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## **Foreword from the Editor-in-Chief**

It has been my great pleasure to witness the steady growth of RJAPS that has enabled us to publish Volume 35. Given the increase in the number of manuscripts submitted to the journal, first I would like to congratulate all the authors of the articles in this volume, but also thank those who have submitted papers to the journal but did not have them accepted for publication this time.

The first paper is the “Application of value for money methodology to evaluate a public-private partnership road project” by Dinh, and argues that value for money (VFM) assessment allows public policy makers to determine which procurement pattern is better for a specific project. Although the government of Vietnam has established a number of PPP projects since first announcing its desire for private participation in 1993, it has never carried out an evaluation of the “economy, efficiency and effectiveness” of PPPs over more traditional public procurement methods. This paper proposes a value for money methodology to evaluate whether the decision to pursue a PPP creates good value for the Vietnamese government. A case study, the Phu My project, is used to examine the reliability of the method. The study suggests that there is a strong likelihood that the PPP model may not have been a better option for procurement in this project. The experience of the Phu My project thus presents an insightful lesson for many Asian developing economies and their governments regarding the conduct of PPP projects. Without a VFM assessment before implementation, projects could lead to misguided decision-making in the development of projects to develop road transportation infrastructure.

The second paper is “The Asia Cooperation Dialogue (ACD): Formation and Development” by Bunyavejchewin and Nimmannorrawong. This paper investigates the development, progress, and problems of the Asia Cooperation Dialogue (ACD), emphasizing the role of Thailand, the founding country. The ACD contributes by serving as the missing link in Asian cooperation, constituting an informal and a non-institutionalized forum for Asian Foreign Ministers. It is a useful diplomatic asset, which is not as recognized in the same way as ASEAN, APEC, or ASEM, but can still provide a forum for Asian Foreign Ministers to informally exchange views on matters of common interest. However, the significance of the ACD has been considerably undermined by lack of leadership and political will. The paper concludes that the ACD still has the potential to provide a good contribution in many Asian countries, although the significance of the organization has been in decline in recent years. But the ACD needs to improve the current risky situation that is caused by lack of leadership, weak political will, and its inability to fulfill the expectations of its members.

The third article of this issue is “Constraints to the expansion of health insurance in Lao PDR” by Bounkham, and examines the planned expansion of the coverage of health insurance schemes in the Lao People’s Democratic Republic. The study on which it is based aimed to identify the factors that impede the expansion of health insurance, and whether co-payment for healthcare services should be introduced

to improve the quality of care for insured people in Lao PDR. The study applies qualitative methods after reviewing the existing relevant literature and documents; interviewing key informants involved in the implementation of health insurance schemes in Lao PDR, as well as the providers of health services at various levels from the Ministry down to the district level. The results show that low capitation fees, overutilization of health services, unclear roles and mandates of institutions responsible for health insurance schemes, weak law enforcement, and low levels of social solidarity are crucial factors that have slowed the expansion of health insurance schemes in Lao PDR. The paper emphasizes that there are several factors that impede the expansion of social protection schemes in Lao PDR.

The fourth article is “Spatial structure of Tokyo Metropolitan area” by Monzur. This paper discusses the urban spatial structure of the Tokyo Metropolitan Area (TMA) by using the Exploratory Spatial Data Analysis (ESDA) approach. The spatial structure of the population was analyzed with Global Moran’s I and Local Moran’s I. Population Census data from 2000 was used for this analysis, and ArcGIS 10.1 and GeoDa software were used to project and analyze these data. The analysis pointed out the specific locations of clustering types by proving the existence of spatial association and heterogeneity, and differences in the case of the spatial pattern of population distribution. The explained methods and findings of this research contribute to spatial pattern studies of the Asia Pacific region. Many emerging cities in the Asia Pacific region are experiencing an urban transformation, and it is very necessary to understand their spatial structure, at both the local and regional levels. This research can help provide a broader perspective in studying and analyzing the spatial pattern of emerging cities. The paper finally emphasizes that identifying the differences in spatial patterns can guide urban planners in decision-making, and the implementation of urban policies at a regional level.

The fifth paper, “Japan, China and the Trans-Pacific Partnership (TPP) as a Strategic Tool of Choice” by Teh, mainly investigates the role of the Trans-Pacific Partnership (TPP) agreement as a strategic tool for Japan in pursuing its national and regional interests. Japan’s motivation to engage the TPP is driven more by its geopolitical and strategic calculations. The paper discusses three major motivations: 1) the use of the TPP to exert innovation and drive change at home in maintaining its strategic competitiveness; 2) the perceived importance of the TPP as a rule setter for regional economic cooperation; and 3) the significance of the TPP in balancing Beijing’s strategic influence in the region. China’s move to fortify its relations with neighboring countries through its own trade initiatives in an unending tussle with the US could see the formation of two opposing trade blocs in the Asia Pacific region. Japan can play a significant role in bridging the gap and contribute to the possibility of convergence. It concludes with the following message: Japan, values the strategic worth of the TPP, and is therefore in support of the US’s strategic objectives. Tokyo is not merely concerned with China’s economic and military assertiveness, Tokyo needs Washington’s unwavering support in realizing Abe’s plan to move the nation towards full ‘normalization.’ The TPP, if successfully enforced, will strengthen US-Japan’s geopolitical and geo-economic interests, and stands to threaten China’s economic prowess.

Converging the TPP and the RCEP to form an FTAAP would be the best solution if only Beijing, Tokyo and Washington are willing to put their political calculations and tactical differences aside for the sake of the region's integration, and the prosperity of its people.

The sixth paper of the volume is "Impact Assessment of Science and Technology Based Farm (STBF) Project on PalayCheck System Dissemination and Use: The Case of

Small Farmers in Victoria, Tarlac, Philippines" by Guzman, Ilar, Anacio, and Macapugay. This paper acknowledges that technological advances have developed that increase agricultural productivity in the Philippines, puts stress on the gap between production and consumption. Small-scale farmers face many challenges, which include high production costs at the farm level. A Farmer Field School (FFS) was conducted to initially disseminate methods of integrated pest management to address the problem. However, adoption was not fully met since farmers are tied into a "To see is to believe" principle. This study assesses the impact of Science and Technology Based Farm Projects on adoption of Integrated Rice Crop Management; specifically, the PalayCheck System. Comparison groups consisting of STBF beneficiaries and non-beneficiaries were used to evaluate the impact of STBF project on PalayCheck System knowledge. One barangay in Victoria, Tarlac was used as a study site as it is one of the locations where STBF was established. A survey and structured interviews were conducted to collect data. Data collected was for two seasons, namely the 2013 Wet Season and Dry Seasons. The results of the survey indicated that technical knowledge scores for STBF beneficiaries were greater than non-beneficiaries. Although STBF can be considered as an extension alternative for small rice farmers because of their participatory nature, there is still a need for follow up for sustainability within the context of agriculture in the Philippines. Technology adoption will not always be full or complete initially, since particular adoption periods need to be observed. Although policy instruments could play certain roles in technology adoption, relying on policies alone is not enough. Information and education campaigns (IEC) in tandem with policy instruments may work better since farmers do not completely apply the whole technology package, but rather do so in a sequential manner. Thus, there is still a need for follow up to achieve sustainability within the context of agriculture in the Philippines, such as increasing the access to extension, together with participatory approaches such as STBF.

The last paper in this, "Perceived Effects of Conditional Cash Transfer Program among Beneficiaries in Selected Barangays in Pila, Laguna, Philippines" by Fellizar, Geges, Faulmino, Pangilinan, Ilagan, and Palis, discusses the poverty issues in the Philippines. The complex issue of poverty can be connected to other main issues that the country is facing today such as hunger, prevalence of out of school youth and others. As a response to this challenge, the study discusses the ongoing Conditional Cash Transfer (4Ps) program of the government that was implemented by the Department of Social Welfare and Development (DSWD). This program tried to fulfil the country's commitment to the Millennium Development Goals while these were in vogue. This study aims to determine the perceptions of the beneficiaries on the effects of the 4Ps program by characterizing CCT beneficiaries, determining the respondents' knowledge of the

CCT as a program, assessing the perceived effects of the program in terms of education, health, economics, and other areas of interest, and formulating recommendations for the improvement of the program implementation. The study was done in two villages, Barangay Pansol and Barangay San Antonio in Pila, a third-class municipality in the Province of Laguna. Complete enumeration of 4Ps beneficiaries was carried out using a survey questionnaire. The results showed that the program has been generally acceptable to the beneficiaries. The beneficiaries believed that after its five- year implementation, it would have considerably helped their families by then. However, the program must meet the short-term and perceived long-term needs of the beneficiaries to secure sustainable development and implementation of anti-poverty measures.

The 35<sup>th</sup> volume of the Ritsumeikan Journal of Asia Pacific Studies (RJAPS) discusses a diverse range of social studies in Asian countries, particularly in the disciplines of administration, sociology, regional development, public health welfare, urban planning, international diplomatic relationships, agriculture, and poverty alleviation. It assists the development of academic rigor in these fields, but also contributes to the information that industry practitioners need to improve the current situation in their areas of action.

Thank you and best wishes to all the authors in the volume.

*Editor-in-Chief*  
*Ritsumeikan Journal of Asia Pacific Studies,*  
*Prof. LEE Timothy*

# **ORIGINAL RESEARCH:**

## **Application of value for money methodology to evaluate a public-private partnership road project**

DINH Thi Thuy Hang<sup>1</sup>

### **Abstract**

A value for money (VFM) assessment allows public policy makers to determine which procurement, between traditional or public-private partnerships, is better to procure for a specific project. Although the government of Vietnam has established a large number of PPP projects since first announcing its desire for private participation in 1993, the government has never carried out an evaluation of the “economy, efficiency and effectiveness” of PPPs over traditional public procurement. This paper proposes a value for money methodology to evaluate whether decisions to pursue a PPP creates good value for the Vietnamese government. A case study in Vietnam (Phu My project) is applied to examine the reliability of the method. The result of research reveals that there is a 84.9 % confidence level that a PPP model may not be a better option for procurement in the Phu My project. In addition, vehicle tolls and the inflation from 2016-2034 have had the largest impact on the case’s value for money.

**Keywords:** Value for money (VFM), Public-private partnership (PPP), Public sector comparator (PSC), Shadow bid price (SBP).

### **Introduction**

During the past two decades, public-private partnership (PPP) has become an important alternative to traditional procurement to develop new road projects in Vietnam. One of the reasons the government of Vietnam pursues PPP to provide road infrastructure is due to budget constraints to finance such projects, where state resources are not enough to satisfy demand. The term PPP has been identified in accordance with different approaches to defining PPP. PPP could be defined as a range of possible relationships among public and private entities in the context of infrastructure and other services (Asian Development Bank, henceforth, ADB 2008).

Paralleling with development of PPP projects, several evaluation tools to support PPPs decision-making have been investigated, such as the cost-benefit analysis (CBA), the Computable General Equilibrium (CGE) and the value for money assessment. According to Contreras (2014), “CBA and CGE techniques try to answer the question of whether there are better uses for public resources, but they do not look at the different ways of procuring a given project. By contrast, Value for Money (VFM) analysis tries to find the optimal way to supply a given service, once it has been decided that the service must be provided either directly by the public sector or through a PPP scheme” (Contreras 2014, p. 94). According to U.S Department of Transportation (2012, p. 1-2), value for money is defined as “the optimum combination of whole-of-life costs and quality (or fitness for purpose) of the good or service to meet the user’s requirements”. Given the definition, as well as previous studies, there are two kinds of VFM approaches that include quantitative and qualitative VFM assessment. The first involves comparing the

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whole cost of a project if conducted as PPP procurement and traditional procurement (World Bank 2013; Murray 2006; Infrastructure Ontario 2007; D. Marollas et al 2009). The second is associated with checking the fitness of procurements through evaluation criteria (WB 2013; C. Contreras 2014, KDI 2010; D.Morillos et all. 2009). However, for the last decade, quantitative value for money analysis has been utilized more widely as an efficient evaluation method of PPPs in many countries around the world, for example UK, US, Australia, Korea, and Canada among others.

Since first announcing its desire to encourage private participation in 1993, more than 53 projects were developed under PPP in Vietnam, but application of VFM assessment in Vietnam to support PPP decision making is unlikely to be mentioned. Moreover, recently 6 PPP projects among 53 have been reverting from the private sector to the public sector despite the concession term still being active, accounting for about 11% of total projects. This figure is not large, but it is high time for the Vietnamese government to consider and evaluate the efficiency of PPPs, because failure of a PPP project could have a negative impact on both economics as well as society. One of the most pressing concerns of the Vietnamese government is how to encourage private participation and how much investment capital could be mobilized from the private sector in the absence of assessing whether a PPP model is appropriate to procure public projects.

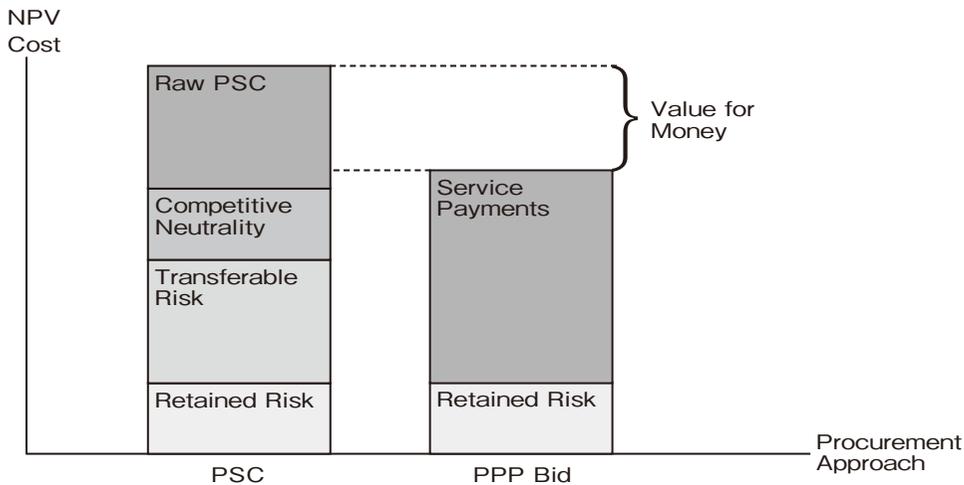
The aim of this research is to cover the quantitative VFM approach to evaluate a PPP model via studying the case of a particular project in Vietnam. The paper begins with a summary of quantitative VFM methodology, including definition and structure. The second part describes the case study to be applied for the research. Third, the paper discusses the main findings from the results. Lastly, it provides some recommendations on the selection of the most suitable forms of procurement to finance the case study.

## **Review of quantitative value for money methodology**

### ***Quantitative VFM definition***

World Bank (2013) defined quantitative VFM as that which “involves comparing the value for money of a proposed PPP (or actual bids received) with a ‘Public Sector Comparator’ (PSC)—that is, a model of the project if implemented through traditional public procurement” (WB 2013, p. 14). Once again, D. Marollas et al. (2009, p. 30) emphasized, “the quantitative VFM component includes all project factors that can be valued in monetary terms. It features a methodology that compares the PPP bid with a hypothetical scenario called the public-sector comparator (PSC)”.

According to the above definitions, quantitative VFM can be understand as the comparison of the costs of a project via the public sector and via a PPP, which can be illustrated by *Figure 1*.



**Figure 1:** Comparison of PSC and PPP bids (Adapted from D. Marollas et al. 2009)

VFM is produced when the value of PSC is larger than the value of a PPP. In the other words, if quantitative VFM is positive, private investors should carry out the project. In contrast, the project should be conducted by the public sector if the indicator is negative. Actually, VFM is to compare the governments' spending between PPP schemes and conventional procurement.

### ***Quantitative VFM structure***

#### *Public-Sector Comparator cost*

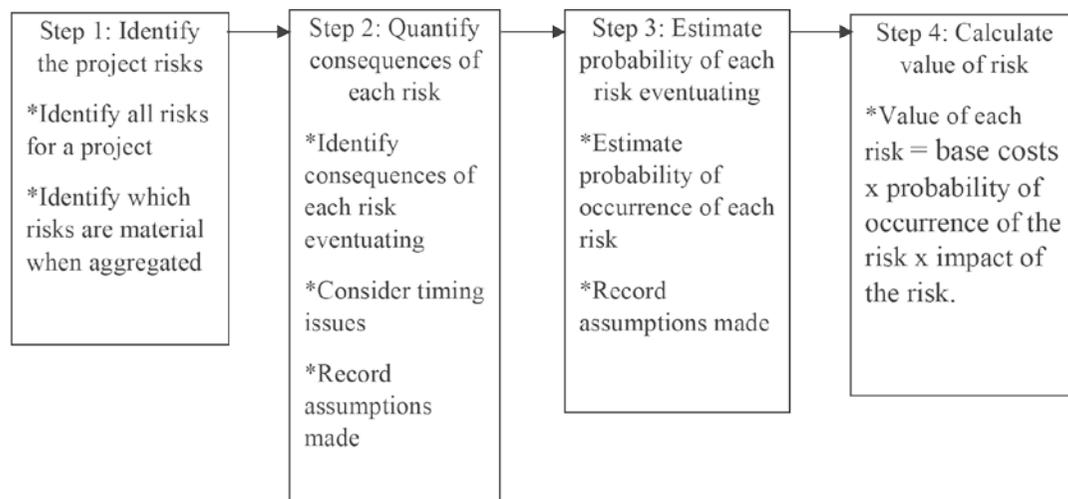
“PSC estimates the hypothetical risk-adjusted cost if a project were to be financed, owned and implemented solely by the public agency” (Partnerships Victoria 2001, p. 6). Although most countries create PSC-PPP comparisons in their own way, components of PSC seem to be similar. According to the Australian style PSC-PPP comparison, the components of PSC include raw cost, transferable risk, retained risk, and competitive neutrality. Meanwhile, PSC in the Canadian style PSC-PPP comparison consists of capital cost, operating cost, risk, tax and optimism bias. However, raw cost of Australian PSC can be similar to capital cost and operating cost of the Canadian PSC. Likewise, competitive neutrality in PSC of Australia is considered as tax in PSC of Canada. Transferable risk, retained risk in Australia, means risk and optimism bias in Canada. Basically, there are four main components in PSC, including: retained risks, transferable risks, competitive neutrality, and raw PSC.

Raw PSC means that whole life cycle costs of a public project, including direct cost and indirect cost relevant to construction, operation and maintenance. Competitive neutrality is to remove any net competitive advantages that accrue to a government business by virtue of its public ownership (Victoria department of Treasury 2001). Transferable risks means risks that would transfer from the public sector to the selected private investors (Infrastructure Ontario 2007). “The value of transferable risks in a PSC measures the cost the government could expect to pay for that risk over the term of the project in a public procurement scenario” (D. Morillos et al 2009, p. 31). Retained risks means that an evaluation of the cost

of risks that government expects to retain if the project is conducted under PPP (Grimsey, D & Lewis, M. K 2005)

### Valuing risk

Basically, the risks in PSC are often valued before classification into transferable and retained risks (D. Morillos et al. 2009). Generally, the process of risk valuation in VFM comprises four main steps, which is illustrated by *Figure 2* below.



**Figure 2:** Steps to risk valuation (Adapted from Victoria department of Treasury. 2001; Infrastructure Ontario. 2007) *Discount rate*

When computing the whole life-cycle cost of a project, it is necessary to compare revenue and costs in different times. “A discount rate is used to convert projected cash flows into a present value to enable comparison of competing options for which the cash flows reflect differences in PPP timing and amounts” (Infrastructure Australia 2013, p. 8). “A discounted cash flow (DCF) analysis allows a public agency to develop a net present value (NPV) for revenues and costs (including costs of risks) that are not expected to occur until far into the future” (US department of transport 2012, p. 3-1). There are three common kinds of approaches to calculate discount rate including (1) Capital Asset Pricing Model (CAPM) (2) Risk-Free Rate (3) A single discount rate.

CAPM: “the cost of capital reflects the return required by an investor to undertake or invest in a particular project. The required return is equal to the risk-free rate, plus a risk premium for the systematic risks retained by the investor” (Partnership Victoria 2003, p. 2).

Risk-Free Rate: “This approach uses the public sector's long-term borrowing rate if the project risks are reflected in the project cash flows”. (US department of transport 2012, p.3-3)

A single discount rate: “which may be project or sector specific, could be used for PPP the PSC and the PPP without adjusting for the risks a public sector would acquire in the PSC (traditional procurement)

option” (D. Morillos 2009, p. 30)

Basically, according to the traditional approach, PSC is the total net present value of four components, including raw PSC, competitive neutrality, transferred risk, and retained risk. However, the potential weakness of the PSC accounting approach is lack of explicit inclusion of the cost consideration. According to Tsukada (2015, p. 8), “allocation of government funds to an infrastructure project entails opportunity costs to nations because these funds would no longer be available for other purposes”. Therefore, cost of financing should be reflected in the PSC calculation. The revised formula of the PSC is identified, as follows (Tsukada 2015):

$$PSC = \text{transferable risks} + \text{retained risks} + \text{competitive neutrality} + \text{financing cost} + \text{raw project} - \text{Future revenue}$$

#### *PPP cost*

Adjusted Shadow Bidding (ASB) represents the cost of a project if implemented by PPPs, which is the PPP bid. According to traditional accounting, ASB is comprised of opex, capex, financing cost, and retained risks. However, ignoring the return on investment computation in the ASB could lead to misguided decision-making when selecting the best procurement form. In addition, Tsukada (2015) questioned the validity of including the retained risk in the cost of PPP shadow bidding practices. The basic assertion of Tsukada (2015) is that a bid price should be estimated by a shadow bid price in accordance with the practices likely to be adopted by the private sector. It should be noted that the private sector does not incorporate retained risk in their formation of a bid price. The modified formula of the shadow bid price (SBP) for a PPP project is as follows (Tsukada 2015):

$$SBP = \text{Capital expenditure} + \text{operating expense} + \text{financing cost} + \text{return on investment (profit)} - \text{future revenue}$$

### **Sensitivity analysis**

This research uses sensitivity analysis to compute simulations of project’s VFM due to the effect of changes in cost components. There are two kinds of sensitivity analysis implemented in this research, including simple sensitivity analysis and advanced sensitivity analysis. Simple sensitivity analysis is to compute effects of movements of PSC cost components on the quantitative VFM through the point estimation. Meanwhile, advanced sensitivity analysis is to measure random uncertainty of cost components influence on VFM of the project. Monte Carlo simulation is applied to generate distributions of simulation VFM.

### **Case study application of quantitative VFM assessment**

The proposed quantitative VFM approach is applied to Phu My bridge in Vietnam. Phu My is one of the PPP projects being criticized strongly in Vietnam because of its inefficiency. The project was planned for

completion in 2005 with a concession time of 29 years. However, after a short time of operation the project was reverted again to the public sector in 2014. According to the concessioners, one of the reasons leading to the inefficiency of the project was that the construction cost was over the forecast. Meanwhile, the actual revenue from the operation of the project was lower than the forecast, which did not cover the expenses. The main argument for this problem centers on whether the project should have been pursued through a PPP scheme as originally planned, or if it should have been repossessed back to the public sector as the Vietnamese government has done.

### ***Background of the project***

The Phu My Bridge is located in Ho Chi Minh City, and spans across the Saigon River. Its length is 2.4 km and its width is 27.5 m with 6 lanes, linking District 2 and District 7 of the city. The objective of the project is to eliminate traffic congestion and travel time on roads in corridor 2, and congestion in urban areas of Ho Chi Minh City. In addition to this, the bridge is expected to contribute to the development of the economy in District 2, District 9, District 7, and other neighborhood districts. The project was planned to start in December 2005 and be operational by January 2009. It was to be transferred to the government of Vietnam in 2034.

The Vietnam Road Administration, on behalf of the Ministry of Transportation, monitors the quality of the construction and implementation. The People's Committee of Ho Chi Minh City (local government) acts on behalf of the Vietnamese Government to sign contracts with the Phu My PPP Company (PMC), which is called a special purpose vehicle (SPV). The Ministry of Finance has become a guarantor for long-term loans from financial organizations, including BIDV, Sacombank and Société Générale. The PMC is responsible for coordinating between private investors and banks, besides, collecting tolls from users.

The key features of the Phu My case are as follows:

*Location:* Ho Chi Minh City

*Length of bridge:* 2.4 Km (4 lanes)

Owner's equity contributed investment is 30% of total capital.

*Construction cost:* 1,806,523 million VND (2005)

*Construction duration:* 4 years (2005 to 2009)

*Operation period:* 26 years (2009 to 2034)

## **Findings and discussions**

### ***Basic assumption for assessment***

In order to carry out the quantitative VFM analysis, it is essential to identify two components, including PSC and SBP. PSC represents the whole cost of project according to the perspective of the government, while SBP is regarded as the whole cost of the project if implemented as a PPP scheme.

### ***The government financing in PSC***

It is hypothesized that the Phu My project could have been constructed by the public sector if the government issued government bonds to finance project. The financing cost is suggested to compute by applying the interest rate of long-term Vietnam national bonds. According to the Vietnamese Ministry of Finance (2005), the interest rate of a fifteen-year government bond was 8.6%, so the same rate is utilized to compute the financing cost of PSC in the case study of the Phu My project. An 8.6% interest rate is assumed to be unchanged during the period of the concession.

### ***Revenue in PSC***

The estimate of revenue of the PSC would be based on the user fees, which depends on the traffic demand and level of toll fees. Due to the lack of information on revenue leakage, and other relevant data, the traffic volume of the PSC is assumed to be equal with the PPP case. The level of the project toll depends on the Circular No 90/2004/TT-BTC of the Vietnamese Ministry of Finance.

### ***Setting discount rates***

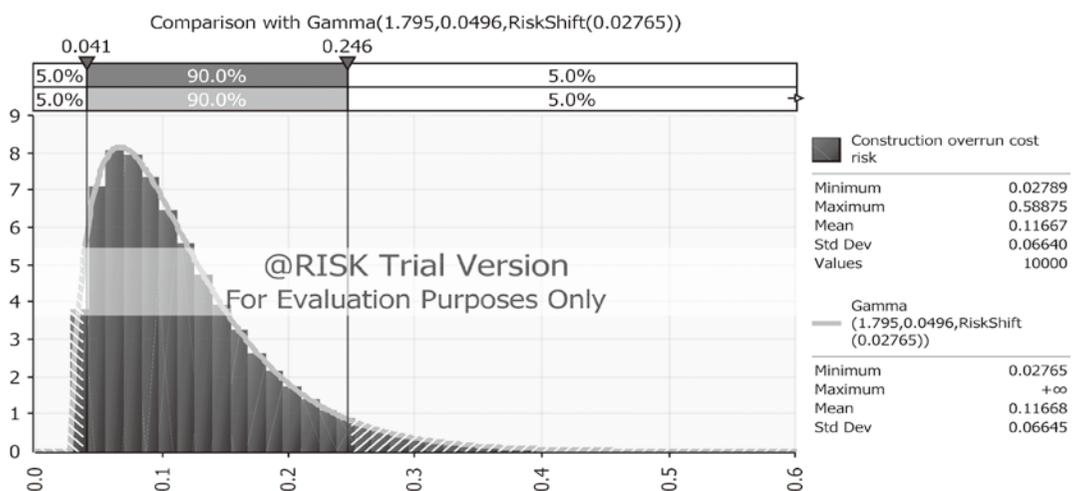
Discount rates play an important role in quantitative VFM assessments. In order to calculate the net present cost of the project followed by traditional procurement, a 8.6% interest rate of long-term government bonds would be used to discount the cash flow of the whole life. Regarding discounting cash flow of SBP, the discount rate is considered by applying WACC. Once again, the impact of inflation of each component in PSC and SBP should be considered in order to change from the real price of cash flows to a nominal price when computing the present value of PSC and SBP. In this research, actual domestic inflation, which is applied for the project from 2005-2015 based on the World Economic Outlook Database of IMF (2015) and a forecasted at 5% inflation rate, is applied for this project from 2016-2034 based on the forecast of the IMF (2015).

### ***Quantification risk***

In project procurement, there are many risks related either the public sector or private sector. Based on a review of the existing literature, there are three key groups: risks in development phase, risks in construction phase and risks in operation phase. More specifically, there are 17 factor-risks that affect projects. However, construction-cost-overrun risk and traffic-volume risk have the strongest impact on the cash flow of projects (Gil, 2013; Kim, 2008, Moneim, 2008, C.O Cruz, 2012). Once again, the studies of Luu V.T. et al (2009) conducting the survey from infrastructures experts demonstrated that construction overruns is one of the main risks that occurs frequently in the construction environment in Vietnam. Due to the historical observation of risks involving infrastructure projects as well as empirical studies regarding risks in Vietnam are very few, it is assumed that there are two kinds of risk associated with construction-cost-overrun risk and traffic-volume risk.

### Construction overrun cost risk

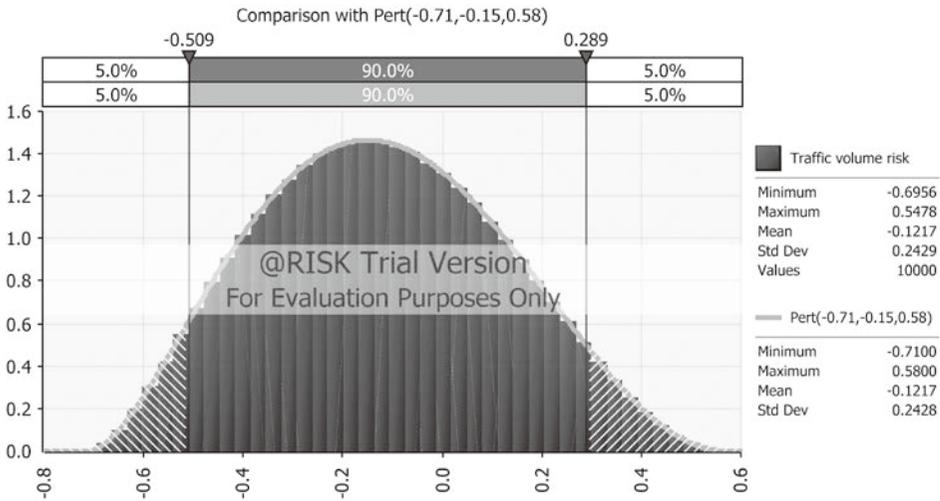
The value of construction cost overrun risk is estimated by applying the mean of construction cost overrun, probability of occurrence of risk and construction cost of the project. Identifying the probability distribution function (PDF) of construction cost overrun requires a large raw source of data. Regarding the probability distribution function, having run 167 road projects in general, the results of Sailing K.B (2008) justified that Gamma distribution fit well for costs overrun. Therefore, the research hypothesizes probability distribution of construction cost overrun of Vietnamese road projects follows Gamma distribution. Through the historical data from projects completed from 2003 to 2015 in Vietnam, the mean value of construction cost overrun is estimated at 11.66%, standard deviation is 6.64%.



