

# 2nd International Conference on Informatics, Engineering, Science and Technology (INCITEST 2019)

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Part 1 of 3

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## Preface

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## Preface

It is our great honor and pleasure to introduce the Proceedings of the 2<sup>nd</sup> International Conference on Informatics, Engineering, Science, and Technology (INCITEST 2019). The second INCITEST was organized by Universitas Komputer Indonesia and was held in Bandung, Indonesia, on 18 July 2019. With the theme **“Building Competitive Advantage to Face Industry 4.0”**, the conference provides a platform to share ideas and current research in the areas of Informatics, Engineering, Science, and Technology with the participants from the scientist, engineers, researchers, practitioners, civil society and organization representative.

Following the success of the first INCITEST, the enthusiasm of second international conference INCITEST has increased. The high enthusiasm was reflected from high number of paper submission with more than 350 papers from the participants coming from several cities and countries. Therefore, it is allowed multinational and cultural exchange of ideas in facing the issue and challenges in Industry 4.0. In order to improve the quality of the papers and extend the publication, all papers have been carefully selected and peer-reviewed.

This conference can only succeed as a team effort. Our sincere thanks conveyed to the Rector of Universitas Komputer Indonesia for his support to the success of the event. We would also like to thank all participants for their contributions to the Conference program and for their contributions to these Proceedings. We also honored and grateful with the cooperation between the organizers of INCITEST 2019 with the international reputable publisher, Institute of Physics (IOP) for publishing the selected conference papers. We hope that the collection of the paper will be a valuable resource and will stimulate further research. Our highest appreciation also goes to the Reviewers, Editor and Advisory Boards who helped us maintain the high quality of manuscripts included in the Proceedings published by IOP. It is our pleasant duty to acknowledge the Directorate of Higher Education and Ministry of National Education for the budget support in INCITEST 2019.



We are looking forward to the third INCITEST next year that will be held on July, 2020 at the campus of Universitas Komputer Indonesia, Bandung, Indonesia.

Thank you,

Best Regards,

**Dr.Lia Warlina**

**The Chief of the Conference**

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# Development of Entrepreneurial Characteristics and a Good Business System in Rural Communities Using Information Technology

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**Abstract.** The purpose of this research is to implement and develop the characteristics of entrepreneurship and accounting systems that already exist in people living in rural areas. This research method used a descriptive method, which presents farmer's income data by examining several existing variables. This study indicating that rural communities do not have good entrepreneurial characteristics and do not have a good accounting system in the process. So, as the result, this research stated that entrepreneurial traits must be instilled from an early age to teach rural communities not to be pegged to become mere laborers. This research was done by discussing entrepreneurship, its characteristics, and an accounting system suitable for farmers by utilizing existing technology Implementing entrepreneurial characteristics is an absolute step that must be done by the government through a fine coaching program.

## 1. Introduction

At this time, opportunities in business are very broad and always growing. Heretofore, business already has several types. Based on the type of activities, business is classified as an extractive business (mining), agricultural business (agriculture), industrial business, and service business [1].

Indonesia is a developing country with abundant natural resources. There are numerous and varied agricultural products. Indonesia is very suitable to get the nickname of an undeveloped country because of this. Therefore, agricultural products must be properly processed and be useful for the community [2]. This era of globalization, free trade can be achieved by any nation including Indonesia. Indonesia has long benefited from its geographical location right between two continents, Asia and Australia. This makes Indonesia a place of transit for traders who used to use water as their main access. Many stop by to trade in Indonesia before proceeding to the next destination. They teach how to trade or do business at that time. In fact, the Indonesian people have a business spirit that has been planted long ago. Every person does have their own entrepreneurial traits, it can be viewed on their creativity, intelligence, and foresight seeking opportunities [3]. Indonesian people have been provided with a lot of capital in the form of their production. They must be in a position to process natural resources well and according to standards. Indonesia's agricultural products in the form of food such as rice, vegetables, and fruits have been widely exported throughout the world. Now Indonesia has been the world's largest producer of agricultural products [4].

However, this is inversely proportional to the farmers who process it. Most of them live less economically [5]. Even though they are people who cultivate agriculture and make Indonesia is proud of being in a position to export their products to the world. The government should be offered



counseling about entrepreneurship so that they can increase their income levels. Even they just have to use technology to instill their entrepreneurial spirit [6]. Technology must be their means to market their products [7]. This is not widely known in the village community. Due to lack of insight, sometimes there are people who want to keep their culture that tends to be primitive and far different from this era of globalization [8]. Therefore this research’s purpose is hoping the society to implement and develop the characteristics of entrepreneurship and accounting systems that already exist in people living in rural areas, not only a theory, but also process and practices [9, 10].

