RUNNING LOW: UNDERSTANDING THE ROLE OF CULTURE IN THE DISMAL SAVINGS RATE OF FILIPINOS

JAMES PATRICK ALONZO

ADB-JSP Fellow – East-West Center | Masters in Public Administration – University of Hawaii at Manoa
E-mail: jpalonzo@hawaii.edu

Abstract - One key measure of a country's development is savings rate as this is a major source of productive investments in the future. Sadly, the Philippines lags behind in this front, especially if compared to its Southeast Asian peers. In 2005, the Philippines' gross domestic savings, as a percentage of gross domestic product , was 15.9%, compared to Indonesia's 27.5%, Thailand's 29.5%, Malaysia's 44.3% and Singapore's 49.4%. The Philippine economy has boomed for the past decade with a thriving business process outsourcing industry and increased dollar remittances of Overseas Filipino Workers. However, the Philippines' savings rate surprisingly dipped further. Much of the current literature emphasizes on a highly economic approach to boost savings – just increase income levels and roll-out financial literacy campaigns. Conversely, this paper argues that more than the level of income and financial literacy, cultural ideologies such as "Bahala na" (leave it to God) play a primordial role on Filipinos' dismally low savings rate. This research proposes that economic interventions can only be effective if it makes cultural reorientation an integral component. In conclusion, this paper sheds light on the rarely acknowledged influence of culture on a developing country's savings behavior.

Index Terms - Culture, Financial Literacy, Public Administration, Savings Rate

I. INTRODUCTION

One of the fundamental measures of a country's stability and trajectory towards economic development is its gross domestic savings rate. It can be said that most developed countries have a high savings rate as a percentage of its GDP.

In 2005, the Philippines' gross domestic savings, as a percentage of gross domestic product (GDP), was 15.9%, compared with Indonesia's 27.5%, Thailand's 29.5%, Malaysia's 44.3% and Singapore's 49.4%. It's been more than a decade since and the Philippines has practically boomed in many fronts. There's been more economic activity flocking in to the island nation due to the thriving business process outsourcing (BPO) and IT industries as well as the increase in the dollar remittances of Overseas Filipino Workers (OFWs). However, as per the recent study in 2015, the Philippines savings rate dipped further to 13.9%, compared to the still high savings rate of Indonesia which is at 34.8%, Thailand with 35.4%, Malaysia with 32.7%, and Singapore with 53.2%.

This brings us to a conundrum, especially when we talk about the Philippines being a developing country and that it needs its societal as well as economic backbones become strong so that it can propel itself to further advancement. As what can now be seen, despite its economic success in the recent years, an increased disposable income of its citizens, and a growing Filipino middle class, its savings rate is reacting on the opposite when logically it should be positive. As such, this study would like to see why the Philippines still has a low savings rate despite its economic development in the past couple years. Specifically, this paper would look at an area which is a critical, but often overlooked, contributory factor that can affect the savings behavior of the Filipinos – its culture.

II. REVIEW OF RELATED LITERATURE

As what has earlier been emphasized, the savings rate of any country is a very important factor to look at when we assess whether or not it is developing sustainably. Savings is very important in any economy because these are major sources of productive investments that will generate more output and employment in the future. Sadly, this is one of the areas by which the Philippines is lagging behind, especially when compared with our Southeast Asian peers.

Normally, one would think that as a country progresses, the savings rate should rise as well as financial conditions of a country do affect its savings and growth [1]. Income, for example, is one of the most important factors to be considered when we deal with savings rate [2]. The logic here is quite simple: since there is more money flowing in to one's pockets, there is going to be more resources that are available for a person to be able to save up. Unlike before when their income was still meager, there will be better opportunities for individuals to save up due to the money increments they are earning. However, there have also been a lot of empirical studies that found out that economic growth and a country's savings rate

does not always positive correlate [3]. It does not always happen that if a nation develops, the savings rate follow suit. A more interesting observation reported is that past researchers have seen this behavior more specifically in least industrialized and developing countries [4]. Such a classic example is the savings rate behavior of the Philippines, which has shown a decline over the past couple of decades, especially when compared to its peers in Southeast Asia vis-à-vis their economic growth. The savings rate of the archipelagic nation has been dismal especially when put in the context of it supposedly graduating from the label of being the "Sick Man of Asia.". On one study made, it was stated that five Southeast Asian countries experienced a "saving transition" during 1972-1991. Four of those five now have the highest saving economies in the world. The odd man out is the Philippines' as its savings rate dismally plummeted.

