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The Influence of Filipino Culture on the Mechanization Program in Nueva Ecija, Philippines

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Abstract — The Philippine economy has been growing due to a service sector driven engine. The evidently changing economic landscape brought by a vibrant service industry does not hide the fact that the agricultural sector is still significantly essential that basic demands of the households are met. Despite the national accounts' strong position, the farmers who are considered as the most hardworking people remain to be the most marginalized. A major challenge faced by the farmers is modernization. This article aims to examine the influence of Filipino culture, namely, the traditional values, local agricultural practices, and family farm business succession towards the agricultural development initiative of the Department of Agriculture which is the Mechanization Program in the Province of San Isidro, Nueva Ecija. A 5-sectioned semi-structured survey questionnaire was used to assess 100 respondents. This study used purposive sampling method coupled with multiple regression analysis in assessing the influence of Filipino culture on the mechanization initiative of the national government. The study found out that the Filipino traditional values, Pagpapahalaga sa Pamilya (Familistic Orientation) and Hiya (Propriety), have a positive influence on the Farm Mechanization Program. It is identified that the dominant agricultural method is the Traditional method which also has a positive impact on the program. Lastly, Family farm business succession does not have a significant influence on the program.

Keywords — *culture, values, practices, farm succession, farm mechanization*

I. INTRODUCTION

It is known that the Philippines is an agricultural country in nature. Our local farmers are one of the main sources of agricultural commodities such as corn, sugarcane, fruits, vegetables, livestock, and dairy products, most especially our staple food which is rice. However, there have been several issues in the country's agricultural sector for many years now due to continuous strains it leaves on several factors specifically on the environment and people involved in farming. The farmers who are considered as the most hardworking people in the country remain in the poverty line. According to the discussion paper of Reyes et al. (2012) regarding Poverty and Agriculture, poverty incidence among agricultural households (57%) is thrice that of the non-agricultural (17%). The numbers clearly indicated that the majority of the poor population is involved in the agricultural sector. Moreover, Reyes et. al (2012) also stated that the poverty rates among agricultural households in the regions of Visayas and Mindanao are above 50%. Meanwhile, in Luzon, only MIMAROPA has a poverty rate of above 50%. Nonetheless, these figures are drastically high which is unfortunate for our farmers. We can say that this high poverty incidence among the farmers is the result of poverty trap wherein they are stuck in having low income, low level of education and healthcare, low levels of human capital, low productivity, and the vicious cycle continues.

The major challenge faced by the farmers at present is modernization. Several studies argue that farmers have a negative perception about modern farming practices e.g. Farm Mechanization and Integrated Pest Management. Aside from the fact that modernization entails financial resources and education which farmers are evidently lacking, the primary reason for the hindrance of agricultural development is culture.

Culture consists of beliefs, symbols, and values that define actions. It essentially defines a total way of life – the way a people think, behave, and feel – that is shared, learned, symbolic, and transmitted from generation to generation (Ferraro et al.,1994). In this study, the researchers will tackle Filipino culture and its impact on agricultural development. Miralao (1997) asserted that the Philippines may be one of the few countries where the traditional family and related values have remained relatively intact in a world that is rapidly changing. This statement poses a conflict with adapting to modern agricultural methods and hampering agricultural development.

The aim of this study is to asses the farmers through a self-constructed questionnaire to evaluate the socio-demographic profile, their familiarity regarding the Mechanization Program, the influence of Filipino traditional values particularly Familistic orientation or *Pagpapahalaga sa Pamilya, Pakikisama, and Hiya*. Moreover, this study intends to identify the dominant agricultural method used by farmers and its impact on the program. And lastly, to determine the effect of Family business succession on the program.

II. LITERATURE REVIEW

2.1 Filipino Traditional Values

Filipino culture is a dynamic context. It consists of values, practices, beliefs, and shared norms of Filipinos over the years. One of the main focus of this study is the Filipino Traditional Values such as *Pagpapahalaga sa Pamilya* or Familistic Orientation of Filipinos, *Pakikisama* or getting along with others, and *Hiya* or propriety. Ligo-Ralph (1990) argued that Filipinos place importance on interrelationships, or the concept of *Pakikisama* and *Hiya* to maintain bonds in loyalty and trust in their social network. Filipinos highly value smooth interpersonal relations which means maintaining harmonious relationships not just within the family but within social relationships (Lynch, 1962).

