

# TECHNOPRENEURSHIP: THE INFLUENCE OF PARTNERSHIP STRATEGY ON AGRICULTURAL START UP'S BUSINESS SUCCESS AND ITS IMPLICATIONS WITH THE COMMUNITY ECONOMIC RESILIENCE

(Comparative Study on Start Up of Desa Apps in Bantul Regency, Special Region of Yogyakarta  
and Among Tani in Batu City, East Java)

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**ABSTRACT:** This research aimed to examine the partnership strategy at each the Desa Apps's and Among Tani's start up in the field of agriculture, identified the driving and inhibiting factors of the Desa Apps's partnership strategy in Bantul regency, Special Region of Yogyakarta and the Among Tani's in Batu city, East Java, and the last was to analyze the effect of the partnership strategy of each start up business success, and its implications with the community economic resilience of the people who worked as local farmers. This research used a qualitative approach with a comparative study, which the data collection techniques used interviews and documentation. The results of the study proved that both of the Desa Apps and Among Tani had similarities and differences in their own 2 partnership strategies, offline and online. Likewise the driving and inhibiting factors to their partnership strategy. The lack of Desa Apps's business success on some indicators had a positive effect, although not significantly, while Among Tani's business success had a positive effect on the community economic resilience of the people who worked as local farmers.

**KEYWORDS** -Technopreneurship, Partnership Strategy, Business Success, Community Economic Resilience

## I. INTRODUCTION

Currently, many countries are trying to encourage the development of technopreneurship in line with the important role of using technology for economic progress (Fowosire et al., 2017). Unfortunately, there has not been enough research related to technopreneurship conducted in developing countries that focuses on agriculture for community economic resilience. For example, the research that conducted in several countries such as Thailand (Ellis et al., 2012), Africa, China and several developed countries such as America (Trendov et al., 2019; Devi, 2009), and the European Union (Horizon 2020 Societal Challenge 2 (SC2), 2019) which focuses on several sectors of agriculture and food which are rapidly being transformed by disruption of digital technologies such as blockchain, Internet of Things (IoT), Artificial Intelligence (AI), and Immerse Reality (IR) with the deployment of cellular technology, sensing services far, and distributed computing is very accurate at a very large scale.

On the other hand, conditions in developing countries are predominantly dominated by the primary sector in the form of utilization of natural resources such as agriculture, indicating the fact that the investment structure is far dominated by the tertiary sector in the form of service industries such as technology and trade, or the secondary sector in the form of manufacturing and procurement such as construction, which causes economic imbalance between technological progress and conventional agricultural systems. As happened in Indonesia, especially the Bantul regency in Special Region of Yogyakarta, where per 2018 the percentage of the population working in the secondary sector was 21.70%, the tertiary sector was 19.87%, and the primary sector

was 14.53% with this proportion. This indicates the high under-utilities for workers with the lowest productivity (Badan Pusat Statistik Kabupaten Bantul, 2019: 73), as well as the Batu city in East Java in the same year with the percentage of the population working in the tertiary sector is 58.24%, the primary sector is 25.55 %, and the secondary sector is 16.21%, in which the primary sector jobs are in fact influenced by seasonal factors, so they are uncertain (Badan Pusat Statistik Kota Batu, 2019: 27).

Agriculture, which is all business activities that include the cultivation of food crops, plantations, fisheries, forestry and livestock (Badan Pusat Statistik Provinsi Daerah Istimewa Yogyakarta, 2019: 1), does have very complex problems. The low digital literacy of elderly local farmers, for example, is one of the toughest obstacles to be able to compete in the era of the Industrial Revolution 4.0, where the rapid development of technological sophistication can disrupt the economic order in conventional agriculture.

Encouraged by an increase in the number of start ups every year in the Special Region of Yogyakarta and East Java (MIKTI dan Teknopreneur Indonesia, 2018), this study aims to examine the partnership strategies at each of the startups in Desa Apps and Among Tani in agriculture towards local farmers who are still has low digital irrationality, identifies the driving and inhibiting factors for the partnership strategy of Desa Apps in Bantul regency, Special Region of Yogyakarta and Among Tani in Batu city, East Java based on agricultural conditions, and the last is to analyze the effect of partnership strategies on the success of their respective businesses start up Desa Apps and Among Tani, as well as the implications for the community economic resilience of people who work as local farmers.

## **II. THEORETICAL AND CONCEPTUAL FRAMEWORK**

Technopreneurship is a new trend in today's digital economy, which is part of the development of entrepreneurship, by providing an overview of entrepreneurship using technology-based innovation. Fowosire (2017) explains that "Technopreneurship consists of identifying modern technology and even creating technological opportunities by presenting commercial products and services". Start up is a company designed to grow fast (Graham, 2012). Its growth does not have to use technology, but in the present era, to take advantage of opportunities to grow rapidly in a large area, the use of technology is an alternative.

Many applications are made and developed according to target users and business models in order to be able to answer market needs. A mobile application or what is often referred to as an app, is a type of application software designed to run on mobile devices, such as smart phones or tablet computers (Techopedia, 2018). Because of the competition is fierce and new technologies are created rapidly, while the old ones will develop even more if they are able to survive, the right strategy is needed to respond to change.

In running a business, strategy plays a vital role in achieving goals and surviving in business competition. Hartono (2005: 31-32) defines a company strategy as a "game plan" which is carried out by management to be able to position the company in the chosen market arena in order to win the competition, satisfy its customers, and achieve good business performance.

Before choosing and determining what strategy to use, it must first be taken into account in a strategic planning method that can be considered through SWOT Analysis. There are 4 quadrants with 2 dimensions consisting of internal organizational factors which include strengths and weaknesses, as well as external factors from the environment which include opportunities and threats. Strengths and opportunities, helping to achieve goals. Meanwhile weaknesses and threats, endanger to achieve goals (Gürel and Tat, 2017: 995).

For any business, a five forces framework can help a business institution understand its industry structure and scout for positions that are more profitable and less vulnerable to attack. With careful calculation on rivalry among existing competitors, threat of new entrants, bargaining power of buyers, bargaining power of suppliers, and threat of substitute products or services is very useful to find competitive advantage (Porter, 2008). A strategic partnership strategy can help to form an ecosystem of strategic alliances to maximize

competitive advantage (IMD, 2020). Arranging a comprehensive strategy with great care, is very important to achieve business success.