**Figure 3:** The Probability Distribution Function (PDF) for construction cost overrun ratio

### Traffic risk

In terms of the traffic volume, value of risk is calculated by applying the mean of traffic volume, probability of occurrence of risk and first-year revenue in the period of operation of the project. Through running 183 road projects in general, Sailling K.B (2008) demonstrated that Pert distribution fit well for traffic volume risk. Based on the historical data from road projects operated from 2010 to 2015 in Vietnam and application of Pert distribution, the traffic volume inaccuracy of road projects in Vietnam is -12,17% with standard deviation of 24,28%



**Figure 4:** The Probability Distribution Function (PDF) for traffic volume

**Calculation of shadow bid price (SBP)**

Items	Value
Capex	1,806,523 million VND*
Opex	1,097,450 million VND*
Equity	30%
Debt	70%
Cost of debt	10 %
Cost of equity	7.25 %
Corporate tax	28 %
WACC	7.21 %
Concession term	29 years

**Table 1:** Financial indicators of Phu My case (Source: T.V Hoang & X.N. Thanh 2013)

\*VND (Vietnamese Dong) = 0.00005 USD

Unit: million VNDs

Year	Capital expenditure	Operation expense	Financing cost	Return on investment	Revenue	SBP	
						Nominal price	NPV
2005	745,779		26,290			834,670	778,537.16
2006	446,955		72,212			593,034	515,951.96
2007	359,279		110,607			564,217	457,867.94
2008	254,510		141,617			537,242	406,657.81
2009		4,504	655,645	9,359	41,650	630,826	445,382.27
2010		5,093	224,830	9,359	47,097	196,319	129,285.51
2011		5,774	242,968	9,359	53,395	211,346	129,821.82
2012		15,618	262,327	9,359	144,438	163,884	93,897.40
2013		17,710	276,091	9,359	163,787	165,946	88,684.66
2014		20,141	289,611	9,359	186,265	165,131	82,314.43
2015		22,891	302,612	9,359	211,696	161,170	74,936.97
2016		26,394	314,812	9,359	244,096	153,799	66,700.84
2017		36,084	325,573	9,359	333,713	107,049	43,303.71
2018		41,031	330,085	9,359	379,464	86,336	32,576.10
2019		46,658	331,360	9,359	431,498	60,090	21,148.16
2020		53,058	328,591	9,359	490,685	27,407	8,996.84
2021		57,321	320,820	9,359	530,107	4,418	1,352.76
2022		57,321	309,206	9,359	530,107	3,021	862.88
2023		57,321	296,622	9,359	530,107	1,165	310.46
2024		57,321	282,986	9,359	530,107	-1,206	-299.68
2025		57,321	269,752	9,359	530,107	-2,612	-605.44
2026		57,321	255,591	9,359	530,107	-4,354	-941.28
2027		57,321	238,115	9,359	530,107	-8,790	-1,772.45
2028		57,321	217,896	9,359	530,107	-15,317	-2,880.85
2029		57,321	195,939	9,359	530,107	-22,897	-4,016.95
2030		57,321	172,093	9,359	530,107	-31,647	-5,178.70
2031		57,321	146,147	9,359	530,107	-41,743	-6,371.35
2032		57,321	118,073	9,359	530,107	-53,174	-7,570.29
2033		57,321	87,531	9,359	530,107	-66,241	-8,796.39
2034		57,321	58,783	9,359	530,107	-76,640	-9,492.90
<b>Total</b>	<b>1,806,523</b>	<b>1,097,450</b>	<b>7,204,785</b>	<b>243,339</b>	<b>10,149,282</b>	<b>4,342,449</b>	<b>3,330,663</b>

Table 2: Calculation SBP of the Phu My project, with a 7.21 % discount rate

### Estimate of the PSC

Cost items	Value (million VNDs)
<i>Project capital cost</i>	
Design and Construction contract price	1,395,148
Acquisition of plant and equipment	45,247
Administration cost during the construction	154,486
Land acquisition	100,000
Contingency cost	111,642

Table 3: Basic assumptions applied to estimate PSC of the project (Source: T.V Hoang &amp; X.N. Thanh 2013)

Unit: million VNDs

Year	Raw PSC					Transferred risk		PSC	
	Capital cost	Management cost	Maintenance cost	Financing cost	Revenue	Overrun cost	Traffic volume	Nominal price	NPV
2005	745,778			64,137		54,704		931,811	858,022
2006	446,955			38,438		42,268		608,515	515,954
2007	359,279			30,898		35,224		528,980	413,000
2008	254,510			21,888		14,336		439,798	316,180
2009		7,370	48	155,361	49,132		5,381	95,090	62,949
2010		8,338	48	155,361	55,587		5,381	79,601	48,522
2011		9,458	48	155,361	63,053		5,381	51,804	29,077
2012		10,697	48	155,361	71,312		5,381	25,910	13,392
2013		12,096	48	155,361	80,637		5,381	-2,447	-1,164
2014		13,721	48	155,361	91,471		5,381	-32,886	-14,412
2015		15,561	48	155,361	103,743		5,381	-64,778	-26,140
2016		17,934	9,648	155,361	119,560		5,381	-86,522	-32,149
2017		20,359	48	155,361	135,727		5,381	-167,075	-57,164
2018		23,108	48	155,361	154,053		5,381	-231,168	-72,830
2019		26,228	48	155,361	174,852		5,381	-307,661	-89,253
2020		29,770	48	155,361	198,464		5,381	-398,954	-106,573
2021		32,098	48	155,361	213,986		5,381	-473,702	-116,519
2022		32,098	48	155,361	213,986		5,381	-505,155	-114,416
2023		32,098	48	155,361	213,986		5,381	-538,181	-112,244
2024		32,098	9,648	155,361	213,986		5,381	-533,241	-102,406
2025		32,098	48	155,361	213,986		5,381	-609,269	-107,742
2026		32,098	48	155,361	213,986		5,381	-647,501	-105,435
2027		32,098	48	155,361	213,986		5,381	-687,644	-103,105
2028		32,098	48	155,361	213,986		5,381	-729,794	-100,759
2029		32,098	48	155,361	213,986		5,381	-774,052	-98,407
2030		32,098	48	155,361	213,986		5,381	-820,523	-96,054
2031		32,098	48	155,361	213,986		5,381	-869,317	-93,707
2032		32,098	9,648	155,361	213,986		5,381	-862,017	-85,562
2033		32,098	48	155,361	213,986		5,381	-974,346	-89,053
2034		32,098	48	155,361	213,986		5,381	-1,030,832	-86,755
<b>Total</b>	<b>1,806,522</b>	<b>644,009</b>	<b>30,048</b>	<b>4,194,744</b>	<b>4,293,390</b>	<b>146,532</b>	<b>139,916</b>	<b>-8,585,558</b>	<b>445,246</b>

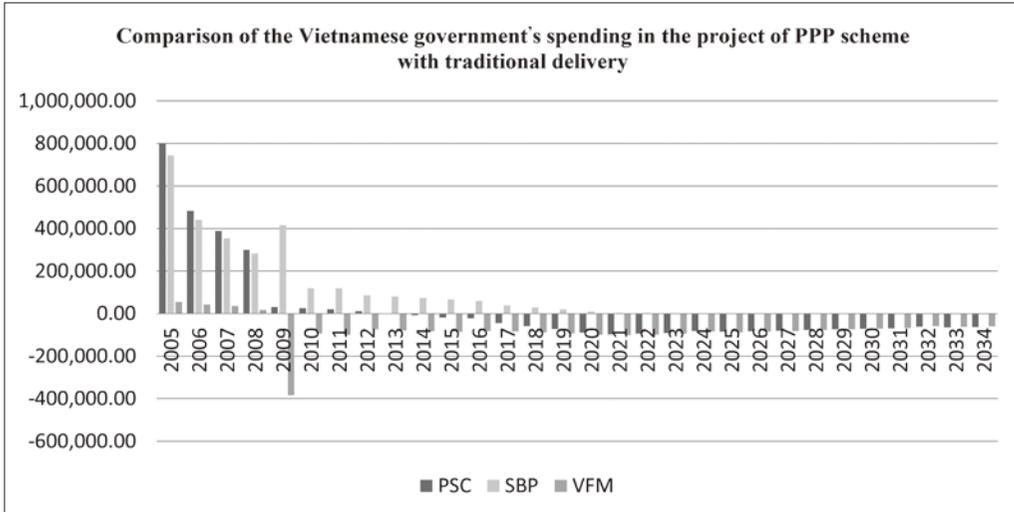
Table 4: Net present value of PSC, with a 8.6% discount rate

### Computation of quantitative VFM

Unit: million VNDs

Items	PSC (I)	SBP (II)
Outflow (A)	1,776,950	5,985,326
Inflow (B)	1,331,703	2,654,662
Net present of cash flow (A) – (B)	445,246	3,330,663
<b>VFM (I) – (II)</b>		<b>-2,885,417</b>

Table 5: Comparison of the Vietnamese government's spending in the project of PPP scheme with traditional delivery

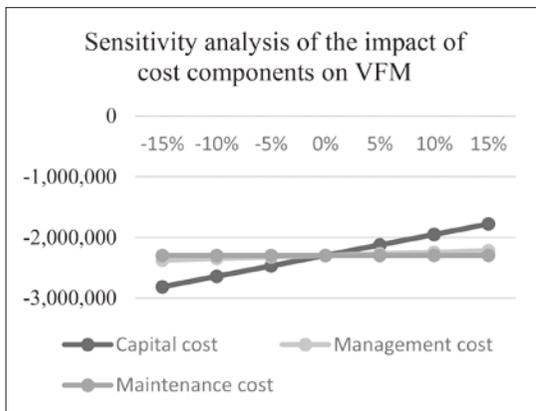


**Figure 5:** Comparison of the Vietnamese government’s spending in the project of PPP scheme with traditional delivery

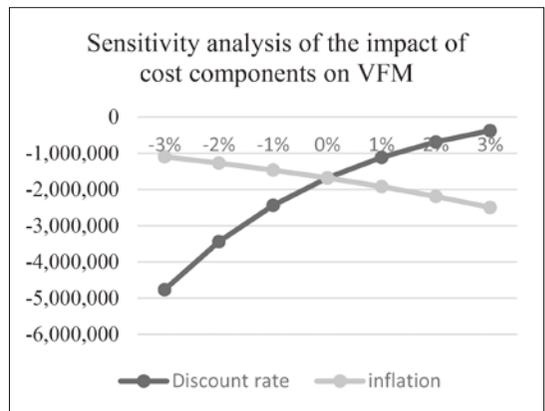
Figure 5 shows the spending of the government for the project under PPP and traditional procurement models. Conventional delivery is expected to have more spending savings for the government, especially from the years 2016 to 2034 of the project cycle. As a result, quantitative VFM of the PPP model compared with the traditional procurement is -2,885,417 million VNDs. It implies traditional procurement is preferred to the PPP scheme to finance the Phu My project.

**Sensitivity analysis**

In order to guarantee the assessment is realistic, sensitivity analysis should be applied to compute the impact of movement in components of PSC on VFM.



**Figure 6:** Sensitivity analysis of the impact of cost components on VFM



**Figure 7:** Sensitivity analysis of the impact of cost components on VFM

### Simple sensitivity analysis

Figure 6 and 7 shows how movements in the cost components influence the project's VFM. As presented in figure 6, VFM is more sensitive to movements in the capital cost than to movements in the management cost and maintenance cost. For example, when the capital cost of PSC influences 1%, quantitative VFM would be changed by 162,492 million VNDs. Meanwhile, every 1% movement in the maintenance cost creates 55 million VNDs. It means that VFM of the project is not sensitive to fluctuation in the maintenance cost. In addition to this, assuming the capital cost of the project implemented by public sector increases 15%, quantitative VFM is still negative. Thus, PPP model could not be preferred to conventional delivery to finance the Phu My project regardless of a 15% extra capital cost. As can be seen in figure 7, VFM has a positive sensitivity to changes in the discount rate, while is negative sensitivity to changes in inflation.

In summary, compared to other cost variables, the fluctuation in the discount rate has a large effect on the VFM of the project, while the movement in the maintenance cost has a minimal impact on the VFM. If there is a 15% increase in the discount rate, the value of VFM is still negative. It supports the position that the decision to pursuit the PPP model is inappropriate regardless of a 15% extra discount rate or extra capital cost.

### Advanced sensitivity analysis

The Monte Carlo simulation with an iteration of 10,000 times was performed to generate distributions of VFM for the project for the stochastic analysis. The @Risk 6.3 Palisade Software was used for running simulations. Figure 8 presents the distribution of the project's VFM. The simulation result reveals that the mean of the VFM is -2,178,345 million VNDs and standard deviation is 1,366,517 million VNDs. In addition, the probability that quantitative VFM is negative is 95%. It implies that doing the project via PPP scheme is not a better solution than traditional government delivery.

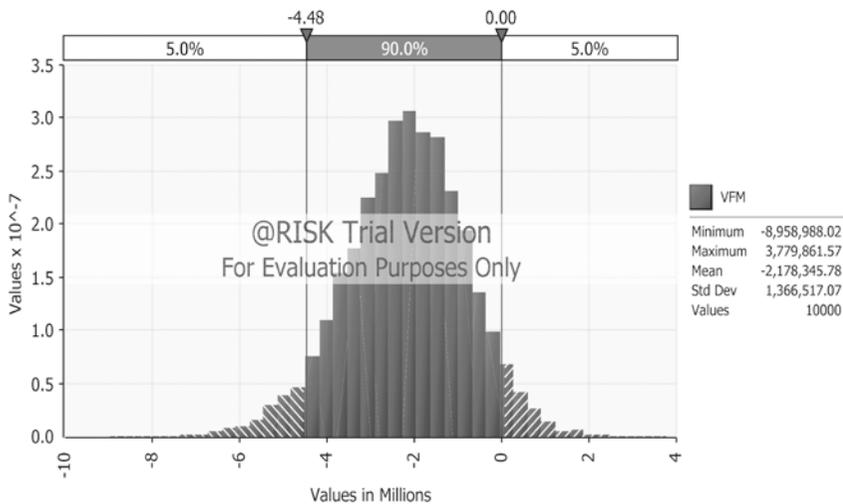
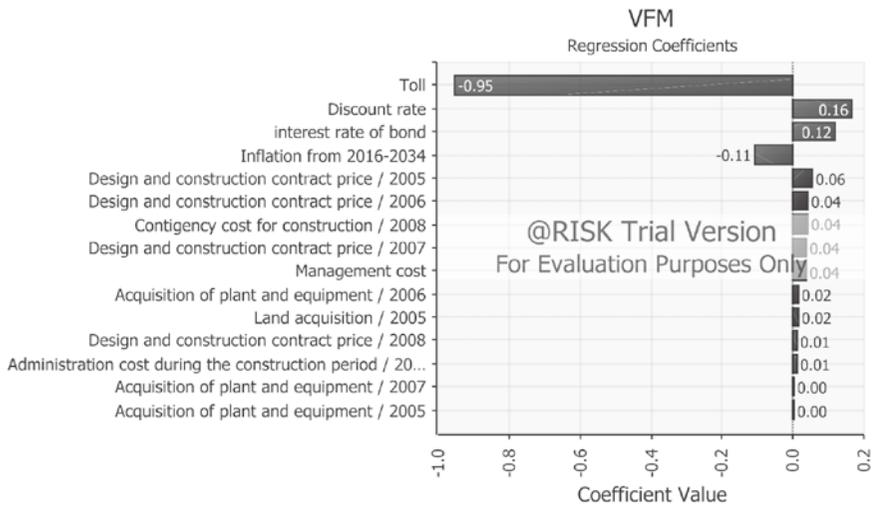
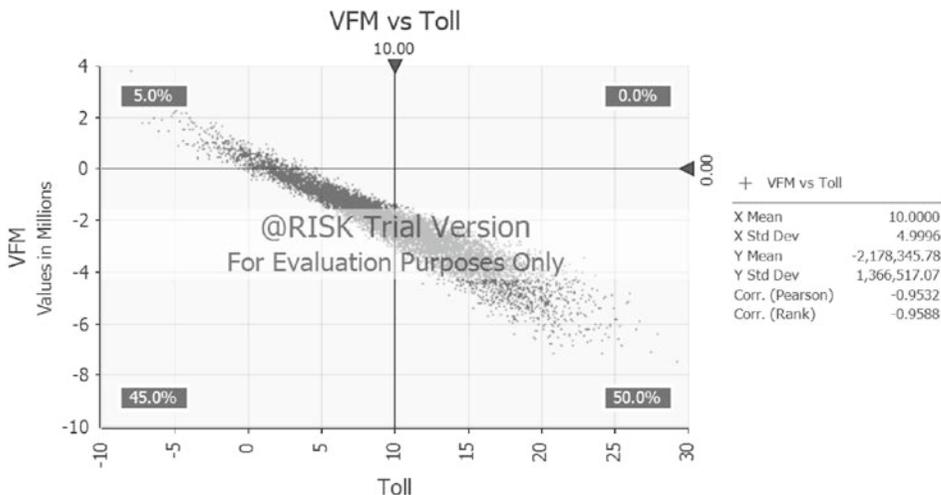


Figure 8: Distribution for the project's Value for money



**Figure 9:** Sensitivity tornado graph for the VFM

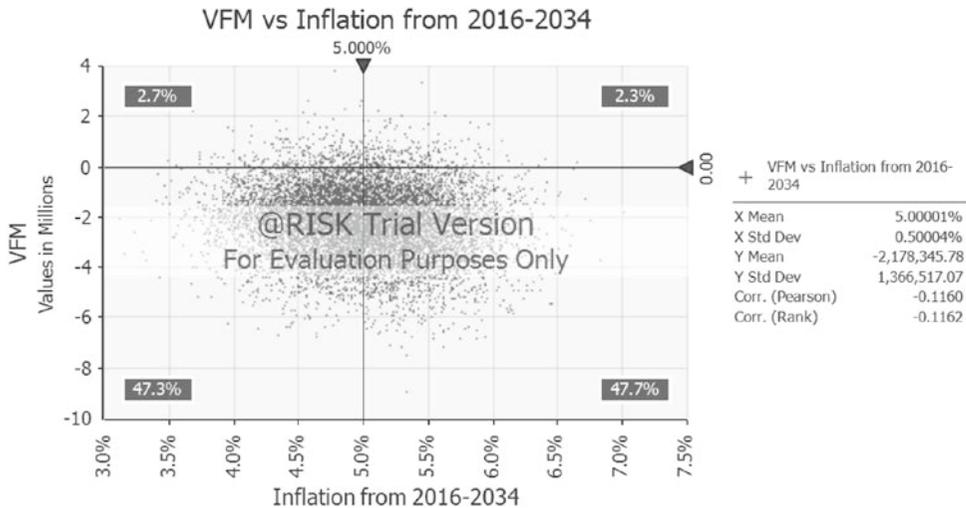
Figure 9 shows the sensitivity tornado graph of the VFM. The larger the regression coefficient of an input variable, the more significant this variable impacts VFM. As shown in the graph, variables that have a larger impact on the value for money of the project are tolls, the inflation from 2016-2034, interest rates, and discount rates. In addition to this, all inputs except inflation from 2016-2034 and tolls have a positive influence on VFM. For example, a one standard deviation increase in toll would reduce VFM of the project by a 0.95 standard deviation, which corresponds to 1,301,846 million VNDs.



**Figure 10:** Scatter graph of VFM versus toll

Figure 10 shows the scatter graph of VFM and vehicle tolls. As can be seen, if the vehicle toll is less than 10,000 VNDs per PCU, there is only 5% confidence level that the PPP model could be more

appropriate than conventional procurement. Alternatively, if the inflation from 2016-2034 is reduced from 5% to 1%, there is roughly a 2.7% chance that the PPP model could be better than the traditional government delivery (shown in *figure 11*)



**Figure 11:** Scatter graph of VFM versus inflation

## Conclusion

The PPP scheme is not expected to be a better option than traditional delivery for the Phu My project. This is especially true if there is stochastic fluctuation in input parameters of PSC (inflation from 2016-2034, the toll, interest rate, items of project capital cost). In that case the probability of negative quantitative VFM of this project would be 95%. This demonstrates that the PPP model could not offer good value for the government with regard to the Phu My project. The decision making of the Vietnamese government to return the Phu My project from private investors to the public sector is rational.

The case of the Phu My project could be a lesson for the Vietnamese government regarding the conduct of PPP projects. Without a VFM assessment before implementation, projects could lead to misguide decision-making in the development of road transportation infrastructure. Once again, PPP is actually considered as a better alternative to traditional procurement if public sector understands clearly what benefits and drawbacks negotiation exist for private investors. One should not think that using a PPP model is only way to reduce state budget burdens that take out from the balance sheet of governments. Also, one should not tend to have such optimistic expectations on a PPP model to finance public projects. In order to prove whether a PPP is suitable procurement to support a given project, it is essential to conduct a value for money test.

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# ORIGINAL RESEARCH: The Asia Cooperation Dialogue (ACD): Formation and Development

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## Abstract

This article aims to provide an overview of the development, progress, and problems of the Asia Cooperation Dialogue (ACD)—the only continent-wide forum in Asia—emphasizing the role of Thailand, the founding country. The ACD serves as the missing link in Asian cooperation, constituting an informal and a non-institutionalized forum for Asian Foreign Ministers. It is a useful diplomatic asset, which is not as recognized as ASEAN, APEC, or ASEM but can still provide a forum for Asian Foreign Ministers to informally exchange views on matters of common interest. A lack of leadership and political will is among the major factors that have considerably undermined the significance of the ACD.

**Keywords:** ACD, Asia Cooperation Dialogue, Asia, Kuwait, Thailand.

## Introduction

“A new chapter of history begins today,” proclaimed Thaksin Shinawatra, the former Prime Minister of Thailand, in June 2002. In his speech delivered at the inaugural meeting of the Asia Cooperation Dialogue (ACD) in Cha-Am, Thailand, he mentioned several bright promises of the new continent-wide forum. However, he might soon discover that the future does not hold a bed of roses for this newborn forum.

This article examines the progress of the ACD—its evolution from its founding in 2002 to the present—and the problems faced by it during its development since its inauguration. It thus provides readers with an overview of the ACD and also attempts an assessment of some of the major problems of the forum.

## Methodology

*Atheoretical Case Studies:* This article uses the atheoretical case study method, as it aims to simply describe the data collected through primary and secondary sources.

## Findings and Discussion

*Establishment of the ACD:* On June 18, 2002, at Thailand’s initiative, former Thai Prime Minister Thaksin Shinawatra and former Thai Foreign Minister Surakiart Sathirathai, along with the Foreign Ministers of and special envoys from 17 other Asian nations, convened in Cha-Am to mark the inauguration of the ACD, supposedly Asia’s first continent-wide forum. Thaksin proclaimed the meeting as an “historic Asian event” that marked the “beginning of a new chapter of world cooperation” (Ministry

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of Foreign Affairs, Thailand—MFA 2003: 167).

The ACD idea was first introduced by Surakiart, on behalf of Thaksin's Thai Rak Thai (TRT) party, at the First International Conference of Asian Political Parties, held in Manila in 2000, a year before Thaksin's electoral win. After coming into office in 2001, Thaksin and Surakiart continued to put forward the idea of establishing an Asia-wide forum for consideration by Asian governments. The idea was formally proposed by Surakiart during the 34th ASEAN Foreign Ministers' Meeting in Hanoi in July 2001, and was further elaborated at the ASEAN Foreign Ministers Retreat in Phuket in February 2002 (Ahmad 2003). In June of the same year, after receiving broad support from Asian governments, Thaksin officially declared the launch of the First ACD Ministerial Meeting, putting the idea of Asia-wide cooperation into practice. The founding members of the ACD are Bahrain, Bangladesh, Brunei Darussalam, Cambodia, China, India, Indonesia, Japan, Republic of Korea, Lao People's Democratic Republic, Malaysia, Myanmar, Pakistan, Philippines, Qatar, Singapore, Thailand, and Vietnam.

The aim of the ACD was to constitute the "missing link" in Asia by encompassing Asian nations into the newly formed 'Asian Community'—a continent-wide forum, the first of its kind in the region—without duplicating other existing regional arrangements or creating a bloc against the others (ACD 2012a). The missing link concept, as stated in *The ACD E-News*, is as follows:

...implies something new. Before the ACD was formed in 2002, forums for cooperation in the Asian region were primarily sub-regional in character, e.g., GMS, ACMECS, BIMSTEC, ASEAN, ASEAN+3, SAARC, GCC, CICA. When the ACD came about, however, it was able to draw its membership from all of Asia's sub-regions, i.e., Southeast Asia, East Asia, South Asia, Western Asia, the Middle East, and Central Asia, becoming the first pan-Asian forum. What the ACD did, then, was to bring (or "link") all sub-regions and sub-regional forums together under one roof (ACD 2007b: 3).

As an Asian community, the ACD would help to integrate and complement existing regional institutions. A key principle was to enhance Asia's strength and economic competitiveness by maximizing its diversity and rich resources as well as actualizing the continent's potential. The ACD would create the required synergy for Asia's enormous potential (ACD 2015). This materialized in Thaksin's opening statement at the inaugural meeting of the ACD in 2002:

At the present time, Asia has not been able to forge the basic understanding and the will to use our dynamism, our talents, our own markets and skills in order to create mutual benefit from our combined potential, either as individual nations or as a region on the world scene. Asia therefore needs to forge a common strategy to build from our vast resources...in order to overcome the challenges of the new century. We must learn to trust, confide, and work together for our mutual benefits, not viewing one another as competitors, but rather as partners and allies (MFA 2003: 169).

The core values of the ACD are as follows: positive thinking, informality, voluntarism, non-

institutionalization, openness, respect for diversity, the comfort level of member countries, and the evolving nature of the ACD process (ACD 2012a). Thaksin pointed out this concept of the ACD in the speech he delivered at the East Asia Economic Summit in Kuala Lumpur in October 2002:

The ACD is not just a cooperation. The ACD is not just a dialogue. But, simply, the ACD is both a cooperation and a dialogue. It is a capacity building process based on trade, economic, social, and possibly political cooperation dialogues, relying upon the flexibility and a comfort level of all its participants. Driven by positive thinking, the ACD will be an evolving, informal, and non-institutionalized, open and inclusive process...In a nutshell, the ACD must be a forum for Asia to pool its inner strengths to create an environment of win-win state of affairs for a wealthier and more prosperous Asia and for the rest of the world (ASEAN Secretariat 2012).

The ACD currently has 34 members from all over Asia. In 2003, it welcomed four new members, namely Kazakhstan, Kuwait, Oman, and Sri Lanka, and four more in 2004, namely Bhutan, Iran, Mongolia, and the United Arab Emirates. Two regional major powers, Russia and Saudi Arabia, joined the forum in 2005. Two Central Asian nations, Tajikistan and Uzbekistan, became members in 2006, followed by Kyrgyzstan a year later. Afghanistan joined the Dialogue in 2012, followed by Turkey the following year. In 2015, Nepal initiated a process for joining the ACD (Xinhua 2015), and it became the 34th member in 2016.

The main objectives of the ACD, as indicated on its website, are as follows:

- 1.To promote interdependence among Asian countries in all areas of cooperation by identifying Asia's common strengths and opportunities which will help reduce poverty and improve the quality of life for Asian people whilst developing a knowledge-based society within Asia and enhancing community and people empowerment;
- 2.To expand the trade and financial market within Asia and increase the bargaining power of Asian countries in lieu of competition and, in turn, enhance Asia's economic competitiveness in the global market;
- 3.To serve as the missing link in Asian cooperation by building upon Asia's potentials and strengths through supplementing and complementing existing cooperative frameworks;
- 4.To ultimately transform the Asian continent into an Asian Community, capable of interacting with the rest of the world on a more equal footing and contributing more positively towards mutual peace and prosperity.

(ACD 2015)

**Operation of the ACD:** The paramount issue at the First ACD Ministerial Meeting in Cha-am was how to move the forum forward, as can be seen through its theme suggested by Thailand, “Asia Cooperation Dialogue: How to Consolidate Our Strengths?” The participants in the inaugural meeting reached an agreement to create two important dimensions of mechanism based on ACD’s core values, namely dialogue and projects.

The dialogue dimension, as stated in Surakiart’s statement, was designed to promote the participation and consultation of ACD members on an inclusive basis, by proceeding incrementally and beginning with stress-free issues before dealing with more difficult ones (Sathirathai 2003: 193-194). Besides, Surakiart (2003: 194) claimed that the dialogue suggested “merit in maintaining the non-institutionalized and informal nature of ACD in order to retain maximum flexibility in rapidly changing times.” At the conclusion of the meeting in Cha-Am, the 18 original ACD member states all agreed that the continuity of the dialogue is essential in sustaining relationships among the membership (Chachavalpongpun 2010: 99).

To put the dialogue dimension into effect, it is imperative to hold the meetings on a regular basis to fortify the sense of ‘we-feeling’ among the members of the ACD. For the first ten years, the forum had organized a series of meetings at two levels: the ministerial level and the senior officials’ level. At the senior officials’ level, apart from the easy-going meeting held in provision for the annual ministerial meeting, there have been at least two other regular sessions for senior officials so that they can meet periodically. The first one is the ACD Senior Officials’ Trips to ACD Capitals. The second one is the ACD Ambassadorial Retreat, usually organized in Bangkok. The retreat has been regularly held since 2002 and is normally chaired by the Permanent Secretary or the Deputy Permanent Secretary for the Thai Foreign Ministry (ACD 2012a). It has been created to encourage talks among member states on various issues of common interest. The retreat is at the top of the dialogue dimension (Chachavalpongpun 2010: 100).

At the ministerial level, the ACD ministers have met annually since its inauguration in 2002. Until April 2016, 13 official ACD Ministerial Meetings took place. The ministerial meeting is conducted in an informal, retreat-style format, in accordance with the ACD’s fundamental values, as can be exemplified through the special manner of the meetings. Sofa Meeting, for example, is “a meeting format uniquely employed in the ACD Ministerial Meetings...Ministers are seated on sofas instead of the meeting room and discuss issues of mutual interest without prepared notes or structured agenda in order to induce the exchange of views and idea freely. Only an indicative list of topics is provided to the Ministers to facilitate the flow of the Meeting” (ACD 2007a: 3). The ACD also annually arranges the Breakfast or High Tea Meetings in September on the sideline of the UN General Assembly session, where the foreign ministers talk and exchange their opinions on the ACD ongoing projects and programs as well as on regional and international issues.

“Hosting the ACD meeting is a piece of cake. What we have to do is just preparing [sic] a speech for the Chair,” said a Thai senior diplomat, who has been involved in ACD affairs, in a closed-door meeting at the Foreign Ministry. As Pavin Chachavalpongpun, former Thai diplomat, describes, the ACD “is a process where there is no agenda, no assigned speakers, no specific topics...prepared for and agreed in advance by senior officials. The host only prepares and issues a Chairman’s Statement for reference” (Chachavalpongpun 2010: 99).

