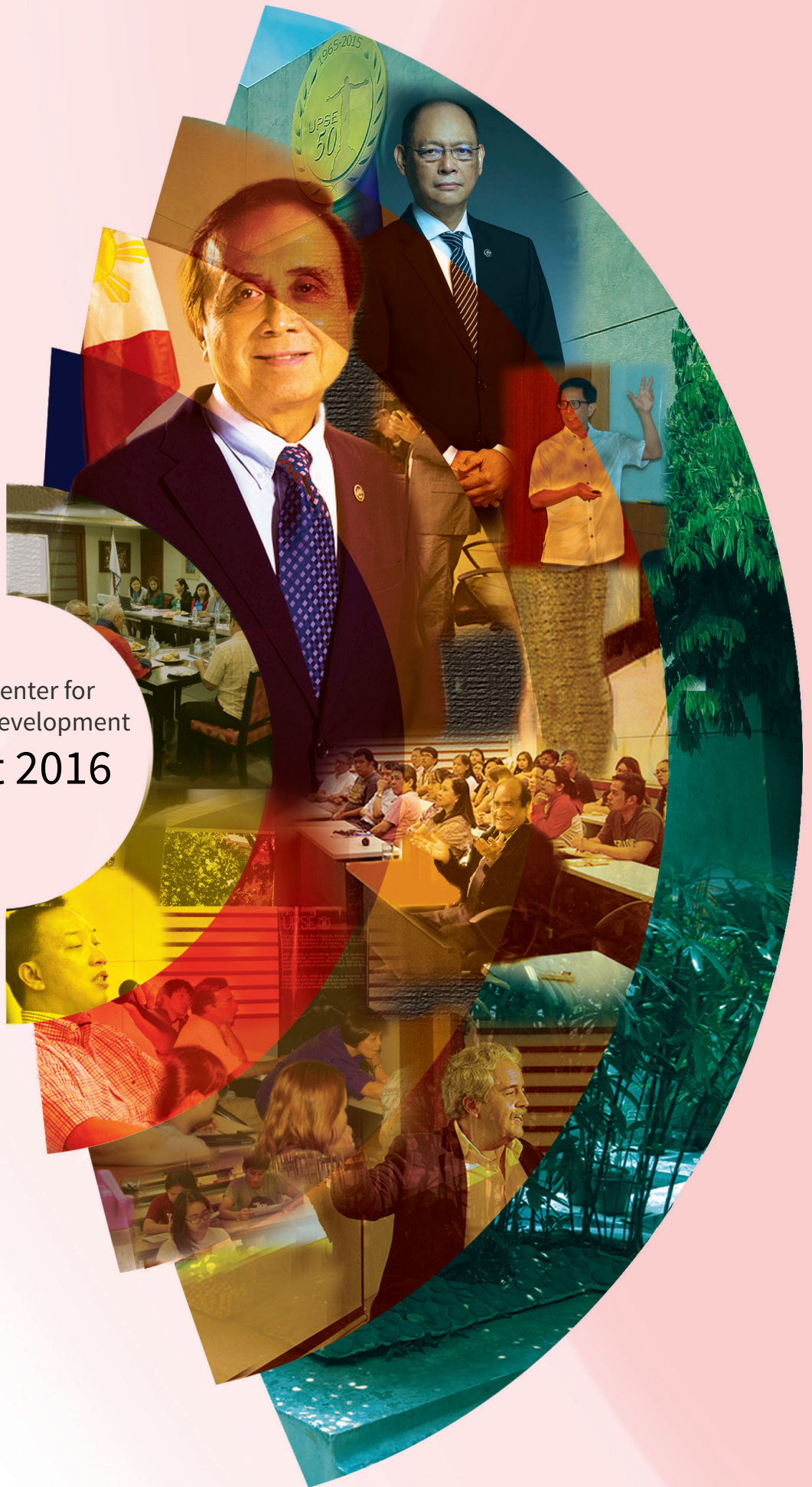
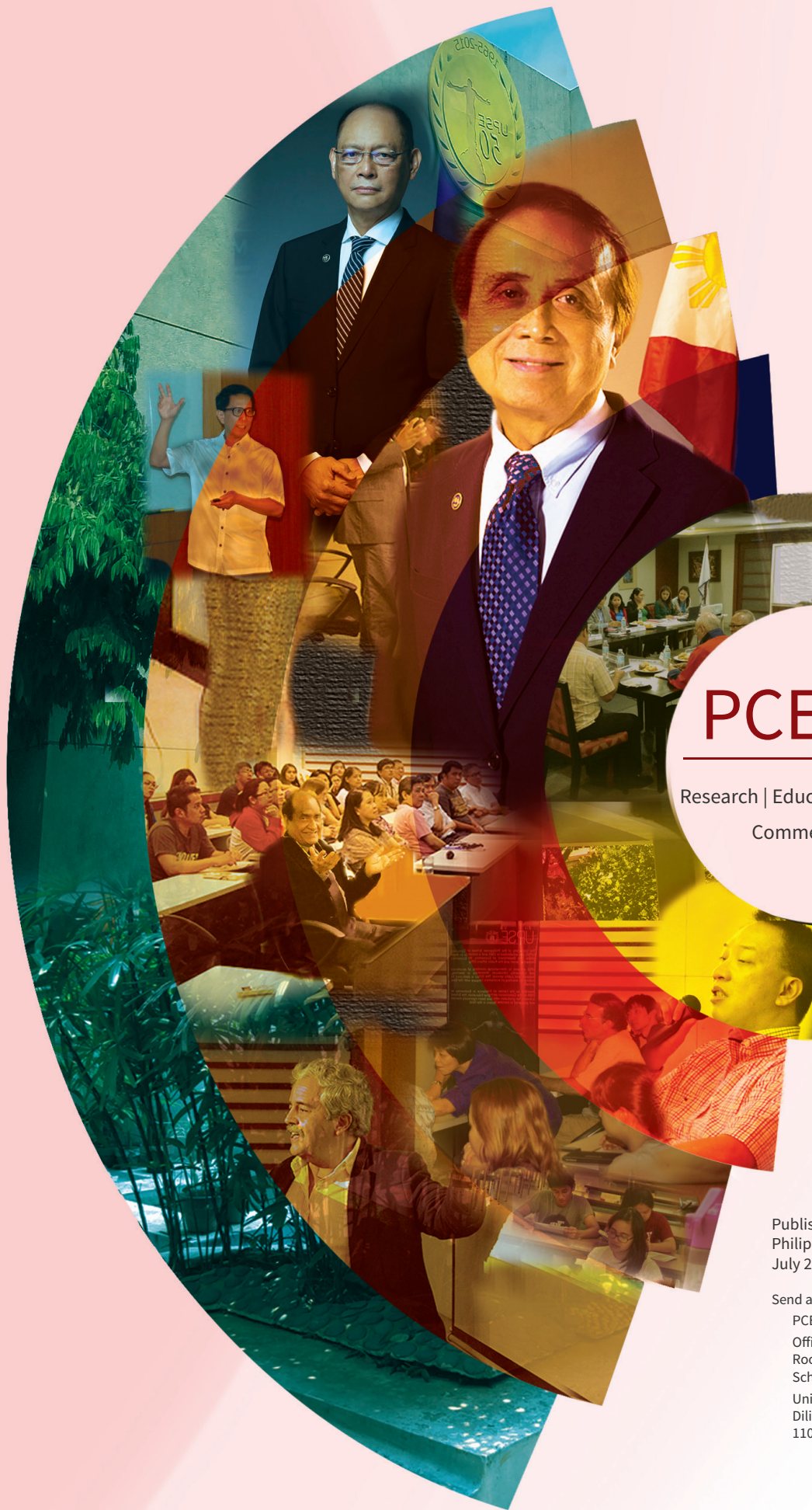


