Vol.8 (2018) No. 6 ISSN: 2088-5334

Impact Assessment of State Assistance Program to Agri-based Micro, Small and Medium Enterprises in the Philippines

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Abstract— The Philippine business economy is largely fuelled by micro, small and medium enterprises. In order to cope with the competition with large firms in the industry, the government has poured investments in form of technology upgrading in the last 15 years. The research aimed to assess the impact on productivity and profitability of state assistance to agri-based micro, small enterprises. Partial Budget Analysis was used in assessing the profitability of the proponent after the intervention. The study showed an average increase in enterprises' production volume, sales level, and generated employment by 157.9%, 51.65%, and 191.82%, respectively. Further, the assistance generated a positive increase in income. However, the defective equipment, failure to meet the repayment schedule, and non-compliance to documentary requirements were among the major problems encountered by the proponent during program implementation. Nonetheless, the state assistance was able to spur innovations among the enterprises. Market potential, market knowledge, financial capability to repay the loan as well as the entrepreneur's resiliency were some of the observed success factors of MSMEs. With its positive firm-level impact, the state assistance program has generally been able to improve its proponent's competitiveness and thus worthy for continuous implementation.

Keywords—impact assessment; state assistance; enterprises impact; agri-based enterprises.

I. INTRODUCTION

The micro, small, and medium enterprise (MSME) sector is considered to be one of the major drivers of economic growth in the Philippines. Based from the 2016 figures provided by the Philippines Statistics Authority, MSMEs account for 99.57% of the total establishments in the country, contributed 63.3% to the total number of jobs generated, 35.7% of the total value-added, and 25% of the total exports revenue [1].

Recognizing the vital role of MSMEs in the economy, its competitiveness has always been included in the development agenda of governments across the globe. The ASEAN Strategic Action Plan for SME Development for 2016-2025 provides a consistent policy framework for its member states to facilitate SMEs access to technology, finance, market, information, and human capital development [2].

Though previous development efforts have been made to sustain the notable contribution of this dynamic and vibrant sector, still, the overall economic performance of MSMEs has been subdued. This weak performance has been largely

attributed to several barriers like access to new technology, and difficulties with improving product quality and marketing. Making MSMEs domestically and internationally competitive is a major challenge that the Philippines faces especially in the light of globalization and increasing regional integration [3].

In order to cope with the competition with large firms in the industry, the government has poured investments in MSMEs in the form of technology upgrading. In Asian developing countries like Bangladesh, Sri Lanka, and Malaysia, technological assistance includes technology extension services, training to workers and entrepreneurs, and testing facilities and tool rooms and hosting trade fairs and the like to give enterprises access to new markets and buyers. In some cases, the development of low cost-production technologies intended for smaller enterprises is being subsidized [4].

For almost 15 years, the Philippines' Department of Science and Technology- Small Enterprise Technology Upgrading Program (DOST-SETUP) has been providing innovative and cost-effective equipment or facilities, assistance for compliance with product standards and testing, as well as training and consultancy services. All the

assistance received from SETUP are payable in three years, which starts six months after the release of the project fund.

On the average, the program assists some 3,000 MSMEs all over the country every year. From 2010 to June 2015, the program has already recorded a total funding of PhP 2.2 Billion with 29,401 technology interventions [5].

With an increasing number of MSMEs being assisted by the program, there is a need to ensure that the resources channeled to supporting them are well spent, well targeted and deliver significant impact to their performance. While an actual firm-level economic impact may reflect the effectiveness of the interventions, it is also noteworthy that the long-term development of MSMEs is greatly affected by the internal factors that consequently determine the sustainability of their operation under the program. Thus, having a holistic understanding of the state assistance program provides key insights as to whether it is worthy for continuous implementation.

The study aimed to: 1) determine the technology interventions adopted by the proponents or the assisted agribased enterprises; 2) characterize the proponents' perception towards the assistance in terms of its relative advantage, compatibility, and complexity; 3) determine the firm-level impact of the program on the profitability and productivity of the proponents; and 4) identify the issues and problems encountered by the proponents under the program.

