8-10 June 2015- Istanbul, Turkey
Proceedings of SOCIOINT15- 2nd International Conference on Education, Social Sciences and Humanities

491

GENDER ANALYSIS OF AGRICULTURAL SOCIALIZATION TOWARDS CHILD AND CHILD INVESTMENTS AMONG HIGHLAND FARMER FAMILIES IN WEST JAVA INDONESIA

By Herien Puspitawati[1]* and Ma'mun Sarma[2]

Part of A National Strategic Research Grant Sponsored By Ministry of Education and Culture-Republic of Indonesia 2014

[1] Lecturers, Dept of Family and Consumer Sciences, Faculty of Human Ecology, Bogor Agricultural University-Indonesia, herien_puspitawati@email.com

[2] Lecturers, Dept of Management, Faculty of Economics and Management, Bogor Agricultural University-Indonesia

*Corresponding Author

Abstract

The socialization of agricultural technology and investment activities implemented by parents toward their children must be done continuously in order to increase their family well-being of farmer families at highland areas. Schultz (1981) said that the child investment will improve economic efficiency and will enhance economic growth in the future. The objectives of the study were to describe gender analysis in (1) Identifying agricultural socialization and child investments, and (2) Analyzing the influence of social economic status of the family to agricultural socialization and child investments. It was a preliminary survey and a descriptive cross-sectional study design. The study was conducted at highland areas that were selected purposively at Ciputri Village, Pacet Sub District, and Sindangjaya Village, Cipanas Sub District, Cianjur District-West Java Province. The pre-survey method of 120 samples was purposively chosen among farmer families in early 2014. Samples were 120 wives and their child. The characteristics of social economic of farmer families were represented by the level education of mother and father and monthly income per capita. The child consisted of 50 percent of male and 50 percent of females. The rate of age of mother and father were 37 and 42 years old. The rate of education level of mother and father were graduated from elementary school level. The rate number of family members was 6 people. Most of economic level of farmer families was above the poverty level. The rate of monthly income per capita was IDR 445.465. The agricultural socialization towards child was measured by 20 items concerning technologies and activities using ordinal scale (1 and 2). The investment towards child was measured by 23 items concerning education facilities and health care using ordinal scale (1 and 2). The reliability of Cronbach Alphas of agricultural socialization and child investment were 0.96 and 0.50. The difference independent of t test will be applied to analyze gender differences between male and female. Structural Equation Modeling (SEM) will be used to analyze the effects of latent variables. It was concluded that there was no differences between male and female child in terms of the treatments of agricultural socialization and child investment done by their parents. Most of farmer families implemented high level of agricultural socialization and investment toward their children both male and female. It was found out that the higher of social economic status of farmer families influenced directly significant to the lower of agricultural socialization towards their child. However, the opposite results showed that the higher of social economic status of farmer families influenced directly significant to the higher of investment towards their child. It seems that the richer farmer families were unlikely to have interested in introducing agricultural knowledge but were very likely to increase their investment towards their child.
Keywords: Gender, child investment, agricultural socialization

1. INTRODUCTION
1.1. Background

Indonesia is an archipelago country located in South East Asia and lies on the ring of fire--between Asia and Australia, and between the Pacific and Indian Oceans. Indonesia is a country that is being transformed into an agrarian state with agricultural industry as the important role in the future. The agricultural sector provides food needs of the population, sustains the lives of more than 63 percent of the Indonesian people, provides raw materials for industry, and opens up business opportunities for the population (Chozin et. al 2010).

The quality of the Indonesian nation in the future is determined by the quality of the children at this time, including the children of farmers who are still in elementary school. Children of farmers are state assets that need to be paid attention on their daily livelihood in the village. That is why the socialization of agricultural environment and investment activities implemented by parents toward their children are considered very important and must be done continuously in order to increase child quality and their family well-being. As Schultz (1981) said that the child investment will improve economic efficiency and will enhance economic growth in the future.

