

## **Study of Role of Agribusiness Young Actors on Optimalization of Private Agricultural Extension in West Java Province, Indonesia**

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### **Abstract**

*This paper describes the role of agribusiness young actors (AYA) in private agriculture extension. The methodological approach in this study was quantitative (description-correlation) and qualitative (focus group discussion). The population in the study was AYA in West Java, Indonesia. AYA was selected by using randomized sampling method. Survey data was statistically analyzed by SEM tools. The research shows that: 1) AYA have significant role in private agriculture extension, particularly in agrarian advocating, dissemination of alternative agribusiness, initiation of non-farm adaptive enterprise innovation, and institution development; 2) model of agricultural approach by AYA is pluralistic, which combines several methods. Extension contents include complex adaptive system and ecological agribusiness integrating socio-system, ecosystem, and geosystem; and 3) institution model based community, integrated with academia, businessment, research centres, government and NGOs. The recommendations are leadership development of rural youth community and social capital strengthening of AYA are needed.*

**Keywords:** role, agribusiness young actors, agricultural extension

### **1. Introduction**

Role of private extension officers need to be increased consider that most of civil servant extension officers in Indonesia are aged. Indonesian Ministry of Agriculture (2014) stated that about 68% of Indonesian civil servant extension officers have reached 50 years old. Elderly officer is identical with low performance of physical, health, education, and motivation (Soewardi, 2004; Indonesian Statistics Bureau, 2013). Instead of encouraged regeneration process of civil servant extension officers, the government didn't recruitment of new civil servant extension officers, while problems faced by farmers, fishermen, and other agriculture based businesses are to be more complex. According to Sumardjo (2012), limitation of quality and quantity of extension officers is the main obstacle of extension program. Elderly extension officers has hampered efforts to realize Indonesian Charter Number 16/2006 about agriculture, fisheries and forestry extensions, implementation of *cyber extension*, application and dissemination of science and technology and service to small scale agribusiness actors. The government has delivered efforts for regeneration of extension officers by recruiting honorary extension officers. Due to low incentive and unpromising future, work ethos and performance of these officers which previously excellent decreased significantly. Facilitation process, technology dissemination, and innovation sharing (including cyber extension) which have increased, recently do not worked anymore. The office of agriculture, fishery and forestry extension which officially work as information service center do not work as well. Contrast from condition of civil servant extension officers, in rural Indonesia were identifies AYAs which conducted self directed extension to their community.

They are educated and skilled youths which by their own consciousness return from overseas, cities or dominant islands to their origin (to own country, to peripheral, to rural area, to remote islands) to create jobs, to serve, to empower and develop of agribusiness. Batista et al. (2009), Beine et al. (2002), Hu et al. (2012), Hunger (2002), Schiff (2005), Stark (2004), Warker (2009) and Kupets (2011) stated that they are brain gain actors. Brain gain is one of the recent and actual regeneration approaches, recommended by (European Union Conference, 2007) as alternative solution to solve human resource imbalance, particularly between urban areas and its peripheral. Statistically, the number of skilled and educated young agribusiness actors is limited. Specially, outside of Java Island (Sumatera, Kalimantan, Sulawesi, Nusatenggara, Maluku and Papua) the number is only about 0,5-1 % of local young farmers. In Java Island it is about 9-14 %, with the highest concentration in highland agro ecosystem and the lowest in lowland agro ecosystem (Indonesian Statistics Bureau, 2013). The existence and role of skilled and educated AYA is interesting to explore. In addition to paradox to low perception of Indonesian young people towards agriculture sector, it is also potential for agribusiness actor regeneration and optimization of private extension officer. This paper is divided into four parts, namely firstly, conceptual framework of AYA and private extension model, secondly research method, thirdly role of agribusiness young actor in private extension, and lastly approach model and private extension institution.