Despite its unique and informal format, the meetings would mean nothing to the members if they do not make the ACD relevant to the changing regional context. To preserve the *raison d'être* of the group, each annual ministerial meeting has always initiated new cooperative schemes in response to the changing situation of the region (Chachavalpongpun 2010: 100). The major outcomes of the ACD Ministerial Meetings can be summarized as follows:

1. The First ACD Ministerial Meeting was held in Cha-Am, Thailand in June 2002. All the representatives present at this meeting endorsed and recognized the ACD initiative.
2. The Second ACD Ministerial Meeting was held in Chiang Mai, Thailand in June 2003. The Chiang Mai Declaration on Asian Bond Market was adopted at this meeting (ACD 2012b).
3. The Third ACD Ministerial Meeting was held in Qingdao, China in June 2004. The Declaration on Asia Cooperation was adopted along with the Qingdao Initiative. The former is a proposal for future cooperation in various fields, while the latter focuses on energy security and cooperation (ACD 2012c, 2012d).
4. The Fourth ACD Ministerial Meeting was held in Islamabad, Pakistan in April 2005. The Islamabad Declaration, which included the Guideline for Granting the Status of ACD Partner for Development, was adopted at this meeting. The guideline aims at opening a channel to cooperate with non-ACD members and other regional groups (ACD 2012e).
5. The Fifth ACD Ministerial Meeting was held in Doha, Qatar in May 2006. The ACD Energy Forum was established because of the Doha Declaration, which was adopted at the meeting. In addition, the ACD Energy Action Plan was endorsed to promote energy security, research and assessment on energy, and energy infrastructure development, and to consider the possibility of reinvesting revenues that accumulate from the energy trade among the ACD members in order to ensure the overall sustainable development of the Asian continent (ACD 2012f).
6. The Sixth ACD Ministerial Meeting was held in Seoul, South Korea in June 2007. The Seoul IT Declaration was adopted at this meeting. The objective of the declaration is to narrow the digital divide among the members of the ACD by fostering closer cooperation in IT-related project areas (ACD 2012g).
7. The Seventh ACD Ministerial Meeting was held in Astana, Kazakhstan in October 2008. The meeting adopted the Seventh ACD Declaration that launched the initiative of Track II participation in the process of the ACD. India and Iran offered to host the ACD Think Tank Network meeting in 2008 and 2009 respectively (ACD 2012h).
8. The Eighth ACD Ministerial Meeting was held in Colombo, Sri Lanka in October 2009. The meeting adopted the ACD Colombo Declaration, with emphasis on reaffirming the commitment to create strong, sustainable, and balanced regional growth as well as to reform global governance and financial architecture, and to shape regional arrangements to meet the challenges of the new century (ACD 2012i).
9. The Ninth ACD Ministerial Meeting was held in Tehran, Iran in November 2010. The meeting discussed ways to converge and to promote cooperation in Asia, fortifying Asia's competitiveness

- and maximizing Asia's diversity and rich resources, leading to economic development in important areas such as tourism, ICT, and energy cooperation (MOFA 2013).
10. The Tenth ACD Ministerial Meeting was held in Kuwait City, Kuwait in October 2011. The meeting discussed various measures to further strengthen cooperation in the region, facilitating Asian regional integration (MOFA 2013).
  11. The Eleventh ACD Ministerial Meeting was held in Dushanbe, Tajikistan in March 2012. The Dushanbe Declaration was adopted at this meeting and it was agreed to set up the ACD Provisional Secretariat. Kuwait's proposal for mobilizing USD 2 billion for an Asian Development Fund was mentioned and its pledge of USD 300 million initial contribution was appreciated (Asia-Plus 2013).
  12. The Twelfth ACD Ministerial Meeting was held in Manama, Bahrain in November 2013. The meeting adopted the Manama Declaration, promoting intra-Asian tourism, featuring orientations to enhance ACD cooperation in a more effective and practical manner, and supporting initiatives and proposal on Asian connectivity (BNA 2013).
  13. The Thirteenth ACD Ministerial Meeting originally scheduled to be held in Riyadh, Saudi Arabia in November 2014 was first postponed and later cancelled due to a low level of participation of member countries. This was because the Eighteenth Summit of the South Asian Association of Regional Cooperation (SAARC) was held in Kathmandu, Nepal from November 26-27, while the ACD Ministerial Meeting was scheduled for November 25 (Rasooldeen 2014).
  14. The Fourteenth ACD Ministerial Meeting was held in Bangkok in March 2016. The meeting agreed to draft the ACD Vision for Asia Cooperation 2030 in order to set a clear direction for regional cooperation in line with the U.N. Sustainable Development Goals 2030 (MFA 2016).

The First ACD Summit was called by Kuwait and was held for the first time in Kuwait City, from October 15-17, 2012. The ACD Summit has been scheduled to be held every three years. At the First Summit, Kuwait and Thailand put forward an initiative to make the ACD permanent with a Secretariat (AFP 2012). Nevertheless, at the initial stage, only the Provisional Secretariat was agreed to be set up. Budit Limschoon, a seasoned Thai diplomat, or "Mr. ACD," a nickname given by his colleagues owing to his dedication to ACD affairs even during the times the forum was downplayed by anti-Thaksin governments, was appointed as the first Secretary General of the ACD overseeing the ACD Provisional Secretariat, based in Kuwait City. At the end of the historic Summit, the Communiqué of the First ACD Summit was also issued. The Second ACD Summit was rescheduled to be held in Thailand in late 2016. The Third ACD Summit will be hosted by Iran in 2018.

For the project dimension, ACD members were encouraged to volunteer to perform as prime movers or co-prime movers in various areas of cooperation, suitable to their expertise. The project dimension mechanism proceeds on a voluntary basis. It therefore does not require a consensus from ACD member countries (Chachavalpongpun 2010: 101). Details of areas of cooperation and prime and co-prime movers are shown in Table 1.

<b>Areas of Cooperation</b>	<b>Prime Movers and Co-prime Movers</b>
1. Energy	Bahrain, Indonesia, Kazakhstan, Qatar, China, the Philippines, Lao PDR, and the United Arab Emirates
2. Poverty Alleviation	Bangladesh, Cambodia, and Vietnam
3. Agriculture	China, Pakistan, and Kazakhstan
4. Transport Linkages	India, Kazakhstan, and Myanmar
5. Biotechnology	India
6. E-Commerce	Malaysia and Bahrain
7. Infrastructure Fund	Malaysia
8. E-Education	Malaysia and Iran
9. Asia Institute of Standards	Pakistan
10. SMEs Cooperation	Singapore and Sri Lanka
11. IT Development	Republic of Korea and Russia
12. Science and Technology	The Philippines
13. Tourism	Thailand, Cambodia, Myanmar, Pakistan, and Bahrain
14. Financial Cooperation	Thailand and Kazakhstan
15. Human Resources Development	Vietnam and Thailand
16. Environmental Education	Japan, Qatar, and Bahrain
17. Strengthening Legal Infrastructure	Japan
18. Road Safety	Oman
19. Natural Disaster	Russia
20. Cultural Cooperation	Iran, India, and Bahrain

**Table 1** List of ACD Areas of Cooperation and their Prime and Co-prime Movers

ACD members demonstrated their zeal for participation as either prime movers or co-prime movers in 20 areas of cooperation under the project dimension. Malaysia, for example, was a keen prime mover in E-Education, subsequently leading to the establishment of Asia e-University, a dual-mode, international university, with the support of ACD members as confirmed at the Fourth and the Fifth ACD Ministerial Meetings.

At the Fourteenth ACD Ministerial Meeting, the areas of cooperation were regrouped into six pillars: (1) Connectivity; (2) Science, Technology, and Innovation; (3) Education and Human Resource Development; (4) Interrelation of Food, Energy, and Water Security; (5) Tourism and Culture; and (6) Promoting Approaches to Inclusive and Sustainable Development (MFA 2016).

One of the most ambitious moves was the Asian Bond Market Development initiative proposed by Thailand, a prime mover in financial cooperation, at the Second ACD Ministerial Meeting. It aims at “promoting the development of efficient and sustainable Asian bond markets for the betterment of Asia and its financial system” (ACD 2003). According to Thailand’s Concept Paper on Asian (Regional) Bond Market Development, the cooperation on Asian Bond Market Development in ACD is needed because of the following reasons:

1. A lack of sufficiently developed bond markets in the region has been constantly mentioned as one of the major causes leading to the outburst of the 1997 crisis. From past experiences in the region, immature debt and capital markets, to a certain extent, forced investors/borrowers to rely upon tapping funds from external sources, particularly short-term borrowing.
2. Short-term borrowing could be destabilizing since it could lead to capital account reversals that would leave fund receiving economies vulnerable thanks to heavily fluctuating capital flows. Therefore, developing efficient bond markets in the region is seen to be not only a necessary condition but also a sufficient one to promote a sound and stable macroeconomic environment.
3. In addition, Asian economies have accumulated substantial amount of wealth in terms of collective international reserves and a large portion of those reserves would normally be invested elsewhere outside the continent. Establishing sound and efficient Asian bond markets could provide alternatives for investment of Asian economies.
4. Therefore, the development of deep and liquid bond markets should be viewed as not only an enhancement to the financial development process within the continent but also a further step to promote more integrated financial cooperation among Asian economies.

(ACD n.d.)

Nevertheless, the Asian Bond Market Development initiative has become stagnant under the ACD framework. It being a forum mainly for Foreign Ministers explains why the ACD was inactive in pursuing the Asian Bond Market Development initiative. However, the more important reason is the fact that the political destiny of Thaksin's government, which was overthrown in 2006, prevented his government from keeping the project alive within the ACD. The 2006 coup in Thailand was the turning point that made the ACD lose its momentum.

***The Lack of Leadership and Political Will:*** Thailand's domestic politics has a great impact on the momentum of the continent-wide forum. After the Thaksin government was toppled in 2006, the ACD has been losing its momentum, and its activities have been few (Chachavalpongpun 2010: 106-107). Critics view the ACD as a promotional product of Thaksin's international ambitions (Panaspornprasit 2004: 260-261; Theeravit n.d.). Subsequent governments, anti-Thaksin factions, have been unwilling to follow up on ACD affairs, and have downgraded this Asia-wide framework (Chachavalpongpun 2009). For them, continuing with ACD works and activities would legitimize Thaksin's legacy and the symbol of his foreign policy. As Chachavalpongpun (2010: 107) observes, "[t]his explains why the ACD is currently being left in a rather neglected state, especially as long as the Democrat Party [Thaksin's opposition] remains in power." His observation remains true for the current military regime led by General Prayut Chan-o-cha, who ousted Yingluck Shinawatra from office in 2014. The Second ACD Summit (which will be hosted by Thailand) and the Fourteenth ACD Ministerial Meeting (which was hosted by Thailand) were postponed from 2015 to 2016.

As Thailand was forced to become less active since the 2006 coup (Chachavalpongpun 2010: 108), there was a leadership vacuum in the ACD. Kuwait saw the opportunity to fill this vacuum. MD Nalapat, an Indian analyst, observed the following:

Kuwait has reasserted its crucial role in the region once again by becoming a strong voice for Asia... It is heartening to note that Kuwait, after more than 20 years, is once again stepping forward to become an important diplomatic player in the region like Turkey, Qatar, Saudi Arabia, and Iran. Kuwait is the Singapore of the Middle East: small, prosperous, and forward-looking (Peter 2012).

Kuwait called for the transformation of the ACD into a formal organization. Kuwait's efforts were best exemplified through the establishment of the ACD Provisional Secretariat at Kuwait City, symbolizing Kuwait's leading position in the continent-wide forum and increasing its international status. Kuwait would host the Provisional Secretariat on its own expenses. However, without support from Thailand, Kuwaiti efforts would be difficult, if not impossible, to achieve. To accommodate Thailand whose diplomacy was under siege by its political crises (Chachavalpongpun 2009), the deal was to nominate a senior Thai diplomat to be the first ACD Secretary General. Kuwait's endeavors, especially about institutionalization, received a lukewarm response from other member countries.

Despite its hard efforts, Kuwait has been unable to gain leadership. This partly derives from the fact that Thailand still controls several ACD works and activities, and is trying to regain its leading role in the ACD. In addition, other players in the Middle East, such as Saudi Arabia, have also joined this competition in the ACD. Riyadh hoped to increase its international status and prestige by hosting the Thirteenth ACD Ministerial Meeting; however, it failed to do so because of insufficient participation in the meeting (Rasooldeen 2014).

The lack of political will among ACD members is also a critical problem for the forum. ACD members claim to be in favor of rhetorical goals, but so far, most of them have only paid lip service to delivering the substantial cooperation goals. A former Thai diplomat observed the following:

The lack of interest in the ACD has not only been felt in Thailand. It is reported that the Thai Foreign Ministry has to work extremely hard in convincing and lobbying ACD members to send representatives to attend some of its many meetings. Some meetings had to be postponed or even cancelled because of insufficient participants (Chachavalpongpun 2010: 110).

Therefore, the ACD has been waning. To a certain extent, the lack of political will among regional powers and great powers has stemmed from the fact that the ACD has not been an organization in the strict sense of the term. For example, Russia, as Elena Suponina points out, "views that...[ACD] is unique but until now is careful and requires there to be further clarity on the organizational side and on its outcomes" (Al-Dulaimi 2012). Therefore, for ACD members like Russia, the ACD has failed to deliver rhetorical goals and actual achievements. Nevertheless, those who are at the region's periphery want to

take advantage of the forum to appear on the same stage with the big powers in the international scene (Chachavalpongpun 2010: 109). Institutionalization of the ACD would be disadvantageous for them.

## Conclusion

For a forum that began with high ambitions, the ACD has achieved surprisingly little. However, despite its inability to have an impact on both a continental and regional scale, and its steadily declining importance, the ACD provides a good example of the difficulties of institution building in Asia. The failure of the ACD has been a result of the forum's lack of leadership and political will and its inability to fulfill the expectations of its members.

In conclusion, we argue that despite having a 14-year-old history of making diligent attempts to take an important step toward becoming a relevant continental body, the ACD does not seem to have a bright future.

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# ORIGINAL RESEARCH:

## Constraints to the expansion of health insurance in Lao PDR

BOUNKHAM Viengmany<sup>1</sup>

### Abstract

This paper examines the planned expansion of the coverage of health insurance schemes in Lao PDR. The purpose of the study is to identify the factors that impede the expansion of health insurance and whether or not co-payment for healthcare services should be introduced to improve the quality of care for insured people in Lao PDR. The study applies qualitative methods after reviewing the existing relevant literature and documents, by interviewing key informants involved in the implementation of health insurance schemes in Lao PDR, as well as providers of health services at various levels from the ministry down to the district level. The results of the study show that low capitation fees, overutilization of health services, unclear roles and mandates of institutions responsible for health insurance schemes, weak law enforcement, and low levels of social solidarity are crucial factors that have slowed the expansion of health insurance schemes in Lao PDR. In regard to co-payments, concerned authorities have different perspectives on the introduction of this scheme; the health service providers' perspective is that a co-payment is necessary to improve the quality of care and eliminate abuse of healthcare services. However, the view of health policy makers and health insurance managers is that co-payments should not be introduced in Laos at this point in time, because it may discourage people from joining health insurance schemes.

**Keywords:** Health insurance schemes, Factor affecting its expansion, Co-payment.

### Introduction

The Lao People's Democratic Republic (Lao PDR) is one of the least developed countries in Southeast Asia. Its total population is around 6.49 million. There are 47 officially recognized ethnic groups (National Statistics Bureau, 2015). The economy of the Lao PDR has experienced substantial progress during the past five years; the Gross Domestic Product (GDP) per capita has increased from \$1,281 USD in 2011 to 1,725 USD in 2015 and about 70% of population works in the informal sector (National Statistic Center, 2012; Lao Statistics Bureau, 2015). The country has achieved significant progress reducing poverty. For example, the poverty rate has decreased from 26.7% in 2010 to 23% in 2015 (Ministry of Planning and Investment, 2010; Lao Statistic Bureau, 2015). However, health expenditures in the Lao PDR highly rely on household out-of-pocket payments from user fees in health care service facilities that can have an adverse effect on healthcare service utilization, and, consequently, health outcome. This contributes to the impoverishment of households (Xu et al, 2003 and Patcharanarumol et al, 2009).

Recognizing the adverse effect of user fees, the government established social protection through health insurance schemes to mitigate the effect of user fees for healthcare in the Lao PDR. Currently, there are four health insurance schemes. In 1993, the government established the first comprehensive social security scheme which was applied to civil servants, police, and military through the Prime Minister

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Decree 178/PM. The target was around 11% of the population; the scheme provided healthcare benefits, child birth benefits and grants, covered for employment injury or occupational diseases, permanent loss of working capacity, sickness, old age pension, survivor and funeral grant benefits. For healthcare benefits, the fee for service system was used at the point of healthcare services in public health facilities, with a ceiling, and the reimbursement model (Sonthany, 2008). This model had the problem of over prescription by hospitals and late reimbursement by the department of social security due to time-consuming procedures, and fragmented contacts between the Ministry of Labor and Social Welfare and healthcare providers. Therefore some civil servants could not claim their healthcare bill from responsible agencies (Jürgensen, 2005). As a result, the scheme was reformed and replaced by the capitation system with the Decree No. 70/PM in 2006. Then, the name of the scheme was changed from civil servant scheme to State Authority for Social Security scheme or SASS.

In 1999, the Social Security Organization (SSO) was created and started to operate in 2001. It is a compulsory scheme that would apply to all employers with more than ten employees, with a contribution rate of 9.5% (5% from employer and 4.5% from the employee's salaries). The target groups are employees of the state, private, and partnership enterprises, which comprise approximately 9% of the population. The scheme provides the same benefits and provider payment methods as the SASS (International Labor Organization, 2015).

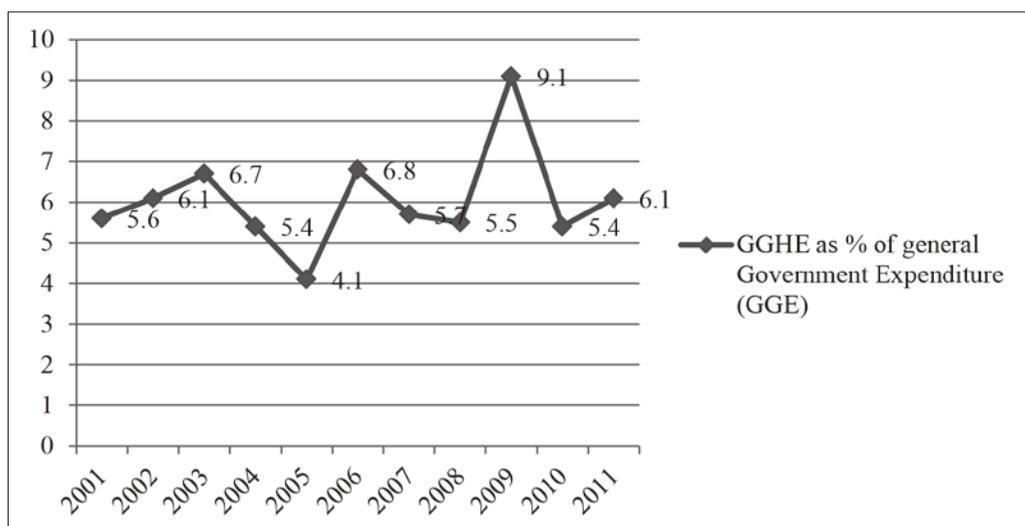
In 2002, the Ministry of Health piloted a Community Based Health Insurance program in five locations; two districts in Vientiane city, and one district in each of the three provinces Luangprabang, Champasack and Vientiane. CBHI aims at providing better access to health services by a regular pre-payment of a small amount. It is a non-profit and voluntary organization (World Bank, 2010). This scheme is a health insurance scheme for the informal sector and non-salaried population, targeting roughly 65% of the population. This scheme provides for a health benefit package and referral to hospitals at the district, provincial, and central levels (Ron, 2006).

In 2004, the Health Equity Funds (HEF) was created with the aim of improving access to health services for the poorest households. The Lao government, the Lao Red Cross, and the Swiss Red Cross finance this scheme, the latter two organizations allowing for third party payment. HEF either reimburses the providers or provides a combination of capitation and case-based reimbursement on healthcare benefits, food and accommodation allowances. The target of this scheme is roughly 15% of the population. In addition to these schemes, since 2010 the government introduced the free healthcare policy for mothers, and children under five years old, known as Free Maternity for All and Free Healthcare for Children under five years old respectively, to accelerate the achievement of the MDG goals by 2015 (Ministry of Health, 2005).

The expansion of health insurance schemes to reach universal coverage by 2025 would require a sufficient budget from various sources such as the government, Official Development Assistance, and households. An additional and sustained financial resource for healthcare is crucial; it is estimated that universal health insurance in the country needs a budget of around \$30 million USD or 0.94% of GDP per year (ILO, 2007). Despite this, government spending on health sector is low. According to the National

Health Account data, the Total Health Expenditure (THE) was only 2.8% of GDP in 2011 (MOH and WHO, 2013). It was much lower than that of its neighboring countries. For instance, the total health expenditure as percentage of GDP was 9.3% in Vietnam, 8.5% in Cambodia, and 14.2% in Thailand (WHO, 2010). The average total health expenditure per capita was around \$37 USD in 2011, of which 39.7% came from households out of pocket payments, 19.9% from government sources, and 31.9% from foreign assistance, while the percentage of government expenditure on health for Social Health Insurance fund was 2.8% (World Bank, 2010, WHO, 2013 and Akkhavong, 2014).

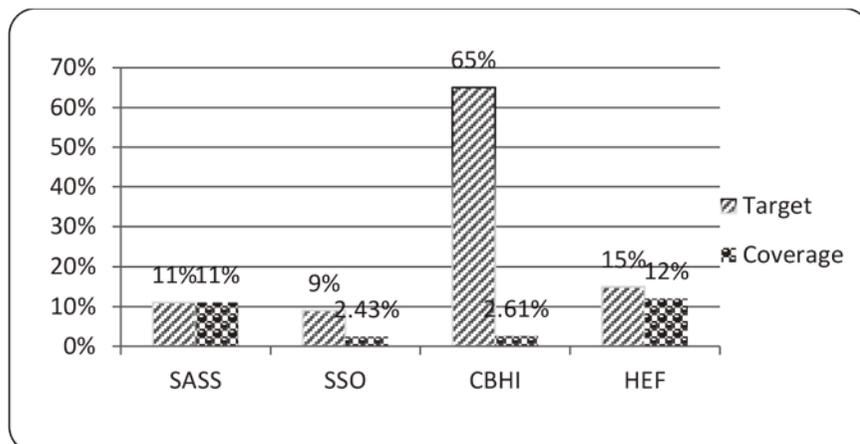
Over the past years, the Lao government has tried to allocate more of budgets to the health sector. In 2012, the National Assembly endorsed a commitment to allocate 9% of General Government Expenditure (GGE) to the health sector to improve health outcomes and increase health service access for the poor. The government has also allocated revenue from Nam Thun 2 hydropower to provide free delivery and child healthcare for children under five years old, as well as Health Equity Fund's resources for the poorest in some priority districts. The General Government Health Expenditure (GGHE), including revenue collected from user fees and Official Development Assistance (ODA) increased gradually from 2001 to 2003 and then fluctuated from 2004 to 2011 due to the change of ODA (see figure 1).



**Figure 1:** Trends of General Government Health Expenditure as percentage of General Government Expenditure from 2001-2011 (Ministry of Finance, 2001-2011; World Health Organization, 2013)

Although, the Lao government's aim of achieving universal coverage by 2025 is clearly defined, the government of Lao PDR has long been struggling to promote universal health coverage and equity access to health services for all ethnic groups nationwide. The population coverage of all health insurance schemes is far from the target of reaching 50% of the total population in 2015. As of 2014, health insurance covered only 28.04% of the total population. It was estimated that 11% of the total population or 418,039 people were covered by the SASS scheme, and about 2.43% of the total population, or around

183,600 people, were covered by the SSO. The community-based health insurance scheme covered around 2.61% of the total population or 161,905 people, while the Health Equity Fund covered 12% of the total population, or 1,171,913 people (see figure 2).



**Figure 2:** Target population coverage by health insurance schemes in 2014 (The National Social Security Fund and National Health Insurance Bureau, 2015)

This paper attempts to examine what caused the health insurance schemes failure to achieve their expansion targets. It also seeks to answer whether or not co-payments should be introduced to improve the quality of healthcare services for insured people.

## Methodology

The existing relevant literature including policies and legal documents were reviewed, and a qualitative research method was applied by interviewing 15 key informants involved in the expansion of health insurance schemes. The key informants were authorities from the Ministry of Health, four central hospitals, one district hospital, four health insurance schemes, the Ministry of Labor and Social Welfare, the Ministry of Finance, Vientiane Capital Health Department, Xaythany's Governor's Office, and the District Health Office. The interviews were conducted in Lao language based on a semi-structured questionnaire, and before conducting interviews a consent form for the interview was provided to explain the purpose of the interview for all informants. The interviews focused on factors impeding the expansion of health insurance and the perception of health service providers in providing healthcare for insured people. The questions cover the interviewees' background, the function of their organization, information related to health insurance schemes, their reflections on health insurance implementation, especially challenges and counter measures to overcome challenges, as well as their perspective on co-payment for healthcare service. The discussions were recorded and translated by the researcher. The data was then analyzed and discussed as follows.

## Findings and Discussion

### *Weak institutional capacity*

The research found that a weak institutional capacity, including the lack of resources, unclear roles and mandates, a weak administrative system of institutions responsible for health insurance are critical factors impeding the expansion of health coverage in Lao PDR. Most institutions responsible for health coverage expansion have limited resources, particularly financial resources to perform their duty effectively. Although data on the deficit or surplus of health insurance schemes is limited, *Table 1* below shows that three out of four health insurance schemes experienced deficits from 2006 to 2014. The SASS experienced an increase in annual budget deficit from about 2.1 billion LAK in 2012 to 10.7 billion LAK in 2013 before going down slightly in 2014. Similarly, CBHI and HEF experienced some annual budget deficit, though the amount was much lower than that of the SASS (see *Table 1*). The budget deficit may have resulted from the high utilization of healthcare services as discussed above and the absence of a payment ceiling for insured members. The interview with key informants revealed that:

“...In some cases, health insurance members were financed by the social security scheme up to 40 to 50 million Kip<sup>2</sup> because there is no ceiling on spending for treatment of each member especially accident cases, but if treatment lasts longer than six months, the patient is required to contribute to the cost of treatment and the health insurance fund does not cover treatment expenditures for very high treatment cost, such as heart operations, as the fund does not have such capacity.” (Key Informant 2, Implementer).

Sometimes, the SASS provides spending coverage for treatment overseas when an insured member travels aboard on an official mission and becomes ill and needs treatment, or when domestic hospitals certify that the health problem of its members needs to be treated abroad.

In some cases, the organizations responsible for the health insurance implementation do not receive the budgets to perform its activities. For example, the National Health Insurance Bureau NHIB operates under the Department of Finance of the Ministry of Health though it claims to have the same status as the Department of Finance. However, it does not have its own budget and lacks human resources, and there are no clear job descriptions for each type of staff. One key informant from the Ministry of Health mentioned that:

“...One reason for the slow expansion of health insurance coverage on the part of informal workers is limited resources to conduct awareness campaigns especially in distant rural areas. The government is committed to contribute 50% of the National Health Insurance Bureau required budget annually, but this organization still hasn't received any budget. Therefore, we don't have money to expand health insurance coverage to reach 50% of MOH's target by 2015.” (Key Informant 3, Implementer).

<sup>2</sup>1 USD = 8,000 Lao Kip (LAK) on March 2015

Surplus or deficit by all facilities VS user fees (Million Lao Kip, 1USD = 8,000 LAK)	2006	2007	2008	2009	2010	2011	2012	2013	2014
State Authority Social Security Scheme	NA	NA	NA	NA	NA	1,413	-2,137	-10,728	-10,611
Social Security Organization Scheme	35	232	2,802	2,084	NA	NA	NA	NA	NA
Community-Based Health Insurance Scheme	0	-237	-235	-111	NA	68	-76	NA	NA
Health Equity Fund	0	NA	NA	0	0	0	NA	212	-14

**Table 1:** The amount of surplus or deficit by all contracted hospitals (The National Social Security Fund and National Health Insurance Bureau, 2015)

Note: NA = Not Available data.

The study also found about unclear roles and mandates of institutions responsible for universal health coverage. For example, NHIB was established in 2013 and its mandate is for health insurance functions of pooling, purchasing/contracting, claims processing, payments and conflict resolution. According to the Prime Minister's Decree No.470, NHIB is composed of SASS, SSO, CBHI, and HEF. In practice, however, NHIB is composed of only the health insurance, or health benefit component, under SASS and SSO and will receive only 2% of the fund collected through these schemes by the Ministry of Labor and Social Welfare. Currently, no agreement on health insurance between the Ministry of Health and the Ministry of Social Welfare has been reached. Based on the interview of the staff for health insurance in the Ministry of Health, the Ministry of Labor and Social Welfare submits the capitations only to the contracted health facilities, while the Ministry of Health is demanding some money for administrative costs as well (extensive interview, February 24, 2015). With the absence of roles and mandates of the institutions responsible for health insurance in the Ministry of Health and the Ministry of Labor and Social Welfare, it becomes difficult to effectively manage and expand health insurance schemes in Lao PDR. Both ministries were waiting for the problem to be solved, but there is no middle institution or government intervention on the issue.

Another crucial factor that weakens institutional capacity for health insurance expansion and management is the poor administrative system of some institutions responsible for health insurance. The NHIB, for example, has insufficient authority to perform its duties as a health insurance institution and does not have the capacity to pool and manage funds from social security, nor the capability to create and operate a unified management and information system. At the moment, NHIB manages CBHI and HEF (HEF supported by government budget); the proportion of total revenue from CBHI scheme to service providers is 90% of contribution pooled at the provincial and district administrative health offices and 10% for administration and monitoring payment, while HEF is 95% pooled at district hospitals and 5% for administration payment. NHIB did not receive any revenues collected by CBHI.

In addition, CBHI did not have a proper system for receiving contribution payments. In general, CBHI members can pay their contribution at village, district hospitals or provincial hospitals. The contribution is usually paid every three months. CBHI did not have its own staff at the village level and has to hire a villager to collect the contributions. The problem was that, in some cases, the CBHI assigned individuals to collect the money from villagers, but they did not give it to CBHI. Villagers who paid their contribution did not receive any benefits from CBHI. More importantly, NHIB has a weak reporting system to get accurate data from health insurance schemes, which leads to limited progress in achieving a unified and harmonized process for collecting, processing and reporting information. CBHI did not have a system or resources to monitor the contribution payments made at different levels of health services. The key informant from this organization emphasized that:

“...the budget to conduct monitoring at provincial and district levels is not available. Therefore, we assigned provincial staff to monitor the implementation and quality of services provided to insured patients at district hospitals in order to get feedback to NHIB. We also don't have enough budgets to organize regular meetings with healthcare providers to access real implementation issue and solve the problem.” (Key Informant 5, Implementer)

The finding was supported by the study conducted by Hernan (2014) that NHIB was established without a careful design and with no implementation plan, and supported by the study conducted in Vietnam by Rousseau (2014), which revealed that weak management system was partly responsible for inefficiency in the implementation of health insurance. It implies that with the budget deficit, unclear roles and responsibilities, poor administrative and contribution collection systems, it would be extremely difficult for the health insurance implementers to effectively perform their tasks. This will have an adverse consequence on the satisfaction of their customers, which will in turn affect the expansion of health insurance coverage.