Families have obligations to protect and care for their children. Referring to Indonesian Law Number 23 of 2002 on the protection of children, the state guarantees the rights and obligations of each child to be able to live, grow, develop, and participate fairly in accordance with human dignity, as well as protection from violence and discrimination. Every child has the right to have access to education and health facilities at home in the context of child development.

Not many researches have been done in Indonesia with deeply insight by using a gender analysis on socialization of agricultural environment and investment activities implemented by parents toward their children. This research used a gender approach in family studies that highlighted the activities of parents toward their children in deal with agricultural environment and also children's education and health facilities at home. According to Bronfenbrenner (1990), the quality of a child's development is determined by microsystem environment consisting of family, peers, school and neighborhood. Based on this theory, this paper emphasizes on the results of studies on socialization of agricultural environment and investment activities implemented by parents toward their children at Cianjur District. Cianjur District was selected for the study because it is a center for the production of vegetables that become the main source for generating income by rural families.

1.2. Statement of the Problems

One of Indonesia's major problems is a high number of poor populations as a result of global economic crisis. Cianjur District is one of the leading sectors of agriculture districts in West Java Province. However, there was 12.2% of poor people in Cianjur District at 2013 (BPS 2014). Approximately 62.9 percent of the population in Cianjur working in the agricultural sector. The problems of economic hardship of the family shown by poverty level will affect the vulnerability of children such as an increase in drop out of basic education, trafficking, domestic violence and deviant behavior. Therefore socio-economic constraints of the family will lead to limitations in investing activities of children.

1.3. Need for the Study

Most research studies addressed the need for caring and investing the children within the family especially deal with the livelihood of the poor family. However, there are only a few studies that address the socialization towards child and child investments especially among highland farmer families in Indonesia with a gender analysis approach. This issue supports the need to examine socialization towards child and child investments among highland farmer families. Thus, child investment could be viewed as an "entry point" in poverty alleviation strategies through the strengthening the family well-being. Based on the problems of farmer families, two research questions have been proposed as follows: (1) How to identify agricultural socialization and child investments?, and (2) What is the influence of social economic status of the family toward agricultural socialization and child investments?

1.4. Objectives

The objectives of the study were to describe gender analysis in (1) Identifying typologies agricultural socialization and child investments, and (2) Analyzing the influence of social economic status of the family to agricultural socialization and child investments.

1.5. The Conceptual Thought

Grand theory approach used in this study is the structural-functional theory that emphasizes the family

8-10 June 2015- Istanbul, Turkey
Proceedings of SOCIOINT15- 2nd International Conference on Education, Social Sciences and Humanities

493

structure and function in developing the quality of human resources (Skidmore 1979; Spencer and Inkeles 1982; Turner 1986; Schwartz and Scott 1994; Macionis 1995; Winton 1995). Family structure in this study included parents and children among highland farmer families in West Java Indonesia. Family functions in this study applied to the "socialization of agricultural and investment activities toward child". As Brown (2006) explained that child investments are manifest in the provision of goods for educational purposes and time spent interacting with children.

2. METHODS AND PROCEDURES
2.1. Design, Locations and Samples

This research was a preliminary survey and a part of National Priority Research Grants funded by the Ministry of National Education-Republic of Indonesia Number: 263/E5/2014. The title of the research was "Gender analysis of family coping strategies, investment and quality of child in Achieving *Targets of Millenium Development Goals* (*MDGs*) among upland farmer families" under coordinator of Dr Herien Puspitawati, with team members of Dr. Ma'mun Sarma and Dr. Lilik Noor Yuliati.