Family is known as the basic unit of society. According to Tarroja (2010), Filipinos have been described as family-centered, and families have been observed to be closely knit. It is one of the values that Filipinos put so much importance in. Being family-oriented means first, emotional closeness within the family is exhibited. Second, children recognize the debt of gratitude and are expected to treat their parents with the utmost respect. “Filipino children, on the other hand, are expected to obey parental authority as a sign of honor and respect to their parents, with emphasis on interdependence and “utang na loob” or debt of gratitude for their parents’ sacrifices in rearing them” (Jocano 1997). Last but not the least, support to the family is never-ending even when members of the family start their own families, work abroad, or simply just being away from home. “Even when family members migrate, their ties to the family in the area of origin are not severed” (Asis, 1994). Moreover, the importance the Filipinos have for the family also reflects on other social relationships. “The weight that Filipinos give to the family affects how they, as individuals within a society, translate the valuation to the social realm.” (Morillo et al. 2013).

Second traditional value of Filipinos is *Pakikisama*. Miralao (1997) defined this as “to make use of soothing and euphemistic words in their speech as well as third-party mediators or go-betweens in dealing with difficult situations/relationships.” Since Filipinos value smooth interpersonal relationships, they could easily get along with other people. This is one of the reasons why Filipinos are friendly in nature. They also tend to let things slide when faced by an undesirable circumstance to avoid conflict with other people. Basically, the value of *Pakikisama* influences the actions of Filipinos towards others. Actions may be about decision-making. Filipinos will consider the opinion or suggestions of others in making decisions.

Third traditional value of Filipinos is *Hiya*. This “demands that one acts circumspectly so as not to shame/embarrass ("*pahiyain*") others nor bring this ("*kahihiyan*") upon one's self” (Miralao, 1997). Similarly to *Pakikisama*, this value also affects the actions in a way that Filipinos present their “best self” to people and not act against the shared norms to avoid embarrassment and negative impressions. It is most often encountered in verbal communication, but on a more general level it is about restraining any individualistic or selfish impulse to put the welfare of the kapwa first (Reyes, 2015).

In the context of agriculture, such values are observed in Filipino farmers. As mentioned above, children ought to have high regard for their parents. This implies that parents have a great influence on their

children's life decisions since having respect is also equal to obeying parental authority. Palis (2020) asserted that Filipino parents would have a great influence on the aspirations, career, and future of their children, and this would determine whether they become the next generation of rice farmers or not. The involvement of family in agriculture or the establishment of Family Farm, is not a new concept in Philippine Agriculture. In fact, it is prevalent in the rural areas. Hayami (2002) defined Family farm as the farm production unit operated mainly by the operator's and his/her family members' labor. Graeub et al. (2016) affirmed that based on a comprehensive analysis of global agricultural census data, family farming is by far the most predominant form of agriculture. "It is important to give particular focus on the farming families in the region because, of all types of families, they are the ones who face and adapt to most changes in political, economic, cultural, and social terms" (Gregorio, 2019).

Problem arises when Filipino culture is conflicted with agricultural development. "In so far as any attention at all was paid to farm people's culture, i.e. the totality of ways of life and rules of behaviour among the farming population (which must be differentiated according to region), it was usually regarded as outmoded and the remnant of a tradition which exerted a disruptive influence on the modernization process" (Pongratz, 1990). Similar to this is the statement of Gregorio (2019) that farmers are seemingly sandwiched by the expected traditional values and bestowed modern practices based on the studies. Moreover, farmers have their own preferences for agricultural technology attributes, which have been found to significantly influence adoption decisions (Maligalig & Demont, 2017).

However, in other similar studies, farmers have a good note on modernization in agriculture. Educated farmers tend to be more productive since they are receptive to new technology (Atchoarena & Gasperini, 2003). Philippine farmers seem to recognize the many advantages of using farm machines over manual, even if these are costly and will certainly displace laborers Bautista et al. (2017). There are also factors that affect their perspective about the use of modern technologies. Laborte et. al. (2009) argued that with a choice of technologies, aside from factors such as available resources and their quality, family consumption preferences and attitudes towards risks, and prevailing policies, decisions of farm households are governed by productivity and profitability as well. In another study of Palis (2006) she concluded that culture, then, was a vital force for bringing about cooperative behavior among Filipino rice farmers. The culture she referred to is the two Filipino traditional values mentioned earlier which are *Pakikisama* and *Hiya.*

Null Hypothesis 1: Filipino Traditional Values do not have a direct effect on the Farm Mechanization Program.

