Gender in domestic and public affairs of the family in three agrosystems at district of Pangkep, South Sulawesi, Indonesia

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Abstract. This paper is based on the proposition that individual behavior is related to the ecological system in which they live. Depart from this proposition, this paper aims to analyze gender behavior of households in three different agrosystems namely highland, lowland and coastal agrosystems. The study conducted in Pangkajene Kepuluan District (Pangkep) where the three agrosystems can be found. For this purpose, Lanne Village of Tondong Tallasa Sub-District represents highland agrosystem; Kelurahan Mangngalekana Sub-district of Labakkang represents lowland agrosystem and Bawasalo Village of Sub-District Segeri as the representation of coastal agrosystem. The total respondent of the study are 220 households which consist of 55 respondents in highland agrosystem, 80 respondents in lowland agrosystem and 85 respondents in coastal agrosystem. Data were analyzed descriptively. The results of the study indicated that the role of wife and husband in the consumption, production and social activities vary in all three agrosystems. In public affairs such as government activities, community activities, and market activities, the involvement of husband and wife are not the same in the three agroecosystems studied. It was concluded that gender behavior both in the domestic and the public level is related to the agrosystem in which a family or household live.

1. Introduction

Studies of gender have been done extensively such as [1,2,3,4,5,6,7,8,9,10,11,12,13,14], Tavva. From these studies, there were only a few studies that relate gender issues to the ecology of a region. [4], for example, examined the role of women in upland agriculture with case studies in Indonesia, Sri Lanka, and the Philippines. He found that women farmers playing a role in marketing of crops. The women farmers are intensively involved in crop and livestock production, cultivation in the fields, cleaning, drying, milling, harvesting, and collecting of production, while male farmers are mostly responsible to carry heavy things such as plowing or loading. Conditions in Sri Lanka show that women farmers are involved in almost all post-harvest activities, such as cleaning, collection, transportation and overall management. [9] found that there is no correlation between the role of women and the conservation of natural resources in horticultural cropping but dominant in almost all activities in horticulture.

In the coastal areas, the study [15] revealed that the main factors that cause women to work as fisherwomen is the economic needs, especially after the husband's got less income. This situation forced the women to play a double role to have additional income as wage laborer and take care of the
household. However, according to [10] that there is an imbalance on wages received between men and women, where women account for only 70 percent of men’s salaries. In fact, most poor households are headed by women, and more than 43 percent of unemployed people in the village are women. Further, [10] revealed that women are more involved in the field of informal business and vice versa men dominate business in the formal sphere. More women are engaged in informal areas related to the characteristics of informal enterprises that can be started and stopped anytime, require no unique skills and can be combined with domestic tasks.

The lack of women's access to agricultural resources is also expressed [8]. They found in their research that majority of women in rural areas are lack of access to agricultural resources such as access to land and other resources. This is in line with the finding of who claimed that the culture, type of agroecosystem and socioeconomic status of the household affects the contribution of women in agricultural production activities. She also mentioned that there are still many situations women in a relatively weak exchange position in economic activities, social, and power both in the household and the community.

According to [2], physical activity in agricultural production is divided according to the gender line, although in many circumstances there is a diversity associated with local norms. This situation is reinforced [16] in his research, that among the Javanese, a husband is the head of the family, but it does not mean that the wife has a lower status because she is also responsible for family survival. [17] found that participation in farm activities are almost equally shared among men and women. The participation of women is slightly greater than men in the case of Buginese (49.6%; 50.4%) and Macassarese (40.7%; 59.3 %). However, ethnic differences in the two cultures have been shifted by time.

All the previous studies mentioned above have focused on gender roles in farming activities in a single agroecosystem, and no one has examined how gender in various agroecosystems simultaneously. Based on that, this research analyzes how gender behavior in households in three different agroecosystems namely highland, lowland and coastal agrosystems.

2. Methods
This study conducted in Pangkep regency which is one of the regencies in South Sulawesi which has three agro-ecosystems that meet the criteria of this research namely have mountain area (Highland), rice field area (lowland), and coastal area. These three different agroecosystems have different social characteristics so that existing gender roles and responsibilities are also expected to differ.

