
Woman Economic Contribution, Livelihood Strategies, and Family Well-being of Farmer Families in Cimanuk Watershed

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Abstract

The objective of this study were to analyze woman economic contribution, livelihood strategies, and well-being of farmer families in Cimanuk Watershed. This study used a cross-sectional study design. This research involved 65 samples farmer families. This study was conducted in Garut and Indramayu District. The results showed that most of woman economic contribution belong to low category. Livelihood diversification is a strategy that most farmer families do in the Cimanuk Watershed on the dry season, rainy season, disaster season, and highly economic pressure season. The family well-being of families belong to moderate category, and economic well-being aspect occupied in lowly level than physic aspect, psychology aspect, and social aspect. The result showed that the well being of farmer families affected by woman economic contribution. The result also showed that livelihood strategies not affected to family well being. Many or less of livelihood strategies not affected to family well being.

Keywords: watershed, family well-being, woman economic contribution, livelihoods strategies

Abstrak

Penelitian ini bertujuan untuk menganalisis kontribusi ekonomi perempuan, strategi nafkah, dan kesejahteraan keluarga petani yang berada di Daerah Aliran Sungai Cimanuk. Penelitian ini menggunakan desain penelitian *cross-sectional study*. Sebanyak 65 keluarga dipilih secara *purposive* sebagai contoh penelitian. Penelitian dilakukan di Kabupaten Garut dan Indramayu. Hasil penelitian menunjukkan bahwa kontribusi ekonomi perempuan termasuk dalam kategori rendah. Pola nafkah ganda adalah jenis strategi nafkah yang paling sering dilakukan oleh keluarga contoh pada musim kemarau, musim penghujan, musim bencana, dan musim tekanan ekonomi tinggi. Hasil menunjukkan bahwa kesejahteraan keluarga petani dipengaruhi oleh kontribusi ekonomi perempuan. Hasil juga menunjukkan bahwa strategi nafkah tidak berpengaruh terhadap kesejahteraan keluarga. banyak sedikitnya jenis strategi nafkah yang diterapkan oleh keluarga tidak memiliki pengaruh terhadap kesejahteraan keluarga.

Kata kunci: daerah aliran sungai, kesejahteraan keluarga, kontribusi ekonomi perempuan, startegi nafkah

INTRODUCTION

Indonesia is an agrarian country that is transforming into an industrial country with a very important agricultural sector in Indonesia. This is because the agricultural sector provides the food needs of the population that sustains the lives of more than 63 percent of Indonesians (BPS 2015). The economic portrait of the agricultural sector in Indonesia has yet to show optimum success even though Indonesia is rich in natural resources. The natural wealth present in Indonesian agriculture is an asset of agricultural development in Indonesia. Data from the Central Bureau of Statistics (BPS) in 2015 shows that 183 million people aged 15 years and over, ie as many as 35 percent or 39.9 million Indonesian workers work in the agricultural sector. The problem of poverty for some of Indonesia's population can not be solved properly. Data from the Central Bureau of Statistics (BPS) in 2010 shows that the number of poor people in Indonesia reaches 31 million or about 13.3 percent of the population in Indonesia and the most comes from farm families.

Given the problem of poverty, the farmer's family needs to manage their farming business optimally with the involvement of all family members. One involvement that has a big role is women as wives as well as housewives. The contribution of women in economic terms is manifested by the contribution of income to the family. According to Lasswell and Lasswell (1987) the economic contribution of women in the family will result in an increase in family finances, luxury ownership, and higher living standards with the achievement of a better sense of security that impact on improving family social status. Directly or indirectly the role of women involved in managing farming activities closely related to the welfare of the family in accordance with the purpose in forming the family that is to realize the welfare for members of his family. Family welfare can be assessed objectively and subjectively. The objective welfare is the level of objective fulfillment of basic needs and developments that refer to normative and ideal standards (Sunarti 2013). Puspitawati (2009) states that subjective family wellbeing is measured based on the need for one's enjoyment that is considered the level of how one enjoys the various possibilities of life as a result of the limitation and opportunity of life and a reflection of interaction with environmental factors.

