# FOOD AVAILABILITY AND ACCESS THROUGH PARTICIPATORY INTERVENTION: DESCRIPTIVE QUANTITATIVE EVIDENCE FROM METRO MANILA

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## ABSTRACT

*Food availability and access is one of the pillars of food security. By evaluating the performance of the National Food Authority in Metro Manila, the study argues that participatory intervention is the key toward an improved food security program. Quantitative data were gathered from poor communities, particularly from 400 respondents living below the poverty line as determined by Department of Social Welfare and Development. Results showed that there is a low level of implementation of the NFA food security program. In particular, the evaluation results of the effectiveness, efficiency, impact and sustainability of the program are low, which respectively revealed the mean results of 1.95, 1.87, 1.94 and 1.91. This evaluation discloses several components of participatory intervention: treatment of poor communities as equal partners; having a flexible policy or program of action for targeting and services; mixing of evaluation, intervention and participation components; and support linkages. The initial findings about participatory intervention critically delineate the fusion between governmentality and state regulation approaches to promote a more effective food security program.*

***Keywords:*** *food security, rice policy, National Food Authority, state regulation, governmentality, non-government actor*

## INTRODUCTION

The Food and Agriculture Organization (2008, p. 2) defines food security as that situation when "all people at all times have both physical and economic access to basic food". Today, there are 2 billion people who are considered poor and they primarily rely on food grains (Tadesse, Kalkuhi & Braun (2014, p.117). Tadesse et. al. (2014) adds that every time the price of grains increases, the poorest around the globe are also the prime victims. It is in this context that "governments and their international associations such as G20 should carefully analyse all existing options to avoid price spikes ... from intervention in financial markets to biofuel prices and they should also facilitate market information" (p. 127). Consequently, the goal of the UN Millennium Term Development Plan to eradicate hunger incidence by 50% in 2015 becomes far-fetched (Gentillini and Webb, 2008).

In the Philippines, there are 11.3 million people who are undernourished (State of Food Insecurity of the Food and Agriculture Organization of the United Nations, 2014). It must be noted that in 2012 the Philippine Daily Inquirer reported that 16 million Filipinos are considered undernourished and this manifest an increase from the 14 million recorded between 2007 and 2009 (Roa&Quismundo, 2014). In 2013, MaharMangahas mentioned a drop of hunger incidence from 21.0 percent to 16.3 percent in the third quarter of 2012 (cited from Business World Report, 2013). And although the per capita GNP/GDP increased throughout 1998-2012 hunger problems persisted. According to the SWS (2012), the annual average percentages of families in hunger rose from 11.0 percent in 1998 to 19.9 percent in 2012.

With the aforementioned accounts, constitutional provisions on food security face great challenge. According to Caoili (1991) "Constitutional provisions must be translated into public policies and implemented as concrete programs of action (p.2)." Countless literatures equate food security with rice (Balisacan and Briones, 2008). This means that the government should assure its people that there is enough rice reserves and it is accessible to the people. Because rice is the country's primary staple, the authors further stressed that "the government has moved aggressively in the distribution of subsidized NFA rice, cracked down on alleged rice hoarders, increases purchases of foreign rice and other means in order that the rice problem will be solved (p. 1). Nonetheless, it was estimated that 48.5% of NFA rice does not reach the consumers (Mehta and Jha, 2014), thus, consumers will ultimately

buy commercial rice which is priced higher than NFA rice. This could not have been the case if the pilferaged 48.5% have reached consumers largely the poor (p.74).

At present, the policies of the NFA to guarantee food availability are as follows:

*"... maintain a year-round strategic rice reserve at a minimum level of 15 days of the nation's rice consumption requirement and should build rice buffer stocks equivalent to a minimum of 30 days by July 1 each year and aggressively procure palay from legitimate individual farmers of Farmers' Organizations for its shall build its buffer stocks from domestic production for stabilization of rice availability" (Clarete, 2008, p. 184).*

With regard to food access, the amended Presidential Decree 4 (PD 4) which defines the current food security program of the Philippine government is being followed. This policy identifies the following mandates of the NFA: (1) stabilize year-round rice prices; (2) make rice affordable for the country's population; and (3) ensure that palay (unmilled or paddy) prices gave the farmers a reasonable level of income (Clarete, 2008, p.15). The NFA's mandate is still in existence according to NFA officials. "... maintain a year-round strategic rice reserve at a minimum level of 15 days of the nation's rice consumption requirement and should build rice buffer stocks equivalent to a minimum of 30 days by July 1 each year and aggressively procure palay from legitimate individual farmers of Farmers' Organizations for its shall build its buffer stocks from domestic production for stabilization of rice availability" (Clarete, 2008, p. 184).

In his analysis On Governance in Agriculture and Rural Development, Martinez (2013) expresses that "as the region opens up its rice trade, the Philippines must make difficult choices about the different ways its rice farmers have been protected by government… continuous exchange of information among many players also stabilizes the price and minimizes its volatility over time...the same market pricing dynamic applies to the local production and distribution of rice".

