ATTRACTING YOUNG GENERATION INTO AGRICULTURE

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& Food and Fertilizer Technological Center
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OUTLINE

INTRODUCTION

METHODOLOGY

STRUCTURE OF AGRICULTURAL LABOR IN INDONESIA

FACTORS INFLUENCING YOUTH ENGAGED IN AGRICULTURE

INCENTIVE POLICIES FOR YOUNG FARMER

WHAT THE GOVERNMENT SHOULD DO TO ATTRACT YOUTH IN AGRICULTURE?

CLOSING
INTRODUCTION

Agriculture absorb nearly 43 percent of the total employment

Major problems of agricultural labor force: low education, ageing farmers, decreasing involvement of young workforce.

Number of youth working in agricultural sectors was decreasing
1993 = 26%; 2003 = 20%; 2013 = 11%

Increasing ageing farmer

The main challenges for the youth to start working in the agricultural sector: limited access to capital, land, skills

The declining interest of youth to work in the agricultural will have consequences on food security

The Indonesia government need to formulate incentive policies for young workforce to attract them working in the agricultural sector
INTRODUCTION

The objectives:
1. to study the structure of the agricultural labor force related to the ageing farmers and participation of young labor in the agricultural sector
2. to study the factors influencing young labor on working in the agricultural sector
3. to review incentive policies for young farmers in other countries and Indonesia in response to the issue
4. to address policy implications in attracting young labor in the agricultural sector in Indonesia.
Data and Analysis

1. Primary data
   - Household survey in some provinces in Indonesia distinguished by agro-ecosystem, namely: plantation, palawija or secondary crops, paddy rice and vegetable.
   - Using the Binary Logistic Regression model to analyze the factors affecting young farmers on working in agriculture.

2. Secondary data
   - Source: Central Bureau of Statistics (CBS)
   - Literature study to review incentive policy for young farmers in other countries and in Indonesia.
PARTICIPATION OF YOUNG LABOR IN AGRICULTURE
The distribution of the population across the archipelago

Java represents only 7% of the total land area but hosts 57% of the population. Density 1,000 person/km²

Papua occupies 22% of the land area but is habited by less than 2% of the total population. Density 7 person/km²

National average population density is 124 persons/km²

Source: BPS, 2011

Agricultural land holding:
Java : 0,3 Ha/HH =>
Indonesia : 0,8 ha/HH =>
wetland 0,17 Ha/HH
wetland : 0,2 ha /HH
<table>
<thead>
<tr>
<th>Landholding (hectare)</th>
<th>Percentage of Household</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 0.1</td>
<td>16.60</td>
</tr>
<tr>
<td>0.1-0.49</td>
<td>39.35</td>
</tr>
<tr>
<td>0.50-0.99</td>
<td>17.43</td>
</tr>
<tr>
<td>1.00-1.99</td>
<td>14.26</td>
</tr>
<tr>
<td>2.00-2.99</td>
<td>6.21</td>
</tr>
<tr>
<td>&gt;3.00</td>
<td>6.16</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>
AGRICULTURE LAND-MAN RATIO, 2011

- Argentina
- Australia
- Bangladesh
- Brasil
- China
- India
- Thailand
- USA
- Indonesia

Land area (x10,000 Ha)

Land area / capita (m²/capita)
DEFINITION OF ‘YOUNG FARMER’

- The age range from 16-40 years
- The Law No. 40 of 2009: The youth are those who enter an important period of growth and development from the ages of 16 (sixteen) to 30 (thirty)
- Indonesian Youth Employment Network (IYEN) defines 'young people' as those who are in the age group of 15-29 years (ILO, 2007).
- Katchova and Ahearn (2014) used 35 years as the limit of age
- David et.al (2013) used 35 years as limit of age to determine someone as a young farmer.
- The French government uses the age limit of 40 years as a peasant youth who is entitled to financial scheme (Murphy, 2013).
- In this paper, peasant youth are those who are 15-35 years of age
The number of young people declined sharply, ageing farmers increased. Several factors explaining these phenomena: (1) agricultural land is getting smaller, (2) increasing number of youth who go to a higher level of education to be more selective in finding the job, (3) non-agricultural jobs in the cities more attractive in terms of prestige and income.
FACTORS INFLUENCING YOUTH ENGAGED IN AGRICULTURE
Table 1: Factors influencing youth engaged in agriculture

