Improving the potential of *Laku Pandai* (Branchless Banking) to develop sustainable financial inclusion

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**Abstract.** The fund management and investment campaign will become a moral hazard to educational institutions as a center of knowledge and culture if it does not involve the community. Using the Smart Behavior Social Intervention Method in Taruma Jaya Village, Kertasari, Bandung Regency, socialize the skills development pattern and identify Laku Pandai’s banking partners’ income sources. This paper aims to increase product diversification in Laku Pandai associated with the potential for sustainable financial inclusion in the village of Taruma Jaya. Innovation and product alignment with 109 respondents collected and filled out questionnaires consists of the university, industry, government relations, innovation and production processes. The mechanism of interaction between Laku Pandai and the five variables has had a positive impact on the improvement of output at a significant level of 0.05 and the university has the lowest significance compared with other variables. The results show the potential benefits for Laku Pandai when collaboration can boost their products’ performance and enable people around Citarum, in particular Kilometer 0 Area, to find job diversification initiated from support for branchless banking to start up business with access to finance.

1. Introduction

*Laku Pandai* is one of the banking strategies in opening markets and providing financial literacy education to the public. *Laku Pandai*, known as Branchless Bank services, is multi-tasking by looking at the mapping of regional potential [34] in making them agents of change in management of village potential, especially financial support and hub to the financial transaction.

Financial inclusion provides significant benefits to the economy and the region [2]. Financial Access services play a role in accelerating economic transformation, including in rural areas [1]. The *Laku Pandai* can gradually learn to develop environmental and social services around their area to boost finance knowledge and motivation. Honoring customs, local wisdom, and social structures can be used as communication facilities and products that carry the concept of participatory and sustainable development [3]. The cultural and environmental mindset is integrated with macro development in the villages [4]-[5]. The Citarum River, with the nickname the Dirtiest River in the world, has made Indonesia pay more attention to the ecosystems that exist along the riverbanks. The population that is concentrated in cities and industrial areas such as Bandung, Bekasi is a threat to the river’s cleanliness, which is used as a drain for both industry and households.

The role *Laku Pandai* in participating in protecting the Citarum River, including by expanding business, innovating, and also creating products that can make public awareness of the cleanliness of the Citarum River more awake. Population growth of 1.66% per year around the Citarum river flow...
In order to mobilize the potential of the community and region, *Laku Pandai* as one of the active subjects of village development can develop its capacity to better understand the method of change and the degree of adaptation of roles in society and as a business actor, with funding support as branchless banking. Desa Taruma Jaya, Kertasari, Bandung Regency has placed the river of Citarum begins, which is called: “Kilometer 0”.

Eradicating poverty is one of the SDG’s Goal number one has related to how people can get their welfare, fulfill their needs, wealth, and daily life with free and secure. Financial inclusion is one of the starting points of a sustainable development program. When people can get financial access and financial literacy from branchless banking or *lau pandai*, they start open new businesses or find new jobs. Before looking at the *Laku Pandai* growing process’s evolution, it is important to remember its core principles. Socio-economic intervention brings factionalism into practice, a philosophy that confirms actors’ presence and the logic of social action and is seen to create a relationship between them [6]. Actors in the field can act but can also explain the actions and situations in which they involve themselves.

For this reason, socio-economic involvement in *Laku Pandai* or in the form of campaigns against the unbankable situation in rural areas depends on the reflexive ability of the actors[7]. This approach allows actors to engage in the process of reflection, even introspection. They examine how they view and interpret the social world and challenge their capacity to behave and participate in this world [26]-[8]. This approach aims to clarify and examine social relations to determine the actors’ different dimensions [10]. Aspects that need to be done: mapping the problem and making technical mapping and solving the problem of increasing *Laku Pandai*.

Open sessions include a culture that embodies the social figures encountered by actors in the context of their everyday lives, their responsibilities or their social experiences[27]. They reflect the physical, political, and cultural context in which the actors evolve and, through group conflict, help expose the essence of the actors’ social relations [32]. Closed sessions reflect on what was stated at the previous meeting. They paved the way for a process of self-analysis and reflexivity by providing the group the opportunity to evaluate, further improve, and justify their comments.