This is a descriptive cross-sectional study design that examined the conditions of family concerning social and economic characteristics, gender analysis, agricultural socialization towards child and child investments. The study was conducted at upland areas that were selected purposively at Ciputri Village, Pacet Sub District, and Sindangjaya Village, Cipanas Sub District, Cianjur District-West Java Province. The site of research was chosen purposively with consideration that Cianjur District is one of the central production areas in vegetables commodities. The pre-survey method consisted of 120 intact farmers' families who were asked to participate in the study. A purposive technique was used for sampling due to the farmers' willingness to participate. The lists of farmer families were taken from the village office administrations to examine the occupation of the families. The interview was conducted from early January to end of March 2014. Samples were 120 farmer's wives of the 4th to 6th graders boys and girls of elementary school level students. The gender balanced of the child was selected that consisted of 50 percent of boys and 50 percent of girls. The respondents were farmers' wives with the assumption that the wives know more in social and economic characteristics of the family than their husbands. The characteristics of social economic of farmer families were represented by the level education of mother and father and monthly income per capita. Other variables were related to agricultural socialization towards child and child investments.

2.2. Instrumentations

A survey instrument was developed to collect the needed data. Once the survey instrument was constructed for this study, the instrument was reviewed for content validity by a national committee/jury for grants competition from the Directorate General of Higher Education, Ministry of Education and Culture- Republic of Indonesia. The committee consisted of national experts in social sciences and faculty members from respected universities in Indonesia. The idea of this paper was also presented at the National Reviewer Committee from the Directorate General of Higher Education, the Ministry of Education and Culture-Republic of Indonesia at December 8, 2013. Section one of the instrument focused on the characteristics of farmer families, included the age (by years) and the education of all family members (by years), the number of family members (by numbers), the average of monthly income (IDR per month), the average of monthly expenditures (IDR per month).

The instruments referred to the concept of Puspitawati et al. (2015). That focused on: (1) Socialization of pesticides, agric. technology and environment towards the child. Twenty items assessed the extent to which respondents' perceived of socialization of pesticides, agricultural technology and environment towards the child The 20 items were measured on a 2-point Likert-type scale ranging from 1=no, not applied, 2= yes, applied, (2) Socialization of tools and farming system towards the child. Twenty six items assessed the extent to which respondents' perceived of socialization of tools and farming system towards the child. The 26 items were measured on a 2-point Likert-type scale ranging from 1=no, not applied, 2= yes, applied, (3) Investment on education facilities towards the child. Eleven items assessed the extent to which respondents' perceived of investment on education facilities towards the child. The 11 items were measured on a 2-point Likert-type scale ranging from 1=no, not applied, 2= yes, applied, (4) Investment on health facilities towards the child. Twelve items assessed the extent to which respondents' perceived of investment on health facilities towards the child. The 12 items were measured on a 2-point Likert-type scale ranging from 1=no, not applied, 2= yes, applied.

2.3. Data Collection

The study was conducted from early January to end of March 2014. Several steps were applied to the process of data collections. The first step was the request for permission to begin the procedures from the

8-10 June 2015- Istanbul, Turkey
Proceedings of SOCIOINT15- 2nd International Conference on Education, Social Sciences and Humanities

494

provincial, district, sub-district, and to village administrative governments. The permission included the proof of ethical clearance that was signed by the Office of Research and Community Services from Bogor Agricultural University. The second step was visiting to the village that was accompanied by the sub-district official with the purpose of socialization of the research purposes and procedures.

2.4. Data Analysis

The quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS, version 15.0) by applying the difference independent of t test to analyze gender differences between male and female students. The Structural Equation odeling (SEM) technique (LISREL version 8.80 Edition Student-July 2006) was used to examine the direct and indirect affect in influencing a particular endogenous variable (Joreskog and Sorbom 2006).

2.5. Reliability

Reliability of instrumentation shows the consistency of a measuring instrument (Carmines & Zeller 1991). Based on Cronbach Alpha, it showed that in general the reliability of variables agricultural socialization was very reliable (Cronbach Alpha was 0.94) and child investment (Cronbach Alpha was 0.50) was quite reliable. The standard of setting typologies between two variables (total of agricultural socialization on a child and total of investment on a child) was implemented by using cut off point of low level was less than or equal to 65% and cutt of point of high level was higher than 65%.