## **2. Conceptual Framework of AYA**

Indonesian Charter Number 16/2006 mentions two actors in agriculture sector, namely main actors and business actors. Main actors are people in and around forest area, farmers, planters, animal breeders, fishermen, fish cultivators, processors and their family. Business actors are Indonesian individuals who manage agriculture, aquaculture, and forestry businesses. According to Indonesian Charter Number 13/2010 about horticulture, business actors are farmers, farmer organizations, individuals, or corporations. Indonesian Charter Number 19/2013 about farmer empowerment and protection states that business actors are individuals conducting business in agriculture, from providing agriculture inputs, on farm production, post harvest, product processors, product marketing, and agriculture support service. Other agriculture actors who are not explicitly states in the charter are extension officers and policy makers. Saragih (1998) classifies agribusiness actors into two groups, namely main actors and supporting actors. Main actors are those who work at downstream agribusiness, cultivators (farmers, animal breeders, fishermen, planters, fish cultivators). Supporting actors are those who work at agribusiness development services and regulation bodies. Include to the second groups are those who work at extension, banking, consultation, research and development bodies. Sitorus et al. (2001) point out that agribusiness actors, whether agribusiness corporations or farming community are equal. Actors in inclusive agribusiness perspective (World Bank, 2009) are various, namely those who involve in value chain, supply chain and cluster, from producers, input providers, institution managers, information servers, input distributors, output distributors, financial institutions, and product processors.

Based on age, main and business actors could be classified, namely old actors and young actors. Especially, young actors not only involved in on-farm production, but also in all agribusiness subsystems. They are young farmers involved in field school, apprentices, dan farming course, who became innovators, researchers, product marketer, product processors, input suppliers, information providers, farmer organization managers, and even politicians (Hasansulama, 2005). According to Adebayo (2010), Kupets (2011), Ha et al. (2009), Warker (2009) dan Faiz (2007), these AYA are brain gain actors. Different from previous generation, youth who was raised with state of the art ICT is identical with c-generation (connected, convergence, collaboration, creative and contextual). Tapscott (2009) mentions as internet or digital generation. A generation, which according to (Supangkat, 2010) creative and responsive to new things, and a part of continual innovation development. A generation with internet access, naturally sensitive and responsive to collaborative activities, and aware to the importance of relation. A generation that accosiate and join with communities, reccomend innovation to others, confident to discuss and share opinions. Internet generation is smarter, nimble and tolerant to diversity. Their culture is empowerment, pay attention to justice and social problems, and involve in community activities. Faiz (2007) research points out that brain gain actors can play a part as extension or empowerment officer in their community. Private extension officer is a main actor who succes in their business, and with their own consciousness will and able to be an extension officer. They are entrepreneur, whom their products are to be change trigger. The roles can be different at every person, community and region, depend on youth quality, their self reliance, entrepreneurial skill, social capital quality, access to productive resources, and opportunity structure of their system.

According to (CYMMIT Economics Program, 1993), resource characteristics play a high important role to person or community ability to adopt innovation.

