DECENTRALIZATION, DIGITALIZATION, AND DEVELOPMENT

Strengthening Local Governance for Crisis Response, Recovery, Resilience, and the Sustainable Development Goals

A REPORT ON THE MANDANAS-GARCIA SUPREME COURT RULING

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By the United Nations Development Programme
15th Floor North Tower, Rockwell Business Center Sheridan
Sheridan Street corner United Street
Highway Hills, 1554 Mandaluyong City, Philippines

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Foreword

Atty. Benjamin C. Abalos, Jr.
Secretary
Department of the Interior and Local Government

The Supreme Court ruling on the Mandanas-Garcia petitions has carved a new path and presented better opportunities for local government units (LGUs) - one that leads towards a just share of the national budget and improved autonomy. Since its finality, the Department of the Interior and Local Government (DILG) has remained a robust ally of the local governments in carrying out its call.

The Department's constant presence in the discourse on the Mandanas-Garcia ruling implementation as one of its main stewards strengthened its partnership with the United Nations Development Programme (UNDP) as the two tackle key governance issues leading to the publication of this report titled *"Decentralization, Digitalization, and Development: Strengthening Local Governance for Crisis Response, Recovery, Resilience, and the Sustainable Development Goals (SDGs)."*

Collaborating on various facets of the said report, the UNDP and the DILG went on the journey towards producing this flagship report that reflects a contextualized take on decentralization, transition, and the national recovery plan post-COVID-19. It gives me pride that the DILG's invaluable feedback and contribution aid in the production of this relevant report which we hope will influence discussions, provide a source of critical information, and enrich the reader's understanding.

As the ruling heightened the demand for greater responsibility and accountability from the LGUs and the general public's expectation for more quality services, I earnestly believe that this report can shed some light on the issues that concern local governance and present innovative governance strategies to further improve LGUs' fiscal autonomy and absorptive capacity amid full devolution.

This report is a timely guide in meeting the thrusts and priorities of the LGUs in the wake of full devolution and advancing President Ferdinand R. Marcos Jr.'s directive to advocate for more evidence-based and data-driven interventions in effecting eventual economic recovery from the COVID-19 pandemic and other crises that have remarkably changed our means and needs.

Likewise, this is an assurance to the UNDP that the DILG, being a *matino, mahusay* at *maaasahang Kagawaran*, will continuously support all engagements and look forward to more partnerships towards the attainment of our common development agenda to realize a *matatag, maginhawa at panatag na buhay* for all Filipinos.

ATTY. BENJAMIN C. ABALOS, JR.

Foreword

Dr. Selva Ramachandran
Resident Representative
UNDP Philippines

The Philippines has entered a crucial time in its history when major transitions are set to happen in the year 2022. First, the new Administration under President Ferdinand "Bongbong" Marcos, Jr. is set to implement its agenda towards the Philippines' recovery from a devastating crisis brought about by the COVID-19 pandemic, aiming to leave no one behind. Second, a transition which can potentially support this recovery agenda - the implementation of the Mandanas-Garcia Ruling – is set to happen. This ruling gives more opportunities and flexibility for local government units (LGUs) to design, plan, implement, and monitor programs, projects, and activities (PPAs) by enabling them to receive a larger share of national funds through the National Tax Allotments (NTAs) and by having provisions which can further support decentralization and capacity-building.

The transition is complex, however, with the President himself declaring during the 2022 State of the Nation Address his intention to clarify the roles and responsibilities between the national and local government. Furthermore, the President highlighted the importance of well-implemented response initiatives during calamities and crises. Finally, the President stressed the importance of digitalization as a means of achieving greater capability and efficiency in governance processes.

Meanwhile, various plans related to the upgrading of local development have been given value, such as the building of health centers and hospitals nationwide (including the building of specialty hospitals in areas outside the National Capital Region), building better more infrastructures (including those supporting the modernization of railway systems and investments in renewable energy), and the improvement of innovation and technology. The implementation of the National Broadband Plan shall be prioritized to ensure connectivity in Geographically Isolated and Disadvantaged Areas (GIDAs) and the use of good and solid data for decision-making shall be leveraged to improve governance. To support these, the Administration further aims to strengthen digital education in schools and encourage the students' engagement in Science, Technology, Engineering, and Mathematics (STEM) subjects or courses. This is a strong indicator of the Administration's appetite for strengthening the technical capabilities of the Philippine's future workforce.

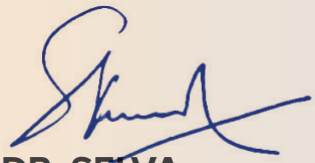
This can make the Philippines globally competitive, especially considering the quickly advancing knowledge and technologies around the world, including the use of Artificial Intelligence and Quantum Computing, not to mention the increasing relevance of data in every area of work.

By partnering with the Department of the Interior and Local Government (DILG), we have produced this report titled, **"DECENTRALIZATION, DIGITALIZATION, AND DEVELOPMENT: Strengthening Local Governance for Crisis Response, Recovery, Resilience, and the Sustainable Development Goals"** which grapples with burning issues faced by the local government units (LGUs) as they prepare for the Mandanas-Garcia SC Ruling transition. The report contains analysis and recommendations on key burning issues related to the transition, including challenges on budget planning, dependency on national tax allotments, climate and conflict-related crises, capacities for innovation, need for digitalization, underspending, and social accountability, among others. The report further emphasizes the need for well-informed planning, assessments, and program implementation toward recovery and development. This provides further information which could guide both national government agencies and local government units, with the support from stakeholders and development partners, to make the necessary adjustments or enhancements on existing recovery plans and their implementation.

I invite you to read four chapters on key burning issues – our response to which will largely define our success at achieving the SDGS at the local level by 2030. They are: *From Dependency to Autonomy Local Governance, Fiscal Capacity, and the Outlook for LGU performance in the post-Mandanas transition* (Chapter 1) by Mr. Jerik Cruz and Mr. Rico La Viña, *Breaking Down the LGU Fiscal Performance: A Study on the Budget Utilization Rate* (Chapter 2) by Dr. Cielo Magno, Mr. Francis Capistrano, and Ms. Sheena Kristine Cases, *Putting The Mandanas-Garcia Resource Infusion To Optimal Use: A Strategy for Philippine Local Government Units to Mitigate Losses and Damages from Environmental and Conflict Crises* (Chapter 3) by Ms. Amelia Supetran and Ms. Tanya Hamada, and *Civic Tech for Social Accountability in Philippine Local Governments: Nuancing Citizen Feedback and Civil Society Empowerment for the Supreme Court 'Mandanas-Garcia' Ruling Implementation* (Chapter 4) by Ms. Czarina Medina-Guce. The editing of this report has also been guided by our Research Coordinator, Ms. Rebecca Malay.

I am grateful for the thought and effort that came into the creation of this report, with cooperation among DILG and UNDP officials and staff, the report's editorial team, including our graphic artist and copyeditor, and our peer reviewers who are also acknowledged in full in the Acknowledgement section of this report.

May this report be a source of enlightenment and inspire actions, which could help spur and strengthen the Philippine's recovery.



DR. SELVA RAMACHANDRAN

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The DILG Team:

Francisco R. Cruz, CESO III, MMG (Assistant Secretary for Plans and Programs), Anna Liza F. Bonagua, CESO III (Director, Bureau of Local Government Development), Renelyn De Claro (Chief, Planning and Programming Division), Jan Chael Laude Pon-an (Economic Development Specialist I), Maria Elizabeth Perez (Economic Development Specialist I), and Anna Victoria Quibot (Local Government Operations Officer III).

The UNDP Philippines Team:

Yemesrach Workie (former Senior Policy Advisor, UNDP Philippines), Riza Teresita Halili (Project Manager for Pintig Lab), Sheena Kristine Cases (Data Analyst for Pintig Lab), Charlene Balaan (Communications Analyst), Althea Roa (Programme Assistant), and Priscilla Marie Joy Manuel (Project Assistant).

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Abbreviations and Acronyms

AIP	Annual Investment Program
APP	Annual Procurement Plan
BARMM	Bangsamoro Autonomous Region in Muslim Mindanao
BIR	Bureau of Internal Revenue
BLGF	Bureau of Local Government Finance
BoC	Bureau of Customs
BTr	Bureau of the Treasury
BUR	Budget utilization rate
CALABARZON	Cavite, Laguna, Batangas, Rizal, and Quezon
CCC	Climate Change Commission
CC	Component City
CDA	Capacity Development Agenda
CDP	Comprehensive Development Plan
CLUP	Comprehensive Land Use Plan
CO	Capital Outlay
COA	Commission on Audit
ComDev	Committee on Devolution
COPD	Chronic Obstructive Pulmonary Disease
COVID-19	Coronavirus disease
CPH	Census of Population and Housing
CSC	Civil Service Commission
CSO	Civil society organization
DBM	Department of Budget and Management
DENR-EMB	Department of Environment and Natural Resources – Environmental Management Bureau
DevLIVE	Development LIVE
DILG	Department of the Interior and Local Government
DIME	Digital Information for Monitoring and Evaluation
DRRM	Disaster risk reduction management
DTP	Devolution Transition Plan
ECQ	Enhanced Community Quarantine
EO	Executive Order
FOI	Freedom of Information
GDP	Gross Domestic Product
GEF	Growth Equity Fund
GIDA	Geographically Isolated and Disadvantaged Area
GPPB	Government Procurement Policy Board
GPS	General public services
GSR	General service revenue
GVA	Gross Value Added
HUC	Highly-Urbanized City
ICC	Independent Component City
ICT	Information and Communication Technology

IRA	Internal Revenue Allotment
LCE	Local chief executive
LDF	Local Development Fund
LDIP	Local Development Investment Program
LDRRMF	Local Disaster Risk Reduction and Management Funds
LGBTQI+	Lesbian, gay, bisexual, transgender, queer and intersex
LGC	Local Government Code of 1991
LGSF-AM	Local Government Support Fund-Assistance to Municipalities
LGU	Local government unit
LPTRP	Local Public Transport Route Plan
LRMMP	Land Resource Management Master Plan
LSR	Locally-sourced revenue
MOI	Means of implementation
MOOE	Maintenance and Other Operating Expenses
MPDLGP	Mainstreaming Peace and Development in Local Governance Project
NDRRM	National Disaster Risk Reduction and Management
NGA	National Government Agency
NGO	Non-government Organization
NTA	National Tax Allotment
NUC	National Unification Council
ODK	Open data kit
PAMANA	Payapa at Masaganang Pamayanan
PCOO	Presidential Communication Operations Office
PDNA	Post Disaster Needs Assessment
PhilGEPS	Philippine Government Electronic Procurement System
PPA	Programs, projects, and activities
PRA	Probabilistic Risk Analysis
PRRM	Philippine Rural Reconstruction Movement
PS	Personnel Services
PSA	Philippine Statistics Authority
PUV	Public Utility Vehicle
SC	Supreme Court
SDG	Sustainable Development Goals
SGLG	Seal of Good Local Governance
SRE	Statement of Receipts and Expenditures
STEM	Science, Technology, Engineering, and Mathematics
ULAP	Union of Local Authorities of the Philippines
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNFCCC	UN Framework Convention on Climate Change
UNRISD	United Nations Research Institute for Social Development
WHO	World Health Organization

About the Editor

Rebecca "Beckie" Malay is the Treasurer of the Board of Trustees of the Philippine Rural Reconstruction Movement (PRRM) and serves voluntarily as its Director of Advocacy and Development Cooperation, convener of Global Call to Action against Poverty (GCAP) Philippines and sits as a regional council member of GCAP Asia. She represents GCAP and the global south in the Global Steering Committee of the Coalition for the UN We Want (C4UN), a coalition of civil society organizations seeking greater participation of CSOs and reforms in the UN system. She has also participated extensively in the international advocacy for the achievement of Agenda 2030 and the SDGs at the High Level Political Forum and the UN General Assembly, among others. She graduated with a degree in Economics from the University of the Philippines and has a certificate in Development Economics from the African Programme on Rethinking Development Economics in Capetown, South Africa.

About the Authors

Jerome Patrick "Jerik" Cruz is a Ph.D. student at the Massachusetts Institute of Technology, where he is a recipient of the MIT Homer A. Burnell Presidential Fellowship. Before his studies at MIT, he was a development economist and faculty at the Department of Economics at the Ateneo de Manila University, where he has led and authored policy studies commissioned by the Asian Development Bank, the International Labour Organization, the Singaporean government's ISEAS Yusof-Ishak Institute, and the Philippine Institute for Development Studies, among others. His current work spans research related to public finance, industrial/innovation policy, the future of work, and the political economy of local COVID-19 responses. He has also served as an advocacy strategist on multi-awarded public health, land rights, and environmental protection campaigns in the Philippines, including the campaign to legislate and implement the Philippines' sin tax law of 2012.

Enrico Antonio B. La Viña is a Ph.D. candidate in Political Science at the University of California, Davis. He studies the political economy of development, conflict, and democratization in Southeast Asia. Before going to graduate school, he worked as an analyst in the development sector. Rico holds a B.A. in Philosophy from Ateneo de Manila University and an M.A. in International Political Economy and Development from Fordham University.

Dr. Cielo Magno is an Undersecretary at the Department of Finance. She oversees the Fiscal Policy and Monitoring Group which is responsible for recommending fiscal policies, formulating tax reform proposals as well as forecasting and programming national government revenues. Prior to being appointed as Undersecretary, Dr. Magno was an Associate Professor at the University of the Philippines' School of Economics (UPSE). She has more than twenty years of experience in research and policy work with the public and the private sector, including international agencies. She was a member of the international board of the Extractive Industry Transparency Initiative (EITI), an advisory committee member of the CONNEX Global Initiative, and served as a board member of civil society organizations. She obtained her Masters degree in Economics from the UPSE and a Ph.D. in Law and Public Policy from Northeastern University in Boston, Massachusetts as a Fulbright scholar.

Francis "Kapi" Capistrano is currently UNDP Philippines Accelerator Lab's Head of Experimentation. Through this role, he collaborates with programme team members and partners in designing and implementing experiments on frontier development areas such as civic action against poverty, marine litter, and sustainable cities. He was a journalist who transitioned to doing development work and policymaking. Prior to taking on the Head of Experimentation of UNDP Philippines' Accelerator Lab, he served as Project Coordinator of the NEDA-UNDP Strategic M&E Project and Senior Project Officer of the DepEd-UNDP computerization project. Before UNDP, he helped pursue budget reforms and open government innovations at the Department of Budget and Management; performed complete staff work on landmark socio-economic policies as a Senate staffer; and covered political economy issues as a reporter for BusinessWorld. He is an AB Communication graduate who is currently writing his thesis on procurement in the Philippines for Master's in Development Economics.

Sheena Kristine M. Cases is a Data Analyst of the UNDP Philippines' Pintig Lab. She is a research generalist with comprehensive experience doing quantitative data analysis, monitoring, evaluation, accountability, and learning (MEAL) work, and knowledge management. She previously worked for international non-government organizations namely Save the Children and Oxfam Pilipinas, the academe, the Philippine government, and a start-up biofuels company. She provided technical and knowledge management assistance to the UNDP Philippines for the conduct of the Socioeconomic Impact Assessment of COVID-19 in the Bangsamoro Autonomous Region in Muslim Mindanao (or BARMM SEIA) and the COVID-19 Socioeconomic Impact Assessment in Mindanao: Strengthening Recovery Towards Peace and Development in the Six Regions (or MinDA SEIA). She has B.S. Economics and Master of Arts (Demography) degrees from the University of the Philippines - Diliman and was a recipient of the Demographic Research and Development Foundation Fellowship.