**PCED** | Philippine Center for  
Economic Development  
Annual Report 2016





# PCED | Philippine Center for Economic Development

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# PCED

The Philippine Center for Economic Development (PCED) was created on 15 March 1974 by Presidential Decree (PD) No. 453 with the sole function of giving financial and moral support to the programs of the School of Economics of the University of the Philippines.

## Mission

It is envisioned that through the financial support of the Center, the School will be able to undertake its academic functions on a larger scale, ultimately contributing to the country's continuing and accelerated efforts at national development.

## Vision

To give financial and moral support to the research, teaching, training and other programs of the School of Economics of the University of the Philippines.

The Center is directed to formulate a program for financing the programs of the School, including the endowment of faculty chairs. Being independent of this assistance, the School remains under the academic and administrative supervision of the University of the Philippines System, relying on faculty initiative as the prime means of developing competent training and research programs.

*Continued on inside back cover...*

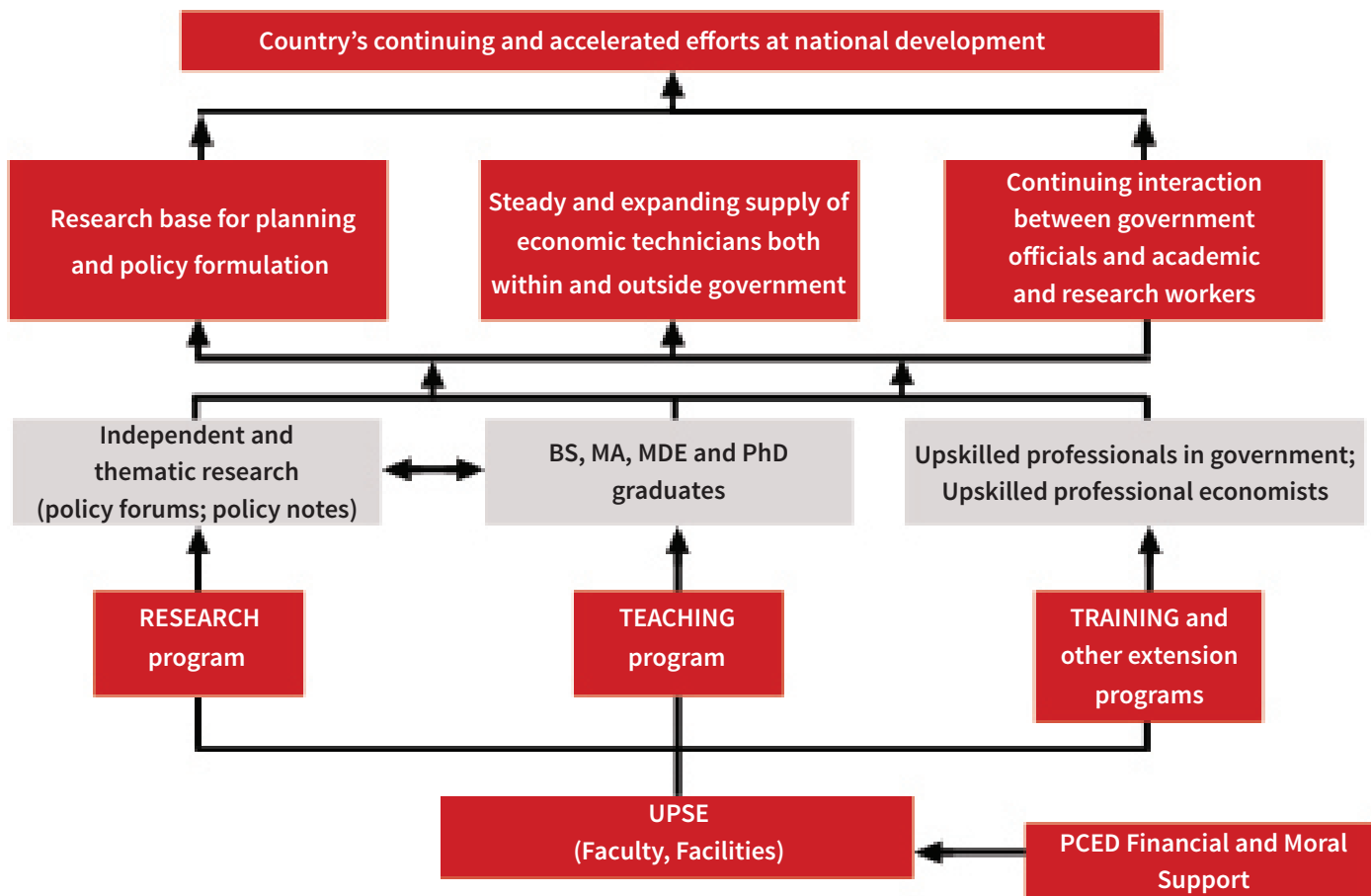
# PCED Mission and Vision

Continued from inside front cover...

The support of the Center extends to programs related to all of the following functions of the School which are to:

1. Conduct and engage in economic research oriented towards national policy and the needs of national development, particularly in the areas of:
  - a. monetary and fiscal policy;
  - b. tariff and trade policy;
  - c. industrial and agricultural policy;
  - d. regional economic development;
  - e. long-, medium-, and short-term economic planning;
  - f. human resources and employment;
  - g. economic aspects of education, health, and social development in general; and
  - h. statistical programs and policy.
2. Undertake training programs designed to provide the government and the nation as a whole with planners, analysts and economic statisticians; or in general, with technicians skilled and knowledgeable in the problems of economic development;
3. Serve as the medium for bringing together experts and specialists in other disciplines to conduct studies and investigations, and engage in the interchange of ideas so as to bring their knowledge and experience to bear on common problems, with a view to evolving fresh ideas and approaches that could be effectively applied to economic development; and
4. Engage in the publication of the results of research.