<table>
<thead>
<tr>
<th>Variable</th>
<th>Wetland Region</th>
<th>Dry land–secondary crops Region</th>
<th>Dry land–vegetable crops Region</th>
<th>Dry land–plantation crops Region</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>Pr&gt; Chi-Square</td>
<td>Coefficient</td>
<td>Pr&gt; Chi-Square</td>
</tr>
<tr>
<td>1. Age</td>
<td>-0.1572</td>
<td>***</td>
<td>-0.1008</td>
<td>***</td>
</tr>
<tr>
<td>2. Education</td>
<td>0.1989</td>
<td>***</td>
<td>0.2234</td>
<td>***</td>
</tr>
<tr>
<td>3. Land holding/capita</td>
<td>-0.2264</td>
<td>**</td>
<td>-0.3500</td>
<td>***</td>
</tr>
<tr>
<td>4. Sex/Gender</td>
<td>-1.0036</td>
<td>***</td>
<td>0.0631</td>
<td>**</td>
</tr>
<tr>
<td>5. Number of HH member</td>
<td>0.0203</td>
<td></td>
<td>0.1229</td>
<td>*</td>
</tr>
<tr>
<td>6. Economic status</td>
<td>3.621E-6</td>
<td>***</td>
<td>4.5E-7</td>
<td></td>
</tr>
<tr>
<td>7. Dummy Year (2009=0; 2012=1)</td>
<td>-0.2034</td>
<td></td>
<td>-0.1743</td>
<td></td>
</tr>
</tbody>
</table>

Dependent variable is dummy variable
1 = youth (age 15-35) involved in agriculture, 0 = youth not involved in agriculture

Source: primary data
***significant at the 99% level; **significant at the 95% level; *significant at the 90% level
Factors influencing youth engaged in agriculture

The variables significantly affect the probability of youth on being involved in agriculture.

1. **Age**: negative effect
   - The youth involved in agriculture were relatively younger than the limit of 35 years of age used in this analysis
   - Young farmer still in the learning period

2. **Education**: positive effect
   - Young workforce engaged in agriculture have relatively good education
   - Many young workforce were still at school have second job on farm

3. **Size of land per capita**: negative effect
   - Most young workforce engaged in agriculture do not have arable land
   - Youth engagement on farm is more like a worker / laborer who receive wages
Factors influencing youth engaged in agriculture

4. Gender: negative effect
   - Many young female workers are involved in agriculture.
   - Girls are no longer in school and unmarried help their parent on farm

5. Number of household members: positive effect
   - The involvement of the HH members on the farm can be as temporary or permanent job.
   - Most of the household members generally have double jobs, in agriculture and in non-agriculture (transport, trade, etc.)

6. Economic status: positive effect
   Agricultural sector is still as main HH income sources

7. Year Dummy: negative effect
   Youth involvement in agriculture in the last three years has declined
INCENTIVE POLICIES
<table>
<thead>
<tr>
<th>Country</th>
<th>Programs/ Incentives</th>
<th>Targeted Object</th>
</tr>
</thead>
</table>
| European             | New entrance scheme for farmer:  
  – Working capital installation grant  
  – Interest subsidy on a farm       | Farmers under 35 years           |
| Victoria – Australia | Three loan facilities with an interest rate concession:  
  – Purchase stock & equipment  
  – Purchase land  
  – One to grow.               | People 40 years of age or under  |
| France               | – Lump sum or subsidized loan to buy the land  
  – A reduction in taxes over five years | Young farmers (under 40)          |
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<thead>
<tr>
<th>Country</th>
<th>Programs/ Incentives</th>
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</tr>
</thead>
</table>
| United Kingdom 2) | Young Entrants Support Scheme (YESS):  
|                | – A one-off grant payment for a young entrant as head of holding for the first time  
|                | – Mentoring services from professionals                                                                                                               | People under 40             |
| China 4)      | Ministry of Agriculture:  
|                | - loans and tax benefits                                                                                                                              | Young Farmer               |
## Learning from Other Countries

