

THE COMMUNITY EMPOWERMENT THROUGH ENTREPRENEURSHIP AND TECHNOLOGICAL PRODUCT APPLICATION IN KERTASARI, BANDUNG REGENCY, WEST JAVA, INDONESIA

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Abstract. Kertasari Sub-district is not only the largest producer of potatoes in West Java, but also proves itself as one of the suppliers of potato at the national level. The quality of the potatoes is not inferior. The target markets include some regions, such as Jakarta, Sumatra, and Kalimantan. The potato commodity is also able to penetrate the export market, especially Singapore, and some well-known supermarkets in Indonesia. Based on the field observations and interviews with some women/mothers, they have tried to help their families' income by processing the agricultural products into various processed products such as potato chips produced traditionally, which are sold to the surrounding areas. Nevertheless, the quality of potato chips has not matched market demands. They also face other problems, i.e. limitation in entrepreneurship and technology capacity. The solutions and output targets for the community empowerment through entrepreneurship and application of technology are as follows: 1) What are the implementation procedures, the solution steps to partner's problems, and the types of expertise in the implementation of community empowerment through entrepreneurship and the technology application of the potato chips processing machine?, 2) How is the overview of science and technology transferred in the implementation of community empowerment through entrepreneurship and the technology application of the potato chip processing machine?, and 3) How are the solution and target of activity implementation achieved from the priority problems, which include: entrepreneurship problems and problems in the application of potato chip processing technology. The approach methods used to apply the solutions and achieve the output targets include training, technical Tuition (Bimtek), mentoring, and application of the technological product to the partners. The implementation of community empowerment through entrepreneurship and technology application has a positive impact on the two potato chip business groups in Cibereum Village, Kertasari Sub-district, Bandung Regency, West Java, Indonesia. This can be seen from the implementation of science and technology through training, technical Tuition, and technological mentoring by giving the following achieved solutions: 1) The partners' entrepreneurship capacity, which includes a) The partners have high motivation in running their businesses, b) The partners are able to run a correct business management, c) The partners have a business plan as their business guideline, d) The partners are able to identify market opportunities and market/business networks and 2) The application of technology to the partners, which includes a) Each partner owns a potato peeler machine and the washer, a wave potato slicer machine, a deep fryer machine, an oil draining machine (spinner), a product packaging machine, and a bag sealer in which the machine designs are created by the team, b) The production process is more effective and can produce more potato chips, c) The partners' skills increase by 100%, and d) The products have a better quality.

Keywords: Community Empowerment, Entrepreneurship, Technological Product Application

I. INTRODUCTION

Kertasari is geographically located in the southernmost part of Bandung Regency. The geographical condition of this sub-district is hilly because it is upstream of the Citarum watershed or the Zero Point of the Citarum upstream. The altitude of Kertasari ranges from 1,250 m to 2,500 m above sea level. Kertasari consists of seven villages, one of which is Cibereum Village, which is the center of Kertasari Sub-district. Most of the Kertasari residents are farmers and plantation workers. The flagship product of Kertasari is Potato Agriculture as illustrated in the figure below.

Kertasari is not only the largest producer of potatoes in West Java after Pangalengan. It also proves to be one of the regional potato suppliers for the national scale. The potato seedlings are not only managed or organized by the government agencies, but also the farmers. Therefore, in

Kertasari, there are individual/private plots of land used for growing the potato seeds. The quality is good, sold to main markets in Jakarta, distributed to some regions, such as Sumatra, Kalimantan, and several other regions. Even, Kertasari's potatoes can penetrate the export markets, especially Singapore, and some well-known supermarkets in Indonesia. In addition, there is a contract with a large food processing company – Indofood where the potatoes as the raw material come from Cibereum Village.

A. The Partners' Profiles and Priority Problems

Based on the survey of productive business groups, the Group Partner 1 (Mrs. Entin Kartina) at RW 02 RT 01 and Prospective Group Partner 2 at RW 18 RT 04 in which each group consists of 9 members. Cibereum Village has 27 RW (hamlets) and 118 RT (neighborhoods), a population of approximately 16,000 people. About 80% of its citizens are farmers and agricultural laborers, and only 20% are housewives or not working. The average educational level is

junior high school. Those who become laborers earn only Rp. 30,000 for a half-day work.