Success has other dimensions such as financial rewards and satisfaction which for many business owners are just as important, or more than monetary rewards, which can motivate them to work hard and take extraordinary risks (Hill, 2020). Many parameters are used to measure business success. There are simply 4 top indicators of business success, namely profit, growing network, team satisfaction, and business owner satisfaction (Cutcher & Neale Accounting and Financial Services, 2016). Business success is also influenced by various conditions from the business objectives, the strategies, and the economic resilience of the community itself.

The community economic resilience can be conceptualized as the economic capacity of the society as a whole to ward off the negative economic impacts of disruption and to adapt to changing economic conditions due to disruption in order to maintain the economic standard that does not decline in life (Dinh and Pearson, 2015). Indicators to determine the community economic resilience are needed to indicate economic conditions.

A research conducted by the Colorado Office of Economic Development and International Trade (2016) states that "Recurring driving factors that communities found important to their resilience include: Quality of Life; Industry Diversity; Community Leadership; Education and Healthcare; Transportation Access". Rural communities with their main livelihood base in the agricultural sector tend to have the same characteristics and general conditions related to the things that drive or inhibit community economic resilience.

### **III. METHODS**

This research used a qualitative approach, with a comparative study. Just as "structured focus comparisons" require collecting data on the same indicators across units (King et al., 1994: 45-46), it is a way of systematizing the information in the following case studies so that they can be used for descriptive or causal inference. This comparative research study was conducted in March-April 2020 in 2 start ups, namely Desa Apps and Among Tani, which both have a smart farming concept with the priority of users being local farmers.

The research location was also selected with a sample equal to districts and cities from different provinces, namely Bantul regency (Special Region of Yogyakarta) and Batu city (East Java). Data collection techniques in this study were divided into 2, primarily using interviews, while secondary using documentation.

### **IV. DISCUSSION**

#### **1. Comparison of Partnership Strategies in Each Start Up Desa Apps and Among Tani in the Agriculture Sector against Local Farmers Who Still Have Low Digital Turnover**

A very significant difference appears in the SWOT analysis used to determine the strategy carried out at each start up.

**Table 1** SWOT Analysis of Desa Apps

		<b>Strengths</b>	<b>Weaknesses</b>
<b>Internal Origin</b> (Attributes of the Organization)	1.	The existence of the Tridharma Perguruan Tinggi program from Gadjah Mada University as an operational basis.	1. The delay in the formulation of the vision, mission and values being developed.
	2.	The sustainability of the partnership program through community service programs from the Tridharma Perguruan Tinggi.	2. Limited number of Human Resources (HR) for operational processes.
	3.	The existence of partnership network development efforts.	3. Funding constraints in start-up operations in the field.
	4.	Various features in the application.	4. Constraints on developer feature updates.
	5.	Loyalty of Human Resources (HR) in start-up management.	5. There are bugs in the application.
		<b>Opportunities</b>	<b>Threats</b>
<b>External Origin</b> (Attributes of the Environment)	1.	The large number of farmers in Bantul district.	1. Low digital literacy of elderly farmers.
	2.	The enthusiasm of farmers to partner.	2. Limited network and offline partnership program.
	3.	Availability of internet network to support government programs.	3. Little diversification of agricultural commodities produced by farmers.
			4. There are still many users who buy and sell agricultural commodities outside the application.
			5. There is competition with e-commerce that has a similar business model.
		<b>Helpful to Achieving the Objective</b>	<b>Harmful to Achieving the Objective</b>

In addition, based on the SWOT analysis of Table 1 and Table 2, there are several similarities between Desa Apps and Among Tani in terms of the strategies used, namely offline as well as online. The following is also the equation of partners as priority target users, namely local farmers in the form of farmer groups and farmer group associations (*gapoktan*) and partners in the form of farmers, traders, government, and the private sector.

**Table 2** SWOT Analysis of Among Tani

		<b>Strengths</b>	<b>Weaknesses</b>	
<b>Internal Origin</b> (Attributes of the Organization)	1.	There is a very strong legal basis for the vision and mission.		
	2.	Strong funding support from the Batu City Regional Budget (APBD) for operations.		
	3.	The complexity of the partnership network.		
	4.	The sustainability of the partnership program for agricultural regeneration and the formation of Pelopor Pemuda Tani.		
	5.	The quantity and quality of Human Resources (HR) who are very capable and dynamic in management and start-up partnerships.		
	6.	The variety of features in the application.	1. Constraints to developer feature updates. 2. There are bugs in the application.	
	7.	Competitive advantage in the form of a comprehensive partnership in handling the Complaints feature in the online application, along with providing concrete assistance to farmers offline.		
	8.	Giving rewards in the form of additional salaries for the CROP Team (Quick Response to Public Opinion) who were successful and punishment in the form of a cut in salary for the CROP Team (Quick Response to Public Opinion) who failed to handle agricultural problems in the field which were reported in the Complaints feature.		
<b>External Origin</b> (Attributes of the Environment)	<b>Opportunities</b>		<b>Threats</b>	
	1.	The large number of farmers in Batu city.	1.	Complex bureaucracy in the government.
	2.	The high enthusiasm of the young farmers.	2.	The low digital literacy of elderly farmers.
	3.	The breadth and variety of agricultural commodities in Batu city.	3.	The many and strong horticultural broker networks in Batu city.
	4.	The rapid development of the partnership network with local farmers in Batu city.	4.	There are still many users who buy and sell agricultural commodities outside the application.
5.	Integrated and monitoring of partnership network database comprehensively.	5.	There is competition with e-commerce that has a similar business model.	
		6.	Unavailability of internet network at several points in Batu city.	
		<b>Helpful</b> <b>to Achieving the Objective</b>	<b>Harmful</b> <b>to Achieving the Objective</b>	

The partnership strategy used also has differences in terms of offline and online strategies. Offline in terms of targeting, from the number of users in Bantul regency, formally, Desa Apps is still partnering with 1 farmer group, namely the Women Farmers Group (KWT) Multi Sari in Srandakan sub district and informally

with 1 Farmer Group Associations (Gapoktan) Sari Kismo, meanwhile Among Tani partners with farmer groups, farmer group associations (gapoktan), and Pelopor Pemuda Tani Team as users in 3 sub districts in Batu city, namely Bumiaji, Junrejo, and Batu districts.