The Organization for Economic Cooperation and Development (OECD) identified four types of innovation namely production, process, marketing, and organizational innovation. Product innovation refers to the new or improved product, equipment or service that is successful on the market. A process innovation entails the implementation of a new or enhanced manufacturing or distribution process, or a new course of social service. Organizational innovation results in new ways of categorizing internal associations, directing and empowering employees, molding careers and rewarding work with pay and benefits. Lastly, marketing innovation engages in the improvement of the target mix of markets and how selected markets are attended to. Impact of any or combinations of these innovations ranges from effects on sales and profitability to changes in productivity and efficiency of business enterprises [6].

Existing literature presents consistent findings of the general positive relationship of innovations in firms' performance. In innovation-performance analyses conducted on SMEs in the context of Nigeria and Malaysia, [7],[8] asserted that technological (product and process) innovation and market innovation are important factors on both financial and market performance of SMEs. In terms of productivity, a study conducted on Italian manufacturing industry found out that investment in equipment, coupled with Research and Development (R&D) initiatives spurs product and process innovation. These, in turn, deliver a positive impact on a firm's productivity, especially process innovation [9].

Undertaking process innovation, [10] estimated an increase in sales, profits, and labor productivity by 19 percent, 20 percent and 24 percent respectively in sampled business establishments in the Philippines. Product innovation is also shown to have a positive, significant impact on sales and labor productivity. It has, however, a

fairly small impact on firms' sales and profit performance indicators compared to process innovation.

With the aim of promoting innovation as a key source of competitiveness, governments have extended a variety of programs offering financial assistance and Business Development Services for SMEs.

Reviewing recent impact evaluation studies of SME programs across ten high-income countries (United States, United Kingdom, Republic of Ireland and Northern Ireland, Australia, New Zealand, Belgium, and Japan, among others) and nine developing countries (Chile, Mexico, Argentina, Brazil, Bangladesh, and Turkey, among others), [11] found out that majority of high-income country studies find positive impacts on sales or employment, and some find impacts on increased investments in new plant and equipment, exports, probability of firm survival, and either labor productivity or TFP. On the other hand, half of the developing country studies find positive impacts on performance measured by sales, TFP, export markets or export intensity; however, none find evidence of employment gains.

A more focused study on the impact of state assistance program in the Philippines is limited. Rigorous evaluation of business development services to help enterprises adopt new technologies seems to be even rarer than evaluations of finance-related initiatives [4].

While literature collectively advances the knowledge on how to measure program impacts, assessments that delved on identifying areas of program design and implementation for improvement are in short supply.

II. MATERIAL AND METHOD

A. Research Design

The study employed the descriptive type of research which focused on the before-and-after exposure of the proponents to the state assistance program. It was carried out through both quantitative and qualitative data that paved the way in measuring the program's impact and in evaluating its implementation.

B. Sampling

The SETUP assisted agri-based enterprises in Camarines Sur, the Philippines from 2003 to 2012 were the respondents of this study. Specifically, interviewees were the business owners or any representative from these enterprises who are knowledgeable about their participation in the program and has access to the first-hand data and information needed for this assessment.

A total of 23 proponents from agriculture-related industries in the province were identified using complete enumeration technique. The list of the proponents was secured from DOST-Provincial Science and Technology Center (PSTC), Camarines Sur.

C. Data Gathering and Analysis

The study employed survey method with the aid of pretested questionnaire to collect the primary data from the respondents. Project's profile and status reports (sales, production volume, employment generated, market outlets, etc.) were obtained from PSTC-Camarines Sur to validate and collect other information which the respondents did not provide during the interview. In order to determine the impact of the program on profitability, copies of annual income statements before and after the program implementation were requested from the proponents. However, due to the confidentiality issues, only one proponent was able to divulge the said document.

The available data gathered were primarily analyzed using descriptive statistics and partial budget analysis. The latter was used to determine the impact of the program on the respondent's profitability based from the incurred quantified losses and gains after the program intervention.

