

Land Tenure System and Farming Household Food Access in North Cotabato, Philippines

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Abstract— This study explores the association of land tenure to food access in selected villages in the municipality of Pigcawayan situated in the North Cotabato province of the Mindanao peninsula, Philippines. There were 56 farm tenants that were interviewed in the study through snowball sampling. Using the chi square test of association, results showed that a significant association exists between zero harvest payment agreement and confidence in tenancy with days without enough food at alpha 0.05. A significant association between zero harvest payment agreement and confidence in tenancy with experience hunger with no money and days without enough food was also demonstrated at 0.10 alpha. Lastly, the findings of the paper revealed that while the farmers can eat three times a day, their access to food can only be sustained if they would continuously work, even on land recovery days, in order to generate enough income to buy food for household consumption.

Keywords— *land tenure, food access*

I. INTRODUCTION

The Philippines is considered to have one of the worst land tenure problems particularly among small-hold farmers (Vargas, 2003). These small farming households often lack access to agricultural assets such as land, water, and tenure security, which in turn results to low productivity. Roughly around 60% (around 3 million) of the total agricultural families in the country earn their living by farming land that they do not own as tenants or agricultural laborers (Vargas, 2003). Land rental is a customary practice, with sharecropping and fixed rent arrangements representing

25% of agricultural land in the country (Koirala, Mishra and Mohanty, 2016).

Holden & Ghebru (2016) studied the conceptual linkages between land tenure reform, tenure security and food security to address research gaps on the interconnectedness of tenure security and food security issues. To further bridge the research gaps, this study provides scientific evidence on the causal link between land tenure and food security on the aspect of food access dimension.

In particular, the association of land tenure to food access in selected villages in the municipality of Pigcawayan situated in the North Cotabato province of the Mindanao peninsula in the Philippines was examined. The Municipality of Pigcawayan is a highly agricultural area where the main crops are rice and corn. The three barangays covered in the study were North Manuangan, Bulu-an and Bulucaon. North Manuangan and Bulu-an are generally peaceful areas. North Manuangan, however, is near Liguasan marsh where the Bangsamoro Islamic Freedom Fighters (BIFF) and the Moro Islamic Liberation Front (MILF) traverse to get to their camps. Thus, farming in these two barangays is occasionally affected by military and rebel conflicts. Bulucaon, on the other hand, is a flood prone area adjacent to conflict areas where hostage takings happen from time to time. More frequent disruptions in farming activities occur in this village.

II. REVIEW OF RELATED LITERATURE

The relationship of land tenure and food accessibility in the context of food security is visualized in Figure 1. The framework focuses on the food accessibility dimension of

food security where “availability, access, and utilization of food depend on land tenure security” (Espinosa, 2014).

The framework illustrates the relationship of land tenure and food access. Land tenure variables includes tenure security, payment conditions, and land to work on.

The tenant then sources the capital that serves to provide for supplies for farming. Farm produce are then sold to generate income, and consequently pay the tenant’s debts. The remaining income is used to purchase food and other household needs.

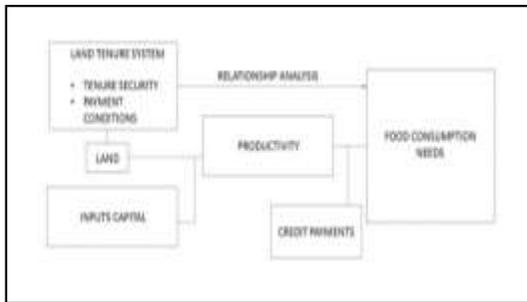


Fig. 1. Conceptual Framework

Traditionally, land tenure and food security have been two separate studies, but today with the pressure on land and the need to increase food production for food security, researchers are now looking into bridging the gap between the two (Maxwell & Wiebe, 1998; Ghebru & Holden, 2013).

1. Land Tenure System in the Philippines

Food and Agricultural Organization defined land tenure as “the relationship, whether legally or customarily defined, among people, as individuals or groups, with respect to land related resources (Quizon, 2017). Throughout the study, the term “rent” will be referring to the payment made by tenant farmers to their landlords for the use of the farmland. As per the Agricultural Tenancy Act of the Philippines (R.A. 1199), a tenant is defined as a person who is cultivating a land that belongs to another with the intention of producing, sharing the produce or paying the landlord a certain agreed price. Landlord or landholder as defined by the R.A. 1199 refers to “a person, natural or juridical, who, either as owner, lessee, usufructuary, or legal possessor, lets or grants to another the use or cultivation of his land for a consideration either in shares under the share tenancy system, or a price certain or ascertainable under the leasehold tenancy system.”