The environment as a place of residence has become one of the external factors affecting the welfare of the family in supporting quality survival in fulfilling its basic needs (Iskandar et al., 2007). Watersheds are one of the slums whose communities are often associated with high levels of poverty and unemployment (Hariyanto 2010). Analyzing the poverty and economic problems faced by some farming families in Indonesia requires a comprehensive and comprehensive approach. According to Widiyanto, Setyowati and Suwanto (2010) one approach to understanding poverty is sustainable livelihood. This approach not only discusses income (income poverty) and jobs (jobs) but more thoroughly. Livelihood strategy or livelihood strategy is an effort made by the family in order to meet the needs of his life. Scoones (1998) mentions that livelihood strategies are divided into three strategies: livelihood engineering (agricultural livelihoods and non-agricultural livelihoods), multiple livelihood patterns, and spatial engineering (migration) as an effort to survive.

Based on the many problems faced, the economic contribution of women and livelihood strategy is expected to improve the welfare of the family. Therefore, the objectives of this study are: (1) to identify family characteristics, economic contribution, livelihood strategies, and family welfare of farmers in upstream and downstream of Cinamuk watershed; (2) to analyze differences in women's economic contribution, livelihood strategies, and family farm welfare in Upstream and downstream of the Cinamuk watershed, (3) analyze the influence of family characteristics, economic contribution, livelihood strategies, and family farm welfare in the Cinamuk watershed.

METHOD

This study uses cross-sectional study design, ie how to study the object of research conducted in a certain time. The location of this research is conducted in Cimanuk River Basin (DAS) which is one of the main pillars of water resources in West Java Province and as the second longest river in West Java (Ministry of Environment 2013) and focuses on upstream and downstream areas including Kabupaten Garut and Indramayu are determined purposively with the consideration of the determination of the sub-districts and villages near the Cimanuk river flow as well as the community utilizing the river for daily life such as agriculture and household needs. The data collection process was conducted from April to May 2016. The population in this study were all farming families who had children aged under five and school age consisting of wife and husband and were in the vicinity of Cimanuk river basin. Number of families of farmers in the study were 65 families with 26 families in Garut as upstream and 39 families in Indramayu as a downstream area.

Types of data collected in this study are primary data and secondary data. Secondary data were obtained from village, kelurahan and kecamatan institutions on village monograph data and data on the number of families with children under five and school age. Primary data is data obtained from interview with questioner tool. Primary data include: (1) respondent characteristics (husband's age, wife's age, husband's education, wife's education, family income and expenses, family size, husband's occupation, wife's occupation, length of marriage, married mother's age); (2) the economic contribution of women using questionnaires by looking at wife's income; (3) livelihood strategies using modified questionnaires and referring to Dharmawan (2007: 2009) and the 1998 Scoones theory which consists of three dimensions, namely the engineering of livelihood sources (there are two sub-dimensions of agricultural livelihoods and non-agricultural livelihoods), multiple livelihood patterns, As well as a migration consisting of 39 statements and using four scales ie 1 = never, 2 = sometimes, 3 = often, 4 = very often; (4) the welfare of the family using questionnaires refers to the Biology, Simanjuntak, Puspitawati (2012) which consists of four dimensions of physical, economic, social and psychological wellbeing, and 33 statements using four scales: 1 = unsatisfied, 2 = 3 = satisfied, 4 = very satisfied. The index scores achieved were classified into categories and classified into three categories with cut off interval class (Hayati, Simanjuntak, Puspitawati 2012) ie low: 0.00 - 33.33, medium: 33.34 - 66.67, height: 66.68 - 100. Data analysis Used in this study using descriptive and inferencing

analysis. Descriptive analysis includes the average, maximum and minimum values used in quantitative data. Inferencing analysis used was correlation test and regression test.

RESULT

Family Characteristic

The age of husband and wife in this study was categorized into three namely early adulthood (22-40 years), middle adult (41-60 years), and final adult (> 60 years). The results showed that the average age of husband and wife age in the upstream and downstream areas were in the early adult age category of 39.98 years and 35.54 years. The results of the descriptive test indicate that the average large family of samples included in medium family (5 - 7 people), while the average age of the mother when married 18.71 years and the length of marriage is 16.83 years. The education age of husband and wife of upstream and downstream areas has the greatest average is at 6- <9 years. The average household per capita income upstream is Rp259,125, while per capita income downstream is Rp614,388. Percentage of husband work in upstream and downstream is mostly as farm laborer equal to 70.8 percent, while as a farmer of 29.2 percent. More than half (53.8%) of upstream and downstream wife jobs are housewives, nearly a third of wives (23.1%) as farm laborers, while the rest are farmers, self-employed, employees and other workers.