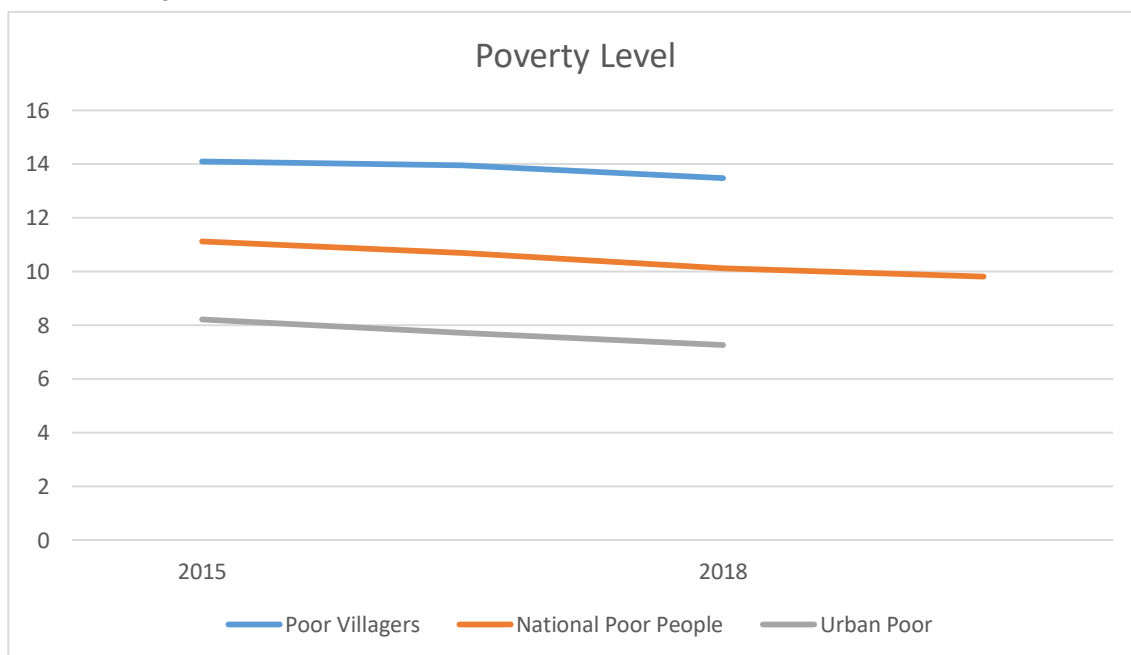
**2. Method**

This research used descriptive methods that examining several existing variables to presents farmer’s income data. We will see how much the income of the farmers or the village community, the types of work that can be developed in the rural area. So, we will find the right way to improve their income.

**3. Results and Discussion**

In the expression In the attachment of the Minister of Cooperative and Small-Scale Enterprise Ministerial Decree Number 961 / KEP / M / XI / 1995, it states that: (a) Entrepreneur are people who have the spirit, attitude, behavior, and entrepreneurial abilities; (b) Entrepreneurship is the spirit, attitude, behavior and ability of a person in handling a business or activity that leads to an effort to find, create and applies new ways of working, technology and products by increasing efficiency to provide better services and or gain more benefits [2].

In 2015, trillions of funds were expended by the government on budgets and villages. The aim is to create and overcome the social gap between rural and urban communities. The government issued 20 trillion in funds for the year. Then in 2016 amounted to 47 trillion and 60 trillion in 2017 and 2018. However, because the funds being crossed are not on target, the program does not function. Some have received the funds but because of a lack of insight into business and entrepreneurship. These funds are not used for venture capital. Nevertheless, the funds are used for their personal interests such as renovating their homes, buying vehicles and others. Only a little money is used for business capital [7]. The mindset of the pegged village people who do not think broadly becomes the main factor that causes (see Figure 1).



**Figure 1.** Chart of Poverty Rates per Region

It can be observed in the data that recorded in Figure 1, how far the difference in the level of poverty in the village compared to the city. In fact, most of the city's wealth originated in the village. This is why we need to apply the entrepreneurial spirit of rural communities to overcome these gaps. According to David (1996), the character/profile of an entrepreneur is as follows (see Table 1).