III. RESULTS AND DISCUSSION

A. Proponents' Profile

1) Industry: More than half (78.27%) of the program-assisted enterprises are under the Food-processing, Primary Crop and Animal Production, Horticulture, and Gift, Decors, and Handicrafts (GDH) industry which are classified by [12] as low-technology industries. Under the medium-low-technology industry, proponents from Furniture and Metals and Engineering account for 13.04% and 4.35% of its total number, respectively. Lastly, Health/Pharmaceutical Industry, which is a high-technology industry has only one (4.35%) proponent.

Based from the results, it can be inferred that the program mostly assisted MSMEs from low-tech industries as they are less innovative in nature than high-tech industries. [13] claims that the low-tech industries tend to rely more heavily on external funds, thus government funding for R&D is more important for them than high-tech ones.

2) Size Structure: As to the asset size, small enterprises dominated the total number of proponents with 53%. This is followed by micro-enterprises and medium enterprises which account for 29% and 18% respectively. In terms of employment size, both micro and small enterprises comprised 47% of the total number of the proponents while the remaining 6% are categorized as medium enterprises.

This number of assisted micro and small enterprises implies that the program recognizes their relatively limited resources as limitations for scaling-up than that of medium enterprises.

- 3) Types of Ownership: Majority of the proponents are initiated and managed by individual entrepreneurs. Specifically, proponents from Horticulture, Food-processing, Furniture, GDH, Metals and Engineering and one from Animal Production industry are registered as a sole proprietorship. On the other hand, cooperatives comprise three proponents engaged in Crop Production while the sole proponent from Health and Pharmaceuticals industry is registered as a corporation.
- 4) Project and Assistance Utilization Status: Four (17.39%) of 23 SETUP projects are completed or have fully refunded the assistance while fourteen (60.87%) of these are still ongoing. There are two proponents who have recently fulfilled the payment, yet they are still considered on-going projects for Certificate of Ownership from DOST has not been released. The remaining five proponents are terminated

or the equipment received was pulled out by or surrendered to the agency.

From the 17 operating, non-terminated projects, more than half (64.71%) successfully incorporated the technology on their production operation. However, there are SETUP proponents which the equipment received are either partially utilized or totally unutilized. For the former, one firm temporarily stopped the operation because the proprietor became incapacitated to engage in the production due to a serious health problem. Table I presents the profile of state-assisted SMEs or proponents.

TABLE I PROPONENTS' PROFILE

| Variable | Category | Frequency | Percent |
|-----------------------|---------------------------------------|-----------|---------|
| | Food Processing | 10 | 43.48% |
| | Primary Crop and Animal Production | 4 | 17.4% |
| | GDH | 3 | 13.04% |
| Industry | Furniture | 3 | 13.04% |
| , | Metals & Engineering | 1 | 4.35% |
| | Health /Pharmaceuticals | 1 | 4.35% |
| | Horticulture | 1 | 4.35% |
| Types of Ownership | Sole Proprietorship | 19 | 82.61% |
| | Cooperative | 3 | 13.04% |
| | Corporation | 1 | 4.35% |
| | Small | 10 | 55.56% |
| Size Structure | Micro | 4 | 22.22% |
| Structure | Medium | 4 | 22.22% |
| | On-going | 13 | 56.52% |
| Project Status | Graduated | 5 | 21.74% |
| | Terminated | 5 | 21.74% |
| Assistance | Fully utilized | 11 | 64.71% |
| Utilization | Unutilized | 5 | 29.41% |
| Status | Partially utilized | 1 | 5.88% |

B. Technological Intervention

An approved budget amounting to PhP13,260,325 (US\$249,534) was allocated to provide proponents a single or combinations of technological assistance ranging from acquisition of production and packaging equipment, purchasing packaging materials, to availing shelf-life, nutrifacts or microbial testing.