As subsidies are phased out, the NFA can also seek a "financial restart" by shifting the burden of its accumulated debt over to government. This leaves the NFA with a potentially smaller set of restricted roles: maintain buffer rice stocks (both imported and locally grown) in support of domestic disaster response and poverty alleviation.

The country's population being mentioned in PD 4 obviously includes people living below poverty line given the fact that the NFA's system of rice distribution is universal (Mehta, A. &Jha, S. (2014). According to Devaney (2016) the viewpoints of the ultimate beneficiaries of food regulation, specifically the consumers, are important. Concurring with this viewpoint Khan, Timotijevic, Newton, Coutinho, Llerena, Ortega, Benighaus, Hofmaier, Xhaferri, Boer, Urban, Strahle, Nereseni, Rat, & Hadwiger (2016) stated that different actors other than the government itself should engage in any innovation in the food and health domain.

**Research Considerations**

This paper looks into the concepts of food availability and access by explaining how the descriptive quantitative evidence gathered from poor households reveal the relevance of participatory intervention toward food security. In order to formulate new strategies and come up with a modified food security program, the proposed research needs to address research question: In terms of food availability and stability of supply and access, how effective, efficient, beneficial and sustainable is the food security program of the National Food Authority in Metro Manila?

As mentioned in the introduction, the food security program of the NFA was evaluated according to the criteria of effectiveness, efficiency, impact and sustainability. Two literatures were utilized to come up with the said criteria. First, the Social Housing Foundation, Rooftops Canada / Abri International and the Urban Sector Network (2002) measured the success of housing programs using the said indicators. Refer to the table below.

Table 1. Evaluation Criteria and Descriptions

| Efficiency | Effectiveness | Impact | Sustainability / Replicability |
|---|---|---|---|
| 1. Was delivery cost effective? | 1. Did the project create a quality built environment? | 1. Did the project contribute towards the creation of sustainable communities? | 1. Is the project still functioning? |
| 2. What sort of gearing was achieved? | 2. Was beneficiary participation & choice built into the project? | 2. Did the project contribute towards the stabilisation of the housing environment? | 2.What levels of rent, rates &service payment are there? |
| 3. To what extent were the systems in place adaptable & responsive to local conditions? | 3. Was job creation & LED part of the project? | 3. To what extent did the project build the economy and add to economic empowerment? | 3. Are projects well located? |
| 4. What was the rate of delivery? | 4.To what extent were special needs targeted | 4. Has the project led to an improvement in the quality of life of beneficiaries? | 4. Are basic services being provided on a continued and reliable level? |
| | 5. As part of the project? | | 5. Is there political commitment to the project? |
| | | | 6. What are the different perceptions of success of the project? |

The second study is that of McDavid, Huse & Hawthorn (2013, p. 18). They pointed out the following ten key possible evaluation questions:

1. What is the need for a program?
2. Is the program relevant?
3. Was the structure/logic of the program appropriate?
4. Was the program implemented as intended?
5. Was the program technically efficient?
6. Was the program responsible for the outcomes that actually occurred (effectiveness 1)?
7. Did the program achieve its intended objectives (effectiveness 2)?
8. Was the program cost-effective?
9. Was the program cost beneficial?
10.Wastheprogramadequate?Fromtheabovementioned sources, the research derived the questionnaires for the poor beneficiaries. These questionnaires were also pilot tested among 10 beneficiaries and the results showed that the instrument was appropriate for them.

This research is significant on the following grounds. The prime contribution of the study falls under the political aspect in relation with government and in aid of program implementation. Second, the study will benefit policy makers, funding agencies and other stakeholders as it will provide them information about the current performance of the NFA program. In the academic realm, the proposed study contributes to long standing debate in Political Science about the role

of the state in society and economy. It specifically argues that both state-centered and society-centered theories are taxonomical and divisive. Instead of an either-or theory, this study suggests a linking and not a delinking between state and society in the provision of social justice and the achievement of social development.

In the evaluation of the food security program of the NFA in Metro Manila, the study adopts a middle-range theory that falls in between the two theories. The provision of social justice, for instance, is both the responsibility of state- and non-state actors. As this study deals with the urban context of food security, it derives a theoretical design from the studies of Kemeny (1992) and Uietrmark (2005) about the role of the state in urban policy.

Subscribing to Kemeny's (1992, pp. 48-49) study about theorizing the state in housing research, the author asserts that a balance needs to be established between political reductionism (state-centered analysis) and social reductionism (society-centered analysis). The author specifically expressed that:"A strong case can therefore be made out for analysis of public policy in terms of the interaction between the interests of powerful social groups/classes/organizations or whatever, on the one hand, and the interests and power of those responsible for the political and legal institutions of the state on the other."

According to Uitermark (2005, pp. 159-160), there are two major theories of the state through which an analytical construct could be derived to provide an analytical framework to understand the genesis and evolution of urban policy —the state theoretical regulation approach and the governmentality approach. To him, the combination of the two theories "stresses the importance of local institutional ensembles in providing the central state with both rationalities and technologies of government."