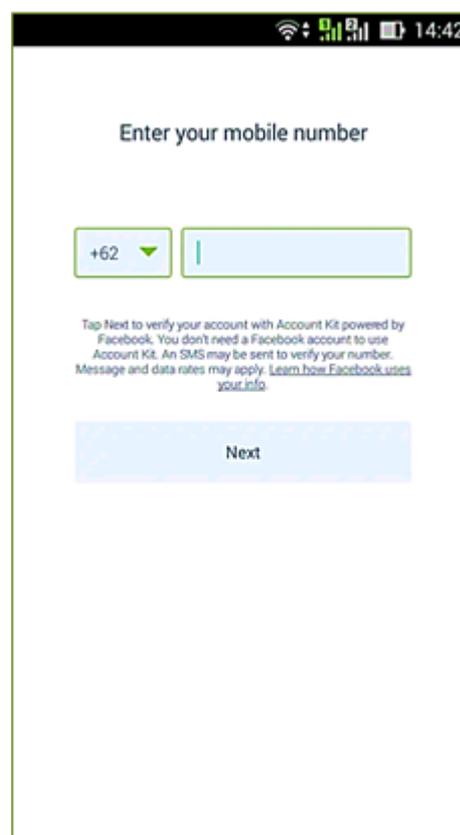
As a partner, there is little difference between Desa Apps and Among Tani, where Among Tani has a stronger partnership strategy, compared to Desa Apps. The process of handling agricultural problems among Among Tani through the Keluhan feature does not stop with the application, but also provides concrete solutions in the field to related farmers through the CROP Team (Quick Response to Public Opinions) after receiving an instruction report from the Command Center. Whereas the process of handling agricultural problems conveyed by farmers through the application, by Desa Apps, so far there has been no direct follow up to the field if there is no funding assistance.

The difference in online strategies is that there are various features developed in each application. Desa Apps provides features such as Informasi Cuaca, Informasi Harga, Catatan Tani, Pasar, Artikel, Tanya Jawab, Info Kantor, and Info Toko. Meanwhile, Among Tani provides features such as Cuaca, Tanam, Harga Produsen Hari Ini, Produk, Kanal Berita, Panduan menu in Informasi features, Diskusi menu in Informasi features, Direktori menu in Informasi features, and Keluhan.

To be able to use the various features in the Desa Apps application, the user must download the application first through the Play Store and activates an account as shown in Figure 1 and Figure 2. The Desa Apps application is still available for Android-based mobile phones only. The activation process in the application is quite easy, just registering an account in the form of a name, an active mobile number, and an e-mail.



**Figure 1**  
Desa Apps Application Page



**Figure 2**  
Desa Apps Account Activation Process

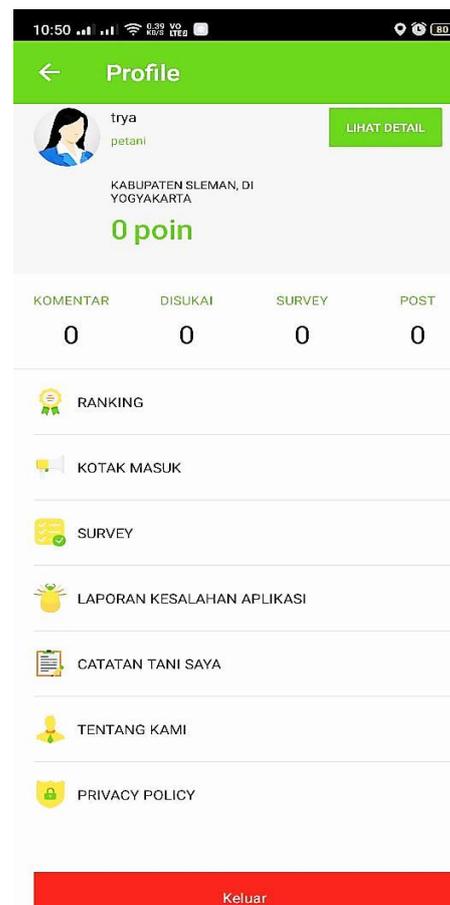
Source: Desa Apps (April 12, 2020), Edited by Author

After completing verification of the Desa Apps account, the user can enter the Home page which displays various features of Desa Apps as shown in Figure 3. Many features provided by the Desa Apps application can be used according to their respective functions. The farmers as users can also change their personal profiles on the Profile, as well as carry out online activities such as viewing the Ranking obtained, checking incoming messages through the Kotak Masuk, filling out surveys on the Survey, reporting bugs through Laporan Kesalahan Aplikasi, accounting for their agricultural businesses using Catatan Tani Saya. To know the profile of Desa Apps on Tentang Kami, and understand the privacy policy for using the application through the Privacy Policy as shown in Figure 4.



**Figure 3**

Desa Apps Features Menu Page



**Figure 4**

Example of User Profile on Desa Apps

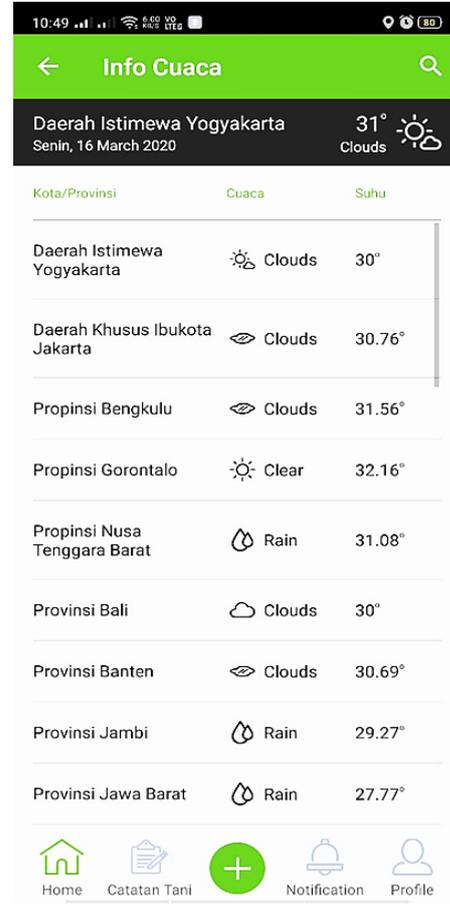
Source: Wulandari (March 17, 2020), Edited by Author

Notification of all user activities in the application will appear in the Notification as shown in Figure 5. In addition, every activity in providing comments, likes, filling out surveys, and posting articles will be given 1 point for each of these activities, even though these points do not yet have certain rewards for using the Desa Apps application. This application provides a Info Cuaca feature, which can display weather predictions for the next 6 days with a very wide area coverage on a provincial scale throughout Indonesia, as shown in Figure 6. However, this application cannot display weather predictions in a more specific scope, namely the district, because it still uses an application partnership from abroad, namely Open Weather. It is hoped that the

development of this feature can partner with the Meteorological, Climatological, and Geophysical Agency (BMKG) because it can display weather information at a more specific scope down to the sub-district level.