**3. Research Method**

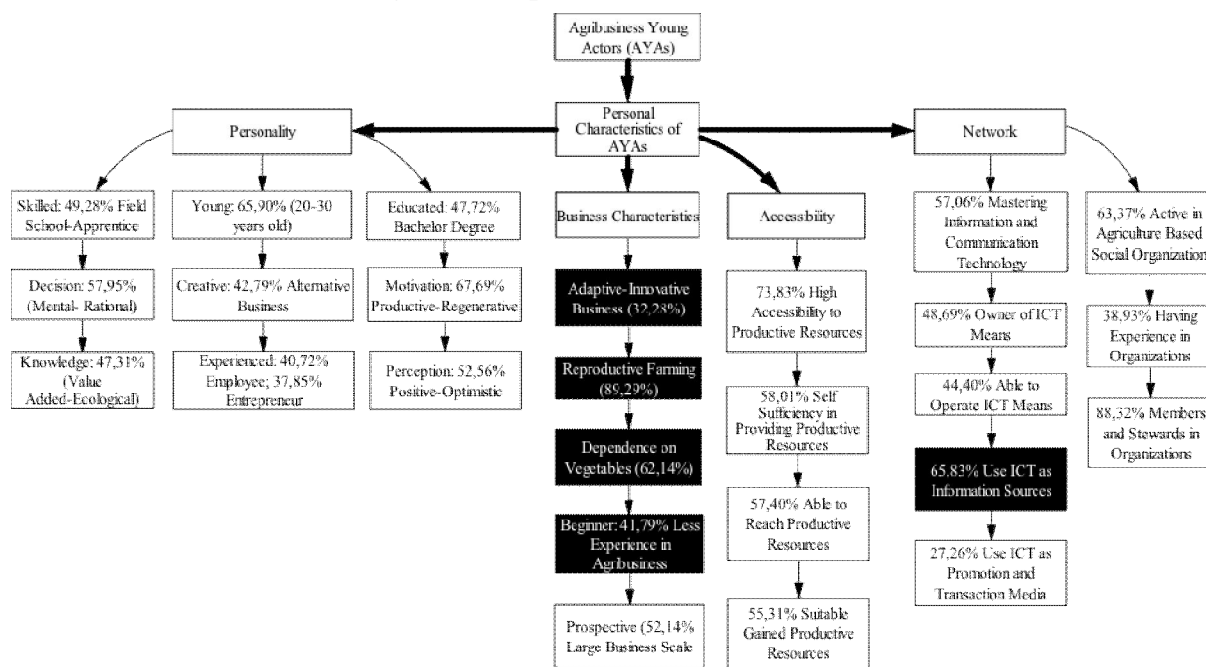
This research implements mixed method, quantitative and qualitative. Quantitative design used survey descriptive correlation and qualitative design used focus group discussion (FGD). Research has been conducted in West Java Provice, Indonesian, from July 2013 to October 2014. 7.728AYA(age 22-35), relatively high skill and education are research population. From this populationn, randomly selected 280 AYA with used Slovin formula. For FGD, purposively selected 10 stakeholders and expert of agriculture extension from 10 town of West Java Province. Primary data was collected by structured interview techniques with tested reliable questioner and FGD with discussion guidance. Secondary data was collected from related government institutions and by desk study. Collected data was analysis with Structure Equation Modelling (SEM) by Lisrel 8.8 software.

**4.Result and Discussion**

**4.1AYAs Characteristics**

In general, AYAs characteristic is relatively high on personality (decision, motivation, perception), business (reproductive farming, dependence on vegetables, prospective commodity), accessibility ton productive resources (providing, reach and gained productive resources) and networking (mastering information and communication technology, active in agriculture organization, steward in organization), with no significant differences among regions. However, only 17, 59 percent are definitely established. AYAs characteristics can be described at the following figure (Figure 1).

**Figure 1: Map of AYAs Characteristics**



**4.2 AYAs Role in Extension Optimization**

In fact, only creative and innovative AYAs (17,59 percent) who have social, technology and network readiness, play a role in agricultural extension and community empowerment optimization. These roles are:

1. Empower unemployed youth in rural area through “9 approach” (to unchain, to bond, to heal, to train, to apprentice [*learning by doing*], to introduce entrepreneurial choices, to facilitate new business, to assist business strengthening and to advocate business. Graduates of the collaborative program between AYAs, farmer groups, village, local military officers, local police officers and community leaders have decided to be input providers, product marketers, product processors, packaging business owners, input distributors, seed providers, and information service providers;

2. Initiate the growth and development of PrivatTraining Center for Rural Agriculture (PTCRA), which is not only educate and train farmers, students and youths from its surrounding areas, but also from several areas and provinces in Indonesia. PTCRA applies pluralistic and multidisciplinary approaches, with participative arranged curricula, based on needs of participants and skills of local agribusiness actors.