2.2 Agricultural method

In the Philippines, it is evident that there is a conflicting comparison between traditional and adaptive methods of agriculture. For instance, Filipinos who are still sticking to laborious practices are said to be risk-averse due to several constraints such as fears with economic risk, high collateral requirements (Binswanger & Sillers, 1983), and social fears. This is apparent in subsistence farmers, taking a risk is a matter of life for their family even if hypothetically, the given costs and benefits are in their favor.

Borrowing the words of Morillo et al. (2013) "The correlates of emergent family values identify possible channels by which public policies can influence positive values or reinforce distinct cultural traits as the basis of Filipino society and nationhood." Local governments can use the prevalent cultures of Filipinos as the foundation or basis for administering certain policies and carrying out projects.

Income inequality as measured by the Gini coefficient remains high and it has risen in rural areas between 1991 and 2015. This rising inequality in income can be due to the weak growth in employment opportunities in agriculture with poor levels of output, productivity growth in the sector, and static rural education levels due to low levels of investment in the sector. Economic growth can be seen to be concentrated on region NCR where its share of GDP in 2017 is (63%), which evidently shows the uneven distribution of growth (Tuaño & Cruz, 2019) and (Reyes, 2012). Given that Filipino farmers are prone to vulnerability as a result of information insufficiency and learning, are unwilling to take part in uncertain adaptations in farming, which will eventually affect the environment and agriculture in the long-run. Small-scale farmers are much more prone to physical and economic risks, or at worst indebtedness (Lubang, 2019).

Farmers are not against innovation, in fact, they understand the importance of adopting new technologies in farming. The factor holding them back would be the repercussions it may bring to their family such as financial impediments, as people employed in the agricultural sector are being paid less and are living below the national poverty line (PSA, 2018), and lack of knowledge has made it much complicated for them to make progress (Acosta-Michlik and Espaldon, 2008), if the government were to subsidize the acquisition for machinery and with the displacement of laborers brought about by modernization should ease by providing an alternative source of income (Bautista et al. 2017). Filipino farmers are relationalists and not individualists, they habitually place their judgment based on the collective notion of the group to give them a charge of courage or *lakas ng loob* (Palis, 2006).

There is a direct relationship between mechanization and yields, studying Rodriguez and Piadozo's (2016) Farm Mechanization Among Lowlands Rice Farmers in Laguna, Philippines, it was found that "Increasing productivity in rice farming and agriculture would require farm mechanization. Thus, to increase the level of productivity of their farms, farmers have to be educated about the benefits of improved farm mechanization."

Null Hypothesis 2: Agricultural methods which are Traditional and Modern do not have an impact on the Farm Mechanization Program.

2.3 Family business succession

In family business research, the definition of family business remains problematic. However, in most studies, a family business has been described as a business that is usually managed and controlled by multiple family members, sometimes from different generations (Manala-o & Gerial, 2019). Family businesses promote development and progress among members of the family as well as the economy. However, family businesses are complicated in nature, by dynamics within the owning family. These dynamics not only affect business performance but also business growth, change, and transitioning over time (Olson et al, 2003). Manala-o & Gerial (2019) stated that Intergenerational succession is surely a priority for most family business owners who wish to see the longevity of the establishment and legacy passed on to their family members. According to Quisumbing (1986), Family and kinship ties are considered to be the highest value in the Philippines.

Ward (1997) indicated that the long-term health and sustainability of any family business depends on its ability to anticipate and respond to change. The successor's experience, character, qualities, and commitment will factor into and reflect on the family business. In some cases, the responsibility of managing the family business is passed on to the successor despite unpreparedness. Furthermore, some studies show that only a few family businesses appropriately plan for succession, putting more emphasis on planning for management and operations (Morris, Williams, and Nel, 1996). A succession of the family business leadership emerges as a critical area because one of the primary reasons family businesses fail is the lack of a written succession plan (Tatoglu et al. 2008).