Figure 1. The PCED Mandate (PD 453)





## Message from the Chair

The Philippine Center for Economic Development continues to help the country's pursuit of sustainable development. This is carried out through its regular support to the University of the Philippines School of Economics (UPSE) that trains economists and undertakes needed research. Several of the graduates of UPSE constitute the core staff at the NEDA. As well, many studies that stem from UPSE's research activities serve as references in the crafting of the Philippine Development Plans (PDP).

The PDP 2017-2022, which flows from the President's 0-10 Point Socioeconomic Agenda, is geared toward the Filipinos' long term vision (LTV), known as Ambisyon Natin 2040. The technical papers behind this LTV were mostly prepared by the faculty and graduate students of the School.

As NEDA monitors and implements the first Plan anchored on the long-term vision of the Filipino people, PCED is already giving us ideas on what to do in the following years. The thrusts of the government as well as the Sustainable Development Goals will not be achieved without continuous study and evaluation of policy – the ambit of PCED.

With its mission of research, teaching, and training in support to the UPSE and the country in general, the PCED continues to be a valued partner in nation building and inclusive development.

Mabuhay ang PCED!

**Hon. Ernesto M. Pernia**  
*Socioeconomic Planning Secretary*  
Chairman of the PCED Board

The PCED is mandated to extend support to the research, teaching, training and other programs of the UP School of Economics (UPSE). With this 2016 Annual report, I am pleased to present what we have accomplished this past year.

In 2016, the PCED funded the research by our faculty which covers different topics and have been disseminated in 12 discussion papers and seven working papers. Nine new studies were initiated and a total of 12 PCED-funded research papers were completed.

PCED also supported the conduct of lectures and seminars by faculty, students, and visitors from other universities and institutions. Such activities include 33 UPSE-PCED Seminars.

PCED also supported graduate students by providing fellowships. In 2016, we supported 42 students (2 MDE, 7 PhD teaching fellows, 15 MA teaching fellows, 12 MA coursework, 6 PhD coursework).

Our current and future success in meeting our goals is largely dependent on the support of its Board of Trustees, PCED officers and staff, and our partners. I would like to express my sincerest appreciation to everyone who has played a part, big or small, to our accomplishments. Thank you.

Sincerely,



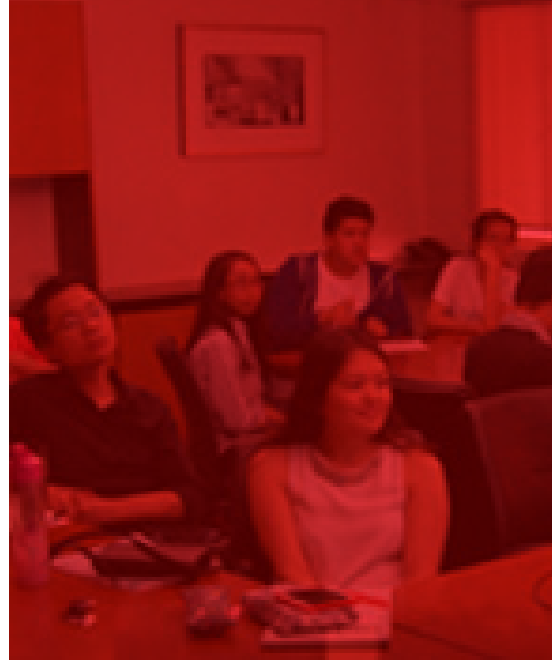
**Orville Solon, PhD**

*Executive Director*

Philippine Center for Economic Development



## Message from the Executive Director



# PCED Supported Activities and Accomplishments in 2016

The UPSE faculty regularly produce research studies as part of their academic function. In 2016, PCED supported 9 new studies by providing research grants. The grantees were given one year to complete their research projects. Table 1 provides the contract details for each study.

Table 1. 2016 Research Contracts

	AUTHORS	TITLE	CONTRACT DURATION	STATUS
1	M.C. Pajaron	Motivation to remit: Evidence from the Philippines	4 January 2016 4 January 2017	Completed
2	R.E. Reside, Jr.	Aspects of non-government organization (NGO) operations in the Philippines	5 January 2016 4 January 2017	Completed
3	S.L.S. Daway	On the allocative and welfare effects of quasi-hyperbolic discounting	1 February 2016 1 February 2017 Extended: June 30, 2017	Completed
4	L.E. Guillermo	Cross-border bribery and institutional heterogeneity	11 Mar 2016 11 Mar 2017 Extended: Sept. 11, 2017	On-going
5	A.L. Arcenas	The inflationary effects of El Niño and La Niña in the Philippines	05 May 2016 06 May 2017 Extended: Nov. 6, 2017	On-going
6	M.D. Gonzales	A financial conditions index for the Philippines: What does it tell us?	04 August 2016 04 August 2017	On-going
7	K.R.L. Jandoc	An experiment on coalition formation in economics	10 August 2016 10 August 2017	On-going
8	R.M.T. Balanquit	A generalization of the quantity equivalence result in procurement auctions	18 August 2016 18 August 2017	On-going
9	C. Wiemer	Business Cycle Theory with an application to the Philippines	31 August 2016 31 July 2017	On-going

# Completed Research

Completed research studies are released as discussion papers, working papers, or policy notes. In 2016, 20 PCED-funded research papers were completed – 12 discussion papers, and 7 working papers. The abstracts of the completed research are presented below while Tables 2 and 3 provide a summary of all the titles and authors.

## A. DISCUSSION PAPERS 2016

### DP 2016-01

#### Climate change, dengue and the economy: Ascertaining the link between dengue and climatic conditions

*Abstract:* This paper examines the climate-change related factors that affect the incidence of dengue in the Philippines. Dengue, one of the most high-profile public health problems in Southeast Asia, has been estimated to cost hundreds of millions of dollars in the Philippines and worldwide in terms of treatment, surveillance and control, lost income and other indirect costs per year. The disease has been a burden on the public, especially the poor who are less able to access funds for treatment and more heavily affected by the loss in income due to illness.

The findings indicate that temperature, precipitation and the incidence of La Niña significantly contribute to the cases of dengue in the Philippines by enhancing the breeding, growth and de-

velopment of the *Aedes aegypti*, the dengue-carrying mosquito variety. The econometric results also indicate that better household sanitation practices also reduce dengue cases, indicating that investments to enhance the public's adoption of hygienic and other health practices do lessen the transmission of diseases such as dengue. The results of the study are consistent with the findings of studies regarding dengue in other parts of the world, and contribute to the growing awareness about the health impacts of climate change. This study should provide Philippine policy-makers some guidance in addressing the dengue problem as regional climate change becomes more pronounced. *Agustin L. Arcenas*

### DP 2016-02

#### Do regions gain from an open economy?

*Abstract:* This paper looks into whether and how sub-national regions can benefit from a country's economic openness. Using data on the Philippines, it first notes marked disparities

across its regions as reflected in economic and social indicators. The dominance of Metropolitan Manila in the national economic landscape persists, albeit spread effects into adjacent regions are increasingly apparent. Applying econometric analysis to panel data, the paper then examines how regional economic growth is influenced by economic openness. Results show that regional gains appear to be uneven with the ex-ante lagging regions at a disadvantage; by extension, the welfare effect on the poor appears unequal, as well.