3. RESEARCH FINDINGS

3.1. The social, economic and demographic characteristics of farmer families

It was found in Table 1 that the rate of age of mother and father were 37 and 42 years old. The rate of education level of mother and father were graduated from elementary school level. The rate number of family members was 6 people.   Most of economic level of farmer families was above the poverty line. The rate of monthly income per capita was IDR 445.465, with a range of at least IDR 20 000 up to a maximum of IDR 8.575 million/person/month. The average percentage of income from farming and non farming were 75.6 and 24.3 percents respectively. Based on poverly line of Cianjur District (that was-- IDR 268 251/person/month (BPS 2013)), then, per capita of family income below the poverty line was more than half (59.7%) families. Overall, based on gender analysis, it proved that there was no difference between boys and girls in their family socio economic and demographic characteristics.

Table 1. Gender analysis of child and family characteristics.

No	Variable	Means		Independent T test (difference)	Significant of (p)
		Boys	Girls		
1	Age of father (years)	42.41	42.7	- 0.192	0.848
2	Age of mother (years)	37.1	37.0	0.047	0.963
3	Level education of father (score)*	6.10	6.10	- 0.959	0.339
4	Level education of mother (score)*	5.95	5.90	1.507	0.134
5	Number of family members (persons)	5.3	5.7	- 1.473	0.144
6	Monthly income per capita (IDR/month)	462.918	428.013	0.200	0.842

3.2. The agricultural socialization towards child and child investment

The agricultural environment at the research site related to horticulture and vegetable production. In general, the samples in this study had a narrow field that was less than one hectare. Samples in Sindang Jaya village were more likely to utilize their homeyards by planting of cut flowers for sale compare to Ciputri Village. Based on gender analysis at Table 2, it proved that there was no difference between boys and girls in receiving agricultural socialization and investment from their parents. However, supprisingly, girls were more likely to receive socialization of tools and farming system from their parents rather than boys.

8-10 June 2015- Istanbul, Turkey
Proceedings of SOCIOINT15- 2nd International Conference on Education, Social Sciences and Humanities

495

Table 2. Gender analysis of agricultural socialization and investments toward child.

No	Variable	Means		Independent T test (difference)	Significant of (p)
		Boys	**Girls**		
1	Socialization of pesticides, agric. technology & environment (score)	32.1	32.7	- 0.421	0.675
2	Socialization of tools and farming system (score)	**37.9**	**40.6**	**- 1.953**	**0.053+**
3	Total of socialization on a child (score)	70.1	73.3	- 1.618	0.108
4	Investment on education facilities (score)	14.7	14.8	- 0.235	0.814
5	Investment on health facilities and so on (score)	17.6	17.8	- 0.996	0.321
6	Total of Investment on a child (score)	32.3	32.6	- 0.741	0.460

+ significant at p ≤ 0,10

Based on typologies between socialization and investment on a child, there were 4 types as shown in Table 3 and Figure 1. They were: (1) Type 1 was represented by the high agricultural socialization and low child investment; (2) Type 2 was represented by the high agricultural socialization and high child investment, (3) Type 3 was represented by the low agricultural socialization and high child investment, and (4) Type 4 was represented by the low agricultural socialization and low child investment.

Based on the results, it can be shown that Type 2 was the largest percentage of farmer family (53.3% for boys and 65.0% for girls), Type 1 was the second largest percentage of farmer family (25.0% for boys and 15.0% for girls), Type 3 was the third largest percentage of farmer family (13.3% for boys and 15.0% for girls), and Type 4 was the smalest percentage of farmer family (8.3% for boys and 5.0% for girls).

Table 3. Typology of Agricultural Socialization and Investment Toward A Child

No.	Type	Boys (%)	Girls (%)	Total (%)
1	Type 1: High Socialization, Low Investment	25.1	15.0	20.0
2	Type 2: High Socialization, High Investment	**53.3**	**65.0**	**59.1**
3	Type 3: Low Socialization, High Investment	13.3	15.0	14.2
4	Type 4: Low Socialization, Low Investment	8.3	5.0	6.7