The proposed research hence utilizes Kemeny's (1992) "returning to the state in housing research" and Uitermark's (2005) "local institutional ensembles" to study and evaluate the food security program of the NFA in Metro Manila. To this effect, the theoretical underpinnings of this proposal hinge around the investigation of center-local relations and the role played by local formations in the implementation of the food security program. The diagram below is a general illustration of the theoretical construct of the study.
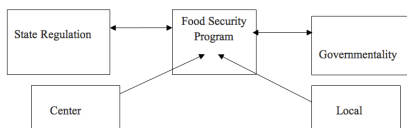


**Figure 1: Theoretical Framework**

Applied to the study of the NFA food security program, the theoretical construct could be operationalized in the following manner. The "center" pertains to the key government agencies while the "local" pertains to the local institutional ensembles which constitute local government units, poor population and market formations. Food security is the official policy of the national government and is epitomized by the Food Security Program of the NFA. In the evaluation of the program (effectiveness, efficiency, impact and sustainability), the critical interaction between the key government agencies (KGAs) and local formations (LFs) would be examined. *Refer to the diagram below.*
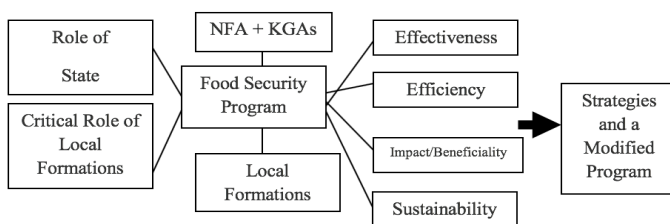


**Figure 2: Conceptual Framework**

For the purposes of this paper, the analyses provided herein are limited to the quantitative data gathered. The qualitative data and analyses are still currently being thematized and the conceptual map to be derived from this would surely bolster and/or qualify the quantitative findings of this research.

**Descriptive Quantitative Evidence**

This section presents the empirical results of the study. The descriptive statistics are composed of the following—the response rate of return, the socio-demographic profile of the respondents, the perception of the respondents about the general implementation of the NFA program, correlations and ANOVA.

*Response Rate of Return*

The table below demonstrates the response rate of return of target respondents in Manila City after the survey was conducted. Four hundred (400) respondents for this study still fall within good and reliable sample size because at 0.05 margin of error (which is allowed in Slovin's formula), the sample size is 399. The researcher distributed 400 questionnaires, 385 responses (96.25%) were retrieved, which means that this figure is the total number of questionnaires that were answered by the respondents

Table 2. Response Rate of Return of Target Respondents in Manila City

| BASIS FOR ROR | Caloocan City | Manila City | Quezon City | Pasig City | TOTAL | IN % |
|---|---|---|---|---|---|---|
| No. of Respondents | 120 | 140 | 90 | 50 | 400 | 100 |
| Unretrieved Questionnaires | 1 | 5 | 4 | 5 | 15 | 3.75 |
| Retrieved Questionnaire | 119 | 135 | 86 | 45 | 385 | 96.25 |

Socio-demographic profile of the respondents

The socio-demographic profile of the respondents focused on the following aspects, namely, gender, age, educational attainment, employment, household composition, income, transportation and food assistance. In turn, their understanding of food security, the focus of this study, was also surveyed. These aspects proved statistically important in correlating perceptions vis-à-vis the NFA program.

The age of the respondents are relatively in the their middle age where 175 or 45.45% of them belonged to the age bracket of 31-45 years old, while 97 or 25.19% of them are between 46-60 years old, 78 or 20.26% aged between 16-30 years of age and 35 or 9.09% are in the age bracket of 61-75.Of the 385 respondents, 35 respondents (9.09%) were male and 350 (90.91%) were female. In terms of employment, out of the 385 respondents, 318 respondents (82.60%) were unemployed and 67 (17.40%) were employed.

As for the distribution of respondents according to educational attainment, it showed that 26.49% are children in the household aged 16-20 that finished high school education, 58.44 percent who finished this educational level are mothers of the household and 33.77% are the fathers of the household who finished secondary level. Further, 13.25% are children in the household aged 20-30 that finished high school education, 36.10 percent who finished this educational level are mothers of the household and 13.51% are the fathers of the household who finished tertiary level. Meanwhile, 1.82% stated that they were only able to finish the elementary level.

Majority of the respondents' households is comprised of 1-5 members (73.77 percent), while 14.29% are comprised of 6-10 members and 9.8% are composed of 11-15 members. Of these household members, an overwhelming majority of them have only either 1 to 2 income earners (95.91%) while only 4.94% of household respondents that have 3 to 4 household member that has an income. These respondents live in their own houses (80%) and the rest (15%) are co-owners, renters or living with their relatives like parents, sister or brother.

As to the nature of their employment, 50% of the respondents are public employees. Private employment garnered 31.95%, self-employment is at 15.06% and only 4.94% earns from other sources. In particular, the economic status of the respondents are considerably poor where 188 or 48.83% of them earns an income of 2,500 – 5,000 while87 or 22.6% of them earns an income of 5, 000 – 7,000 while68 or 17.66%earns an income of 7, 500 – 10,000. Fifty or 12.99% of them earns an income of 10,000 – 12, 500 and respondents who earns an income of 12, 500 – 15, 500 is only 14 or 3.64%.