Some female farm laborers have tried to increase the family income by processing potatoes into potato-based snacks. This is because potatoes in the village are abundant with the current price of Rp. 4,000 – Rp. 5,000. By processing potatoes into a variety of processed products including traditionally-produced potato chips, which are sold to the surrounding areas. According to Adiyoga, *et al* (1999), potato chips, in general, are products that are produced through stripping, slicing, soaking in a solution, and frying. The factors that determine the quality of potato chips are color, appearance, taste, texture, oil content, water content, and nutritional value.

The results of interviews and observations show various problems which are still faced by the two partner groups.

B. Entrepreneurship Problems

1. The partners have low entrepreneurship motivation and entrepreneurship requirements/ characteristics.
2. The partners do not have the right business management capability.
3. The partners do not understand the business plan and implement it.
4. The partners do not have market and business networks.

C. Problems in the Application of Potato Chips Processing Technological Product

1. The partners do not yet understand the right production flow chart of potato chips.
2. The partners do not have a potato peeler and the washer.
3. The partners do not have a wave slicer machine so that the slices are inconsistent in terms of shape and size.
4. The partners do not have a machine to fry the potato slices.
5. The partners do not have a machine to drain oil (spinner) on the fried chips.
6. The partners do not have a product packaging machine and plastic bags.

Based on the above problems, the solutions and output targets for the implementation of community empowerment through entrepreneurship and the application of the technological product for processing potato chips in Cibereum Village, Kertasari Sub-district, Bandung Regency, West Java are described as follows:

1. What are the implementation procedures, the solution steps to partner's problems, and the types of expertise in the implementation of community empowerment through entrepreneurship and the technical application of the potato chips processing machine?
2. How is the overview of science and technology transferred in the implementation of community empowerment through entrepreneurship and the technical application of the potato chip processing machine?
3. How are the solution and target of activity implementation achieved from the priority problems, which include:

D. Entrepreneurship Problems

1. The partners have low entrepreneurship motivation and entrepreneurship requirements/ characteristics.
2. The partners do not have the right business management capability.
3. The partners do not understand the business plan and implement it.
4. The partners do not have market and business networks.

E. Problems in the Application of Potato Chips Processing Technological Product

1. The partners do not yet understand the right production flow chart of potato chips.
2. The partners do not have a potato peeler machine and the washer.
3. The partners do not have a wave slicer machine so that the slices are inconsistent in terms of shape and size.
4. The partners do not have a machine to fry the potato slices (deep fryer).
5. The partners do not have a machine to drain oil (spinner) on the fried chips.
6. The partners do not have a product packaging machine and plastic bags.

II. BASIC THEORY

A. Community empowerment

The empowerment is how to make people capable to build themselves and improve their own lives. The term *capable* here contains the meaning of powerful, understanding, motivated, having opportunities, seeing and utilizing opportunities, energizing, being able to work together, knowing as an alternative, being able to make decisions, taking risks, being able to find and capture information, and being able to act according to initiatives (Anwas, 2014:49). This description is in line with the Law No. 20 of 2008.

Anwas (2014) states that the main empowerment of small businesses is how to build resilient human resources. They need to be trained from the production to post-production in the correct and effective ways. They need to be encouraged to create various product innovations that have competitiveness. The ability to encourage innovative thinking and behavior is very necessary. Other skills and abilities that are needed by small business actors are the managerial aspects, financial management, marketing, and mutually beneficial cooperation.

B. Entrepreneurship

In the Presidential Instruction No. 4/1995 on the National Movement Promoting and Cultivating Entrepreneurship, the entrepreneurship is defined as the spirit, attitude, behavior, and ability of a person in handling business and/or activities that lead to efforts to find, create, implement ways of new work, technology and products by increasing efficiency in order to provide better services and/or gain greater profits. This definition is interesting because entrepreneurship is not only about commercial activities to make a profit, but also non-commercial activities as far as they are performed with the right and superior attitude or behavior to increase efficiency in the broadest sense in order to provide better service to all

interested parties, i.e. customers, including society, nation, and country.

C. Application of Technology

According to Usman (2002), the word application is geared towards activities, actions, or mechanism of a system. The implementation is not merely an activity, but a planned activity to achieve certain objectives. Meanwhile, in a broader sense, technology can include system, organization, and technique. However, along with the development and progress of the times, the notion of technology has become increasingly wider so that today, technology is a concept relating to the type of use and knowledge of tools and expertise, and how it can influence human beings ability to control and change things around them (Rusman *et al*, 2012). Thus, technology is a kind of extension of human beings' hands to utilize nature and something around them more optimally. In short, technology simply aims to facilitate the fulfillment of human needs.