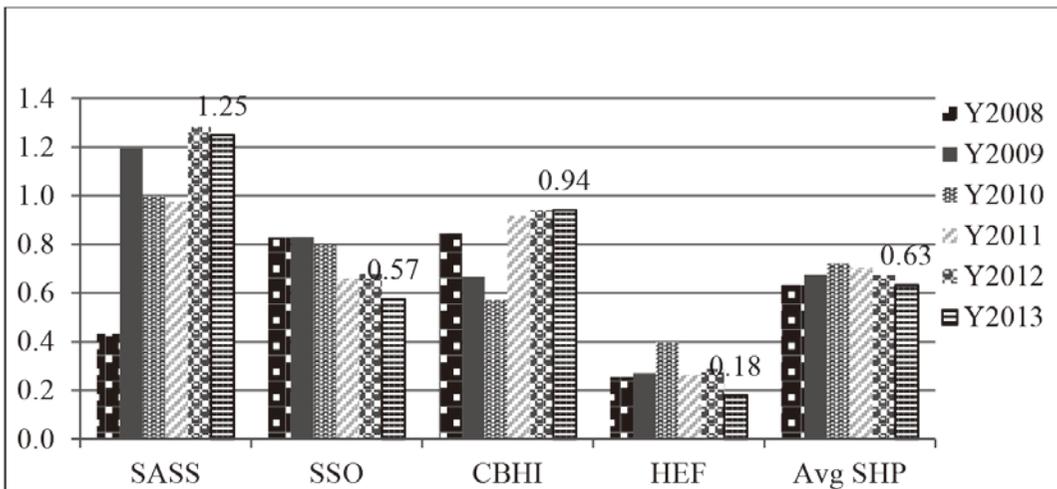
### ***Weak law enforcement***

Another factor affecting the expansion of a social protection scheme is weak law enforcement. For example, the expansion of SSO failed to achieve its target simply because private enterprises ignored the law and regulations and state authorities seem to do nothing about it. There is no doubt that a large number of private enterprises do not participate in the SSO scheme. For example, in Xaythany district 35 out of 238 companies have so far joined the SSO scheme to provide social protection and health insurance to their workers. The finding was supported by the study conducted by Alkenbrack and her colleagues (2015). Despite such a large number of companies ignoring the law and regulations, nothing has been done to make them comply with the law and regulations. The Lao Trade Union (LTU), which is responsible for private employee protection has not attempted to solve the problem. The results of their study also revealed that small family owned businesses were less likely to enroll in social security schemes compared with large firms. This is against the Law on Health Care passed in 2005 and the 2013

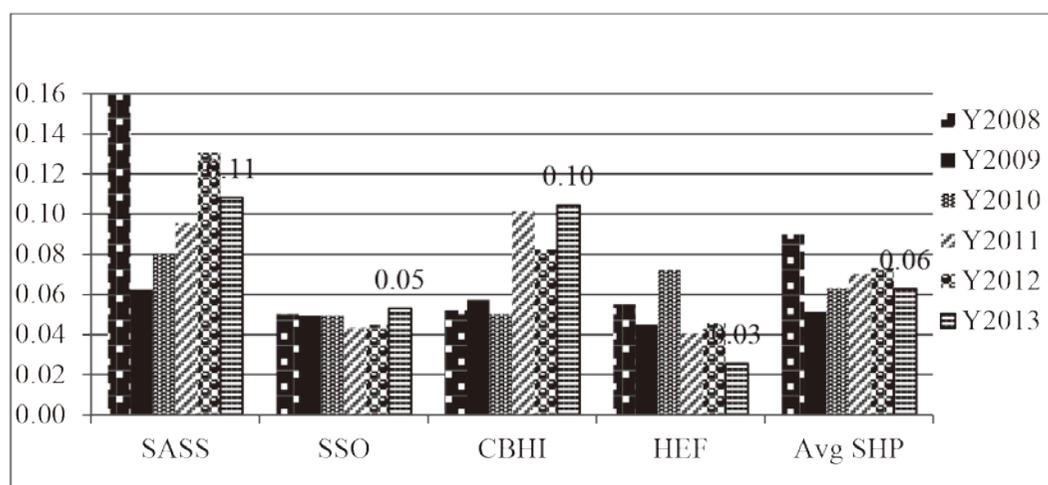
Law on Social Welfare. Weak enforcement could be explained by various factors, including the lack of political will, weak institutional capacity and inappropriate social security law enforcement mechanisms. Weak enforcement of social security laws also occurs in neighboring countries including Vietnam. As pointed out by Rousseau (2014) that Social Security of Vietnam has low power and capacity to control and follow up the implementation of health insurance schemes.

**Low capitation payment and social solidarity**

The study found that the concerned authorities believed that low capitation fees and high utilization rates have had a significant negative impact on the expansion of healthcare coverage. In general, contracted hospitals would receive a capitation of around 85,000 LAK per person per year (\$10.62 USD/person/year); the current capitation rate can cover only one Outpatient Department (OPD) and about 0.2 to 0.4 Inpatient Department (IPD) per year per person. It was more than three times lower than capitation rate of Thailand that was about \$50 USD in 2007 (Limwattananon, et.al, 2013). Despite the small capitation, the utilization rate of insured people was high by Lao standards given that the number of insured people was low. During the extensive interviews conducted on February 24-25, 2015, the key staff in three central hospitals (Setthathirath, Mahosot and Mitaphap) claimed that the utilization rate of health services by insured people was too high. The data from the National Health Insurance Bureau also revealed that among all health insurance schemes, SASS and CBHI experienced the highest rates of outpatients and inpatients between 2008 and 2013, accounting for 1.25% and 0.94% of all insured people of each scheme respectively (see *Figure 3* and *4*).



**Figure 3:** Trend in OPD utilization rate by health insurance schemes (National Health Insurance Bureau, 2015)



**Figure 4:** Trend in IPD utilization rate by health insurance schemes (National Health Insurance Bureau, 2015)

With small capitation, hospitals are facing significant losses annually. Although the amount of losses was not available for all healthcare facilities, it has been widely echoed among health service providers that they lost a lot of money from providing care to insured people. According to the staff in charge of the health insurance division in Mahosot Hospital in Vientiane, the hospital faced a budget deficit of about 2 billion LAK (Lao kip) annually due to low capitation and the high utilization of healthcare services (extensive in-depth interview, February 24, 2015). Similarly, the staff responsible for health insurance division at Setthathilath Hospital in Vientiane acknowledged that the hospital faced a budget deficit from providing care to insured people (extensive interview, February 24, 2015). Mitaphab Hospital had a similar experience, facing financial problems in providing healthcare to insured people (extensive interview, February 25, 2015). The findings were supported by the study conducted in Vietnam by Phoung and her colleagues (2015) in that a district hospital faced a critical budget deficit due to the low capitation rate. It is obvious that with the budget deficit, hospitals would not be able to provide good quality healthcare services to insured people. Only a minimum benefit package was provided; many diseases were not covered and drug supplies were extremely limited. This would certainly result in low satisfaction with healthcare services among insured people. This would hinder health insurance schemes from expanding the coverage. The uninsured population will not join the health insurance schemes, and some insured people may be reluctant to renew or opt to terminate their memberships. The concerned authorities should attempt to widely launch an advocacy of right-balanced capitation so that service quality can be improved to meet the expectations of the insured population.

Moreover, the lack of social solidarity has also impeded the social protection schemes. A lot of people just do not see the importance of social protection if they do not have health problems. The experience of CBHI perfectly illustrates the issue associated with the lack of social solidarity. According to personal communication with the staff responsible for CBHI in the Ministry of Health, adverse

selection is too common. People often pay contributions only when feeling sick and stop paying after that. This has resulted in high drop-out rates and failure in achieving the targets. People do not see the importance of contributions they make to the health insurance schemes, which can help to save other people's lives.

### ***Copayment***

Health service providers experience critical budget deficits due to a high utilization rate of health care service, and thus a copayment is often proposed to solve the problem. In Lao PDR, the introduction of a copayment is being debated among health care providers and health policy makers. The results of this study reveal that perceptions on the issue of copayment were widely divided among the concerned staff in Lao PDR. From the health provider perspective, co-payment should be introduced for two main reasons. First, copayments would help to reduce budget deficits. Second, copayments would help to change the behavior of insured people to reduce unnecessary utilization of health services, and improve reasonable treatment for patients because NHIB can monitor expenditure based on copayments collected in hospitals. The staff in charge of health insurance in Mahosot Hospital contended that:

“...Copayment policy is very useful for hospitals for quality improvement, and reduces the over utilization of insured member. A copayment should be 10% in order to provide the best quality of care to insured members, and subsidize the exemption scheme. Recently, there is some copayment of health insurance members existing in the hospital for kidney dialysis, VIP room for admission. However, before introducing this policy, the government should pass the Law and enforce it effectively.” (Key Informant 6, Service provider).

On the contrary, most of Lao health policymakers and health insurance implementers are reluctant to introduce copayments. They believe that it will affect the health insurance scheme expansion negatively because the public is not ready for a copayment. They do not understand the limitations of health insurance schemes and demand for more and more from them. The health staff responsible for health insurance in the Ministry of Health said that even without a copayment, it is still difficult for a volunteer scheme like CBHI to expand its coverage. She further contended that:

“...copayments should not be introduced in Laos at this point in time because we are now encouraging people to join health insurance schemes. Copayments may be possible in 2030, when the country achieves full universal coverage (UC), but it should not exceed 10% in order to change the healthcare seeking behaviors of the insured people.” (Key Informant 2, Policymaker)

### **Conclusion**

After the introduction of user fees in the mid-1990's, four health insurance schemes have been implemented to alleviate the adverse consequences of user fees for healthcare services in Lao PDR.

Currently, there are four health insurance schemes, namely the Social Security Organization (SSO), the State Authority Social Security (SASS), the Community Based Health Insurance (CBHI) and the Health Equity Funds (HEF). However, the expansion of social protection by these four schemes has been below their targets. The coverage of all health insurance schemes were expected to cover 50% of the total population in 2015, but only 28.04% of the total population was covered by social protection schemes in 2014. Among these schemes, CBHI, which is a voluntary scheme, could achieve only 2.61% in 2014 out of 65% of its target set by 2015. Even a compulsory scheme like SSO could achieve only 2.4% out of 9% of its target population.

There are several factors that impede the expansion of social protection schemes in Lao PDR. Low capitation of healthcare services causes health facilities to face critical financial problems. Major hospitals in Vientiane complain that they lose a huge amount of money annually from providing healthcare services to insured people. It has affected the quality of care provided and discouraged people from joining health insurance schemes. In connection to the lack of funds, the budget deficits of health insurance schemes could also affect the expansion of social protection because there are not enough financial resources to raise public awareness about the importance of health insurance schemes, particularly voluntary schemes like CBHI and HEF.

The unclear role and mandates of institutions responsible for health insurance schemes and weak law enforcement also impede the expansion of social protection coverage. The National Health Insurance Bureau was established, but without having clear mandates and adequate resources it could not perform its duties effectively. Compulsory health insurance schemes like SSO have failed to expand their coverage simply due to weak law enforcement. Several private enterprises do not comply with the relevant laws and regulations, but nothing has been done to address the issue.

A poor administrative system of institutions responsible for health insurance has also affected the expansion of health insurance schemes, especially the CBHI. There was no proper contribution payment system in place. CBHI did not have accurate information about its finance at different levels. In some cases, the persons assigned by CBHI to collect contribution payments did not hand in the revenues they collected. This made villagers angry because they could not receive the benefits in accordance with their contribution.

There is no common ground on the issue of copayments. From the perspective of healthcare service providers, a copayment is necessary to improve the service quality. With copayments, there will be more financial resources, and insured people may change their health seeking behaviors by not seeking unnecessary healthcare. However, some high-ranking officials in the Ministry of Health and in social protection schemes believe that it is not the right time to introduce copayments because they may negatively affect the health service utilization rate.

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# ORIGINAL RESEARCH:

## Spatial Structure of Tokyo Metropolitan Area

Tawhid MONZUR<sup>1</sup>

### Abstract

This research is focused on analyzing the urban spatial structure of the Tokyo Metropolitan Area (TMA) by using the Exploratory Spatial Data Analysis (ESDA) approach. To address the main research objective, the spatial structure of the population is analyzed. For this research Global Moran's I and Local Moran's I were selected. The population Census data 2000 is used for this analysis. ArcGIS 10.1 and GeoDa software are used to project and analyze the population census data. Population numbers are converted to density to exclude the influence of the census unit area sizes. The analysis pointed out specific locations of clustering types by proving the existence of spatial association and heterogeneity and differences in the case of the spatial pattern of population distribution.

**Keywords:** Exploratory spatial data analysis (ESDA), GIS, Population, Spatial structure, Tokyo Metropolitan Area (TMA)

### Introduction

Studying urban spatial structure, especially that of large urban areas, is becoming more important than ever because of the current pace of urban growth. The Current pace of population growth is considered as a “problem of the many” in the environment, social, and economic domain, which needs proper policies and planning initiatives for urban regeneration in a sustainable manner (Smith 2011; Knaap et al 2013; Bertaud 2001, 2004; Rode et al 2008; Lee 2007; Glaeser and Khan 2001; Mieszkowski and Mills 1993).

This research has selected Tokyo for analysis. Firstly, the urban management plan of Tokyo is praised because of its uniqueness and effectiveness (Hein, 2010). Secondly, the urban development process of Tokyo experienced multiple political, economic, and environmental upheavals, but still carries fame for attaining a sustainable urban form (Cho 2011; Morita et al 2012). Thirdly, to understand the overall spatial structure of TMA by using the ESDA approach, and assess its suitability in studying a large area. Henceforth, understanding spatial structure of TMA could contribute to both Tokyo and the emerging Asian cities in urban and regional planning. Asia Pacific countries are facing a problem of proper urban planning. Besides, most of the metropolitan areas located in the Asia Pacific are beset with social, environmental and economic issues referred to as the “The developing country phenomena” (Bugliarello 1999). New emerging cities in the Asia Pacific region are more complex in nature and difficult to study by using the conventional methods of urban studies. This research has selected a group of spatial statistical approaches simply called the Exploratory Spatial Data Analysis (ESDA) that has been effectively used for urban structure analysis from 2 perspectives: (1) the first group of research studied the Employment

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distribution<sup>2</sup> (e.g., Baumont et al 2004; Guillain et al 2006), and (2) the second group of research studied the Population distribution<sup>3</sup> (e.g., Millward and Bunting 2008; Millward 2008)

The research is constructed to study the spatial structure of TMA by using the ESDA approach. To address the research goal, the spatial structure of the population is analyzed because population is sensitive to changes in urban structure (Baum-Snow 2007). The research uses the Geographic Information System (GIS) and applies the Exploratory Spatial data analysis (ESDA) approach. Moreover, this research will also explore methods to observe the suitability of this approach in studying the spatial structure of the Tokyo Metropolitan Area.

The paper is structured as follows. The next section is a brief review of theoretical and empirical studies that have been done for studying Tokyo's spatial structure, as well as methods that have been applied. The 3rd section describes the study area, data collection, and preparation for the analysis, with the description of a spatial weight matrix. Section 4 deals with the methods of explanation and the empirical results. Finally, the conclusion describes the research findings and further analysis that can improve the research results.

## 2. Urban Spatial Structure Studied for Tokyo

The spatial structure of Tokyo has been studied from different perspectives. It has been analyzed based on a historical review, categorization of important events, location and amenities preferences, and employment distribution and inter-urban population distribution/migration (for example, see, Ichikawa 1994; Watanabe 1972, Watanabe et al 1980; Kikuchi and Obara 2004; Sorensen 2001a, 2001b; Okata and Murayama 2011; Pernice 2007; Tonuma 1998; Hein 2010). Tokyo has a good transportation network, which connects the urban and suburban locations, and enables the city population to commute from long distances. Decentralization, as stated in the paper of An (2008), is one of the main governmental policies which has been emphasized for reducing the concentration within the CBD (Central Business District) areas. To get rid of the negative urban externalities, government plans seemed successful for the development of the CBD areas but some research studies have criticized the idea of concentration outside the CBD areas that worsen the situation of suburbanization, which became one of the prominent issues that the government of Tokyo has had to deal with (Sorensen 2001a, 2004). Several urban policies have been implemented, but population concentration surpasses all the regulations.

Tokyo spatial structure studies can be found in papers where the main focus was on personal income, transportation costs, land price fluctuations, and land use changes for agricultural purposes that influenced the spatial pattern of Tokyo (Fujita and Kashiwadani 1989; Zheng 1990, 1991; Inoue et al 2007; Kikuchi and Obara 2004). A Local Moran's I with k-order neighbors was used to analyze the distribution of elderly people in Ichikawa City (Zhang and Murayama 2011), and selected only a small part of TMA.

<sup>2</sup> Employment distribution studied for the urban areas are- Los Angeles, The United States, eight departments of Ile-de-France region, France, Singapore, Singapore, the Jakarta Metropolitan Area (JMA), Indonesia, Alexandria, Egypt, Rome, Italy, Athens, Greece, Hermosillo, Mexico and Dijon, France.

<sup>3</sup> Population distribution studied for Five Canadian cities are- Toronto, Vancouver, Calgary, Kitchener and Halifax.

Articles related to the Tokyo spatial structure are large in number and focused on modeling the factors that affect distribution, and lack of a visual understanding. Only a very small number of research has actually tried to understand the spatial structure itself. They failed, however, to study the whole metropolitan region. This research looks at the overall spatial structure of TMA by looking at the differences in the distribution of population and that can fill the gaps of spatial structure studies previously done for studying TMA. By further research, the spatial structure of TMA can contribute to better urban policy-making for the region, and serve as a reference to the emerging megacities of the Asia Pacific region in urban planning and policy implementation (Uchiyama and Okabe 2012).

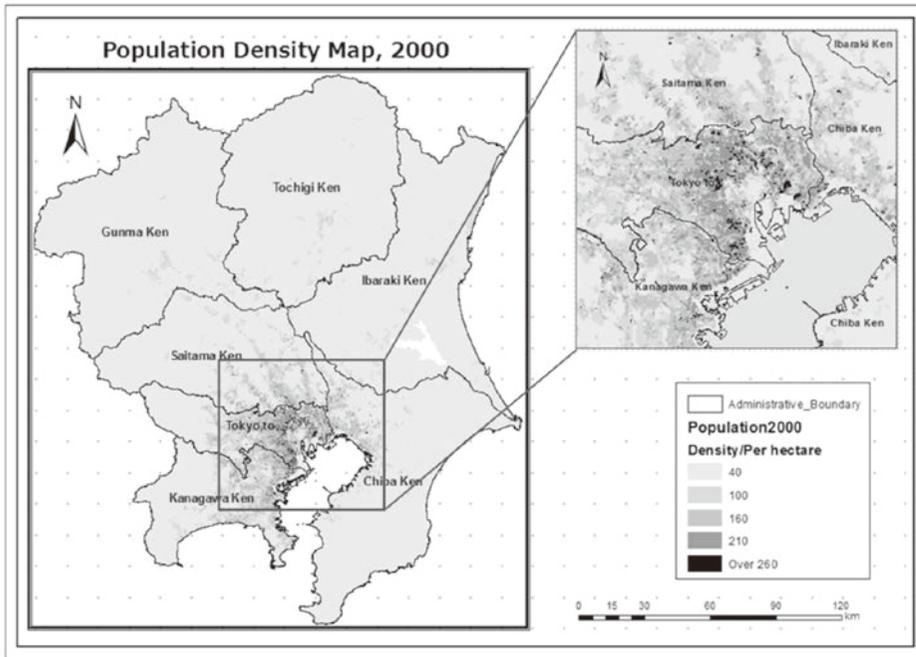
This research has selected the spatial statistical approach in analyzing the spatial structure of TMA because past research studies have used a regression based approach, cluster approach, or Grid-based approach in studying the spatial structure of TMA (for example, see Alpkokin et al 2007; Zheng 1991; Bagan and Yamagata 2012). A statistical based approach, however, was used by Zhao and Murayama (2005) to analyze the land use pattern focused on a small part of the central business district (CBD) in the TMA. In contrast, this research tends to analyze the spatial structure of the TMA on a regional level. The next section describes the study area and methods used for this research.

### **3. Research Approach and Methodology**

This research selected the GISA (Global Indicator of Spatial Association) and LISA (Local Indicator of Spatial Association), the two branches of ESDA approach in studying the spatial structure of TMA used by many small and large cities to understand spatial association and spatial heterogeneity in spatial structure, which are lacking in the cases studying the TMA.

#### ***3.1 Tokyo Metropolitan Area***

This research focuses on the Tokyo Metropolitan Area, including the 23 inner wards and the neighboring prefectures: Saitama, Kanagawa, Chiba, Gumma, Ibaraki, and Tochigi. It is an area of 32,028 [km] <sup>2</sup> and is referred to as the largest mega metropolitan region in the world. Tokyo shares 8.5% of the land in Japan and has a population of 40.4 million people, mostly concentrated around the Tokyo Metropolitan Area (based on the 2000 census data). It is the economic hub of Japan, with a high rate of population concentration. (Table 1).



Created by the Author

**Figure 3.1:** Population Density of TMA (per/ha), 2000 (Natural Breaks)

Prefectures	Tokyo-to	Kanagawa	Saitama	Chiba	Ibaraki	Tochigi	Gunma	Total
Population	120,408,75	849,0236	693,8159	592,1994	298,2323	200,7773	202,4699	404,060,59
Household	541,3504	334,1301	248,2408	217,1144	984,814	668,352	695,058	157,565,81

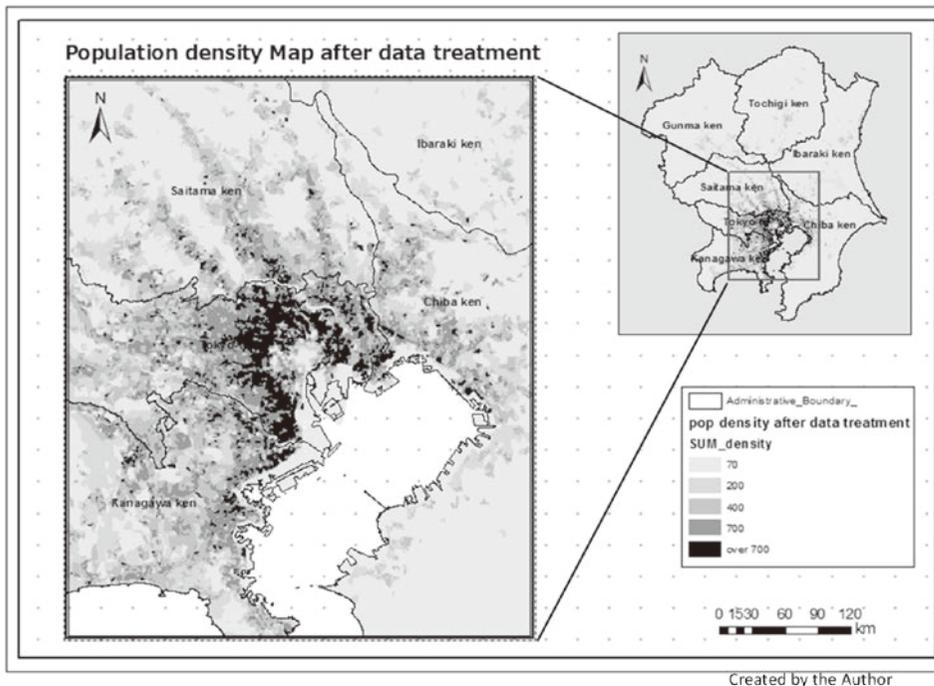
**Table 1:** Demographic distribution in Tokyo Metropolitan Area, 2000 (Source: Authors calculation from the employment dataset)

### 3.2 Data

This research uses population census data from 2000, collected from the Ministry of Internal Affairs and Communications (MIC). The population census dataset contains different sets of variables, but for this research, only the population distribution data has been manipulated by using Excel's statistical software. The boundaries of the census area units are provided in an ArcGIS shapefile as presented in Figure 3.1. Since the areas of census units (polygons) are different, this study further divided the study area into 200 meter by 200-meter cells, with the population evenly allocated to each cell according to the total population number within the polygon. It contains 804,002 cells in total. From Figure 3.2, it can be observed that after treating the density dataset, the locations of high density are clearly visible.

Conceptual representation of the location is a prerequisite in order to identify the spatial association and spatial heterogeneity (Baumont et al 2004; Guillain et al 2006). A Spatial Weight Matrix is constructed based on the notion that each observed value is linked to a set of adjacent neighboring

observed values, which is exogenous by nature (Baumont et al 2004). The elements of the weight matrix ( $w_{ii}$ ) have 0 diagonals whereas the elements ( $w_{ij}=1$ ) represent the spatial influence of location  $i$  to location  $j$ . For this research, Queens contiguity weight matrix (1st order) has been selected with at least 9 conjoined cells, and are considered a clustered location (Getis and Aldstadt 2002).



**Figure 3.2:** Population density Map after data treatment, 2000

For the tabulation and manipulation of the extracted data, Excel statistical software is used. Also, the spatial statistical toolsets are analyzed by using the ArcGIS 10.1 and GeoDa software.

## 4. Empirical Results

### 4.1 Global Moran's I

The Global Moran's I, also called the Global Spatial Autocorrelation, measures the linearity of the observed value to its neighboring values, which determine the identification of the spatial distribution patterns (Dispersed, Random and Clustered) of a certain phenomenon (Goodchild 1986, Griffith 1992)

To determine the spatial patterns Global Moran's I provide two sets of Moran's I indexes; Positive Moran's I Index and Negative Moran's I Index. The 3rd set of indexes appears when the Moran's I Index provides 0 (ArcGIS resource)<sup>4</sup>.

The dispersed spatial pattern means that each observed value from its neighboring values is located

<sup>4</sup> [http://resources.esri.com/help/9.3/arcgisengine/java/gp\\_toolref/spatial\\_statistics\\_tools/how\\_spatial\\_autocorrelation\\_colon\\_moran\\_s\\_i\\_spatial\\_statistics\\_works.htm](http://resources.esri.com/help/9.3/arcgisengine/java/gp_toolref/spatial_statistics_tools/how_spatial_autocorrelation_colon_moran_s_i_spatial_statistics_works.htm)

far from each other, or has less linearity between the observed value and the neighboring values. In this case, Moran's I index will be negative. The Random spatial pattern means the distribution of the values is independent. More precisely, no spatial connection existed between the observed and neighboring values (Moran's I Index will be 0). The Clustered spatial pattern means most of the values are concentrated in nearby locations or adjacent together, and Moran's I index will be positive. Moran's I can be written as follows (Viton 2010):

$$I = \left( \frac{s}{\sum_{ij} w_{ij}} \right) \frac{\sum_{ij} w_{ij} (b_i - \bar{b})(b_j - \bar{b})}{\sum_i (b_i - \bar{b})^2}$$

Where,

S = number of observations

$\sum_{ij} w_{ij}$  = sum over all i and j of  $w_{ij}$

$w_{ij}$  = spatial weight between i and j.

$W_{ij} (b_i b_j)$  = weight \* cross product terms.

The Global Moran's I analysis output (Moran's I index is 0.93) reveals that a strong spatial autocorrelation exists within the population distribution in TMA. More precisely, the Global Moran's I Index proves that the distribution of the population in Tokyo tends to have a clustered spatial pattern. Moreover, The Z-score is as high as 1662.85 while higher than +2.58 can show enough that there is a 99% chance that the data is taking a clustered pattern (ArcGIS resource)<sup>5</sup>.

Global Moran's I analysis gives an overall result of the formation of a certain type of spatial pattern in the selected area. However, Global Moran's I analysis alone cannot provide enough evidence to identify the spatial differences. The output failed to provide evidence about the locations of high and low values. To find out the high and low-density locations and also the dissimilar locations, Local Moran's I is used and discussed in the next section.

#### 4.2 Local Moran's I

The Global Moran's I analysis, found strong evidence that a clustered pattern exists in TMA in terms of population distribution, but fails to identify what type of clustering and the locations of the spatial association and spatial heterogeneity. On the other hand, Local Moran's I calculates each location separately (different locations of an area). Local Moran's I is technically a localized version of Global Moran's I that looks at the specific locations and provides evidence on the assumption of the Global Moran's I. The Local Moran's I identify the significant locations of positive or negative autocorrelation. The Local Moran's I can be written as follows (Anselin 1995)-

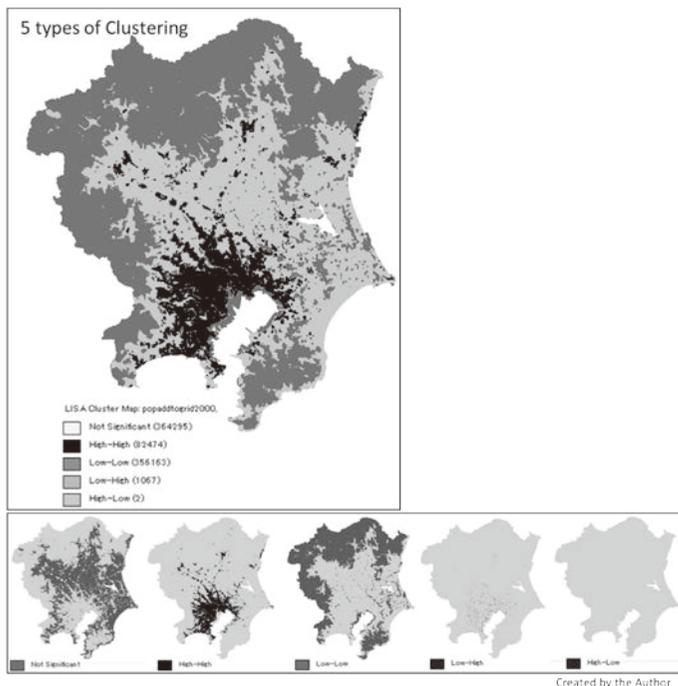
$$I_i = b_i \sum_j \hat{w}_{ij} b_j$$

$$\text{Where, } b_i = Z(b_i) = \frac{b_i - \bar{b}}{\sigma} \ \& \ \left[ \sigma = \frac{\sum_j (b_i - \bar{b})^2}{s-1} \right]$$

<sup>5</sup> [http://resources.esri.com/help/9.3/arcgisdesktop/com/gp\\_toolref/Spatial\\_Statistics\\_toolbox/what\\_is\\_a\\_z\\_score\\_what\\_is\\_a\\_p\\_value.htm](http://resources.esri.com/help/9.3/arcgisdesktop/com/gp_toolref/Spatial_Statistics_toolbox/what_is_a_z_score_what_is_a_p_value.htm)

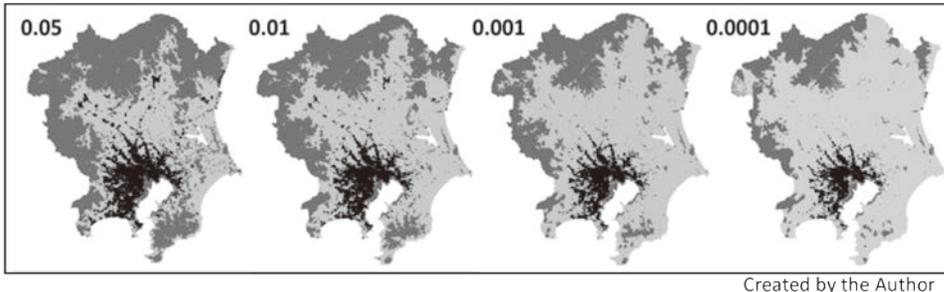
The Local Moran's I analysis divides all the values into five separate groups based on the Local Moran's I Index and the significance level. Local Moran's I not only identifies the high and low values but also addresses the outliers of the values. Insignificant (i.e. no significant clustering exists); High-High group (i.e. high values are clustering with other neighboring high values and are above the mean); Low-Low group (i.e. low values are clustering with other low values and below the mean); High-Low group (i.e. high values clustering with low values and are below the mean); and Low-High group (i.e. low values are clustering with high values and are below the mean). The first 2 groups (HH and LL) signify a positive spatial autocorrelation or, in other word, spatial clustering. The 3rd and 4th group (HL and LH) signify a negative spatial autocorrelation, or are what is known as outliers or dissimilar values (Baumont, et al 2004; Anselin 1995).