**Figure 5**  
 Desa Apps's Notification



**Figure 6**  
 Info Cuaca Feature of Desa Apps

Source: Wulandari (March 17, 2020), Edited by Author

In connection with the availability of the Desa Apps download application through the Play Store, so that everyone in any area as long as there is internet access, as an Android version of the mobile phone user, can download it, not only limited to the area of Srandakan sub-district, Bantul regency, Special Region of Yogyakarta. The flexibility of installation and activation allows farmers to consult through the Tanya Jawab feature about agriculture from other users throughout Indonesia as shown in Figure 7. Likewise, what is contained in the Artikel feature such as Figure 8, where users can also get various information about the world of agriculture from other users throughout Indonesia. The feature of this article is even more interesting because it is not only available in written form, but also in video form, which will be added in the form of a podcast which is still in the process of being developed. Various users can also post on this feature, after going through verification by the admin.



**Figure 7**

Tanya Jawab Feature of Desa Apps

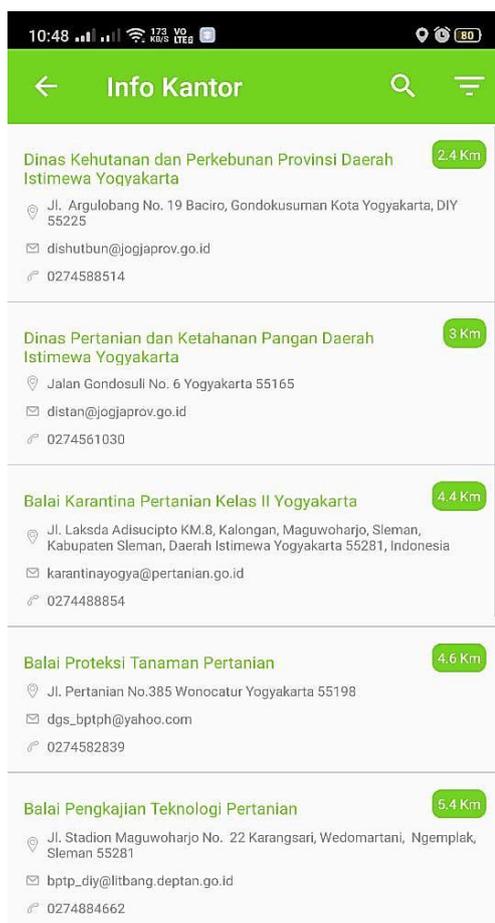
Source: Wulandari (March 17, 2020), Edited by Author



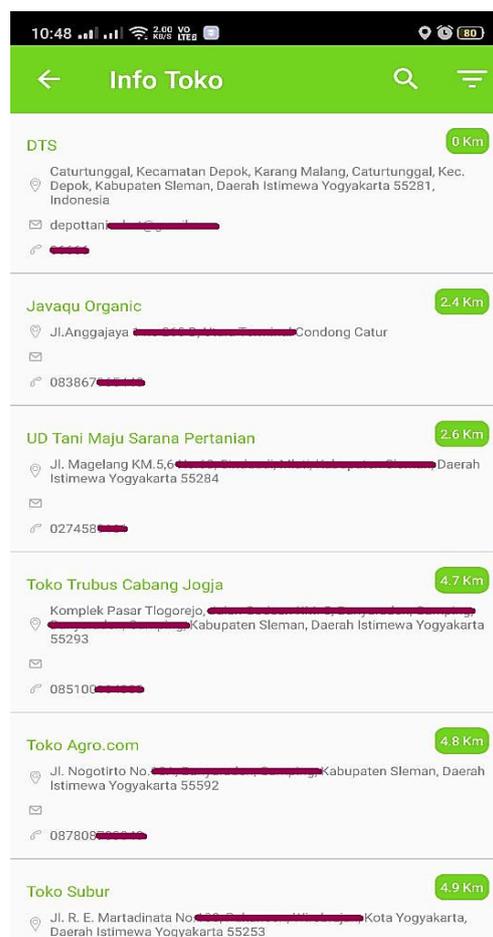
**Figure 8**

Artikel Feature of Desa Apps

As shown in Figure 9, to support the need for information about the existence of agricultural related agencies, Desa Apps also provides an Info Kantor feature along with the address, distance from the current user's location, and the contact of the agency concerned. Through the Info Toko feature as shown in Figure 10, this application provides the necessary information regarding the existence of agricultural production facilities (saprodi) stores around the location required by the user.



**Figure 9**  
Info Kantor Feature of Desa Apps



**Figure 10**  
Info Toko Feature of Desa Apps

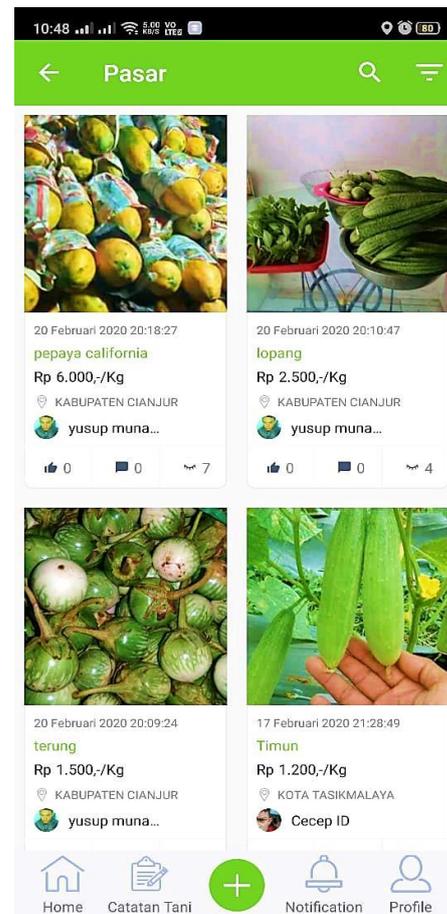
Source: Wulandari (March 17, 2020), Edited by Author

But it turns out that this feature has advantages over the Info Kantor feature, where even if a user has an agricultural production facility (saprodi) store business sector, he can register his shop in this application via the + Tambahkan menu and select the Info Toko option found on the application page as listed in Figure 11. Besides being able to be used to add Info Toko, this menu can also be used to add agricultural products to be sold in the Pasar feature through the Jual Barang option, make changes to the farming business accounting cycle through the Catatan Tani option, post articles through the Artikel option, or post questions about farming problems via the Tanya Forum option.