Based on this understanding, it can be concluded that the term technological application leads to activities, actions, or mechanisms of a system. The word mechanism implies that the application is not just an activity, but a planned activity performed seriously based on certain norms to achieve the activity's objectives. In this discussion, the technology takes the form of tangible products to facilitate the activities of the community or community groups in the form of potato chip machines.

III. METHOD

A. Approach Methods

The approach methods and implementation steps are described as follows:

1. Identification of the Partners' Problems

It was the first step taken by the team to identify the partners' problems. After that, the team determined the priority problems faced by the partners.

2. Designing

Designing is an activity to draw, plan and sketch or arrange several separate elements into one whole unit. A system can be designed in the form of a flow chart, which is a graphical tool that can be used to show the sequential process of the system. In this stage, the design of machines needed by the partners was in line with their priority problems. The designs include a potato peeler machine and the washer, a potato slicer machine, a deep fryer, an oil draining machine (spinner), a product packaging machine, and a bag sealer.

3. Making

Making is an activity of creating/processing something. This activity aims to create something in a number of ways or steps that are in accordance with the object to be made. In this step, the team made a potato peeler and the washer, a potato slicer, a deep fryer, a spinner, a product packaging machine, and a bag sealer.

a. Operation Test

Operation Test is an action to implement and try a technological product to find out whether the results of making the potato peeler, washer, potato slicer, deep

fryer, spinner, product packaging machine, and bag sealer are feasible or there are still constraints or weaknesses. In this case, the machines produced by the team had been tested in several places and the results showed satisfactory results.

b. Training/Dissemination Method

The training method is aimed at transferring science and technology in solving problems by increasing the partners' insight and understanding. The training was held in the Cibeureum Village Hall. The approach method was determined by the team to solve the problems and to reach the specified output targets for **1) the entrepreneurship problems**, including a) Improvement in the entrepreneurial motivation and entrepreneurial requirements/business characteristics, b) Improvement in the right capacity of the partners' business management, c) Formulation of a business plan covering all business aspects, including market and marketing, operation, technical production, finance (working capital, investment, and financial statements), and environment, d) Improvement in knowledge and possession of the ability to specify and create market opportunities and business networks and **2) the methods for applying the technological product of potato chip machines, including training** on a) Improvement in the understanding, skill, and capability to apply the production flow chart of potato chips, b) Improvement in the knowledge and use of the wave peeler machine, and c) Improvement in the knowledge and use of the packaging machine and plastic bags.

c. Technical Tuition Method and Operational Assistance

This approach method was intended to transfer the science and technology so that the partner was able to practice the materials of the technical Tuition and mentoring from experts (team) in which they were performed directly in the partner's business location. The experts/team, in an applicative manner, directed, guided processes and stages, and gave examples to the partners in overcoming their problems and achieving the program's targets and outputs which include the potato peeler, washer, potato slicer, deep fryer, spinner, product packaging machine, and bag sealer.

d. Method of Facilitation Approach and Media

This approach method was intended to simplify, alleviate, facilitate, connect, create (design), obtain, and have something needed by the partners. The facilitation approach for the partner was used to solve his problems and achieved the following targets and outcomes: 1) Facilitation of the improvement in the capacity of frying equipment and supporting equipment for both partner groups; 2) Facilitation and mediation of access to markets/prospective customers and mediation of business networks for both partner groups.

IV. Discussion on the Implementation of the Community Empowerment Through Entrepreneurship and Technological Product Application

A. Procedure for Activities, Solution Steps, and Types of Expertise

1. Activity Procedure

The work procedures of this program are as follows:

a. Preparing Activity Operational Plans

In this stage, the team drew up plans starting from the team coordination meetings, correspondence, criteria identification, number of trainers, mentors and assistants, modules, schedule activities, implementation of training programs, implementation of monitoring and evaluation, and activity report, and preparation of publishing scientific articles in the national journal/mass media.

b. Conducting Team Coordination Meetings

In this stage, the team conducted team task division meetings, scheduled coordination meetings, which are intended to make the activities starting from preparation, implementation, monitoring, and evaluation, to the preparation of reports able to run well according to the plans.

c. Making a Program Activity Schedule

The program implementation of the technological product application of potato chip machine is planned for 8 (eight) months with consideration of activities ranging from preparation, program implementation (training, technical tuition and assistance, facilitation and mediation, monitoring and evaluation, and preparation of activity reports).

d. Implementation of Training / Technical Tuition / Mentoring, Facilitation and Mediation.