Another research in the past has been made which developed a simultaneous-equations model of savings in developing countries. It was believed that on the basis of the parameter estimates that they used, steady-state savings ratios should rise significantly for countries that experience higher rates of income growth. However, the perplexing thing that had happened is that an upward movement in savings rate did not occur in the countries of Brazil, Costa Rica, Israel, the Philippines, and Taiwan [5]. Again, a question should be asked, why is the savings rate of the Philippines continuously sliding despite conditions favoring a more positive increase in savings? This definitely presents a very interesting case and an opportune time to take a look at potential factors that can explain why the Philippines continues to dip in terms of their savings rate despite the continued economic progress it has been enjoying the past decade.

In light of this, there are definitely a few areas that we need to consider to better explain this phenomenon. Starting off on a more macro-level, budgetary policies, financial sector liberalization, and statutory saving schemes would all appear to have raised private saving in countries [6]. Meanwhile, on another study made on ten developing countries, one glaring finding they had seen is that living standards and the age distribution of a certain nation play a very crucial role in looking at the savings behavior of its citizens as they have structural effects on household behavior [7]. On the other hand, lifetime factors, as represented in the permanent income measure by certain household characteristics, also make an impact on household and individual savings.

Also, there have been quite a number of studies that were done to see how other technical and economic factors do play a role in the savings rate behavior of a country's citizenry. For example, population size and population growth are areas commonly looked at when we're talking about this topic. This can be attributed to the fact that resources will always have a limit in supply. The more people who will have to share and benefit from this same pool of resources, the lesser the resources they may get individually which subsequently can translate to lesser amount that they can save. In this regard, one study has found out that that population growth has a purely transitional effect on economic growth and savings rate [8].

On a more micro-perspective, there has also been some considerable focus in the past on how the grassroots think about savings in relation to their day-to-day behavior. One factor that has been taken a look at is a household's ability to withstand external shocks such as emergency situations. This is where talks about discussions about insurance may come in. Most households in low-income countries deal with economic hardships through informal insurance arrangements between individuals and communities rather than through publicly managed programs or market-provided insurance schemes. Households may, for example, sell the physical assets they have or even draw on savings, in response to this set-up which will eventually deplete both resources [9].

Lastly, another interesting factor that can influence a nation and even an individual's savings rate is culture. There's been some evidence found on immigrants that cultural effects tend to have some effect on household savings [10]. This non-qualitative component of savings behavior proves to be a very promising area to study, however, there's not a lot of literature present about this dimension on savings. Moreover, there not a myriad of resources currently available on this topic especially that in the Filipino context. This said, considering that the Philippines has a unique culture on its own that seeps in to family, societal, and even national spheres, it would be worthwhile to see if culture may be able to give more clarity as to why Filipinos' savings rate continuously drops over time.

III. HYPOTHESIS

When Filipino culture is given a spotlight, one of the most important concepts that would be thought of is the "Bahala na" attitude. The "Bahala na" attitude is a Filipino cultural mentality which has a loose English translation of "leaving something or someone in the hands of God" [11]. This definition was even further emphasized and extended to have a more personal component by saying that "Bahala na" is "a fatalistic resignation or withdrawal from an engagement or crisis or a shirking from personal responsibility'' [12]. Filipinos who subscribe to this belief think that "things in life are actually beyond one's own control" and

outcomes are heavily dependent on external factors – a Divine Being, fate, and even the people surrounding you. This attitude can perpetrate the thinking that whatever happens in the future should not be worried about at the present and when used in a negative manner, can actually take someone's own personal responsibility of whatever consequences will ensue out of one's own actions.

In this discussion, the "Bahala na" ideology can actually be represented in different levels. Gripaldo has elucidated on the following statements that all pertain to this Filipino cultural attitude:

1. **Come what may / Whatever will be, will be** – this implies that the Divine Being/fate will take care of everything in due time. The future will always be uncertain but one must not worry as things will eventually pan out the way it is supposed to be and that whatever is destined to happen is destined to be. This can be seen when a person decides on something very hastily and says "bahala na" which implies that "I've made a decision now, and God/destiny will take care of the consequences in the future".