### 2. Method

The new framework that has arisen has made it possible for the government or other relevant institutions to face various problems and obstacles. Indonesia is a country with a variety of cultures so that the characteristics of its people are also diverse. Some are willing and simple to accept the creation of a system with advanced technology, some are very primitive, it is difficult to accept the creation of the period [29]. Therefore, a feasibility test must be tested on the strategy to be implemented, whether it will reach the community quickly or still take a long time and many costs.

| Model                          | Indicators | Factor Loading | CR   | Cronbach’s Alpha | AVE   |
|--------------------------------|------------|----------------|------|------------------|-------|
| Academic Collaboration         | UN         | 0.921          | 0.82 | 0.87             | 0.708 |
| Collaboration with Industry    | IN         | 0.910          | 0.86 | 0.846            | 0.724 |
| Collaboration with the Government | PM    | 0.916          | 0.963| 0.953            | 0.730 |
| Innovation                     | INOV       | 0.971          | 0.963| 0.955            | 0.775 |
| Process                        | PROD       | 0.957          | 0.967| 0.949            | 0.830 |
2.1. Case study location and period
Our method to exploring this research using a quantitative method, using primary questionnaire data and Focus Group Discussion with socio-economic involvement, consists of arranging community meetings of 10 to 15 people to address a specific topic that has been formalized and proposed by academics[12]-[30]. Period of research from January 2018 to July 2019, in village called Taruma jaya, Kertasari, Bandung, West java Indonesia. The groups are formed in the same emphasis and are used as initiators and actuators of ideas, they put together people who share the same responsibilities or experiences but don’t know each other. Socio-economic initiatives include the same groups meeting on a variety of occasions to examine the different components of the action[15].

2.2. Data collection and analysis
These sessions are sometimes open and sometimes closed, making cohesiveness more possible. The writing method is done by describing and analyzing the phenomena that occur according to the needs in the field (descriptive analysis) [21]. Although it was conducted quantitatively, it was carried out with a depth interview involving key community figures in the Taruma Jaya Village area, Kertasari sub-district, Bandung Regency. This paper survey was conducted on 109 residents and 15 BUMdes officials. The data obtained from the 109 questionnaires were analyzed through the SPSS package program and the three proposed relationships were tested through regression analysis.

3. Results and discussion

3.1. Laku Pandai and community empowerment
The target of this activity is the Citarum watershed community. It is hoped that the community will practice it in their respective homes and become a pioneer in the surrounding community. Communities living around the Citarum watershed through the implementation of project-based learning in making fund processing and investment models with the EIAE cycle (early stage, Intermediate stage, Advance Stage, Expert) Bandura applied learning theory [31].

![Figure 1. Cisanti lake (Situ Cisanti) Natural Scenery in Taruma Jaya, Kertasari, Bandung, Indonesia.](image)

Community empowerment that prioritizes aspects of science and technology always pays attention to campaign sustainability [23]. Whether people realize it or not, the community will change their habits if there is a change in mindset or paradigm of thinking, including in fund management and investment...
[13]-[14]. The connection between the Citarum watershed as an essential instrument in the cultural
development of the surrounding community must be able to stimulate and move in the realm of
sustainable campaigns. Fund management and investment campaign models can produce results based
on the investment model plan at the intermediate, advanced, and expert stages [33].
Community service indicators with five latent variables in partnership with universities, industry or
government agencies, along with product and process innovation in Laku Pandai to enhance the
efficiency of their position in raising financial literacy in rural areas, as summarized in Table 1. We use
the Confirmatory Study of Factors (CFA) to build the Convergent Validity and Discrimination of
Current Constructions based on Larkin and the Construction of Theory of Malone [24].
As shown in Table 1, the findings indicate that the loading indicator factor for these five latent variables
is greater than 0.6 composite reliability (CR) academic collaboration less reliable with value 0.82 than
others compared to industry, Government, Innovation [2]. Cronbach’ Alpha, with value 0.846 less than
other variables, and the extracted mean-variance (AVE) for the four latent variables, respectively,
industry, government, innovation higher than the minimum threshold values of 0.724, 0.730, 0.775 ,
0.830 rather than collaboration with university consist 0.70. They were suggesting appropriate
construction reliability and convergent validity, from questionnaire and respondent.