Economic Contributions

The economic contribution of women is the proportion of earnings of wives who participate in farming and non-farm work on total family income. Overall, the average female economic contribution provided by the wife to the family is in the low category (80.0%) (Table 1). This is because most of the wives of the sample family are totally unemployed and only parenting and some work but have low wages compared to men who work in the same field.

Table 1 Family based on economic contribution of women and region

Tabel 1 Keluarga berdasarkan kontribusi ekonomi perempuan dan wilayah

Women Economic Contribution	Upstream		Downstream		Total	
	n	%	n	%	N	%
Low (≤ 33.33)	21	80.8	31	79.5	52	80.0
Medium (33.34 – 66.67)	5	19.2	7	17.9	12	18.5
High (66.68-100)	0	0	1	2.6	1	1.5
Total	26	100.0	39	100.0	65	100.0
Mean± Deviation Standard	15.96±18.06		18.00±17.12		17.18±17.40	
Min-max	0-65		0-68		0-68	
<i>p-value</i>			0.647			

Description : * significant at p-value <0.1

Different test results in Table 1 to the female economic contribution variable showed no difference between the economic contribution of women to the family in the upstream and downstream areas. Based on interviews with some respondents in the downstream area, the seasonal work that comes when Lebaran is strongly

supportive of additional work by the wife. Finding a job in this region is not so difficult, does not require high education as long as it has good will and accuracy.

Livelihood Strategy

A livelihood strategy is an effort by the family to continue to survive consisting of abilities, assets, and activities (Chambers and Conway 1991). The purpose of the family's livelihood strategy is to obtain livelihood security, a condition that indicates the sustainability and adequacy of the family towards access to meet basic needs for food security and improved family health status (Kamaruddin & Samsudin 2014). With the creation of livelihood security is expected to improve the welfare of the family widely. The livelihood strategy is divided into 3 (Scoones 1998) namely: livelihood engineering, multiple income patterns, and migration. Engineering livelihood is one of survival strategy by utilizing natural resources both in agriculture and non agriculture. A multiple income pattern is a strategy that applies diversity of livelihood patterns by finding jobs other than agriculture to increase income or by mobilizing family labor (father, mother and child) to work. Spatial engineering (migration) is a livelihood strategy by conducting regional movements or livelihood patterns.

The livelihood strategy of the dry season is the work done by the family to survive when in a certain period when a region does not receive rain and experience periods of drought. Based on the results of the percentage distribution of the most commonly used livelihood strategies in the dry season, upstream and downstream farming families apply different livelihood strategies to agricultural livelihoods, non-agricultural livelihoods, double income patterns, and migration. On the basis of agriculture, upstream and downstream families often apply the type of livelihood strategy by working on other people's land where the highest achievement of the average score is on the statement item "Working on someone else's land to supplement income after managing their own land" (46.2% upstream and 51.3% downstream) and upstream families also implemented livelihood strategies using pesticides to reduce pests (46.2%) while the lowest achievement was on the statement item "Utilizing natural assets to supplement income (catch fish for sale)" (3.8% upstream and 0.0% downstream), Whereas in non-agricultural subsistence families often work as construction laborers where the highest achievement is in the statement item "there are family members who become construction workers" (19.2% upstream and 23.2% downstream). Meanwhile, in order to survive, families in the upstream and downstream regions make a double income pattern with husbands and wives often working (34.6% upstream and 33.3% downstream), whereas for family upstream migration strategies upstream and downstream often do by way of migratory husbands Out of the area to find work (15.3% upstream and 23.1% downstream).