High Agricultural Socialization

Type 1:
Boys 25.1%;
Girls 15.0%;
Total 20.0%

Type 2:
Boys 53.3%;
Girls 65.0%;
Total 59.1%

Low Child Investment

High Child Investment

Type 4:
Boys 8.3%;
Girls 5.0%;
Total 6.7%

Type 3:
Boys 13.3%;
Girls 15.0%;
Total 14.2%

Low Agricultural Socialization
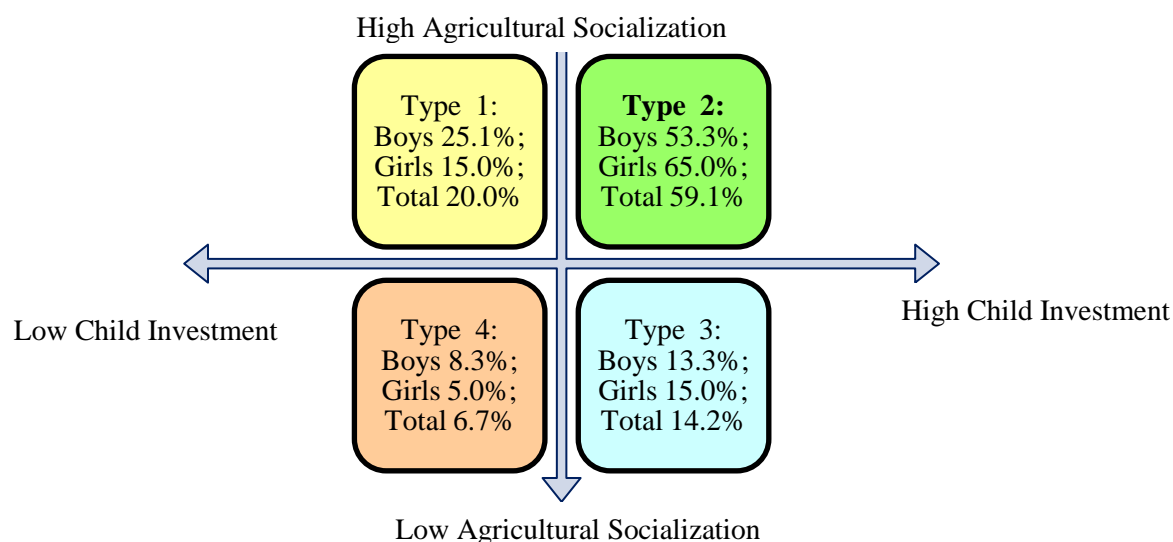
Figure 1. Typology of agricultural socialization and investment toward a child.

8-10 June 2015- Istanbul, Turkey
Proceedings of SOCIOINT15- 2nd International Conference on Education, Social Sciences and Humanities

496

3.3. Factors affecting Agricultural Socialization and Child Investment: A Structural Equation Modeling (SEM) analysis.

Structural Equation Modeling (SEM) at Figure 2 was used to analyze the effects of latent variables. The value of Chi-Square, GFI (Goodness of Fit Index) and RMSEA (Root Mean Square Error Approaximate) were 22.40 (p= 0.05), 0.95 and 0.08 respectively for the total samples (n= 120). Based on these results, it can be said that the models fit the data (based on the criteria of Bollen 1989).

Results described that the latent variable of child characteristics was indicated by sex of the child whether a boy or a girl. The latent variable of family characteristics was indicated by the education level of mother and father and also monthly income per capita, even though the income per capita did not showed the strong indicator for the latent variables. The latent variable of agricultural socialization was indicated by socialization of pesticides, agricultural technology and environment and socialization of tools and farming system. The latent variable of child investment was indicated by investment on education facilities and investment on health facilities.

Findings showed that based on gender analysis there was no difference between boys and girls in receiving agricultural socialization and investment from their parents. The latent variable of agricultural socialization was directly negative influenced by family characteristics (β = -0.21*). Then, the latent variable of child investment was directly positive influenced by family characteristics (β = 0.24*). Finally, there had no relationship between latent variables of agricultural socialization and child investment (ψ_{34} = - 0.02).