In relation to agriculture, succession in family farms occur. It is influenced by culture and thus impacts the openness to change and adaptation in many different farming areas. Family farms rely on family members to provide labor and that the family is responsible for the management of farm production (Garner & de la O Campos, 2014). The essential utilization of family work means that the family farmers' inability to hire paid labor for agricultural production, Paris et al. (2005) argues that this aspect reflects the insufficient labor supply in some rural areas, possibly due to outmigration and as such not a possibility even if the family could hire labor. On the social aspects of farming, Riley (2009) defines family farms as those with more than one generation of the same family involved in the farm enterprise. This is perhaps the main viewpoint in separating family farms from other farming practices and recommends that there are longer-term effects of the farming operations and productions. Furthermore, according to Castillo (1979), the family farm sector relies heavily on intergenerational succession (Pesquin et al. 1999).

Null Hypothesis 3: Family Business Succession does not have an influence on the Farm Mechanization Program.

2.4 Synthesis

Filipino traditional values particularly *Pagpapahalaga sa Pamilya*, *Pakikisama*, and *Hiya*) have a role in our farmers' perception about the Farm Mechanization Program. Filipino culture seems to have an influence on their decision-making in agriculture and can hinder the utilization of new technology which is advantageous in agricultural productivity. Agricultural methods of farming are divided into two categories: traditional and modern, may have no impact on Farm Mechanization Program, as conservative practices may be outdated and can be replaced, resilience to changes in technology can be much more efficient in agricultural performance. Family business succession in relation to farming has an impact on agricultural development programs. With intergenerational succession, openness to change and adaptation in many different farming areas is considered.

2.5 Simulacrum

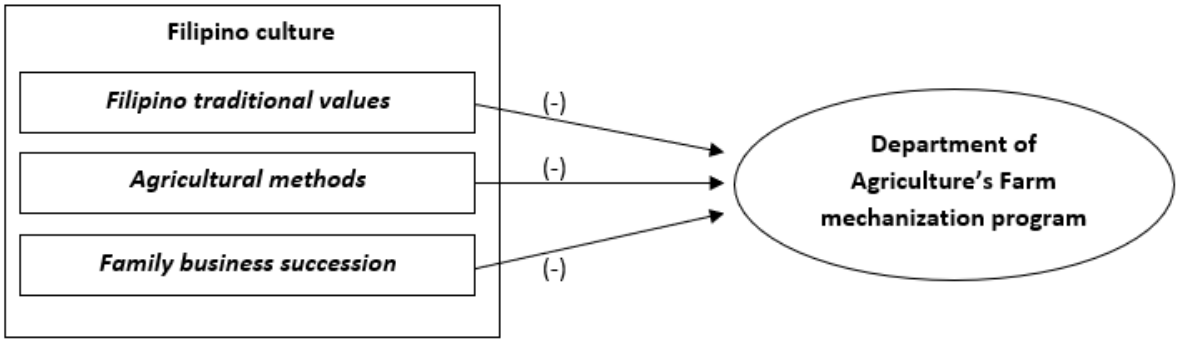

Figure 1. Department of Agriculture's Farm Mechanization Program as the dependent variable. Filipino traditional values, Agricultural methods, and Family business succession as the independent variables.

2.6 Significance of the study

This study intends to yield additional knowledge to the existing studies about culture and agricultural development. Moreover, this study aims to have a positive contribution to the society particularly to the farmers and local government units through the understanding of the culture of Filipino farmers and to raise awareness and enlightenment to help the local government implement more effective programs and policies that will benefit the local farmers.

III. METHOD

This study used a descriptive quantitative method. The researchers included a total of 100 male and female farmers aged 20 to 80 years old who may and may not be part of the registry or cooperatives of the Department of Agriculture's Rice Competitiveness Enhancement Fund in San Isidro, Nueva Ecija. Santiago (2015) stated that Nueva Ecija is recognized as the "Rice Granary" of the Philippines and it is relevant that the target respondents are from the same locality. The researchers determined the age, gender, educational attainment, civil status, monthly income, type of income, household size, occupational classification, and years of farming experience as the profile of the respondents. The sampling method used in this study is Non-Probability or Purposive Sampling because the researchers believed that the chosen respondents will satisfy the aims of the study. The sectoral study was conducted specifically in San Isidro, Nueva Ecija, Philippines. The rationale behind this selection is the accessibility the researchers have to the respondents, the consideration that Nueva Ecija is a major rice-producing province which in particular is predominantly irrigated in the Philippines (Maligalig & Demont, 2017) and it consists of farmers who are significant in this study. The period of the study started from January to December 2021.