The rainy season livelihood strategy is an effort by the family to survive when the increase of rainfall in an area compared to usually in a fixed period of time regularly. Based on the results of the percentage distribution of the most commonly used livelihood strategies in the rainy season, the upstream family often implements the type of welfare strategy with their wives and / or children to work on other people's land (50.0%), while the downstream family often implements A livelihood

strategy by working on other people's land to increase income after managing their own land (53.9%). On the non-family basis of subsistence farms in the downstream often work as construction laborers where the highest achievement is in the statement item "there are family members who become construction workers" (23.1%), while upstream families often apply livestock farming strategies (19.2%). Families in the downstream area make a double income pattern with husbands and wives often work (33.3%) and upstream families often make livelihood strategies with husbands having two or more jobs (46.2%), while for family upstream migration strategies in upstream and downstream Often by way of family members ie migratory husbands out of the area to obtain employment (15.2% upstream and 20.6% downstream).

Selanjutnya strategi nafkah musim bencana adalah upaya yang dilakukan keluarga untuk bertahan hidup ketika terjadi peristiwa alam seperti banjir, tanah longsor, gunung meletus, tsunami dan yang lain. Hasil menunjukkan bahwa presentase strategi nafkah yang sering dilakukan keluarga di hulu pada basis pertanian dengan menggunakan pestisida untuk mengurangi hama (7.6%) dan keluarga di hilir sering melakukan strategi nafkah dengan menggunakan teknologi untuk memkasimalkan output (12.9%). Sedangkan pada basis nafkah non pertanian keluarga di hulu sering menerapkan strategi nafkah dengan cara anggota keluarga yang membuka usaha menjahit/keterampilan/makanan (11.5%) sedangkan keluarga di hilir menerapkan strategi nafkah dengan terdapatnya anggota keluarga yang menjadi buruh/asisten rumah tangga (5.2%). Sementara pada pola nafkah ganda keluarga di hulu sering melakukan strategi nafkah dengan cara suami memiliki dua atau lebih pekerjaan (15.4%) sebaliknya keluarga di hilir sering melakukan dengan cara istri memiliki dua atau lebih pekerjaan (7.7%). Strategi nafkah migrasi yang sering dilakukan di hulu dan hilir adalah dengan cara suami migrasi ke luar daerah untuk memperoleh pekerjaan (3.8% hulu dan 2.6% hilir).

Selain itu, strategi nafkah musim tekanan ekonomi tinggi adalah upaya yang dilakukan keluarga untuk bertahan hidup ketika terjadi kesulitan ekonomi dalam memenuhi kebutuhan non pangan seperti kesulitan untuk rekreasi keluarga, kesulitan untuk biaya pendidikan, kesulitan untuk membayar listrik, memperoleh pekerjaan, menyediakan bibit dan pupuk tanaman dan lainnya. Hasil menunjukkan bahwa pada saat tekanan ekonomi tinggi, keluarga di hilir sering menerapkan strategi nafkah rekayasa sumber nafkah basis pertanian dengan menggarap lahan orang lain untuk menambah pendapatan setelah mengurus lahan sendiri (53.9%) sebaliknya keluarga di hulu sering melakukan strategi nafkah dengan menggunakan pestisida untuk mengurangi hama kerana berdampak terhadap hasil pertanian dan juga istri dan atau anak ikut bekerja di lahan orang lain (46.1%), sedangkan untuk basis nafkah non pertanian keluarga di hilir sering melakukan strategi nafkah dengan anggota keluarga membuak usaha keterampilan/makanan/menjahit (23.0%) sebaliknya keluarga di hulu sering melakukan strategi nafkah dengan anggota keluarga menjadi buruh bangunan (26.9%). Disisi lain, penerapan pola nafkah ganda sering dilakukan oleh keluarga di hulu dimana suami memiliki dua atau lebih pekerjaan berbeda (57.7%) sedangkan keluarga di hilir melakukan dengan cara suami dan istri bekerja (33.3%) dan keluarga di hulu istri atau anak migrasi ke luar daerah untuk memperoleh pekerjaan sedangkan keluarga hilir sering melakukan strategi nafkah dengan suami migrasi ke luar daerah untuk memperoleh pekerjaan.