The activities of training, technical tuition (Bimtek), assistance, and facilitation and mediation were held in the Cibeureum Village Hall and/or locations following certain conditions, especially for the mediation approach.

e. Implementation of Monitoring and Evaluation

The monitoring is an activity performed by the team to observe and monitor the implementation of training, technical tuition (Bimtek), and mentoring, while the evaluation is an assessment activity performed by the team from preparation to post-training program, technical tuition, mentoring, facilitation, and mediation. This activity is intended to assess the results of all program activities or measure indicators of success, and possible weaknesses by looking for factors that cause them, prepare materials for making a program report and recommendations for the program activities, and **identify materials for the program's sustainability action plan to become an SME guided by the Unpas Empowerment Team.**

2. The Solution Steps to the Partners' Problems

The solution steps to the partner's priority problems set in the solutions and output targets for the program of technological product application of potato chip machines in two partner groups can be seen in Figure 3.1.

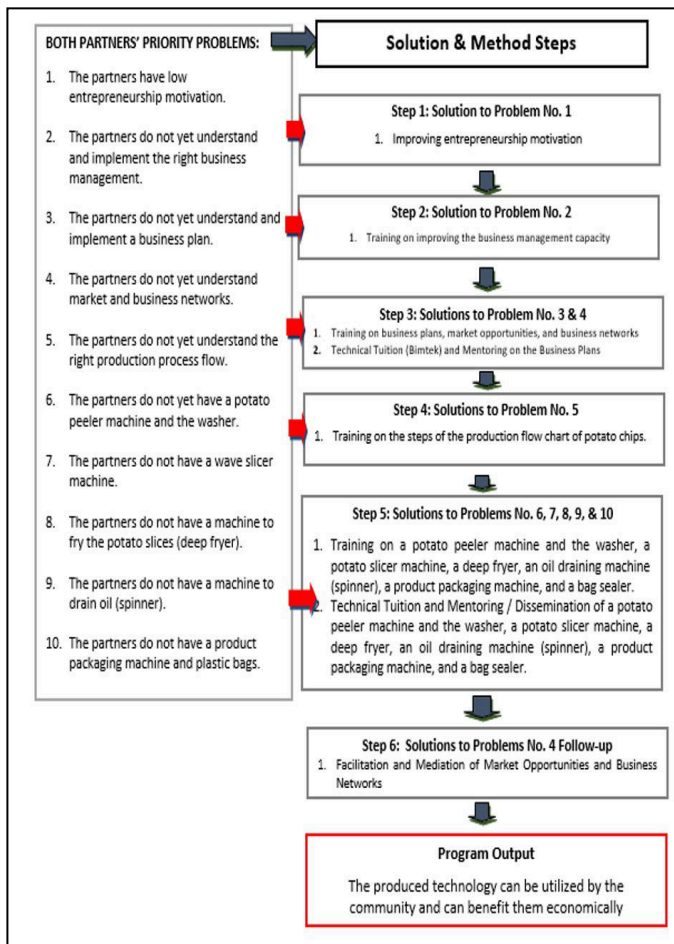


Figure 1

Solution & Method Steps to Solve the Partner's Priority Problems

3. Types of expertise in the implementation of community empowerment through entrepreneurship and the application of technological products.

Program Output

The produced technology can be utilized by the community and can benefit them economically. The types of expertise in implementing this program are described in Table 1.