**Figure 11**

+ Tambahkan Menu on The Desa Apps's Page

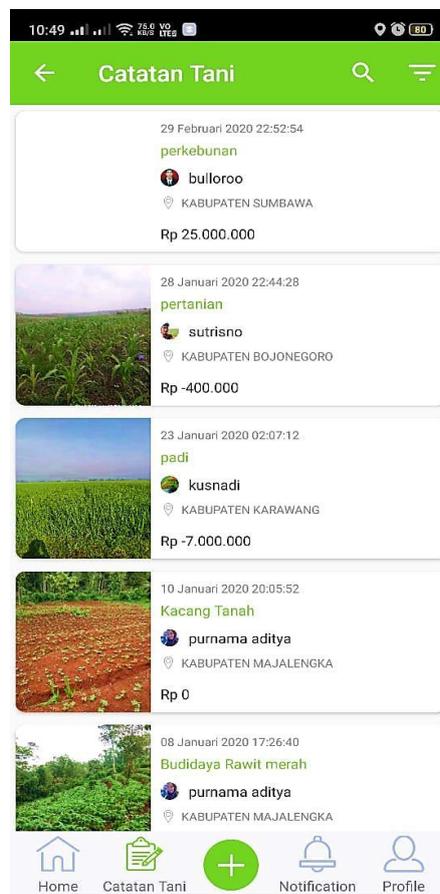


**Figure 12**

Pasar Feature of Desa Apps

Source: Wulandari (March 17, 2020), Edited by Author

In the Pasar feature, farmers and other users can make buying and selling transactions of agricultural products as shown in Figure 12. Indeed, this feature is not equipped with a payment system or transaction record like e-commerce in general, because this feature is also still in the development stage, so the transaction process is directly contacted by the contact listed on the product description that is sold via comments or telephone. In this feature, farmers are expected to be brave and confident in marketing their products by displaying product photos, descriptions, and prices offered. As a guide for standard product prices to be offered, farmers can also refer to the updated food prices listed on the application's Home page. This price has been adjusted to the National Strategic Food Price Information Center (PIHPS) issued by Bank Indonesia (BI). However, unfortunately this price information tends to be on the consumption price in the market, while the basic price directly from farmers is not available, so farmers still have to try to adjust the existing price. In the business world such as agriculture, it is important to do accounting for the system. Such as digital recording through the Catatan Tani feature as shown in Figure 13, trying to provide a solution.



**Figure 13**

Catatan Tani Feature of Desa Apps

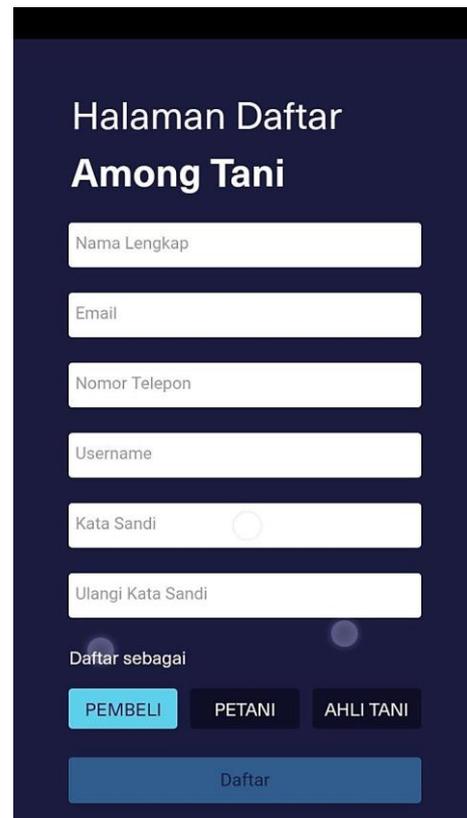
Source: Wulandari (March 17, 2020), Edited by Author

For online strategy, Among Tani develops through various features provided in the Among Tani application which are still available for Android and can be downloaded via the Play Store as shown in Figure 14. Before being able to use the various features available in the Among Tani application, farmers must install it to their mobile phone and create an account as a user first by filling in the registration page in the form of full name, e-mail, telephone number, user name, password, and user category on application as shown in Figure 15.



**Figure 14**

Among Tani Application Page



**Figure 15**

Among Tani's Account Activation Process

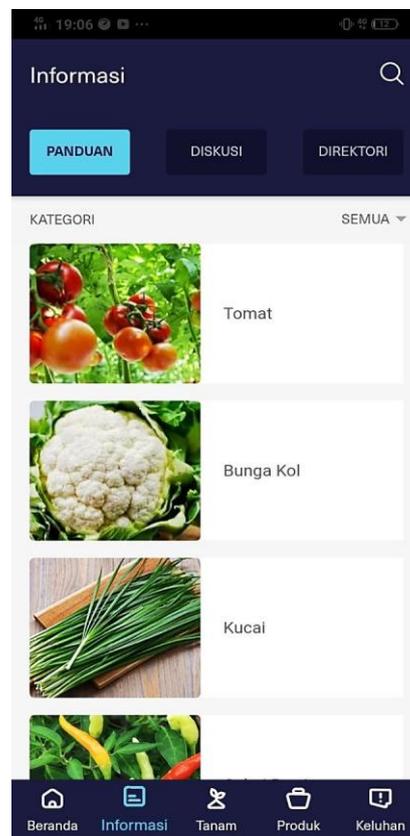
Source: Purwanto (March 27, 2020), Edited by Author

After completing the registration process, the account will go through a special verification process by the Command Center. Due to the availability of this application on the Play Store, any user can download it even if they are not residents of Batu city. Therefore, after going through the special verification, if the user is a resident of Batu city, then they will be able to take advantage of all the features in the Among Tani application, while if they are not a resident of Batu city, they will only be able to take advantage of the features as a Pembeli category only.