Amelia Supetran is a climate change and environment expert who served as a Senior Technical Adviser to the Climate Change Commission. She retired from the United Nations Development Programme in the Philippines in 2016, where she supervised the Inclusive and Sustainable Development Team for more than 16 years. This team also managed the environment and climate change portfolio, including three UNDP international projects, one of which became an intergovernmental organization (PEMSEA or Partnerships for the Seas of East Asia). Prior to her UNDP stint, she served the Philippine Government in various capacities for 21 years, handling responsibilities on environmental impact assessment, environmental education, and other multilateral environmental agreements. She supervised the implementation of these agreements in the Philippines as an Executive Director of the Environmental Affairs Office of the Department of Environment and Natural Resources. She is a B.S. Chemistry graduate and also has a Masters degree in Chemistry Education.

Maxine Tanya M. Hamada, Head of HCamp Consultancy, works on governance strategy and innovation. She has more than two decades of leadership experience in both civil society and public service. Her work spans the sectors of public fiscal management, civil society engagement, security sector reform, local government performance, and indigenous peoples' rights. She helped establish two influential think tanks in the Philippines and sits on the international steering committee of the World Movement for Democracy. She served the Philippine government as Assistant Secretary for Monitoring and Evaluation in the Department of Budget and Management. There, she helped set up a national evaluation policy for the bureaucracy, oversaw the Grassroots Planning and Budgeting Program and engagements with civil society, and piloted a meaningful devolution program with direct fiscal downloads to performing provincial governments. HCamp Consultancy works with sub-national, national and international clients on giving governance strategy impact and results.

Czarina Medina-Guce, Ph.D. Cand., is a sociologist with 15 years of executive management and technical experience in international development, democratic innovation, participatory governance, public policy, local governance, and impact assessments. She has been consulting as a governance expert with the UNDP to support various policy reforms since 2017. She serves on the Board of Directors of People Powered (New York, USA), a global non profit working for the advancement of participatory democracy, teaches with the Development Studies Program of the Ateneo de Manila University, while also completing her Ph.D. in Sociology at the University of the Philippines – Diliman. She completed executive courses in the Lee Kuan Yew School of Public Policy in the National University of Singapore and was a 2014 Fellow of The Asia Foundation's Development Fellows Program for Emerging Leaders in Asia.

Executive Summary

With the current transition of local governments to full decentralization under the Mandanas-Garcia Supreme Court (SC) Ruling, and considering the impact of the COVID-19 on local government units (LGUs), it is important to identify the strategic areas where local capacities can be built to respond to and recover from future crises. Furthermore, progress towards the attainment of the Sustainable Development Goals (SDGs) by 2030 need to be given priority. Recognizing these, the Department of the Interior and Local Government (DILG) and the United Nations Development Programme (UNDP) in the Philippines have produced a report entitled, **"Decentralization, Digitalization, and Development: Strengthening Local Governance for Crisis Response, Recovery, Resilience, and the Sustainable Development Goals"** with the following objectives:

1. To articulate insights on the preparedness of the Philippines for the Mandanas-Garcia SC Ruling transition and its implications on the ability of the country to respond to - and recover from - various forms of crisis, namely COVID-19, conflict, and climate change.

2. To identify strategic areas of development support for LGUs, citizens, and the private sector, so that stakeholders stand the best possible chance of reaching the best-case scenario by 2030.

3. To unlock investments in strategic areas of capacity-building support.

The report demonstrates that the national government and LGUs had been steadfast in trying to address the various issues and crises that arose from the compounded impacts of the COVID-19 pandemic. However, since LGUs continue to struggle with persistent issues related to the dependency on Internal Revenue Allotment (IRA) (now called the National Tax Allotment or NTA) , capacity, underspending, crises management, and social accountability, the national government agencies and LGUs must ramp up efforts in working together to optimize the use of their resources. These efforts need to support the devolution transition, the implementation of recovery plans, and related development initiatives that will ultimately support the attainment of the country's SDGs by 2030. Aside from these, it is important for the national government to strengthen its role on the coordination and monitoring of the Devolution Transition Plans (DTPs), including ensuring that programs, projects, and activities (PPAs) are aligned with the Government's vision. Furthermore, included in the priorities of the Government is to further study and clarify the roles and functions of the national government as well as the LGUs, in relation to the Mandanas-Garcia SC Ruling. Overall, to achieve these goals, a mindful and proactive effort for an innovative and data-driven recovery through a whole-of-society approach is crucial.

Key insights from the four chapters in the report are:

- Rising fiscal autonomy and reliance on locally generated revenues on the part of local government units (LGUs) is closely related to the increasing effort of LGUs to provide services. This indicates that an increased responsiveness of LGUs to their constituents has a significant association with fiscal accountability and public financial management improvement measures.

- The larger an LGUs budget, the lower the rate of budget utilization. Cities and provinces on average have PhP604 million unspent per year, with some LGUs exceeding PhP8 billion unspent in one year. Furthermore, the size of the capital outlay budgets is negatively correlated with the budget utilization rate (BUR) of LGUs.

- LGUs have generally struggled to quickly adopt innovative governance strategies, with many preferring basic and easily implementable measures over innovative but technically advanced strategies.

- There is a significant disparity among LGUs in terms of technical capacity and preparedness for the Mandanas-Garcia SC Ruling.

- A positive correlation can be seen between disaster preparedness, as measured by the early warning score of the SGLG, and budget utilization rate.

- The declining trend in budget utilization rates would suggest that a new approach to building public financial management capacity needs to be adopted to prevent further underspending after the Mandanas-Garcia transition.

- The devastating impacts of crises over the past decades on the country indicate the difficulty of LGUs to adapt and learn quickly from experience to mitigate and manage a crisis. Furthermore, crises brought by Climate Change need a thorough attention and an immediate, responsive, and adaptive action. Their borderless impact continue to widely affect people, especially the most vulnerable, at a great cost. Also, LGUs have different levels of capacity and performance based on DILG's LGU Segmentation data. To address the difficulties faced by the LGUs, different approaches in maximizing means of implementation (MOIs) (finance, infrastructure and technology), including the Mandanas-Garcia resource infusion, may be explored.

- Civic tech designed by or with the people can be effectively used to accomplish data-related innovations, service delivery, and capacity-building in some of the most remote areas in the country with high poverty levels and limited-to-no internet connectivity and thus, imaginable for other local governments.

Given these results, the report proposes seven (7) recommendations:

1. RE-EXAMINE national crisis management, fiscal, and social accountability paradigms and processes, and come up with a more efficient, responsive, and adaptive crises management in the Philippines.

2. ASSESS local government unit (LGU) capacities and review fiscal transfers, assignment of functions (including national government vis-a-vis local government), and procurement processes for efficient use of resources.

3. AUGMENT capacity support of LGUs on fiscal performance or crises management through long-term technical assistance partnerships.

4. MAXIMIZE good governance conditionalities to strengthen government systems and capabilities.

5. LEVERAGE on using probabilistic risk assessment and anticipatory planning to mitigate and manage the impact of crises.

6. OPTIMIZE people-designed civic tech initiatives and embed them in mainstream 'offline' civil society strategies with monitoring and evaluation.

7. LENGTHEN the Mandanas-Garcia SC Ruling transition timeline, given the challenges brought upon by the COVID-19 crisis on the LGUs.

1 From Dependency to Autonomy

Local Governance, Fiscal Capacity, and the Outlook for LGU performance in the post-Mandanas transition

Jerik Cruz[1]
Enrico Antonio B. La Viña[2]

"...LGUs that are able to maximize their fiscal revenue-raising powers are more likely to spend greater shares of their budget on services and public goods due to the incentives that own-source revenue reliance tends to generate..."

PNP and BFP officers examined a motorist's temperature at a checkpoint in Bukidnon (2021). Photo by BFP

1. Introduction

Since the categorization of the global COVID-19 outbreak as a pandemic by the World Health Organization (WHO) on March 11, 2020 (WHO 2020), it has become evident that the crisis brought about by the spread of SARs-CoV-2, has posed the largest immediate setback to global development in a generation. Given the toll wrought by the pandemic in terms of lives lost and overwhelmed health systems, in addition to the socioeconomic damage wrought by the recurring lockdowns, the COVID-19 pandemic has been described by United Nations Secretary-General Anthony Guterres as the "worst human and economic crisis of our lifetimes", which risks undermining

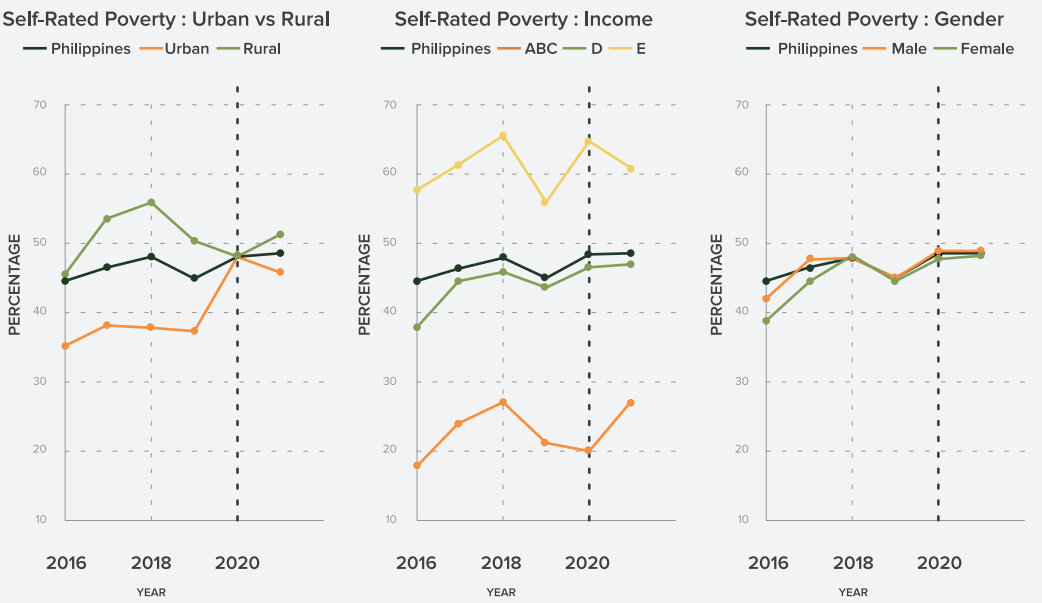
advances made on all of the Sustainable Development Goals (SDGs) (UN ECOSOC 2020). The same conclusion has been highlighted by a series of reports by the UN Department of Economic and Social Affairs, the United Nations Development Program (UNDP), and the Sustainable Development Solutions Network, with the UNDP specifically warning of the potential of the COVID-19 crisis to trigger the first global decline in the human development index since the launch of the measure in the 1990s (UNDP 2020; Sachs et al 2021; UNDESA 2021).

Developing countries have been especially vulnerable to the immediate and long-term impacts of the pandemic, with the Philippines being a case-in-point. Beginning with confirmation of local COVID-19 transmission in the country in March 2020, and the imposition of the first among several Enhanced Community Quarantines (ECQ) shortly after across Luzon island, the spread of the novel coronavirus has sparked the most profound socioeconomic crisis in the country's existing statistical record (World Bank 2020). In 2020, the Philippine economy contracted by 9.5 percent—a figure exceeding even the sharpest dips in growth during the country's 1980s debt crisis (PSA 2021; Dohner 1989). On the health front, the country has witnessed more than 2.84 million confirmed COVID-19 cases and more than 51,545 deaths as of end-2021, marking one of the worst coronavirus outbreaks in the Southeast Asian region. In addition, the crisis has been exacerbated by pre-existing structural fragilities in the country's economy, such as its stark social, spatial, and digital divides, its fragmented welfare systems, and the vulnerability of its leading economic sectors to lockdown measures (ACERD 2020; Lim 2020; World Bank 2020).

1.1. The effects of the pandemic on SDG progress

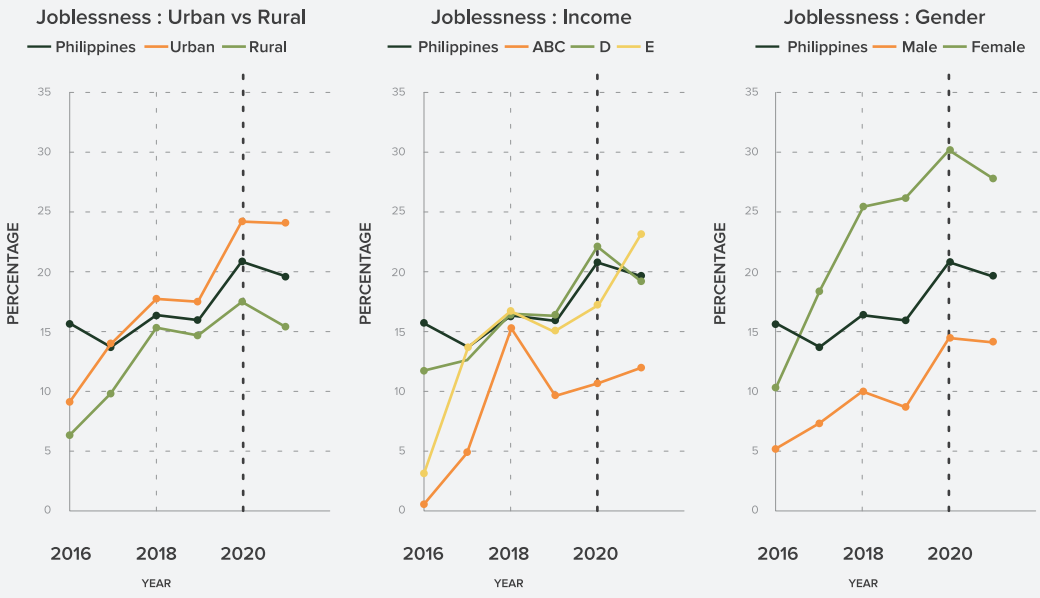
Though the COVID-19 pandemic has obstructed regular data collection procedures of the Philippine government[3], the available evidence suggests that the repercussions of the crisis on the country's realization of the SDGs will be equally serious. Consider the following trends. First, as Social Weather Stations indicators suggest, the COVID-19 pandemic has severely— and for hunger and joblessness, catastrophically— impacted indicators such as self-rated poverty, hunger incidence, and adult joblessness. As illustrated below by Figures 1.1. to 1.3., all three indicators have experienced acute increases in 2020 with the onset of the pandemic, and have remained at elevated levels throughout 2021. In general, these provide indication of the profound setbacks posed by the COVID-19 crisis on SDG 1 (No Poverty), SDG 2 (No Hunger), and SDG 8 (Decent Work).