2. **Some other person X will take care of this in the future** – the word "bahala" does have a derived meaning which is "taking responsibility". The usage of "bahala na" in this context is that in the future, someone will eventually take care of matters, more specifically in concerns about people affiliated with each other. In the Filipino context, when someone says "bahala ka na", it means "you take care of it". And since in the Philippine society, we are highly family-oriented and collectivist, it is very usual to hear these words said amongst different members of the family – for example, when taking care of sick or older family members.

3. **Let's have fun now – Don't mind the future, Just focus on the present –** another use of "bahala na" which is prevalent amongst the Filipino community is by saying "bahala na bukas, ang mahalaga, masaya tayo ngayon" (don't mind what will happen tomorrow, what's most important is that we are happy now). This level of this cultural attitude somehow alludes to the Filipinos' fun loving nature and the affinity towards merry-making. Fiestas, or festivals, are a big part of Filipino culture – there is almost one fiesta celebration happening every day of the calendar year. Just like fiesta, birthdays, Christmas and other celebrations are best enjoyed through a bountiful preparation of food. And "bahala na" comes to play by saying, let's enjoy and savor the moment that is now.

Thus, this cultural attitude may have some connection to the saving behavior of the Filipinos as this is such an integral outlook that they hold in their daily life – savings potentially being one of them. As such, this study's research hypothesis is: Filipinos who strongly agree with the "Bahala na" attitude are less likely to save than the ones who strongly disagree with it**.**

IV. SIGNIFICANCE OF THE STUDY

This study is very pressing and significant to take a look at especially if we would want to ensure that countries like the Philippines can get out of a vicious cycle of poverty and elevate the standards of living of its citizens. It all the more becomes timely because the economic conditions of the archipelagic nation seems poised for more growth, and if the Filipinos do not take advantage of this situation, it may find it more difficult to get past being tagged as a developing country.

In a paper made before, it was emphasized that the poor state of public finance and low domestic saving rate in the Philippines stand in the way of a stable and self-sustained growth [13]. Thus, we need to see what relevant factors really do affect the savings rate of Filipinos – culture being the area of interest we have in this research. If this does not improve, all the economic progress that the nation has been enjoying and the growth of middle-income base will just be put into waste. If indeed, culture does play a role on the Filipinos' savings behavior, this can be instrumental so that we can come up with initiatives tailored to alleviate the concern.

V. METHODOLOGY

To limit the study, I have focused more on a micro-analysis, which means the data derived mostly focused on the individual or household level. First-hand data was gotten and data collection was done by rolling out an online survey. Kindly note that although there were publicly available data currently in the sites of Bangko Sentral ng Pilipinas (Central Bank of the Philippines), Philippine Statistics Office (PSA), and World Bank, their focus was not much on the respondent's cultural beliefs and perceptions. As such, it was decided that it was better to collect firsthand data and use the publicly available information only as a reference.

The main target respondents where data was collected from are Filipinos of all ages and varied demographic backgrounds. This method proved to be both beneficial and limiting. The upside is that the online survey is a cheap, fast, and widely encompassing means of

gathering data especially that the researcher was outside the Philippines at the time of study. However, it also meant that only people who have access to the internet were the ones who can readily answer the survey. In total, there were 350 respondents in the study.

The 10-item survey contained questions focused on respondent's perception about savings, spending behavior, cultural beliefs, etc. As the research wanted to highlight that culture and societal norms may have an impact on savings behaviour, the focus of this survey is more on the qualitative rather than the quantitative aspect (incorporating some cultural/normative beliefs in the question) so that there is a more holistic approach when the analysis is done.

As people are usually sensitive to answer money-related questions and may not answer as honestly as possible if their names were asked, it was purposely not included in the survey questionnaire. All questions were also written in Filipino as the researcher wanted the approach to be more inclusive so that people from all social classes (A, B, to E) may be able to understand and answer it. This would also promote a wider range of answers that can prove relevant to the study.