The needs of students, extension officers and practitioners are definitely different. Hence, speakers and trainers must be assigned with various needs;

3. As parts of c-generations (*connected, creative, communicative, convergence dan collaborative*), which are closed with ICT development, AYAs are actors in cyber extension, GPS and GIS applications, agribusiness promotion, IT marketing system (e-commerce) and social media network. With ICT, AYA look for and share agribusiness information freely, including operation and business planning, cultivate crops and product marketing. Furthermore, with ICT, some AYAs have applied e-banking transaction system;

4. Develop social entrepreneurship through forming integrated learning centers as rural youth empowerment place, community center for seed breeding, and woman farmer business groups. The activities could enable, strengthen, and advocate education, local culture, sports, environment, agriculture (in particular biodiversity), small business and indigenous knowledge. In practice, the center could collaborate with community, schools, universities, government, and CSR management.

5. Initiation and development of agricultural and environmental education (agro-eco-education) integrated with agro-ecotourism for children, students, and university students. The activities could be practice and participative research at farm (seeding, planting, picking), teaching farm, and camping ground at conservation zone. Even though various level of achievement, AYAs could have significant role to facilitate the meet of customer needs and agribusiness practice;

6. Initiate and develop rural community information service institution and ad vocation, such as rural community radio, rural internet service and NGOs at rural areas. These institutions have multiple impacts because their activities are integrated with community network at rural and urban areas.

7. Initiate development of inclusive and alternative commodities through collaboration with researchers, universities, markets, government and business actors. Methods developed emphasize ecological agribusiness, and conduct participatory action research involving farmer groups as center integrated with activities and needs of community, market, business actors, government and universities (*the triple helix model*);

8. As agribusiness actor group with access to ICT, AYAs are bridge between and among agribusiness actors in agribusiness knowledge sharing. Although AYAs organization is still weak, its agribusiness network is more active and wider than other organizations with elder agribusiness actors. Moreover, AYAs are also upload rural uniqueness and local agribusiness potential to social media and internet;

9. Link the agribusiness actor network with wider agribusiness actor networks, at national and international level, through exhibitions, festivals, conferences, internet, markets, including cooperation in standardization application and seed quality certification and organic products with international standardization bodies

10. AYAs are also initiator, motivator, facilitator, and denominator of organic agriculture development (particularly organic rice and vegetables), exporter of agribusiness commodities (especially vegetables, mangos teen and organic rice), supplier of agribusiness products to modern market (supermarket, hotel and restaurant), trader of inter island agribusiness products, seed breeding business owners (rice, vegetables, fruits, plantation crops);