### Canada

- **Loan guarantees, innovative lending products,** interest rate protection and interest rate reduction for education and training.
- **Farm Credit Canada (FCC)**
  - Loan up to $500,000 at a variable interest rate

### Alberta - Canada

- **The Agriculture Financial Services Corporation (AFSC)’s programs:**
  - Interest rate concession of 1.5% for the first five years of a loan

### Manitoba - Canada

- **Manitoba Agricultural Services Corporation (MASC)**
  - Annual rebate
  - Financing option that reduces the deposit required

### Canada

- Young farmer and Beginning farmer
- People under 40 years of age

### Alberta - Canada

- Beginning farmer
- Any individual with a net worth of $500,000 or less

### Manitoba - Canada

- Young farmers less than 39 years of age
### LEARNING FROM OTHER COUNTRIES

<table>
<thead>
<tr>
<th>USA 2) 3) 4)</th>
<th>Young Farmer under 35 years of age, beginning farmer and socially disadvantaged farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. United State Department of Agriculture (USDA) Farm Service Agency (FSA): “Lender of First Opportunity” to help farmers graduate to commercial credit</td>
<td></td>
</tr>
<tr>
<td>- Guaranteed Loan Program</td>
<td></td>
</tr>
<tr>
<td>- Direct Loan Program</td>
<td></td>
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<tr>
<td>- Land Contract Guarantee Program</td>
<td></td>
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<tr>
<td>2. Iowa Agricultural Development Authority (IADA)</td>
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<tr>
<td>- Beginning Farmer Loan Program (BFLP)</td>
<td></td>
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<tr>
<td>- Loan Participation Program (LPP),</td>
<td></td>
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<tr>
<td>- Beginning Farmer Tax Credit Program (BFTC).</td>
<td></td>
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<tr>
<td>3. Farm Credit System 3):</td>
<td></td>
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<tr>
<td>– Provide credit at competitive interest rates</td>
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<tr>
<td>– Lower loan fees, or loan covenants for owning land and leasing equipment</td>
<td></td>
</tr>
</tbody>
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FINANCING PROGRAM

- Credit for Food Security and Energy (KKP-E)
- Business Credit for People (KUR)
- Social Responsibility Partnership Program (CSR)
- Credit for Cattle Breeding Program (KUPS)
- Services of Agricultural Financing Scheme Program (SP-3)
Credit for Food and Energy Security (KKP-E)

interest subsidy scheme for farmer to support the program of national food and energy security

Objective: provide an investment credit and or working capital with affordable interest rates to small farmer

Commodity: food crops, horticulture, plantation, livestock, mechanization

can be accessed in a groups of farmer from the executing banks
Business Credit for People (KUR = Kredit Usaha Rakyat (Indonesian)).

- a low-interest loan for working capital for farmers and small and micro entrepreneurs
- Objective
  - to improve access to financing for farmers and farmer groups from the bank to accelerate the growth of the real sectors
  - to support food security, poverty reduction, expansion of employment opportunities in the agricultural sector
- Target: business people on upstream and downstream agriculture
Objective: to support the availability of beef toward food self-sufficiency and increase creation of jobs in the community

Target: cattle breeding company, cooperative, and groups of farmers

Extended by the executing banks with an interest subsidy from the government

Scheme: a two-year interest subsidy for business company, 5 years for business people
Financing investment and or working capital for farming credit from upstream to downstream

Provides lower interest with a credit limit up to Rp 500 million.

