

# Measuring a community productivity based on motivation, skills, and marketing knowledge through a computerized application

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**Abstract.** The study aims to determine the effect of motivational, skill and marketing knowledge on productive. The study uses a survey method with causal analysis (path analysis). The sample consisted of 100 housewives by using simple random sampling technique. The relationship model between variables formulated in the theoretical model using Analysis of Variance (ANOVA). The results showed that variations of the productivity of the people were directly affected positively by variations of motivation, skills, and marketing knowledge. Variations of marketing knowledge are directly affected positively by variations of motivation and skills. Therefore, to increase community productivity can be done by increasing marketing knowledge, motivation, and skills. This can be done by enhancement program through community-based instructional design.

## 1. Introduction

The determination on increasing productivity has been around since the beginning of human civilization. This is comprehensible because productivity represent the existence of desire (*the will*) and human struggle (*effort*) to always improve the quality of life and livelihood in every aspect possible. The productivity of village communities has an impact on their income. Furthermore, this income has an impact on other community problems, including the high number of school dropouts. Children in rural areas grew without sufficient education which results in the low competitiveness of human resources (HR) that are greatly needed for the development of their villages.

The low income per capita of Tangsi Jaya Village, Gununghalu District - West Bandung Regency is a suitable reason for creating activities that can help increase productivity and welfare. Community outreach activities on how to commercialize chili processed products have not been able to improve community welfare. One of the obstacle is community productivity is lower than expected. There is a statement that productivity is generally defined as a measure of the amount of output produced per input unit. This input = output conversion has been on the spotlight in recent years [1]. So, the productivity must be measured based on certain index and for a certain period. Factors that influence productivity, include: personnel, management, education, motivation, technology, and culture [2]. Thus, the factors that influence productivity can be divided into environmental, organizational, group and individual factors. Furthermore, it was stated that individual factors include: the level of academic/technical/vocational education, past experience/age, competence and overall skills, motivation and morale, culture / individual attitudes, individual creativity, absence, job satisfaction, feelings / sense of communal ownership, and appreciation.



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The main problem of rural communities, including the community of Tangsi Jaya village, Gununghalu district - West Bandung regency is the low level of productivity. This is not only seen from the number, but also how productivity of the community was distributed. The factors that might influence the productivity distribution in rural areas are as follows. *Firstly*, low motivation in increasing family income. There is a statement that work motivation greatly influences productivity. High motivation will yield high productivity and low motivation will reduce productivity [3]. It means that one's work motivation will be stimulated when given responsibility and confronted with organizational interpersonal collaborative process, environmental factors have a significant influence [4]. The other opinion says that work motivation is a set of internal and external forces that cause an employee to choose actions and engage in certain behaviors [5]. This limitation shows that work motivation of a person is the strength from within and from outside himself which is used to choose certain actions and behaviors. *Secondly*, the skills of the community in managing processed agricultural products are inadequate. To be successful in the business world, an entrepreneur must be smart and skilled as a samurai who not only knows swordsmanship, but is also skilled in using it and creative in his every maneuver. The skills that must be possessed by an entrepreneur, are: (a) *Basic literacy skills*, which are basic skills that everyone must definitely have such as reading, writing, counting, and listening [6]. (b) *Conceptual skills*, which are mental abilities to coordinate and integrate all organizational interests and activities. (c) *Administrative skills*, which are all abilities related to planning, organizing, arranging staff and supervision. (d) *Technical skills*, which are skills for using equipment, procedures, or techniques from a particular field [7]. (e) *Human relations skills*, which are the skill of developing a harmonious relationship between all members of an institution or organization [8]. (f) *Decision making skills* which are skills to identify problems while offering various alternative solutions to encountered problems [9]. (g) *Time management skills* are skills in using and managing the time as productive as possible [10]. (h) *Technological Skills* which are the abilities of a person in mastering the technology as a means of supporting their work or business [11]. *Thirdly*, the knowledge of the community on how to market processed agricultural products is still inadequate. Then, there is a definition that marketing is the process by which companies create value for customers and build strong customer relationships in order to capture value from customers in return [12]. Therefore, an entrepreneur needs to be provided with marketing knowledge.

## 2. Research method

This research aims to determine the effect of motivation, skills, and marketing knowledge on productivity of community. This study uses a survey method with causal analysis (*path analysis*). The study sample consisted of 100 housewives in Tangsi Jaya Village, Gununghalu District, West Bandung Regency. From the population as well as *sampling frame* of 120 people based on Table of Cohen Manion and Morrison with 90% confidence level at alpha 0.05 with *Simple Random Sampling* technique 100 samples were acquired [13]. Data collection is conducted using questionnaire. Before testing the hypotheses, regression estimation error normality test is done first using the *Lilliefors* technique and the significance and linearity tests of simple linear regression models are carried out according to the relationship model between variables formulated in the theoretical research model using Analysis of Variance (ANOVA).