The units of observation would be each Filipino individual respondent. Meanwhile, the Dependent Variable (DV) of interest in the study is the Savings of the respondent as a Percentage of their Monthly Income/Allowance. Meanwhile, the Independent Variables (IV) determined encapsulate the various perceptions Indicative of a "Bahala na" Attitude as explained previously in this paper. Those are:

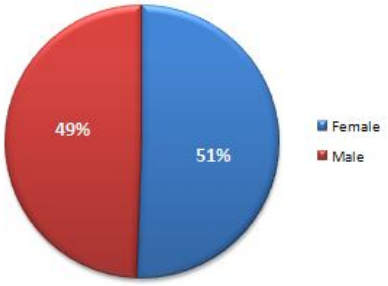
R1 – Habit of Setting aside Money for Expenses first before Savings
R2 – Belief that Kids have the Responsibility to Financially Support their Parents during Old Age
R3 – Perception that there is a Need to Celebrate the Moment through Food and Festivity

The types of variable that can be seen in the questionnaire are categorical/nominal and continuous in nature. As such the statistical tests that were done to assess statistical significance were t-test (with the p-value) and Pearson's r.

VI. FINDINGS

Demographics

Out of the 350 respondents that were surveyed, there were 177 females and 173 males. This translates to a gender composition of 51% female and 49% male – an almost equal mix of both genders.

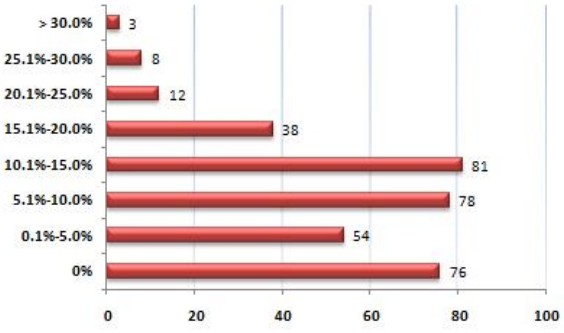


Place of Residence

Residence	Count	Proportion
NCR	89	25.43%
Luzon	86	24.57%
Visayas	87	24.86%
Mindanao	88	25.14%
	350	**100.00%**

Meanwhile, the geographic locations of the respondents were quite spread out. There were 89 respondents from the National Capital Region (this Is the area where Metro Manila, the country's capital city, is situated), 86 respondents from Luzon (the whole northern Philippines, excluding the National Capital Region), 87 respondents from Visayas (the central Philippines), and 88 respondents from Mindanao (the southern Philippines). This was a good representation that had happened so that the differing opinions of Filipinos' across the archipelago can be taken into account.

Dependent Variable



Respondents of the survey are also grouped together as per the bracket where they belong in terms of their savings as a percentage of their monthly income/allowance. This is a very crucial variable to look at as this serves as our Dependent Variable (DV). As can be seen, majority of the respondents are clustered in the 10.1%-15.0% (81 respondents) and 5.1%-10.0% (78 respondents) ranges, which is reflective of the macro savings figure stated earlier in

this paper. There was also a considerable number of people who do not save at all (76 respondents), and the count decreases as the savings range goes on the higher end, i.e. greater than 20%.

Independent Variables

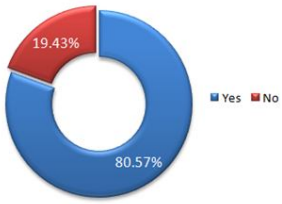
The first independent variable of interest talks about the habit of setting aside money for expenses first before savings. The survey questionnaire asks:

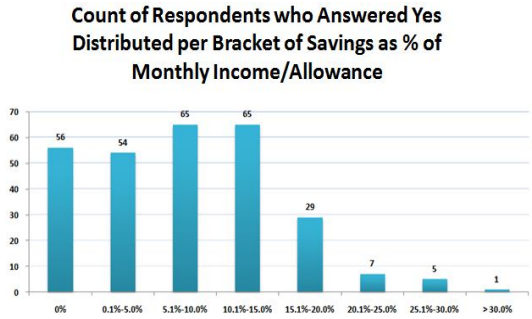
2) Tuwing bigayan ng sweldo o allowance, nagtatabi muna ako ng pera para pambayad ng gastusin bago magtabi ng pang-ipon.