The data collection involved the use of a five-part semi-structured questionnaire which was self-constructed to precisely answer the statement of the problem which is crucial in this study. The researchers gathered similar questionnaires online which served as a guide. Moreover, it was translated from English to the Filipino language to ensure the accuracy of data collection from the target respondents.

The first section of the questionnaire will assess the socio-demographic profile. The second section will evaluate the familiarity of farmers with the Farm Mechanization Program. The third section will determine the impact of Filipino traditional values. The fourth section will assess which agricultural method is dominant today. The last section will evaluate the effect of Family business succession. The questionnaire was validated by 10 participants within the subject respondents in San Isidro to assess its accuracy in relation to the study and if the content was being conveyed and understood properly by the respondents.

The survey questionnaire was validated by 10 participants within the subject respondents in San Isidro, Nueva Ecija to assess its accuracy in relation to the study and if the content was being conveyed and understood properly by the respondents. As a result, the researchers revised the age range of the respondents which was 20-65 to 20-80, because the researchers considered the good number of respondents who were above the initial age range. Moreover, some questions were also modified as the respondents who validated the questionnaire found some questions difficult to understand and some questions were also not applicable. Those who validated the questionnaire will no longer be included in the total number of respondents.

The survey was conducted through a pen-and-paper questionnaire which will be given by the researchers to the contact person who will disseminate the copies of the survey and will also act in accordance with the social distancing protocols as the researchers are trying to reduce social contact with the potential respondents due to the on-going pandemic.

The researchers treated the collected primary data with utmost confidentiality by constructing a cover letter that sought permission from the respondents and ensured that the data gathered will only be for the sole purpose of this study. The cover letter is included along with the survey questionnaire.

All the data collected from the respondents were then encoded and analyzed using Descriptive Statistics in Microsoft Excel as well as Multiple Regression Analysis using GRETL software for econometric analysis.

Moreover, the regression model used in this study is as follows:

$$FFMP = \beta_1 FTV + \beta_2 AM + \beta_3 FBS + e$$

Wherein:	
FFMP	The Familiarity of Farmers about the Farm mechanization program
FTV1	Familistic Orientation
FTV2	Pakikisama
FTV3	Hiya
AM1	Traditional Farming
AM2	Modern Farming
FBS1	Family Business Succession
FBS2	Preparedness to manage the family business

Where:	
FFMP	Dependent variable
β1, β2, β3	Regression coefficients
FTV, AM, FBS	Correlation coefficients
e	Error

IV. RESULT AND DISCUSSION

4.1 Result

TABLE I. PROFILE OF RESPONDENTS

%	%

Age		Household size	
Under 30	6.00	Mean	4.234375
30 to 50	31.00	Min	0
over 50	63.00	Max	11
	100.00		

Gender		Farming experience (yrs)	
Male	64.00	Mean	23.43
Female	36.00	Min	0
	100.00	Max	60
Educational Attainment		Civil Status	
No formal education	1.00	Single	14.00
Pre-school	0.00	Married	70.00
Elementary	24.00	Separated	5.00
High school	30.00	Widowed	11.00
College	18.00		100.00
Undergraduate degree	27.00		
	100.00		
Occupation		Type of Income	
Employed	60.00	Annually	20.00
Unemployed	39.00	Semi-annual	77.00
No answer	1.00	Quarterly	3.00
	100.00		100.00
Monthly Income (from another source of income)			
Minimum	500		
Maximum	100000		

Based on the results of the socio-demographic profile, most of the farmers are over 50 years old, 31 percent are within the 30-50 age range, and only a few are under 30 years old. With this, the traditional methods of farming are still favored and widely used. The maximum household size is 11. This number is considered a risk of poverty. Greenspan (1992) asserted that "having many children does substantially increase the risk of poverty." He also stated that "the risk of poverty was found to increase from 44-50 percent in households with one child to 60-78 percent in households in those with five." Most of the farmers are male and only 36 percent are female which is not surprising because farming is a laborious activity usually dominated by men. The highest farming experience is 60 years and the lowest only have less than a year of farming experience. This means that some farmers started at a very young age and worked on farms all their lives. In terms of educational attainment, 30 percent of the farmers only attained High School level of education, followed by farmers who had an undergraduate degree with 27 percent. There is 24 percent of farmers who reached