1) Production Equipment: Sixty-eight percent (68%) of the project fund was used to purchase production equipment for twenty-two (22) proponents across seven (7) priority industires. The assisted food-processors engaged in pili-nut pastries production were able to acquire a roasting machine, pili juice, and oil extractor, ITDI gasified/combustor, evaporator/stirrer, crispy pili kernel chopper, and stainless steel work tables. Other food-processors failed rapid sausage filler, semi sausage knotting machine, etc. for processed

meat production; mechanical dryer, strainer oil drain table, etc. for crispy pork production; noodle cutter and roller with conveyor, spiral mixer, etc. for soya beans processing; coconut extractor, mechanical coconut grater, etc. for buko pie production; virgin coconut oil (VCO) filtering machine, induction cap sealer, etc. for VCO production.

For the Crop and Animal Production, one firm acquired automatic feeder and drinker for its poultry production. Another proponent who is into muscovado sugar processing obtained set of machinery and equipment consisting of cane crusher, cane juice filtering system, juice storage tank, preheating tank, among others.

SETUP proponents from furniture sector were provided financial assistance to purchase kiln dryer, spray booth, double bag dust collector, circular saw, spindle molder, shaper, planer, and thicknesses.

For GDH industry, equipment like a sewing machine, handloom, stalk dehydrator, grinding machine with a motor, etc. were purchased for proponents who are engaged in the manufacture of hand-woven products while votive candle molders were provided to a proponent who is into candle production.

A sole proponent from Metals and Engineeing industry acquired lathe machine, universal milling machine, shaper, re-boring machine, air compressor (1hp), spray gun, drill press, turning tool holder, vernier caliper, and mechanical power hacksaw.

- 2) Packaging Equipment: Twenty-eight percent (28%) of the funds were used to purchase packaging equipment which includes vacuum sealer, vertical form fill sealer, band sealer, laser printer, sign maker, and filling machine.
- 3) Packaging and Labelling Materials: Two percent (2.60%) of the budget was used to purchase secondary packaging materials like boxes and special plastics.
- 4) Laboratory Testing: The remaining 1.18% was allocated for the availment of nutritional and shelf-life analysis requested particularly by two proponents from food-processing industry.

TABLE II
PROJECT COST DISTRIBUTION PER TYPE OF ASSISTANCE

| Assistance | Number of Proponents | Amount | % |
|--------------------------------------|-------------------------|--------------------------------|-------|
| Production Equipment | 22 | P9,045,235 (US\$170,213) | 68.21 |
| Packaging Equipment | 9 | P3,713,540 (US\$69,882) | 28.01 |
| Packaging and Labelling Materials | 2 | P345,200 (US\$6,496) | 2.60 |
| Product Laboratory Testing | 2 | P156,350 (US\$2,942) | 1.18 |
| Total | | 13,260,325.00 (US\$249,534) | 100 |

The significant amount spent for the purchase of equipment implies that the proponents are generally particular with upgrading their production processes. Result of this study conform to the findings of [14] that low-tech

industries generally undertake process innovation and thus are large user of Government funding for the purchase of machinery and equipment. Table II presents the project cost distribution per type of assistance.

C. Technology Intrinsic Characteristics

From the proponents which were able to fully utilize the assistance, entrepreneurs were asked to assess the intrinsic characteristics of the intervention as to its relative advantage, compatibility, and complexity.

First, the technology was perceived with relative advantage or is beneficial to the enterprise's operation. [15] argued that when SMEs perceive a technology to supersede conventional methods of getting things done and are able to observe major, positive results from using the technology, they would be more likely to be driven to adopt it.

With respect to its compatibility, they reported that the adopted technology conforms to the proponent's interests. The acquired equipment was generally observed to be compatible as it brought improvement to their production or processing capacity and the change in the processes did not undermine the quality of the products.

Lastly, the proponents agreed that the new technology is very easy to adopt and user-friendly. They asserted that the equipment they received from the program requires less training prior to its application. Indeed, entrepreneur's technology know-how is one of the significant determinants of technology adoption [16].

D. Impact on Productivity

1) Change in Production Volume: Based on the available data presented in Table III, an overall increase of 157.9% in the production volume of selected proponents was attained after the SETUP intervention. This positive impact is deemed to be the result of equipment upgrading through the program. However, it should be noted that the change of the production capacity of these proponents is mostly influenced by the market demand for their products. This is true to the case of Proponent A where there was a posted increase in its production volume by as much as 800%. The proponent asserted that the said increase is a result also of an increase in product orders.