Like commercial leasing, agricultural leasing also involves a contractual agreement between the owner and the tenant. Contracting arrangements between land owner and tenants may not always be written and formally stipulated by the

law. Some contracts exist even with the absence of an external legal enforcement. So long as the land owner and tenants understand each other efficient results may still be achieved. In the case of the Philippines, informal contracting is more effective relative to formalization of contracts (Michler & Shively, 2015).

According to Chaudhuri and Maitra (1997) there are three types of land tenure contracts based on payment methods that exist: 1) wage contract; 2) rental contract and 3) sharecropping. The nature of legal relations between and among the parties depends upon the type of land tenure contract.

Wage contract tenancy exists when a land owner hires a farmer to do the agricultural processes necessary for agricultural production. The hired farmer is then paid for his labor inputs. The tenant in this case does not have any decision-making capability with regard to the land he is working on.

Rental contracts are those where a farmer rents the land from a landowner, and in turn he pays a fixed amount to the landowner for the use of the land. The amount paid will be what is agreed upon by both parties entering the contract.

Sharecropping, on the other hand, is also a type of contract where the land is leased to the tenant but instead of fixed cash rent, the landowner is paid a portion of the yield of the farmer.

2. Food Access as a Food Security Indicator

The meaning of food security has evolved over time. In the mid-70s, food security meant access by all people to enough food to live a healthy and productive life. Subsequently, the definition was amplified by the FAO to include nutritional value and food preferences. Hence, at the World Food Summit in 1996, food security was thus defined as that which exists when “all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for a healthy and active life” (Pinstrup-Andersen, 2009).

Food security has four main dimensions: 1) food availability; 2) food access; 3) food utilization; and 4) stability (Burchi et.al., 2011). According to Leibtag & Kaufman (2003), “food purchase decisions by the poor often entail tradeoffs among taste, preference, and quality factors—either real or perceived—to meet spending constraints”.

Bickel, Nord, Price, Hamilton, & Cook (2000) presented a definition of food security which focused more on its dependency on financial resources and limitations. Access to food must be attained without the use of emergency supplies or resorting to stealing or scavenging. Relatively, Maxwell & Wiebe’s (1998) definition of food security also focuses on access, “the state of having secure and

sustainable access to sufficient food for an active and healthy life”. Access in this context means being able to produce food or have resources that can be exchanged for food.

Napoli (2011) also presented a new concept of food security from an economic point of view that focuses on food security as the capacity to buy enough food, and food insecurity exists if food is available but consumers have no resources to buy.

Access in food security as defined by the World Food Summit (as cited by (Napoli, 2011) is “physical, economic and social access”. Whereas the determinants of food security, according to Jabo et al (2017) included the age of the household head, education, farm size, household size, farm assets, remittances, nonfarm activities and access to formal credit. Simply lowering the price of available foods in the market does not necessarily ensure food for everyone; low income households should be able to afford food for it to be available for their family (Arene & Anyaeji, 2010). Additionally, availability of food does not guarantee food access. Resources are needed for a household or an individual for them to have the capacity to acquire food (Irohibe & Agwu, 2014).

Although much of the definition of food security revolved on the access and capability to purchase or acquire food, traditional income and poverty measures are still not enough to measure food security. Low income households may still be food secure and non-poor household may still be food insecure. Reasons for such are still unknown but differences in household decisions, geographic location, and demand could be among the factors (Bickel et al., 2000).

3. Land Tenure and Food Security

The framework by Maxwell & Wiebe (1998) tried to establish a way in which land tenure and food security are related, in which decisions about production, marketing, consumption and investment in farming activities affect the distribution of resources among households. It starts from the assets that an individual or household have. Followed by the decisions they make to allocate their resources which are necessary for their farming activities. These decisions are affected by the inputs market, expected output prices, technology and tenure institutions.

External elements such as resource amount, trade conditions and environmental factors will have profound effects on the theory’s movement. Clockwise movement allows for decision making capacities of the household with consideration to conditions given by various elements to generate different outcomes.

Agricultural production may be affected, as household members may find other forms of employment to compensate for shortages. These decisions may also affect

entitlement, which may include cash and in-kind components.

This entitlement, as Maxwell and Wiebe (1998) citing Sen (1981), is defined as the budget or choice that describes goods and services that household members have as capacity to purchase. Thus, all decisions are affected by production, external factors and economic changes. In this framework, food accessibility is at the movement from entitlements to consumption and investment decisions, where part of the resources is allocated for food.