**Figure 16**

Beranda Feature Page of Among Tani



**Figure 17**

Panduan Menu on Among Tani's Informasi Feature

Source: Purwanto (March 27, 2020), Edited by Author

On the Among Tani Beranda feature page as shown in Figure 16, there is Cuaca information showing weather conditions in Batu city for the next 1 week, Kanal Berita which displays agricultural articles and news in text form created by the Batu City Agriculture Service Operator Team is assisted by Farmer Assistance Personnel (TPP) in the field, as well as Harga Produsen Hari Ini which displays the price of agricultural commodities in the form of fresh plant products in Batu city sourced from the Batu City Agriculture Office. The Among Tani application also provides an Informasi feature that has 3 menus, namely Panduan, Diskusi, and Direktori. The Panduan menu contains planting guidelines that can help farmers to plant a desired commodity according to Standard Operating Procedures (SOP) as shown in Figure 17 and 18.



**Figure 18**

Panduan Menu on Komoditas Category  
in Among Tani's Informasi Feature



**Figure 19**

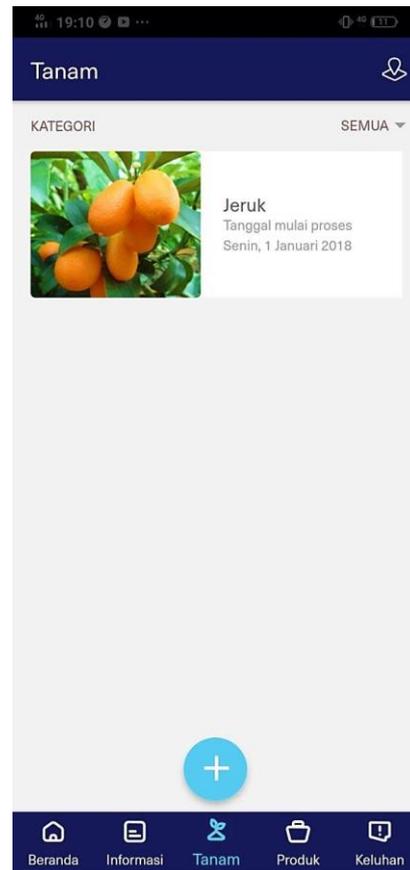
Discussion Menu on Among Tani's  
Informasi Feature

Source: Purwanto (March 27, 2020), Edited by Author

In the Diskusi menu, farmers can discuss and exchange experiences about agricultural cultivation with agricultural experts or other farmers as shown in Figure 19. Farmers can post questions via the + button that appears on the Diskusi menu page in the Informasi feature. Answered questions will appear in the Komentar column. Information for agricultural production facilities shops (saprodi) in Batu is also available in the Informasi feature with the Direktori menu as shown in Figure 20. The information is sourced from data owned by the Batu City Agriculture Office, which is then uploaded by the Operator Team. Users can find out the details of the store in question by clicking on the selected store.



**Figure 20**  
Direktori Menu on Among Tani

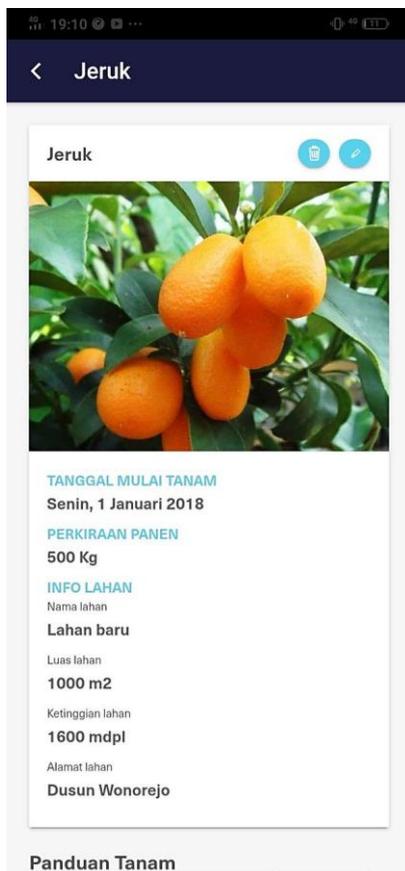


**Figure 21**  
Tanam Feature of Among Taniin Among Tani's  
Informasi Feature

Source: Purwanto (March 27, 2020), Edited by Author

The process of planting agricultural commodities can also be monitored through data that has gone through the input process in the Tanam feature of the Among Tani application as shown in Figure 21. In this feature, farmers can input data related to Land Name, Land Area, Land Height, Address, Hamlet, Village, District, Status, Latitude, and Longitude of the land.

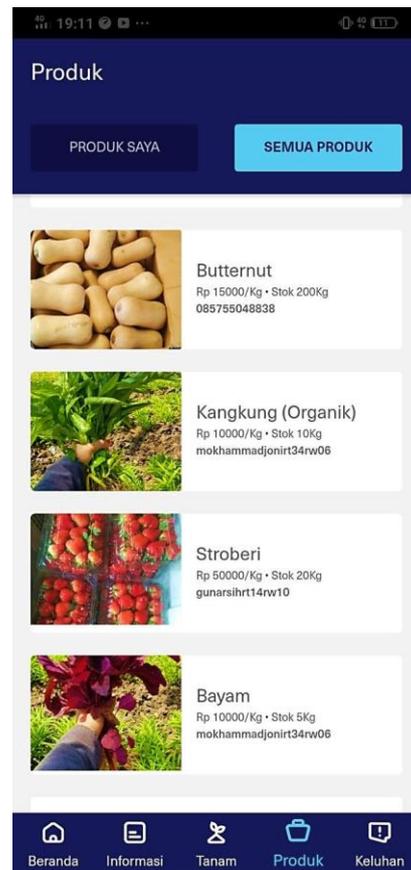
In this feature, farmers as users can add data on land owned or cultivated via the + button that appears on the Planting page. If the land data input process has been completed, the process of updating cultivation reporting data at each stage can be more systematic as shown in Figure 22.