| Model | UN | IN | PM | INOV | PROD |
|-------|----|----|----|------|------|
| UN    | 0.821 |     |    |      |      |
| IN    | 0.621 | 0.910 |     |      |      |
| PM    | 0.602 | 0.916 | 0.963 |     |      |
| INOV  | 0.601 | 0.971 | 0.963 | 0.955 |     |
| PROD  | 0.623 | 0.957 | 0.967 | 0.949 | 0.830 |

3.2 Triple Helix and Laku Pandai
Table 2 shows the AVE’s square root for the constructs and the association between them, suggesting
that the model has discriminative validity [19]. A multiple regression study was used to assess the 0.05-
level influence of Laku Pandai collaboration with University 0.821 while industry with value higher
0.910, Government 0.963, 0.955 with innovation and product process 0.830. Almost all variables has a
significant impact to financial inclusion, University has a responsibility of morality to becoming
guardian angel of villages that need training guidance and assistance. The industry has involve as a
business hub between market and village, most of their product and services still based on traditional
collaboration environments no wonder that significance level rises at 0.910. Government boost their
value from many programs and funding that we called Dana Desa, every village that deserves to receive
block grant one billion rupiah value of government 0.963 triggering to that issues. Various of product
also contribute to financial inclusion, market will expanding to new product and new market, it means
new income to all villagers and farmers. The value 0.830 for this variable still low even though bigger
than university.

Table 3. Descriptive statistics of the relationship Triple helix with smart behavior.

| Model | Mean | S.D. | Min | Max |
|-------|------|------|-----|-----|
| UN    | 4.210 | 1.411 | 1   | 8   |
| IN    | 4.721 | 1.121 | 1   | 8   |
| PM    | 4.332 | 1.301 | 1   | 8   |
| INOV  | 4.112 | 1.293 | 1   | 8   |
| PROD  | 4.229 | 1.336 | 1   | 8   |
The descriptive statistics in Table 3 display the mean scores for Laku Pandai partnerships with universities, industry, and government. Scores range from 4,112 to 4,721, enabling all stakeholders to engage and generate creativity and collaborate to engage in research projects with academics. Any social initiative needs a service team, coordinated and mobilized in various roles[15]. They are helping the group to establish itself and assist it in the study of its actions. They are positioned with the party that made improvements to it. Innovation still placed behind proves that empowering civilization to eradicate poverty from funding access than start new business is part of stakeholders’ responsibilities. The planning to create more innovation than collaborative between academicians, industry, and government to create more product, more innovation should develop more intensively.

Table 4. Regression related to Laku Pandai Products.

| Model     | Unstandardized Coefficients | Std. Error | Standardized coefficients | t   | Sig  | Collinearity Statistic | Tolerance | VIF  |
|-----------|-----------------------------|------------|---------------------------|-----|------|------------------------|-----------|------|
| (Constant)| 0.513                       | 0.216      | 1.691                     | .091|      |                        |           |      |
| University| -0.117                      | 0.911      | -0.119                    | -1.211| .241 | 0.316                  | 2.317     |      |
| Industry  | 0.799                       | 0.814      | 0.734                     | 9.110| .081 | 0.395                  | 2.369     |      |
| Government| 0.231                       | 0.079      | 0.165                     | .027| 0.775| 0.571                  | 1.921     |      |

The regression model for increasing program ability is shown in the table (4), which is statistically important. Multiple regression analysis is used to analyze the relationship between program partnership with Triple Helix (government, business and academia) and Production Diversification Process success at a meaningful level of 0.05. Normality was measured by skewness and kurtosis scores of independent and dependent variables ranging from 0.241, 0.81 and 0.775, respectively. They are appropriate in terms of normality, since the absolute values of skewness and curtosis are less than 2 for each measure[17]-[16].