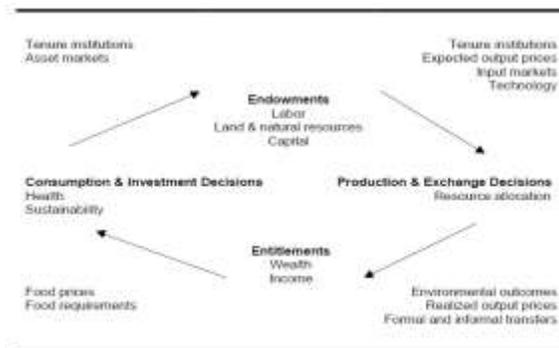


Fig. 2. Land Tenure and Food Security: Reformulating the Links (Source: Maxwell & Wiebe, 1998)

III. METHODOLOGY

A descriptive exploratory research design was employed in the study. A survey was conducted among 56 tenants that were selected using snowball sampling from three villages in Pigcawayan, North Cotabato from February 24 to March 2, 2018. Respective village halls served as venues for personal interviews with the land tenants. The initial part was facilitated using a questionnaire consisting of personal information, tenancy situation, farming operation situation, and daily needs. Key informant interviews were added to elicit perspectives of government officials in the area.

To test the hypothesis that there exists no association between land tenure variables and the food access of tenants, descriptive statistics (mean, median, and mode) and chi-squared test of association between land tenure variables (rent payment condition to landlords in case of zero harvest, confidence of the tenants in their tenancy, range of number of sacks sold and the rate of payment of the tenants to their landlords) and food accessibility variables (the frequency of the number of times that they experience hunger with no money, the frequency of the time that the tenants go to credit for food, and the number of days that they experience that there is not enough food for their household) were applied.

IV. RESULT AND ANALYSIS

A. Land Tenure Status

A substantial portion of the residents of the study area depend on agriculture as their main source of income. As majority of the poor farmers of the area do not own land, they resort to working on other lands and the landlords are the ones who usually determine the size of the land that is appropriated to their tenants. According to the Municipal Agrarian Reform Officer (MARO), the land size holding of the landowners and tenants is decreasing over time.

Tenancy agreements with the landlord are being passed down from the parent to the next generation. This common practice among tenanted farmers finds legal support in the Agricultural Tenancy Act of the Philippines which provides for tenancy succession. Landlords are bound to transfer tenancy rights of their tenants to the next generation if the time comes that the parents are no longer able to work on the land. Tenure agreements between landlord and tenants include payment terms comprising of the mode of payment or how much will be the share of the landlord in the tenant's produce. Consequently, the tenure is transferred to the tenant's next generation. For most of the tenants, their agreements with their landlords do not warrant any contract that had to be signed. Verbal agreement was enough for their respective tenurial agreements to work.

Results showed that the confidence level of farmers who only went into verbal agreements with their landlords are higher and the percentage of the unconfident farmers are also relatively lower. According to the farmer-respondents, they only see contract signing as a formality and since they have been working for years on the land, the need for it seems unimportant. They also pointed out that their parents have signed an agreement with their landlord before so there is no need for them to do it today.

For the payment method, sharecropping is the dominant payment method. Half of the tenants are paying 25% of their harvest as rental fee to their landlords. In addition, there exists a modified version of sharecropping where tenants and landlords agree upon a fixed number of sacks that a tenant will pay regardless of the volume of harvest. This is problematic for farmers especially on times where they experience zero harvest or crop failure. For the land rental fees, 73.21% or 41 respondents answered that if crop failure or zero harvest happens, they are not bound to pay their rent to their landlord. However, 19.64% or 11 respondents said that they must still pay their land rental fee to their landlord. Given this, 64.28% of the tenants have their crops insured, and only 33.93% do not have crop insurance.

B. Farming inputs and capital source

It is common to the tenants that they borrow capital from private lenders to spend on farm inputs including seeds, fertilizers, herbicides, pesticides, among others. This is because they lack the requirements and knowledge to apply for government or any other formal lending institutions. Only one tenant said that some of his inputs were shouldered by his landlord. It was only for the irrigation fee that most of the respondents used their own money for the payment. Since majority of the inputs are shouldered by the tenants through credit, they carry almost all the risk every planting cycle. Given this, the tenant's source of capital is the biggest problem every cropping season.

Tenants became heavily dependent on credit as their primary source of capital by borrowing from private land owners than applying from a government accredited lending institution. This practice is due to the respondents' inability to produce collateral for their debt. Another factor is their lack of cooperative membership accreditation for group loans. The study also finds that a majority of the respondents is unaware of the process of formal credit while those few who are aware find the application tedious.

The perceived interest rates to be paid by the tenants is also very different from the actual value they pay. Most of the time, tenants pay in kind in the form of sacks of rice. The highest interest rate declared by the tenants in the survey was 10% but when computed relative to the number of sacks they pay, it shows that they are paying more than 50% of the principal amount. During credit payment, tenants are bound to sell their produce to those buyers who they are indebted to. These buyers will dictate the price which is usually lower than the prevailing market price.

C. Food accessibility status

To be able to support their needs, tenants must be constantly working, even during the fallow period of their lands. Sixty-six percent of the tenant-respondents said that their income is not enough to last them until the next harvest. Still, all of the tenant-respondents said that they were able to eat rice three times a day. However, it was not measured if what they eat three times a day is enough to sustain their nutritional needs.