Furthermore, the livelihood strategy of the disaster season is an effort by the family to survive when there are natural events such as floods, land logs, volcanoes, tsunamis and others. The results show that the percentage of livelihood strategies that are often done by the upstream family on an agricultural basis by using pesticides to reduce pests (7.6%) and downstream families often make livelihood strategies using technology to maximize output (12.9%). Whereas in the non-farm family livelihood base upstream often applied the livelihood strategy with the family member who opened the sewing / skill / food business (11.5%) while the downstream family implemented a livelihood strategy with the presence of family members who became laborers / housekeepers (5.2%). While in the family's uplifting subsistence pattern in the upstream often make a livelihood strategy in the way the husband has two or more jobs (15.4%) otherwise the downstream family often performs by the way the wife has two or more jobs (7.7%). The frequent migration strategies for upstream and downstream migrants are migratory husbands out of the area to find work (3.8% upstream and 2.6% downstream).

In addition, the livelihood strategy of high-pressure economic season is the effort of the family to survive when there is economic difficulty in meeting non-food needs such as difficulties for family recreation, difficulties for education expenses, difficulties to pay for electricity, obtaining jobs, providing seeds and crop fertilizers and others. The results show that when the economic pressure is high, the downstream family often implements the livelihood strategy of livestock farming by working on other people's land to supplement their income after managing their own land (53.9%) instead of upstream families often making livelihood strategies using pesticides to reduce (46.1%), whereas for non-family subsistence family base in downstream often do subsistence strategy with family member membua effort skill / food / sewing (23.0%) Otherwise families in the upstream often make a living strategy with family members to be construction workers (26.9%). On the other hand, the adoption of multiple livelihood patterns is often done by upstream families where husbands have two or more different jobs (57.7%) while the downstream family does the husbands and wives work (33.3%) and families in the upper reaches of wives or children migrating out Area to get a job while the downstream family often make a livelihood strategy with a migration husband out of the area to get a job.

Family Welfare

Family welfare in this study is determined by assessing the wife's perception of economic, physical, social, and psychological conditions. Based on the results of the overall research of family welfare in the Cimanuk watershed is in the category of being with an average overall score of 44.80 percent. The results of the study in Table 2 show that family perception on economic prosperity is ranked the lowest when compared with other aspects, while the highest ranking lies in the psychological aspect.

Table 2 Distribution of family welfare by region

Family Welfare	Upstream		Downstream		Total		
	n	%	n	%	N	%	
Physic	Low (≤ 33.33)	6	23.1	2	5.1	8	12.3
	Medium (33.34 – 66.67)	9	73.1	33	84.6	52	80.0
	High (66.68-100)	1	3.8	4	10.3	5	7.7
	Total	26	100.0	39	100.0	65	100.0
Economy	Low (≤ 33.33)	16	61.5	21	53.8	37	56.9
	Medium (33.34 – 66.67)	10	38.5	18	46.2	28	43.1
	High (66.68-100)	0	0.0	0	0.0	0	0.0
	Total	26	100.0	39	100.0	65	100.0
Social	Low (≤ 33.33)	4	15.4	5	12.8	9	13.8
	Medium (33.34 – 66.67)	21	80.8	34	87.2	55	84.6
	High (66.68-100)	1	3.8	0	0.0	1	1.5
	Total	26	100.0	39	100.0	65	100.0
Psychology	Low (≤ 33.33)	6	23.1	8	20.5	14	21.5
	Medium (33.34 – 66.67)	17	65.4	31	79.5	48	73.8
	High (66.68-100)	3	1.5	0	0.0	3	4.6
	Total	26	100.0	39	100.0	65	100.0
Total	Low (≤ 33.33)	7	26.9	5	12.8	12	18.5
	Medium (33.34 – 66.67)	19	73.1	34	87.2	53	81.5
	High (66.68-100)	0	0.0	0	0.0	0	0.0
	Total	26	100.0	39	100.0	65	100.0

Different test results showed no difference in family welfare, except on physical welfare dimension with p-value 0.037. The average physical wellness index score in the downstream area was higher (53.41) than the upstream region (45.85) due to observations at the study site (state and house hygiene, sanitation and environmental hygiene, water condition, and physical health condition of the sample family) Better downstream. In addition, based on the different test of family welfare as a whole covering all dimensions of physical, social, economic, and psychological well-being, it is shown that there is no significant difference in family welfare in upstream and downstream areas with p-value 0.314. This is because family characteristics in both upstream and downstream areas are not very different and homogeneous.