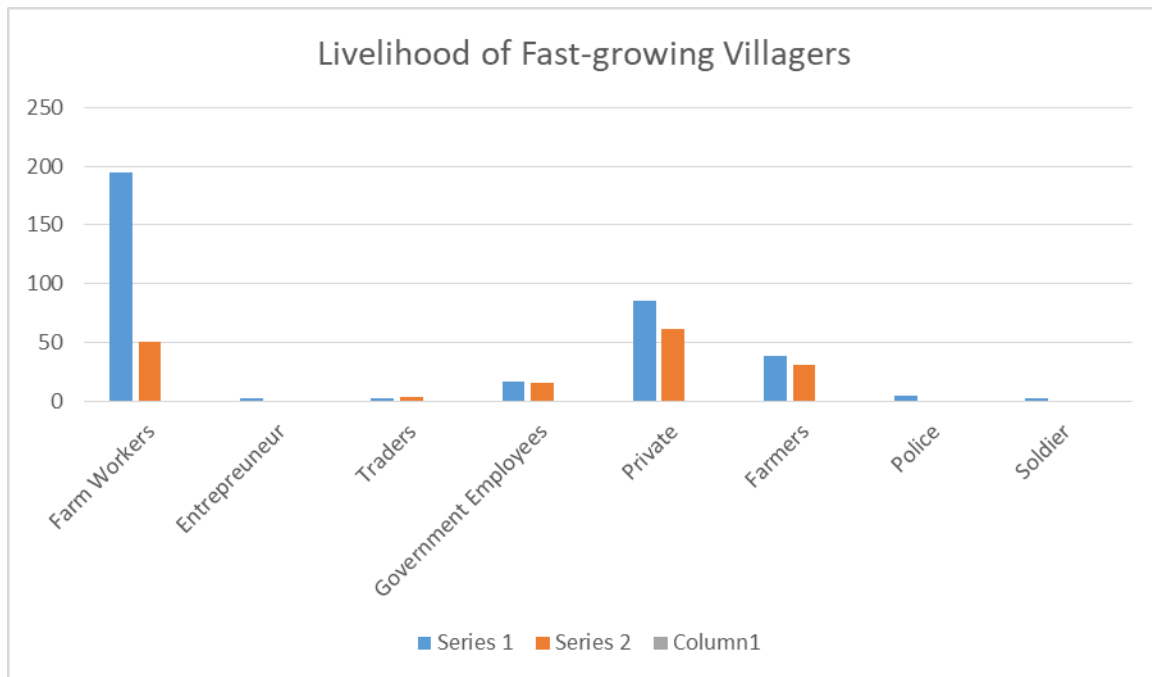
**Table 1.** Profile and Characteristics of Prominent Entrepreneurs

<b>Profile Characteristics</b>	<b>Characteristics of Prominent Entrepreneurs</b>
High achievement	Experts get achievements.
Risk taker	They are not afraid to take risks but will avoid high risk if possible.
Fixers	They are responsive to identifying and solving problems that can prevent their ability to achieve goals.
Status Finder	They do not allow the need for status to interfere with their business mission.
High Energy Levels	Dedication and workaholic for his success.
Confidence	High confidence level.
High Emotion ties	Separating between emotional and career relationships.
Personal Satisfaction	Love high complexity with a low formalization

Table 1, Villagers are usually afraid to take risks even though they have achievement. For example, Sundanese culture teaches its citizens to not go out far from their villages to find a job. This culture must be lowered to implement its entrepreneurial characteristics. Then people are often slow in solving problems. Whether it is for a big or a small problem. Insufficient confidence to express opinions and overcome problems makes rural communities less developed.

They cannot separate emotionally from the career they live. Sometimes there are parents who do not share their child's career goals. So they feel pressured if they choose a career that they will choose then choose to follow the words of their parents. Even though, pastoral communities have high energy levels. They are tireless to work. Every morning they always leave to farm and raise livestock and it is repeatedly happen every day. This has become their personal satisfaction. Tirelessly, never feel bored despite repeated activities.

If this matter is linked to entrepreneurship, rural communities can make tiny micro-enterprises. A micro business is a productive business owned by individuals and/or a business entity that meets the criteria of a micro business. Whereas small business is a productive economic business that is independent, carried out by individuals or business entities that are not subsidiaries or branches of companies owned, controlled or become direct or indirect parts of medium or large businesses that meet the criteria of small businesses as referred to in Constitution (see Figure 2).