Figure 4.1 shows the 5 types of clustering in TMA. The insignificant clustering or NS group pattern contains the highest number of 364,295 cells, the High-High clustering group or pattern contains about 82,474 cells, Low-Low clustering group or pattern contains 356,163 cells, Low-High clustering group or pattern contains 1057 cells and high-low clustering group or pattern contains 2 cells. The outcome provided by the Local Moran's I calculation are statistically significant at a 0.05 confidence level. Interpretation of the outputs and identification of the locations of 5 clustering types is very difficult at a 0.05 level of significance, or is too general. In this case, threshold significance levels are selected (0.01, 0.001 and 0.0001 level of significance) to observe the clustering types. From figure 4.2, the differences in spatial clustering can be visible in cases of population distribution, which selected locations as clusters based on the intensity of the clustering



**Figure 4.1:** The 5 types of Clustering (at 0.05 Level of Significance)

The Local Moran's I analysis identified the specific locations of the high-density areas or hotspots and low-density areas or cold spots in TMA. Besides, the analysis also identified the outliers or dissimilar locations mostly adjacent to high population density areas.



**Figure 4.2:** The 5 Clustering types at 0.05, 0.01, 0.001 and 0.0001 Level Of Significance.

## 5. Conclusion

This paper contributes to urban spatial structure studies through using the ESDA statistical approach in studying the spatial structure of the Tokyo Metropolitan Area. For this research, a population distribution dataset for the year 2000 was selected and analyzed. Global Moran's I and Local Moran's I were used for this research.

This research selected a widely used statistical based approach, ESDA, to study a large urban area, in this case the TMA. The ESDA approach has been used to study the spatial structure of many large and small cities, and proved effective and easy to use. In the case of the TMA, Local Moran's I analysis identified the locations of high and low clustering as well as outliers/dissimilar locations, providing an explanation for the spatial structure of the TMA to a great extent. The difference between the previous methods and ESDA is, ESDA addressed the locations of the high and low clustering as well as intensity of the clustering that previous research papers lacked in studying the spatial structure of TMA. Moreover, ESDA based studies in case of employment and population distribution studied the differences in locations or looked at one cluster type to draw a conclusion. This research used ESDA in a different way to understand the spatial structure where the threshold significance level is considered as classifying further the cluster types to different ranked centers to see the incite of the spatial pattern.

Spatial structure of population distribution: the Local Moran's I analysis, identified the locations of high and low density as well as identified the locations of dissimilar areas in case of population distribution in TMA. In general, The Local Moran's I analysis separated all values into 5 different clustering types based on a 0.05 level of significance and showed all potential locations of clustering. To identify the true locations of clustering, threshold significance levels were selected (0.01, 0.001 and 0.0001 level of significance) that identified the locations based on the intensity of the relations between the observed and neighboring values that Global Moran's I indexes failed to provide. The intensity of the clusters can further help to analyze the centers and sub-centers of the TMA as well as employment

distribution.

For this research, I have used a grid of  $200 \times 200 \text{m}^2$ , but it could be different if the size of the grids is changed. Further studies will look at the differences in grid size and their impact over spatial pattern analysis. The research can be further improved by looking at land use changes over time based on population and employment distribution. Further research also aims to use population and employment variables to analyze what made the dissimilar clustering types exist within the TMA. Additionally, distribution of employment, transportation, and population for recent years will be studied to analyze the changes in the spatial pattern in the TMA.

The explained methods and findings of this research can help in spatial pattern studies of the Asia Pacific region. The emerging cities in the Asia Pacific region are going through an urban transformation, and it is necessary to understand the spatial structure both at the local and regional levels. Uchiyama and Okabe's (2012) research paper visually showed the emerging cities transformation that could be problematic for the future of urban studies. Henceforth, this research can help provide a broader perspective in studying and analyzing the spatial pattern of emerging cities. Nonetheless, to understand the spatial structure of a city, it is necessary to identify the differences in spatial patterns that can guide urban planners in decision-making and implementation of urban policies at a regional level.

#### Notes:

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# **ORIGINAL RESEARCH:**

## **Japan, China and the Trans-Pacific Partnership (TPP) as a Strategic Tool of Choice**

Benny TEH Cheng Guan<sup>1</sup>

### **Abstract**

This paper discusses the role of the Trans-Pacific Partnership (TPP) agreement as a strategic tool for Japan in pursuing its national and regional interests. While it is undeniable that the economic benefits to be accrued from the agreement in terms of boosting Japan's economic growth are important and well argued, Tokyo's motivation to engage the TPP is driven more by its geopolitical and strategic calculations. The former serves middle to long-term ambition while the latter takes on short to middle term goals. Centering on the latter, the paper discusses three major motivations: 1) the use of the TPP to exert innovation and drive change at home in maintaining its strategic competitiveness; 2) the perceived importance of the TPP as a rule setter for regional economic cooperation; and 3) the significance of the TPP in balancing Beijing's strategic influence in the region. China's move to fortify its relations with neighboring countries through its own initiatives in an unending tussle with the US could see the formation of two opposing trade blocs in the Asia Pacific region. Japan can play a significant role in bridging the gap and contribute to the possibility of convergence.

**Keywords:** Japan, China, Trans-Pacific Partnership, Free trade agreement, Geopolitical

### **Introduction**

The Trans-Pacific Partnership (TPP) has often been billed as a highly ambitious 21st century regional free trade agreement not simply because of having the objective to address new global trade and investment challenges in the new millennia, but also to push cooperation beyond the World Trade Organization (WTO) in many areas including the protection of intellectual property, environment, and labor. With 30 chapters, the TPP agreement (TPPA) is promoted as a "high-standard, ambitious, comprehensive, and balanced agreement that will promote economic growth; support the creation and retention of jobs; enhance innovation, productivity and competitiveness; raise living standards; reduce poverty in our countries; and promote transparency, good governance, and enhanced labor and environmental protections" (USTR, 2015)<sup>2</sup>. The TPPA was finally signed on 4 February 2016 after twelve participating countries, namely Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, United States and Vietnam concluded negotiations that lasted for 5 and a half years.<sup>3</sup>

The significance of the TPPA to smaller participating nations such as Malaysia, Vietnam, Peru and Chile lies in their ability to take advantage of the perceived economic benefits in enhancing their national economic development and thrusting them ahead of non-TPP countries by increasing their competitiveness in international trade. Malaysia's Trade Minister Mustapa Mohamed foresees that the

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<sup>2</sup> For the history and more detailed discussions on the components of the TPP, see Lim, Elms and Low (2012).

<sup>3</sup> Although the negotiation process started in March 2010, not all countries joined the TPP at the same time. Malaysia joined the TPP in October 2010 while Canada and Mexico joined in October 2012. Japan only started negotiations in July 2013 and therefore took less than 3 years to complete.

TPP will add a further 9% in preferential access that would allow Malaysian exporters “to enjoy a better footing than neighboring competitors” (New Straits Times, 2014).

While bigger and more advanced member countries such as the US and Japan would benefit economically as well, the TPP’s contribution to them lies more in its perceived role as a strategic tool in great power rivalry. For the US, the TPPA forms a vital part of its ‘rebalancing’ policy that would position the US as an economic leader in the Asia Pacific region (See Froman, 2014; Bader and Dollar, 2015). Hence, the TPPA becomes the litmus test of “U.S. credibility as a regional leader” (Williams, et. al., 2016: 3). The failure of the agreement will not only weaken US’s leadership role but could provide opportunity for China to take the lead in developing a regional order. The strategic significance of the TPP has not only been argued by scholars and observers but acknowledged by leaders as well. At the 2015 Shangri-la Dialogue in Singapore, Prime Minister Lee Hsien Loong spoke that “[b]ecause whatever the merits or demerits of individual line items of trade covered in the TPP, the agreement has a wider strategic significance. Getting the TPP done will deepen links on both sides of the Pacific. Failing to get the TPP done will hurt the credibility and standing of the US not just in Asia, but worldwide” (Lee, 2015).

Considering that the TPP contains a key geo-economic element, what then would be the motivational factors for Japan to join the TPP? To what extent was China’s rise and economic prowess a major concern for Japan in its deliberations to participate in the TPP? Although Japan is a strong ally of the US, it did not commit itself to the TPP until July 2013, the last member to join. The argument advanced in this paper is three fold. Firstly, Tokyo realizes that external pressure is needed in recalibrating its economy to drive change at home and enhance its strategic competitiveness vis-à-vis Beijing. Secondly, the high standards set by the participants and the wide coverage of chapters under negotiation captured Tokyo’s attention despite realizing the difficulties ensued. Thirdly, China’s rapid economic transformation and its geostrategic role in the region featured prominently in Japan’s calculation to participate in the TPP. The objective of this paper is primarily to elucidate insights into Japan’s approach of using the TPP as a strategic tool of choice. This paper is thus divided into four subsequent sections with the first three sections discussing the three arguments respectively and the last section concludes the paper.

### ***Theoretical Orientation***

The perspective that the international system remains anarchic and power rivalries between strong states continue to be a prevailing feature, motivates the questions and arguments put forth in this paper. Under such conditions, states are unitary and rational actors that would seek to optimize their interests and influence not only to ensure but also enhance their survivability (see Waltz, 1979). The lack of trust and the seeming relative losses of power may force states to cooperate to balance against a perceived threat.

Tokyo has been rather apprehensive about China’s economic rise and its impact on Japan’s regional economic influence. However, it would be a mistake to conveniently assume that structural challenges would necessarily lead to a zero sum game. The TPP may exemplify the dominant role of Japan and the US in a new economic cooperative framework that are meant to check China’s political and economic advances in the region but no TPP members have ever proposed a clause or provision to prevent any Asia

Pacific countries from becoming a member. As such, China may choose to participate under the negotiated economic rules of the TPPA or develop alternative approaches to counter the perceived threat of the TPP to its economic interests.

Framing the discussion within the systemic perspective, unfortunately, has its limitations. This is because Japan's motivations in joining the TPP were not merely structural but were equally informed by domestic considerations. As Helen Milner points out, domestic political dynamics involving multitude of actors can shape the foreign policies of states and determine their behavior on whether to engage in international cooperation (Milner, 1997). Japan's decision to realistically engage other countries in the TPP process was made after lengthy deliberations among domestic actors and the determination of the Abe administration to consider the TPP as a critical foreign policy choice that could lend credence to his agenda for long-term economic reform. The value of the TPP for Japan can therefore be effectively explained by the combination of systemic pressures and domestic level factors.

### **The TPP as a Pressure for Economic Revitalization**

Ever since the 2006 Pacific-4 Free Trade Agreement (officially called the Trans-Pacific Strategic Economic Partnership Agreement) between Brunei, Chile, New Zealand and Singapore was expanded into the TPP with the US's involvement in 2008, Japan has been seriously debating the advantages and disadvantages of joining the grouping. Arguably, Japan was caught unprepared by the move of the US to develop the TPP. Tokyo did not pay much attention to the P-4 FTA because it was focusing instead on realizing its idea of a Comprehensive Economic Partnership for East Asia or CEPEA (involving 16 nations including China) and establishing an Economic Research Institute for ASEAN and East Asia (ERIA) that was to serve as a crucial support mechanism to the development of CEPEA. These two proposals were known as the Nikai Initiative (named after the then Trade Minister Toshihiro Nikai) and were meant to demonstrate Japan's leading role in regional economic integration as well as to aid in achieving the final goal of a Free Trade Area of the Asia Pacific (FTAAP) (Teh, 2011).

By the time the US had expressed its commitment to the TPP, CEPEA was undergoing two phases of feasibility study (the final report of Phase II Track 2 Study Group on CEPEA was submitted in October 2009 at the 4th EAS Summit in Cha-am, Thailand), ASEAN was undecided in adopting the China-supported East Asia Free Trade Area (EAFTA) or the Japan-proposed CEPEA, Thailand as host was undergoing one of its worst political crisis in 2008-09 that caused the 4th East Asia Summit (EAS) to be rescheduled several times, and the sudden introduction of new proposals – the “Asia Pacific Community” by then Australian Prime Minister Kevin Rudd and the “East Asian Community” (EAC) by then Japanese Prime Minister Yukio Hatoyama. With the various regional economic ideas and frameworks remained at the drawing board, the attractiveness of the P-4 FTA to the US seemed rather clear – a high-quality agreement that was already in force and welcomed accession by other economies. Meanwhile, the push factor for the US, argues Tashiro Yoichi of Otsuma Women's University, was the 2008 economic recession and the need to reassert its political economic leadership in the Asia Pacific (Yoichi, 2012). Interestingly, the TPP is the only region-wide economic framework that has the potential to expand and is not under

ASEAN's leadership. Japan was torn between promoting its interest in CEPEA, which would be deemed 'friendlier' since it is perceived as less ambitious and would allow an exclusion list, and joining the US in the TPP, which is highly ambitious and require all sectors to be included in negotiation.

In November 2010, two years after the US confirmed its participation in the TPP, then Prime Minister of Japan Naoto Kan pledged to bring Japan into the TPP. His decision irked his predecessor, Yukio Hatoyama, who had promoted a closer Sino-Japanese relation through his EAC concept. At the Foreign Correspondence's Club in February 2011, Hatoyama had mentioned that:

"I'd like to ask [Naoto] Kan why his administration has dumped the concept of an East Asian community in favour of the Trans-Pacific Partnership. While I agree with Kan that Japan should be opened up, I don't agree with his method. It seems to be the thinking of the bureaucracy, especially the Foreign Ministry with its strong inclination to join the TPP... It's a reversion to the situation under (former Prime Minister Junichiro) Koizumi. Everyone is focused on the US rather than Asia. I feel that rather than pushing forward with the TPP, it's better for Japan to focus on relations with Asia" (quoted in Sharp, 2011).

Hatoyama's disapproval of Kan's decision on the TPP highlighted two important points. Firstly, the TPP was viewed as a US-led initiative capable of negatively affecting Japan's relations with its Asian counterparts, particularly China. Secondly, the Foreign Ministry of Japan is seen as playing a prominent role in trying to enhance the nation's strategic interests through trade by moving Tokyo closer to Washington. In contrast to the position of the Foreign Ministry, Japan's Ministry of Economy, Trade and Industry (METI) saw the economic importance of including China and the cost for excluding it. It pushed for the realization of CEPEA but at the same time acknowledged the TPP as one of the plausible routes to an FTAAP (see METI, 2010).

Naoto Kan's decision to engage the TPP countries marked a significant turning point. The Basic Policy on Comprehensive Economic Partnerships released in November 2010 made clear Japan's posture of engaging in higher quality FTAs and commitment to domestic reforms. It mentioned that:

"...the Government of Japan is absolutely resolved to 'open up the country' and 'pioneer a new future'...With regard to EPAs or broader regional economic partnerships that are politically and economically important and will be of especially great benefit to Japan, the Government of Japan, while taking into consideration the sensitivity of trade in certain products, will subject all goods to negotiations for trade liberalization and, through such negotiations, pursue high-level economic partnerships" and in order to do so, it "will first promote appropriate domestic reforms with respect to areas of the agricultural industry, movement of natural persons from abroad to Japan, and regulatory reforms" (MOFA, 2010).

The importance of the TPP and its relations to the call for domestic reforms is captured by then Foreign Minister Seiji Maehara's remarks that "[i]f we don't seriously consider opening the nation up, we could soon lose our competitive edge... (By not joining the TPP) aren't we sacrificing much of the 98.5 percent (of the economy that isn't primary industry) for the 1.5 percent that is?" (Sharp, 2010). In January 2011, Kan reshuffled his cabinet, replacing Trade Minister Akihiro Ohata who had opposed agricultural trade liberalization with Banri Kaieda who was strongly in favor of Japan's participation in the TPP

(Mulgan, 2011). Much of the debates that transpired in Japan were centered on those who saw the TPP as the golden arrow that would lift Japan's competitiveness and create value added in non-competitive sectors, and those who saw the TPP as a force that will undermine Japan's long held protected sectors and threaten traditional customs and practices caused by sudden influx of cheap foreign goods. The Central Union of Agricultural Cooperatives (JA-Zenchu) saw the TPP as counterproductive, foreseeing that agricultural production would decrease by 4.1 billion yen and self-sufficiency rate will plummet from 40% to 14% (JACOM, 2010). The Nishoren or Consumers Union of Japan warned of possible food safety issues caused by the loosening of food regulatory policies due to the TPPA. However, the unfortunate Great East Japan Earthquake in March 2011 further intensified domestic debates over the country's direction on the TPP issue.

METI's 2011 White Paper on International Economy and Trade discussed the value of the TPP as one of the key strategies for the revitalization of Japan by referring to the strengthening of "kizuna" (bonds of friendship) with other countries through the promotion of high-level economic partnerships, namely the TPP. This strategy was based on two key reasoning. Firstly, Japan was falling behind in terms of its ratio of trade covered by the signed and in effect FTAs to its total trade value which was at 17.6%, lower than China's at 21.5%, South Korea's at 35.8%, and the US's at 38.0%. Secondly, Japan's EPAs were of lower liberalization rate at about 86-87% on a tariff line basis compared to US-Australia FTA, US-Peru FTA, US-South Korea FTA and South Korea-EU FTA which were all above 95% (METI, 2011).

Although the earthquake incident exposed the government's lack of preparedness and caused Kan his top position, the TPP idea was kept alive under Yoshihiko Noda's leadership and further pursued under the current Prime Minister Shinzo Abe as part of his third arrow growth strategy. One of Abe's aims is to increase the FTA trade ratio by 3.7 times to 70% by 2018 (Kantei, 2013: 128). To achieve this rather ambitious aim, the TPP is given greater emphasis as it serves to propel Japan's FTA proliferation, particularly of those with higher standards, and catch up with other trading nations apart from augmenting its economic competitiveness.

In order to utilize the TPP to boost Japan's liberalization rate, Tokyo will need to dismantle obstacles to its domestic reforms. South Korea's high liberalization rate in its FTA with the US, for example, did not come without protest and painful reforms. According to Aurelia George Mulgan, Professor of Politics at the University of New South Wales, the main obstacles to Japan's trade reform "have been a divided bureaucracy, politically well organized and entrenched protectionist interests, and institutionalized opposition from ruling party politicians, who have acted directly to block their own government's trade policy initiatives from within the policy making process" (Mulgan, 2014a: 27). She further adds that "[a]s a result, trade negotiations involving Japan have often taken years to complete, with the results falling far short of the levels of trade liberalization desired by Japan's trading partners (Ibid). The tug of war between ministries and the domestic debates between pro- and anti-TPP camps were most pronounced when compared to any other FTAs that Japan has engaged in. In making the case for Japan's TPP participation, METI for example came out with their estimation that the country would see its GDP rise by 10.5 trillion yen with 812,000 new jobs while MAFF (Ministry of Agriculture, Forestry and Fisheries) countered with

their own calculation showing a decline of 7.9 trillion yen in GDP and 3.4 million job losses (Ibid: 27).

Therefore, a successful TPP negotiation for Japan hinges on the Abe administration's ability to reduce internal obstacles to trade reform before it is able to leverage on the TPP as an external tool to exert pressure for more structural changes. One of the biggest challenges in objecting to Japan's inclusion in the TPP is in the agricultural sector. Although political observers such as Adam Posen, president of Peterson Institute for International Economics and Richard Katz, editor of *The Oriental Economist Alert*, have suggested that Abe lacks political will despite "conditions are ripe for a determined prime minister to override the powerful farm lobby" (Xinhuanet, 2014; Katz, 2014), there has been progress in agricultural reforms such as the consideration to increase corporate involvement in agriculture to boost competitiveness (Takada, 2014) and the role of electoral reforms in the 1990s in reducing the political influence of the Japan Agricultural Cooperatives (JA) (Pollmann, 2014) to a point whereby "the focus of debate is no longer whether to reform agriculture but rather when and how to do it" (MacLachlan and Shimizu, 2014). The appointment of Hiroshi Moriyama, founder of an anti-TPP caucus with 63% of the 408 LDP representatives in both Houses in the Diet as members, as the head of the Liberal Democratic Party's Task Force on the TPP in September 2014, taking over from Koya Nishikawa, may have appeared as if Abe lacks the willpower but it instead showcased the delicate balance that the Abe administration has to tread to earn the support of anti-TPP policymakers in dismantling the old agricultural regime represented by the JA. Nishikawa and Moriyama recognized the need for reform but were adamant to maintain protection of the five sacred sectors (rice, beef and pork, sugar, wheat, and dairy) of which the Abe administration did acknowledge as a pre-condition to Japan's participation in the TPP process. To further ensure Japan's commitment in the TPP, the government removed JA-Zenchu's legal mandate "to audit and guide regional cooperatives across the country" as the first step in reducing the power that JA wields since it is considered as the "keystone of the whole anti-TPP movement in Japan" (The Japan Times, 2015a; Matthews, 2015).

The stalling of the TPP negotiation process due to Japan's adamant request for exemptions and special quotas of sensitive agricultural products not only underlines the tough negotiations predominantly on the bilateral track between the US and Japan but equally perhaps as a strategy for Japan to hold back from conceding too much until Tokyo could confirm that Washington possesses the Trade Promotion Authority needed to push the deal through Congress. With the signing of the TPPA, it has become clear that leveraging on the TPP to push for domestic structural reforms remains a challenge since Tokyo was only able to attain 95.1% of tariff removal compared to nearly 100% for the other members (The Japan Times, 2015b). On agricultural products alone, Japan will eventually remove tariffs on 81% of products (compared to 90% and above for the other TPP members) and 30% of items under the five sacred sectors (Nikkei Asian Review, 2015). Rice remains protected with import quota set at 56,000 tons, and 78,400 tons from the 13th year onwards. Despite the shortcomings, they are the highest tariff removal rates that Japan has ever achieved in its FTAs. Japan has initiated the ratification process of the TPPA and will table it in the September 2016 extraordinary Diet session for ratification. Key figures such as Yuji Yamamoto who has been appointed as the Minister for Agriculture, Forestry and Fisheries in August 2016 are

expected to play their crucial roles in defending the TPPA against anti-TPP protesters, particularly the opposition parties.

### **The TPP as a Rule Setter in Advancing Japan's Regional Interests**

The second strategic value of the TPP is the perceived rule-making aspect of the agreement. The TPPA is, argues proponents, a high-level new age agreement that includes many WTO-plus issues, hence goes beyond simple tariff elimination. Apart from the ambitious goal of the TPPA to achieve 100% liberalization rate, it is in the area of non-tariff barriers that provides a vital opportunity for TPP members to play a critical role in setting trade rules that could potentially affect future economic activities covering the whole of the Asia Pacific. Those trade rules would cover areas such as competition, labor, government procurement, intellectual property, investment and services.

The nation's most powerful business lobby, the Japan Business Federation or more commonly known as Keidanren issued a statement titled "Recommendations on Japan's Trade Strategy" in 2011 urging the government not to waste time in joining the TPP in order to be directly involved in the rule-making process and secure Japan's long term business interests and economic growth in the Asia Pacific region (Keidanren, 2011). In June 2013, the government answered the call with its blueprint for structural reform titled "Japan Revitalization Strategy: Japan is Back". Issued a month before Tokyo's official participation in the TPP negotiations, the document states that "the government will draw up new rules in Asia Pacific region by working positively on the Trans-Pacific Partnership (TPP) negotiations and use these rules as a basis for discussion of rule-making for Free Trade Area of the Asia-Pacific (FTAAP)" (Kantei, 2013: 128).

The perceived potential of the TPP obviously sets it apart from other bilateral and regional FTA frameworks including the Regional Comprehensive Economic Partnership (RCEP) currently under negotiations. While Tokyo would have preferred more time to iron out differing opinions on the TPP at home prior to entry, the rapid progress made in the TPP negotiation rounds add urgency and pressure on the Japanese government to take the big leap and start its negotiation process with the other TPP member countries. This action was primarily motivated by two key factors. Firstly, Tokyo was concerned that the new rules agreed under the TPPA could adversely affect its economic growth and cloud its political influence in the region should it decide not to join. Secondly, Tokyo did not want to lose the golden opportunity to be part of the rule-making process and be forced to accept the TPP rules should it decide to participate after the negotiation process has ended and the agreement enforced.

These concerns would most likely derived from the conviction that the TPP represents the most promising route to an FTAAP that Tokyo has been supporting since the idea came about in 2006. The opportunity to create a common set of rules under the TPP would not only help to address the issue of overlapping bilateral FTAs that affects the operation of business supply chains but also to go beyond the constraints of the WTO by establishing rules in areas not covered by the WTO and further expanding them beyond the TPPA to form "a global set of rules" (Urata, 2016). However, it is similarly the rule-making factor that some TPP opponents saw as the danger for which Japan should rightly avoid. Anti-TPP protesters were justifiably worried about the secretive nature of the negotiation process. By keeping the

public in the dark, opponents were concerned that their government may compromise too much in the negotiation process, or may use the TPPA to push for subsequent unpopular reforms or to dismantle powerful interest groups that threatens the power base of the ruling party.

There is thus an enduring issue of trust for the present government. Undeterred, Shinzo Abe was reported to have said a day after the TPPA text was released for public scrutiny that “[r]ules should not be something that are imposed on you – you make them. The TPP is the structure where Japan and the US can lead in economic rule-making” (*The Japan Times*, 2015b). However, the effectiveness of the TPPA in charting new trade rules for the region remains to be seen since the signed document will need to go through the legislative process of each of the member countries before it could be legally enforced and most importantly whether US President Barack Obama will be able to have the TPPA ratified by Congress without further renegotiations before his term ends in January 2017. Obama faces an uphill battle as his own party and the Congress have become increasingly sceptical of the TPP. Both 2016 US presidential candidates, Hillary Clinton and Donald Trump, have also voiced their reservations over the ratification of the TPPA. While Trump has publicly spoken against the trade deal, Clinton viewed it as falling short of her expectations. With the latter leading the presidential race, the realization of the TPP remains a possibility. If Obama fails to ratify the TPPA and Clinton wins the election, she may opt to reopen negotiations to secure additional terms for the US before seeking congressional approval. This, however, will prove problematic as Japan has made it clear that it will not entertain any renegotiation requests (*The Japan Agri News*, 2016). Obtaining an early approval from the Diet could lend support to Obama’s efforts in seeking ratification and perhaps weaken the voices of TPP opponents in the US from calling for a renegotiation (*The Japan News*, 2016).

### **The TPP as a Balancer to China’s Strategic Influence in the Asia Pacific**

China’s rapid economic rise and the political clout that it commands in the Asia Pacific region creates unease in Tokyo and Washington. The development of the TPP is therefore seen as a response to check China’s growing influence in the region. However, is the TPP designed to contain China by keeping it out or to include it under US-Japan determined rules? Some scholars and observers such as David Piling (2013) have argued that the TPP is an economic containment strategy to prevent China from developing its own regional economic order (see also Drysdale, 2011).<sup>4</sup> Arguing that the TPP deliberately targets China, Professor of International Studies at Peking University, Wang Yong, argued that China’s rise is eroding “the economic foundation of the US-led security order in East Asia” and by centering on the TPP, where the US could take the lead, instead of the EAFTA or RCEP, it hopes to thwart “the emergence of a China-centered East Asian economic bloc”, constraint “the centrifugal tendencies of allies Japan, South Korea and Australia, which are attracted by China’s growing economic power”, and have “a decisive say over the direction of the multilateral trading system, and dealing with the challenges from China and other emerging economies” in order to wrestle back control of the region (Wang, 2013).

Contrary to such arguments, the strategic intent of the TPP was never to deny China entry but to

<sup>4</sup> For a counter argument to David Piling, see Solis (2013).

welcome it under US-Japan leadership. While member countries such as Australia and New Zealand do not want the TPP to be turned into a “project to isolate and antagonise China” (New Zealand Herald, 2014), Japan and the US do not want to see China create its own rules in the region that could undermine or run contrary to their interests. Japan’s then Economy Minister Akira Amari remarked in May 2014 that “China is the world’s second largest economy but rules governing the economy have been extremely opaque and unpredictable. This extreme opaqueness would hinder trade... It’s inevitable that China would have to join the TPP... The TPP can play a major role to eliminate that opaqueness” (Waki and Sithole-Matarise, 2014). Barack Obama made it even clearer in an interview with Wall Street Journal that “if we don’t write the rules, China will write the rules out in that region. We will be shut out” (Seib, 2015).

For the US, China is the prized money and getting Japan to come onboard the TPP was fundamental. As aptly emphasized by Aurelia Mulgan, “Japan’s participation amplifies both the economic and strategic importance of the TPP for the US. Japan’s involvement enables the TPP to effectively compete with the China-led Regional Comprehensive Economic Partnership (RCEP), which involves Japan but not the US. Absent Japan, the TPP becomes a bit of a sideshow in the US strategic game against China and hardly the vehicle to facilitate the US rebalancing to Asia that America would like it to be” (Mulgan, 2014b). Tokyo is fully aware of the strategic role that Japan plays in the TPP as reflected by then LDP Secretary General Shigeru Ishiba’s comment to Akira Amari that “the TPP without Japan is pointless” (Ibid). In no ambiguous terms, Japan recognizes the strategic value of the TPP and uses it as a tool to further its national interests.