X2	= 22.40	
p	= 0.05	
df	= 13	
GFI	= .95	
AGFI	= .89	
RMSEA	= .08	
n	= 120	
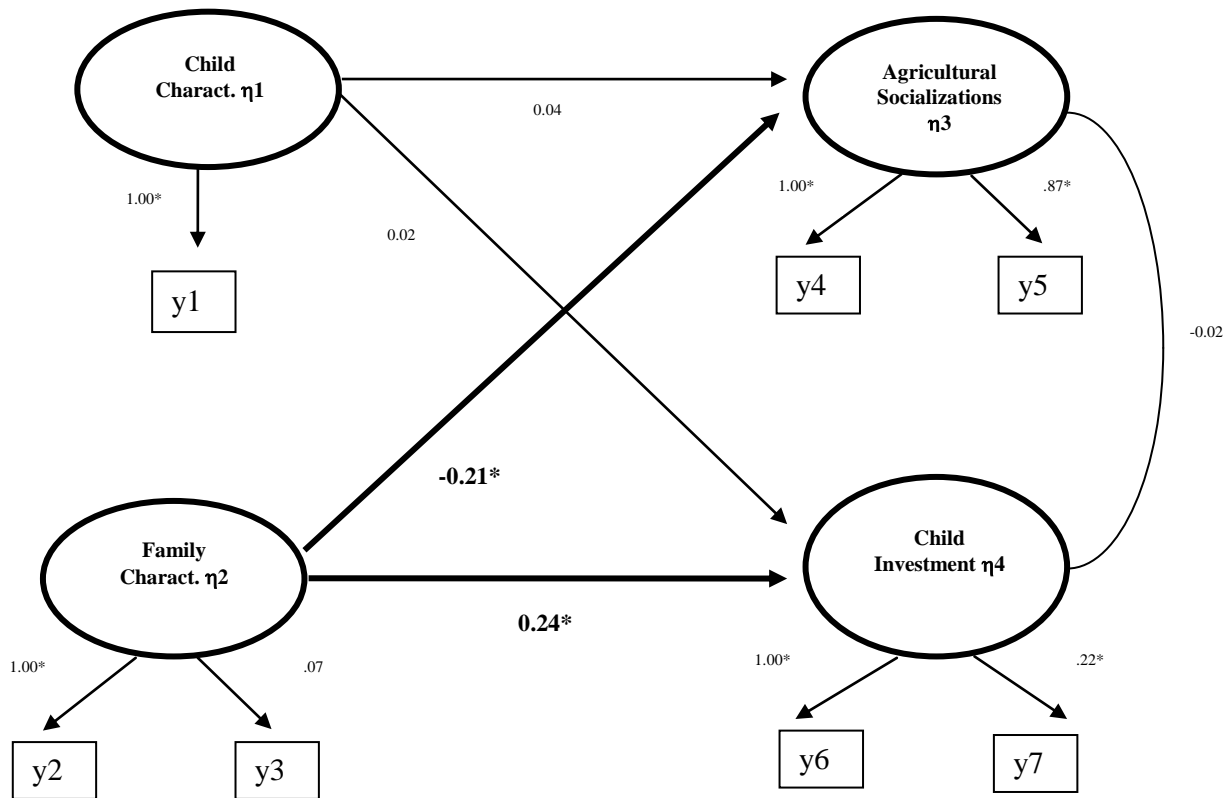
Notes:
Y1 = Sex of Child (1= boys; 2= girls)
Y2 = The education of father and mothers (level)
Y3 = Monthly income per Capita (IDR/month)
Y4 = Socialization of pesticides, agric. technology & environment (score)
Y5 = Socialization of tools and farming system (score)
Y6 = Investment on education facilities (score)
Y7 = Investment on health facilities and so on (score)

Figure 2. The effects of child and family characteristics toward agricultural socialization and child Investments.