Table 1
Types of Expertise in the Technological Product Application Program

| Partner Problems | Name / Type of Expertise |
|--|--|
| Entrepreneurship (entrepreneurial motivation, business management, business plans, market opportunities, and business network development) | Dr. Dindin Abdurrahim BS, S. Sos., MM.M.Sc. (Team Leader) Competence: Entrepreneurship and Management Development/ Lecturer of Business Administration Dept - Unpas |
| Technological products of food processing machine and equipment (potato peeler, | Dr. Ir. Asep Dedy Sutrisno, MP (Team Member) Competence: Machinery and Equipment Industry / |

| | |
|--|---|
| washer, wave potato slicer) | Lecturer of Food Engineering Dept Unpas |
| Stages in the food production flow chart (deepfryer, oil draining machine (spinner), product packaging machine, and bag sealer). | Jaka Rukmana, ST, MT (Team member) Competence: Diversification of Food Products & Tool Designs/ Lecturer of Food Engineering Dept - Unpas |

B. Description of the Transfer of Science and Technology in the Implementation of Community Empowerment through Entrepreneurship and Application of The Technological Products Overview of Entrepreneurship Science and Technology

1. Materials concerning the motivation for success in entrepreneurship, the requirement for becoming successful entrepreneurs, and entrepreneurial attitudes and behaviors.
2. Materials regarding planning, organization, supervision, and control of the business.
3. Materials regarding the analysis of the internal and external environments, the vision and mission, market and marketing aspects, production and technology processes, human resources and financial aspects (working capital and investment), and business plan documents.

C. Overview of the Technological Product Application of Potato Chip: Peeler, Slicer, Deep Fryer, Spinner, and Packaging Machine




Spesifikasi :
 1. Nama Mesin/alat : Pengupas kulit kentang
 2. Dimensi (D x T) : 0,35 x 0,55 m
 3. Konstruksi S5304 & Baja Profil
 4. Energi Elektrik : -
 5. Operasi : Semi Kontinyu
 6. Prinsip Kerja : Kentang kulitnya terkupas akibat gaya gesek kekasaran batu gurinda dan kulitnya terkupas dan dengan penyemprotan air maka kulit akan terpisahkan dengan daging kentangnya
 7. Fungsi : Mengupas kulit kentang
 8. Aplikasi : Laboratorium Teknologi pangan Unpas

Mesin Pengupas Kulit Kentang (Potato Peeler)



Spesifikasi :
 1. Nama Mesin/alat : Slicer Bergelombang
 2. Dimensi (P x L x T) : 45 x 45 x 60 cm
 3. Konstruksi : Stainless Steel 304
 4. Energi Elektrik : 0,5 HP
 5. Operasi : Kontinyu
 6. Kapasitas : 50Kg/jam
 7. Prinsip Kerja : Bahan pangan diiris dengan bentuk bergelombang oleh gaya sayatan bergelombang dan menghasilkan irisan bergelombang
 7. Fungsi : Mengiris bahan pangan dengan bentuk bergelombang
 8. Aplikasi : Kabupaten bandung dan Kota Bandung

Mesin Pengolah Keripik Bergelombang



Spesifikasi :
 1. Nama Mesin/alat : Slicer
 2. Dimensi (P x L x T) : 0,3x0,25x0,4 m
 3. Konstruksi : S5306
 4. Energi Elektrik : 300 Watt
 5. Operasi : Semi kontinyu
 6. Prinsip Kerja : Daging disayat oleh pisau yang tajam dan berputar secara vertikal
 7. Fungsi : Mengiris daging
 8. Aplikasi : Laboratorium Teknologi Pangan Unpas

Pengiris



Alat Penggoreng (Deep Fryer)

Spesifikasi :
 1. Nama Mesin/alat : Deep Fryer
 2. Dimensi (P x L x T) : 0,5 x 0,45 x 0,3 m
 3. Konstruksi : Stainless Steel 304
 4. Energi Elektrik : 300 Watt
 5. Operasi : Batch
 6. Prinsip Kerja : Bahan pangan /agro di dalam keranjang digoreng dengan minyak panas yang dipanaskan oleh heater elektrik
 7. Fungsi : Menggoreng produk pangan /agro
 8. Aplikasi : Kabupaten bandung dan Bandung

Table 2
Description of Tools and Technological Product Advantages of Potato Chip Machines

| No. | Name Tool | Function | Principle | Advantage |
|-----|------------|---|---|---|
| 1 | Peeler | Peel potatoes as well as do the washing process | Based on the contact between materials and a rough surface so the potato skin can be peeled off | Appropriate Technology with low power and high productivity |
| 2 | Slicer | Slicing potatoes in a wave shape | Based on the compressive force given by the wave blade | Appropriate Technology with low power and high productivity |
| 3 | Deep Fryer | Frying potato slices | Based on the process of convection heat transfer from heating media to food materials | Appropriate Technology with low power and high productivity |
| 4 | Spinner | Drain oil Contained | Based on the centrifugal | Appropriate Technology |

| | | | |
|---|-------------------|---------------------|---|
| | in potato chips | force on the engine | with low power and high productivity |
| 5 | Packaging Machine | Pack the product | Based on the process of entering the product on packaging materials |
| | | | Appropriate Technology with low power and high productivity |