The rule-making factor not only brings Tokyo closer to Washington and indirectly help realize the Structural Impediments Initiative (SII)<sup>5</sup> set out 25 years ago (Parker, 2014) but more significantly functions to pressure Beijing to reform its economic policies by putting in place clearer trade rules and regulations in line with internationally accepted norms so as to enable it to join the TPP and reap the economic benefits on offer. Instead of trying to contain China, the main strategy is for the US and Japan to complete writing the rules and then pull China into the regional grouping by having it sign on to the agreed rules after the agreement comes into effect. It is thus necessary to promote and maintain the TPPA negotiations at a high standard to thwart China’s interest to participate until the deal is sealed. Despite the TPP being proclaimed for its economic benefits, it is not originally designed to be fully inclusive (Tiezzi, 2015). The aim of using the TPP to pressure China in realigning its policies is evident from Obama’s remarks that “we hope that then China actually joins us in not necessarily formally being a member of TPP but in adopting some of the best practices that ensure fairness in operations” (The White House, 2014).

The question, however, is whether the TPP wields enough power to entice China to join and accept the new rules or will Beijing opt to develop its own trading bloc. As Mireya Solis has aptly pointed out, “The most fundamental challenge to the TPP project vis-à-vis China is not that it is built around a faulty notion of containment, but rather that it may not constitute a powerful enough enticement to propel China

<sup>5</sup> The SII was a 1989 initiative between the US and Japan to discuss ways on reducing trade imbalance that has caused increased tension in their economic relations. The initiative however failed to yield positive results and was terminated in 1993.

to sign on to these new standards on trade and investment (Solis, 2013). Indeed, China has not been sitting idly as the TPP took shape but has instead shown greater resolve to push for progress in the China-Japan-Korea FTA, prioritizing its FTA with South Korea and actively promoting and supporting the RCEP, which have entered their 11th round of negotiations (as of February 2016) (Jin, 2013; Yoshimatsu 2014).

Even with the TPP in place, China may still diffuse some of the TPP's perceived impact on its economy through the promotion of competing regional integration concepts. In May 2014, China, Japan and South Korea signed and put into effect their agreement for the Promotion, Facilitation and Protection of Investment, and more significantly a report on Beijing's proposal to set up a mega FTAAP as an alternative to the US-led TPP was issued at the Asia-Pacific Economic Cooperation (APEC) senior officials' meeting (The BRICS Post, 2014). Three months later in August, China and ASEAN came to an agreement to start negotiations on upgrading their existing bilateral FTA. China is not only focusing on East Asia but is building up its influence in Central Asia under the Shanghai Cooperation Organization (SCO) that has recently expanded to include India and Pakistan. Beijing has also strengthened its presence by leading the BRICS Development Bank and BRICS Contingency Reserve Arrangement to provide loans and combat currency crises (The BRICS Post, 2015). In October 2013, China proposed the establishment of a new USD100 billion Asian Infrastructure Investment Bank (AIIB) and it has begun its operations in January 2016. With the US and Japan as chief shareholders of the World Bank and the Asian Development Bank (ADB) respectively, it is not surprising that they saw the AIIB as a "lending rival" (Aiyar, 2015).<sup>6</sup> The AIIB and the One Belt, One Road (OBOR) initiatives are strategic ideas that could challenge the TPP's strategic role and lead to competing models of regionalism with the US and China on opposing ends (see Terada, 2015).

These various endeavors are meant to promote China's interests and reduce the perceived disadvantage of being excluded from the TPPA. While China does not dismiss the TPP altogether, it rejects the idea of the TPP being the main, if not only, route to an FTAAP. This demonstrates its refusal to be subjugated. There is thus a need to carefully consider the long term risk of an East Asian region splitting into two blocs instead of a single unified FTAAP, perhaps similar in some ways to the failed FTAA when Brazil strongly objected to US's attempt to extend its "rules and regimes across the Americas" (Steinbock, 2014).

### ***RCEP vs. TPP***

Will Tokyo's plan to get Beijing on board the TPP works? This may depend on how China views not only the economic cost but also the political and strategic implications involved. A 2014 study by Peter Petri, Michael Plummer and Fan Zhai estimated that if the TPPA is expanded into 17 countries with the additional inclusion of China, Indonesia, South Korea, Philippines and Thailand, China will benefit as much as USD808.6 billion by 2025 compared to USD249.7 in the RCEP (Petri, Plummer and Zhai, 2014:

<sup>6</sup> Aiyar (2015) argues convincingly that it is not because the AIIB will become a political tool of China that the US and Japan are against it since the ADB and the World Bank have been used by Japan and the US in promoting their own foreign policies respectively, but the notion that the AIIB will reduce the dominating role of the World Bank and the ADB.

84). Other existing TPP members will see their income gains increase too. US's income gain will quadruple from USD76.6 billion to USD327.6 billion while Japan will see an increase from USD104.6 billion to USD237.3 billion (Ibid: 84). Much of the gains would come from China's participation. However, the economic cost to China for not joining the TPP is estimated at USD34.8 billion (Ibid: 84). Noticeably, China's entry into the TPP will not merely bring economic value for itself but will generate enormous benefits to the other TPP members as well.

Considering that the TPP negotiations have been finalized and remained a high standard agreement, it will prove difficult for China to accede without major economic reforms. Joining the TPP will mean bringing China's policies in line with the beliefs, norms and interests of the US and Japan. Washington and Tokyo would want to see Beijing adopt policies that are transparent and predictable, introduce regulations in line with global best practices and further open up its economy. This is the ultimate strategic feature of the TPP. Japan did not participate in the TPP simply to reduce tariffs but to build common values with likeminded states and to reduce overreliance on the Chinese economy (Terada, 2015). The latter will not be an easy task to achieve since China's economy is well entrenched in the international system.

China will most likely speed up negotiations in the RCEP (pushed by China and excludes the US), which are scheduled to conclude by the end of 2016. This comes after China managed to reinstate the FTAAP idea as host of the APEC summit in November 2014 despite strong objections from the US to exclude it from the joint communiqué for fear that it would derail progress made in the TPP (Davis, 2014). The importance of realizing an FTAAP was once again reiterated by Beijing at the APEC summit in November 2015.<sup>7</sup> The main reason for China to keep the FTAAP concept alive is to prevent the TPP from becoming the ultimate vehicle for the realization of an Asia-Pacific wide FTA since it would mean acceding to the TPPA and hence subscribing to American leadership (Solis, 2014). If China decides not to hop on the TPP bandwagon, a possible outcome would be a competition in rule making between the RCEP and the TPP towards the aim of achieving an Asia-Pacific wide FTA (FTAAP). While a convergence between the RCEP and the TPP would be an ideal solution, “[d]ifferences not only in levels of ambition, but also in the nature of those ambitions, loom as potentially the largest obstacles to convergence between the TPP and the RCEP” (Scollay, 2014: 243-244). This differences is aptly elaborated by Takashi Terada when he commented that “[a]s ASEAN has also shown an interest in RCEP, in which the speed and level of liberalisation would be based on the standard that developing countries generally prefer, the dissimilarities in these integration models in the Asia Pacific region make any future merger of TPP and RCEP difficult. This also means the US and China will continue to compete against each other over trade and investment rule-making in East Asia and the Pacific” (Terada, 2013).

Japan, however, can play a significant role in closing the gap since it is party to both frameworks. With its experience in the TPP negotiations and its ability to increase its liberalization rate, Japan is poised to push for higher liberalization rate and cover more WTO-plus issues in the RCEP. It will have the

<sup>7</sup> A ‘collective strategic study’ on the FTAAP is currently underway and is expected to be completed by the end of 2016.

backing of ASEAN countries such as Brunei, Malaysia, Vietnam and Singapore who are already members of the TPP and may gain support from Indonesia, Philippines, Thailand and South Korea who could be willing to improve their trade liberalization rate since they have expressed their interest to join the TPP. China's economic slowdown could also lead to greater deregulations and policy improvements. Reducing the gap as much as possible between the two frameworks will contribute to the future possibility of convergence in the forming of an FTAAP. Furthermore, the fact that Japan views the new rules in the TPP not as a zero-sum game but as "a basis for discussion of rule-making" for the FTAAP enables it to play a vital role in bridging the concerns of the US and China (Kantei, 2013: 128).

## **Conclusion**

The key factor that affects China's assessment of the TPP is not the US but a combined US-Japan. China had earlier dismissed the TPP idea as a containment policy of the US but softened its position when Japan decided to officially join the TPP negotiations (see Li, 2014). Admittedly, China lost the opportunity to join hands with Japan in constructing an East Asian region when Tokyo extended an olive branch to Beijing. As Yoichiro Sato, Professor of International Strategic Studies at Ritsumeikan Asia Pacific University observed, "China's failure to fully embrace Hatoyama's half-cooked 'East Asian Community' concept at the East Asian Summit meeting in October 2009 was perhaps the beginning of Japan's return to normalcy" (Sato, 2010). Far from its trade value, the TPP provides an opportunity for Japan to rebuild and enhance if not to seal its relations with the US, starting with Naoto Kan and continuing with Shinzo Abe.

The TPP, pushed by the Abe administration as part of its third arrow strategy, serves Abe's commitment to domestic structural reforms and his realization of the need to open up the country to enhance Japan's strategic and economic competitiveness. Beyond that, the TPP solidifies Japan's relations with likeminded countries particularly the US and to check China's growing regional influence. Containing China is neither Washington's nor Tokyo's plan but getting Beijing to join and subscribe to the TPPA after its completion is. While Japan's involvement in the TPP process has contributed to China's reassessment of the TPP potential due to its rule-making factor, setting the bar too high may only discourage Beijing and may cause it to move away from engaging the TPP as its present initiatives seems to suggest. This may eventually lead to an unwanted division of the region into two powerful trade blocs – one led by China and the other by the US.

Japan, unlike Australia or New Zealand, or even Malaysia, values the strategic worth of the TPP and is therefore in support of the US's strategic objectives. Tokyo is not merely concerned with China's economic and military assertiveness but as Ichiyo Muto, the founder of People's Plan Study Group and an anti-war activist, observes, Tokyo needs Washington's unwavering support in realizing Abe's plan to move the nation towards full 'normalization' (Personal communication, 25 October 2014). The TPP, if successfully enforced, will undoubtedly strengthen US-Japan's geopolitical and geoeconomic interests, and stands to threaten China's economic prowess. Converging the TPP and the RCEP to form an FTAAP would be the best solution if only Beijing, Tokyo and Washington are willing to put their political calculations and tactical differences aside for the sake of the region's integration and the prosperity of its people.

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# **ORIGINAL RESEARCH:**

## **Impact Assessment of the Science and Technology Based Farm (STBF) Project on PalayCheck System Dissemination and Use: The Case of Small Farmers in Victoria, Tarlac, Philippines**

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### **Abstract**

Many technological advances have been developed to increase agricultural productivity in the Philippines. However, the gap between production and consumption is continuously growing. Small-scale farmers face many challenges, which include high production costs at the farm level. Farmer Field School (FFS) was conducted to initially disseminate integrated pest management to address the problem. However, adoption was not fully met since farmers are tied into a “To see is to believe” principle. Thus, in 2010, a new initiative aiming to demonstrate the advantages of using quality rice seeds of the most preferred and newly released inbred and hybrid rice varieties was implemented by the government to increase the productivity and income of rice farmers in irrigated areas. This study assesses the impact of Science and Technology Based Farm Projects on adoption of Integrated Rice Crop Management (IRCM) specifically the *PalayCheck System*. Comparison groups consisting of STBF beneficiaries and non-beneficiaries were used to evaluate the impact of STBF project on *PalayCheck System* knowledge. One barangay in Victoria, Tarlac was used as a study site as it is one of the location where STBF was established. A survey and structured interviews were conducted to collect data. Data collected was for two seasons namely 2013 Wet Season and 2013 Dry Season. The results of the survey indicated that technical knowledge scores of STBF beneficiaries were greater than non-beneficiaries. It was also indicated that crop yields and farm income were greater for STBF beneficiaries. It was also shown that trainings attended was a significant variable in explaining adoption of the farmers. Though, STBF can be considered as an extension alternative for small rice farmers because of its participatory nature, there is still a need for improvements for sustainability within the context of agriculture in the Philippines.

**Keywords:** Science and Technology Based Farm, Integrated Rice Crop Management, Impact Evaluation, Field-based extension education

### **Introduction**

The Philippine’s agricultural sector continues to be significant to the country’s economy with 12.09 million workers contributing 11% of the Gross Domestic Product (GDP). The main agricultural enterprise of the country is crop cultivation, wherein rice, as the major crop, has contributed up to 20% of the total agricultural GDP (BAS, 2012). However, given that rice production is capital intensive, small-scale farmers face many challenges. Viability of small-scale farmers to contribute to production has been vulnerable over the years for multiple factors, including high costs of labor, high costs of fertilizers and pesticides, the incidences of pests and diseases, natural calamity, as well as lack of price incentives from

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rice buying agents. Hence, the production rate of 18.03 million metric tons in 2012 is still not enough to answer rice demand forcing the country to rely on rice imports (FAO, 2009).

The problem with rice demand cannot be solved through dependence on imports from other countries, thus the government has developed and implemented a “Rice Self-Sufficiency Plan” as a response to the apparent rice shortage, then improved to include other staple crops like root crops, banana, maize, and others. The improved master plan was renamed “Food Staples Sufficiency Plan” (FSSP) which stipulated a change in target, and envisioned the country to be rice self-sufficient by 2016. The FSSP identifies three sets of interventions: to raise farm productivity and competitiveness; enhance economic incentives and enabling mechanisms; and manage food staples consumption (Food Staples Sufficiency Plan, 2013).

In 2010, the Philippine Rice Research Institute (PhilRice) in collaboration with the Philippine Council for Agriculture and Aquatic Resources Research and Development (PCAARRD) implemented a project entitled “Science and Technology-Based Farm (STBF) on Increasing Yield through the Utilization of Quality Rice Seeds of Recommended Varieties on selected Irrigated and Rainfed Areas” in the provinces of Tarlac, Occidental Mindoro, Leyte, Negros Oriental, Agusan del Sur, and Bukidnon. The general objective of this project is to demonstrate the advantages of using quality rice seeds of the most preferred and newly released inbred and hybrid rice varieties in increasing the productivity and income of rice farmers in irrigated areas. It aims to showcase the agronomic and yield performance of quality rice seeds of recommended varieties by establishing science and technology based farms (STBFs) which can also serve as learning fields for rice farmer-beneficiaries. The project also aims to impart knowledge and skills on participatory varietal selection and utilization of quality rice seeds as well as to promote the technology to farmers in irrigated rice-farming communities, and encourage them to adopt the technology in their respective farms through regular Farmers Beneficiaries Trainings (FBTs) (Bautista, et al., 2009).

Farmer Field School (FFS) is one type of agricultural intervention for boosting agricultural productivity, by allowing farmers together with the assistance of an expert, to experiment and learn from their own plots. In the case of Cameroon in Africa, David in 2007 points out that FFS provided farmers with new skills and knowledge in managing their cocoa plantations. Additionally, FFS graduates demonstrated superior knowledge on cocoa in general, as compared to non-FFS farmers. FFS also had good results in Peru, wherein a paper by Erin et al. (2003) showed that the participation of farmers can raise the average potato seed output/input ratio by approximately 52% of the average value in a normal year. Farmer’s level of Integrated Pest Management (IPM) knowledge has a very significant effect on technology adoption (Erbaugh et al. 2010; Erbaugh, Donnermeyer & Kibwika, 2001). Thus, FFS increased the capacity of farmers to apply new technologies in their fields to assess their relevance to their specific circumstances, and promoted interaction with the researchers and extension workers for help, which were needed to solve a specific problem (Godrick & Khisa, in Muhammad et al., 2013).

The concept of STBF is also similar to FFS and the Location Specific Technology Development (LSTD) program implemented by PhilRice. The main difference is that STBF is done for four cropping seasons instead of one or two cropping seasons in the hope of greater technology adoption and project

sustainability. Also, establishment of the STBF is considered to be the foundation stone of extension teaching because they are based on the basic principle of “seeing is believing”. In a demonstration farm, an improved practice is presented in terms of its practical application of the different component technologies of *PalayCheck System* (an Integrated Rice Crop Management), the technology platform of the project under a specific situation. Successful demonstrations are very effective in convincing people. It is regarded as probably the most effective tool for technology transfer as it involves the three important processes of learning, which are seeing, hearing, and doing (Ilar, 2012).

Currently, agricultural agencies in the Philippines are in the process of streamlining its development efforts. Research and Development (R&D) is at the forefront in finding more innovative and relevant ways of disseminating technologies for greater technology adoption and sustainability. Assessing the impacts of the STBF project is needed to develop innovative and relevant ways of disseminating technologies, and determine reasons why technologies are hardly adopted or not adopted at all. It is in this premise that this study was conducted to assess the technologies presented in the STBF project and their subsequent impacts on the lives of the farmers and the farming community. The need for research on impacts of technology is important since the suitability of new technologies is essential, to identify knowledge that could support the design of appropriate policies with respect to their adoption. Furthermore, the introduction of new agricultural technologies has complex and diverse impacts on the socio-economic, socio-cultural, and socio-environmental, of intended or unintended, stakeholders of such particular technologies (Bisset in Rodrigues, Campanhola & Kitamura, 2003).

Factors that affect farmers in adopting agricultural interventions dictate whether such interventions are appropriate within the scope of the targeted area. Such factors are thus, essential for determining the level of impacts arising from implemented agricultural interventions. Numerous factors have been identified by a number of papers. One is farmer’s income levels, wherein the research of Erbaugh et al. in 2010 found out that farmers in Uganda with higher total incomes were less likely to adopt IPM strategies shown in FFS. Another major factor mentioned in several papers is the level of knowledge possessed by farmers as a result of attending the FFS. Erbaugh et al. (2001) found out that participation in FFS is an effective mechanism for increasing both knowledge of IPM and the adoption of cowpea specific IPM strategies while the non-participants appear to be less knowledgeable. Improved knowledge translates to tangible benefits, such as reduced pesticide use and increased productivity (van den Berg, in David, 2007; Erbaugh, Donnermeyer & Kibwika, 2001; Praneetvatakul and Waibel, 2006). Moreover, since specific agricultural technologies have particular goals, such as increasing yield, reducing farming costs, higher profit, etc., observed impacts revolve around these pre-determined objectives. Clearly defined objectives are thus important for better assessing impacts from agricultural technologies.

Previous research in technological innovations adoption stresses that awareness and knowledge of a new technology is crucial in the adoption or decision-making process (Rogers, 1995). Hence, an ex-post analysis of the STBF project in Barangay Masalasa in Victoria, Tarlac is essential in describing the impacts of the project in order to plan succeeding interventions. The results will also guide development workers in crafting and implementing development projects that will be relevant to address the needs of

the farming communities.

### **Purpose and Objectives**

The main purpose of this study was to assess the impacts of the STBF project on the adoption of *PalayCheck System* component technologies by small-scale farmers in Victoria, Tarlac. The relationship between enhanced *PalayCheck System* knowledge and adoption was also examined. Participatory approaches and FFS have placed more emphasis on increasing knowledge and awareness of key concepts and creating enhanced learning through group collaborative effort. This evaluation is an attempt to provide a framework for merging these two approaches by assessing both increases and adoption of the *PalayCheck System*. The specific objectives were to: (a) compare STBF beneficiaries and non-beneficiaries on knowledge of *PalayCheck System*; (b) compare STBF farm beneficiaries and non-beneficiaries on the adoption of the *PalayCheck System* component technologies; and (c) determine the impact of STBF project on the socio-economic aspect of the beneficiaries.

### **Methodology**

#### ***Evaluation Approach***

The assessment of STBF participation on the adoption of IRCM strategies agrees to the Targeting Outcomes of Programs (TOP) model suggested by Bennett and Rockwell (2004). The model involves seven levels to guide both program development and assessment. These levels are arranged hierarchically with each level serving as a step towards achieving program impacts.

This assessment focused on the Level 3 (KASA) which refers to Knowledge, Attitude, Skills, and Aspirations that influence the adoption of selected practices and technologies that help in achieving expected outcomes. Changes in KASA can occur when people react positively to their participation in program activities. Increased awareness and knowledge are generally considered prerequisites to the adoption of new practices and technologies, including IRCM (Rogers, 1995). Since farmer adoption of the *PalayCheck System* component technologies was an important project goal, this study assesses the effectiveness of STBF in achieving this goal.

#### ***Population and Sample***

A total of twenty-four (24) farmers were selected from the roster of the STBF project beneficiaries in Brgy. Masalasa, Victoria, Tarlac. There were originally 32 farmer-beneficiaries but due to reasons including others no longer farming because of other jobs, and one farmer died already, only 24 STBF beneficiaries were interviewed. Scheduled interviews were employed instead of self-administered to gather quality data to avoid confusion on the survey instrument. Another group of participants served as a comparison group. These are the people assumed to have not attended any training under the STBF project conducted by PhilRice. Contrary to the first group, the comparison group composed of the same number of farmers were selected using the systematic random sampling. The list was obtained from the

Agricultural Extension Worker (AEW) assigned in the area validated by the Local Barangay Officials headed by the in-charge on the Committee on Agriculture. The final sample consisted of 24 STBF beneficiaries and 24 non-beneficiaries for a total sample size of 48 (n=48).

Structured Key Informant Interviews were also conducted with the Farmer Cooperator of (STBF project) and Extension Workers (EWs) assigned in the area to gain insights from perspectives of the implementers.

### ***Data Collection and Instrumentation***

A questionnaire was developed from previous instruments used to examine socio-economic background characteristics. Added to the instruments were specific questions designed to measure adoption of the *PalayCheck System* component technologies, knowledge of *PalayCheck System* attributes, and STBF assessments. A team of enumerators conducted a pre-test of the instrument with five farmers not included in the sample. Pre-tested and revised questionnaires were completed through personal interviews conducted by the researchers with the farmers.

### ***Group Comparability***

To assess the impacts of STBF on knowledge of the *PalayCheck System* and the adoption of the *PalayCheck System* component technologies, the degree of comparability between STBF beneficiaries and non-beneficiaries was assessed. This was deemed necessary to check for sample selection bias. Using a T-test of mean differences, the two groups were compared on the basis of socioeconomic criteria including age, years of education, household size, farm size, total family income and trainings attended. A T-test of mean differences was used to assess the impact of FFS on awareness/knowledge of *PalayCheck System*. A summated ratings scale consisting of five attributes of *PalayCheck System* knowledge was used as the dependent variable. Zero-order correlations among all variables in the model were used to determine its relation to the adoption of *PalayCheck System* component technologies.

## **Results and Discussion**

### ***Group Comparability***

*Table 1* shows the comparison of STBF beneficiaries and non-beneficiaries on key socio-economic variables to give a larger picture about the characteristics of each farmer group. The results indicate significant mean differences between the groups on years of education, farm size and trainings attended. STBF beneficiaries were more likely have completed more years of formal education, own larger farms and attended trainings. There were no significant differences between the two groups on age, household size and family income.

Item Description	STBF beneficiaries	STBF non-beneficiaries	df	T
Age	47.7 (11.56)	49.25 (12.60)	46	-.442
Years of Education	10.67 (3.06)	8.67 (2.73)	46	2.39*
Household Size	4.63 (1.47)	4.29 (1.63)	46	.745
Farm Size	2.26 (1.65)	1.33 (.68)	46	2.54*
Family Income (Farm & off farm)	74912.50 (1.01)	78303.75 (1.44)	46	-.094
Trainings Attended	1.0 (.00)	.21 (.41)	46	9.35*

Values in parentheses ( ) are standard deviations;

<sup>1</sup> Equal variances assumed; \*t-test significant at p<0.05

**Table 1:** Means, Standard deviations and Significance levels for Items Comprising Age, Years of Education, Household Size, Farm Size, Family Income and Trainings Attended of STBF Beneficiaries and Non-beneficiaries in Brgy. Masalasa, Victoria, Tarlac

### ***Impact of STBF project on Knowledge of PalayCheck System***

This research investigated the impact of participation in the STBF project by comparing technical knowledge scores for the *PalayCheck System*. A T-test of mean differences was used to assess the impact of the STBF project on a summated ratings scale of *PalayCheck System* knowledge (Table 2). For a *PalayCheck System* knowledge attribute such as Use of Quality Seeds, Proper Nutrient Management, and Proper Pest Management, a statistically significant difference was found between the two groups. These indicate that farmers who participated in the STBF project are more knowledgeable in these three crop management areas. This can be supported by the result of the key informant interview with the AEW that these three crop management areas were given emphasis during the FBTs done during the implementation of the project. There was also significant difference in the total *PalayCheck System* knowledge scores for STBF beneficiaries (M=139.8, SD=15.7) and non-beneficiaries (M=125.3, SD=13.8);  $t(46)=3.39$ ,  $p<0.05$ . These results suggest that STBF project does have an effect on the knowledge of the *PalayCheck System*. Specifically, the results suggest that when farmers participated in the STBF project, their knowledge on the *PalayCheck System* increases.

Item Description	STBF beneficiaries	STBF non-beneficiaries	df	T
Use of Quality Seeds	7.96 (1.49)	6.83 (2.14)	41	2.114*
Proper Land Management	13.13 (1.80)	12.00 (2.45)	42	1.813
Proper Crop Establishment	8.58 (1.56)	8.42 (1.42)	46	0.388
Proper Water Management	13.21 (1.64)	12.42 (2.02)	44	1.490
Proper Nutrient Management	26.08 (3.59)	22.32 (2.41)	40	4.253*
Proper Pest Management	26.13 (3.23)	23.75 (2.77)	45	2.732*
Proper Harvest Management	44.33 (4.86)	41.54 (7.38)	40	1.547
<i>PalayCheck System</i> Knowledge Scale (N=170)	139.83 (15.72)	125.28 (13.78)	46	3.390*

Scale adjusted Cronbach's Alpha = .941; Values in parentheses ( ) are standard deviations;

<sup>1</sup> Equal variances assumed; \*t-test significant at p<0.05

**Table 2:** Means, Standard deviations and Significance levels for Items Comprising *PalayCheck System* Knowledge Scale by STBF Beneficiaries and Non-beneficiaries in Brgy. Masalasa, Victoria, Tarlac

### *Adoption of PalayCheck System Specifically on Nutrient and Pest Management*

Based on the Focus Group done before the implementation of the STBF project, the weaknesses of the farmers in relation to their rice production management are on nutrient and pest management. To enhance their weaknesses, these management areas were given emphasis during the FBTs. In terms of nutrient management, the use of Leaf Color Chart (LCC) was recommended. LCC is a handy plastic “ruler” with strips of four shades of green used to compare the color of rice leaves under field conditions and to measure the green color intensity of leaf which corresponds to the plant’s nitrogen content. In addition to this, farmers must conduct Minus-One-Element Technique (MOET) test 30 days before transplanting or direct weeding to determine soil nutrient deficiencies (PalayCheck Booklet). These technologies were recommended to prevent over usage of fertilizers. For the pest management, insect pest identification was recommended as well as natural enemies (beneficial organisms) and diseases to determine what action or kinds of pesticides to be used. All five *PalayCheck System* component technologies (see *Table 3*) were coded 0, if farmers had not adopted, and coded 1, if farmers had adopted the specific technology then combined into summated adoption scales. Adoption Scales used all five component technologies, with a score ranging from 0-5 and a coefficient reliability of .990. Zero-order correlations among all variables in the model in relation to *PalayCheck System* strategies are presented in *Table 3*. Considering that STBF beneficiaries were more likely have completed more years of formal education, own larger farms and attended trainings, results indicate that adoption of five recommended *PalayCheck System* Strategies was mostly highly correlated with farm size, knowledge on *PalayCheck System* and trainings attended. All other correlations were not significant at the  $P \leq .05$  level.

N=48	Adoption Scale	Age	Years of education	Farm Size	Knowledge Score	Trainings Attended	Family Income
Adoption Scale	1.00						
Age	-.088	1.00					
Years of Education	.256	-.219	1.00				
Farm Size	.268	-.047	.559*	1.00			
Knowledge Score	.478*	-.070	.216	-.003	1.00		
Trainings Attended	.740*	-.086	.392*	.347*	.439*	1.00	
Family Income	.001	-.012	.292*	.058	.113	-.121	1.00

a. Cells contain zero-order (Pearson Correlation)

\*. Correlation significant at 0.05 level

**Table 3:** Zero-order correlations between the Adoption of Recommended Six *PalayCheck System* Strategies

The adoption of specific *PalayCheck System* component technologies by STBF beneficiaries and non-beneficiaries is shown in *Table 4*. The table shows that there are significant mean differences between the two groups on the adoption of all *PalayCheck System* component technologies  $P \leq .05$  level, and it can be noted that among the non-beneficiaries, none of them have used the different strategies ( $M = .000$ ;  $SD = .000$ ).

Item Description	Range	STBF beneficiaries	STBF non-beneficiaries	df	T
LCC	0-1	.917 (.282)	.000 (.000)	46	15.906*
MOET	0-1	.792 (.415)	.000 (.000)	46	9.349*
Insect Pest Identification	0-1	.917 (.282)	.000 (.000)	46	15.906*
Natural Enemies Identification	0-1	.917 (.282)	.000 (.000)	46	15.906*
Disease Diagnosis	0-1	.917 (.282)	.000 (.000)	46	15.906*
Adoption Scale	0-5	4.412 (1.412)	.000 (.000)	46	15.328*

Scale adjusted Cronbach's Alpha = .990; Values in parentheses ( ) are standard deviations;

<sup>1</sup> Equal variances assumed; \*t-test significant at p<0.05

**Table 4:** Means, Standard deviations and Significance levels for Items Comprising *PalayCheck System* Adoption Scale by STBF Beneficiaries and Non-beneficiaries in Brgy. Masalasa, Victoria, Tarlac

To determine whether being beneficiaries in an STBF project had an effect on the adoption of *PalayCheck System* component technologies, this research then established the extent to which attending FBTs affects adoption variance. To this end, a multiple regression model was used in which the dependent variable is the *PalayCheck System* Adoption Scale. The results of the analysis is shown in *Table 5*. Together, the independent variables explain .599 (R<sup>2</sup>), or in percentage terms, 59.9%, of the variation in the adoption of *PalayCheck System* component technologies. Attending FBTs appear to be a strong predictor for the adoption of the component technologies. These results suggest that attending FBTs where the venue of increasing knowledge on *PalayCheck System* component technologies are more likely to contribute to its adoption.