Elementary level which is greater than farmers who reached College level with only 18 percent. The majority of Filipino farmers are poor and have inadequate education, and the people employed in the agricultural sector are mostly living below the national poverty line, according to statistics (PSA, 2018). This can explain why farmers that have been surveyed are mostly subsistence or micro-farmers that consist mainly of the elderly aged over 50. With the majority of small-scale farmers being vulnerable to physical and economic risks, or at worst indebtedness (Lubang, 2019), it's no wonder they are being left behind despite innovations as major landowners who can afford technological advances, have the capacity to produce more yields, leaving those who cannot sustain themselves outcast. Another reason for the low educational attainment of the farmers may be because some who came from a family of farmers chose to work and help their family members instead of pursuing a degree. However, there are farmers who also encourage their children to finish their education because they do not want them to experience their struggle. They hope for the best for their children and they think that education is the right path for a better future. Most of the farmers are married. 14 percent are single, followed by widowed with 11 percent. Only 5 percent are separated. In terms of other occupations or other sources of income, more than half of the farmers are employed or have other jobs aside from farming. Only 39 percent are unemployed and pursue work on the farm. A study made by Scalabrini (2017) has concluded that farmers in Albay are diversifying their livelihood income by job hunting in different cities specifically in the Manila region. It can be deduced that this is one of the causes why younger generations hesitate in venturing into farming, as seen in the data respondents, there are only 6% under 30 years old, they resort to finding more lucrative employment opportunities in other sectors besides farming. This is shown in the data results that 60 percent of farmers are employed in other jobs besides farming, as it is not enough as a source of income, and 39 percent of the total respondents are those who are unable to get jobs due to several reasons such as lack of qualifications and employment. The lowest monthly income they earn from other jobs is 500 and the highest is 100,000 pesos. The majority of the farmers have a semi-annual type of income from farming as they harvest twice a year. Less than a quarter harvest once a year, and only a few have a quarterly income.

Model 1: OLS, using observations 1-6
Dependent variable: FFMP

	coefficient	*std. error*	*t-ratio*	*p-value*	
FTV1	*2.29037*	*0.133390*	*17.17*	*0.0370*	**
FTV2	*−0.195581*	*0.145726*	*−1.342*	*0.4077*	
FTV3	*1.21279*	*0.0995755*	*12.18*	*0.0522*	*
AM1	*0.572556*	*0.0105665*	*54.19*	*0.0117*	**
AM2	*−0.775798*	*0.0447125*	*−17.35*	*0.0367*	**

Mean dependent var	*100.0000*	*S.D. dependent var*	*99.88193*
Sum squared resid	*0.942800*	*S.E. of regression*	*0.970979*
Uncentered R-squared	*0.999991*	*Centered R-squared*	*0.999981*
F(5, 1)	*23309.51*	*P-value(F)*	*0.004973*
Log-likelihood	*−2.961650*	*Akaike criterion*	*15.92330*
Schwarz criterion	*14.88210*	*Hannan-Quinn*	*11.75528*

P-value was highest for variable 3 (FTV2)

As what has been observed in OLS Model 1, FTV1 which is Familistic Orientation has a significant impact on the Farm Mechanization Program. On the other hand, FTV2 which is *Pakikisama* does not affect the said program. FTV3, which is *Hiya*, has a slight influence. Both Familistic Orientation and Hiya have a positive correlation with FFMP, meaning a favorable change in these behaviors causes an increase in the Farm Mechanization Program.

Based on the OLS Model 2, Both AM1 and AM2, which are Traditional and Modern Methods in Farming, statistically have a significant impact on the Farm Mechanization Program, as both variables are less than the usual significance level of 0.05.

There is a positive correlation on Traditional Methods meaning as more people use this method, there will be an increase of 0.57 in the Farm Mechanization. On the other hand, there is a negative correlation

between Modern Methods to Farm Mechanization Program. As more people use the modern method in farming, there will be a fall in the Farm Mechanization Program.