FIGURE 1.1. Self-Rated Poverty during the COVID-19 pandemic



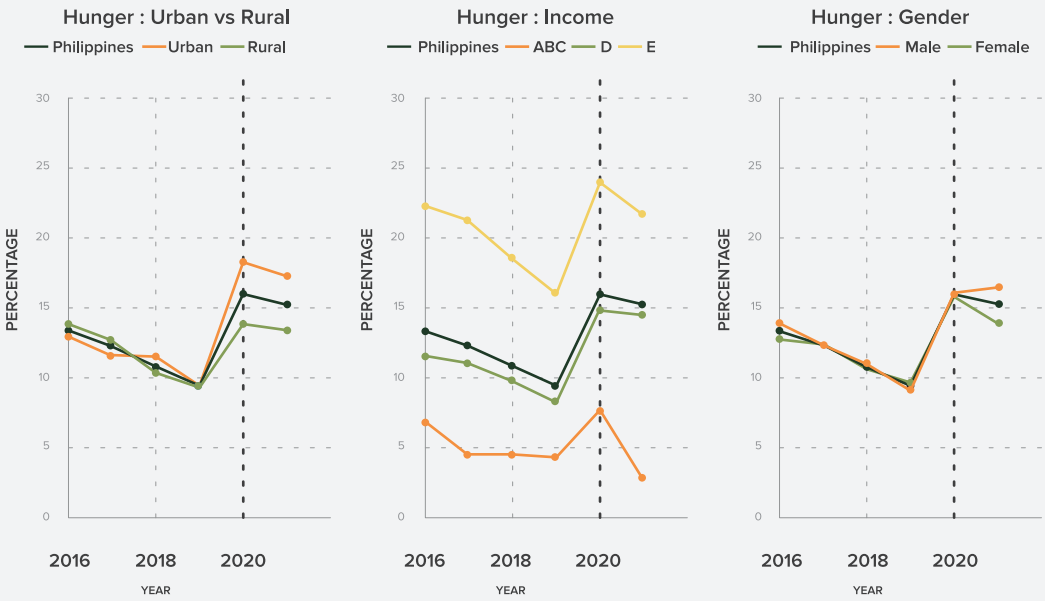
Source: Social Weather Stations

FIGURE 1.2. Joblessness during the COVID-19 pandemic



Source: Social Weather Stations

FIGURE 1.3. Reported Hunger during the COVID-19 pandemic



Source: Social Weather Stations

Further disaggregation of these trends by area, gender, and income level, also indicates that these impacts have not been evenly distributed — attesting to substantial inequalities among groups in terms of managing the burden of the pandemic. With regards to self-rated poverty (Figure 1.1.), for instance, while urban areas have borne the most severe impacts in 2020, rural zones appear to have experienced delayed shocks related to the pandemic in 2021. Joblessness has also risen by record levels in 2020 (Figure 1.2.), though the effects appear to have been most pronounced with regards to Social Weather Station (SWS) respondents in class E and urban areas. Arguably most striking has been the impact of the pandemic on reported hunger levels (Figure 1.3.), which have been characterized by dramatically unequal recovery levels in 2021, with middle class (ABC) respondents decreasing their hunger levels relative to 2019, while those from classes D and E have not only reported greater hunger increases in 2020, but persisting hunger well into 2021. If such trends persist, the COVID-19 crisis is likely to pose setbacks to the realization of SDG 10 (Reduced Inequalities) into the longer term.

Second, though the response to COVID-19 has entailed a whole-of-nation mobilization of the health sector to combat the pandemic, the crisis has also upended Filipinos' ability to access and make use of services for other health conditions. From 2019 to 2020, overall levels of claims from PhilHealth[4] dropped by 18.6 percent in spite of the rise in dedicated claims related to COVID-19— the biggest drop in annual PhilHealth claims in the present administration. But as illustrated by Figure 1.4., comparable and at times even more dramatic declines were registered for high-burden diseases ranging from asthma, Chronic Obstructive Pulmonary Disease (COPD), dengue, diabetes, heart disease, pneumonia, and tuberculosis.

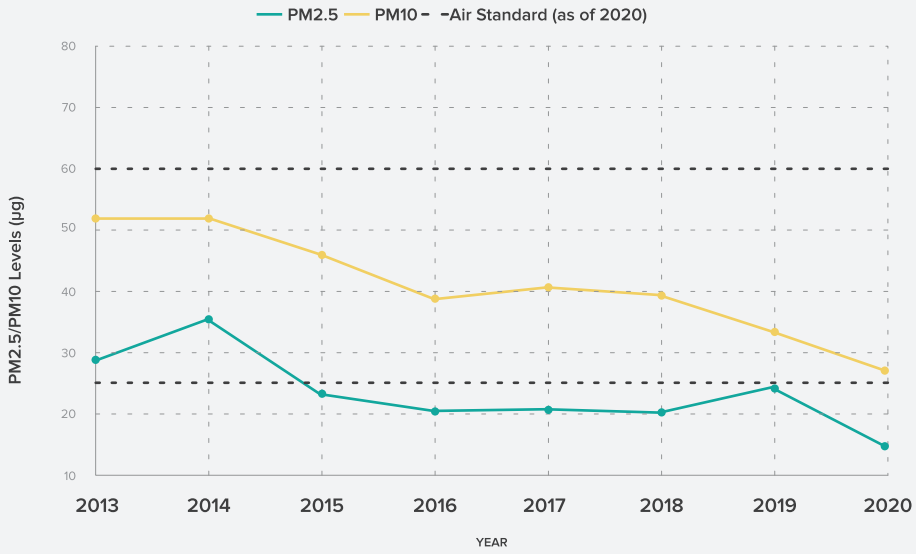
Similar reductions in claims also occurred for medical procedures, including elective procedures such as cataract survey as well as essential reproductive healthcare services like routine maternal care. While certain non-elective and emergency treatments have retained steady levels amidst the pandemic, and other forms of modes of medical treatment/delivery (e.g. telemedicine) have witnessed growth among higher-income households, these broad-based declines in PhilHealth filings provide suggestive evidence of diminishing use and access to various kinds of essential and non-essential health services in the country. On top of the immediate health challenges posed by the pandemic, the adverse shock in terms of access and usage of health services will, in turn, affect the country's ability to attain SDG 3 (Good Health and Well-Being).

FIGURE 1.4. COVID-19 and PhilHealth claims for ten high-burden diseases and medical procedures

Source: PhilHealth, based on Ulep et al (2020)

More examples of COVID-induced SDG setbacks could be provided— yet despite these and other obstructions that the pandemic has posed to the SDGs, the onset of COVID-19 has also paved the way for a number of unexpected sustainable development gains. For instance, impositions of ECQs in 2020 have resulted in noticeable improvements in air quality: based on data from the Department of Environment and Natural Resources – Environmental Management Bureau (DENR-EMB), lockdowns in Metro Manila led to decreases in PM 2.5, PM 10, and other suspended particulates of air pollution of up to 57 percent (Espita-Casanova 2020; Magcale-Macandong et al 2021). As illustrated by Figure 1.5., this trend accounted for 2020 being the year with one of the most significant decreases and lowest overall recorded level of air pollution over the past decade. Along with landmark measures that have been undertaken throughout the pandemic to promote more active transportation (e.g. protected bicycle lanes) and rationalizing public transport operations (e.g. PUV-only lanes), the pandemic has opened an unprecedented window-of-opportunity to advance SDG targets associated with promoting sustainable cities and transport systems (e.g. SDG targets 3.9.1, 11.6.2).

FIGURE 1.5. Average annual air pollution levels (PM 2.5, PM 10), 2013-2020

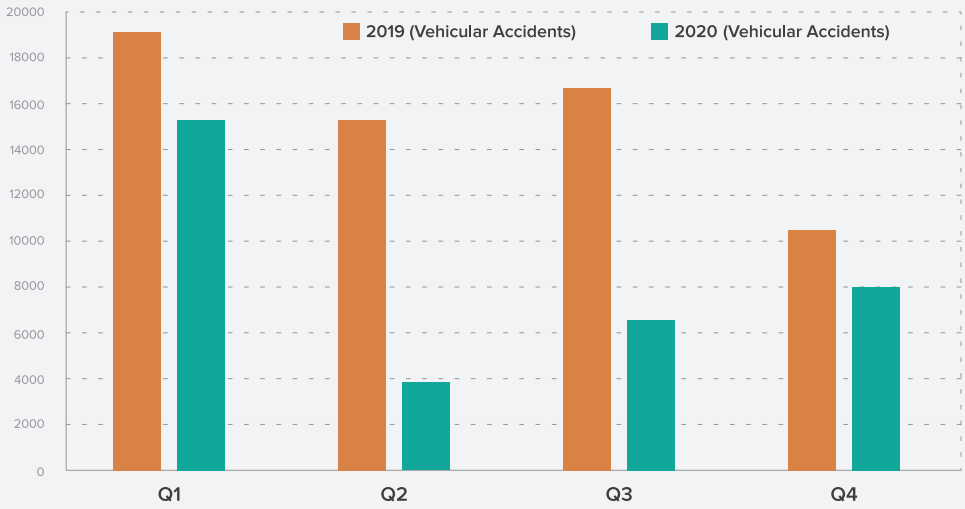


Source: DENR-EMB Air Quality Section

Parallel to environmental shifts, reduced vehicular traffic has likewise lowered road crash incidents which attests that SDG targets on road safety (SDG 3.6 and SDG 11.2) are attainable. Upon the imposition of ECQ in mid-March 2020, road crash statistics, which are usually shown as the biggest cause of injuries and deaths nationwide, went down sharply for the first time. It was 75 percent in the second quarter of 2020; then 61 percent by the third quarter, and it dropped to 24 percent by year-end.

The drastic decrease of vehicular/ transport-related injuries nationwide as shown in Figure 1.6. and improvement in air quality was also attributed by complementary landmark effort by the public sector and civil society groups that shaped up in the middle of the pandemic, such as; the installation of bicycle lanes, contracting of displaced Public Utility Vehicle (PUV) drivers, the uptake of urban agriculture and backyard gardening, and the establishment of community pantries and mobile kitchens. These combined developments initiated through multi-sectoral efforts revealed how a health crisis can disrupt the status quo and widen what used to be narrow spaces to introduce a more sustainable and livable new order of organizing the social, economic, and political life of citizens relevant to the present times.

FIGURE 1.6. Vehicular/Transport Related Injuries Nationwide, 2019 vs. 2020



Source: DOH-ONEISS

The advent of COVID-19 has brought forward a once-in-a-century crisis in the Philippines and worldwide. Yet the crisis has also redefined the public's imagination of a "better normal" that can more effectively advance inclusive and sustainable development, both inside and beyond the Philippines. To what extent can such possibilities be realized, given the "scarring" (Oxford Economics 2020) that the pandemic is expected to leave on the country's socio-economic landscape? In light of another gamut of changes that are poised to commence in 2022 - the capacity, effectiveness, and performance of LGUs across the Philippines will be even more decisive in charting the country's prospects for attaining the SDG targets.

2. LGUs in the 2022 Transition: COVID-19, the Mandanas-Garcia SC Ruling, and Local Governance in Perspective

The year 2022 is set to be a crucial period for LGUs in the Philippines. To begin with, it marks the 2nd year since the onset of the COVID-19 pandemic— and potentially the first one in which the majority of its population will be vaccinated against the disease, especially once current government immunization plans come to fruition. Yet given the rise of the Delta and Omicron variants, and the continuing surge in places that have already attained high vaccination rates (e.g. Israel, Singapore, Norway, New England in the US), COVID-19 is now poised to become a global "endemic" illness (Shaman and Galanti 2020; Torjesesn 2021). Akin to countries such as Singapore, Malaysia, and Thailand that have embarked on long-term COVID-19 management strategies (Sim and Xinghui 2021; Anand 2021; Thanthong-Knight 2021), this means that the Philippine government from the national level down to LGUs will have to craft their own plans and measures for "living with virus" for the foreseeable future, especially if they do not have a plan yet. Doing this effectively will require, not only considerable investments in national and subnational health and welfare systems, but also boosting the capabilities of LGUs, including technical capacities in the collection, management, and analysis of real-time data, to refine both the public health and economic dimensions of the pandemic while maintaining progress on the SDGs.

Implementation of vaccine rollout in San Fernando, La Union (2021). Photo by: DILG Region I

But 2022 is also a year of significant change in the Philippines' framework for local governance since the passage of Republic Act 7160—or the 1991 Local Government Code (LGC). Responding to the 2019 decision of the Supreme Court on the case of Mandanas et al. v. Ochoa et al. (referred as the Mandanas ruling), which expanded the revenue base from which LGUs' share of national taxes are to be computed. In June 1, 2021, President Rodrigo R. Duterte signed Executive Order 138, which mandates the full devolution of services and responsibilities listed under Section 17 of the LGC (EO 138) and other existing laws which subsequently devolved functions of the NG to LGUs. The order has set in motion a historic reassignment of responsibilities as well as resources from national to subnational government levels starting 2022. Both the National Government Agencies (NGAs) and LGUs have entered into a preparatory stage to start the formulation process of devolution transition plans which will lay down how they will assume additional functions, services, and facilities. Box 1.1. below summarizes the contents of EO 138 as well as ongoing efforts being undertaken by LGUs in relation to them.

BOX 1.1. Executive Order 138 and the transition process for LGUs.

Executive Order 138 (or EO 138), series of 2021 provides the framework for the "full devolution" of mandated responsibilities in Section 17 of the Local Government Code to mitigate the fiscal impact of the implementation of the Supreme Court ruling on the Mandanas et al v. Ochoa et al case. EO thus requires local governments to develop their own Devolution Transition Plans (DTPs) concerning the assumption of functions by LGUs between 2022 and 2024; the creation of a Growth Equity Fund (GEF) to provide fiscal assistance to "poor, disadvantaged, and lagging LGUs"; as well as the establishment of a Committee on Devolution to oversee and monitor the implementation of the devolution process. In addition, LGUs are also required to formulate a Capacity Development Agenda (CDA), for Provinces/Cities/Municipalities, and capacity development requirements for Barangays.

The specific contents of LGU's DTPs, in turn, are spelled out in more detail by the DBM-DILG Joint Memorandum Circular No. 2021-1, Guidelines on the Preparation of Devolution Transition Plans of Local Government Units in Support of Full Devolution under Executive Order No 138, dated 01 June 2021. Provincial, City, and Municipal LGUs to elaborate on (a) the state of their already-devolved functions, services, and facilities; (b) the planned phasing of their assumption of the full devolution; (c) their CDA; (d) their proposed changes to their Organizational Stucture and Staffing Pattern; (d) their local revenue forecast and resource mobilization strategy; and (f) their performance targets for devolved functions and services. Meanwhile, only the first three items are required from Barangays.

The component concerning their resource mobilization strategy has been added to the DTP due to the anticipated fall in NTA transfers to LGUs resulting from the COVID-19 pandemic, on top of other possible fiscal gaps. The general deadline for LGUs to submit this plan is on December 12, 2021 for provinces, November 12, 2021 for cities and municipalities, and October 13, 2021 for barangays.