*Ernesto M. Pernia,  
Janine Elora M. Lazatin*

### DP 2016-03

#### Behavioral polymorphism in Bayesian games

*Abstract:* J. Harsanyi introduced structural polymorphism in game theory, that is, there are many possible agent types such as “low productivity” or high productivity” with corresponding probability but all operating under one behavioral type, strict rationality.



In this paper, we introduce behavioral polymorphism into Bayesian games. The multiplicity of behavioral types have become increasingly recognized and studied.

Agents ascribe to each other a probability distribution across the possible types. They then choose the appropriate type as response to the possible type of the others which type determines the choice of strategy. We show in a dimorphic game model with the two types being strict rationality (SR) and utilitarian altruist (UA) that there always is a high enough assignment such that cooperation is the dominant strategy for both players in initially social dilemma games. Thus, the strategy set is endogenous in games with behavioral polymorphism. We argue that the assignment is based on some heuristics such as the counter-parties' membership in some groups. *Raul V. Fabella*

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**DP 2016-04**  
**Groups, norms and endogenous membership: Towards a socially inclusive economics**

*Abstract:* In Part I, we argue that Economics must outgrow the narrow confines of Neo-Classical Economics to embrace 'sociality' first championed by Herbert Simon in the mid-1950s and now by a growing number of economists under the banner of Social Economics. We contend here that Neo-Classical Economics is incomplete, rather than wrong. Firstly any alternative model must subsume the Neo-Classical model as a special case even as it embraces conceptual promontories from other social science disciplines, viz., groups, norms

and sanctions. Secondly, it must be couched in a language familiar to the economics profession—maintain optimizing behavior and equilibrium analysis.

In Part II, we construct a formal model where the agent is at once a private entity and a member of a social group; his utility is inclusive combining the agent's private utility over goods (the Neo-Classical utility) and the utility he derives from being a member, viz., access to group's collective good. As a member, he commits to support the procurement of the group's collective good and submits to a system of norms and to the corresponding self-organized sanctions regime punishing violation of group norms. The agent solves a sequence of optimization problems: the first determines his optimal consumption basket given his budget constraint (net of group contribution), prices in the market location of the group; this gives his inclusive indirect utility; the second determines his optimal market hours by maximizing his indirect inclusive utility subject to time constraint and the market wage rate; this gives his doubly indirect inclusive utility; thirdly, he maximizes his inclusive doubly indirect utility with respect to the monetary contribution of the group given the sanctions for norm violation. The choice of social group follows from a rank order of groups by greatest inclusive utility an agent can attain in each competing social group. Finally, we show how the agent's relative weighting of his private and group commitment may wax and wane depending upon the stakes of the inter-group competition. *Raul V. Fabella*

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**DP 2016-05**

**Conglopolistic competition in small emerging economies: When large and diversified is beautiful**

*Abstract:* The economic catch-up of the East Asian miracle economies went hand-in-hand with the emergence and even dominance of large private or quasi-state business groups such as the Zaibatsus in the pre-WWII and the Keiretsus of the post-WWII Japan, the Chaebols of South Korea and the Taipan-led business empires of South and South East Asia. The dominance of the so-called Robber Barons in the Gilded Age of the USA catch-up era (1870-1900) was of the same genre. The natural vent for size among firms, following the Williamson make or buy logic, manifests itself as vertical integration in large economies; in small economies, it manifests itself as horizontal integration or conglomeracy. The motivations are underdeveloped factor mainly capital and insurance markets. Weak public ordering also motivates size as firms to vertically integrate into private ordering to resist official and unofficial predation. Conglopolistic competition, the competition among conglomerates in many markets, is largely in the non-traded goods sectors where foreign competition is not felt and market saturation is quickly attained. We give show how conglopolistic competition is welfare-improving and give examples of how it boosts the collective action capacity of the weak Philippine state. The dynamism of the Philippine Service sector is due to lively conglopolistic competition which in turn comes

from relatively free entry (apart from large capital cost) in these sectors. It is imperative to attract conglomolistic competition in the traded goods sector especially in industrial agriculture. We identify fragmentation of farm land and the 5-hectare ownership ceiling as the one barrier preventing the entry of conglomolistic competition in agriculture. *Raul V. Fabella*

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#### DP 2016-06

### Why fixed rent contracts are less prevalent: Weak third party enforcement and endogenous principal type

*Abstract:* We revisit the question of why fixed rent contracts are less prevalent than crop share contracts despite Marshallian inefficiency. We consider the case where the type of the principal is endogenous to contract provisions and renegeing by the principal may pay due to weak third party enforcement (TPE). We imbed the quality of TPE into the participation constraint of the agent in an effort-in-advance P-A model. The governance regime explicitly involves interplay of three categories of the Northian enforcement, viz., first, second and third party enforcement. Weak and strong TPE are formally defined. We show that the general contract derived nests the usual textbook contract when TPE is strong; weak TPE on the other hand results in a strictly positive induced risk aversion which always exceeds the inherent risk aversion of the agent. This prevents the power of the contract to

equal one even when the agent is risk-neutral, thus, rendering a fixed-rent contract sub-optimal. *Raul V. Fabella*

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#### DP 2016-07

### Threshold bank-run equilibrium in dynamic games

*Abstract:* This study sets a bank-run equilibrium analysis in a dynamic and incomplete information environment where agents can reconsider attempts to run on the bank over time. The typical static bank-run model is extended in this paper to capture the learning dynamics of agents through time, giving bank-run analysis a more realistic feature. Apart from employing a self-fulfilling framework in this model, where agents' actions are strategic complements, we allow agents to update over time their beliefs on the strength of the fundamentals that is not commonly known. In particular, we extend the bank-run model analyzed by Goldstein and Pauzner (Journal of Finance 2005) and build it on a dynamic global games framework studied by Angeletos et.al. (Econometrica 2007). We present here how a simple recursive setup can generate a unique monotone perfect Bayesian Nash equilibrium and show how the probability of bank-run is affected through time by the inow of information and the knowledge of previous state outcome. Finally, it is also shown that when an unobservable shock is introduced, multiplicity of equilibria can result in this dynamic learning process.

*Romeo Matthew Balanquit*

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#### DP 2016-08

### Common belief revisited

*Abstract:* This study presents how selection of equilibrium in a game with many equilibria can be made possible when the common knowledge assumption (CKA) is replaced by the notion of common belief. Essentially, this idea of pinning down an equilibrium by weakening the CKA is the central feature of the global game approach which introduces a natural perturbation on games with complete information. We argue that since common belief is another form of departure from the CKA, it can also obtain the results attained by the global game framework in terms of selecting an equilibrium. We provide here necessary and sufficient conditions.