Factors Affecting Family Welfare

Table 3 shows the results of regression tests on the dimensions of women's economic contribution and livelihood strategies to family welfare. Based on the results in Table 3 it is found that the economic contribution of women significantly negatively affect the family welfare score. This means that any increase in one

female economic contribution will be able to lower the family welfare score. The livelihood strategy in the regression test in this study is the number of livelihood strategies implemented and carried out by families in various seasons namely the dry season, the rainy season, during a disaster, and when the family is experiencing high economic pressure. The results also show that livelihood strategies have no significant effect on family welfare. The many or fewer livelihood strategies employed by the family will neither increase nor decrease the family welfare score.

Table 3 Influence of family characteristics, economic contribution of women, and livelihood strategies to family welfare

Variable	Family Welfare		Sig.
	β Unstandardized	β Standardized	
Constant	22.298		0.076
Age of husband (years)	0.502	0.277	0.301
Length of wife education (years)	1.083	0.211	0.199
Length of wife education (years)	-0.469	-0.107	0.523
Age of wife when married (years)	-0.018	-0.005	0.781
Length of married (years)	-0.201	-0.102	0.781
Family size (persons)	0.641	0.097	0.619
Per capita income (IDR)	9.204	0.278	0.113
Region (dummy 0 = upstream 1 = downstream)	1.961	0.081	0.714
Women economic contribution (IDR)	-0.200	-0.292	0.061**
Livelihood strategy (number of types of livelihood strategies implemented)	-0.477	-0.129	0.360
	Adj. R ²	0.232	
	F	1.454	
	Sig.	0.177	

Description: * = significant at $p < 0.1$, ** = significant at $p < 0.05$, *** = significant at $p < 0.01$

DISCUSSION

Families in this study were classified in families with early adulthood because of wife and age of husband still ranged between 22-40 years. However, when viewed from the educational background of his family both the family in the upstream and downstream areas still have a low education that is graduated from Sd or not finished junior high school. The lack of family-owned education will affect the types of work accessible to family members. According to Elder et al. (1992) unstable jobs will have an impact on low income and create economic pressures that will make families less prosperous. Most wives in families in upstream and downstream regions work in the agricultural sector and others work in non-agricultural sectors. This is in accordance with Sajogyo (1982) which states that women in rural areas are known not only to take care of everyday households but to be involved in farming or non-farm activities that are commercial or social.

The work of the wife in the family in the upstream and downstream areas is as housewives, because at the time of the research took place the family still has children under five and school children. This is in line with Hayati, Simanjuntak,

Puspitawati (2012) which mentions that families with toddlers and school age have higher domestic work demands, so the wives usually decide to stop working in the public sector. On the other hand, there are wives who work in the public sector aside from parenting. In such a livelihood strategy, women also like men have a very important role as a breadwinner. Women are not only involved in reproductive activities that do not directly generate income, but also in production activities that directly generate income. Wives work with the aim to increase family income for more prosperous families. The additional income from the economic activity of women hence the economic role of women can alleviate the family from poverty (Hayati et.al 2012). One of the goals of women to work is to earn income in the form of money so as to encourage the role of women as supporting the household economy in supplementing family income and meeting family needs. This is also consistent with Lasswell and Laswell (1987) arguing that the economic contribution of women in the family economy will result in an increase in family finances, luxury ownership, higher living standards with better security attainment resulting in improved family social status. Although their work has a very important contribution to the survival and welfare of the family, in reality women are still underestimated in society (Zehra 2008).