As a result of the implementation of the Mandanas ruling via EO 138, LGUs are set to receive a windfall in their National Tax Allotments (NTA)— formerly Internal Revenue Allotment or IRA. Based on estimates from the Department of Budget and Management (DBM), the total NTA share of LGUs for 2022 will increase by 37.9 percent or PhP 263.5-billion more than 2021 levels (DBM 2021). An additional PhP 10-billion has been provisionally set aside for the 2022 National Expenditure Program for the proposed Growth Equity Fund (GEF) to provide additional fiscal support to 16 provinces and 258 municipalities that have been selected by the Committee on Devolution (ComDev) on the basis of their poverty incidence and per capita NTA (Bonagua 2021). Finally, based on the Capacity Development Agendas that are to be integrated in their DTPs, LGUs are likewise expected to receive a portfolio of capacity-building interventions that are to be provided by the DILG's Local Government Academy as well as other NGAs which was previously under the Capacity Development Framework of DILG and elaborated in DILG Memorandum Circular No. 2021-067.

Yet despite the substantial opportunities offered by the execution of the Mandanas ruling, a number of concerns have been expressed regarding the potential unintended consequences once EO 138 is implemented. Summarized below are among prominent issues that have been raised since the release of the EO:

- **Limited absorptive and service delivery capacity among LGUs:** similar to issues of "underspending" at the NGA level (Navarro 2014; Monsod 2016), LGUs only harbor limited ability to effectively and efficiently process the expanded fiscal resources that will be made available to them by EO 138, translating into low budget utilization rates (Diokno-Sicat et al 2020). But such constraints are prone to be even more acute than those experienced by NGAs, given the limited manpower and technical know-how of staff at the subnational level to transform such resources into service delivery outputs (Domingo and Reyes 2017).

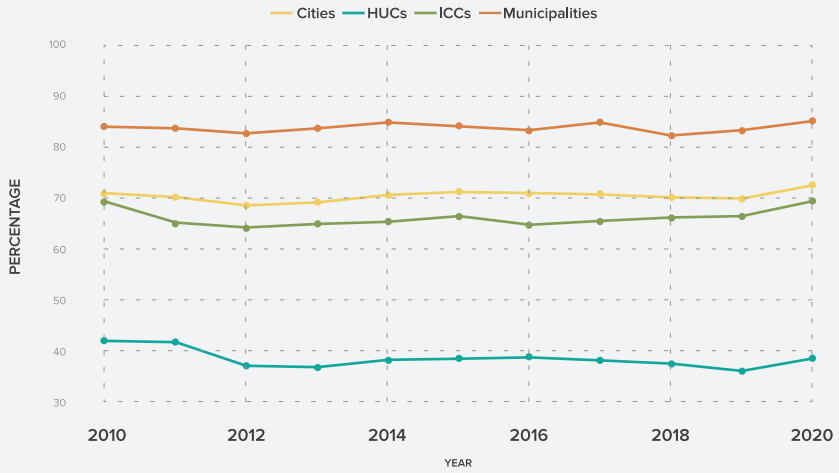
  This is especially likely to be a challenge for larger scale, more complex capital investments (e.g. infrastructure development). To this end, recent analysis by the World Bank's Philippine Economic Update for mid-June 2021 has documented a significant inverse relationship between the share of capital outlays in LGUs' budgets and their budget execution rates across all types of local governments, including among high-capacity LGUs. As such, they project that the Mandanas windfall for 2022 to be entirely allocated to capital outlays, budget utilization rates for provinces, cities, and municipalities could fall by 14, 13, and 24 percentage points respectively (World Bank 2021). Though already a major pre-COVID challenge, the onset of the pandemic has made addressing such capacity constraints even more urgent given the need for substantial capital spending to adapt to the post-COVID "new normal" and to stimulate recovery to an economy that remains in the doldrums. Moreover, in the face of long-term challenges associated with climate change, to what degree LGUs will prioritize the fulfillment of their environment and natural resource management functions remains an open question, considering LGUs' tendency to deprioritize these responsibilities in the past as well as common capacity deficits that have inhibited their realization (Domingo and Manejar 2018; Broad and Cavanagh 1993).

- **Disparities and Imbalances among LGUs:** closely related to the first issue above are high capacity disparities among LGUs, which will likely translate into differing ability to take advantage of the opportunities offered by EO 138. Indeed, the impact of decentralization on the quality of governance has long been uneven: though a number of standout high-performing "innovators" have certainly emerged since 1991, the quality of local governance has generally remained low, and improvements in both the economic and administrative workings of local states have been "sluggish" (Capuno 2005; Sicat et al 2019). Moreover, in spite of GEF grants to poorer and more rural LGUs, longstanding vertical and horizontal fiscal imbalances are likely to remain in place as EO 138 does not yet correct for the flaws in the very design and criteria that have long been pointed out as regards to the distribution of IRA/NTA (Manasan 2007; Manasan 2020; World Bank 2021). Consequently, strong "centrifugal" forces are likely to manifest in LGU performance in the wake of EO 138's implementation, with already high-performing, high-capacity LGUs being able to make

better use of the Mandanas funds than lower-capacity LGUs (Diokno-Sicat et al. 2020). In the absence of well-designed capacity interventions, this could aggravate already significant disparities among local governments—a likely outcome due to the differing capabilities of LGU's to manage the still-ongoing COVID-19 pandemic.

- **Perverse incentives for fiscal autonomy:** despite the increased revenue-raising powers afforded to them by the LGC, most LGUs have remained dependent on the central to local transfers. As shown by Figure 1.7., prior to the COVID-19 pandemic, cities, in particular, have on average sourced more than 70 percent of financial resources from IRA/NTA, whereas the corresponding figure for municipalities was above 80 percent (ADB 2014; Ang et al 2019). Only Highly Urbanized Cities (HUCs), where most economic activity in the country is concentrated, appeared to have relied more on their own source of revenues as opposed to central-local transfers. This trend was worsened by the pandemic, with different classes of LGU reporting a greater dependency on fiscal transfers amidst lockdowns and economic disruptions. In turn, studies undertaken over the years have traced the drivers of such dependency to the disincentive effects posed by assured fiscal transfers on local resource mobilization (Manasan 2005; Llanto 2011), as well as the dearth of significant reward mechanisms for improvements in service delivery and revenue-raising (Martinez-Vasquez and Liu 2011; Mendoza and Ocampo 2017). Unless these incentives stemming from the fiscal decentralization framework of the LGC are addressed, it would likely appear that the implementation of the Mandanas ruling will not, by itself, encourage LGUs to maximize traditional and more innovative (e.g. payment for ecosystem services, special levies for properties benefiting from LGU public works investments) revenue-raising measures available to them.

FIGURE 1.7. IRA dependency ratios of Philippine provinces, cities, and municipalities, 2010-2020



Source: DOF-BLGF

While the DILG and DBM are taking actions to spur LGUs to reduce their reliance on fiscal transfers, it remains unclear how these largely voluntary measures will be effective in overcoming the perverse incentives entrenched into the very design of the NTA and considering the conflicting priorities of LGUs with the continuing COVID-19 pandemic, on one hand, and the uncertainty and political risk generated by the upcoming May 2022 national and local elections, on the other. Certainly, it may be possible to design the GEF to include revenue-raising conditionalities to address such concerns for the poorest and most disadvantaged provinces/municipalities, but the limited scope of the GEF means that this measure, if adopted, will only have coverage among a minority of LGUs.

- **Fiscal accountability and political dynasties:** dependency on NTA for funding also relates to LGUs' accountability to their constituents, particularly in public financial management. While EO 138 and various memoranda issued under it provide language on the importance of civil society participation as well as some measures for citizen participation and monitoring, the framework for EO 138's implementation, however, appears not to have established fiscal transparency and accountability safeguards that can be leveraged by ordinary citizens. In fact, given long-observed linkages between improving fiscal accountability and increased reliance on own-source revenue generation (Ross 2012; Hoffman and Gibson 2005; Gervasoni 2010), increased NTA dependency among LGUs that could result from the Mandanas ruling implementation could have a potential negative spillover effects as well on their accountability and responsiveness to their constituents.

  A distinct, though related, concern are the repercussions of EO 138's implementation on political dynasties in the Philippines' local governance landscape. Indeed, horizontal or coterminous dynasties (with multiple family members holding office at the same time) have remained pervasive, accounting for more than one out of two local chief executives (LCEs). After the 2019 elections, an estimated 57 percent of governors and 53 percent of mayors have come from dynastic clans (Mendoza et al 2019), compromising checks and balances at the LGU level and offering undue advantages to dynasties when it comes to political competition. The presence of dynastic political families have also been found to weaken incentives to furnish public goods and observe accountability standards (Anderson, Francois and Kotwal 2015; Cruz, Labonne, and Querubin 2017). Without complementary measures to foster a political party-based politics, as opposed to clan-based forms of political competition, the implementation of EO 138 runs the risk of reinforcing the system established by horizontal dynasties in local politics, affording them control of more resources that will allow them to further solidify their political influence and expand political base on their respective localities.

- **Implications of the 2022 elections:** the implementation of EO 138 offers another layer of complexity, not only because of the ongoing COVID-19 pandemic, but also by the upcoming national and local elections in May 2022. On one hand, this raises

questions whether new LCEs and their appointed officers will maintain continuity with the DTPs following the national and local polls or will the Mandanas ruling and implementation be sustained considering that its authority emanated from an executive prerogative of an Executive Order. In most cases, EO's are vulnerable to being overturned by future administrations.

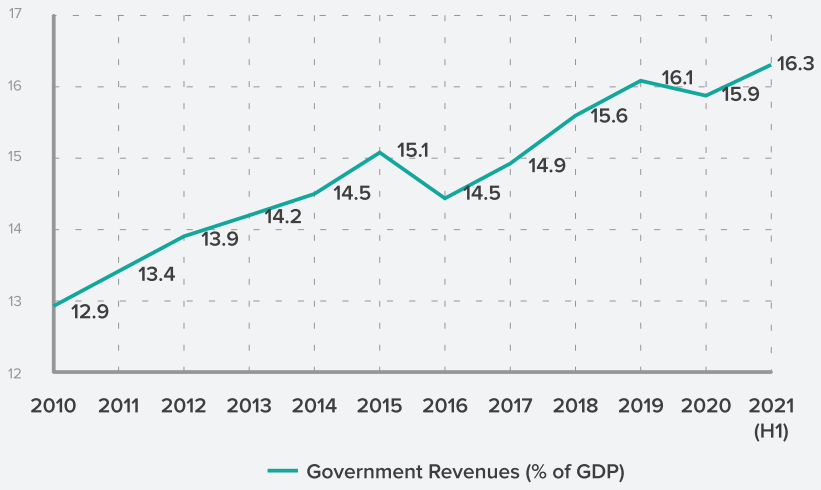
Other concerns have also been raised on how electoral incentives could influence the roll-out of the EO in its first year. Some observers have underscored the need for clearer criteria and stronger accountability mechanisms in the establishment of the GEF in order to avoid the risk of it becoming "a substitute for pork barrel" for LGUs (Cantos 2021). There is also the possibility that LCEs may pressure their local devolution committees to craft their DTPs in ways that will reinforce their incumbency advantage in elections, such as, by frontloading the devolution of functions and expenditure areas that are typically skimmed for electoral funding (e.g. public works and road infrastructure) (Mendoza and Cruz 2019; Ravanilla et al 2020) and implemented along clientelistic criteria (e.g. health and social welfare) (Diokno-Sicat and Maddawin 2018). Without additional safeguards, such electoral incentives could skew the implementation of EO 138, setting an adverse precedent in its first year of implementation. In sum, even beyond the need to adjust long-term plans and sustainable development strategies to the "new normal" of COVID-19, the year 2022 will witness the most consequential shift in the Philippine local governance landscape since the 1990s. Thirty years after the passage of the LGC, LGUs are now set to assume the full responsibilities and resources promised by the country's decentralization framework. Yet there remain major questions about the readiness and capacity of most LGUs to handle their expanded role in the post-Mandanas period as well as possible unintended consequences of EO 138's roll-out. This underscores the importance of better understanding on how the LGUs are situated with regards to one another in relation to their capacity in fiscal management and public service delivery, and on how these capacity differentials will impact on their performance after assuming expanded responsibilities amidst the long-term impacts of the COVID-19 and climate crises.

3. Capacity and fiscal contracts: Charting LGU performance in the post-COVID, post-Mandanas era

How can the LGUs take the best of the advantages offered by the implementation of EO 138, and which among them will maintain progress towards fulfilling the SDGs in the COVID "new normal"? Much of the discussion concerning LGUs' preparedness to implement the Mandanas ruling has been focused on upgrading their budget utilization and service-delivery capabilities. There are also grounds for giving equal urgency to concerted efforts to boost their local resource mobilization capacity.

In the immediate term, building LGUs' tax and revenue-raising capacity is of cardinal importance given the future impact of COVID-19 on their NTA levels. While LGUs can expect a surge of fund transfers for 2022, these allotments will be diminished in subsequent years due to the economic impact of COVID-19 on national government coffers, as shown by Figure 1.8.[5]. Indeed, according to the Bureau of the Treasury (BTr), national public sector revenues in 2020 declined by 8.97 percent (PhP 281.5-billion) relative to 2019 levels, with taxes and customs duties plunging by an even larger 10.32 percent and 14.69 percent, respectively (BTr 2021). Moreover, though it might appear that reported revenue in the 1st half of 2021 recovered somewhat from the economic disruption caused by the pandemic, the figure of 16.3 percent actually represents a continued decrease in collections relative to the same period in 2020, where the respective figure was 16.9 percent of GDP. Consequently, it will be imperative for LGUs to augment their NTA receipts by maximizing the fiscal powers provided by the LGC to moderate the impacts of the contraction on their ability to provide services, to respond to long-term impacts of the COVID-19 pandemic, and to maintain progress on the SDGs.

FIGURE 1.8. National government revenue collections (% GDP), 2010-2020



Source: Department of Finance

Yet in the medium- and longer-term, strengthening of LGUs' fiscal capacity is also strategic for improving the quality of local governance and on their positioning to realize the SDGs. As Box 1.2. elaborates below, these benefits stem from how increased efforts to mobilize taxes and own-source revenues generate political and economic incentives both among taxpayers (who are inclined to demand concessions in return for tax compliance) and government officials (who must retain legitimacy with taxpayers to reduce tax resistance) to engage in protracted bargaining over how ceded revenues will be managed. Due to these dynamics, own-source revenue generation has often been found to be directly linked to improved fiscal accountability, increased public financial management capacity, expanded provision of public services, as well as enhanced incentives to foster local economic development (Moore 2006; Prichard 2015; Poschl and Weingast 2013; UNCTAD 2014; UNRISD 2016). When LGUs are able to consolidate such "fiscal contracts", efforts to strengthen local governments' fiscal autonomy are likely to deliver positive spillover effects on their levels of fiscal accountability, responsiveness to citizens' demands for public service provision, and commitment to advancing economic growth.