TABLE III EFFECT ON PRODUCTION VOLUME

| Dunamamama | Volume | | Effect | | |
|-----------------|------------------------|----------------|-----------|--|--|
| Proponent | Before | After | (in %) | | |
| Crop Production | Crop Production Sector | | | | |
| A | 500 packs | 4,722 packs | 844.4% | | |
| Food-processing | Food-processing Sector | | | | |
| G | 3 kilo | 7 kilo | 133% | | |
| Н | ND | ND | 40% | | |
| I | 18,120 | 22,650 bottles | 25% | | |
| 1 | bottles | 22,030 bottles | 2570 | | |
| K | 75 boxes | 100 boxes | 33% | | |
| L | 215,020 unit | 479,116 unit | 122.82% | | |
| M | ND | ND | 40% | | |
| N | 1,300 pcs | 1,625 pcs | 25% | | |
| | | Total | 1,263.22% | | |
| | | Mean | 157.9% | | |

2) Change in Sales: A 51.65% increase in sales of the proponents was incurred during the program implementation. The impact was mainly attributed to the introduction of specialized equipment for the improvement of the proponents' product appearance and quality. The packaging and labeling development availed by Proponent A contributed a lot in making its products attractive to the customers, and helped meet the mandatory packaging requirements of leading supermarkets, groceries, and malls. Moreover, other proponents were able to comply with the product quality standards of retailers because of the reliable shelf-life and nutrition facts indicated in the product label.

Technology acquisition that promotes both product and process innovation has proven to increase over-all company's sales [17], [18]. However, [19] pointed out that the continuous innovation must be complimented with entrepreneur's effort to look for new market opportunities. This is particularly true to the case of Proponent L from Food-processing industry where it was able to go beyond the 10 market outlets located in Naga City, Camarines Sur and penetrate more numbers of supermarkets, department stores, restaurants, and convenience stores in the entire region after the intervention. On the other hand, the two proponents from the Furniture industry were able to look for their clients through joining trade fairs and exhibits and bidding.

The benefits gained by the proponents from SETUP in terms of sales is shown in Table IV.

3) Employment Generation: Table V presents the beforeand-after status of employment in selected SETUP proponents. In general, there was a 191.82% increase in the number of workers/employees after the program's intervention. This significant increase is reflected in nine (9) proponents while there is one (1) who maintained the employment size.

Result reveals that technological innovation leads to an increase in manpower requirement. This is consistent with the findings of [20], [21], [22] that product innovation in particular is a significant source of employment gains. The switch of production towards the improved product does not reduce employment requirements, and the growth of its demand is the strongest force behind employment creation.

E. Impact on Profitability

The result of the analysis presented in Table VI shows that the net change is positive, indicating that the SETUP intervention was successful in improving the profitability of the enterprise. The income losses as a result of an annual refund and an increase in the cost of packaging materials were offset by the significant increase in sales. The said increase is attributed to the proponent's expansion of its market outlet as it was able to comply with the mandatory packaging requirements of some established supermarkets and other market stalls in the region.

TABLE IV EFFECT ON SALES

| Propo | Gross | Effect | | |
|-----------------------------------|------------------------------------|------------------------------------|--------|--|
| nent | Before After | | (in %) | |
| Crop and Animal Production Sector | | | | |
| A | P19,321,126.70 (US\$363,548.26) | P34,123,731.75 (US\$642,081.02) | 76.6% | |
| С | P5,919,564.79 (US\$111,383.61) | P11,839,129.58 (US\$222,779.98) | 50% | |
| Food-pi | Food-processing Sector | | | |
| Н | P600,000.00 (US\$11,291.19) | P720,000.00 (US\$13,549.66) | 20% | |
| I | P1,267,080.00 (US\$23,838.90) | P1,583,850.00 (US\$29,800.46) | 25% | |
| J | ND | ND | 25% | |
| K | P823,680.00 (US\$15,497.70) | P1,155,623.04 (US\$21,743.98) | 40% | |
| L | P4,234,300.00 (US\$79,674.67) | P11,345,729.30 (US\$213,463.99) | 167.9% | |
| Furniture Sector | | | | |
| P | P4,678,472.39 (US\$88,025.91) | P5,614,166.76 (US\$105,639.06) | 20% | |
| R | P143,714.22 (US\$2,703.98) | 201,199.91 (US\$3,785.52) | 40% | |
| | | Total | 464.8% | |
| | | Mean | 51.65% | |