In highland agroecosystem, Lanne Village, Tondong Tallas District was chosen as the research site. This village is located at an altitude of ± 450 m above sea level and is ± 45 km from the capital of Pangkep regency. The people in this village work as small farmers with cultivated land average ly under 1 ha. The land is planted with rice in rainy season and peanuts in dry season as primary source of income for the farmers in Lanne Village. For additional income, some farmers also become harvest workers, both on rice and peanut.

For lowland agroecosystem, the Kelurahan Mangngalekana of District Labakkang was selected. This village is characterized by food crops and home industries. Ethnic in this village are dominated by Makassar and Bugis ethics. For coastal agroecosystem, the Kelurahan Bawasalo of Segeri District was choosen. This village characterized with main economic activities on fisheries, where men work as fishermen, whereas women are worked at home doing various kinds of work such as salted fish from catching her husband and or selling mixed goods in front of her house.

There were totally 220 people selected randomly as respondents in this study which consisted of 55 respondents from Lanne village, 80 respondents from Kelurahan Mangngalekana, and 85 respondents from Kelurahan Bawasalo. The data were analyzed descriptively.

3. Results and discussion
The gender dimension in this paper is seen in two domains namely domestic and public. In the domestic realm it describes the role differentiation, power allocation and economic allocation in the household.
While in the public sphere, it describes household access and control to community participation, government affair, and markets in each agroecosystem.

3.1. The Role of Gender in Domestic Domain

a. The division of roles

The division of roles concerns about how roles are played by family members in their daily activities such as housekeeping role (reproduction role), farming role (production role) and social involvement.

In highland agroecosystems, the division of roles and time allocations within families were still dominated by women, especially in reproductive activities. The average time allocated by men in reproductive activities was 3.2 hours per day while woman was 8.5 hours a day. Household roles in households in highland agroecosystems include cooking, washing clothes and dishes, cleaning houses, raising children, taking water, and searching for firewood. These activities were done by husband and wife in turn and help each other. The most common roles of men are taking water, searching for wood, and cooking when the wife is busy. In the study area, it was found that 36.3 percent of households where men have a high degree of involvement in managing domestic household affairs. There were 45.5 percent of households that men and women should work hand in hand with household activities. Also, there were 18.2 percent of households consider the task of managing a household is not a male role but a women's role.

In the lowlands, the pattern of male involvement in the domestic role is likely the same amount to the men and women in the highlands. However, there are also households in this agrosystem (27.6 percent) who say that household affairs are women's business.

In coastal agroecosystems, the pattern appears to be different, with majority (63.5 percent) of the households assess domestic affairs as women's affairs and it only a small portion (10.6) said that men are also involved in household management. This is because the men in coastal areas who work as fishermen have to go fishing that can last several days, so the roles of household management are done by women.

b. Time allocation

Taking care of a household is not an easy job because it takes place in a daily range continuously. It is not only requiring attention but also needs a lot of time. In both upland and lowland agrosystems, it appears that men have a high degree of involvement of over 30 percent in domestic household management. But in coastal areas is low due to the situation that they have to leave the house for extended periods (ranging from 1 to 2 days or nights) for fishing, while the men in the highland and lowland just leave the house for a few hours to the fields or farms. The time allocation used by men in the highland for domestic family activities was 3.2 hours/day and 1.2 hours/day in the lowland, whereas in coastal areas was about 0.7 hours/day (+ 42 minutes/day).

In production management, the allocation of time for the husband was more than the wife. In highland and lowland areas, the husband's time allocation in production activities was about 6 hours/day, while in coastal areas allocated to 8 hours/day. In the highlands area, the allocation of wife time for production activities was similar to that of husbands who spent about 5 hours per day. This indicates that the husband and wife are involved together in the production activities. Regarding social activities, the allocation of time used by the husband or wife was almost the same namely between 1.5 - 2 hours of each social event that they involve.

c. Decision making

Within family, such as in organization, there is also decision making involved in domestic activities (consumption), production and social events. In highland agroecosystems, decision-making varies from men and women. Sometimes male or wife is dominant in making a decision. For domestic activities (consumption), there were 40.61 percent of respondents said that the decision was made by the wife
alone, while 37.88 percent said it was arranged by husband, and only 21.51 percent said that it was done jointly between husband and wife.