BOX 1.2. The Governance Dividends of Taxes and Fiscal Contracts

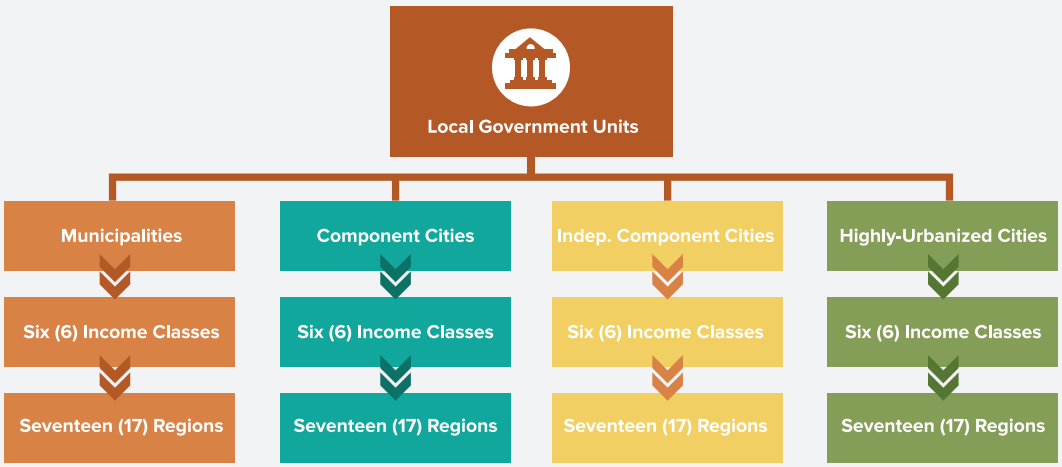
Over the past decade, there has been a rising tide of interest in the politics of public finance in developing countries. Indeed, in recent works in the tax, governance, and development literature, increased reliance on taxes by governments has been found to be linked, among others, to the development of state capacity, the promotion of accountability, stronger economic growth incentives, the expansion of governments' role in service provision, greater social services delivery, and enhanced policy space (Moore 2006; Prichard 2010, 2015; Poschl and Weingast 2013; UNCTAD 2014; Bird and Zolt 2015; UNRISD 2016).

Underlying several of these relationships are the dynamics of "tax bargaining" or "fiscal contracting"— processes of interaction and negotiation between taxpayers and governments over public revenues whereby "citizens accept and comply with taxes in exchange for government providing effective services, the rule of law and accountability" (Moore 2008; Prichard 2010). As commonly recognized by the fiscal contract literature, such bargaining dynamics may unfold in direct (e.g. national fiscal dialogues) or indirect (e.g. protests, strategic signaling of government and taxpayers) fashion; they may also be crystallized via formal (e.g. earmarking) or informal (e.g. political pledging) means. At its most general, however, tax bargaining can occur through incentives embedded into tax relationships, given citizens' interests in ensuring that their taxes are prudently spent, and states' motivations to ensure that citizens exhibit "quasi-voluntary compliance" in observing their obligated tax payments (Levi 1988; Prichard 2015). Through such incentives, taxation is oftentimes found to be linked to enhancements in governance and accountability, as well as to improvements in budgetary allocations in public services provision (including certain forms of social spending)— indicating demonstrable tendencies among states to confer tangible benefits upon taxpayers, compared to non-tax sources of revenue.

3.1. Fiscal autonomy and governance incentives: findings from multilevel modeling

To what extent have such posited dynamics obtained among local governments in the Philippines? To probe these questions, we estimate a series of multilevel models that examine the relationship between the degree of reliance of city and municipal LGUs on their locally-generated revenues and various detailed measures of LGUs' orientation towards (a) service delivery, (b) local economic development, (c) public financial management improvements, and (d) budget utilization capacity. Specifically, our models examined the within-group variation of city and municipal LGUs according to the schema which is visually presented in Figure 1.9. for reasons that we briefly outline below. Since cities and municipalities are accorded different taxing and expenditure powers by the LGC (Manasan 2005; Llanto 2009; Diokno-Sicat and Maddawin 2018), we grouped LGUs according to their legal classification as Municipalities, Component Cities (CCs), Independent Component Cities (ICCs), and Highly-Urbanized Cities (HUCs) (given the very low numbers of ICCs, they are grouped together with HUCs). Then we further subdivided LGUs within these legal categories according to: a.) their income classification to compare only among local governments of similar economic size[6], and b) regional location to control for unobserved cross-regional influences. In addition, these were grouped together based on a detailed specification to compare LGUs that are of the same type, income class, and region. This manner of grouping LGUs will ensure an "apple-to-apple" comparison, which is crucial given the substantial heterogeneity in local government capacity and performance in the Philippines.

FIGURE 1.9. Multilevel Modeling Schema

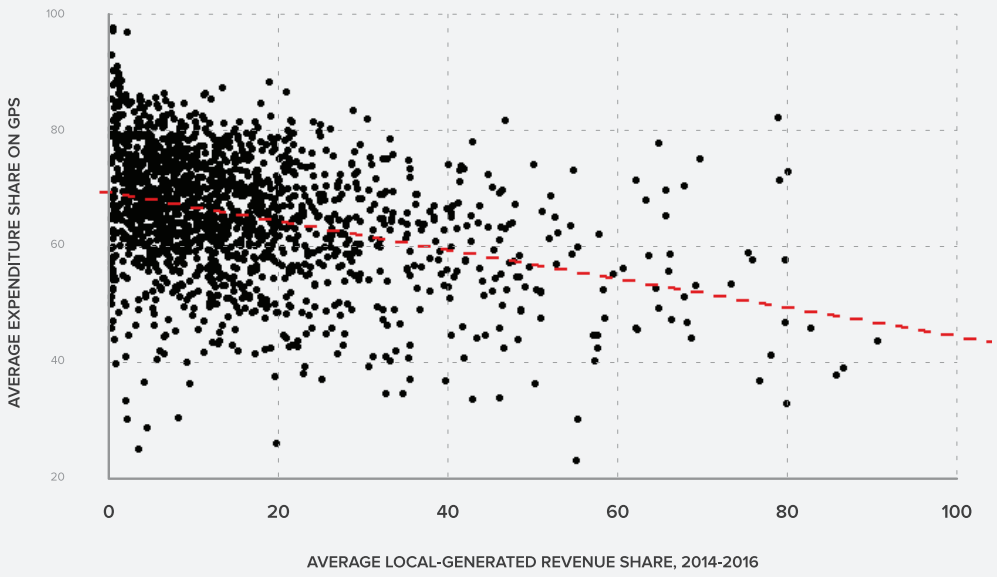


Source: Authors

Based on initial inspection of our main variables of interest (see Annex 1.1.), our models mainly permit for varying intercepts through a linear fixed-effects specification and feature cluster-robust standard errors. Similarly, we adopted controls for the following LGU-level factors which could confound inference on the relationship between increased LGU tax reliance and LGU capacity/performance: (a) an LGU's 2015 poverty rate (data source: PSA), (b) its 2015 urbanization rate (PSA-CPH), (c) average educational attainment (PSA-CPH), (d) whether the LGU was governed by the political dynasty (ASOG Political Dynasty dataset), and (e) the number of recognized civil society/business groups (CMCI).

Greater tax reliance encourages a stronger service-delivery orientation. At the broadest level, increasing LGU fiscal capacity appears linked with a more pronounced orientation towards service provision in expenditure decisions. As already stated in the previous section, most LGUs in the Philippines remain heavily dependent on IRA/NTA transfers to fund their expenditures, with this being a particular problem among poorer provinces and municipalities (Manasan 2005; Ang et al 2019). Yet across all LGU types, an increasing share of annual income from local revenue sources is inversely and significantly associated with the share of LGU expenditure spent on basic administrative functions and upkeep (categorized as "general public services"). This is illustrated by Figure 1.10. below, where we plotted the average share of city/municipal LGUs' expenditures on General Public Services for 2017-2019 compared to the share of their revenue generated from local revenue sources from 2014-2016, under the previous electoral cycle. The same patterns obtain if we use Locally-sourced revenue (LSR) ratios for 2017-2019.

FIGURE 1.10. LGU Locally-sourced Revenue (LSR) vs. General Service Revenue ratios (GSR), 2014-2016 vs 2017-2019



Source: Authors, using BLGF data

Our multilevel models continue to confirm this relationship, even when other potential confounders are accounted for (Models 2 and 4), as defined in footnote 7[7]. As shown by Table 1.1., when we compare LGUs of the same legal type (Model 1), raising an LGUs' LSR ratio by one percentage point is associated with a nearly 0.2 percentage point decrease among LGUs GPS expenditure shares— a relationship that remains practically and substantively significant even when we allow for varying slopes and baselines based on the region in which an LGU is situated (Models 3 and 4). In other words, rising fiscal autonomy and reliance on locally-generated revenues on the part of LGUs is, all else equal, closely affiliated with increasing effort on the part of LGUs to provide services, which may be indicative of increased responsiveness of LGUs to their constituents.

TABLE 1.1. Multilevel Model (Varying Slopes and Intercepts): GPS ratio vs. LSR ratios

	Dependent variable:			
	avg_GPSratio1719			
	(1)	(2)	(3)	(4)
avg_LSRratio1416	−0.196***	−0.136**	−0.186**	−0.162**
	(0.053)	(0.058)	(0.076)	(0.071)
Urban_share_2015		−0.028**		−0.018
		(0.014)		(0.015)
education15.y		−0.003		−0.004
		(0.009)		(0.010)
povertyincidence15		0.049*		0.013
		(0.030)		(0.040)
fat_dyn		−0.566		−0.484
		(0.556)		(0.550)
cmci_number_othergrp17		0.0003		0.002
		(0.007)		(0.007)
Constant	65.377***	65.766***	64.640***	66.424***
	(2.498)	(3.863)	(4.359)	(4.608)
Observations	1,617	1,329	1,617	1,329
Log Likelihood	−6,059.792	−4,971.988	−6,035.260	−4,952.857
Akaike Inf. Crit.	12,131.580	9,965.976	12,088.520	9,933.713
Bayesian Inf. Crit.	12,163.910	10,023.090	12,137.010	10,006.400
Note:				*p<0.1; **p<0.05; ***p<0.01

Source: Authors

If LGUs that rely more on their own revenues for funding tend to exhibit a stronger service delivery orientation than NTA-dependent ones, then where do the former spend their revenues? By examining the association of increasing own-source revenue autonomy with other categories for LGU expenditure, we found a significant and robust relationships with all LGU spending areas particularly with respect to local expenditures on education and on the provision with economic services, though we also found evidence of HUC-specific effects on health and housing expenditures as illustrated in Figure 1.11. Table 1.2. presents our multilevel models in which LGU expenditure ratios for education, health, housing, and economic services are regressed on LSR shares, featuring the same controls as Table 1.1. and with LGUs already grouped into legal classification, income class, and regional location. With regards to the effect size, expanded tax dependence is most strongly related to an increased share of LGU spending on education (0.1 percent increase for every one percentage point in LSR) as well as on economic services (0.05 percent for every percentage point increase). The statistical significance of the ratio of education spending most probably stems from the earmarking of real property surtaxes to LGUs' "special education fund" (Manasan et al 2011; World Bank 2016); meanwhile, the high practical association with economic services could be indicative of strengthened incentives among local revenue-reliant LGUs to invest in the growth of their local tax base, as has been argued for other contexts (e.g. Poschl and Weingast 2013).

TABLE 1.2. Multilevel Model (Intercepts): Budget shares on LSR ratios, 2017-2019

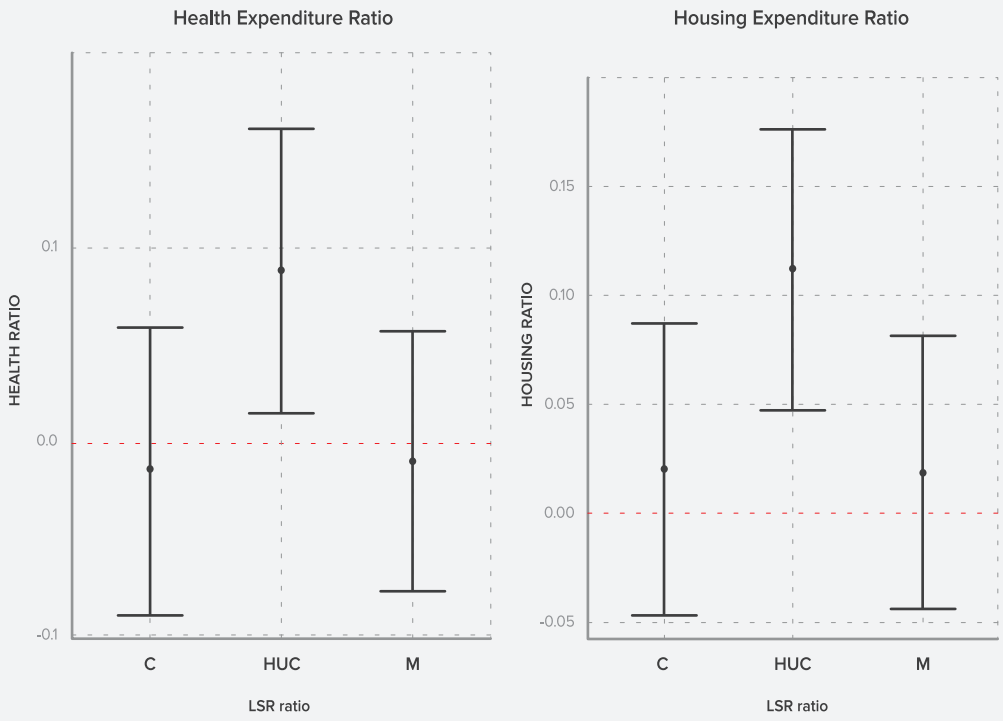
	Education	Health	Housing	Economic Services
avg_LSRratio1416	0.094**	-0.010	0.013	0.054*
	se = 0.003	se = 0.005	se = 0.008	se = 0.008
Urban_share_2015	0.005	-0.005+	-0.001	-0.027*
	se = 0.003	se = 0.002	se = 0.002	se = 0.005
education15.y	-0.005*	-0.003*	0.000	0.002
	se = 0.001	se = 0.001	se = 0.000	se = 0.009
povertyincidence15	-0.008+	-0.021+	-0.006	-0.055
	se = 0.002	se = 0.005	se = 0.005	se = 0.025
fat_dyn	0.018	0.052	0.313+	-0.138
	se = 0.080	se = 0.160	se = 0.093	se = 0.398
cmci_number_othergrp17	0.002	0.007	-0.001	0.001
	se = 0.004	se = 0.004	se = 0.001	se = 0.007
Num.Obs.	1332	1332	1332	1332
R2	0.453	0.118	0.139	0.135
R2 Adj.	0.440	0.098	0.119	0.115
R2 Within	0.195	0.009	0.009	0.017
R2 Pseudo				
AIC	5598.1	6832.8	6164.2	8893.8
BIC	5759.1	6993.8	6325.2	9054.8
Log.Lik.	-2768.055	-3385.382	-3051.106	-4415.910
Std.Errors	by: sglg_muntype	by: sglg_muntype	by: sglg_muntype	by: sglg_muntype
FE: sglg_incomeclass	X	X	X	X
FE: sglg_muntype	X	X	X	X
FE: sglg_region	X	X	X	X

Note: ^^ + p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

Source: Authors

By comparison, own-source revenue reliance appears to have a more complex relationship on health and housing expenditure by LGUs. While the common effect across LGU types for both types of expenditure as reported in Table 1.1. is insignificant, we nonetheless find evidence of a positive relationship among HUCs/ICCs, as shown in Figure 11, once we allow for varying slopes across different LGU types. In Annex 1.1., we present graphical evidence to justify this modeling choice. Specifically, among HUCs and ICCs, a one percentage point increase in LSR ratio is associated with roughly a 0.1 percentage point for both health and housing spending ratios— a relationship which is significant at the 5 percent level. While the exact reason for why this relationship is positive and significant only among HUCs/ICCs deserve to be investigated in greater depth, however, the patterns provide additional indication that increased reliance of LGUs on their own-source revenues is likely to strengthen their service-delivery orientation, especially in larger cities which feature larger tax bases.