Following the program of weakening the CKA, we weaken the notion of common belief further to provide a less stringent and a more natural way of believing an event. We call this belief process as iterated quasi-common p-belief which is a generalization to many players of a two-person iterated p-belief. It is shown that this converges with the standard notion of common p-belief at a sufficiently large number of players. Moreover, the agreeing to disagree result in the case of beliefs (Monderer & Samet, 1989 and Neeman, 1996a) can also be given a generalized form, parameterized by the number of players. *Romeo Matthew Balanquit*

**DP 2016-09****Procurement auctions with interdependent values and affiliated signals**

*Abstract:* Procurement auctions that assume independent private values (IPV) provide a benchmark for analysis that is readily demonstrated but often unrealistic. Firms who compete for exclusive selling rights normally derive outputs from a highly similar set of inputs which, in turn, allows them to obtain some knowledge on how others would price their goods. In this paper, we incorporate this assumption by showing how affiliated signals and interdependent values can possibly affect the expected quantities sold and selling prices of some endogenous-quantity procurement auction formats. The resulting equilibrium bidding strategies no longer give credence to the typical equivalence result which holds under IPV. In this environment, the second-price auction yields both higher expected prices and lower expected quantities than the first-price auction. This result is consistent with similar studies showing suboptimality of auction mechanisms that allow for winning bids of less-than-the-highest willingness to pay, when values are not fully independent.

*Romeo Balanquit, MJM Kimwell*

**DP 2016-10****Comprehensive tax reform in the Philippines: Principles, history and recommendations**

*Abstract:* The new Duterte administration is planning to undertake a reform of the country's tax sys-

tem. This paper provides a background to options available to the government moving forward, starting with basic principles of taxation, criteria for evaluation, tax instruments and mix of instruments. The background is complemented by a review of the history of past tax reforms in the Philippines, from the end of the Marcos regime to the Aquino administration. The historical and episodic assessment ends with a list of lessons learned from the past. Finally, recommendations are made for both tax policy and tax administration.

*Renato E. Reside, Jr., Lee Burns*

**DP 2016-11****WASH for child health: Some evidence in support of public intervention in the Philippines**

*Abstract:* Like in many developing countries, diarrheal diseases remain a top cause of child mortality and morbidity in the Philippines. Partly to address this problem, the government has undertaken programs to expand access to safe water and sanitation facilities, especially among poor households. To assess the impact of such interventions on child health, we apply propensity score matching technique on the pooled data from the last five rounds of the National Demographic and Health Survey. We find that improved water and improved sanitation each reduced the probability of child diarrhea in 1993-2008 by around two percentage points. In 2013, improved water reduced the probability by about 7 percentage points, while improved sanitation do not seem to have statistically significant effect.

These results lend support to the government's programs to widen access to safe water and sanitation facilities as measures to improve child health.

*Joseph J. Capuno, Carlos Antonio R. Tan, Jr., Xylee Javier*

**DP 2016-12****Government "under-spending" in perspective: Incompetence, inertia, or indigestion?**

*Abstract:* The measured under-spending over the last 5 years has more to do with ambitious targets rather than apathetic or incompetent bureaucrats: while actual disbursements fell short of planned disbursements by about ten percent per year from 2011 to 2015, real per capita disbursements on capital outlays and maintenance and operating expenses increased relative to levels in 1999 to 2010 by an average of 41.6 and 76.8 percent respectively. The bureaucracy was unable to keep up with its own ambitions because of absorptive capacity constraints which were driven in part by the inertia from three decades of maneuvering in tight fiscal space as well as coordination problems and other structural bottlenecks, some of which have long-attended budget and plan design and execution but have not been recognized as binding constraints until now. The fund absorption problem is not uniform across agencies however indicating more fundamental organizational issues in certain sectors, and the need for actions beyond public finance management reforms to optimize the contribution of fiscal spending to inclusive growth.

*Toby C. Monsod*

## B. WORKING PAPERS 2016

### WP 2016-01

#### Transitioning to a higher retirement age

*Abstract:* Rising concerns over the pending retirement of the Baby Boom generation, declining fertility and increasing longevity have spurred discussions on the merits of raising the retirement age to 70 years old. This paper formally analyzes the transitional and long-run macroeconomic and welfare effects of such a reform in the context of a 56-period dynamic overlapping generations framework, where exponential-discounting (ED) and quasi-hyperbolic-discounting (QHD) agents co-exist in the economy. While the policy reform unambiguously raises aggregate labour, whether output per worker will rise or fall along the transition path will depend on the reform's relative impact on aggregate capital. In particular, raising the retirement age, along with sufficiently reducing the social security tax rate, results in rising trends of capital per worker and output per worker throughout the transition to the long run. Moreover, this particular reform is able to support a favourable combination of lower pension contribution rates and higher pension benefits. In terms of welfare, QHD agents impose a pecuniary externality on ED agents, manifesting in distinct saving behaviours that result in dissimilar welfare impacts. Indeed, a higher retirement age works like a commitment mechanism that allows sophisticated QHD agents to mitigate the adverse welfare implications of present-biasedness. *Sarah Lynne S. Daway*

### WP 2016-02

#### Cross-national corruption measures: A comparison

*Abstract:* This paper aims to compare objective and subjective based indexes of corruption and how well they could capture changes of corruption over time. The problem of measuring changes in corruption internationally is significantly more daunting than that of estimating their levels. We compute trends in corruption for groups of geographically proximate countries, based on the geographic distribution of cases of cross border bribes, and confirm that cross-country variations in corruption are greater than time variations within the countries. We compare the time variations in levels of corruption thus computed, with those that may be inferred from changes in perceived corruption, as measured by Transparency International's Corruption Perception Index. We find that these alternative measures of changes of corruption in time are not significantly correlated. Using a panel data estimation technique, we attempt to explain trends in corruption. We only partially confirm results that are obtained when the purpose is to account for their levels in the context of a cross-sectional study. We conclude that the study of changes in levels of corruption is still in its infancy. *Laarni Escresa and Lucio Picci*

### WP 2016-03

#### Optimal investment in preparedness of farm and non-farm households

*Abstract:* This paper provides an initial framework regarding priorities for government programs to reduce the natural-disaster vulnerability of farm households in the Philippines. The study begins with the likelihood that climate change will increase the probability of flooding, since rainfall is expected to both increase and be more concentrated (more storms). Then turn to a conceptual framework for understanding resilience at the household level and evidence from the PCED Social Protection Survey about coping strategies of farm households. The framework can be used to shed light on pros and cons of alternative public policies to reduce household vulnerability, in particular, the limited coping tools available to low-income households are highlighted. This helps to strengthen the case for preventive policies that lower probability and/or severity of damages. Inasmuch as disaster risk management policies at the national level are typically without coherent foundations, tentative indications of how the farm level risk-management framework can be expanded to the national level are provided. *Majah-Leah V. Ravago*