**Figure 22**

An Example of Land Cultivation in the Among Tani's Tanam Feature

Source: Purwanto (March 27, 2020), Edited by Author

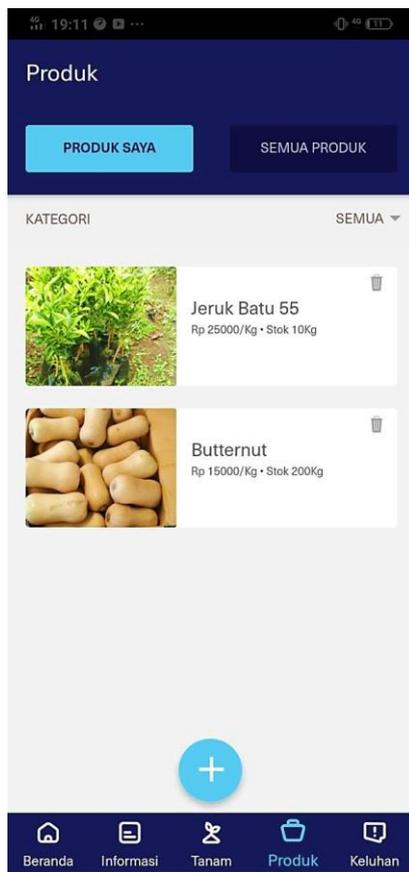


**Figure 23**

Semua Produk Menu in Among Tani's Produk Feature

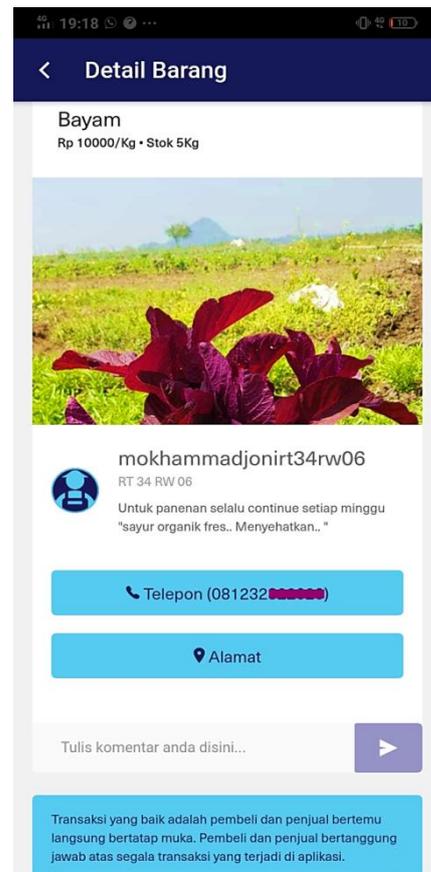
Farmers can also buy and sell their agricultural products through the Produk feature as shown in Figure 23. In this feature there are 2 menus, namely Produk Saya which displays agricultural products marketed by the farmers concerned and Semua Produk which displays all agricultural products marketed by all users.

If the farmer wants to add or change the description of his product that is marketed through the application, it can be done by pressing the + button on the Produk Saya menu in the Produk feature. Likewise, if farmers want to delete it, they can press the button with a picture of a trash can in the upper right corner of the product column as shown in Figure 24. Transactions can also occur by viewing detailed information on the product to be purchased by selecting the product in question. In the details of the selected product, there will be a contact for the seller concerned and the buyer can make transactions by contacting the available contacts as shown in Figure 25. Farmers can set selling and buying prices with the Harga Produsen Hari Ini guide found on the Beranda page of the Among Tani application.



**Figure 24**

Produk Saya Menu in Among Tani's  
Produk Feature



**Figure 25**

Detail Barang Menu on Among Tani's  
Produk Feature

Source: Purwanto (March 27, 2020), Edited by Author

The last feature in this application is Keluhan. Farmers can submit complaints related to agricultural problems in the field such as pests and other agricultural problems as shown in Figure 26. In this feature, every complaint from farmers through the application will go to the Command Center to be forwarded to the field agent in the CROP Team (Quick Response to Public Opinion). Every complaint that comes in will be processed and farmers will be assisted to get concrete solutions in the field, even if needed the farmers concerned will be facilitated to fulfill agricultural problem solutions according to the portion that has been considered.



**Figure 26**

Among Tani's Keluhan Feature

Source: Purwanto (March 27, 2020), Edited by Author

Even at the Command Center, every complaint that comes in, the coordinates of the problematic land, the Person in Charge (PIC) from the CROP (Quick Response to Public Opinion) Team who handles it, the deadline for completion, as well as settlement steps, will be able to monitor the performance and progress of problem solving. in the field as shown in Figure 27.

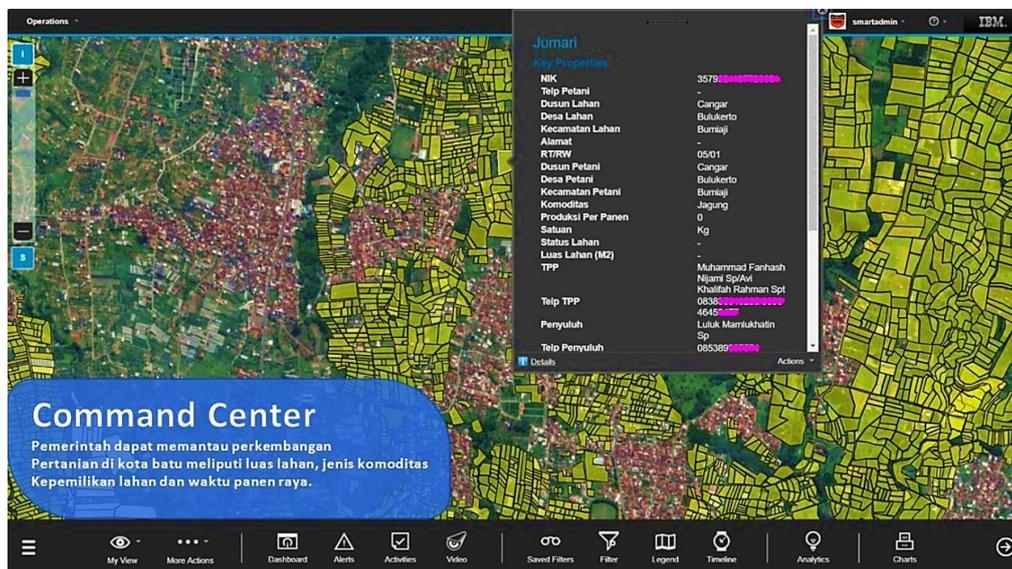


Figure 27

Command Center Agricultural Progress Page

Source: Purwanto (March 27, 2020), Edited by Author

If the Keluhan cannot be handled properly according to the Keluhan handling deadline agreed in the system, an evaluation will appear from the Command Center page, and the CROP Team (Quick Response to Public Opinion) responsible for the task will be given punishment in the form of a warning or salary deduction. The evidence of the completion of the complaint handling is also reported monthly to the Batu City Agriculture Office.