FIGURE 1.11. LGU-type specific effects (95% Confidence Intervals): Health and Housing Expenditure ratios vs. LSR ratios



Source: Authors

Greater local-revenue generation generates capacity and accountability spillovers. Even more striking is the association of greater LGU own-source revenue reliance with improvements in accountability and public financial management capacity. For this, we estimate a series of varying-baseline models with take as our dependent variables: (a) LGUs' compliance rate with recommendations from the Commission of Audit (COA) in its CY 2018 annual audit report[8], which generally concern measures to improve LGU public financial management practices, and to a lesser extent local fiscal accountability; and (b) the budget utilization rate for the 20% Local Development Fund of LGUs IRA/NTA. As previously, we group LGUs first according to their legal classification, followed by their income class and regional location, and apply robust standard errors. We likewise control for the same variables as earlier.

TABLE 1.3. Multilevel Model (Intercepts): COA Recommendation Compliance on LSR ratios, 2018

	Muntype	Muntype + Income Class	Muntype + Region	Muntype + Income Class + Region
sglg_coacomply17	0.451**	0.451**	0.415**	0.413**
	se = 0.016	se = 0.018	se = 0.015	se = 0.017
avg_LSRratio1416	0.115*	0.094**	0.137*	0.116**
	se = 0.013	se = 0.005	se = 0.024	se = 0.010
Urban_share_2015	-0.006	-0.014	-0.050*	-0.055+
	se = 0.014	se = 0.019	se = 0.010	se = 0.013
education15.y	-0.019*	-0.011	-0.012	-0.003
	se = 0.004	se = 0.010	se = 0.011	se = 0.007
povertyincidence15	-0.105*	-0.089	-0.174***	-0.156***
	se = 0.022	se = 0.034	se = 0.004	se = 0.003
fat_dyn	-1.113*	-1.072*	-1.510*	-1.457*
	se = 0.122	se = 0.162	se = 0.180	se = 0.260
cmci_number_othergrp17	0.014	0.012	0.010	0.008
	se = 0.017	se = 0.019	se = 0.018	se = 0.019
Num.Obs.	1332	1332	1332	1332
R2	0.263	0.265	0.311	0.313
R2 Adj.	0.258	0.256	0.298	0.297
R2 Within	0.252	0.246	0.231	0.227
R2 Pseudo				
AIC	11418.0	11426.1	11360.2	11367.1
BIC	11469.9	11509.2	11495.3	11533.3
Log.Lik.	-5698.997	-5697.041	-5654.115	-5651.540
Std.Errors	by: sglg_muntype	by: sglg_muntype	by: sglg_muntype	by: sglg_muntype
FE: sglg_incomeclass		X		X
FE: sglg_muntype	X	X	X	X
FE: sglg_region			X	X

Note: ^^ + p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

Source: Authors

Table 1.3. presents the results of our multilevel models for LGUs' compliance with COA recommendations. Parallel to the indications of an increased orientation towards services and public goods provision, greater local government reliance on local revenue sources also seems to have a significant association with fiscal accountability and public financial management improvement measures. Across all specifications, a one percentage point increase in LGUs' own-source revenue is positively and significantly associated with a more than 0.09 percentage point increase in COA recommendation compliance, even when we control for the rate of LGUs' COA compliance in 2017, the previous fiscal year. Moreover, even in our most restrictive model, our estimated coefficient is 0.116. The result is consistent with the arguments leaning in favor of a fiscal autonomy-accountability linkage: LGUs that mobilize their own revenues are much more likely to act on COA recommendations, indicating a responsiveness to improving their fiscal management practices.

TABLE 1.4. Multilevel Model (Intercepts): Local Development Fund Budget Utilization on LSR ratios, 2017

	Muntype	Muntype + Income Class	Muntype + Region	Muntype + Income Class + Region
avg_LSRratio1416	0.147+	0.094+	0.221*	0.210*
	se = 0.045	se = 0.030	se = 0.042	se = 0.032
sglg_coacomply17	0.072*	0.063*	0.030+	0.017
	se = 0.011	se = 0.009	se = 0.008	se = 0.006
Urban_share_2015	0.068*	0.075*	0.043*	0.064*
	se = 0.007	se = 0.011	se = 0.007	se = 0.009
education15.y	0.000	0.021	0.001	0.013
	se = 0.015	se = 0.015	se = 0.019	se = 0.023
povertyincidence15	-0.360*	-0.304*	-0.168	-0.125
	se = 0.058	se = 0.060	se = 0.071	se = 0.071
fat_dyn	1.595**	1.487*	1.285**	1.165*
	se = 0.139	se = 0.199	se = 0.129	se = 0.128
cmci_number_othergrp17	-0.037+	-0.049*	-0.048*	-0.057*
	se = 0.012	se = 0.006	se = 0.008	se = 0.009
fat_dyn × cmci_number_othergrp17	0.052+	0.068	0.046	0.061
	se = 0.016	se = 0.026	se = 0.023	se = 0.033
Num.Obs.	1331	1331	1331	1331
R2	0.027	0.033	0.071	0.077
R2 Adj.	0.019	0.021	0.053	0.055
R2 Within	0.026	0.021	0.009	0.008
R2 Pseudo				
AIC	13987.2	13990.3	13955.0	13957.9
BIC	14044.3	14078.6	14090.1	14124.1
Log.Lik.	-6982.603	-6978.132	-6951.510	-6946.937
Std.Errors	by: sglg_muntype	by: sglg_muntype	by: sglg_muntype	by: sglg_muntype
FE: sglg_incomeclass		X		X
FE: sglg_muntype	X	X	X	X
FE: sglg_region			X	X

Note: ^^ + p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

Source: Authors

Ground breaking ceremony of the Support to the Barangay Development Program (SBDP) projects at Digos City, Davao del Sur on October 27, 2021 Photo by: DILG Region XI

Do these improvements translate into better public financial management performance among LGUs? Table 1.4. reports our multilevel models in which our dependent variable is now the LGU budget utilization rate of the 20 percent Local Development Fund. Across all specifications, and controlling as well for the compliance rate of LGUs with COA recommendations in 2017, we again documented a positive and significant effect of increased own-source revenue reliance on LDF budget utilization: in our most granular model (Muntype + Income Class + Region), a one percentage-point increase in an LGUs' LSR translates into a 0.21 percentage point hike in their LDF budget utilization rate, significant at the 5 percent level. It is likewise worth noting that our coefficient for the effect on LGUs' COA recommendation compliance rate is also positively and in most cases, significantly, associated with increased budget utilization. This is also an indication that our earlier regression results reported in Table 1.3. are capturing improvements in public financial management capacity among LGUs, which translates into improved budget execution performance among LGUs.

Overall, these results provide suggestive evidence in favor of the governance spillover effects of promoting greater LGU fiscal autonomy and capacity. While all of the relationships documented above need to be examined with more rigorous analytical strategies to make claims concerning causation, it nonetheless appears that LGUs that are able to maximize their fiscal revenue-raising powers are more likely to spend greater shares of their budget on services and public goods due to the incentives that own-source revenue reliance tends to generate, with this link being most pronounced for expenditures on education and economic services. By the same token, the findings also indicate that fiscal autonomy is closely linked to LGU accountability as well as efforts to improve public financial management practices, as measured both through LGUs' compliance with COA recommendations and their budget utilization rates of the 20 percent LDF. Both of these spillovers translate directly into strengthening LGUs' capacity to realize the SDGs in the post-Mandanas period: especially under a framework of full decentralization, progress in fulfilling the SDGs will fundamentally hinge on LGUs' adopting a more pronounced service-delivery orientation towards their constituents, as well as improved capacity on their end to transform the expanded resources provided to them into development outcomes.

4. LGU preparations for the Mandanas-Garcia SC Ruling and COVID-19 response: Results from an LGU Online Survey

How have LGUs with differing levels of fiscal capacity fared during the COVID-19 pandemic and in their preparations for EO 138's implementation? One of the constraints is secondary data analysis and this has been illustrated by the unavailability of updated LGU-level data for 2020 and 2021 due to the COVID-19 pandemic. Yet it is entirely possible that the pandemic may have also ushered in some critical shifts in the capacity-performance balance of different LGUs with some gaining strength while others suffered from weaknesses. The pandemic also raised additional complications that highlight LGUs' readiness to take on and implement the Mandanas ruling, especially on increased resources and responsibilities as revealed by pre-pandemic data.

Finalization of the devolution transition plan (DTP) of Sabtang, Batanes on November 5, 2021. Photo by: DILG Region II

To address these gaps, UNDP Pintig Lab, with the support of DILG's Office of the Assistant Secretary for Plans and Programs and the Planning Service, ran an online survey from September 29 to November 5 which was disseminated to 1,715 provincial, city, and municipal LGUs. The survey consisted of seven sub-surveys distributed to targeted LGU officers and they were given five weeks to respond. There were 1,027 LGUs who answered at least one of the seven sub-surveys. The response rates varied greatly among the sub-surveys, ranging from 211 LGUs (Transportation Officer) to 607 LGUs (Treasurer). There was significant inter-regional variation in response rates. For example, in one sub-survey, we received 59 responses from CALABARZON but in another region only one completed a response. Generally, the scope of the questions encompassed the direction of LGUs regarding the development of their Devolution Transition Plans (DTP) in compliance to EO 138, for it also covered their health and social amelioration responses to the COVID-19 crisis and the state of their transport and disaster risk reduction planning and management functions in the middle of the pandemic.

For a focused discussion, we offer the main results of both analyses in the next two subsections. Due to the breadth of the survey, we will only highlight the most salient findings from the Planning and Development Officer (PDO), Health Officer (HO), Budget Officer (BO), Treasurer, Social Welfare Development Officer (SWDO), and Transport Officer (TO) sub-surveys. The technical details of our analysis are indicated in Annex 1.2. and references to the questions of the online survey in Annex 1.2.

1. Planning and Development Officers Sub-Survey

Planning and Development Officers (PDOs) indicated that significant capacity support is needed for different devolution areas. With the sole exception of "maintenance of peace and order," all the other devolution areas had a mean score of 7 or higher out of a scale of 0 (not needed at all) to 10 (very strongly needed) (see Table 1.2.1. in Annex 1.2.). In particular, significant assistance is needed for agricultural and irrigation services, revenue mobilization, and health services, among others. Furthermore, while this trend is consistent across the different types of LGUs, municipalities need more assistance than cities. Across all the devolution areas, municipal PDOs expressed a greater need for support than their counterparts at the provincial and city LGUs (see Table 1.2.2. in Annex 1.2.).

Finally, there are also significant regional disparities in terms of the level of capacity support needed. For example, in terms of energy-related services, Central Luzon (6.5) needs less assistance than MIMAROPA (8.1) (see Table 1.2.3. in Annex 1.2.). This indicates that intensive capacity support may be required for LGUs to take on the new downscaled functions. Furthermore, the need for capacity support also differs across the different types of LGUs across regions.

The PDOs were also asked about their plans to hire plantilla personnel in different sectors given the implementation of the Mandanas ruling. Hiring will likely be concentrated in a few sectors. For example, most LGUs expect to hire new plantilla staff in health services (88.3%) and social welfare services (83.9%), while a little more than half (58.5%) will increase plantilla staff for general public services and administration (See Table 1.2.4. in Annex 1.2.). In addition, there are significant regional differences in terms of readiness to hire more administrative staff. For example, most LGUs in the Cordillera Administrative Region (77.3%) and Northern Mindanao (70.2%) may hire new administrative staff, while less than half of Ilocos region (48.7%) and Central Luzon (34.4%) may do so. However, foregoing hiring of plantilla staff for administrative purposes may impede the readiness of LGUs to take on the Mandanas ruling's increased resources and responsibilities (See Table 1.2.5. in Annex 1.2.). More administrative staff may, for example, be needed to maximize additional funding.

Finally, more than half (59%) of LGUs do not use Information and Communication Technology (ICT) systems to monitor their PPAs, which shows that they do not have up-to-date monitoring of their different PPAs (See Table 1.2.6. in Annex 1.2.). This trend is consistent across the different levels of government. There is also a significant regional disparity in the use of ICT monitoring systems. For example, close to half (42%) of Bicol LGUs have ICT monitoring systems versus around a quarter of Eastern Visayas (22.7%) and Central Luzon (26.2%) LGUs (see Table 1.2.7. in Annex 1.2.). Clearly, some LGUs in the regions have fallen behind in adopting ICT systems.

2. Health Officer Sub-Survey

The Health Officers (HOs) have identified the biggest constraints that their LGU has faced in implementing the COVID-19 vaccination program. In general, LGUs do not report much difficulty securing vaccine supplies, managing vaccine delivery logistics, vaccine storage, determining eligible and priority vaccine recipients, and monitoring and reporting of vaccination progress. The LGUs, however, have had a more difficult time generating public demand for vaccination and ensuring the attendance of first dose vaccinated individuals for their second dose. Thus,

based on this survey, the demand-side dimension of vaccine distribution seems to be an impediment (see Table 1.2.8. in Annex 1.2.). Furthermore, cities have more difficulty in implementing the vaccination program versus municipalities. For example, adequate vaccine supplies have been harder to procure for urbanized cities (5.7) versus municipalities (3.9) (see Table 1.2.9. in Annex 1.2.). This is an intuitive result since the population—and number of COVID-19 cases—of cities exceed those of municipalities. However, generating public demand for vaccination is a problem for municipalities and cities alike. It is also a significant constraint across the different regions (see Table 1.2.10. in Annex 1.2.).

In sum, the survey demonstrates that LGUs, in general, do not seem to have a difficult time managing and distributing the vaccines that they receive. The administrative side of the program has not been too troublesome. One significant challenge, however, seems to be the public demand for these vaccines. We must note, however, that the lack of demand for vaccines does not seem to be a significant constraint—on a scale of 0 (not a constraint) to 10 (a critical constraint), it has a mean score of 5.4 across all LGUs.

The HOs were also asked what types of COVID-19 health measures their LGU used for their 2020 and 2021 budgets. The survey highlights the preference for basic, brick-and-mortar response strategies to COVID-19 rather than more innovative but technically-advanced strategies. They have focused on the provision of basic equipment and supplies like COVID-19 testing kits, PPEs, medicines, and subsidies for frontliners. For example, most LGUs (74%) used their budget to buy PPEs for frontliners. In contrast, there has been less focus on innovative measures that utilize ICT, among other things. For instance, half of LGUs (53.7%) spent their budget on an active contract tracing system. However, only a quarter of LGUs (28.3%) in that same period invested in a passive/digital contract tracing system. Furthermore, only a quarter of LGUs (25%) used their budget on e-health/telehealth services and less than half of LGUs (36.7%) deployed mobile health services. In addition, some regions are more likely to be reliant on these analog responses than others. More than half of LGUs in Western Visayas (56.2%) reported deploying a passive/digital contact tracing system while less than a quarter of LGUs in Zamboanga Peninsula (16.7%) did the same (see Table 1.2.11. in Annex 1.2.). This shows that some regions are laggards in the adoption of innovative COVID-19 response strategies.