○ Oo

○ Hindi

This question translates to: when you receive your income/allowance, do you set aside money for expenses first before savings? The options are: Yes (Oo) or No (Hindi).





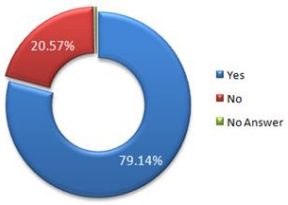
There were 282 out of 350 respondents that answered Yes (which represents 80.57% of the total). Meanwhile, there were 68 respondents who answered No (which translates to 19.43% of the total). If we were to look at the more granular distribution of those who answered yes per the bracket of savings as percentage of their monthly income/allowance, we can see that the highest count is that of 65 respondents, and this was both the count on the 5.1%-10.0% and 10.1%-15.0% brackets. This is followed by the 0% and the 0.1%-5.0% brackets. Meanwhile, the lowest count is the one greater than 30% with only one respondent answering affirmatively. The second independent variable of interest is regarding the belief that kids have the responsibility to financially support their parents during old age. The survey questionnaire asks:

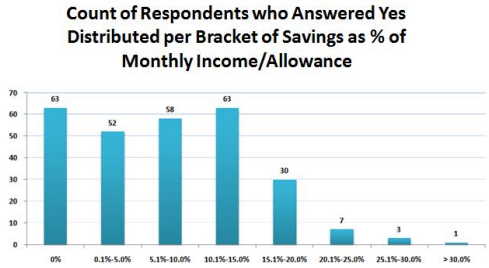
9) Naniniwala ka bang may responsibilidad ang anak na tulungan ang magulang sa pangangailangang pinansyal pag sila'y matanda na?

○ Oo

○ Hindi

This question translates to: do you believe that kids have the responsibility to financially support their parents during old age? The options are: Yes (Oo) or No (Hindi).





Out of 350 respondents, there were 277 respondents who answered Yes (which represents 79.14% of the total). On the other hand, there were 72 respondents who answered No (which is equal to 20.57% of the total). Meanwhile, there is 1 respondent who opted not to answer the question. Now, looking at the distribution of those who answered yes per the bracket of savings as percentage of their monthly income/allowance, we can see that the highest count is that of 63 respondents, and this was both the count on the 0% and 10.1%-15.0% brackets. This is followed by 5.1%-10.0% bracket with 58 respondents answering positively to the question. Meanwhile, there was again only 1 respondent who respondent positively on this question on the greater than 30% bracket.

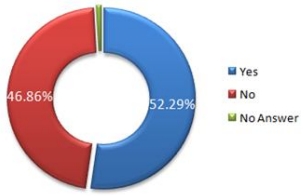
The third independent variable we are looking at is the perception that there is a need to celebrate the present moment through food and festivity. The survey questionnaire asks:

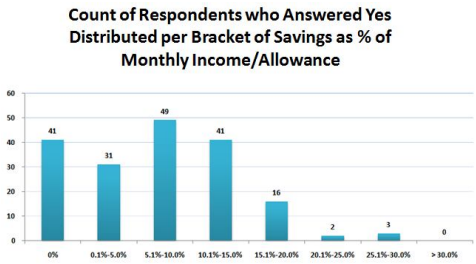
6) Mahalaga sa aking magbigay ng regalo tuwing may selebrasyon (birthday, pasko, fiesta, etc).

○ Oo

○ Hindi

This question translates to: is preparing food a necessity to celebrate family occasions (birthdays, Christmas, fiesta, etc)? The options are: Yes (Oo) or No (Hindi).





The respondents who agreed to this question were 52.79% of the total, which is tantamount to 183 respondents. Those who disagreed was 46.86% of the whole respondent count, which is equal to 164 individuals. Meanwhile, 3 respondents left the question unanswered. The highest concentration of correspondents who had a positive response on this was on the 5.1%-10.0% bracket with 49 respondents, followed by 0% and 10.1%-15.0% brackets which are tied at 41 correspondents.