Table 5. Regression related to Laku Pandai Innovation.

| Model     | Unstandardized Coefficients | Std. Error | Standardized coefficients | t   | Sig  | Collinearity Statistic | Tolerance | VIF  |
|-----------|-----------------------------|------------|---------------------------|-----|------|------------------------|-----------|------|
| (Constant)| 0.371                       | 0.210      | 1.442                     | .177|      |                        |           |      |
| University| 0.008                       | 0.066      | 0.007                     | 0.181| .921 | 0.377                  | 2.544     |      |
| Industry  | 0.688                       | 0.084      | 0.681                     | 9.221| .061 | 0.421                  | 2.310     |      |
| Government| 0.211                       | 0.071      | 0.171                     | 2.024| .51  | 0.535                  | 1.781     |      |

Table 5 tested Laku Pandai Innovation based on regression analysis with a significant relation between triple helix with innovation 0.921, 0.61 and 0.51. With collinearity test University have big portion to develop innovation in society with basic research and applied policymaking. The regression showing that industry need collaborative research and design with the University to create more innovation. The ideal situation that Teaching factory will be helped each stakeholder contribute by their functionality, creating Laku pandai as one alternative among the many solutions to alleviate poverty and create new jobs.

Banks must also play an active role in educating clients to realize the dangers inherent in branchless banking, so they can do so themselves by self-service banking, i.e. on the customer’s mobile phone. In this way, the idea of prudence can be applied not only by the bank but also by the customer. Harmonization and coordination of cooperation between related parties, whether academia, government, and industry, is required to support this smart program by developing technologies and types of products, in addition to how to increase public confidence in the use of these smart salutary services.
4. Conclusion
Banking agents run financial inclusion services on cell phones. In view of the fact that it is not possible for him to open a branch office in a remote village that needs a large amount of money. As a result, the public, apart from understanding bank insights, is also expected to understand technology insights (mobile phones). Without awareness of education on this topic, the achievement of inclusion goals can certainly be slowed down. However, what needs to be considered here is the effort of banking institutions to provide daily advice so that public awareness can grow and promote confidence in the services given. Another issue that emerges when the infrastructure is insufficient is, in particular, that the communication network in any remote village is still not adequately available, which can interfere with the smooth running of the integration process, so that the government acts as a facilitator. i.e. providing facilities or assistance for infrastructure and communication networks to help the public needs. Laku Pandai in village communities, particularly those in the interior, are accustomed to keeping their assets or resources in the form of savings. The first purpose is to provide the community with information and understanding so that they are aware of banking, so that community-owned assets can be used more productively. For example, certain people’s excess funds may be used as business capital for other people. This rotation of the flow of funds would facilitate the balance of income which, in turn, would lead to an economic balance. Second, financial inclusion is one way of creating a social balance. Minimizing the income gap in society would promote the achievement of a socio-economic balance in the society. People can indirectly help each other to transfer funds through banking intermediation.

Indonesia is considered to be the last nation to adopt a plan for financial inclusion. Financial inclusion will stimulate higher national incomes from increased investment and public savings in banking institutions.

The government needs to cooperate with the private sector industry and academia to create innovation and product diversification in particular parties or companies. Program aimed at raising awareness among rural and rural communities about the functions and roles of banks in making more productive use of wealth. This is expected to boost potential economic development. Providing knowledge about the benefits of Laku Pandai to increase financial literacy capacity. In this role, academics can provide input or shake their awareness as a group, and sometimes show contradictions, about what should be done. The readiness to practice on branchless banking in implementing its role in society can trigger an independent village's development if collaboration is carried out. The program has a socio-economic character that stands out because its function is related to the banking world[27]. Thus, they break with the traditional and academic positions of axiological neutrality in which the socio-economic aspects are expected to develop socio-economic reasoning in increasing their capacity as reformers of financial literacy and village development. Further research needs to elaborate how technology acceptance model from Laku Pandai will be affect trust and awareness of innovative mindset.

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