## 3. Results and discussion

### 3.1. Motivation has positive direct effect on productivity

The calculation results by using the SPSS 20 found that the path coefficient of Motivation ( $X_1$ ) to Productivity (Y) or  $\beta_{y1}$  of 0.202 is significant at  $\alpha = 0.05$ . Thus  $H_0$  is rejected and  $H_1$  is accepted so that it can be concluded that the path coefficient is significant. Therefore it can be stated that there is a positive direct effect of Motivation on Productivity. This supports the theory says that work motivation greatly influences work productivity. High motivation will produce high productivity and low motivation will reduce productivity [3]. It means that one's work motivation will be stimulated when

given responsibility and confronted with organizational interpersonal collaborative process, environmental factors have a significant influence [4]. This is what makes motivation able to increase productivity. Similar opinion is said that motivation and productivity have been the subject of endless debates by motivational theorists. While others argue that motivation can be designed to influence performance and productivity, for others it is a function of ability [14].

### 3.2. Skills have positive direct effect on productivity

The results of calculations by using the SPSS 20 found that the path coefficient of Skill ( $X_2$ ) to Productivity (Y) or  $\beta_{y2}$  of 0.166 is significant at  $\alpha = 0.05$ . Thus  $H_0$  is rejected and  $H_1$  is accepted so that it can be concluded that the path coefficient is significant, therefore it can be stated that there is a positive direct effect of Skills on Productivity. It supports the statement that the individual factors that influence productivity are competencies and skills as a whole [2]. The labor has the right mix of skills at the right time to act as support for doing their work productively [15].

### 3.3. Marketing knowledge have positive direct effect on productivity

The calculation results by using the SPSS 20 found that the path coefficient of Marketing Knowledge ( $X_3$ ) to Productivity (Y) or  $\beta_{y3}$  of 0.233 is significant at  $\alpha = 0.05$ . Thus  $H_0$  is rejected and  $H_1$  is accepted so that it can be concluded that the path coefficient is significant. Therefore, it can be stated that there is a positive direct effect of Marketing Knowledge on Productivity. It supports the opinion that the productivity must be measured based on certain index and for a certain period. Factors that influence productivity, include: personnel, management, education, motivation, technology, and culture. One of the individual factor is the level of previous academic/ technical/vocational education, including the knowledge that has been obtained [2]. Its emphasis on knowledge as a means of production, organizations are challenged to direct the productivity of their employees in making knowledge more productive [16].

### 3.4. Motivation has positive direct effect on marketing knowledge

The calculation results by using the SPSS 20 found that the path coefficient of Motivation ( $X_1$ ) to Marketing Knowledge ( $X_3$ ) or  $\beta_{31}$  of 0.483 is significant at  $\alpha = 0.05$ . Thus  $H_0$  is rejected and  $H_1$  is accepted so that it can be concluded that the path coefficient is significant. Therefore it can be stated that there is a positive direct effect of Motivation on Marketing Knowledge. It supports the opinion that motivation and belief are factors that influence knowledge, and both increase knowledge [17]. Likewise the result of research that student motivation is a very significant factor in achieving academic results [18].

### 3.5. Skills have positive direct effect on marketing knowledge

The calculation results by using the SPSS 20 found that the path coefficient of Skills ( $X_2$ ) to Marketing Knowledge ( $X_3$ ) or  $\beta_{32}$  of 0.130 is significant at  $\alpha = 0.05$ . Thus  $H_0$  is rejected and  $H_1$  is accepted so that it can be concluded that the path coefficient is significant. Therefore, it can be stated that there is actually a positive direct influence of Skills on Marketing Knowledge. It supports the opinion that someone who has conceptual skills is able to coordinate and integrate all the interests and activities of the organization [7]. This includes a person's ability to view the organization as a whole and understand the relationship between its interdependent parts, obtain, analyze, and interpret information received from various sources, including marketing knowledge. This also supports the results of the study that skills training produces an increase in knowledge and competence [19].

## 4. Conclusion

Based on analysis and discussion of the results of research the following can be concluded that the variation in productivity of the people of Tangsi Jaya Village Gununghalu District - West Bandung Regency is directly affected by variations in motivation, skills, and marketing knowledge. Variations in marketing knowledge are directly affected by variations in motivation and skills. Therefore, increasing

community productivity can be done by increasing marketing knowledge, motivation, and skills. This can be done by marketing knowledge enhancement program through community-based instructional design.

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