For online socialization and marketing there are also differences, where Desa Apps still uses 1 platform, namely Instagram with the manager and content developer who is also the Chief Executive Officer (CEO) who is the admin of this account, while Among Tani uses various platforms from social media such as Instagram, Facebook, Twitter, Youtube, the Batu City Government Website, Notifications on the Among Tani application, SMS Gateway on all numbers registered in the database, and the next project is the Batu City Agricultural Department Website, which is managed by the team from the Batu City Agricultural Department.

## 2. Comparison of Driving and Inhibiting Factors for the Partnership Strategy of Desa Apps and Among Tani

The field conditions that are quite different, of course, also greatly influence various driving factors in the form of strengths and opportunities, along with inhibiting factors in the form of weaknesses and threats, from each start up and the environment. Even so, Desa Apps and Among Tani also have similarities in the driving factor for their partnership strategy in the form of agricultural counseling with the use of technology in the Agricultural era 4.0, the enthusiasm of farmers to partner, as an effort to support government programs in the region with existing internet networks without eliminating the role of Agricultural Extension Field (PPL). In addition, these two start ups have similar factors inhibiting the partnership strategy in the form of a lack of funding to develop features in online applications related to weather and e-commerce, there are still many users who buy and sell agricultural commodities outside the application, there is competition with e-commerce that has a similar business model, as well as the difficulty of digital literacy among elderly farmer groups.

Significant differences in the inhibiting factors for the partnership strategy can also be seen due to differences in the readiness of the formulation of the vision, mission and values developed by each start up, in which Desa Apps in its formulation is still delayed, while Among Tani has been carefully prepared along with the basics law. Constraints are the absence of regeneration for agricultural regeneration in young farmers, diversification of agricultural commodities, the absence of assistance in handling integrated and sustainable agricultural problems online and offline, along with a standard reward and punishment mechanism in Standard Operating Procedures (SOP) at Desa Apps in the Bantul regency, all these things have been carefully prepared by Among Tani in Batu city. In addition, the existence of a very wide and strong network of horticultural brokers is an obstacle to the marketing of large quantities of agricultural commodities for farmers in Batu city, while in Bantul regency it is not as complex.

### **3. Comparison of the Effect of the Partnership Strategy on the Business Success of Each Start Up and Its Implications with the Community Economic Resilience**

There are differences regarding the effect of the partnership strategy on the success of the business of each start up and its implications with the community economic resilience of people who work as local farmers. Starting from the condition of the level of the community economic resilience who work as local farmers in Bantul regency, the Special Region of Yogyakarta is still uneven and less resilient, although not significantly, the existence of Desa Apps can have a positive impact on community economic resilience in terms of education related to the use of technology in the field. agriculture. This occurs due to the lack of success of Desa Apps's business in terms of team satisfaction and business owner satisfaction, which is also influenced by many farmer group members who are unwilling and able to use the application to help increase agricultural productivity. In addition, the counseling and assistance process from Desa Apps is not yet sustainable and there is no agricultural regeneration program.

Meanwhile, Among Tani's strong business successes and the community economic resilience of local farming communities in the Batu city, East Java, were already quite resilient before the partnership strategy with Among Tani, which was after the Among Tani partnership even though there were still group members. Farmers who are not able or willing to use Among Tani's access, they are also greatly helped by the assistance, counseling, and assistance in handling agricultural problems which are not only resolved online but also offline, which has a very positive effect on increasing the community economic resilience. Moreover, it is supported by efforts to regenerate agriculture in the form of Pelopor Pemuda Tani and various approaches made through the Batu City Agricultural Department for program sustainability.

## **V. CONCLUSION**

Based on the discussion that has been stated previously, this research has several conclusions. First, Desa Apps and Among Tani each have similarities in terms of 2 types of partnership strategies in the agricultural sector used, namely offline and online. However, each of these start-ups has some differences in the extent of the partnership network, the use of features in the application, and the follow up in handling agricultural problems.

Second, there are several things that are the similarities and differences in the driving and inhibiting factors of the partnership strategy at each of the start up of Desa Apps in Bantul regency, Special Region Yogyakarta and Among Tani in Batu city, East Java. The similarity that arises in the driving factor is that to provide agricultural extension information through the use of digital technology, there is enthusiasm from farmers to partner, and supports the government's vision and mission. Meanwhile, the inhibiting factors are still difficult for digital literacy among elderly farmers, there are still many users who buy and sell agricultural commodities outside the application, and there is competition with e-commerce that has a similar business model.

The difference in the driving factors is the complexity of the partnership strategy used, the funding support for developing features in the application, and the diversification of products marketed in the

application. The difference in the inhibiting factors for the partnership strategy at each start up is the readiness of the formulation of the vision, mission and values developed by each start up, operational support capacity, complexity of the partnership strategy, the presence or absence of a sustainable agricultural regeneration program, and internet network availability.

Third, the lack of success of the Desa Apps business on several indicators has a positive effect although not significantly on the community economic resilience in terms of education related to the use of technology in agriculture. In addition, the counseling and assistance process from Desa Apps is not yet sustainable and there is no agricultural regeneration program. Meanwhile, Among Tani's strong business successes, Among Tani has a very positive effect to further increase the economic resilience of people who work as local farmers. Moreover, it is supported by efforts to regenerate agriculture in the form of Pelopor Pemuda Tani and various approaches made through the Batu City Agricultural Department for program sustainability.

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