**Figure 2.** Charts of Livelihoods of Cepagan Village Residents

Figure 2 in Cepagan Village, Warungasem, Batang District, the community prefers to be a farm laborer rather than being a farmer. Farmers are only one who helps the activities of farmers who in fact are people who have the farmer. Farmers pay agricultural laborers below the standard according to how many hectares of plantations they are working on. Only a few people decide to become a trader. Three women and two men chose a trading business as a stall owner. This is a good capital for the village because there are people who dare to start small business. The government must provide effective guidance on micro business. Farmers must be taught how to do decent business so as not to continue to be farm laborers. They must be offered employment for others [6].

Rapid population development must be a reference for entrepreneurship and provide employment for others. Every country already has successful entrepreneurs in their fields such as Bill Gates, Mark Zuckerberg, Jack Ma etc. of all Indonesian people, only 18% are successful entrepreneurs. This shows that there are a lack of interest in being an entrepreneur. Then the entrepreneurial spirit must be instilled early from the lowest elements of society. Planting the nature of honesty and dare to be an important foundation of becoming an entrepreneur. In schools of various levels must be given lessons on entrepreneurship. In Indonesia, most entrepreneurs are located in urban areas. There are rarely those based in the countryside. This also makes entrepreneurs less understood in rural areas. If they start entrepreneurship, they usually experience continuous losses and cannot find a way out. Educational factors are the things that make these losses. Lack of insight about a suitable recording system makes business owners often experience cheating. They do not use a sound recording and auditing system. The entrepreneur only records expenses and income and audit verbally nor in writing. Accounting is just an information system in the process of identifying, measuring and reporting information, especially finance in both profit-seeking companies and non-profit-oriented companies. The accounting must be implemented as an orderly and reliable recording system. This system is called upon to reduce the level of fraud and can be used as a guide for making a decision.

The balance sheet is the message that must be made/compiled by the company to describe the wealth and obligations it has. Income is a report that has a function to provide or analyze the development of the company in the future which is seen from how much the ability of the company to



be able to generate profits in accordance with the period of time according to the accounting benefits [3].

However, the report is directly implemented for new entrepreneurs in the village. They will easily forget how to place significant accounts. Their memory will not be tough to remember how to record it. Therefore, in this era of globalization, it has been created an accounting application that is easier to run, namely the accurate program. An accounting recording program is made in Indonesia in the Indonesian version. The income statement is a report that has a function to provide or analyze the development of the company in the future which is seen from how much the ability of the company to be able to generate profits in according to the period set in accordance with the accounting benefits. Therefore, in this era of globalization, it has been created an accounting application that is easier to run, namely the accurate program. An accounting recording program is made in Indonesia with the Indonesian version.

#### 4. Conclusion

Implementing entrepreneurial characteristics is an absolute step that must be done by the government through a fine coaching program. Entrepreneurial traits must be instilled from an early age to teach rural communities not to be pegged to become mere labourers. Supporting applications have been provided so that they can help with entrepreneurial activities, and repeat the risk of recording errors.

#### References

- [1] Eversole, R., Barraket, J., and Luke, B. (2013). Social enterprises in rural community development. *Community Development Journal*, **49**(2), 245-61.
- [2] Zimmerer, Thomas W, Norman M. Carboruugh, (2004), *Introduction to Small Business Entrepreneurship and Management*, **2**, 1-10.
- [3] Wood, M. S. (2011). A process model of academic entrepreneurship. *Business Horizons*, **54**(2), 153-61.
- [4] Solichin, Endang, (2005). *Study of Entrepreneurship Characteristics and business climate and contribution to business progress (study on food agro-industry on the scale of small businesses in Kediri)*, **1**, 5-12
- [5] Littunen, H. (2000). Entrepreneurship and the characteristics of the entrepreneurial personality. *International Journal of Entrepreneurial Behavior and Research*, **6**(6), 295-310.
- [6] Gaspersz, Vincent. (2003), *Integrated Scorecard with Six Sigma Performance Management System, for Business and Government Organizations*, **2**, 12-20.
- [7] Kevin D Johnson (2013). *The Entrepreneur Mind, 100 Essential Beliefs, Characteristics, and Habits of Elite Entrepreneurs*, **3**, 8-18.
- [8] Soegoto, E. S. (2013). *Entrepreneurship Menjadi Pebisnis Ulung*. Elex Media Komputindo, **2**, 32-41.
- [9] Kuratko, D. F. (2009). Entrepreneurship. Theory, Process, Practice, South-Western Cengage Learning. *McClelland's Theory of Needs*, **1**, 28-39.
- [10] Hisrich, R. D., Peter, M. P., and Shepherd, D. A. (2008). Entrepreneurship. Chriswan Sungkono dan Diana Angelica (translation).