^{*}ND- No Data

TABLE V EFFECT ON EMPLOYMENT

| Duananant | Number of Employees | | Effect | | |
|------------------------|---------------------|-------|-----------|--|--|
| Proponent | Before | After | (in %) | | |
| Crop Production Sector | | | | | |
| A | 10 | 20 | 100% | | |
| Food-processing Sector | | | | | |
| F | 7 | 7 | 0 | | |
| Н | 2 | 8 | 300% | | |
| I | 4 | 6 | 50% | | |
| J | 1 | 6 | 500% | | |
| L | 11 | 24 | 118.28% | | |
| M | 6 | 15 | 150% | | |
| M | 5 | 10 | 100% | | |
| Furniture Sector | | | | | |
| Q | 2 | 6 | 200% | | |
| R | 1 | 5 | 400% | | |
| | | Total | 1,918.18% | | |
| | | Mean | 191.82% | | |

TABLE VI
PARTIAL BUDGET ANALYSIS: ANNUAL INCREMENTAL BENEFIT OF PROPONENT A FROM SETUP INTERVENTION

| GAINS | | | LOSSES | | |
|---|----------------------------------|------|---|-------------------------------|--|
| Increase in Income | Amount | | Decrease in Income | Amount | |
| 2011 Sales P17,883,776.21 (US\$336,515.38) | | | | | |
| 2012 Sales P19,321,126.70 (US\$363,502.48) | P1,437,350.49 (US\$27,045.03) | | | | |
| Total Increase | P1,437,350.49 (US\$27,045.03) | | Total Decrease | 0 | |
| Decrease in Cost | Amount | | Increase in Cost | Amount | |
| | | | 2011 Packaging Supplies P227,662.69 (US\$4,283.94) | | |
| | | | 2012 Packaging Supplies P246,088.70 (US\$4,630.04) | P18,426.01 (US\$346.67) | |
| | | | SETUP Amortization | P120,000.00 (US\$2,256.98) | |
| Total Decrease | 0 | | Total Increase | P138,426.01 (US\$2,603.67) | |
| Total Gains | P1,437,350.49 (US\$27,035.08) | | Total Losses | P138,426.01 (US\$2,604.05) | |
| CHANGE IN NET INCOME (GAINS-LO | OSSES)= PHP 1,298,9 2 | 24.4 | 8 or US\$24,437.82 | _ | |

On the other hand, the increased cost of packaging materials was due to the relatively high cost of specialized plastic and boxes which are required by the new packaging equipment.

F. Problems and Issues Encountered by the Proponents

1) Unutilized Equipment: Set of equipment provided by DOST to seven proponents was left unused due to various reasons. First, four of them received defective or underperformed equipment. One proponent who acquired shredding machine for organic compost production found out that it was defective, hence it was surrendered. The mechanized stirrer with combustor received by one firm who is engaged in pili-based pastry production failed to stir the mixture at the bottom part of the work causing it to burn. With this, the proprietor decided to unravel the parts of the equipment and take the useful ones for other production purposes. Another related case was encountered by one proponent who acquired a set of equipment for meatprocessing, but some were defective like the heavy duty rapid sausage filler, sausage knotting machine, and vacuum sealer. The case of another firm is that the newly-acquired set of equipment failed to improve its muscovado sugar production efficiency. Based from its observation, the design of the equipment was not capable to immediately produce the required heat to boil the sugarcane sap, leading to an increase in production time from the average 3 hours to as much as 8 hours. In addition, the equipment requires the use of fire woods as a source of heat, different from the solar dried cane they were using for their brick- fabricated furnace. According to the firm, this may cause a problem when it comes to the supply of firewood and issues on DENR regulations as to its outsourcing.