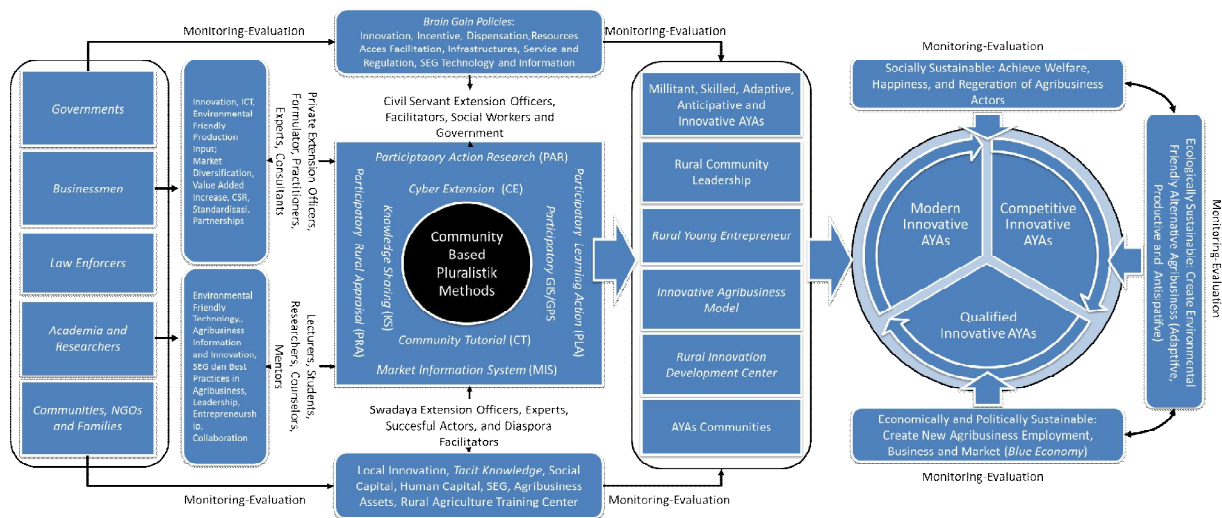
11. Administratively, AYAs who are integrated with association, community institutions, farmer groups and woman farmer groups, play an important role in input providing innovation, business development innovation (commodity diversification, business patterns and business types), product processing innovation, product marketing innovation (market diversification, exhibition, development of partnerships, online vegetable market, integrated market at tourist destination or agrotourism), commodity promotion innovation (tourism village, creative village, post harvest celebration), group administration arrangement innovation (activities computerization system, accounting and documentation), and partnership innovation (with business actor, government, universities, community, agribusiness investors and research institutions)

### 4.3 Model of AYAs Extension Approach

As a process, extension activities are perceived by AYAs divergently, broadly, freely, practically and interactively as:

1. A participative, collaborative and convergence learning process based on awareness and needs integrating contents, methods, technologies, informants and participants at the same time, space and activities. For recent generation, c-generation with convergent technology culture, which according to Tapscott (2009) and Supangkat (2010), creative and responsive to new invention, and raised in high development innovation climate, extension is not delivered step by step in long time (as Roger’s innovation adoption theory), because in addition to the facts that AYAs are faster and more self reliance (anticipative, visioner, adaptive, empathetic and innovative) in learning, the change is possible with mixing various resources, participants, methods, and technology. By using convergence technology, multidisciplinary contents and pluralistic methods, goals of extension can be achieved fastly. Outsiders should perceive AYAs as smart people (Hasansulama, 2005);
2. A process to link, synergy all agribusiness actors in a rural creative community and creative ecosystem which is conducive and opened for all creative actors, accessed by all people, enable all participants to learn, interact, share knowledge continuously. This could be denotative-physical mean (such as meeting room, discussion room, exhibition room) or connotative virtual mean (such as virtual room, cyber room, social media room). In extension approach framework which is based on rural creative community, extension officer roles would be various, from general participants, informants, facilitators, moderators, mediators, consultants, motivators, initiators, and innovators.
3. Extension is also perceived by creative and innovative AYAs as strengthening process of local potential and social capital for all agribusiness actors. Local potential strengthen is related to local uniqueness innovation and creation, including commodities, cultural arts, knowledge and local technology. Social capital strengthen is related to AYA institution, to bond, to bridge, and to link all agribusiness actors with other actors. Sumardjo (2010) points out that products from social capital development through extension are synergistic partnership institution among related stakeholders to create synergistic and sustainable partnership network. Extension is not only a strengthening process of agribusiness practical readiness, but also social capital of all agribusiness actors. Sumardjo (2012) goes on to say that in order to sustain community development, extension must be participative, and should consider local knowledge and social capital. Indeed, these aspects play an important role in achieving sustainable competitiveness (Berns et al., 2009; Ning He, 2012; Srivastava et al., 2013). Figure 1 is drawn based on Structure Equation Modeling analysis.