Model 2: OLS, using observations 1-6
Dependent variable: FFMP

	coefficient	*std. error*	*t-ratio*	*p-value*
const	*18.9709*	*20.2720*	*0.9358*	*0.4184*
FBS1	*0.450839*	*0.728944*	*0.6185*	*0.5800*
FBS2	*1.16974*	*1.09996*	*1.063*	*0.3656*

Mean dependent var	*100.0000*	*S.D. dependent var*	*99.88193*
Sum squared resid	*710.9191*	*S.E. of regression*	*15.39393*
R-squared	*0.985748*	*Adjusted R-squared*	*0.976247*
F(2, 3)	*103.7483*	*P-value(F)*	*0.001701*
Log-likelihood	*−22.83803*	*Akaike criterion*	*51.67606*
Schwarz criterion	*51.05134*	*Hannan-Quinn*	*49.17525*

In the OLS result, it has been observed that the variable Family business succession and preparedness to manage the family business is statistically insignificant, having the P-value of 0.58 and 0.37, respectively, as P-value is greater than the alpha which is 5 percent. A significance level of 0.05 indicates a 5% risk of concluding that an association exists when there is no actual association.

The R-squared has the value of 0.96, this indicates that 96% of the variance of the farm mechanization program is somehow explained by the variable family business succession and preparedness to manage the family business. The Akaike criterion for OLS Model 1 is 15.92 and for Model 2 it is 51.68, both results are relatively low, this indicates that the OLS Model is a good fit for the observed data.

4.2 Discussion

Based on the research findings, among the sub-variables of Filipino Traditional Values, two are significant to the Farm Mechanization Program namely, Familistic Orientation or *Pagpapahalaga sa Pamilya* and *Hiya*. While the other sub-variable, *Pakikisama*, is insignificant. Although both are significant, Familistic Orientation or *Pagpapahalaga sa Pamilya* has a higher level of significance while *Hiya*, on the other hand, only has a slight significance.

The high significance level of Familistic Orientation or *Pagpapahalaga sa Pamilya* is supported by the study of Tarroja (2010) which described Filipinos as family-centered and closely-knit. This strong emotional bond greatly influences the decisions of each family member. The familistic orientation of the farmers significantly affects their choices when it comes to the use of modern technology in farming. Farmers have high regard for the opinion of their families. Moreover, the well-being of their family is an utmost concern. They are willing to adapt to the modern method of farming if it will produce a better outcome in terms of profitability as this will be beneficial to their family especially to those who have no other source of income aside from farming. In line with this, Laborte et. al. (2009) asserted that with a choice of technologies, aside from factors such as available resources and their quality, family consumption preferences and attitudes towards risks, and prevailing policies, decisions of farm households are governed by productivity and profitability as well. As what has been observed in the type of income in farming, 77 percent of the farmers earned semi-annually as they harvest twice a year which may not be enough to sustain their needs. This could be a reason why the majority are employed or have another source of income to have enough means for living and achieve a more comfortable life.

The next component of Filipino Traditional Values is *Pakikisama*, which is surprisingly insignificant to the Farm Mechanization Program. It is known that Filipinos give great importance to interpersonal relationships and the value of *Pakikisama* is the action of Filipinos influenced by others. However, with regards to the program, this is not significant. Maligalig & Demont (2017) argued that farmers have their own preferences for agricultural technology attributes, which have been found to significantly influence adoption decisions. This

implies that farmers have their own stand regarding the program and are not influenced by the perspective of other farmers. They seemed to depend on their own decisions about using modern technologies in farming. Thus, it can be inferred that farmers have different stances about the program.

The last component of Filipino Traditional Values is *Hiya*. This is the demand that one must act circumspectly to avoid shaming others or oneself. Although quite similar to *Pakikisama*, this has little significance to the Farm Mechanization Program. According to Atchoarena and Gasperini (2003), educated farmers tend to be more productive since they are receptive to new technology. In addition, Philippine farmers seem to recognize the many advantages of using farm machines over manual, even if these are costly and will certainly displace laborers. (Bautista et al. 2017). This could influence the point of view of other farmers regarding the use of modern technologies, especially the elderly ones with low educational attainment which is the majority of the research findings. This behavior may occur when they notice that they may be behind other farmers who are already utilizing modern technology in farming. Subsequently, some farmers may think that the traditional way of farming should no longer be practiced as more and more farmers learn to adjust and adapt to the new method of farming.