Statistical Tests: T-test and Pearson's r

Using all the results tallied from the survey questionnaire and looking through these independent variables (IV), we wanted to see if these have statistical significance to the dependent variable (DV). Three separate t-tests were done and the results below summarize the t-test statistic, degrees of freedom (DF), P-Value, and Pearson's r:

T-test	t Value	DF	P-Value	Pearson's *r*
DV & IV 1 (Expense over Savings)	1.9907	348	0.0473	-0.1061
DV & IV 2 (Children's Financial Responsibility)	3.6353	347	0.0003	-0.1915
DV & IV 3 (Necessity of Festivities Now)	2.5983	345	0.0098	-0.1385

Interpreting these derived statistical results, we can say that:

- For DV & IV 1: This test has a t-test statistic of 1.9907 with 348 degrees of freedom, P-value of 0.0473 (less than 0.05 threshold) which means it is **statistically significant**. It has a negative linear relationship with Pearson's r value of -0.1061.
- For DV & IV 2: This test has a t-test statistic of 3.6353 with 347 degrees of freedom, P-value of 0.0003 (less than 0.05 threshold) which means it is **statistically significant.** It has a negative linear relationship with Pearson's r value of -0.1915.
- For DV & IV 3: This test has a t-test statistic of 2.5983 with 345 degrees of freedom, P-value of 0.0098 (less than 0.05 threshold) which means it is **statistically significant**. It has a negative linear relationship with Pearson's r value of -0.1385.

CONCLUSION

From the results of our statistical test, our research hypothesis finds strong support that indeed, Filipinos who strongly agree with the "Bahala na" attitude are less likely to save than the ones who strongly disagree with it. The P-values from the three t-test statistics point out that that the three representations of the "Bahala na" attitude are statistically significant to the level of savings of the respondents as a percentage of monthly income/allowance. Likewise, the Pearson's r value shows a consistent negative linear relationship between the savings and the cultural beliefs outlined. These statistical results demonstrate how much of a role cultural factors such as "Bahala na" can influence the perception of Filipinos towards savings and in their building of the financial discipline to be able to save up. It can be clearly seen that those who have lower savings rate have higher counts of affirmations on statements pertaining to the "Bahala na" attitude. These numbers strengthen our belief that financial and economic behaviors do not merely constitute a mastery of technical aspect of finances, but also have a cultural underpinning. When we try to put these findings in the context of what is occurring in the psyche of typical Filipinos that influence their day-to-day experiences, we can say that:

R1 – Expense over Savings – If a typical Filipino's priority is to allocate money on the expenses before savings whenever funds flows in either as their income or allowance, this can really espouse the tendency to put off savings and push it to some other time in the very far future. This delay in the act of saving happens because it becomes less of a priority and naturally, will be on a person's second-tier list of to-do. "Bahala na" then becomes apparent when this behavior happens on a continuous basis. In reality, we can see a lot of Filipinos who, despite earning huge sums of money, end up saving nothing, or even finding themselves in massive debt, because they always focus on "what next to buy" or "what else to consume" instead of "how much to save".

R2 – Children's Financial Responsibility – While the Filipinos' belief that kids should take care of their parents in the future highlight and show the positive trait of being family-oriented, this thinking can also have negative ramifications as well. "Bahala ka na sa

akin" or the knowledge that there is always "somebody who would eventually take care of me when I grow old" can unfortunately breed a culture of financial complacency and dependence. This mentality is perfectly pictured by the fact that unlike western culture where old people are usually put in nursing homes when they get older, older-aged Filipinos usually stay with their children, and children's family in their later years.

R3 – Necessity of Festivities Now – The importance of preparing food to share in festivities (fiesta) and family celebrations can influence the savings behavior of Filipinos. Again while it shows the fun-loving culture that the Filipinos have, it can have its negative sides too. Banquets and festivities go hand-in-hand in the Filipino setting. And when we talk about preparing food in this case, it usually means an elaborate way of doing it such that it can feed not just your family, but friends, guests, and even neighbors. This is where "Bahala na" comes in – just enjoy the present; don't think of future stress or problems. Thus, this behavior can definitely impact savings negatively.