3. Budget Officer Sub-Survey

The Budget Officers (BOs) also identified constraints that may prevent their LGUs from making full use of the Mandanas windfall. Of the possible constraints, the lack of additional local funding for investment projects was identified as the biggest potential impediment. The additional funds may need to be supplemented via own-source revenue generation (e.g. local taxes and charges). Otherwise, the Mandanas funds may be insufficient to carry out the additional responsibilities that the LGUs will take on given the devolution of functions. Furthermore, the number and capacity of staff/manpower has also been identified as a significant constraint. This indicates that the maximization of the additional funds may necessitate increasing the number of staff as well as capacity development training (see Table 1.2.12. in Annex 1.2). Finally, for the most part, municipalities, cities, and provincial LGUs have similar concerns.

There are two significant exceptions, however; namely: First, compared to provincial and city LGUs, municipalities seem especially concerned about the

number of manpower/staff as well as the capacity of staff in project planning and preparation, investment/budget programming, and project management and implementation. Second, the lack of additional local funding for investment projects is a bigger problem for municipal LGUs (5.1) relative to HUCs (3.2) or component cities (3.5) (see Table 1.2.13. in Annex 1.2.). These two trends again make sense since municipalities, relative to other types of LGUs, are likely to have fewer resources and lower levels of bureaucratic capacity. In contrast, coordination challenges within and across the national and local government have not been identified as a potential bottleneck.

Finally, different regions have identified different types of constraints that might lead to underspending. For example, the number of staff/manpower seems to be a bigger concern for Central Visayas (6.6) and Caraga (6.4) than regions like NCR (3.3) or Ilocos Region (4.9) (see Table 1.2.14. in Annex 1.2.). However, across the regions, LGUs are concerned with lack of additional local funding for investment projects. They, however, did not consider the lack of data and records needed for planning and project preparation, and procurement-related difficulties to be significant constraints. In sum, LGUs responses suggest that some of the likely causes of underspending will be the lack of resources—capable staff and counterpart funding—rather than procedural concerns like coordination between LGUs or difficulties with securing the relevant documents, permits, and clearances.

Moreover, the BOs were also asked how much capacity development support their LGUs will need from the national government for different budget planning and execution areas. Capacity development is reportedly needed in three areas: aligning local budget plans with national development plans, procurement management plans, and monitoring and evaluation. In terms of local-national budget alignment, more support may be needed to ensure that there is some consistency between the local budget plan with the national plan as well as continuity in terms of how LGUs handle the programs and projects that they will assume under Mandanas ruling. In terms of procurement management plans, LGUs need assistance preparing project procurement management plans (5.1) and annual procurement plans (5.0). Finally, in terms of monitoring and evaluation, support is needed with reporting of physical outputs and accomplishments (5.5) as well as evaluating budget performance of each department/office (4.9). BOs, however, seem less concerned with learning how to obligate and disburse funds (3.9) or preparing the local expenditure program (4.1) (see Table 1.2.15. in Annex 1.2.). Cities and municipalities do not seem to differ in terms of their capacity development needs.

There is also significant regional variation when it comes to demand for capacity training for monitoring and reporting of physical outputs and accomplishments, procurement management plans, and adjusting cash programs for shortages and overages. All regions, however, need support in terms of aligning local budget plans and strategies with national budget plans and strategies (see Table 1.2.16. in Annex 1.2.). In addition, NCR LGUs, relative to other regions, do not seem to require much capacity support. For example, when it comes to preparing project procurement management plans, NCR (2.7) needs much less help than SOCCSKSARGEN (6.6) (see Table 1.2.17. in Annex 1.2.).

Finally, BOs were asked about the extent to which they agree or disagree with different statements concerning the

utilization of the additional Mandanas funding. Interestingly, LGUs strongly disagree with the statement that "Our LGU will have a hard time in fully utilizing the additional budgetary resources provided by the Mandanas ruling's implementation." They believe, however, that "The cap on Personnel Services (PS) spending contributes to staff bottlenecks in utilizing our LGU's budgets." This is consistent with the findings that LGUs are relatively worried about the lack of manpower/staff as well as the capacity of staff in terms of project planning, management, and implementation. Also, most of them agree with the statements that "increasing our own-source revenues will help our LGU improve its service-delivery capacities" and "increasing our own-source revenues will help our LGU achieve more efficient local budget implementation." This coheres with the finding that the lack of additional local funding for investment projects may become a significant bottleneck to the full-utilization of the additional funding (see Table 1.2.18. in Annex 1.2.). Agreement with these statements is near-unanimous across the different LGUs and regions.

4. Treasurer Sub-Survey

The LGU Treasurers were asked: As part of your Devolution Transition Plans, "Are your LGUs planning to significantly expand your revenue collections from the following local taxes?" Most LGUs will likely implement business taxes (90.3%), real property taxes (75.5%), and community taxes (77.3%). The LGUs, however, seem resistant to the idea of considering more innovative tax measures. For example, less than a fifth of LGUs (18.6%) may raise idle land taxes, while only 13.5 percent might collect Special Levies on Lands Benefitted by Public Works Projects and LGU-funded improvements, and 27.5 percent might implement franchise taxes. The lack of interest in considering these measures is surprising given the significance of own-source revenue generation, which they are cognizant of (see Table 1.2.19. in Annex 1.2.).

We must also note that the cities and municipalities have varying preferences in terms of their willingness to raise different types of taxes and fines. For example, more than half of the HUCs (66.7%) will consider idle land taxes, while less than a fifth of municipalities (12.7%) will consider such a measure (see Table 1.2.20. in Annex 1.2.). In general, municipalities, relative to other types of LGUs, seem much more hesitant in expanding revenue collections, except for business taxes and real property taxes.

The Treasurers were also asked how much capacity development support from the national government their LGU will require across the different revenue mobilization areas. On a scale of 0 to 10 (0 = no capacity support is needed and 10 = capacity development support is urgent), significant capacity development support is needed across all the revenue mobilization areas: local revenue forecasting (7.7) and planning (7.8), local tax assessment (7.7) and administration (7.8), local revenue collection (7.9), and local tax policy formulation (7.9), among others (see Table 1.2.21. in Annex 1.2.). In general, municipalities and component cities are in greater need of capacity development support relative to HUCs/ICCs (see Table 1.2.22. in Annex 1.2.). In addition, there is not much regional disparity which indicates that the urgency of capacity support is pervasive.

Finally, Treasurers were also asked if their LGU used any ICT systems (e.g., E-TRACS, RBGIS, Manifold GIS, etc.) in their local revenue assessment and collection efforts. Less than half (43.5%) said yes (see Table 1.2.23. in Annex 1.2.). There are some regional differences in terms of the use of ICT systems—less than half of

(38.9%) of municipalities use ICT systems versus three-quarters of component cities (75.9%) and of HUCs/ICCs (71.4%) (see Table 1.2.24. in Annex 1.2.). Furthermore, there is significant inter-regional variation in the use of ICT systems. For example, less than a tenth of LGUs (9.1%) of the Cordillera Autonomous Region (CAR) use ICT systems, versus less than half of LGUs (44.3%) of CALABARZON (see Table 1.2.25. in Annex 1.2.). This shows that municipalities—in general—and some regions—in particular—are falling behind in terms of the adoption of ICT systems that may assist in their revenue collection efforts.

5. Social Welfare Development Officer Sub-Survey

The Social Welfare Development Officers (SWDO), on the other hand, were asked in response to the pandemic, did their LGUs allocated or realigned their budget for different types of social amelioration efforts for the year 2020 and 2021. The survey again reveals that LGUs tend to focus on more basic measures rather than innovative ones. For example, more than half of LGUs (69.7%) spent their budget on the distribution of food relief packages. In contrast, around a fifth of LGUs (17.6%) have given financial support to business enterprises and around a third of LGUs (30.1%) have given alternative livelihood and skills training programs for unemployed/displaced households. Furthermore, only a quarter of LGUs (24%) provided support for e-learning/online learning activities for youth and students (e.g., sim cards, data, ICT equipment) (see Table 1.2.26. in Annex 1.2.).

This preference for basic and analog measures like the provision of food relief packages or distribution of essential medicines is consistent across different regions and levels of government. The key exceptions, however, are NCR and HUCs in general. For example, most NCR LGUs (80%) provided support for homeschooling activities versus one-third of LGUs in CALABARZON (33%) of or a quarter of LGUs (22.6%) of Northern Mindanao (see Table 1.2.27. in Annex 1.2.). In general, LGUs have prioritized simple and brick-and-mortar response strategies to COVID-19 rather than adopt more innovative—but complex—strategies.

The SWDOs were also asked about the datasets they used to determine cash transfer beneficiaries during the COVID-19 pandemic. Only 5percent of LGUs professed to use no datasets whatsoever—thus, most LGUs relied on some type of data in the disbursement of cash transfers. In addition, less than half of LGUs (39.3%) relied on their own LGU registry/social welfare list. However, transfers distributed according to such lists may be prone to political interference. Furthermore, around a tenth of LGUs (11.5%) relied on a Community-based Monitoring System and a fifth of LGUs (20%) relied on the Listahan/National Householding Targeting System (see Table 1.2.28. in Annex 1.2.). This may, in turn, indicate the lack of data capability on the part of LGUs. These trends are consistent across the different regions.

6. Transportation Officer Sub-Survey

The Transportation Officers (TOs) were asked if their LGUs had a Local Public Transport Route Plan (LPTRP) as of 30 September 2021. A little more than half of LGUs (55%) have responded having a plan ready (see Table 1.2.29. in Annex 1.2.). Furthermore, there is no significant difference in the availability of LPTRP among municipalities, cities, and provincial LGUs. However, there are some regional differences. For example, more than half of LGUs in Ilocos (60%) have an LPTRP, while only a fifth of LGUs in NCR (22%)

have prepared a plan (see Table 1.2.30. in Annex 1.2.). This result may be problematic because the availability of LPTRP indicates the extent to which an LGU has detailed plans for devolution areas like transportation. Furthermore, the availability of the LPTRP can be seen as a proxy for the LGUs overall planning readiness with respect to recently-downscaled functions. This survey therefore provides evidence that many LGUs lack planning readiness given the lack of LPTPR in less than half (42.7%) of LGUs.

The TOs were also asked: "Did your LGU undertake allocate or realign your own budgetary resources for the following COVID-responsive actions for transport services in 2020 and 2021?" Again, LGUs tend to eschew more innovative but technically-demanding measures for more basic measures. For example, in 2020 and 2021, only 21.8 percent of LGUs deployed passive/digital contract tracing systems for public transport services. Furthermore, only 21.3 percent of LGUs service-contracted PUVs provide public transport services (see Table 1.2.32. in Annex 1.2.).

7. Key Insights from the UNDP-DILG LGU Online Survey

The UNDP-DILG LGU Online Survey provides significant insight on the following: (a) general technical capacity of LGUs, (b) their ability to take on new downscaled functions, and (c) response strategies to COVID-19. Discussed below are some of the key takeaways from the survey:

- **LGUs have been slow to adopt innovative governance strategies:** LGUs, in general, prefer basic and easily implementable measures over innovative but technically-advanced and expensive strategies. For example, in terms of own-source revenue, the vast majority of LGUs will not consider implementing idle land taxes (18.6%) or raise franchise taxes (27.5%). In addition, in terms of social amelioration, only around a quarter (24%) have provided e-learning/ online learning support for youth and students. These results align with what is already known about deficits and disparities in local government capacity, given the greater demands imposed on LGUs by more complex and innovative measures.

- **Use of ICT in governance is still not the norm:** the different sub-surveys show that LGUs still tend to prefer analog measures in their approach to governance. For example, more than half of LGUs (59%) do not use any ICT systems to monitor their PPAs. Similarly, only around a quarter of LGUs have spent budgetary resources on passive/digital health tracing systems (28.3%) or e-health/telehealth services (25%). In sum, there is still a long way to go before ICT systems have become fully integrated in local governance— an outcome which appears to be linked to low capacity levels among LGUs, as well as relatively weak incentives for local governance improvements.

- **Significant disparity in terms of technical capacity and preparedness for the Mandanas ruling:** we cannot draw any definite conclusions about differences in regional capacity due to the survey response rates. Still, it is evident that some regions and LGUs have greater technical capacity than others. For example, in terms

Mega Contact Tracing Facility in Valenzuela City (2020) Photo by: DILG NCR

of preparing project procurement management plans, NCR needs much less capacity development support relative to other regions. More generally, cities seem more prepared to handle their newly devolved responsibilities relative to municipalities. Among other things, they have more available resources, and have been quicker to adopt innovative measures like the ICT system. This indicates that urbanized LGUs may be in a better position to make full-use of the additional Mandanas funds. We must also note, however, that cities also have higher burdens relative to municipalities, and that some of our findings provoke consternation about their planning readiness. For example, according to the Transportation Officer sub-survey, cities are less likely to have prepared a Local Public Transport Route Plan (LPTRP) than municipalities even if cities may have greater need for such a plan given the endemic problem of traffic congestion, among other things.

- **Strengthening LGU own-source revenue generation will be critical to improving LGU capacity and service delivery:** this survey suggests that the ability of LGUs to maximize the Mandanas windfall share partly depends on the availability of LGU own-source revenue. Strikingly, Budget Officers identified the lack of additional local funding for investment projects as perhaps the biggest constraint that may prevent their LGU from fully spending the additional funding. One issue, however, is that LGUs seem hesitant about venturing beyond standard areas of revenue collection—business taxes, real property taxes, community taxes, and the like. They are much less interested, however, in increasing local revenue via idle land taxes and franchise taxes. Moreover, LGUs seem to need significant assistance across all revenue mobilization areas e.g., revenue forecasting, planning, and collection, among other things.

The Newly-elected Officials (NEO) Orientation Program in San Fernando City, Pampanga led by DILG Secretary Benjamin Abalos Jr. (2022) Photo from: Local Government Academy Facebook page

5. Conclusion and Policy Recommendations

In the post-COVID era, the Duterte administration's move to attain full decentralization via EO 138, s. 2021 harbors substantial opportunities as well as risks. The additional resources and functional responsibilities that are to be devolved to local governments will bring LGUs even closer to the center of efforts and programs to advance the SDGs in the years ahead. Yet questions continue to loom over LGUs regarding capacity requirements to take on the expanded roles in governance and the pursuit of sustainable development, as well as the unintended repercussions of the initiative's implementation.

Though the Philippine government has undertaken steps to address several of these problems, this chapter has underscored the importance of interventions to further advance the fiscal autonomy and consolidation of LGUs in the post-Mandanas era. In addition to minimizing the disruptive impact of the COVID-19 crisis on LGUs' IRA/NTA

receipts from 2023 onwards, but also in generating spillover accountability, capacity development, and service delivery dividends. To this end, we extend the following recommendations for national and local policymakers as well as their supporters in the development community:

- **Consider lengthening the timeline for the transition:** as formulated by EO 138 and its IRR, the Mandanas transition is to be implemented from 2022-2024— a period that while not formally justified, appears to be aligned with the term of local officials who will be elected in 2022. While highly-ambitious, the implementation of this transition in the midst of the COVID-19 pandemic, greatly amplifies the risks of failure and unintended consequences of the move. In the given context, a more incremental approach towards full decentralization, such as by expanding the 3-year transition to a 6-year span to coincide with a full presidential term, and by more gradually phasing the transferring of programs from NGAs to LGUs within that period. A longer and more phased transition will also allow the both national and local government agencies to build/transfer the necessary capacity to ensure the continuity of performance in service-delivery responsibilities, as well as to course-correct for unintended consequences.