The income spent on food are as follows: 117 or 30.39% of the respondents spend 20 to 30% of their income for food; 15.06% of them spend 5 to 10% of their income to be able to purchase food; 5.71% spend 10 to 20% for their daily meal, and some (11.60%) spend 30 to 50% of their income for their food and others.

The provision of the basic needs of the family is dominated by the father which is 279 or 72.47% of the respondents while the households' mothers represented 31.95%. Only 1.82% of the households have a situation that other member helps in the financial needs of the household; while 11.1% of the households show the situation where both the father and mother are working and 4.94% where the children helps in income generation.

Public transportation is the primary means of transportation where 78.80% use public vehicles while only 11.95% that the respondents' households have their own

private vehicles and only 4.94% of the respondents use both private and public transportation.

Despite the poor economic condition of the respondents, a majority of 69% do not receive any food assistance from the government. Only 28% of the respondents have the experience of food assistance. Food assistance is provided by the barangay officials in the form of canned goods and rice (29.87%) while a measly 2.6% (10 respondents) received assistance from friends or relatives. In general, only 73 of 385 respondents (18.96%) received food assistance. During the period 2004-2010, only 34 respondents or 8.83% have received assistance and between 1998 and 2004, only 7 respondents or 1.82 percent were able to receive assistance on periods earlier than the aforementioned period.

The manner of giving food assistance is mostly per family (23%) and only 8% experienced being given individually and only 4 or 1.04% responded through another manner. Through conversation with respondents, the researcher noted that food assistance was done during Christmas and election time.

The respondents' understanding of food security is simple. They understand the concept as "as eating sufficient food every day", they claim that they are food secure if they eat sufficient food everyday meaning they prepare a meal that is well-balanced complete with protein, carbohydrates, and other essential foods needed by the body (44.42%). On the other hand more than 18%of the respondents understand food security as eating 3 meals everyday. The researcher noted that these respondents think that it is enough for them that they have a viand and rice for a meal, other food such as fruits are not being consumed by the household.

*Overall Program Implementation*

With regard to the implementation of the NFA program vis-à-vis the perception of the respondents, the findings revealed is an overall poor implementation of food security program in Metro Manila. The lowest implementation level is at Caloocan City with an average mean of 1.85, followed by Quezon City at 1.95 and Manila at 1.97. Pasig City, registered the highest average mean at 2.1. Based on these statistics, the program is not effective, not efficient, not sustainable, and has no impact in improving the lives of the beneficiaries. Table 2 shows the descriptive statistics of the survey while Figure 1 shows the level of implementation at the city level and Figure 2 represents the comparison of the average mean of program implementation per city.

Table 3. Descriptive Statistics of the Survey

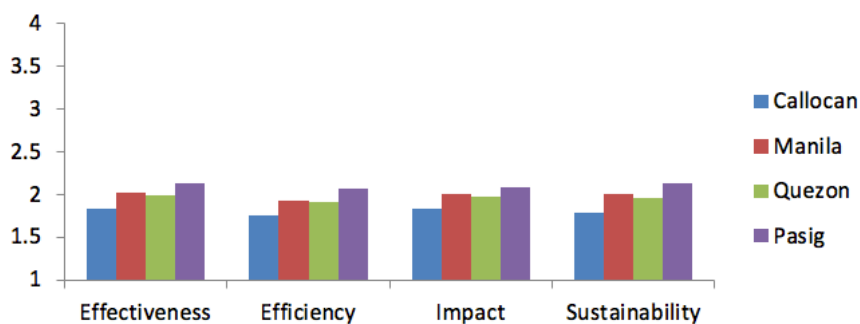| Question/Statement | Mean | Std. Deviation | Verbal Interpretation |
|---|---|---|---|
| MS1 | In times of crisis, there is enough NFA rice in the market. | 1.97 | .782 | Disagree |
| MS2 | Monitoring mechanisms are in place for erring NFA officials and offices. | 1.90 | .844 | Disagree |
| MS3 | NFA outlets are always in place. | 1.92 | .928 | Disagree |
| MS4 | The family knows where to buy NFA rice. | 1.77 | .890 | Disagree |
| MS5 | The family's income can afford the price of NFA rice in the market. | 2.07 | .862 | Disagree |
| MS6 | The NFA has the political will to perform its mandate. | 2.01 | .948 | Disagree |
| 1`MS7 | The NFA should continue its role in providing affordable rice to the population. | 2.06 | 1.024 | Disagree |
| MS8 | The NFA is able to perform its function of providing enough rice in the market. | 1.95 | .919 | Disagree |
| MS9 | The NFA rice can be bought in many outlets or stores. | 1.91 | .905 | Disagree |
| MS10 | The poor households benefit from the rice distributed by NFA. | 1.97 | .915 | Disagree |
| MS11 | The price of NFA rice is cheaper compared to others. | 2.04 | 1.007 | Disagree |
| MS12 | There is coordination between NFA, other government agencies, NGOs and private market. | 1.79 | .822 | Disagree |
| MS13 | There is enough NFA rice in the market. | 1.86 | .825 | Disagree |
| MS14 | The NFA needs to intervene by regulating the price of rice in the market. | 1.90 | .952 | Disagree |
| MS15 | The NFA knows when to check and regulate the price of rice. | 1.85 | .817 | Disagree |
| MS16 | The NFA seeks the help of households and NGOs in monitoring the availability and price in the market. | 1.88 | .890 | Disagree |