RECOMMENDATION

With this research, we can see that the issue of low savings rate of the Filipinos could not be solved by just a mere increase of one's income or initiatives to educate them on financial literacy lessons. The subject of low savings rate has a lot of intertwined factors that have to be considered. While it definitely makes sense that those technical aspects of finances are deemed as important elements in determining the capability of Filipinos to save, this study points out that there needs to be some deeper learning regarding savings that the Filipino society would have to understand.

This said, an approach of cultural reorientation must also happen alongside financial literacy trainings so that Filipinos can effectively develop the culture of financial discipline that will subsequently enable them to save. Financial literacy interventions must then not just focus of the technical aspects of money (deposits, investments, etc), but should also have a cultural component to it. This would help address the pervading cultural beliefs that affect Filipinos' perception about money, savings, and their life in the future. Through this way, the culture of savings may hopefully be deeply embedded on their beliefs and priorities. Furthermore, this can optimistically help Filipinos, regardless of their current social status, to have a better quality of life in the much longer-term.

REFERENCES

[1] M. Fry, "Money and Capital or Financial Deepening in Economic Development? Financial conditions of a country do affect its saving and growth," https://www.jstor.org/stable/1991576?seq=1#page_scan_tab_contents, pp. 464-475, Nov 1978.

[2] C. Reinhart, and M. Ogaki, J. Ostry, "Saving Behavior in Low- and Middle-Income Developing Countries: A Comparison," https://ideas.repec.org/p/pra/mprapa/6978.html, pp. 38-71, Mar 1996.

[3] N. Leff, "Dependency Rates and Savings Rates," https://www.jstor.org/stable/1810683, pp. 886-896, Dec 1969.

[4] R. Mohan, "Causal relationship between savings and economic growth in countries with different income levels," https://ideas.repec.org/a/ebl/ecbull/eb-05e20002.html, 2006.

[5] N. Leff, and K. Sato, "Simultaneous-Equations Model of Savings in Developing Countries," www.journals.uchicago.edu/doi/pdfplus/10.1086/260390, Volume 83, Number 6, Dec 1975.

[6] R. Bautista, and M. Lamberte, "Comparative saving behavior of rural and urban households in the Philippines," www.dirp4.pids.gov.ph/ris/wp/pidswp9015.pdf, Volume XVII, Number 2, 1990.

[7] S. Collins, "Saving Behavior in Ten Developing Countries," www.nber.org/chapters/c5996.pd, p. 349 – 376, January 1991.

[8] D. Bloom, and J. Williamson, "Demographic Transitions and Economic Miracles in Emerging Asia," http://www.nber.org/papers/w6268.pdf, November 1997.

[9] J. Morduch, "Between the State and the Market: Can Informal Insurance Patch the Safety Net?" www.elibrary.worldbank.org/doi/pdf/10.1093/wbro/14.2.187, Volume 14, Issue 2, 1999,

[10] C. Carroll, R. Byung-Kun, and R. Changyong, "Does Cultural Origin Affect Saving Behavior? Evidence from Immigrants," www.journals.uchicago.edu/doi/abs/10.1086/452445, pp. 33-50, October 1999.

[11]R. Gripaldo, "Filipino Cultural Traits: Claro R. Ceniza Lectures," https://books.google.com/books?hl=en&lr=&id=hXJe6vKMjroC&oi=fnd&pg=P, 2005.

[12] T.D. Andres, "Dictionary of Filipino Culture and Values. Quezon City: Giraffe Books," 1994.

[13] R. Bautista, and M. Lamberte, "The Philippines: Economic Developments and Prospects," www.onlinelibrary.wiley.com/doi/10.1111/j.1467-8411.1996.tb00014.x/abstract, November 1996.