Table 3
Solution and Achieved Output Target for the Entrepreneurship

| Solution | Target Output Reached |
|---|--|
| Improving the entrepreneurship knowledge, motivation, & requirements/ characteristics | a. The partners understand the importance of entrepreneurship motivation driving from them themselves and the environment. |
| | b. The partners have a high passion for entrepreneurship. |
| | c. The partners know and understand the requirements for becoming a successful entrepreneur. |
| | d. The partners can apply the characteristics to be an entrepreneur. |
| | e. The partners' businesses have more opportunity to develop. |

Table 4
Solution and Achieved Output Target for the Business Management

| Solution | Target Output Reached |
|--|--|
| Enhancing the correct business management capacity of the partners | a. The partners understand and can make planning. |
| | b. The partners understand and can make an organization (task division). |
| | c. The partners understand and can oversee their business activities. |
| | d. The partners understand and can control their business. |
| | e. The partners can implement the business management concept. |
| | f. The partners' businesses become effective and |

| | |
|--|---|
| | efficient. |
| | g. The partners' business objectives will be easily achieved. |

Table 5
Solution and Achieved Output Target for the Business Plan

| Solution | Target Output Reached |
|---|--|
| Increasing knowledge on the business plan and making it | a. The partners know and understand the process and stages of making a business plan. |
| | b. The partners know and understand the business plan aspects which include market and marketing, operation, technical production, organization and management, finance (working capital, investment, and financial reports), environment. |
| | c. The partners understand their business's strengths, weaknesses, opportunities, and threats. |
| | d. The partners can identify the needs of their business aspects for the coming time. |
| | e. The partners have a guideline in running their businesses, which describes the business aspects thoroughly and systematically. |

Table 6
Solution and Achieved Output Target for the Market Opportunity and Business Network

| Solution | Target Output Reached |
|---|---|
| Increasing knowledge and capability of specifying and create market opportunities and business networks | The partners understand the opportunity for marketing their potato chips. |
| | The partners understand the market and business networks. |
| | The partners can identify the opportunity the markets for their potato chips. |
| | The partners can create relationships and choose |

relationships both in the market and business networks.
Sales of potato chip products are increasing.
Business profits tend to increase.

D. Solutions and Achieved Output Targets for the Application of Potato Chip Technological Products

Table 7
Solution and Achieved Output Target for the Potato Chip Production Flow Chart

| Solution | Achieved Output Target |
|---|--|
| Enhancing the understanding, skill, and capability to implement the production flow chart of potato chips | The partners understand the stages of the production flow chart of potato chips. The partners can apply steps of the production flow chart of potato chips. The partners have a production flow chart of potato chips. The partners' production process become effective and efficient. |

Table 8
Solution and Achieved Output Target for the Potato Peeler Machine and Washing Process

| Solution | Achieved Output Target |
|--|---|
| Application of the technological product of the potato peeler machine and the washer | The partners have a potato peeler machine and the washer for the process of producing potato chips. The partners can operate the peeler machine and the washer. The partners can produce more potato chip products. The partners can work more effectively and efficiently. The partners can reach the production target according to the plan. |

Table 9
Solution and Achieved Output Target for the Wave Slicer Machine

| Solution | Achieved Output Target |
|--------------------|-------------------------|
| Application of the | The partners own a wave |

technological product of the wave slicer machine to produce potato chips.
The partners can operate the wave slicer machine.
The partners can produce quality products with a standard shape and size.
The partners can work more effectively.
The partners get trust from the consumers for their produced products.
The work process of potato chip production becomes more guaranteed.