Target: farmers with at least 21 years of age or married, has run business at least for 2 (two) years and has good business prospect.
Social Responsibility Partnership Program (CSR)

- Partnership program between corporates and small businesses
- Provides working capital or investment to prospective corporate’s partners which is feasible but not yet bankable
- Grants or loans with low interest rate
HOWEVER…..

- The programs are intended for farmers or farmer groups in general, not specifically targeted to young farmers and beginning farmers.
- Under-utilized by farmers since the banks require collateral

need established

**Bank of Agriculture**

- credit with no farmer’s collateral
- through a guarantor from Insurance Agency.
Ministry of Youth and Sports: develop the young people especially in sports, organization and social organization
Ministry of Social Affairs serves as a facilitator of youth community organization development
Ministry of National Education and Ministry of Manpower and Transmigration: active in tackling youth unemployment.
NGO: youth workforce development for college graduates, public job creation with appropriate technologies for disadvantaged community groups and rural communities
1. Development of agro-industry

✓ Agriculture should become the industry that produces the final product, create high value added
✓ Agricultural image will improve: branding, packing and processing, is a creative economy that usually is preferred by the younger generation => can absorb more labor
✓ Agricultural mechanization technology needs to be improved, increasing labor productivity.
✓ Agro-industry should be able to be a leading sector to overcome the present conventional agricultural pattern.
✓ Agro-industry must be able to mix and match between the visions of entrepreneurs, and the young people ideas, with the technology to be selected.
✓ The synergy with the private sector and academia need to be developed
2. Innovation

✓ Innovation is strongly associated with the younger generation => produce something innovative that inspires young people to go into agriculture

✓ One success story is urban farming innovation. Through social media (internet, twitter, facebook) successfully boosted the spirit of the youth to participate into farming
How to attract youth into agriculture?

3. Incentives

✓ Incentive programs for capital, input subsidies, products prices stabilization

✓ A priority should also be given on accessing agricultural land for beginner farmer.

4. Infrastructure

✓ Rural infrastructure such as transportation, energy, communications, irrigation and so forth.

✓ Infrastructure should be available for industries to enter to the villages and farm productions are easily distributed.
5. Investment

- Agricultural investment will generate multiplier effects both forward (downstream) and backward (upstream).
- Private and public investment should be encouraged, not only rely on to the government budgets

6. Institutions

- Agricultural institutions must be built from upstream to downstream;
- Training for business, funding, technology, and markets for the young and beginning farmers should be developed
Although there was no specific incentive programs to young farmer, but the government and some NGOs conduct training and mentoring to youth /young farmers. Training and mentoring has been conducted primarily related with the implementation of technology and also on marketing. One illustration of agricultural mentoring by one of the NGO is presented in some pictures below
Improving farming skills to optimize the potential of local natural resources

# Al Azhar Care for people
Enthusiasm and active participation of the boarding school students in potato farming in Muara Enim, South Sumatra

# Al Azhar Care for people
The spirit of the mentor in encouraging young farmer to use their home yard for growing vegetables in order to reduce household expenses.

Comprehensive and integrated empowerment for rural community
# Al Azhar care for people
One of the mentor, together with citizen, especially young farmer, had successfully managed transforming unutilized land into productive land with horticulture crops Muara Enim, South Sumatra

# Indonesia Gemilang – Al Azhar care for people
The role of young farmers in the management of coffee plantations in South Sumatra. With intense mentoring and strengthening access to post-harvest processing technology and the development of market access, this program was able to increase farmers' welfare.
Mushroom cultivation in one boarding school in Bogor. Through nucleous-plasma partnership, students with rural youth actively involved in the cultivation of oyster mushroom.

Young farmer empowerment program—Al Azhar care for people
Paddy soil testing practice by young successor and farmer groups tutored by the experts and specialists from IAARD, Ministry of Agriculture

# Indonesia Gemilang – Al Azhar Peduli Ummat
THANK YOU