**Figure 1: Model of AYA Extension Approach in West Java Province**



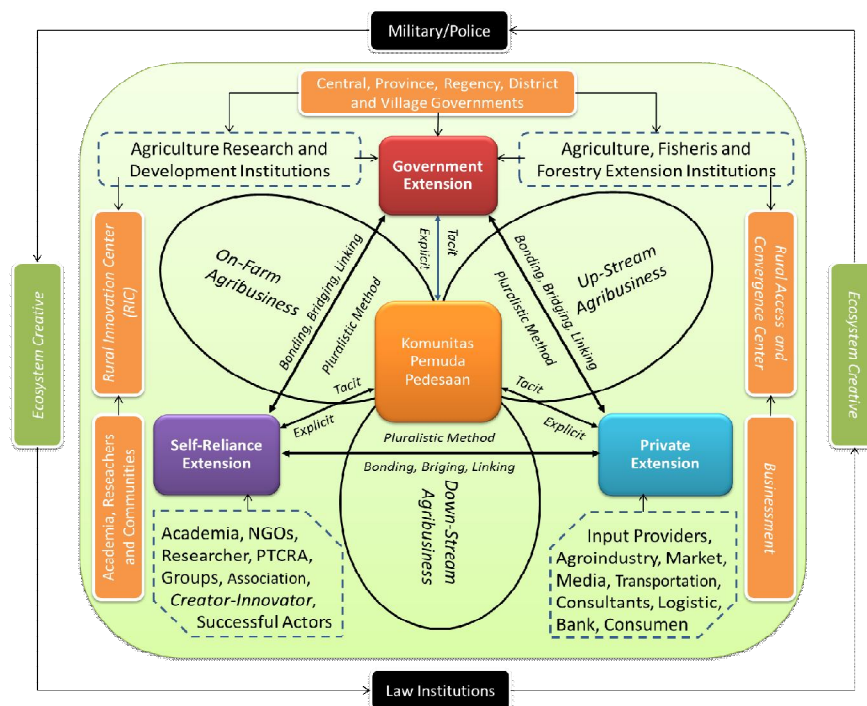
Note: (1) SEG (Sociosystem, Ecosystem and Geosystem)  
 (2) Government, including central, province, residence/city, district and village  
 (3) Low Enforcer, including Military, Police, Law Institution, and Corruption Eradication Commission  
 (4) Including in rural community is AYA

### 4.4 Model of AYAs Extension Institution

In fact, AYAs are more aware with extension officer role and function than its institution. From AYAs viewpoint, extension officer is a facilitator, informant, mentor, tutor, motivator, initiator dan mediator of all agribusiness actors, so that their place is not only at their office, but also at all institutions in rural area. Therefore, extension agent could deliver their role and function at their office, creative community, auction market, farmer groups, NGOs, village office, local police office, local military office, youth organization office, at exhibition and other AYAs creative facilities. By community based pluralistic approach, nozonation between extension officers and agribusiness actors. Community approach perceives all extension officers and agribusiness actors as extension participants. No partial programs, all are integrated in community. Community is also a rural innovation center, resources access center, knowledge sharing center, and rural information and communication center (Figure 2).

For AYAs, civil servant extension officers are only a bridge and link all agribusiness actors with government (including policy, service, regulation, security and laws), private extension officer as a bring and link all agribusiness actors with companies (market, upstream industries, input produced industries, exporters, etc), soprivate extension officers as a bridge and link between agribusiness actors and other communities, universities, research centers, and integrated innovation centers. Akintoye et al. (2012)states that convergent, multidiscipline and pluralistic future extension that plays a role in development of “self reliance brain gain”are: *co-informing, co-learning, co-marketing, co-purchasing, co-producing, co-building, co-inovating and co-branding*. Related to extension, AYAs again state that “existence of role and function is better than only the office building”. Indeed, it is much better if extension is having real institution, structured human resource regeneration, and clear role and function. The main problems of AYAs are their dual culture identity and high egoism, so that they are difficult to unite in existing organization. Eitherto, AYAs in rural area have not been having formal institution.