The second problem that leads to the non-utilization of the assistance is the high cost of equipment installation. One proponent in Furniture industry deferred the use of assistance due to the high cost of electrical system installation that is intended to strategically position the new equipment in the production area.

Lack of production space to house the new equipment was another issue confronted by one proponent. The said enterprise is a newly-established one and a production area enough to carry out the increased production activity is one of its major concerns. The equipment received by the proponent was temporarily kept and will be used after a minor renovation in its production area.

Lastly, the use of the vacuum packing equipment received by one proponent from the Crop Production sector was held for almost 3 years due to the damage in its electrical wiring caused by rodent infestation. The equipment was repaired after the need to meet the increasing order of the product.

- 2) Repayment Issues: Thirty-five percent (35%) of the SETUP proponents revealed that they are encountering difficulty in repaying the assistance. Major reasons are low product sales and urgent expenses that need to be prioritized and paid. [23] found that loan size, business factors, other debt burden, among others are factors that affect the ability of the borrowers to repay their loan. For some proponents who received defective equipment, they argued that there is no reason for them to repay the assistance, as apparently, they do not serve the purpose of the project.
- 3) Report Submission: Poor accounting system and failure to regularly record the business transactions and prepare the financial statements are the main reasons for the inability of 22% of proponents to submit a report for a status update. This affirms the conclusions of [24] and [25] that MSE owners on average possess low level of financial skills when it comes to record keeping. Both attributed this low level of financial literacy to entrepreneur's low educational attainment. Other reasons include time constraint.

IV. CONCLUSIONS

In general, the state assistance program has brought improvement in the productivity and profitability of the agribased enterprises. Market potential, market knowledge, financial capability to repay the loan, as well as entrepreneur's resiliency were the observed success factors of assisted SMEs. But on the other hand, the sustainability of their operation under the program was attributed to the program's policy on equipment acquisition, loan repayment, and compliance on documentary requirements. The fact that the program brings positive impact on business performance, there seems to be a need to improve its design strategies giving particular emphasis on these sustainability factors in order to increase the number of the completed proponent.

Overall, the business gains are deemed worth the government investment and thus, the state assistance program remains worthy for continuous implementation.

Improvement of Selection Criteria/Process: Its market potential, market knowledge, and financial capability to adopt the technology should be considered in screening the potential proponent. Program implementer should assess whether the enterprise's product or service has a potential or huge demand in the market. The upgrade in its production activity should correspond to the market demand for its product or services. It is also equally important to examine entrepreneurs' inclination for market expansion. Lastly, there is a need to ensure that it has the capacity to fulfill the amortization by evaluating its previous financial statements. This will shed light on the enterprise's financial performance and credit standing. It would be also necessary for the implementer to instill in them the importance of securing working capital to sustain the production under the introduced technology.

Equipment or Material Acquisition as Proponent's Accountability: The program should assist the proponent to determine the necessary equipment or materials and its specifications and let the latter purchase to their supplier of choice. The supplier's good reputation should be taken into account in purchasing. Prior to the acquisition, equipment is highly advisable to subject for test-run.

Extended Business Development Services for SMEs Holistic Development: Government and non-government agencies may initiate programs that will teach MSMEs financial management including basic accounting or bookkeeping. Encouraging the proponents to record its financial performance and business transactions on a regular basis will help the program implementer to easily monitor and evaluate their status. In addition, the Department of Trade and Industry and the Department of Agriculture may assist the proponents to explore and identify new markets through market matching, trade fairs, and the like.

Promotion and Development of Industry Competitiveness: For the program to monitor its impact on the agriculture-related industries, it is suggested to set an annual target number of MSMEs per industry. Moreover, the agency may consider the enterprises who are engaged in the production or processing of priority agricultural commodities in the province or region to contribute in boosting its competitiveness.

ACKNOWLEDGMENT

The authors would like to thank the Department of Science and Technology for providing the raw data and the Central Bicol State University of Agriculture for technical and administrative support.

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