APPENDIX

Stata Screenshots of T-tests and Pearson's r

DV & IV 1: Expense over Savings

```
. ttest ipon_num, by(gastos_muna_dummy)

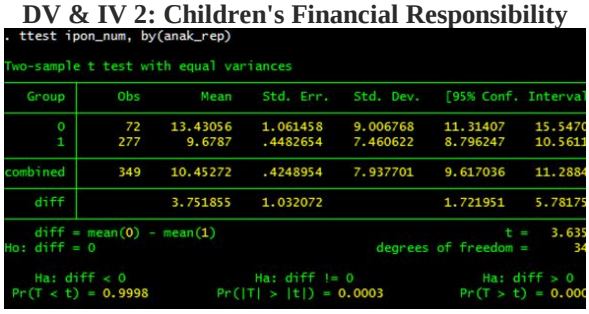
Two-sample t test with equal variances

   Group |     Obs        Mean    Std. Err.   Std. Dev.   [95% Conf. Interval]
---------+--------------------------------------------------------------------
       0 |      68    12.16176    1.165537    9.611266    9.835343    14.48819
       1 |     282    10.03901    .4421361    7.424728    9.168688    10.90933
---------+--------------------------------------------------------------------
combined |     350    10.45143    .4236816    7.926358    9.618138    11.28472
---------+--------------------------------------------------------------------
    diff |            2.122758    1.066333               .0254889    4.220026
------------------------------------------------------------------------------
    diff = mean(0) - mean(1)                                      t =   1.9907
Ho: diff = 0                                     degrees of freedom =      348

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(T < t) = 0.9764         Pr(|T| > |t|) = 0.0473          Pr(T > t) = 0.0236
```

	ipon_num	gastos~y
ipon_num	1.0000	
gastos_mun~y	-0.1061* 0.0473	1.0000

DV & IV 2: Children's Financial Responsibility



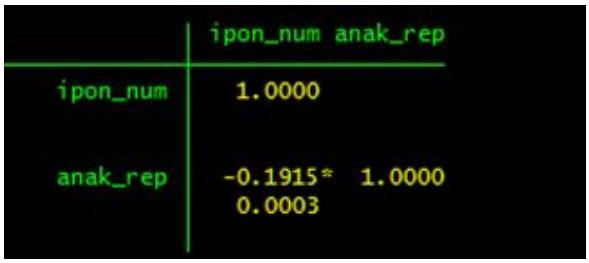
. ttest ipon_num, by(anak_rep)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval
0	72	13.43056	1.061458	9.006768	11.31407	15.5470
1	277	9.6787	.4482654	7.460622	8.796247	10.5611
combined	349	10.45272	.4248954	7.937701	9.617036	11.2884
diff		3.751855	1.032072		1.721951	5.78175

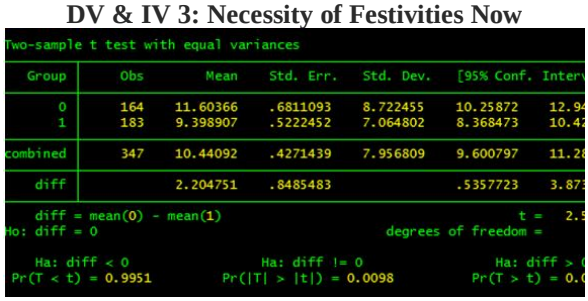
diff = mean(0) - mean(1) t = 3.635
Ho: diff = 0 degrees of freedom = 34

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9998 Pr(|T| > |t|) = 0.0003 Pr(T > t) = 0.000



	ipon_num	anak_rep
ipon_num	1.0000	
anak_rep	-0.1915*	1.0000
	0.0003	

DV & IV 3: Necessity of Festivities Now

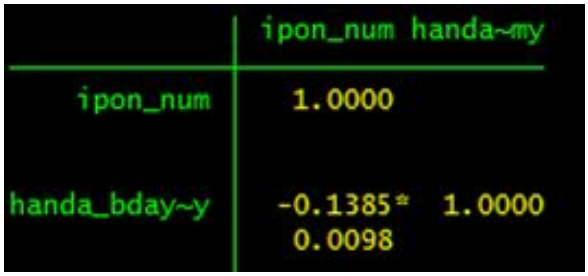


Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interv
0	164	11.60366	.6811093	8.722455	10.25872	12.94
1	183	9.398907	.5222452	7.064802	8.368473	10.42
combined	347	10.44092	.4271439	7.956809	9.600797	11.28
diff		2.204751	.8485483		.5357723	3.87

diff = mean(0) - mean(1) t = 2.5
Ho: diff = 0 degrees of freedom =

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9951 Pr(|T| > |t|) = 0.0098 Pr(T > t) = 0.0



	ipon_num	handa~my
ipon_num	1.0000	
handa_bday~y	-0.1385*	1.0000
	0.0098	

★★★