Overall, the average female economic contribution provided by the wife to the family is in the low category. Different test results also show no difference between the economic contribution of women in the family in the upstream and downstream areas that are in the low category due to the characteristics of the sample family and the region is not too different. This result is different from previous research by Hayati et.al (2012) which shows the economic contribution to farmer's family is in moderate category. The results of this study are higher when compared with the results of research by Puspitasari et.al (2013) which states that the average wife's economic contribution to family income in Kabupaten Cianjur is 11.3 percent. The economic contribution of women is still considered secondary and only as a complementary result of men. This is because female workers are generally rewarded with lower wages compared to men and often wages are considered as a result of the husband's contribution to family income. This is also in accordance with Hayati et.al (2012) which states that the high economic contribution of women is determined by the amount of income in the form of money and the number of household members who work for a living. This is in line with Zehra (2008) which states that women are often seen as second persons who only help couples, are poorly educated, have limited skills to produce economic contributions to families. In addition, the problem of low economic contribution of women in the development of the family economy is only seen from the productivity of women based on their contribution in paid public works, while women's work in the domestic aspect is not taken into account, whereas women's contribution in public and domestic work is equally important. Based on previous research, it is shown that women are human resources enough to participate in fulfilling family economic function. One example of women in rural areas is known not only to take care of everyday house but also to be involved in farming or non-farm business activities that are commercial or social (Sajogyo 1981).

Mean of wife education in this research is SD, can be seen that human capital (skill, knowledge, and ability of an individual in work) owned by wife still low.

Similarly, the state of savings as a financial capital owned by the sample family is still considered less, evidenced by the economic prosperity is in the low category. Yet the success of family livelihood strategies will be influenced by livelihood assets or family capital owned by the family. Livelihood assets or family capital consists of five aspects, including: financial capital, human capital, physical capital, social capital, and natural resource capital (Ellis 2000). This is consistent with the statement of Kamaruddin & Samsudin (2014) which states that family capital such as financial, human, natural, social, and physical capital will affect the success of family livelihood strategies in the form of food security and improvement of family status. The strategies most often carried out by example families both upstream and downstream in the dry season, rain, disaster, and high economic pressures. In accordance with Widodo (2011) statement, double income pattern is often done by poor families as one of the efforts to survive and get out of poverty. This is also in accordance with the opinion of Abdurrahim (2014) which states to maintain the system of life, the community to implement a double income strategy.

In accordance with previous research results Sumarti (2007) which indicates that the family will meet the needs of his family in survival is to make a double income pattern. According to Sumarti (2007) the multiple livelihood pattern is defined as the processes by which households construct a variety of activities and social support capacities to survive and to improve their standard of living. However, the type of double earning pattern that is done differently in each season. For example, in the dry season, the sample family applies a livelihood strategy to a double income with husband and wife working, whereas in the high-pressure season the sample family often implements a double income earning strategy with the husband having two or more different jobs. This is in line with Anwar (2013) which states that family livelihood strategies tend to be scattered, following all available livelihood opportunities or livelihood patterns, and depend on the access that the family has.

In addition, the multiple subsistence livelihood strategies undertaken by the sample family have differences in each season of the dry season, rain, disaster, and high economic pressures. This is in accordance with Dharmawan (2007) which states that livelihood strategies depend on the socio-ecological changes of the environment. Different test results indicate that there is a significant difference between the livelihood engineering strategy of the agricultural livelihood base and the multiple livelihood pattern in the dry and rainy season in the upstream and downstream areas. Although the livelihood engineering strategies of the agricultural livelihoods and the multiple subsistence patterns of the family fall into the low category, the average score on the upstream area is higher when compared to the downstream area. While in the high economic pressure season, there are differences in livelihood maintenance strategies and multiple livelihood patterns. The results of this study differ from those of Sabania and Hartoyo (2016) which suggest that there is a significant difference between spatial strategies in the upstream and downstream regions. Although the family spatial strategies fall into the low category, the average score on the downstream area is higher when compared to the upstream region.

Family welfare in this study is in the medium category. In family welfare, the economic welfare dimension has the lowest score. There are several factors that

affect the welfare of the family one of them is the economic factor in which poverty can hamper efforts to increase the development of resources owned by the family, ultimately can hamper efforts to increase family welfare. In general, the results show no differences in family welfare in the upstream and downstream areas. This is in accordance with the previous research of Sabania and Hartoyo (2016) which states there is no significant difference between the welfare of upstream and downstream of Cimanuk River. The results of this study indicate the age of the husband has an influence on family welfare. This is in accordance with research Puspitawati (2009) which states that the existence of a negative influence of the husband's age on family welfare. The length of education of husband and wife and income per capita family also has no effect on the welfare of the family, this is in line with Puspitasari et.al (2013) that the length of education husband and wife and is a factor that has no effect on subjective wellbeing of the family while the family, income per capita Family affects the welfare of the family. Large families in the study have no influence on family welfare, it is not in accordance with Muflikhati et al. (2010); Puspitawati (2009) explains that large families can affect family welfare. Wives to work in the public sector can contribute economically to family income. The existence of wife's working status in the family is one of the factors that affect the welfare of the family. This is in line with Iskandar (2007) stating that factors affecting family welfare include the status of working wife, income, small family size, young husband's age, old wife's age, high head of household education, income, asset ownership and savings .