Variables	Standard Coefficients	t
Adoption Scale (constant)	-3.42	
Age	-.20	-.185
Years of Education	-.147	-1.062
Farm Size	.077	.572
Knowledge Score	.200	1.714
Trainings Attended	.691	5.385*
Family Income	.070	.594
Multiple R	-	
R Square	.599	
Adjusted R Square	.529	
Durbin Watson (DW) test statistic	1.397	
F Value	8.552	

\*t-test significant at p<0.05

**Table 5:** Results of the Regression Model

***Impact of STBF Project on the Crop yield, Farm inputs Cost and Farm income***

Previous literatures assert that improved knowledge translates to tangible benefits, such as reduced pesticide use and increased productivity. It is assumed that when STBF beneficiaries adopted, or partially adopted the different component technologies they learned from the training, it increased their yields and eventually their income. A T-test of mean difference was used to assess the impacts of STBF projects on crop yield, farm input costs, and farm income. *Table 6* shows a comparison between the mean differences of the two groups on the different variables during the wet season (WS) and dry season (DS) in 2013. In terms of crop yield, the results indicate significant mean differences between the groups on crop yield during the wet and dry seasons. STBF beneficiaries were more likely to produce higher yield than non-beneficiaries both for two seasons. Though, there was no significant difference between the two groups on the total crop yield, it can be noted that STBF beneficiaries produce higher yields ( $M = 10.27$ ;  $SD = 2.42$ ) than non-beneficiaries ( $M = 9.27$ ;  $SD = 2.71$ ). The results suggest that being the beneficiaries of the STBF project contributed to their higher yield.

Since it was highlighted in the trainings that proper nutrient and pest management must be done effectively and efficiently, it is assumed that STBF beneficiaries will be more likely to decrease in their usage of fertilizers and pesticides. To determine if there is a decrease in fertilizers and pesticides used, the same statistical analysis was used. Farm input costs include only the expenses incurred by both groups in terms of the fertilizers and pesticides they used. For the farm input costs during the wet and dry season, a statistically significant difference was found between the two groups. These indicate that farmers who participated in the STBF project have a decrease in their use of fertilizers and pesticides than non-beneficiaries. There was also a significant difference in the total farm input cost for STBF beneficiaries ( $M=14,958.33$ ,  $SD=3,277.00$ ) and non-beneficiaries ( $M=18,283.79$ ;  $SD=6,005.60$ );  $t(46)=-2.381$ ,  $p<0.05$ . These results show that the STBF project does have an effect on the fertilizer and pesticide use of the farmers. Specifically, these results suggest that when farmers participated in the STBF project, their use of fertilizers and pesticides decreased.

To determine the impact of the STBF project on the farm income of the farmers, a T-test comparing the two groups was used. Computed mean differences on farm income shows that there is a significant effect for STBF beneficiaries  $t(46) = 2.721$ ,  $p<0.05$ , with STBF beneficiaries having higher income during 2013. This was also true with Farm income during the wet season,  $t(46)=3.169$ ,  $p<0.05$  and dry season,  $t(46)2.032$ ,  $p<0.05$ . The results suggest that being the beneficiaries of STBF project contributed to their increase in farm income.

Item Description	STBF beneficiaries	STBF non-beneficiaries	df	T
<b>Total Crop Yield (2013), ton/ha</b>	10.27 (2.42)	9.27 (2.71)	46	1.357
Crop Yield (WS, 2013), ton/ha	5.86 (1.35)	4.75 (1.27)	46	1.998*
Crop Yield (DS, 2013), ton/ha	4.42 (1.27)	3.50 (1.54)	46	2.241*
<b>Total Farm Inputs Cost (2013), Php/ha</b>	14,958.33 (3,277.00)	18,283.79 (6,005.60)	46	-2.381*
Farm Inputs Cost (WS, 2013), Php/ha	6,683.54 (1,782.89)	8,323.50 (3,135.90)	46	-2.227*
Farm Inputs Cost (DS, 2013), Php/ha	8,274.79 (1,918.99)	9,960.29 (3,145.92)	46	-2.241*
<b>Total Farm Income (2013), Php/ha</b>	59,760.47 (17,363.77)	46,971.39 (22,764.47)	46	2.721*
Farm Income (WS, 2013), Php/ha	71,722.29 (18,492.23)	55,269.17 (18,757.88)	46	3.169*
Farm Income (DS, 2013), Php/ha	96,718.33 (23,765.24)	80,948.13 (29,681.32)	46	2.032*

Values in parentheses ( ) are standard deviations;

<sup>1</sup> Equal variances assumed; \*t-test significant at p<0.05

**Table 6:** Means, Standard deviations and Significance levels for Items Comprising Crop Yields, Farm Inputs Costs and Total Farm Income in 2013 of STBF Beneficiaries and Non-beneficiaries in Brgy. Masalasa, Victoria, Tarlac

## Conclusions

STBF project was found to be effective in enhancing farm income, technical knowledge and crop yields. These findings provide a confirmation in favor of the adoption of the decision making process, and validation that STBF project is an effective mechanism for increasing both knowledge and adoption of the *PalayCheck System* component technologies. However, it is recommended that the approach be continued as a means of a in disseminating *PalayCheck System* component technologies among farmers.

Adoption of the *PalayCheck System* component technologies can be explained by being the beneficiaries of the STBF project. Farmers who have completed more years of formal education, own larger farms and attended trainings are more likely to adopt the *PalayCheck System* component technologies. But it is also noteworthy that attending FBTs where the venue of increasing knowledge on *PalayCheck System* component technologies are more likely to contribute in its adoption.

However, there is still a need to involve other stakeholders through social assessments. In this light, achievement of reduction of farm inputs costs through the different use of the component technologies under *PalayCheck System* could be established.

Another implication of this study for extension programs in all countries is that the strategy of sustained field-based extension education such as the STBF is important. Change in behavior, such as the adoption of *PalayCheck System* component technologies, cannot be expected without a sustained understanding of the technology. González-Flores et al. (2014) have also discovered in Ecuador that although farmers have significantly adopted technological change, the level of adoption is still in a

“learning by doing” process. Technology adoption will not always be full or complete initially, since particular adoption periods need to be observed. Policy instruments could play certain roles in technology adoption, relying on policies alone is not enough. Information and education campaigns (IEC) in tandem with policy instruments may work better since it can be observed farmers would not completely apply the whole technology package, but rather do so in a sequential manner. Thus, there is still a need for follow up for sustainability within the context of agriculture in the Philippines, such as increasing the access to extension services together with participatory approaches (such as STBF).

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# ORIGINAL RESEARCH:

## Perceived Effects of Conditional Cash Transfer Program among Beneficiaries in Selected Barangays in Pila, Laguna, Philippines

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### Abstract

Poverty remains to be an unresolved problem in the Philippines. More than one-quarter (27.9%) of the population fell below the poverty line the first semester of 2012. This complex issue of poverty can be connected to other main issues that the country is facing today such as hunger, prevalence of out of school youth and others. As a response to this challenge, the ongoing CCT or the Conditional Cash Transfer program of the government was implemented under the Department of Social Welfare and Development (DSWD). It tries to help in fulfilling the country's commitment to the Millennium Development Goals. The then Aquino administration saw CCT, or more popularly known as 4Ps or in long form, the Pantawid Pamilyang Pilipino Program (Bridging Program for the Filipino Family) as a strategy to reduce the poverty incidence from 33% to 16.6% by 2016. This study aims to determine the perceptions of the beneficiaries on the effects of the 4Ps program; characterize the CCT beneficiaries; determine the respondents' knowledge on the CCT as a program; assess the perceived effects of the program in terms of education, health, economics, and other areas of interest; and formulate recommendations for the improvement of the program implementation. The study was done in two villages, namely, Barangay Pansol and Barangay San Antonio in Pila, a third class municipality in the Province of Laguna. Complete enumeration of the 4Ps beneficiaries using a survey questionnaire was done. This study used descriptive analysis.

The results showed that the program is generally acceptable to the beneficiaries. The beneficiaries even believed that after its five- year implementation, it would have considerably helped their families by then. However, the program must meet the short-term and perceived long-term needs of the beneficiaries.

**Keywords:** Conditional Cash Transfer; (CCT); 4Ps – Pantawid Pamilyang Pilipino Program (Bridging program for the Filipino Family); Department of Social Welfare and Development (DSWD)

### Introduction

Poverty remains an unresolved problem in the Philippines. The country's poverty line marks a per capita income of 16,841 pesos<sup>7</sup> a year. According to the data from the National Statistical Coordination Board (NSCB), more than one-quarter (27.9%) of the population fell below the poverty line the first

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<sup>7</sup> \$338 USD, \$1 = 50 Philippine Peso

semester of 2012, an approximate one percent (1%) increase since 2009. Fishermen, farmers, and children remain to have the highest poverty incidences among the nine basic sectors in the Philippines in 2012 (National Statistical Coordination Board NSCB, 2014).

This complex issue of poverty can be connected to other main issues that the Philippines and other developing countries are facing today such as hunger, malnutrition, child mortality, corruption, crime, prevalence of out of school youth, and others. In effect, poverty hinders development; and according to the United Nations Conference on Sustainable Development held last June 2012, sustainable development cannot be achieved if poverty still exists.

In addressing poverty issues through development, Amartya Sen, through his book *Development as freedom*, pointed out that development is expanding the substantial freedoms people enjoy and it also means requiring the removal of major sources of “unfreedoms”<sup>8</sup> like poverty and Tyranny, social deprivation and poor economic opportunities to name a few. Freedom implies not just to do something, but the capabilities to make it happen. Development is seen through peoples’ capabilities to make choices and the achievements based on their capabilities is influenced by, as Sen would say, economic opportunities, political liberties, social powers, and the enabling condition of good health, basic education, and the encouragement and cultivation of initiatives.

As a response to this challenge of freeing people from poverty, various organizations and institutions formulated and designed concrete interventions. One of which is the ongoing CCT or the Conditional Cash Transfer program of the national government or more popularly known as the Pantawid Pamilyang Pilipino Program or “4Ps” in short. This conditional cash transfer program under the Department of Social Welfare and Development (DSWD) helps in fulfilling the country’s commitment to meet the Millennium Development Goals, namely: (1) to eradicate poverty and hunger; (2) achieve universal primary education; (3) promote gender equality; (4) reduce child mortality; and (5) improve maternal health; and aims to target the “poorest of the poor”. This program was patterned after other developing countries such as *Familias en Accion* in Columbia the *Bolsa Familia* in Brazil and *Oportunidades* in Mexico, and in some European countries (Reye, et.al, 2015).

As a result of having positive impacts in other countries, the Aquino administration saw CCT as a strategy to reduce the poverty incidence from 33% to 16.6% by 2016. The administration hopes to achieve the same results of Brazil where they were able to reduce their poverty incidence by 15% in just three years (Reyes, et.al, 2015). The program operates in 79 provinces, covering 1,484 municipalities, and 143 cities in all 17 regions nationwide. It has a total of 4,353,597 registered households and 570,056 are Indigenous households as of 26 August 2015 (DWSW). Since it has started as a small CCT pilot in 2007, the 4Ps program had undergone incremental improvements in its implementation.

Based on the completed assessment of CCT in 2015, children of CCT beneficiaries are enrolling and attending schools. The best showing was during the months of March and April 2015 wherein the school attendance of children aged 6 to 14 were pegged at 98.33%, the daycare level who caters to 3 to 5 years olds were at 97.05%, while the students whose age ranged from 15-18 had a 95.95% showing. With

<sup>8</sup> Amartya Sen’s term for lack of freedom

improved health due to regular visits to health stations, and pregnant mothers getting proper care. In addition, the program initially focused on education and health, but now includes services such as feeding and livelihood programs, scholarships and skills training in order to enable the sustainability and further empowerment of the beneficiaries.

However, despite the good intentions of the program, it is also being criticized by some groups in terms of its effectiveness and sustainability. Monitoring and evaluation of the program is deemed very crucial in determining its effectiveness and ensuring sustainability. Since there have been limited studies in this areas of concern, this study would like to contribute particularly in assessing the perceived impacts of 4Ps, among its beneficiaries.

Rawlings and Rubio (2011) stated that cash transfer is viewed as a new approach in social assistance. The purpose of social assistance is to provide income to the needy; to help these people to fight poverty. Since CCT focuses on human capital development, it could result to long term poverty reduction. Moreover, the program strengthens the relationship between the service provider and the poor. The beneficiaries were also becoming open by allowing direct relationship from the government as part of the conditions that these grantees should send their children to school and avail of regular medical check-ups. Aside from the cash grant that was given by the government, the program also acts as a catalyst that will bring a deeper social exchange and social impact between the relationship of the government and the indigent families, as well as the service providers.

There are key design features introduced by the conditional cash transfer programs that depart from the traditional social assistance programs. First is the provision of grants to poor households, which changes the accountability relationships among the stakeholders. The benefits included in the conditions required by the grants are the use of health/nutrition and education services and stronger connection between the service providers and the poor. By this, the government can have a direct relationship with poor families involving them through giving them responsibility for schooling, health care, and the appropriate use of the cash grants. In recognition of the international data that suggest that women often make more decisions on budgeting affecting children's welfare, the programs designate mothers as recipients of the grants. Second, the programs seek to utilize the elements of human capital development such as health, nutrition, and education components. Third is the promotion of efficient and flexible use of cash grants. Under the health component, And lastly, the programs include good technical program design features such as explicit poverty targeting criteria that are based on proxy-means tests and effective monitoring and evaluation systems (Rawlings & Rubio, 2005).

In the reviewed programs there is the inclusion of education component and health and nutrition component. In the education component, the student should have regular school attendance that is usually 80-85% of school days. There are considerable variations in the size of grants across countries. In the countries of Honduras, Mexico and Turkey, the grant in education components include direct costs such as school fees, school supplies and transportation costs and opportunity costs in sending children to school rather than work. Only a part of opportunity costs are covered in the grants in some other countries. In Columbia and Mexico, there is a higher education grants for secondary school than for primary school

because as a child grows older, the opportunity cost increases. Higher grants are given for the girls at the secondary level in Mexico to give incentive in reversing the notion of unequal gender participation in secondary education and to internalize the externalities for raising their own families (Skoufias cited by Rawlings & Rubio, 2005). In Turkey, there is a high consideration for the number of children in the family. The value of grant decreases proportionally based on the number of children in the family (Rawlings & Rubio, 2005). To a certain extent, the rules of the CCT in the Philippines is quite similar to the aforementioned programs. Health and Nutrition expenses amount to five hundred Pesos (500 Php) a month and if you have a maximum of three children that attends school, you get an additional ten thousand pesos per school year (10 months) per child.

## 2. Objectives of the Study

This study aims to:

1. Determine the perceptions of the beneficiaries on the effects of the 4Ps program.
2. Determine the respondents' knowledge on the CCT as a program;
3. Characterize the CCT beneficiaries
4. Assess the perceived effects of the program in terms of education, health, economics, and other areas of interest.
5. Formulate recommendations for the improvement of the program implementation.

## 3. Location and Methods of the Study

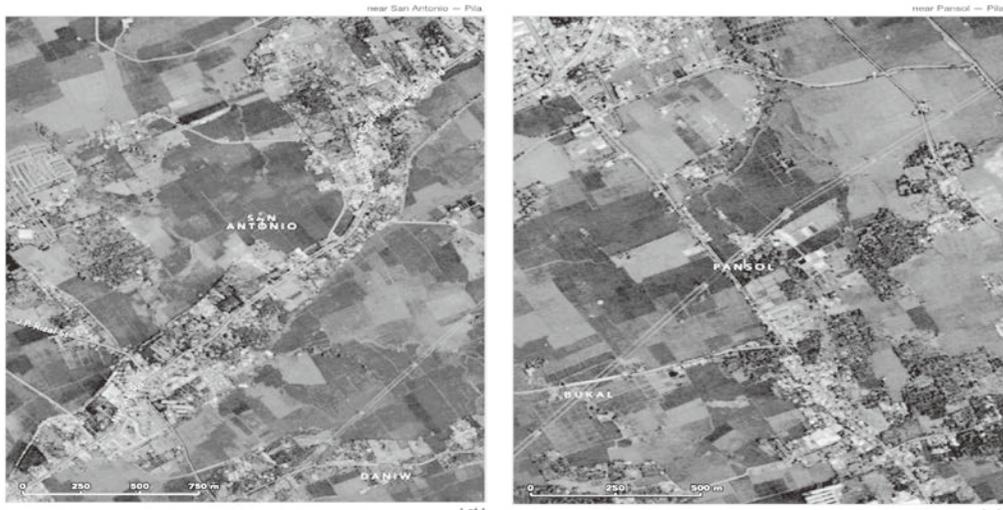
### 3.1 Location of the Study

The municipality of Pila is a third class municipality where in it can be found in the Laguna Province. It has 17 *Barangays*<sup>9</sup>, one of these barangays is Barangay Pansol. At present, the Barangay Pansol has a size of 116 hectares and are divided into six districts or *Puroks* in Filipino. This vast land is mainly used for agriculture. There are be areas that have fish ponds and resort villages. They have recorded 2,278 residents who live in the barangay (NSCB, 2011). Most of them live close to community services because they are easier to reach.

The other study site is Barangay San Antonio, the largest barangay in Pila, Laguna, having a total land area of 230.90 hectares, mostly agricultural lands. It consists of six *puroks*. The barangay is easy to spot as it is located along the highway area only. The village covers mostly agricultural lands and lakeside communities.

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<sup>9</sup> Refers to a village or hamlet in Filipino.



**Photo 1:** Aerial view of Barangay Pansol and San Antonio (generated from Google Earth 2016)

### **3.2 Respondents**

A complete enumeration of the 76 beneficiaries of the CCT program in Barangay Pansol and the 64 members from San Antonio was done. These beneficiaries were divided into two clusters. Those living in farmlands are grouped in cluster A, while those near the lake shore belong to cluster B. These clusters were based on the grouping done by the DSWD officers in order to easily identify the beneficiaries based on their geographical location. The investment or cash grants are given or entrusted to the responsible member or head of household, most of the time the mother or the wife, who are the main respondents in this study.

### **3.4 Methods of Data Collection and Analysis**

Survey questionnaire were administered to all the respondents to determine the socio demographic characteristics of the beneficiary and his/her family, the information about the CCT, their knowledge about the CCT Program, the effects of the CCT on the beneficiaries, and the perceived problems arising from the program. Survey results were tabulated and analysed using frequencies.

## **4. Results and Discussions**

### **4.1 Socio-Demographic Characteristics of the Respondents and their household**

Table 1 shows the summary of the socio-demographic characteristics of the respondents. Both Barangays Pansol and San Antonio have more female (93%, 92%) than male respondents. Also, both barangays have respondents whose ages are mostly 30-39 years old.

Most of the respondents in Barangay Pansol (75%) and San Antonio (78%) were married since CCT was designed and given to families who were known to be economically marginalized. There were also single parents who qualified for the program. (Two respondents from Pansol and two respondents from

Brgy. San Antonio.)

Most of the respondents were high school graduates (28% from Brgy. Pansol, while 30% from Brgy. San Antonio) followed by those who have reached high school but have not graduated (25% from Brgy. Pansol, while 22% from Brgy. San Antonio). Since the majority of the respondents are high school graduates, they have limited employment options, thus making them relatively low income earners. Majority of the respondents are (53% from Brgy. Pansol, while 31% from Brgy. San Antonio) with no income, followed by self-employed respondents (16%) in Brgy. Pansol and skilled workers (14%) for Brgy. San Antonio.

One of the respondents had been a resident in Barangay Pansol for one year, while Brgy. San Antonio had longer staying residents ranging from 21-30 years.

Socio-demographic Characteristics	Brgy. Pansol		Brgy. San Antonio	
	No. of respondents n=76	Percentage (%)	No. of respondents n=64	Percentage (%)
Sex				
Male	5	7	5	8
Female	71	93	59	92
Age				
20-29	12	16	8	12
30-39	30	39	29	45
40-49	17	23	16	25
50-59	12	16	9	14
60-69	4	5	1	2
70 and up	1	1	1	2
Civil Status				
Single	2	3	2	3
Married	57	75	50	78
Separated	5	7	2	3
Widow/Widower	4	5	1	2
Live-in	8	10	9	14
Educational Attainment				
No Formal Education	1	1	0	0
*PrimaryElementary level	0	0	1	2
**Intermediate Elementary level	13	17	13	20
Elementary graduate	9	12	13	20
High school level	19	25	14	22
High school graduate <sup>10</sup>	21	28	19	30
College level	7	9	2	3
College graduate	2	3	0	0
Vocational	4	5	0	0
No answer	0	0	2	3

<sup>10</sup>\* Grades 1 to 3 in Elementary is called Primary Level

\*\* Grades 4 to 6 in Elementary is called Intermediate Level

Work				
Unemployed	7	9	13	20
Housewife	40	53	20	31
Employed (white collar)	2	3	0	0
Employed (blue collar)				
Self-employed	3	4	6	10
Factory worker				
Skilled worker	12	16	7	11
Farmer/gardener	1	1	0	0
LGU Official	5	7	9	14
No answer	4	5	6	9
	0	0	1	2
	2	2	2	3
Total Income of the family (in Pesos)				
No income	4	5	6	9
1.00 – 500.00	0	0	1	2
501.00 – 2000.00	4	5	5	8
2001.00 – 5000.00	29	38	22	34
5001.00 – 10000.00	24	32	17	27
10001.00 – 20000.00	15	20	11	17
20000 and above	0	0	2	3
Years of Residency (in years)				
Less than 1 year				
1-10	1	1	0	0
11-20	20	26	15	23
21-30	15	20	16	25
31-40	14	19	18	28
41-50	17	23	7	11
51-60	4	5	7	11
No answer	3	4	1	2
	2	2	0	0
TOTAL	76	100	64	100

**Table 1:** Socio-Demographic Characteristics of the Respondents

Table 2 below shows the results of the socio-demographic characteristics of the household members of the respondents. Majority of the household members of the respondents were male (57% for Brgy. Pansol, while 65% for Brgy. San Antonio). Most of them were ages 10-19 years old (31% and 37% for Brgy. Pansol and San Antonio, respectively). Reflective of this is the findings that most were single (73% and 77% for Brgy. Pansol and San Antonio, respectively). This is also reflects the educational attainment profile; 31% from Brgy. Pansol and 41% of the respondents from Brgy. San Antonio are in elementary level.

When asked about their employment status, the respondents answered that majority (55% of respondents from Brgy Pansol and 45% of respondents from Brgy. San Antonio) of their household members are students with no income followed by those who are skilled workers (10%) in Brgy. Pansol, while there were unemployed members in Brgy. San Antonio (13%).

With regards to the household members' income, the majority have no income (74% and 71% for Brgy. Pansol and San Antonio, respectively). Upon verification with the respondents, the majority of the

household members are dependent on the household members who earn and have a source of income.

Socio-demographic Characteristics	Brgy. Pansol		Brgy. San Antonio	
	Frequency n=349	Percentage (%)	Frequency n=311	Percentage (%)
Sex				
Male	199	57	201	65
Female	150	43	110	35
Age				
Less than 1	11	3	8	2
1-9	105	30	98	31
10-19	109	31	115	37
20-29	42	12	27	9
30-39	30	9	24	8
40-49	28	8	20	6
50-59	15	4	11	4
60-69	5	2	5	2
70 and up	4	1	3	1
Civil Status				
Single	256	73	238	77
Married	78	22	60	19
Separated	1	1	2	1
Widow/Widower	6	2	3	1
Live-in	8	2	8	2
Educational Attainment				
No Formal Education	9	2	11	4
Primary Elementary level	35	10	20	6
Intermediate Elementary level	108	31	129	41
Elementary graduate	22	6	27	9
High school level	76	22	46	15
High school graduate	41	12	34	11
College level				
College graduate	24	7	3	1
Vocational	3	1	4	1
Below school age	3	1	4	1
No answer	20	6	32	10
	8	2	1	1
Work				
Unemployed	30	9	41	13
Housewife	4	1	2	1
Employed (white collar)	5	1	1	1
Employed (blue collar)				
Self-employed	11	3	21	7
Factory worker				
Skilled worker	5	1	4	1
Security/Marshalls	4	1	3	1
LGU Official	35	10	18	6
Farmer/gardener	1	0	0	0
OFW	1	0	4	1
Tricycle Driver	24	7	24	8
Student	1	1	0	0
Below school age	6	2	3	1
No answer	191	55	141	45
	24	7	39	12
	7	2	10	3

Income (in Pesos)				
No income	259	74	221	71
1.00 – 500.00	1	0	0	0
501.00 – 2000.00	11	3	18	6
2001.00 – 5000.00	40	12	34	11
5001.00 – 10000.00	26	8	27	9
10001.00 – 20000.00	4	1	0	0
Not sure/conditional	8	2	0	0
No answer	0	0	11	3
TOTAL	349	100	311	100

**Table 2:** Socio-Demographic Characteristics of the Respondents' household

### 5. Duration of membership in the CCT Program

Table 3 below shows the duration of the respondents being a beneficiary under the CCT Program. In both barangays, the majority (54% for Brgy. Pansol and 63% for Brgy. San Antonio) of the respondents had been beneficiaries for two years (see Table 3). Thus, it is expected that there should be some manifestations of the significant effects of the program already in the beneficiaries and their family members considering that the time frame of the program is five years.

Duration	Pansol		San Antonio	
	Frequency n=76	Percentage (%)	Frequency n=64	Percentage (%)
Less than a month	8	11	0	0
1 yr	20	26	19	29
2 yrs	41	54	40	63
More than 3 yrs	7	9	5	8

**Table 3.** Respondents' duration of being a beneficiary

As seen in Table 4 below, the majority (72% and 81% for Brgy. Pansol and San Antonio, respectively) of the respondents were interviewed to become a CCT Program beneficiary. 9% of respondents from Brgy. Pansol and 17% of respondents from Brgy. San Antonio was endorsed by the barangay officials for them to be considered a beneficiary. The data shows that the beneficiaries underwent a pre-selection screening before becoming an official beneficiary of the program. The pre-screening process is done by looking at the data of the Small Area Estimates (SAE) of the National Statistical Coordination Board (NSCB) of all Barangays that have a 50% or higher poverty incidences. The results are then double-checked by looking at the so-called "pockets of poverty" based on the data available with the local municipality (Reyes, et al., 2015).

Methods*	Pansol		San Antonio	
	Frequency n=76	Percentage (%)	Frequency n=64	Percentage (%)
Interviews by DSWD	55	72	52	81
Endorsed by Barangay officials	9	12	17	27
Attended a seminar	6	8	14	22
Passed an application	5	7	15	23
No answer	5	7	0	0

**Table 4:** Methods of Beneficiary Selection in the Program; \*multiple answers

When asked about their sources of information regarding the project, the majority (57% and 59% for Brgy. Pansol and San Antonio, respectively) of the respondents indicated an announcement from barangay. This shows that the barangay officials were effective in informing their community on government programs like the conditional cash transfer.

Sources of information*	Pansol n=76	San Antonio N=64
	Frequency	Frequency
TV/Radio/Newspaper	0	7
Announcements from Barangay	43	38
Neighborhood	3	7
Internet	1	0
DSWD	24	23
Others	11	10

**Table 5:** Respondents’ sources of information regarding the CCT Program; \*multiple answers

The most common CCT Program benefit mentioned by the respondents is receiving cash grants (99% for Brgy. Pansol while 100% from Brgy. San Antonio). This shows that the program really focuses on the financial aspect to aid the marginalized communities for the daily expenses.

Benefit*	Pansol n=76	San Antonio N=64
	Frequency	Frequency
Cash grants	75	64
Maternal care	3	16
Education	17	22
Livelihood	5	19
Others	16	6

**Table 6:** Respondents’ benefit from the CCT Program \*multiple answers

43% of the respondents from Brgy. Pansol and 49% from Brgy. San Antonio receive their cash grants once in every one to two months. While some other beneficiaries received their cash grants longer than the said period, as shown in the table below. This shows that there is no regularity and consistency in the

distribution schedule. These delays can be blamed on certain measures that the government, particularly the Commission on Audit (COA) does to ensure funds are properly released. In their COA report of 2012, they stated that 13 Million pesos of funds were put on hold due to errors seen in the list given by DSWD as having double entries. There are also instances wherein the beneficiaries fail to attend required seminars due to accessibility issues of their area and other domestic reasons.

Schedule period	Pansol n=76		San Antonio N=64	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Once in every 1-2 months	43	57	49	77
Once in every 2-3 months	28	36	15	23
Once in every 4-5 months	3	4	0	0
Once in every 6 months	2	3	0	0

**Table 7:** Schedule of cash release under the CCT Program

The cash grants are mostly (88% both from Brgy. Pansol and San Antonio) obtained by female household members as shown in the table below since they are the ones taking care of their household.

Gender	Pansol n=76		San Antonio N=64	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Male	7	9	4	6
Female	67	88	56	88
Both male and female	2	3	4	6

**Table 8:** Gender of the household member obtaining the cash grant

There are 68% and 55% respondents from Barangay Pansol and San Antonio, respectively who said the cash grant they received was used for educational subsidies for their children in school. This shows that the cash grant was essential to sustain the needs of the beneficiaries, which is consistent to the goal of the program of keeping children in school.

Allocation of cash grants based on daily needs	Pansol n=76		San Antonio N=64	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Livelihood capital	5	7	1	2
Educational subsidies for children in school	68	89	55	86
Household expenses	46	61	35	55
Medicine	4	5	9	14

**Table 9:** Allocation of cash grants according to the respondents' daily needs

The rate of acceptance of beneficiaries in the conditions governing the cash grants are summarized in the table below. Majority (58% for Brgy. Pansol and 67% for Brgy. San Antonio) of the respondents rated the conditions at the average level and some are still having a hard time in complying with the regulations given by the program due to geographical or physical constraints.

Acceptance rate	Pansol n=76		San Antonio N=64	
	Frequency	Percentage (%)	Frequency	Percentage (%)
High	22	29	14	22
Medium	44	58	43	67
Low	10	13	4	6
No answer	0	0	3	5

**Table 10:** Acceptance rate by beneficiaries in the conditions governing the cash grants

When asked whether the program will be enough for the beneficiaries after its five- year implementation, majority (82% from Brgy. Pansol and 54% from Brgy. San Antonio) said it is already long enough and have already helped their families by then. 14% of respondents from Brgy. Pansol and San Antonio, respectively, who said that the implementation period is not enough stated these reasons: (1) the program isn't enough to sustain the long term needs of the children; and (2) is that the grant is not enough for their daily needs.

Acceptance rate	Pansol n=76		San Antonio N=64	
	Frequency	Percentage (%)	Frequency	Percentage (%)
ENOUGH	62	82	35	54
NOT ENOUGH	14	18	22	34
"Lubos na"	0	0	1	2
Can't decide	0	0	3	5
No answer	0	0	3	5

**Table 11:** Beneficiaries' acceptance rate in relation to the five year term of the conditional cash grant

## 6. Knowledge of Beneficiaries about the CCT Program

Table 12 below summarizes the knowledge of the respondents on their benefits as a CCT program beneficiary. 64% of Brgy. Pansol respondents and 49% from Brgy. San Antonio respondents believed that the program have improved their children's regular schooling in elementary and secondary schools. Regular check-ups and vaccination of children (59% of respondents) came in second for Brgy. Pansol respondents. For Brgy. San Antonio, 38% of respondents said regular check-up and vaccination of children and regular schooling of pre-schooling came in second.