Figure 3. Program Implementation at the City Level
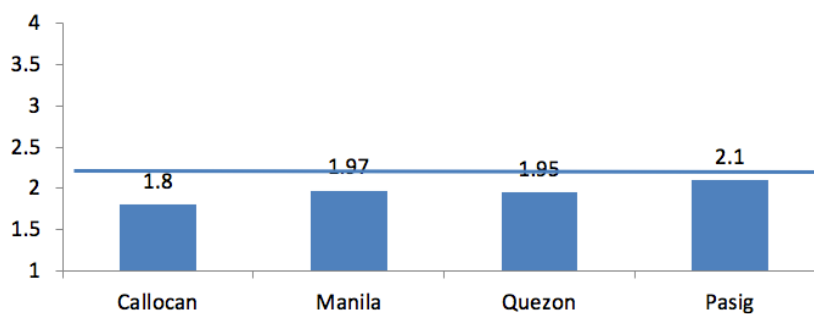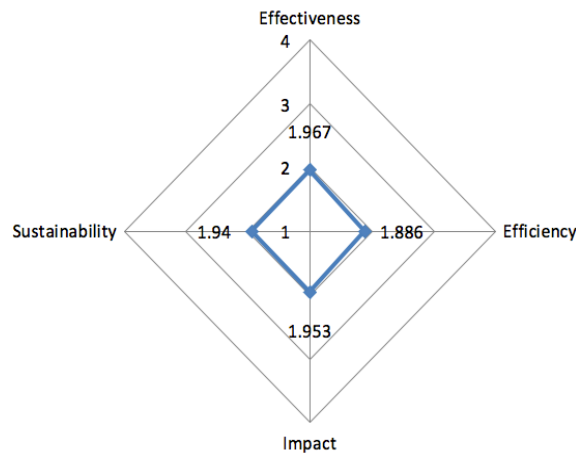


Figure 4. Comparison of Average Mean Per City

Further, the radar map below demonstrate how near or far are the perspectives of the respondents from the perfect score of 4 in relation to effectiveness, efficiency, sustainability and impact, the evaluation results of the NFA food security program are low, which respectively revealed the mean results of 1.95, 1.87, 1.94 and 1.91.

The Degree of Efficiency, Effectiveness, Impact and Sustainability of the Food Security Program of the NFA as Perceived by the Respondents



The NFA program should be given attention to improve its implementation. The beneficiaries of the NFA program are not satisfied with the NFA program implementations. This is reflected by the following statistics: "the family knows where to buy NFA rice" ( = 1.77, sd = 0.89), "there is coordination between NFA, other government agencies, NGOs and private market" ( = 1.79, sd = 0.82), "the NFA knows when to check and regulate the price of rice" ( = 1.85, sd = 0.82), "there is enough NFA rice in the market" ( = 1.86, sd = 0.83), "he NFA seeks the help of households and NGOs in monitoring the availability and price in the market "( = 1.88, sd = 0.89) got the lowest evaluation from the respondents as shown previously in Table 2.

**Figure 5. Radar map for the NFA Program**

Table 4: One-Sample Statistics

|  | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Effectiveness | 385 | 1.9672 | .76255 | .03886 |
| Efficiency | 385 | 1.8864 | .69818 | .03558 |
| Impact | 385 | 1.9529 | .74637 | .03804 |
| Sustainability | 385 | 1.9403 | .79718 | .04063 |
| NFA Program | 385 | 1.9282 | .72752 | .03708 |

Hypothesis 1:    The food security program of NFA in Metro Manila is not effective. (TRUE)
Hypothesis 2:    The food security program of NFA in Metro Manila is not efficient. (TRUE)
Hypothesis 3:    The food security program of NFA in Metro Manila does not contribute to the improvement of lives of the beneficiaries. (TRUE)
Hypothesis 4:    The food security program of NFA in Metro Manila is not sustainable. (TRUE)

Table 5: One-Sample Test

| | T | Df | Sig. (2 tailed) | Mean Difference | 95% Confidence Interval of the Difference Lower | Upper |
|---|---|---|---|---|---|---|
| | | | Test Value = 2.5 | | | |
| Effectiveness | -13.709 | 384 | .000 | -.53279 | -.6092 | -.4564 |
| Efficiency | -17.245 | 384 | .000 | -.61364 | -.6836 | -.5437 |
| Impact | -14.382 | 384 | .000 | -.54708 | -.6219 | -.4723 |
| Sustainability | -13.777 | 384 | .000 | -.55974 | -.6396 | -.4799 |
| NFA Program | -15.420 | 384 | .000 | -.57175 | -.6447 | -.4989 |

There is low implementation level of NFA food security program. The program is not effective, not efficient, it has no significant impact, and it is not sustainable according to the perceptions of the respondents (p-value < 0.05).