In the research, there is a significant negative influence between economic contribution of women and family welfare. If the wife is busy working to contribute economically to the family income then the wife will not have much time to socialize with the neighbors so as to decrease activity in social groups. This causes the wife to have no role in society so that the subjective welfare of the wife decreases. This is inconsistent with Chen (2010) which states that the more the wife's role, the higher the contact with the neighbors and the many activities of the group, the higher the subjective well-being of the wife, it indicates that there is life satisfaction if it has more than one role. The results of research on wives who have multiple roles in line with previous research by Andriani et al. (2008) activities of caring and taking care of children, cooking and home maintenance mostly done by the wife only, and in the public sector farming activities more done by husband, but sometimes the wife helped. The role of wife in addition to being involved in farming activities directly, is also involved indirectly. Unlike the case with previous research results Hayati et.al (2012) wife joined work to contribute as women play a significant role in the achievement of family welfare.

In order to sustain life and improve socio-economic status, every poor household builds a livelihood mechanism. Of all these livelihood mechanisms will form a distinctive livelihood strategy. According to Sconnes (1998) in conducting a livelihood strategy, households can either designate an activity or combine the three forms of livelihood strategies to derive the most effective strategies to survive in crisis and normal conditions to achieve the welfare of their families. The results showed that livelihood strategies have no significant effect on family welfare. Many of the few types of family livelihood strategies do not determine the level of family welfare. This is not in accordance with Dharmawan (2001); Paulina et.al (2009)

which states that families who apply various types of livelihood strategies in agricultural households, will be able to improve the degree of welfare of their families. In addition, this is not in accordance with the results of previous research Sulastri (2014) which states that livelihood strategies affect the welfare of the family. However, the results of this study are not in accordance with the results of research Sumarti (2007) which states the livelihood strategy that double income pattern into behavior or economic action stands out used by poor farmers who affect the welfare. This is allegedly because all the families who were subjected to the study were different farming families between rice farmers and plantation farmers so that families have different characteristics. In addition, this is allegedly due to the use of family income strategies one of which is to increase income and because of the characteristics of different research examples and welfare measures.

CONCLUSION AND SUGGESTION

Conclusion

Overall, the average female economic contribution provided by the wife to family income is in the low category of economic donation with an average of 17.18 percent. The results show that the multiple subsistence pattern is the most common strategy for example households in both upstream and downstream areas in the dry season, rain, disaster, and high economic pressures. Family welfare in this study is in the medium category. Different test results indicate that there is a difference in physical welfare dimension in upstream and downstream areas with higher physical welfare index score in downstream area than upstream. Result of influence test is known that economic contribution of woman and livelihood strategy have significant effect to family welfare. Families will have higher welfare when applying non subsidized livelihood strategies. Non subsidized livelihood strategies are carried out, among others, by implementing livelihood engineering strategies on both agricultural and non-agricultural livelihoods as well as migration

Suggestion

Based on the results of research there are several efforts that can be done by the family to improve the welfare of his family. One of the factors related to women's economic contribution and family welfare is education. The education of family members will relate to work owned by family members and also their income. Therefore, it is important for the community to pay attention and attach importance to education. The role of women is also one of hope in the development of sustainable livelihood strategies in the family to increase family welfare. However, with the reality of low wages for women in the community both in the field of agriculture and non-agriculture make the role of women underestimated. The government should set the same wage between men and women as well as the government set the right program policies for families to improve family welfare. Cimanuk River has a very important role for family sustainability. Considering the families in this study came from different backgrounds and not all families used the river, it would be better if for further research the characteristics of the respondents are limited only to families who really take advantage of the river for daily needs

either for toilets or agricultural needs in order Visible influence on the economic contribution of women, livelihood strategies, and family welfare.

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