Household decision-making patterns in consumption affairs at the lowlands and coastal areas seem the same pattern then that in the highlands. In lowland households, the decision making on domestic matters is mostly done jointly between husband and wife (40.53 percent). This shows that the power of husband and wife in decision making is almost equivalent.

In terms of production activities, it appears that the role of wife in decision making is very small ie 11.82 percent in highland households, 5.62 percent in lowland and 5.88 percent in coastal areas. However, there are also families whose decision-making are done jointly between husband and wife, especially in lowland areas, although still low on 28.12 percent.

In social activities, the decision making is mostly done by husband and wife individually, especially for activities such as celebration and wedding party much determined by the wife, but things that require physical activities such as work or attendance meetings are determined by husband. Nevertheless, many households made of mutual agreement between husband and wife, especially in lowland areas (42.51 percent), in highlands (36.36 percent), and 25.88 percent in coastal areas).

**d. Financial Allocation**

Financial arrangements intended here are how households manage revenue and allocate it to production, consumption and social activities. The arrangement of income in highland households is mostly made by the wife (47.3 percent) which is in the coastal area is done by the husband (81.2 percent). This can be understood because the involvement of wives in the production process of the highlands is quite substantial, ranging from soil preparation to harvest. While in coastal areas, the participation of the wife is so very low that the husband is very dominant in managing the income. In lowland areas, income arrangements are mostly made jointly between husband and wife (66.2 percent).

Regarding allocation of income for matters relating to production activities such as buying tools, seeds, fertilizers, and so on there are differences in patterns of the three agrosystems studied. In highland areas, the allocation of income for matters relating to production activities are mostly made by husbands (43.6 percent) or jointly between husband and wife (36.4 percent). But in lowland areas, the allocation of income for production activities are mostly done together between husband and wife (67.5), and done by the husband alone only 8.75 percent). In coastal areas, the pattern is similar to that in the highlands dominated by husbands (54.1 percent) or with wives (42.4 percent).

To meet the needs of household consumption, the utilization of income there are different patterns. In highland areas, the use of income for consumption is determined jointly between husband and wife (69.1 percent), whereas households in lowland and coastal regions are almost entirely determined by wives (96.25 percent and 97.6 percent). This shows that the allocation of income for household consumption is much played by women. This can be understood because culturally kitchen activity (consumption) is the territory of women.

In social activities such as gratitude, marriage, celebration, and so on, the determination of income allocation is mostly done by wives alone on three types of agroecosystems, namely 60 percent in highland agroecosystems, 52 percent in lowland agroecosystems and 68 percent in coastal agroecosystems. From the facts mentioned above, it seems that the role of gender in highland agro-ecosystem is equality in the differentiation of the role of farming production activities, the allocation of power in social activities and the allocation of income economy whereas in lowland agro-ecosystems there is gender equality in the allocation of power of business production, family, and power allocation of social activities. And in coastal agroecosystems, gender equality exists on the allocation of the power of social activities only.

The involvement of women in decision-making is reinforced by the location of villages close to the district capitals and access to district towns, and provincial capitals are much easier when compared to upland and coastal agroecosystems.
3.2 Roles of Gender in Public Domain

The gender dimension in the public sphere can be seen in 4 aspects, namely: access to government activities, community and market activities.

**(a) Involvement Gender in Government Affairs**

Gender involvement in government activities is the capacity of men and women in the family to participate actively in programs or activities initiated by local government (Desa) such as participation in village meetings, mutual assistance activities, empowerment programs, counseling, meetings, PKK, Posyandu, etc. In these activities, households in highland agrosystems (69.1 percent) were mostly shared between wives and husbands, and very little of these activities were performed by wives (7.3 percent). In lowland agroecosystem, the distribution is relatively similar between wives alone (31.3 percent), wife (31.3 percent) and husband (43.8 percent). But in coastal areas, the situation is different from households in two highlands and lowland agroecosystems.