As shown in Table 6, age of the respondents is significantly correlated only to their perception about the statement "In times of crisis, there is enough NFA rice in the market" ($r = 0.10$, $p < 0.05$). Gender is significantly correlated only their perception about the statement "There is coordination between NFA, other government agencies, NGOs and private market ($r = 0.12$, $p < 0.05$). The number of family members is significantly correlated to their perceptions about the statements "The NFA is able to perform its function of providing enough rice in the market" ($r = 0.10$, $p < 0.05$), and "The NFA knows when to check and regulate the price of rice" ($r = 0.12$, $p < 0.05$).Work status, income and number of earners in the family are not significantly correlated to the NFA program implementation.

## Table 6: Result of Pearson Correlation Coefficient

| | Age | Gender | Work | Members | Income | Earners |
|---|---|---|---|---|---|---|
| | | Pearson Correlation Coefficient | | | | |
| 1   In times of crisis, there is enough NFA rice in the market. | .103* | .044 | .058 | .093 | -.015 | .067 |
| 2   Monitoring mechanisms are in place for erring NFA officials and offices. | -.054 | .071 | .076 | .050 | .016 | .034 |
| 3   NFA outlets are always in place. | -.033 | .043 | .028 | .018 | -.049 | .039 |
| 4   The family knows where to buy NFA rice. | -.052 | .030 | .040 | .007 | -.092 | .026 |
| 5   The family's income can afford the price of NFA rice in the market. | .082 | .078 | .054 | .094 | -.023 | .068 |
| 6   The NFA has the political will to perform its mandate. | .007 | .041 | .069 | .072 | .000 | .036 |
| 7   The NFA should continue its role in providing affordable rice to the population. | .011 | .088 | .033 | .084 | -.053 | .049 |
| 8   The NFA is able to perform its function of providing enough rice in the market. | .089 | .032 | .027 | .102* | -.049 | .048 |
| 9   The NFA rice can be bought in many outlets or stores. | -.024 | .070 | .039 | -.002 | -.045 | -.017 |
| 10  The poor households benefit from the rice distributed by NFA. | -.049 | .088 | .029 | .013 | -.037 | .010 |
| 11  The price of NFA rice is cheaper compared to others. | .054 | .058 | .067 | .091 | -.040 | .050 |
| 12  There is coordination between NFA, other government agencies, NGOs and private market. | .031 | .118* | .007 | .060 | -.048 | .059 |
| 13  There is enough NFA rice in the market. | -.012 | .088 | .035 | .068 | .005 | .025 |
| 14  The NFA needs to intervene by regulating the price of rice in the market. | -.084 | .099 | .050 | -.030 | .002 | .003 |
| 15  The NFA knows when to check and regulate the price of rice. | .026 | .042 | .024 | .121* | -.031 | .068 |
| 16  The NFA seeks the help of households and NGOs in monitoring the availability and price in the market. | -.018 | .079 | .060 | .030 | -.064 | -.016 |

In Table 7 below, it reveals that there is no significant correlation between the respondents' profile and their perceptions about the effectiveness, efficiency, impact, sustainability, and overall NFA program implementation.

Table 7: Pearson Correlation coefficients between the respondents' profile
and NFA food security program (n = 385)

| | Age | Gender | Work Status | Household Members | Family Income | No. of Earners |
|---|---|---|---|---|---|---|
| | | | Pearson Correlation and p-value | | | |
| Effectiveness | .041 (.421) | .080 (.118) | .055 (.282) | .058 (.254) | -.044 (.392) | .041 (.426) |
| Efficiency | -.011 (.834) | .088 (.085) | .045 (.374) | .036 (.485) | -.032 (.526) | .040 (.437) |
| Impact | .014 (.789) | .082 (.110) | .055 (.279) | .038 (.454) | -.041 (.419) | .033 (.513) |
| Sustainability | .007 (.887) | .066 (.199) | .050 (.330) | .041 (.423) | -.048 (.346) | .038 (.452) |
| NFA | .005 (.924) | .082 (.107) | .054 (.292) | .045 (.375) | -.042 (.417) | .042 (.413) |

More importantly, Table 8 below reveals the established correlation of effectiveness, efficiency, impact, and sustainability with each other. This implies that the four components are quintessential elements in evaluating a program. Further, the correlation critically extends with the overall NFA program implementation ($p < 0.05$). This relation points to the correctness of the method used in program evaluation.

However, the fine point in this argument not only lies in the method used but in the instruments as well. For instance, Carpio (2010) used the same method and components in evaluating the Community Mortgage Program. In this case, he used a set of different instruments that are relevant to the condition of the urban poor and informal settlers. In the near future, an attempt will be made to use the same components to evaluate the AFP Modernization program and other government programs as well. The challenge again is to contextualize the components in the form of appropriate questions for the military personnel concerned.