**WP 2016-04****The impact of climate change on food security in the Philippines: Should the country be alarmed?**

*Abstract:* The literature indicates that climatic conditions have observable impacts on agricultural production, arising from the physical changes in the nurturing environment for plant growth. The conclusions have been that increases in temperature have negative effects on food production for those that are close to the equator, suggesting that tropical countries like the Philippines would be negatively affected by global warming. This study verifies if this is indeed true for the Philippines, and also tests if other climatic variables that are now being affected by global warming also have an effect on production, specifically rice and corn. The regression analysis confirms that changes in temperature have a negative effect on corn production, but curiously, have a positive effect on rice production. The findings also indicate that the intensity of El Niño negatively affects domestic rice production but not corn. Measuring the impact of government support on rice production is beyond the scope of this paper but examining the trend of the rice production data suggest that a rise in temperature triggers additional support from the Food Staples Sufficiency Program (FSSP); and this leads to an increase in domestic rice production in the Philippines. But while FSSP is able to neutralize the effect of

gradual increase in temperature, it has not been able to negate the effects of a weather shock such as El Niño. Finally, this study also found that corn production is not sensitive to the intensity of El Niño, but is negatively affected by temperature and precipitation. These results suggest (but needs to be investigated further) that the magnitude of support for corn production has not been sufficient to counteract the negative effects of “worsening” climatic conditions. *Agustin L. Arcenas*

**WP 2016-05****Common belief revisited**

*Abstract:* This brief study presents how selection of equilibrium in a game with many equilibria can be made possible when the common knowledge assumption (CKA) is replaced by the notion of common belief. Essentially, this idea of pinning down an equilibrium by weakening the CKA is the central feature of the global game approach which introduces a natural perturbation on games with complete information. We argue that since common belief is another form of departure from the CKA, it can also obtain the results attained by the global game framework in terms of selecting an equilibrium. We provide here necessary and sufficient conditions. Following the program of weakening the CKA, we weaken the notion of common belief further to provide a less stringent and a more natural way of believing an event. We call this belief process as iterated quasi-common

p-belief which is a generalization to many players of a two-person iterated p-belief. It is shown that this converges with the standard notion of common p-belief at a sufficiently large number of players. Moreover, the agreeing to disagree result in the case of beliefs (Monderer & Samet, 1989 and Neeman, 1996a) can also be given a generalized form, parameterized by the number of players. *Romeo Balanquit*

**WP 2016-06****Global liquidity and financial vulnerability**

*Abstract:* Rey (2015) finds that the global financial cycle has a strong common component among global asset prices, gross capital flows, credit flows, and the leverage of the financial sector, and that it co-moves with VIX, a measure of uncertainty and risk aversion in markets. This study attempts to make a modest contribution to the literature on the relationship between global liquidity and financial vulnerability. It conducts a dynamic conditional correlation analysis to examine relationship between global credit and risk, and regression analysis to examine how global liquidity, as seen in cross-border claims to the Asia-Pacific region or capital flows to the Philippines as a share of GDP interacts with the global factor, VIX, and affects stock market returns, bank leverage, and the growth of domestic credit to the private sector in the Philippines. *Maria Socorro Gochoco-Bautista*

**WP 2016-07**

## Love thy neighbor: An analysis of violent conflicts in the Autonomous Region of Muslim Mindanao

*Abstract:* Like other developing countries, the Philippines has a long history of internecine warfare or conflicts, especially in Mindanao where the secessionist conflicts alone since the 1970s have resulted in enormous human and economic costs. That this and other conflicts and other conflicts continue to this day underscore the need for a better understanding of their causes to guide policy. Applying regression analysis on the conflict dataset for 2011-2014 of the Bangsamoro

Conflict Monitoring System, we identify the important correlates of the incidence of violent conflicts in the cities and municipalities of the Autonomous Region of Muslim Mindanao. The internal revenue allocation (IRA) and poverty rates are negatively correlated with the incidence of identity conflicts. Further, the IRA and the frequency of shadow economy conflicts are positively correlated. There is some evidence of spatial spillover: the incidence of violent conflicts due to crime, governance, political or shadow economy issues is associated more with the overall incidence than the incidence of any particular type of conflicts in the neighboring LGUs. The incidence of the same types of conflicts also tends to be lower in places where the incumbent mayor and governor

belong to the same clan. Further, the incidence is generally higher in cities, especially in Cotabato City, than in municipalities, or in provincial capitals. Relative to other places, Isabela City and Lanao del Sur appear safer or more peaceful. While the incidence of resource conflicts appears lower in 2012 than in 2011, in general there is no significant variation in the incidence of any type of conflict across years. To contain violent conflicts, these results suggest that policy interventions are better directed at cities, especially Cotabato City, more in Maguindanao and less in Lanao del Sur, or in places where mayors and governors are related, or at once to wherever they occur initially to prevent them spilling over to adjacent places.

*Joseph J. Capuno*

**Table 2. 2016 UPSE DISCUSSION PAPERS**

NUMBER	TITLE	AUTHOR/S
1601	Climate change, dengue and the economy: Ascertaining the link between dengue and climatic conditions	Agustin L. Arcenas
1602	Do regions gain from an open economy?	Ernesto M. Pernia, Janine Elora M. Lazatin
1603	Behavioral polymorphism in Bayesian games	Raul V. Fabella
1604	Groups, norms and endogenous membership: Towards a socially inclusive economics	Raul V. Fabella
1605	Conglopolistic competition in small emerging economies: When large and diversified is beautiful	Raul V. Fabella
1606	Why fixed rent contracts are less prevalent: Weak third party enforcement and endogenous principal Type	Raul V. Fabella
1607	Threshold bank-run equilibrium in dynamic game	Romeo Matthew Balanquit
1608	Common belief revisited	Romeo Matthew Balanquit

(Table 2. 2016 UPSE Discussion Papers, continued)

1609	Procurement auctions with interdependent values and affiliated signals	Romeo Matthew Balanquit MJM Kimwell
1610	Comprehensive tax reform in the Philippines: Principles, history and recommendations	Renato E. Reside, Jr., Lee Burns
1611	WASH for child health: Some evidence in support of public intervention in the Philippines	Joseph J. Capuno, Carlos Antonio R. Tan, Jr., Xylee Javier
1612	Government “underspending” in perspective: Incompetence, inertia, or indigestion?	Toby C. Monsod

Table 3. 2016 WORKING PAPERS

NUMBER	TITLE	AUTHOR/S
1601	Transitioning to a higher retirement age	Sarah Lynne S. Daway
1602	Cross-national corruption measures: A comparison	Laarni Escresa and Lucio Picci
1603	Optimal investment in preparedness of farm and non-farm households	Majah-Leah V. Ravago
1604	The impact of climate change on food security in the Philippines: should the country be alarmed?	Agustin L. Arcenas
1605	Common belief revisited	Romeo Balanquit
1606	Global liquidity and financial vulnerability	Maria Socorro Gochoco-Bautista
1607	Love thy neighbor: An analysis of violent conflicts in the Autonomous Region of Muslim Mindanao	Joseph J. Capuno

In 2016, the PCED supported a total of 42 graduate students by providing fellowships.