8-10 June 2015- Istanbul, Turkey
Proceedings of SOCIOINT15- 2ⁿᵈ International Conference on Education, Social Sciences and Humanities

497

It was summarized from SEM analysis that there was no difference between girls and boys in terms of the treatments of agricultural socialization and child investment done by their parents. Most of farmer families implemented high level of agricultural socialization and investment toward their children for both boys and girls. It was found that the higher of social economic status of farmer families influenced directly significant to the lower of agricultural socialization towards their child. However, the opposite results showed that the higher of social economic status of farmer families influenced directly significant to the higher of investment towards their child. It seemed that the richer farmer families were unlikely to have interested in introducing agricultural knowledge to their child but were very likely to increase their investment on education and health facilities towards their child.

4. CONCLUSIONS AND RECOMMENDATIONS

The conclusions are: (1) There was no difference between males and females child agricultural socialization and investment from their parents. However, supprisingly, girls were more likely to receive socialization of tools and farming system from their parents rather than boys. Type 2 represented by the high agricultural socialization and high child investment was the largest percentage of farmer family (53.3% for boys and 65.0% for girls), (2) It was found that the higher of social economic status of farmer families influenced directly significant to the lower of agricultural socialization towards their child. However, the opposite results showed that the higher of social economic status of farmer families influenced directly significant to the higher of investment towards their child. It seemed taht the richer farmer families were unlikely to have interested in introducing agricultural knowledge to their child but were very likely to increase their investment on education and health facilities towards their child.

Finally, based on these results, it is recommended that the socialization of farmer as professional occupation is very important for youth generation among farmer families both for the lower and upper social economic status. The agricultural technologies and tools are very important topics to be introduced to the children of the farmer both male and females start from elementary school age.

ACKNOWLEDGEMENTS

REFERENCES

BPS 2014 (http://jabar.bps.go.id/LinkTabelStatis/view/id/49)

Bonfenbrenner. 1990. Alienation and the Four Worlds of Childhood. Di dalam Muuss, Rolf, Editor. Adolescent Behavior and Society (4ᵗʰ Ed.). McGraw-Hill Publishing Company.

Brown, P.H. 2006. Parental Education and Investment in Children's Human Capital in Rural China. Economic Development and Cultural Change Journal. The University of Chicago. Pp. 759-789.

Carmines EG, Zeller RA. 1991. Reliability and Validity Assessment. Fifteenth printing. Newbury Park, California: Sage Publications.

Chozin, M.A., Sumardjo, Poerwanto, R., Purbayanto, A., Khomsan, A., Fauzi, A., Toharmat, T., Hardjanto, & Seminar K. B (Editor). Pembangunan perdesaan dalam rangka peningkatan kesejahteraan masyarakat. Pemikiran Guru Besar Perguruan Tinggi Badan Hukum Milik Negara. IPB Press.

Macionis JJ. 1995. Annotated Instructor's Edition Sociology (5ᵗʰ Ed), New Jesey: Prentice Hall, Englewood Cliffts

Poerwanto & Chozin 2010).

Puspitawati, H., Sarma, M and Noor Yuliati, L. 2015. The Family Research on Coping Strategies, Child Investment, Child Quality and Family Well-being among Upland Farmers in Indonesia. IPB Press (in review process)

Schwartz MA, Scott BM. 1994. Marriages and Families: Diversity and Change, New Jersey: Prentice-Hall Inc.

Schultz, T.W. 1981. Economics of the Family:Marriage, Children, and Human Capital. Chicago: University of Chicago Press.

Skidmore W. 1979. Theoretical Thinking in Sociology. Second Editon. Cambridge University Press. New York.

Spencer M, Inkeles A. 1982. Foundations of Modern Sociology. Third Edition. Prentice, Inc. New Jersey.

8-10 June 2015- Istanbul, Turkey
Proceedings of SOCIOINT15- 2ⁿᵈ International Conference on Education, Social Sciences and Humanities

498

Turner JH. 1986. The Structure of Sociological Theory (4th Ed), Chicago, Illinois: The Dorsey Press.

Winton C.A. 1995. Frameworks for Studying Families. The Duskin Publishing Group, Inc. Connecticut, USA.