Table 8: Pearson Correlation coefficients between the different aspects
of NFA food security program (n = 385)

| | Effectiveness | Efficiency | Impact | Sustainability | NFA |
|---|---|---|---|---|---|
| Effectiveness | 1 | | | | |
| Efficiency | .960** .000 | 1 | | | |
| Impact | .980** .000 | .941** .000 | 1 | | |
| Sustainability | .977** .000 | .957** .000 | .973** .000 | 1 | |
| NFA | .983** .000 | .984** .000 | .976** .000 | .981** .000 | 1 |

** Correlation is significant at the 0.01 level (2-tailed).

*Difference in Perceptions*

In Table 9, it is shown that the perceptions of the respondent regarding the statements "Monitoring mechanisms are in place for erring NFA officials and offices" (F-value = 2.58, $p < 0.05$) and "The NFA needs to intervene by regulating the price of rice in the market" (F-value = 2.96, $p < 0.05$) are significantly different according to the age of the respondents. The perception that "there is coordination between NFA, other government agencies, NGOs and private market" is significantly different according to gender. According to the number of family members, the perceptions are significantly different about the following statements:

"The family's income can afford the price of NFA rice in the market" (F-value = 3.59, p < 0.05), "The NFA has the political will to perform its mandate" (F-value = 4.21, p < 0.05), "The NFA should continue its role in providing affordable rice to the population" (F – value = 3.18, p < 0.05), "The NFA is able to perform its function of providing enough rice in the market" (F – value = 3.16, p < 0.05), "The NFA rice can be bought in many outlets or stores" (F–value = 3.99, p < 0.05), "The poor households benefit from the rice distributed by NFA" (F–value = 8.24, p < 0.01), "The price of NFA rice is cheaper compared to others" (F–value = 5.68, p < 0.01), "There is enough NFA rice in the market" (F – value = 3.05, p < 0.05), "The NFA knows when to check and regulate the price of rice" (F-value = 4.89, p <0.01).

There is no significant difference in the perceptions about the NFA implementation program according to work status, income, and number of earners in the family.

## Table 9. Result of One-Way Analysis of Variance

| | Age | Gender | Work | Members | Income | Earners |
|---|---|---|---|---|---|---|
| | | One-Way ANOVA (F-value) | | | | |
| In times of crisis, there is enough NFA rice in the market. | 2.319 | .750 | 1.315 | 2.488 | .583 | 2.047 |
| Monitoring mechanisms are in place for erring NFA officials and offices. | 2.58* | 1.949 | 2.254 | .493 | .323 | .591 |
| NFA outlets are always in place. | .376 | .694 | .311 | 1.945 | .913 | .636 |
| The family knows where to buy NFA rice. | 1.186 | .335 | .628 | 2.586 | 1.059 | .131 |
| The family's income can afford the price of NFA rice in the market. | 1.713 | 2.361 | 1.102 | 3.586* | .751 | .887 |
| The NFA has the political will to perform its mandate. | 1.169 | .638 | 1.809 | 4.206* | .637 | .286 |
| The NFA should continue its role in providing affordable rice to the population. | 1.460 | 3.012 | .406 | 3.177* | .735 | .498 |
| The NFA is able to perform its function of providing enough rice in the market. | 1.735 | .398 | .281 | 3.157* | .692 | .500 |
| The NFA rice can be bought in many outlets or stores. | .839 | 1.887 | .583 | 3.986* | 1.923 | .078 |
| 0 The poor households benefit from the rice distributed by NFA. | 1.070 | 2.994 | .321 | 8.237** | 1.414 | .096 |
| 1 The price of NFA rice is cheaper compared to others. | .613 | 1.292 | 1.704 | 5.683** | 1.421 | .542 |
| 2 There is coordination between NFA, other government agencies, NGOs and private market. | .986 | 5.416* | .020 | .694 | .571 | .669 |
| 3 There is enough NFA rice in the market. | 1.731 | 2.973 | .482 | 3.049* | .544 | .139 |
| 4 The NFA needs to intervene by regulating the price of rice in the market. | 2.964* | 3.753 | .948 | .412 | .736 | .550 |
| 5 The NFA knows when to check and regulate the price of rice. | 1.368 | .685 | .229 | 4.885** | .480 | 1.059 |
| 6 The NFA seeks the help of households and NGOs in monitoring the availability and price in the market. | 2.340 | 2.432 | 1.398 | 1.195 | .847 | .154 |

(F value is significant at *p<0.05, **p<0.01)

In terms the relationship between the perceptions about the implementation level of NFA food security program according to age of the respondents, there is no significant difference (p-value > 0.05) as illustrated in Table 11.

Table 10: Significant difference in the implementation level of NFA food security program according to age of the respondents.

| | Age | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | | 3 | | 4 | | F value | P value |
| | Mean | Std. Deviation | Mean | Std. Deviation | Mean | Std. Deviation | Mean | Std. Deviation | | |
| Effectiveness | 2.0288 | .84321 | 1.8907 | .70311 | 1.9858 | .73352 | 2.1607 | .91081 | 1.534 | .205 |
| Efficiency | 1.9936 | .81132 | 1.8136 | .62297 | 1.9162 | .72365 | 1.9286 | .70142 | 1.353 | .257 |
| Impact | 2.0321 | .83073 | 1.8886 | .70462 | 1.9588 | .69684 | 2.0821 | .87392 | 1.078 | .358 |
| Sustainability | 2.0288 | .88387 | 1.8743 | .74694 | 1.9446 | .75259 | 2.0607 | .94780 | .988 | .398 |
| NFA | 2.0240 | .82942 | 1.8575 | .66143 | 1.9401 | .72360 | 2.0357 | .80215 | 1.268 | .285 |

Further, there is no significant difference in the implementation level of NFA food security program according to gender of the respondents (p-value > 0.05) as shown in Table 12.