Table 4. PCED Summary of Fellowships support for 2016

FELLOWSHIPS	NO. OF FELLOWS
MDE	2
PHD teaching fellows	7
MA teaching fellows	15
MA coursework	12
PHD coursework	6
<b>TOTAL</b>	<b>42</b>

# Dissemination

## Seminar Series





Table 5. 2016 SEMINARS

DATE	TITLE	AUTHOR/S
13 Dec 2016	The coupling of disadvantages: Material poverty and multiple deprivation in Europe before and after the Great Recession	Dr. Rod Hick, Lecturer Cardiff University
9 Dec 2016	The Abbreviated Women's Empowerment in Agriculture Index (A-WEAI)	Hazel Malapit, Research Coordinator Poverty, Health and Nutrition Division, International Food Policy Research Institute (IFPRI)
2 Dec 2016	Slice and Dice: Institutional Persistence and Local Government Fragmentation in the Philippines	Prince Christian Cruz, PhD Candidate UP School of Economics
18 Nov 2016	Virtues and institutions in Adam Smith: a reconstruction	Dr. Emmanuel S. de Dios, Oscar M. Lopez Sterling Professor of Law and Economics, UP School of Economics
11 Nov 2016	Motivations to remit: Evidence from the Philippines	Dr. Marjorie C. Pajaron, Assistant Professor UP School of Economics
28 Oct 2016	Procurement auctions with interdependent values and affiliated signals	Dr. Romeo Matthew Balanquit Assistant Professor, UP School of Economics Miharu Jay M. Kimwell, PhD Candidate UP School of Economics
25 Oct 2016	World Bank East Asia and Pacific economic update and Philippines economic update October 2016 edition	Dr. Sudhir Shetty, Chief Economist, World Bank East Asia and the Pacific Region Dr. Birgit Hansl, Lead Economist World Bank East Asia and the Pacific Region

(Table 5. 2016 Seminar, continued)

DATE	TITLE	AUTHOR/S
21 Oct 2016	Financial incentives and its impact on maternal and child health: a study in the Philippines	Kanako Yoshikawa, PhD Candidate Osaka University
14 Oct 2016	Do (non-standard) risk and time preferences explain health insurance enrollment?	Kim van Wilgenburg, PhD Candidate Erasmus University Rotterdam
30 Sep 2016	What explains the rise of For-Profit Universities: Evidence from dental assistant programs	Dr. Xing Xia, Assistant Professor of Economics Yale – National University of Singapore
28 Sep 2016	Love thy neighbor: An analysis of the incidence of violent conflict in the Autonomous Region of Muslim Mindanao (Presentation)	Dr. Joseph J. Capuno, Professor UP School of Economics
23 Sep 2016	Mining taxation: Dynamic AETR model	Karlo Adriano PhD, Candidate UP School of Economics
26 Aug 2016	Information design in strategic experimentation environments	Carlo A. Cabrera PhD, Candidate London School of Economics and Political Science
5 Aug 2016	Global liquidity and financial vulnerability presentation	Dr. Maria Socorro Gochoco-Bautista, Professor UP School of Economics
17 Jun 2016	The politics of strongman rule: What the crisis states literature suggests	Dr. James Putzel, Professor of Development Studies, London School of Economics and Political Science
13 May 2016	Economic dynamics: Exploring with Mathematica	Rolando A. Danao, Professor Emeritus UP School of Economics
28 Apr 2016	Human Development Report 2015: Work for human development	Dr. Shantanu Mukherjee, Team Leader Human Development Report Team, United Nations Development Program
22 Apr 2016	The impact of climate change on food security in the Philippines: Should the country be alarmed?	Dr. Agustin L. Arcenas Associate Professor, UP School of Economics

(Table 5. 2016 Seminar, continued)

DATE	TITLE	AUTHOR/S
15 Apr 2016	Do regions gain from an open economy?	Dr. Ernesto M. Pernia, Professor Emeritus UP School of Economics Janine Elora M. Lazatin PhD, Candidate UP School of Economics
11 Apr 2016	The 10 trillion dollar debt	Dr. Eli Remolona, Chief Representative for Asia and the Pacific, Bank for International Settlements
8 Apr 2016	Is the Emergency Unconditional Cash Transfer a viable complement to the current emergency protocols?	Dr. Luzeta Adorna, Head of Research for Alcanz Consulting Group, Inc. Dr. Augusto Rodriguez, Chief of Social Policy Section, UNICEF Philippines
1 Apr 2016	Explorations into use of the exchange rate in macroeconomic policy in Asia	Dr. Calla Wiemer, Professorial Lecturer UP School of Economics
18 Mar 2016	Common belief revisited	Dr. Romeo Matthew Balanquit, Assistant Professor UP School of Economics
16 Mar 2016	Governance, innovation, and productivity in global value chains: Lessons from the Philippines	Adrian R. Mendoza PhD, Candidate UP School of Economics
11 Mar 2016	A century of Philippine spatial inequality	Jeffrey G. Williamson Laird Bell, Professor of Economics, Harvard University
09 Mar 2016	Debiasing expectations	Kim van Wilgenburg PhD, Candidate Erasmus University Rotterdam and Tinbergen Institute
04 Mar 2016	Silence on climate change and the fury of natural disasters	Dr. Vinod Thomas, Director General of Independent Evaluation, Asian Development Bank

(Table 5. 2016 Seminar, continued)

DATE	TITLE	AUTHOR/S
26 Feb 2016	Optimal investment in preparedness of farm and non-farm households	Dr. Majah-Leah V. Ravago, Assistant Professor, UP School of Economics
19 Feb 2016	International asset allocation in presence of systematic cojumps	Nguyen Duc Khuong, Professor, IPAG Business School (France)
05 Feb 2016	Cross-national corruption measures: A comparison	Dr. Laarni Escresa, Assistant Professor UP School of Economics
29 Jan 2016	Transitioning to a higher retirement age	Dr. Sarah Lynne S. Daway, Assistant Professor UP School of Economics
22 Jan 2016	Climate change, dengue and the economy: ascertaining the link between dengue and climatic conditions	Dr. Agustin L. Arcenas, Associate Professor UP School of Economics

For more information and updates, please visit our official websites, like our Facebook page (<https://www.facebook.com/dilimanupse>) and follow us in twitter (<https://www.twitter.com/dilimanupse>).