It seems that household involvement in dominant government activities (84.7 percent) is done by only wives, 8.2 couples followed jointly between wife and husband, and 7.1 percent followed by the husband alone. This is understandable because husbands who work in the sea is often not at home when there is government activity so that these activities are followed by only wives.

**(b) Involvement Gender in Social Affairs**

Community activities here mean the activities that are carried out in the community. These activities include marriage, salvation, religious teaching, funeral and so forth. Households in highland agrosystems of these activities appear to be proportionally carried out by wives (36.6 percent), wife and husband (34.5 percent) or husband alone (29.1 percent). This may be due to households in highland agrosystems where there is no clear gender role difference. Both husband and wives have equal opportunities to engage in community activities.

Households in lowland agrosystems, it appears that community activities are conducted jointly between wife and husband (63.8 percent), who only wives (27.5 percent) and by husbands alone (8.75 percent). In coastal agrosystems, community activities are mostly done by wives alone (70.7 percent), and few community activities are conducted by husbands. This relates to the work of husbands in the coastal areas that have to leave home for a relatively extended period.

**(c) Involvement Gender in Market**

To fulfill the consumption and production needs of household is done through domestic market. Usually for the fulfillment of consumption needs by women or wives while for the acquisition of production needs are generally done by men. In households in highland agrosystems, 41.8 percent is performed by only wives, while only 38.2 percent of men do. There is 41.8 percent that believes that market access is shared between the wife and husband. The low level of wives access to markets in the highlands is much influenced by the far market of their homes.

In lowland agroecosystem, market access is mostly done by the wife (51.0 percent) primarily to get the needs of household consumption. Husband’s access to the market is only done by 26.5 percent, and 22.5 activities are conducted jointly between wife and husband. In coastal agroecosystem, market access is mostly done by husbands (90.6 percent). This is because the husband that came home from the sea directly sold the catch to the market and at the same time buys their needs, especially the consumption needs. Only a small amount of each 4.7 percent of market access is done by wife or wife with her husband.

**4. Conclusion**

The division of roles and time allocations within families are different in the three agrosystems studied. In coastal agroecosystem, domestic affairs are dominantly done by wife, while in highland and low land this affair are done almost equally between husband and wife. For production activities, the husband allocates more time than the wife in coastal area, while in the highland and low land it is the same.
Household decision-making patterns of consumption affairs in the lowlands and coastal areas seem to show the same pattern as those in the highlands. In lowland households, it seems that the decision making on domestic matters is mostly done jointly between husband and wife. In production activities the role of wife in the three agroecosystems in decision making are very small. In social activities, the decision making is mostly done by husband and wife individually. For activities such as celebration and wedding are much determined by the wife, but things that require physical activities such as work or attendance meetings are determined by husband.

The arrangement of household income in highland households is mostly made by the wife while in the coastal area is done by the husband. In lowland areas, income arrangements are mostly made jointly between husband and wife.

Gender involvement in government activities such as participation in village meetings, mutual assistance activities, empowerment programs, counseling, meetings, PKK, Posyandu, etc. In these activities, households in highland agrosystems percent) were mostly shared between wives and husbands. In lowland agroecosystem, the distribution is relatively similar between wives alone, and wife and husband. But in coastal areas, the situation is different where these activities are done only by wives due to the fact that husbands who work in the sea are often not at home when there is government activity.

To fulfill the consumption and production needs of household is done through domestic market. Usually for the fulfillment of consumption needs by women or wives while for the acquisition of production needs are generally done by men. In households in highland agrosystems, 41.8 percent is performed by only wives, while only 38.2 percent of men do. There is 41.8 percent that believes that market access is shared between the wife and husband. The low level of wives access to markets in the highlands is much influenced by the far market of their homes.

Market access to buy food for consumption is mostly done by the wife in the lowland and highland, while in coastal area, buying food consumption is dominantly done by husband.

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