**Figure 2: Model of AYA Community Based Extension Institution**



### 4.5 Policy Implication

To empower AYAs could not deliver partially, with methods applied by previous generations. It needs an approach which involve all stakeholders collaboratively, integrated various methods and needs conducive, adaptive and accommodative institutions, which enable all stakeholders to participate, create and innovate and collaborate. Institution that able to bond, bridge, and link AYA with wider actors. One of the accommodative and representative is rural creative community/RCC. RCC is integrated with academia, businessmen, local NGOs, government, and law enforcer. As youth institution, creative community has been successful when it is applied at the City of Bandung, Cimahi, Tasikmalaya and Bogor.

Moreover, community has also successful in Scotlandia, China, Taiwan, India and Singapore (Howkins, 2001; Florida, 2003). However, rural creative community to support rural competitiveness has not been widely developed.

Based on the research results and adapt triple helix model from Etzkowitz and Leydersdorff (2008), AYAs self sufficiency development can be delivered by multiple helix model, with these following recommendations: (1) to create RCC as learning, human resource R&D, innovation, entrepreneurship, leadership centers, and in general rural and agricultural innovation center; (2) to create RCC as a center of interaction, socialization, participation, discussion, creation, collaboration, coordination, promotion, solution, synergy, and consultation; (3) to create synergy between RCC with academia, researcher and government (including village level) reciprocally in PLRA (Participatory Learning and Research Action) scheme with community based; (4) to create synergy between RCC with government and businessmen reciprocally to create creative ecosystem conducive to capacity building, to increase access to productive resources, effectively of redistribution and productive land protection, development of supporting facilities, strengthening of development institution performance and strengthening of creative product market; (5) to create synergy between RCC with businessmen and law enforcement institution reciprocally to create national security, a prerequisite of creative ecosystem conduciveness; (6) to create synergy between RCC and law enforcement institution and NGOs reciprocally to create NGOs which strengthen and develop rural community leaders; and (7) to create synergy between RCC and NGOs, academia and researcher from various institutions reciprocally to develop knowledge ecology and to share knowledge.

Multiple Helix (MPH) model based on RCC is suitable for AYAs with *dual cultural identity*, because the model convergent development approach. Participants with ideas and creative experiences work together in RCC. All parties have double position, as source and receiver, give solution and receive input. Interaction means and communication media are not rigid, but flexible and anticipative towards fatigueless. Activities may use community rooms, group secretariat, village meeting hall, agriculture extension office, farms and other places. Contents of RCC based MPH has no boundary, but multidisciplinary. Methods used are selectable and integration from various methods (*pluralistic method*). Hence, in this model, contents and methods are multiple. Supporting to this model are several approaches such as *interdisciplinary training and education* (ITE), *multidisciplinary training and education* (MTE), *collaborative training and education* (CTE), which are collaboration of all participants from different profession, enable to share, change and strengthen each others, and facilitate each other without limit (Chan et al., 2002; Anumba et al., 2008).

### **5. Conclusion and Recommendation**

From several aspects, AYAs characteristics are at high level, which are different from elder agribusiness actors. AYAs have significant role in private extension, particularly in youth empowerment, rural social enterprise development, “green” campaign, agrarian ad vocation, dissemination of non-vegetables agribusiness innovation, initiation of non-farm adaptive business innovation, ICT application, application of technology to substitute farm worker scarcity, and initiation of private extension institution (RCC). Model of extension approach is pluralistic, which integrate *participatory rural appraisal*, *participatory learning action*, *participatory action research*, *cyber extension*, *market information system* and *community radio action*. Contents of extension are multidiscipline, which are related to complex adaptive system and ecological agribusiness that integrated socio-eco-geo systems (including geological disaster mitigation). Model of extension institution is based on community, which is integrated with academia, businessmen, research center, NGOs, and government. Recommendations are RCC must be developed as extension and empowerment center of AYA and rural agribusiness actors, a need to develop rural youth community leadership and to strengthen social capital of AYAs community.

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