Benefits*	Pansol n=76		San Antonio N=64	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Regular maternal check-up	46	61	25	39
Family development sessions	57	75	29	45
Regular check-up and vaccination of children ages 0-5	59	78	38	59
Regular schooling of day care and preschool children ages 3-5	42	55	38	59
Regular schooling of elementary and secondary children ages 6-14	64	84	49	77
Deworming of children ages 6-14 twice a month	32	42	24	38
Others(Livelihood and Scholarship)	2	3	0	0

**Table 12:** Beneficiaries knowledge on the benefits of the CCT Program; \*multiple answers

Table 13 below shows the conditions mentioned by the respondents before they can become a CCT program beneficiary. Almost half (49%) of the respondents from Brgy. Pansol said that having no regular income was the most common criterion to be a CCT program beneficiary.

In Barangay San Antonio, most of the respondents (42%) said that being a registered voter was a condition before becoming a CCT beneficiary. This was followed by having no regular source of income.

Conditions*	Pansol n=76		San Antonio N=64	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Registered voter	18	24	27	42
Indigent family	15	20	13	20
No regular source of income	37	49	22	34
Family size	15	20	15	23
Not aware	1	1	0	0
Others	20	26	0	0

**Table 13:** Conditions for the respondents to become a beneficiary; \*multiple answers

## 7. Perceived community effects of CCT program

The respondents were asked their perceived effects of the CCT program on education. Most of them (88% and 89% in Barangay Pansol and San Antonio, respectively) said that their children are able to go to school regularly because of the program. This increase in students' attendance will have a positive impact in the long run since the children can have more focus on excelling academically and could increase the possibility of finishing college and therefore, having more employment options.

Perceived effects*	Pansol n=76		San Antonio N=64	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Regular schooling	67	88	57	89
Improved academic performance	39	51	13	20
Being able to finish Pre-school	26	34	12	19
Being able to graduate in Elementary	28	37	12	19

**Table 14:** Respondents' perceived effects of the CCT Program in Education; *\*multiple answers*

Regular check-up and vaccination for children are the most perceived effect of the CCT program on the health aspect (88% on Barangay Pansol while 77% for Barangay San Antonio). Regular vaccination and check-up for children is a good indicator towards better health conditions in the barangay. Children are more prone to getting sick but through regular vaccination and check-up, the health of children can be monitored and worsening of diseases can be prevented.

Perceived effects*	Pansol n=76		San Antonio N=64	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Regular maternal check-up	25	33	22	34
Regular vaccination and check-up for children	67	88	49	77
Regular deworming for children twice a year	40	53	40	63
Less maternal and children mortality rate	10	13	8	13
Others	6	8	0	0

**Table 15:** Respondents' perceived effects of the CCT Program in Health; *\*multiple answers*

Table 16 below shows the respondents' perceived effects on the economic aspect following the CCT program. Majority (88%, 80%) for Brgy. Pansol and San Antonio said that the program helped in reducing their burden in household expenditures. This proves that the cash grants given are helpful to the families and that it is effective in addressing the immediate needs of the beneficiaries.

Perceived effects*	Pansol n=76		San Antonio N=64	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Reduces burden in household expenditures	67	88	51	80
Helpful in family savings	22	29	16	25
Helps in allocating the money for basic needs of the family	44	58	39	61
Not of help	3	4	0	0
Others (livelihood)	1	1	0	0

**Table 16:** Respondents' perceived effects of the CCT Program in Economic Aspect; *\*multiple answers*

Perceived effects of CCT in the Family	Pansol	San Antonio
Improved relationship between husband and wife	52	55
Improved relationship among parents and children	64	57
Improved relationship among siblings	37	54
There are positive behavior changes per member in the family	37	60
Not of help	6	4

**Table 17:** Respondents' perceived effects of the CCT Program in the Family

### 8. Problems and Issues in the Barangay in relation to CCT

Table 18 below shows the distribution of the respondents who have identified presence and absence of issues in the barangay regarding the program. Most of them (78% of respondents from Barangay Pansol while 86% of respondents from Barangay San Antonio) said that there is no problem, while only a few (22% of respondents from Barangay Pansol while 14% of respondents from Barangay San Antonio) have mentioned some problems regarding the implementation of the program, which is summarized in Table 19.

Presence of Issues in the barangay regarding CCT program	Pansol n=76		San Antonio N=64	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Present	17	22	9	14
Absent	59	78	55	86

**Table 18:** Presence of issues in the barangay regarding CCT program

Certain problems were raised like, or education, a beneficiary said that lack of allowance hindered the children from regularly attending school.

For the health aspect, one member specified unequal benefits given to beneficiaries as a problem. Some will get free treatment or medicines while others do not since supply has already run out. While for the economic and livelihood aspect, seven of the respondents from Brgy. Pansol said gambling of household members as a problem. This may denote that the cash grants may not be used for its intended purpose of uplifting marginalized communities and improving their conditions. Also, a respondent said that having no regular livelihood is a problem with the program since they do not have a stable source of income to sustain their needs.

On its overall implementation, some respondents (two for Brgy. Pansol and three for Brgy. San Antonio) said that there is a "bias" in the selection of beneficiaries and only beneficiaries of certain political alliances are able to get and enjoy their privileges. This runs counter to what the program is mandated to do, which is to unbiasedly give help to those who are truly need without prejudice. Also, three respondents from Brgy. San Antonio said that they are not able to receive their pay out without any

valid reason given. Although 14 respondents found that five years is not enough to sustain the needs of their schoolchildren, only one said that, in general, CCT is not enough to sustain its long term goals.

ASPECT	PROBLEM/ ISSUE	Pansol n=17	San Antonio n=9
Education	Children have no allowance therefore they are not regularly able to go to school	1	0
	Haven't specified but said there is a problem	16	9
Health	Unequal benefits being given	0	1
	Haven't specified but said there is a problem	17	8
Economic and Livelihood	Gambling	7	0
	No regular Livelihood	1	0
	Haven't specified but said there is a problem	9	9
Overall Program	Only selected gets privileges	2	3
	Pay out isn't received/ delayed/ reduced	4	6
	The span of five years of getting benefits from CCT is not enough	1	0
	Haven't specified but said there is a problem	10	0

**Table 19:** Current issues and problems in the implementation of CCT program

Table 20 below summarizes the observed reasons of the respondents for the absence of issues and problems in the implementation of CCT. In Brgy. Pansol, 32 % of respondents were not able to state the reason, while 10% respondents said the program is well executed and therefore see no problem.

On the other hand, in Brgy. San Antonio, 20% said that program is well executed, and there were no perceived issues in CCT's implementation.

REASONS	Pansol n=59	San Antonio n=55
Beneficiaries follow conditions	7	7
The program as a whole is well executed	10	20
It helps the families	3	4
Settles conflicts immediately	1	2
No Answer	32	12

**Table 20:** Beneficiaries' observed reasons for the absence of issues and problems on the implementation of CCT

The table above summarizes the suggestions of the beneficiaries who said that a problem exists in the implementation of the program. Majority of the respondents, in all aspect were not able to specify a recommendation; only a few were able to identify what they think could be a solution to their problem.

One respondent from Brgy. San Antonio said increasing the cash grants could be of help to the families. Two from the same barangay said that distributing free educational materials such as books and uniforms could aid them. In the health aspect, two respondents from Brgy. San Antonio said distributing free medicines and vitamins could not only solve the health problems of beneficiaries but it can edify the valuable contributions of deliverables promised by the program. A respondent from Brgy. Pansol said that in order to solve economic and livelihood problems, those who are caught gambling should be eradicated from the list of beneficiaries since they might be using the cash grants for illegal activities. Two respondents, each from Brgy. Pansol and San Antonio said being more strict in the monitoring of the beneficiaries of the program helps in addressing problems such as gambling issues. Five respondents from Brgy. San Antonio said having livelihood programs such as curing of meats, which is an added bonus of being in the program, could help in solving the problems previously identified since the families could have alternative sources of incomes. And lastly, following the governing conditions of the program was specified as the solution by two respondents and four respondents from Brgy. Pansol and San Antonio, respectively.

## 9. Conclusions and Recommendations

As a result of having positive impacts in other countries, the Aquino administration saw the 4Ps program as a strategy to reduce the poverty incidence from 33% to 16.6% by 2016. The administration hopes to achieve the same results of Brazil, where they were able to reduce their poverty incidence by 15% in just three years.

The results of this study show that the CCT program in the Philippines, or better known as Pantawid Pamilyang Pilipino Program (4Ps), is generally acceptable to the beneficiaries in both the villages of Barangay San Antonio and Barangay Pansol. In terms of meeting its target on education, beneficiaries say that their children have been able to go to school due to the help given by the program. Since their children have been going to school, this provides opportunity for them to finish at least elementary level and increase their likelihood of getting a job. In the realm of health and food, the respondents were generally pleased with how the program helps them in alleviating household everyday needs. Most respondents from both areas even believed that after its five-year implementation, it would have considerably helped their families fight off poverty.

However, there is still a lot of room for improvement in terms of meeting short-term and long-term needs of its beneficiaries. Though the two villages of Brgy. San Antonio and Brgy. Pansol generally had a positive response to the program, these are just two of the many villages under the program. Questions about the programs' sustainability as well as a change in the leadership of the national government places the 4Ps in uncertainty. Certain problems can also be pointed out in the program. Factors like there are too many sectors and government agencies involved in the process of implementation, which according to Arulpragasam...et.al(2011) can create a situation for fraud, error, corruption, resulting in leakages. Another criticism is that it develops dependency to the program creating a reputation of the 4Ps program as more of a "dole out" system that promotes sole reliance to whatever monetary help is extended and nothing

more. The current Secretary of the Department of Social Welfare and Development (DSWD), Sec. Judy Taguiwalo said that she will not institute or support the long-term institution of a “stop-gap” measure. Instead, she would focus more on long-term economic initiatives that will create more sustainable jobs and livelihood (Lopez, 2016).

### **Recommendations**

The CCT program in the Philippines still needs improvement in order to accurately achieve its targets. It could benefit more by looking at and borrowing the best practices of CCT programs from other countries. For instance, by increasing the age range of student beneficiaries from 14 years old to 22, just like in Mexico’s CCT program called *Oportunidades*, the program will not only encourage students to finish their elementary education but also high school and eventually, on towards a vocational program or college degree which will more or less increase their chances of getting a good paying job. The elementary level of education in the Philippines already has the benefit of being the most well-attended level even without 4Ps intervention (Reyes, et.al., 2013). Based on the Annual Poverty Indicator Survey (APIS), the problem of severe non-attendance in school among older children from ages 15-22 is around 45% in 2011 as compared to the meager 2% attrition from the elementary level.

Another recommendation would be narrowing the frequency of receiving the cash grants. The majority of our respondents use the money for their daily needs, but the government only releases the cash in two to three months time. It would be better if the cash arrives on a weekly basis so that it could truly help the beneficiaries attend to their daily expenses with confidence.

The program implementers should also focus on capacity building programs for the beneficiaries that are sustainable. If the beneficiaries are located in an agricultural area, farming related projects wherein whatever organic produce they grow will be sold at the local market, or better yet, their own sort of Farmers market should be implemented. If they are in the city, domestic skills like cooking, laundrying, driving, and even gardening and landscaping should be taught to the beneficiaries so it would be easy to find employment and hopefully a way out of poverty.

Indeed, there is still much room for improvement with respect to the 4Ps’ implementation. Hopefully, given enough time and the needed political support the Program may help break the cycle of intergenerational poverty in the country.

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### *Books:*

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Molotch, Harvey. 1976. The city as a growth machine. *American Journal of Sociology* 82(9): 50-65.

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Muller, Chandra. 1983. "Resource dependency in community based organizations." Master's thesis, Department of Sociology, University of Chicago.

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Marciniak, Edward, and Nancy Jefferson. 1985. "CHA Advisory Committee Appointed by Judge Marvin E. Aspin: Final Report." (December), Chicago. Unpublished.

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Japanese Ministry of Foreign Affairs. "Japan's FTA Strategy (Summary)."

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## 日本語論文執筆要領

創刊以来、Ritsumeikan Journal of Asia Pacific Studies では、主に英語で書かれた論文を刊行してきましたが、日本語による論文も積極的に受け付けることになりました。

Ritsumeikan Center for Asia Pacific Studies (RCAPS) が所属する立命館アジア太平洋大学では、教学の部門において、英語によるレポートや卒業論文を執筆するにあたり、アメリカ心理学会 (American Psychological Association、以下 APA) が定める書式にしたがって、本文、注、参考文献を執筆することを推奨しています。日本語によるレポートや卒業論文についても、APA スタイルを日本語に置き換えたものを推奨しています。こうした教学上の方針と合致させるためにも、Ritsumeikan Journal of Asia Pacific Studies では、英語論文は全面的に APA スタイルに依拠し、日本語論文は APA スタイルを日本語に置き換えたものに依拠する方針を立てました。

学術雑誌の質は、論文が示す研究内容だけでなく、雑誌全体の体裁が整っているかにも左右されます。本誌の体裁や表記を統一し、読者にとって読みやすいものとするため、執筆および投稿の際、以下の執筆要領に留意してください。

### 1. 原稿の作成

1.1 原稿の分量は、行頭、行末、空行などの余白を含めて、30,000 字以下を目安にしてください。40 字 × 30 行で作成し、計 25 ページが目安となります。

1.2 原稿は未公開のものに限ります。他誌に掲載済みのものでなく、他誌で審査中のものも二重投稿と見なし、掲載不可とします。

1.3 原稿はパソコンで作成してください。マイクロソフト社製 Word で読み取り可能なフォーマットを歓迎します。

1.4 パソコンによるページレイアウトの設定は、A4 判、横書き、上下左右に 30mm 以上の余白、40 字×30 行、フォント・サイズ 11 ポイント前後にしてください。

1.5 英文要旨については、英文校閲の専門家による修正を行うことがあります。

## 2. 文章の表記

2.1 引用などで必要な場合を除き、原則として常用漢字、現代かなづかいを用いてください。

2.2 句点はマル（。）、読点は点（、）を使ってください。

2.3 数値にはアラビア数字、固有名詞や概念には漢数字を使ってください。

（例）1990 年代、126 件、第二次世界大戦

2.4 漢字で表記できない外国の固有名詞はカタカナで表記し、必要に応じて初出時の直後、カッコ内に原綴りを記してください。

（例）アンダーソン（B. Anderson）

2.5 パソコンの機種依存文字は、文字化けの原因になるので避けてください。たとえば、ローマ数字の II, IV, IX などは特殊文字を使わず、I, V, X などアルファベットの組み合わせで入力してください。

## 3. 原稿の構成

3.1 原稿は以下の構成でお願いします。

- 1) タイトル（日本語）
- 2) 氏名（日本語）
- 3) キーワード（日本語、5 語前後）
- 4) 本文（注は脚注を使用）
- 5) 謝辞（必要な場合のみ）
- 6) 参考文献
- 7) タイトル（英語）
- 8) 氏名（英語）
- 9) キーワード（英語、5 語前後）
- 10) 要旨（英語、500 語程度）
- 11) 図版・表など（文章の原稿本体とは別のファイルで準備してください）

3.2 本文を区分する場合、章は I、II、III…、節は 1、2、3…、項は (1)、(2)、(3)…などの数字を用いてください。数字の後ろに点は付けません。章見出しはその前後に 1 行分の空行を、節見出し以下はその前に 1 行分の空行を入れてください。

## 4. 図版・表などの作成

4.1 図版（写真、地図などを含む）・表などは文章の原稿本体とは別のファイルで準備し、1 点ずつ、作成者名（あるいは写真の撮影者名など）、図版・表ごとの通し番号、説明をつけてください。

4.2 図版のファイルは、JPEG、PNG、もしくはPDF形式で作成してください。

4.3 図の見出しは図の下、表の見出しは表の上につけます。

## 5. 注の付け方

注は本文下部に掲げる脚注方式とします。文中につける注の番号は上付きで(1)、(2)、(3)……とします。

(例) 一般に学術論文における注の付け方には脚注方式と後注方式がある<sup>(1)</sup>。

## 6. 本文での引用・参照（直接引用と間接引用）

6.1 短い引用（1～3行程度の直接引用）は、かぎカッコを使用します。著者名を地の文に示す場合には、著者名（出版年，p. ページ数）「……」とします。著者名を地の文に示さない場合には、引用をとじるかぎカッコの後ろに、（著者名，出版年，p. ページ数）を記します。

(例 1)

田辺（1995，p.196）は「人類学的に個人の宗教性を問題にすると、その社会における人、個人あるいは自己といった概念を明らかにすると同時に、さらにそれらが、資本主義的な社会関係においていかに変化してきたかという問題を抜きにして論ずることはできない」と批判している。

(例 2)

この場合の「領有」とは、「すでに存在する諸表象のなかからつごうのよいものを選択的にえらびとりみずからのものによって、あらたな文化的主体を構築する作業」（林，2001，p.27）を意味している。

6.2 長い引用（4行以上の直接引用）は、インデントの機能を用いて行頭を2文字下げにし、前後を1行ずつ空けます。

(例)

そして、フェザーストーンが言うように、後者のグローバル・マーケティング戦略はジャパナイゼーションに新たな意味を付与したのである。

もしジャパナイゼーションという語が何らかの意味を持つとしたら、それは土着化、グローバリズムという概念をもとにした市場戦略に関することである。それは統一化された商品やイメージを押しつけるのではなくローカル市場の需要に即したものを提供しようとするものだ。この戦略はローカリズムのスローガンを掲げようとする世界中の多国籍企業の間でポピュラーな戦略にもなっているのだ。

(Featherstone, 1995, p.9)

次章で論じるように、このようなジャパナイゼーションをグローバリズムに短絡的に結びつける議論は説得力に欠けるだけでなく、日本のナショナリスティックな言説と共謀的に作用してしまう危険性がある。

6.3 引用（直接引用）せず、参照（間接引用）する場合も、上記6.1と同様に出典を記します。すなわち、著者名を地の文に示す場合には、「著者名（出版年，p. ページ数）」とします。著者名を地の文に示さない場合には、参照した箇所（著者名，出版年，p. ページ数）を記します。

(例 1)

川中（2005，p.54）によれば、民主化後のフィリピンでは、自由主義的な経済改革が進む中で、利益表出の機会を持たなかった貧困層が「ポピュリスト」を支持するようになり、これが中間層の間で民主主義への不信を強めているという。

(例 2)

他方、トクヴィルの市民社会論に対しては、市民社会における支配と抵抗、支配的な新自由主義との親和性を看過しているというグラムシ的視座からの批判がある (Hedman, 2006, p.5; Mercer, 2002, p.11)。

6.4 ページを記載する場合は、原則としてすべての桁を省くことなく記載します。

(例) pp.3-10, pp.71-75, pp.97-118, pp.100-106, pp.213-223

6.5 文献全体を参照している場合、ページの記載は省略できます。同一著者の複数文献を参照する場合には、出版年を半角セミコロンで区切って並べます (セミコロンと出版年の間に半角スペース)。同一著者への参照が続く場合でも *ibid.* は使用せず、著者名を繰り返します。

6.6 共著の場合には、3 名以下であれば著者名を列挙し、4 名以上であれば第 2 著者以降を省略します。

(例) (生田, 松澤 2000)、(和田ほか 1995)、(Gommans and Leider 2002)、(Hefner, Lyon and Lucas 1983)、(Greenberger et al. 1954)

## 7. 参考文献の書式

7.1 参考文献の目録を本文末尾に掲げます。見出しは「参考文献」とします。配列は、原則として著者名 (または編者名。共著の場合は筆頭著者名) のアルファベット順とし、同一著者に複数の文献がある場合には、さらに出版年順とし、2 つめ以降は著者名の代わりに全角ダッシュ 4 個「————」で表示します。同一著者に出版年が同じ文献が複数ある場合には、1997a, 1997b… などとして区別します。

7.2 必要に応じて、日本語文献、英語文献などと言語ごとに分けたり、「一次史料」「未公刊文書」「新聞」などを一般の参考文献から分けたりする工夫は可能です。日本語文献を独立させる場合、配列は原則として著者名 (または編者名。共著の場合は筆頭著者名) の 50 音順とします。

7.3 欧文文献のファースト・ネームは、APA スタイルに従い、原則としてイニシャルで表記してください。また、第 1 著者 (編者) 名は氏名を倒置させて、ラスト・ネーム、ファースト・ネームとしますが、第 2 著者 (編者) 以降の氏名は倒置させません。

7.4 日本語、英語以外の言語による文献の記載は英語文献に準じますが、著者名のファースト・ネーム、ラスト・ネームなどの配列は、各言語の慣習にしたがってください。

7.5 欧文文献の雑誌名は、他分野の読者にもわかるよう、原則として略語ではなく、フルで表記してください。煩雑さを避けるために略語を使う場合は、略語一覧をつけてください。

7.6 参考文献目録の表記の基本は、以下のとおりです。下線部はイタリックにします。APA スタイルに従うため、書名は文頭と固有名詞以外、語頭を大文字にはしません。

### 1) 欧文・単行本・単著

著者ラスト・ネーム, 著者ファースト・ネーム. (出版年). 書名. 出版地: 出版社.

(例)

Anderson, B. (1998). *The spectre of comparison: Nationalism, Southeast Asia, and the world*. London and New York: Verso.

2) 欧文・単行本・共著（複数）

and は & としません。第 2 著者以降の氏名は倒置しません。

第 1 著者ラスト・ネーム, 第 1 著者ファースト・ネーム and 第 2 著者ファースト・ネーム ラスト・ネーム .  
(出版年). 書名. 出版地: 出版社.

第 1 著者ラスト・ネーム, 第 1 著者ファースト・ネーム, 第 2 著者ファースト・ネーム ラスト・ネーム  
and 第 3 著者ファースト・ネーム ラスト・ネーム . (出版年) . 書名. 出版地: 出版社.

(例)

Hollan, D. W. and J. C. Wellenkamp. (1994). *Contentment and suffering: Culture and experience in Toraja*. New York: Columbia University Press.

3) 欧文・単行本・編者（単数）

編者ラスト・ネーム, 編者ファースト・ネーム, (Ed.) (出版年) . 書名. 出版地: 出版社.

(例)

Harris, I. (Ed.) (1999). *Buddhism and politics in twentieth-century Asia*. London and New York: Pinter.

4) 欧文・単行本・編者（複数）

第 1 編者ラスト・ネーム, 第 1 編者ファースト・ネーム and 第 2 編者ファースト・ネーム ラスト・ネーム,  
(Eds.) (出版年) . 書名. 出版地: 出版社.

Gommans, J. and J. Leider (Eds.) 2002. *The maritime frontier of Burma: Exploring political, cultural and commercial interaction in the Indian Ocean world, 1200-1800*. Leiden: KITLV Press.

5) 欧文・雑誌掲載の論文

APA スタイルに従うため、雑誌名だけでなく、巻もイタリックにします。

著者ラスト・ネーム, 著者ファースト・ネーム . (出版年) . 論文名 . 雑誌名, 巻 (号), 論文の最初のページ-論文の最後のページ .

(例)

Jory, P. (2000). Books and the nation: The making of Thailand's national library. *Journal of the Southeast Asian Studies*, 31(2), 351-373.

6) 欧文・単行本（論文集・予稿集など）掲載の論文

編者の氏名は倒置しません。

著者ラスト・ネーム, 著者ファースト・ネーム . 出版年 . 論文名 . In 編者名 (Ed.) , 書名 (pp. 論文の最初のページ-論文の最後のページ) . 出版地: 出版社.

(例)

Bronson, B. (1999). Patterns in the early Southeast Asian metals trade. In I. Glover, P. Suchitta and J. Villers (Eds.), *Early metallurgy, trade and urban centres in Thailand and Southeast Asia* (pp.63-114). Bangkok: White Lotus.

7) 和文・単行本・単著

著者氏名 (出版年)『書名』 出版社 .

(例)

中島岳志 (2005)『ナショナリズムと宗教：現代インドのヒンドゥー・ナショナリズム運動』 春風社 .

8) 和文・単行本・編者 (複数)

第 1 編者氏名, 第 2 編者氏名編 (出版年)『書名』 出版社 .

(例)

生田真人, 松澤俊雄編 (2000)『アジアの大都市 3 クアラルンプール, シンガポール』 日本評論社 .

9) 和文・雑誌掲載の論文

著者氏名 (出版年)「論文名」『雑誌名』 巻 (号) , 論文の最初のページ-論文の最後のページ .

(例)

玉田芳史 (1996)「タイのナショナリズムと国民形成：戦前期ピブーン政権を手掛かりとして」『東南アジア研究』 34(1), 127-150.

10) 和文・単行本掲載の論文

必要に応じて、書名のあと、丸カッコ内にシリーズ名などを記します。

著者氏名 (出版年)「題名」編者氏名編『書名』 (必要に応じてシリーズ名など) (pp. 論文の最初のページ - 論文の最後のページ) 出版社 .

(例)

内田隆三 (1996)「知の社会学のために：フーコーの方法を準拠にして」井上俊ほか編『知の社会学／言語の社会学』(岩波講座現代社会学 5) (pp.35-66) 岩波書店 .

11) 欧文ウェブサイト

マイクロソフト社製 Word の場合、URL のハイパーリンクを削除してください。見やすさを考慮して、URL の直前で改行を入れてもかまいません。

著者ラスト・ネーム, 著者ファースト・ネーム (もしくはサイトの管理運営組織名) . (記事執筆年 (もしくはデータの公開年)) . ページ名 . サイト名 . Retrieved on Month Date, Year, from URL

(例)

National Institute of Statistics of Cambodia. (2014). Agriculture Census 2013. *National Institute of Statistics*. Retrieved on October 7, 2015, from <http://www.nis.gov.kh/index.php/en/nis-event/2-ac2013-released.html>

12) 和文ウェブサイト

マイクロソフト社製 Word の場合、URL のハイパーリンクを削除してください。見やすさを考慮して、URL の直前で改行を入れてもかまいません。

著者氏名 (もしくはサイトの管理運営組織名) (記事執筆年 (もしくはデータの公開年)) 「ページ名」『サイト名』 年月日アクセス . < URL >

(例)

外務省 (2015)「国・地域：タイ王国、基礎データ」『外務省ホームページ』2015年10月7日アクセス <  
<http://www.mofa.go.jp/mofaj/area/thailand/data.html> >

13) PDF形式でしか公開されていない文献 (欧文)

マイクロソフト社製 Word の場合、URL のハイパーリンクを削除してください。見やすさを考慮して、URL の直前で改行を入れてもかまいません。

著者ラスト・ネーム, 著者ファースト・ネーム. (出版年). 文献名 (必要に応じて、シリーズ名など).  
Retrieved from URL

(例)

Lee, J. 2013. *Myanmar pivots awkwardly away from China* (ISEAS Perspective 2013/64). Retrieved from  
[http://www.iseas.edu.sg/documents/publication/iseas\\_perspective\\_2013\\_64\\_myanmar\\_pivots\\_awkwardly\\_away\\_from\\_china.pdf](http://www.iseas.edu.sg/documents/publication/iseas_perspective_2013_64_myanmar_pivots_awkwardly_away_from_china.pdf)

編者がいる文献の一部を記載する場合には、単行本掲載の論文の書き方にしがいます。

著者ラスト・ネーム, 著者ファースト・ネーム. (出版年). 論文名. In 編者ファースト・ネーム ラスト・ネーム (Ed.), 文献名 (必要に応じて、シリーズ名など) (pp. 論文の最初のページ-論文の最後のページ). Retrieved from URL

(例)

Mori S. and Yamagata T. (2009). A note on income and poverty of persons with disabilities in Metro Manila. In Mori S., C. Reyes, and Yamagata T. (Eds.), *Poverty reduction for the disabled in the Philippines: Livelihood analysis from the data of PWDs in Metro Manila* (IDE Joint Research Program Series, No.151)(pp. 145-157). Retrieved from  
[http://www.ide.go.jp/English/Publish/Download/Jrp/pdf/151\\_03.pdf](http://www.ide.go.jp/English/Publish/Download/Jrp/pdf/151_03.pdf)

14) PDF形式でしか公開されていない文献 (和文)

マイクロソフト社製 Word の場合、URL のハイパーリンクを削除してください。見やすさを考慮して、URL の直前で改行を入れてもかまいません。

著者氏名 (出版年)『文献名』(必要に応じて、シリーズ名など) < URL >

(例)

崔博憲 (2013)『日本の新しいニューカマー：東南アジア出身の外国人研修生・技能実習生を中心に』(京都大学グローバル COE「親密圏と公共圏の再編成をめざすアジア拠点」ワーキングペーパー次世代研究 No.99) < [https://www.gcoe-intimacy.jp/images/library/File/working\\_paper/New%20WP/WP\\_NextGenerationResearch\\_99\\_SAI2010\\_abstract.pdf](https://www.gcoe-intimacy.jp/images/library/File/working_paper/New%20WP/WP_NextGenerationResearch_99_SAI2010_abstract.pdf) >

編者がいる文献の一部を記載する場合には、単行本掲載の論文の書き方にしがいます。

著者氏名 (出版年)「論文名」編者氏名編『文献名』(必要に応じて、シリーズ名など) (pp. 論文の最初のページ-論文の最後のページ) <URL>

岩井美佐紀 (2012)「ベトナム農村における住民組織：メコンデルタ「新経済村」の集落に焦点を当てて」

重富真一・岡本郁子編『アジア農村における地域社会の組織形成メカニズム』（アジア経済研究所調査研究報告書 No.413）（pp.1-27） < [http://www.ide.go.jp/Japanese/Publish/Download/Report/2011/pdf/413\\_ch2.pdf](http://www.ide.go.jp/Japanese/Publish/Download/Report/2011/pdf/413_ch2.pdf) >

15) 英字新聞の記事

マイクロソフト社製 Word の場合、電子版では URL のハイパーリンクを削除してください。見やすさを考慮して、URL の直前で改行を入れてもかまいません。

記者名 . (発行年月日) . 記事名 . 紙名 , pp. 記事の最初のページ - 記事の最後のページ .

記者名 . (発行年月日) . 記事名 . 紙名 , Retrieved on Month Date, Year, from URL

(例)

Cowell, A., et al. (2010, April 19). Authorities criticized over handling of air crisis. *The New York Times*. Retrieved on April 20, 2010, from <http://www.nytimes.com/2010/04/20/world/europe/20ash.html?hp>

16) 日本語の新聞の記事

マイクロソフト社製 Word の場合、電子版では URL のハイパーリンクを削除してください。見やすさを考慮して、URL の直前で改行を入れてもかまいません。

記者名 (発行年月日) 「記事名」『紙名』 pp. 記事の最初のページ - 記事の最後のページ .

記者名 (発行年月日) 「記事名」『紙名』 アクセス年月日 < URL >

(例 1)

著者名不明 (2010 年 4 月 18 日) 「文化変調：政策貧困 細る博物館」『朝日新聞』 pp.1-2.

(例 2)

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17) 日本語、英語以外の言語による文献

英語文献に準じますが、書き方は各言語の慣習にしたがってください。

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