Having no food at all is different from having insufficient food. When asked if they experience days without enough food, 50% of the respondents said yes but saying that it only happens sometimes. There were some (43% of the respondents) who said that they always had food. But there were a few (16%) who said they experience having no food occasionally. All respondents also said that they felt the effect of the increasing food prices, although 54% of the tenants said they do not borrow money to buy food.

Results from the Chi Square Test of Association showed, at alpha equals 0.05, significant association between the tenure

variables: zero harvest payment arrangement of the tenant with their landlord and the tenant confidence, and the food access variable, namely, days without food and money. The frequency of the event that the tenant household experience days without enough food also showed an association with land tenure variable: zero harvest payment agreement and confidence in tenancy (p value < 0.10), thus rejecting the null hypothesis.

Food access means that food must be sufficient at all possible instances at any given time period. Otherwise, households become subjected to variation in food access (Maxwell and Wiebe, 1998). The results indicate that landless households' food access are compromised by the land tenure status. That is, these landless households' food access varies on a longer time period with their insufficient source of income, and even becomes unpredictable especially in conflict areas (Maxwell and Wiebe, 1998, Tolossa, 2003). Researchers like Bruce and Migot-Adholla (1994) posited that improved security in tenure in productive lands (high output harvest) would lead to greater income and food access.

The significant association between confidence in tenure and zero harvest payment agreement and food inaccess supports the view of Maxwell, Wiebe, Tolossa, Bruce, and Migot-Adholla.

Feder and Noronha (1978) posited that verbal agreements with the landlords do not enhance the food access of the landless households. Though these farmers are confident about their land tenure, they still experience hunger. Contrary to verbal agreements between landlords and tenants, having a secure tenure or holding a registered deed or title, would increase the farmers' demand for land improvement, short term investment in inputs and long term investments on technology, leading to higher productivity and food access. Moreover, with no harvest from the unproductive land, the landless households do not have enough income and are more exposed to experiences of hunger. Access to productive lands is said to be one of the most significant factors to determine food security in households (Davies, 1996).

TABLE 1. CHI-SQUARE TEST OF ASSOCIATION RESULTS BETWEEN FOOD ACCESS AND LAND TENURE VARIABLES

Land tenure variables	Food access variables (p-values)		
	Experience hunger with no money	Experience credit for food	Days without enough food and money
Zero harvest payment agreement	0.0770*	0.9582	0.0415**
Confidence in tenancy	0.0651*	0.2134	0.0253*

Range of number of sacks sold	0.9233	0.4221	0.1765
Percent payment	0.4058	0.8944	0.2072

** significant at alpha=0.05; *significant at alpha=0.1

In contrast with the findings of Feder and Noronha (1978), this study revealed that verbal agreements between tenants and landlords enhanced food access. This is attributed to the high level of confidence in tenancy of the tenants despite the absence of any written or formal agreement. Tenants are confident in their tenancy status due to the tenurial protection and succession provided by the Agricultural Tenancy Act of the Philippines.

V. CONCLUSION AND RECOMMENDATION

This study highlights the status and challenges in food access among farm tenants in the Southern part of the Philippines. Analyses support the hypothesis that land tenure variables “confidence in tenancy” as well as “zero-harvest payment agreement” are significantly associated with tenant household food accessibility variables. Tenancy confidence is not necessarily dictated by a signed contract between the landlord and the tenant. “Experience credit for food” depicted no association with the tested land tenure variables. Significant associations suggest that variations in “confidence in tenancy” and “zero harvest payment agreement” imply variations in the food accessibility of the tenant.

This study confirmed that the tenurial protection and succession under the Agricultural Tenancy Act of the Philippines provided the tenants with tenurial confidence even in the absence of a written or formal contract. Further, it is posited that the Agricultural Tenancy Act of the Philippines is supportive of the enhancement of food access among tenant farmers.

Although tenant incomes have been relatively adequate to buy food provisions, the recovery period deterred the access to instantaneous income resources which led households to look for alternative sources to support themselves. Consequently, many households became heavily reliant on debt. Tenants felt unfair arrangements as they themselves could not afford the rice they sowed and harvested. This caused involuntary pilferage of small number of sacks for their own consumption before selling the rest to the market.

This study confirmed the need for tenants to become better informed in sourcing capital which could be achieved through the intervention of the local government units. provide them with a means to legally process registrations.

While the land tenure system provides livelihood for the tenants to sustain their capacity to access food necessities, this frequency in food access does not guarantee adequacy for the rest of the household. Further research on the fulfillment of nutritional requirements is recommended. It is also recommended to include other dimensions of food security such as vulnerability, availability, and sustainability. A comparative study among the villages is also suggested with respect to the level of food security in the area as Mindanao is highly susceptible to conflict.

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