With this said, the null hypothesis which stated that Filipino Traditional Values do not have a direct effect on the Farm Mechanization Program is not absolutely rejected as one component of FTV which is *Pakikisama* aligns with it.

Traditional Farming and Modern Farming have a significant correlation with the Farm Mechanization Program. This signifies our rejection of the second null hypothesis which states that Traditional Farming and Modern Farming negatively affect the Farm Mechanization Program.

Traditional farming is now being replaced by the new technological advances as using new equipment in farming increases the number of yields as concluded in Piadozo's (2016) study, Characterization of Farm Mechanization Among Lowlands Rice Farmers in Laguna, Philippines, there is a direct relationship between mechanization and yields. As seen in the OLS results, both Traditional and Modern Methods are significant, however, looking at their coefficients, the Traditional method of farming has a positive effect on the Farm Mechanization Program. It can be deduced that farmers who are still operating using traditional methods are much more willing to acquire and be part of programs that can enable them to procure modern equipment in farming, as said by Acosta-Michlik and Espaldon (2008), farming communities in the Philippines are restricted by numerous factors such as lack of money and information to their adaptive decisions, making them unable to advance. In contrast, the Modern method of farming is significant though it has a negative effect on the Farm Mechanization Program. This can be explained with the reasoning that farmers who have already procured or are using modern equipment for farming, are not that eager to partake in such programs as it will not benefit them to get ahold of machinery they already have. Though this does not mean that the null hypothesis should be accepted somehow, as both are still significant, people who use modern methods are not that eager or enthusiastic, nevertheless, they are not opposed to the program, compared to people who still use traditional practices, they are much more willing to participate in the said program.

Family Business Succession and the preparedness to manage the family business do not have an influence on the Farm Mechanization program. This indicates strong evidence for the third null hypothesis, which states that Family Business Succession does not affect the farm mechanization program. One possible reason for this is that younger generations prefer other jobs over farming. According to the study of Moya et. al. (2015), education receives a high priority. The children, although once helping on the farm, are leaving the farm for higher education and sometimes jobs overseas. Moreover, as most of the siblings leave the farm for jobs elsewhere, often one of the siblings takes over the management from aging parents with the help of full-time hired laborers. This is opposed to the usual family farms which are operated by each family member. Evidently, educational attainment in the family plays a major role in choosing a career path. According to the research findings, 30 percent of the farmers only attained a High School level of education, 27 percent had an undergraduate degree, 24 percent reached Elementary level and only 18 percent in the College level. It is observed that in rural areas, the farmers who attained a lower level of education pursue farming compared to those with a higher level of education who tend to choose a different career path which negates family farm succession.

V. CONCLUSION AND RECOMMENDATION

Based on the research findings, the sub-variables of Filipino Traditional Values, specifically Familistic Orientation or *Pagpapahalaga sa Pamilya* and Propriety or *Hiya* are two significant variables to the Farm Mechanization Program; both variables have a positive influence, meaning a favorable change in these behaviors causes an increase in the Farm Mechanization Program. The sub-variable, *Pakikisama* or "*getting along with others"* is statistically insignificant. Though both are relevant, Familistic Orientation has a higher level of significance than Propriety which only has a slight significance. Both Traditional and Modern Farming methods are significant. However, the Traditional method of farming has a positive effect on the Mechanization Program, while the Modern method of farming has a negative effect on the program. Thus, it is identified that the dominant agricultural method is the Traditional Method. Finally, Family Farm Business Succession does not have an effect on the program because the younger generation prioritizes higher education and prefers other jobs over farming.

The agricultural development initiative of the Department of Agriculture which is the Mechanization Program was derived from the Republic Act no. 11203, known as the "Rice Tariffication Law". This program is set to increase the farmer's productivity, profitability and competitiveness through mechanized farming. The socioeconomic issue this study focused on is in the agricultural sector, specifically the delayed progression in the technological advancement in farming. In the research findings, Filipino traditional values such as Familistic orientation, Propriety, Traditional methods, and Modern methods have an effect on the Mechanization Program. To address this issue in the agricultural sector, there should be an increase in the accessibility to farm machinery and the implementation of applicable training means for micro farmers in order to induce mechanization.

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