The screenshot displays the website for the University of the Philippines School of Economics. The header includes the university's name, logo, and a search bar. The main content area is titled "UPSE/PCED Seminars" and features a photograph of a seminar in progress. Below the photo, there is a text box stating: "Our seminars are open to the public and are brought to you by UPSE and PCED. For more info, please contact Ms. Gloria Lambino, UPSE Economics Research Center, at telephone No. 920-5465. For group attendance, please email [gdlambino@econ.upd.edu.ph](mailto:gdlambino@econ.upd.edu.ph)." Below this is a form for email notifications: "Would you like to be notified of upcoming seminars and workshops by e-mail? Send an e-mail to [pced\\_research\[at\]econ.upd.edu.ph](mailto:pced_research[at]econ.upd.edu.ph). Leave the subject line blank, and type 'subscribe econ-seminar-announcements' (without the quotation marks) with your first name and last name in the body." At the bottom, there is a table of "UPCOMING SEMINARS" for 2016:

Date	Speaker's	Title
11 Mar 2016	Jeffrey G. Williamson Laird Bell Professor of	A Century of Philippine Spatial Inequality (Abstract   Presentation)

# PCED Board Meeting



# Resources

## A. Personnel

Table 6. PCED Staff as of December 2016

POSITION TITLE	NAME OF INCUMBENT
Executive Director	Orville Jose C. Solon
Adm. Asst. III	Rowena V. Alvarez
<b>Research Division</b>	
Division Chief III	Joseph J. Capuno
Adm. Asst. II	Gil S. Mallari
<b>Special Projects Division</b>	
Division Chief III	Aleli D. Kraft
Adm. Asst. II	Juliet R. Gordulan-Caparas
<b>Finance and Adm. Division</b>	
Division Chief III	Maria Socorro Gochoco-Bautista
Accountant III	Nerissa L. Deleña
Adm. Officer III	Ma. Teresa B. Tueres
Adm. Asst. III	Gerlie P. Paloma
Adm. Asst. II	Judy Vi V. Avila
Adm. Aide IV	Robert T. Barcelo
Adm. Aide IV	Larry M. Sagcal
Adm. Aide III	Alberto M. Calaguas

# Fiscal Resources and General Allocation

**Table 7. PCED Income Statement  
For the Years Ended December 31, 2016 and 2015 (In Philippine Peso)**

	<b>2016</b>	<b>2015 (As Restated)</b>
<b>Income</b>		
Rent Income	4,641,574	3,988,393
Income from Investments	4,354,698	4,981,222
Interest Income	84,863	264,689
Miscellaneous Income	187,159	0
<b>TOTAL INCOME</b>	<b>9,268,294</b>	<b>9,234,304</b>
<b>EXPENSES</b>		
<i>Personnel Services</i>		
Salaries and Wages	1,754,519	1,675,264
Other Personnel Benefits	684,996	718,249
Year-end Bonus and Cash Gift	305,071	174,467
Life & Retirement/ Philhealth/ HDMF/ ECC Contributions	243,691	232,483
Personnel Economic Relief Allowance	200,000	192,000
Clothing/Uniform Allowance	45,000	40,000
Productivity Incentive Allowance	40,000	152,175
Other Personnel Benefits	5,000	0
<b>Total Personnel Services</b>	<b>3,278,277</b>	<b>3,184,638</b>

(Table 7. PCED Income Statement, continued)

	2016	2015
<b><i>Maintenance and Other Operating Expenses</i></b>		
Other Maintenance and Operating Expenses	5,214,581	5,936,201
Depreciation Expense	4,160,211	3,037,183
Office and Other Supplies Expenses	1,254,765	1,482,333
Repairs and Maintenance	946,129	948,107
Auditing Services	898,060	419,463
Consultancy Services	244,869	84,253
Other Professional Services	214,764	412,706
Training Expenses	198,036	138,399
Representation Expenses	115,461	100,984
Subscription Expenses	62,719	176,157
Insurance Expenses	60,638	23,906
Traveling Expenses - Local	23,753	22,857
Taxes, Duties and Licenses	5,801	8,232
Gasoline, Oil and Lubricant Expenses	460	8,065
Miscellaneous Expenses	16,959	7,600
<b><i>Total Maintenance and Other Operating Expenses</i></b>	<b>13,417,207</b>	<b>12,806,446</b>
TOTAL EXPENSES	16,695,484	15,991,084
NET (LOSS) INCOME BEFORE SUBSIDY	7,427,190	6,756,780
SUBSIDY FROM THE NATIONAL GOVERNMENT	28,169,000	13,000,000
NET (LOSS)/ INCOME AFTER SUBSIDY	20,741,810	6,243,220



Table 8. PCED Balance Sheet  
December 31, 2016 and 2015 (In Philippine Peso)

ASSETS	2016	2015 (As Stated)
<b>Assets</b>		
Cash and Equivalent	22,132,612	42,021,031
Financial Assets	12,355,762	30,700,673
Receivables - Net	21,443,746	15,887,537
Prepaid Expenses	171,586	58,668
Inventories	367,352	567,106
<b>Total Current Assets</b>	<b>56,471,058</b>	<b>89,235,015</b>
<b>Non Current Financial Assets</b>	<b>99,833,268</b>	<b>52,075,314</b>
<b>PROPERTY, PLANT AND EQUIPMENT - NET</b>	<b>21,505,564</b>	<b>17,684,803</b>
<b>TOTAL ASSETS</b>	<b>177,809,890</b>	<b>158,995,132</b>
<b>LIABILITIES</b>		
<b>Liabilities</b>		
Accounts Payable	2,770,060	4,228,272
Trust liabilities	168,060	636,900
<b>TOTAL LIABILITIES</b>	<b>2,938,120</b>	<b>4,865,172</b>
<b>EQUITY</b>		
<b>Equity</b>		
Donated Capital	14,890,129	14,890,129
Capital - Miscellaneous	23,677,893	23,677,893
Retained earnings	136,303,748	115,561,938
<b>TOTAL EQUITY</b>	<b>174,871,770</b>	<b>154,129,960</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>177,809,890</b>	<b>158,995,132</b>

# Directory of Key Officials

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## 2016 and Current

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**ERNESTO M. PERNIA**  
*Chair*  
Economic Planning Secretary  
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Economic and Development Authority

## Members



**SALVADOR C. MEDIALDEA**  
*Executive Secretary*



**BENJAMIN E. DIOKNO**  
*Secretary Of Budget  
and Management*



**RAMON M. LOPEZ**  
*Secretary Of Trade  
and Industry*



**DANILO L. CONCEPCION**  
*President of the University  
of the Philippines*



**CARLOS G. DOMINGUEZ III**  
*Secretary Of Finance*



**ORVILLE JOSE C. SOLON**  
*Dean of the U.P.  
School of Economics*



**AMANDO M. TETANGCO, JR.**  
*Governor of the Bangko Sentral  
ng Pilipinas*