Table 10 Solution and Achieved Output Target for the Deep Fryer of Potato Slices

| Solution | Achieved Output Target |
|--|--|
| Application of the technological product of the deep fryer | The partners own a deep fryer. The partners can operate the deep fryer. The partners can work more effectively. The work process of potato chip production becomes more guaranteed. |

Table 11 Solution and Achieved Output Target for the Spinner

| Solution | Achieved Output Target |
|--|--|
| Application of the technological product of the oil draining machine (spinner) in the fried potato chips | The partners own a spinner, i.e. a machine to drain the oil contained in the fried chips. The partners can operate the spinner. The partners can work more effectively. The work process of potato chip production becomes more guaranteed. |

Table 12
Solution and Achieved Output Target for the Packaging Machine and Plastic Bags

| Solution | Achieved Output Target |
|--|--|
| Application of the technological product of the product packaging machine and plastic bags | The partners own a product packaging machine for their potato chips. The partners own plastic bags for their potato chip products. The potato chip appearance is more attractive (an |

opportunity to expand the marketing area, including modern markets).
 The partners get trust from the consumers for the products.

Table 13
Summary of Outcomes and Outcome Indicators of Entrepreneurship and Technological Application to Community Groups in Kertasari Sub-district, Regency Bandung, West Java – Indonesia

| Outcomes | Outcome Indicators |
|---|--|
| He Partners' Entrepreneurship Capacity | The partners have high motivation in running their businesses. |
| | The partners can apply the <u>right business management.</u> |
| | The partners have a business plan as their <u>business guideline.</u> |
| Application of Technological Products to the Partners | The partners can identify market opportunities and market/business networks. |
| | Each partner owns a potato peeler machine and the washer, a slicer machine, a deep fryer machine, an oil draining machine (spinner), a product packaging machine, and a bag sealer from the designs created by the team. |
| | The production process is more effective and can <u>produce more potato chips.</u> |
| | The partners' skills increase by 100% |
| | The qualitative and quantitative products increase by 100%. |

The evaluation of the implementation of the Community Empowerment through Entrepreneurship and Technological Application shows the following results:

2. He program of community empowerment through entrepreneurship and technology application can be implemented according to the plans by employing various approaches, including training, technical tuition, and mentoring and application of potato chip production machines.
3. He evaluation results show that that there is still an obstacle in the implementation of the community empowerment through entrepreneurship and technology application, i.e. the program implementation timeline is not in line with the target timeline due to the different timeline between the partners and the team so it is rather difficult to synergize the program schedule.

V. CONCLUSIONS

A. Conclusions

The program implementation of community empowerment through entrepreneurship and technological application has positive impacts on the two partners (potato chip business groups) in Cibereum Village, Kertasari Sub-district, Bandung Regency, West Java, Indonesia. This can be seen from the implementation of science and technology through facilitation, training, technical tuition, and mentoring to solve problems by providing the achieved solutions as follows: 1) The partners' entrepreneurship capacity, which includes a) The partners have high motivation in running their businesses, b) The partners are able to run a correct business management, c) The partners have a business plan as their business guideline, d) The partners are able to identify market opportunities and market/business networks and 2) The application of technology to the partners, which includes a) Each partner owns a potato peeler machine and the washer, a wave potato slicer machine, a deep fryer machine, an oil draining machine (spinner), a product packaging machine, and a bag sealer in which the machine designs are created by the team, b) The production process is more effective and can produce more potato chips, c) The partners' skills increase by 100%, and d) The products have a better quality.

B. Suggestions

In relation to the implementation of community empowerment program through entrepreneurship and technological application to the two potato chip business groups in Cibereum Village, Kertasari Sub-district, Bandung Regency, West Java, Indonesia, the Executing Team gives the following recommendations:

1. Strong/high commitment is needed for all parties, especially the Executing Team related to community empowerment program through entrepreneurship and technological application to the two potato chip business groups in Cibereum Village, Kertasari Sub-district, Bandung Regency, West Java, Indonesia, because in its implementation, the timeline schedule is not in line with the planned one. This is majorly caused by the incompatible timeline between the partners and the executing team.
2. It is necessary to follow up this empowerment program with other models such as becoming an *usaha binaan* (guided business) and specifying a business class increase target for the partners.
3. To achieve and increase the business development or to increase the business class requires the participation of all parties, including Higher Educations by making collaboration between various fields of science and through the implementation of science and technology sustainability, Local Governments, i.e. the relevant agencies such as Office of Cooperatives and SMEs, Office of Industry and Trade, Office of Agriculture through the facilitation and mediation of their programs, the Companies through CSR programs, and the Business Community and Mass Media both print and online to help accelerate the development of the partner's business through collaboration, promotion, and protection against leading local products.

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