Table 11: Significant difference in the implementation level of NFA food security program according to gender of the respondents.

| | GENDER | | | | t-value | p-value |
|---|---|---|---|---|---|---|
| | 1 | | 2 | | | |
| | Mean | Std. Deviation | Mean | Std. Deviation | | |
| Effectiveness | 1.7750 | .69782 | 1.9864 | .76700 | -1.567 | .118 |
| Efficiency | 1.6929 | .61934 | 1.9057 | .70345 | -1.724 | .085 |
| Impact | 1.7607 | .72594 | 1.9721 | .74667 | -1.601 | .110 |
| Sustainability | 1.7750 | .72241 | 1.9568 | .80335 | -1.287 | .199 |
| NFA | 1.7393 | .69539 | 1.9471 | .72891 | -1.615 | .107 |

The table below also reveals that there is no significant difference in the implementation level of NFA food security program according to work status of the respondents (p-value > 0.05)

Table 12: Significant difference in the implementation level of NFA food security program according to work status of the respondents.

| | TRABAHO | | | | t-value | p-value |
|---|---|---|---|---|---|---|
| | 1 | | 2 | | | |
| | Mean | Std. Deviation | Mean | Std. Deviation | | |
| Effectiveness | 1.8768 | .72614 | 1.9866 | .76986 | -1.077 | .282 |
| Efficiency | 1.8180 | .70626 | 1.9010 | .69669 | -.889 | .374 |
| Impact | 1.8640 | .70039 | 1.9720 | .75555 | -1.083 | .279 |
| Sustainability | 1.8548 | .78185 | 1.9586 | .80046 | -.974 | .330 |
| NFA | 1.8438 | .70301 | 1.9464 | .73248 | -1.056 | .292 |

Table 13, as shown below, reveals the following findings:

There is no significant difference in the effectiveness level of NFA program in the four areas (F-value = 2.254, p > 0.05).

There is no significant difference in the efficiency level of NFA program in the four areas (F-value = 2.523, p > 0.05).

There is no significant difference in the impact level of NFA program in the four areas (F-value = 1.646, p > 0.05).

There is significant difference in the sustainability level of NFA program in the four areas (F-value = 2.687, p < 0.05).

There is no significant difference in the overall implementation level of food security program of NFA in Caloocan, Manila, Quezon City and Pasig (F-value = 2.413, p > 0.05).

Table 13: Food Security program of NFA in Caloocan, Manila, Quezon City, and Pasig

| | Lugar | | | | | | | | | |
| | Caloocan | | Manila | | Quezon | | Pasig | | F value | P value |
| | Mean | Std. Deviation | Mean | Std. Deviation | Mean | Std. Deviation | Mean | Std. Deviation | | |
| Effectiveness | 1.828 | .626 | 2.022 | .830 | 1.991 | .758 | 2.125 | .854 | 2.254 | .082 |
| Efficiency | 1.761 | .573 | 1.921 | .749 | 1.908 | .689 | 2.072 | .815 | 2.523 | .057 |
| Impact | 1.834 | .609 | 2.000 | .816 | 1.978 | .750 | 2.078 | .831 | 1.646 | .178 |
| Sustainability | 1.784 | .658 | 2.002 | .866 | 1.962 | .799 | 2.128 | .867 | **2.687** | **.046** |
| NFA | 1.796 | .598 | 1.973 | .789 | 1.950 | .726 | 2.104 | .815 | 2.413 | .066 |

In general, Table 15 shows that there is no significant difference in the perception of the respondents regarding the effectiveness, efficiency, impact, sustainability, and overall NFA program implementation when they grouped according to their profile such as age, gender, work status, number of household members, family income, and number of earners in the family.

## Initial Conclusions and Recommendations

The low level or poor implementation of the NFA program from the perception of poor households who are the supposed beneficiaries of the program is instructive of the need to improve the food security program in the country. As reflected by the governmentality and regulation approaches, to involve the poor beneficiaries entails a method in between, that is participatory intervention. The NFA in particular cannot carry out an effective program meant to serve the poor without recognizing them as equal partners. The adoption of a flexible food policy or program of action entails a significant degree of targeting the needs and conditions of the poor beneficiaries. In turn, the passivity inherent on the demand-driven implementation of the food program is overcome.

Basically, this study is limited to the descriptive quantitative measures of evaluation. What needs to be done is to combine the quantitative evidence presented in this paper and the qualitative evaluation of the program. More so, different perspectives need to be factored in, particularly, the views of the NFA officials who are working on the implementation of the food program and those of non-governmental actors whose undertakings are aligned with the NFA and food security. Through the said fusion, a more concrete alternative or alterations could be crafted to realize a participative approach in intervention.

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