- **Maximize the use of good governance conditionalities in the transition period:** the mixed record of the LGC in fostering improved local governance quality as well as fiscal autonomy among LGUs suggest that local governments are unlikely to undertake fiscal consolidation if unconditional grants are not matched with programs/funds that require them to elevate their fiscal performance. Though increased NTA/IRA transfers are legally mandated to be unconditional, the national government nonetheless retains scope to impose such conditionalities with respect to (a) the GEF, and (b) transitional support by NGAs with respect to their PPAs. Continued receipt of GEF grants can be made conditional on the fulfillment of improved governance criteria, including but not necessarily being limited to promoting local fiscal autonomy. Moreover, especially if a lengthened timeline is provided for undertaking EO 138, NGAs can adopt a "graduated" approach to the extension of certain kinds of funding assistance with the programs that will remain in their remit, with the amount of support to be furnished to be associated with different levels of attainment of good governance benchmarks. Moreover, though all types of LGUs require such conditionalities and support, it may be strategic to direct particular attention to provincial governments, given their supervisory functions over component cities and municipalities.

- **Reforming the Local Government Code:** in spite of its promise of enabling "full decentralization", numerous deficiencies in the LGC's fiscal decentralization framework remain untouched by EO 138. Among others, perverse incentives in the allocation of IRA/NTA need to be addressed to account for socioeconomic disparities as well as to integrate performance-related criteria in the provision of expanded grants to encourage improvements in LGU capacity and performance. Moreover, there also remains unfinished business with respect to addressing ambiguities in expenditure assignments across different layers of governments; in expanding LGUs'

taxing and revenue-raising powers; and redressing inefficiencies in tax assignment, especially with respect to provincial and municipal LGUs.

- **Consider suspending the personnel services cap for the lengthened transition:** a consistent finding that has emerged from the LGU online survey have been stark deficits and disparities in local government capacity to take on their expanded responsibilities under EO 138, with inadequate human resources being a particular challenge (e.g. with respect to budget execution). While policymakers have already relaxed existing ceilings on the shares of NTA expenditures on personnel salaries (i.e. 55 percent) in anticipation of LGUs increased hiring needs, the "learning-by-doing" process among LGUs to discover and refine the staffing structure that best enables them to realize the devolved functions may require an extended period of flexibility and capacity development. This lengthened period of flexibility can coincide with an extended transition period, such as with the 6-year process mentioned earlier. Concerns about over-hiring and bloated local bureaucracies can be dealt with by including "right-sizing" criteria among good governance conditionalities and other local governance assessment systems, like the Seal of Good Local Governance.

- **Support civil society and local business engagement with both the revenue and expenditure sides of local public finance:** since the Priority Development Assistance Fund or "Pork Barrel" controversy, a range of civil society groups have gained prominence in the front of budget advocacy, which has received additional wind in the midst of the COVID-19 pandemic. But while much focus has been given towards strengthening citizen and CSO engagement on the expenditure side of public finance, less attention appears to have gone towards supporting CSO ability to facilitate and enter into constructive, forward-looking bargains with local governments concerning fiscal consolidation in exchange for improved accountability and service-provision. A major historical example of such CSO engagement for fiscal contracting can be located in the development of the first participatory budgeting initiatives in Porto Alegre, Brazil in the 1990s, which also served as a venue to build grassroots consensus on municipal revenue-raising policies in addition to budgeting oversight (Schneider and Baquero 2006).

  Beyond civil society groups, engaging local enterprises and local business associations in the revenue and expenditure sides of local public finance is another measure that could also deliver significant dividends in strengthening tax reliance-accountability linkages, since businesses are often among the most significant local taxpayers. Indeed, past procurement reforms, such as the Government Procurement Reform Act (R.A. 9184) have also opened up significant windows for local business players to contribute to procurement monitoring at the LGU level (SEPO 2008; PWI 2009); an initiative to promote such constructive public finance engagement by local business throughout the implementation of EO 138 could achieve similar gains for cementing the formation of governance-enhancing "fiscal contracts" at the local government level.

End notes

1 Email: jpdcruz@mit.edu and jpdcruz@ateneo.edu

2 We thank Cymon Lubangco for his valuable and outstanding research assistance, as well as the UNDP Pintig Lab team for the support and patience in the writing of this chapter. We are likewise thankful to the following key informants who were interviewed in the research process for this piece, including (in no particular order): Dr. Alvin Ang , Atty. Michael Henry Yusingco, Dr. Charlotte Justine Diokno-Sicat, Dr. Christopher Berse, Dr. Valerie Ulep, DILG Assistant Secretary Frank Cruz, Mr. Kayle Salcedo, Dr. Philip Arnold Tuano, Mr. Kenneth Abante, Dr. Laurice Jamero, and Atty. Pauline Caspellan. We also thank Ms. Jenina Joy Chavez, Laurence Anthony Go and their colleagues at Action for Economic Reforms, Mr. Jedd Ugay and his colleagues at the MoveAsOne Coalition and AltMobility, Marvin Lagonera, and members of other teams from UNDP Philippines for their invaluable comments on pre-testing versions of the online survey. All errors are our own.

3 For instance, a major challenge that this study has confronted has been the lack of updated indicators of the DILG's Seal of Good Local Governance and the DTI's Cities and Municipalities Competitiveness Index for 2020 due to the pandemic.

4 Adapted from: https://www.cgdev.org/publication/impact-covid-19-pandemic-social-health-insurance-claims-high-burden-diseases-philippines. Though not included here due to the preliminary nature of the data, available data from PhilHealth for 2021 suggests an even more dramatic decline in claims in the first three quarters of 2021.

5 This is due to a three-year lag in the computation of IRA/NTA transfers, as designed in the LGC. Thus, the decline in revenues due to the COVID-19 in 2020 will impact the provision of transfers in 2023, three years after the fact.

6 While we leave out the details, both cities and municipalities are in the Philippines are classified according to income according to six levels, from first-class to sixth-class

7 Control variables used in Tables 1.1. and 1.2. include the following: urban_share_2015 (the share of urban population based on the 2015 Census of Population and Housing); education15.y (average education levels based on the 2015 Census of Population and Housing); povertyincidence15 (local poverty incidence based on the Philippine Statistical Authority's Small Area Estimates of the 2015 Family Income and Expenditure Survey); fat.dyn (whether an LGU was controlled by a fat political dynasty in 2016 based on the Ateneo School of Government Political Dynasty dataset); and cmci_number_othergrp17 (members of business federations, especially the Philippine Chamber of Commerce and Industry, existing within an LGU based on the 2017 Cities and Municipalities Competitiveness Index of the DTI.

8 Our results are the same if we instead use the 2017 COA compliance rate as our dependent variable. This is reported in the appendices of the chapter.

2 Breaking Down the LGU Fiscal Performance

A Study on the Budget Utilization Rate

Dr. Cielo Magno, Francis Capistrano and Sheena Kristine Cases

"...the increased funds of the LGUs due to the Mandanas ruling, without any institutional or structural improvements, will result in the decrease in budget utilization and delay in service delivery and program implementation....Policy, institutional and structural reforms need to be implemented to make decentralization truly work for sustainable development."

Ground breaking ceremony of the Support to the Barangay Development Program (SBDP) projects at Digos City, Davao del Sur on October 27, 2021. Photo by: DILG Region XI

1. Introduction

Local government units (LGUs) play a significant role in a decentralized system. The Local Government Code of 1991 (LGC) aims to enable local government units to achieve "genuine and meaningful local autonomy." This is to allow communities to achieve full development. To operationalize this, powers, functions, responsibilities, and resources are allocated between the national government and the various LGUs.

The recent ruling of the Supreme Court on the Mandanas-Garcia petition is a very important consideration in improving decentralization in the country. The decision expanded the bases of the computation of the national tax allotment (NTA) of LGUs. The NTA level for FY 2022 is PhP 263,548,501,000 or 37.89% higher than FY 2021 shares of LGUs (DBM, 2021a). While this is a step towards meaningful decentralization, this development does not necessarily correct the inequitable distribution of the IRA and of fiscal responsibilities. Moreover, this threatens the fiscal sustainability of the national government: thus, the latter has opted to manage the risk by reducing spending on functions already devolved by law to LGUs (The World Bank, 2021).

The Mandanas-Garcia decision nevertheless provides a much-needed infusion of resources to LGUs. Such resources are a windfall that, if used properly and swiftly, bolsters the capability of LGUs to combat the triple threat of the COVID-19 pandemic, climate-related disasters, and conflicts, especially in Mindanao. In the face of these crises, adequate local investment in resilience-building and disaster risk reduction, infrastructure, and social development would be necessary for the Philippines to catch up on its Sustainable Development Goals (SDGs) targets.

However, the ability of LGUs to put their limited resources to use remains wanting. From 2015 to 2018, LGUs on average, utilized about 78 percent of their annual budgets and 64 percent of their capital outlays allocations. Local Development Funds (LDF) and Local Disaster Risk Reduction and Management Funds (LDRRMF) likewise suffer from under-utilization at 82 percent and 59 percent, respectively. Experts explained that the Mandanas-Garcia ruling may likely lead to lower budget execution rates given LGUs' current absorptive capacity. The vertical fiscal gap may worsen, and horizontal fiscal imbalances may persist (The World Bank, 2021).

Using panel data analysis, this study examines the various factors that are associated with the underspending patterns of LGUs. It specifically looks at the LGUs' budget utilization rates (BUR) and its relationship with the size and composition of their budgets, socio-economic indicators, fiscal management indicators including audit opinions, measures of disaster preparedness and vulnerability, and institutional indices. The study uses data on local finances and audits as compiled by the World Bank (2021), the Seal of Good Local Governance of the Department of the Interior and Local Government (DILG), the municipal and city level poverty estimates and population census of the Philippine Statistics Authority (PSA), and the housing vulnerability index (Healey, Lloyd, Gray, and Opdyke, 2022).

The objectives of the study are the following:

i. To illustrate the extent of budget underutilization at the local level, generally and for key sectors, such as: infrastructure and disaster risk reduction;

ii. To identify the factors that are most associated with LGU under-utilization and other key relationships between variables; and

iii. To recommend further research and possible means to improve the efficiency and effectiveness of public spending and service delivery at the local level.

2. Background and Motivation

In 2019, the Supreme Court promulgated its decision in the case of Mandanas v. Ochoa. The decision stated that all national taxes regardless of source—whether collected by the Bureau of Internal Revenue (BIR) or Bureau of Customs (BoC) —should be included in the tax base used for computing the just share in the national taxes of the LGUs. Because of this decision, the IRA—now called the National Tax Allotment (NTA)—has increased by nearly 40 percent or by PhP 263.5 billion from 2021 to 2022.

In response to this seminal decision, the national government adopted a policy of full meaningful devolution. Through Executive Order (E.O.) No. 138 issued in 2021, the national government directed all national government departments and LGUs to formulate Devolution Transition Plans (DTPs) which identify the functions and services to be devolved to LGUs, the transition period for such devolution to take place, and the necessary measures, including capacity building, to aid such transition.

This section briefly looks at the context of fiscal devolution and local fiscal performance prior to the seminal ruling.

The legal environment before Mandanas-Garcia

> *Local government units shall endeavor to be self-reliant and shall continue exercising the powers and discharging the duties and functions currently vested upon them, they shall also discharge the functions and responsibilities as are necessary, appropriate, or incidental to efficient and effective provision of the 'basic services arid facilities enumerated therein.*
>
> ***- Local Government Code, Book I, Chapter II, Section 17(a).***

After years of centralized authority, Republic Act No. 7160 or the Local Government Code (LGC) provided for the much-needed division of powers and laid out a host of policy areas that would be devolved to different tiers of LGUs. The LGC's most prominent feature is the devolution of substantial powers to LGUs "to bring development to the countryside." The LGC attempts to wean local governments from dependence on the national leadership (Gatmaytan, 2001 p. 630).

To operationalize this through fiscal policy, the LGC stipulated that 40 per cent of tax revenues would be shared with LGUs to fund policy making and implementation (Sarah Shair-Rosenfield, 2016). At the same time, the LGC devolves

or "confers power and authority upon the various LGUs to perform specific functions and responsibilities (LGC Section 17(e))." Devolved basic services are agriculture, health, social services, maintenance of public works and highways, and environmental protection (see Annex 2.1.). The extent of services to be devolved to them depends upon the nature of the local unit (Tapales, 1992).

Congress attempted to attain this objective by, among others, increasing the financial resources available to local government units. The Code broadens the taxing powers of local governments, provides them with a specific share from the national wealth exploited in their areas, and increases their share from the national taxes - otherwise known as the Internal Revenue Allotment (IRA) (Gatmaytan, 2001 p. 631). While the LGUs were given the power to generate their own revenues, the more productive sources such as the income tax, value-added tax, and excise tax belong to the national government, dwarfing the revenues to be collected by LGUs (Guevara, 2000).

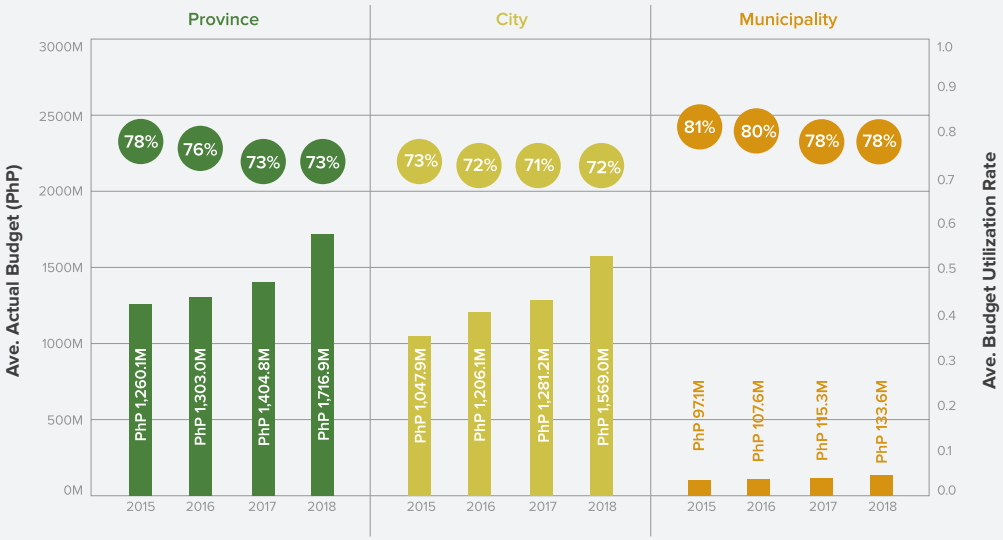
In the case of IRA and other mandatory shares, these are required by law to be automatically released to LGUs quarterly. These shares may not be reduced or impounded by the national government except when it experiences an unmanageable fiscal deficit (Guevara, 2000).

Local Government Underspending

"provinces, cities, and municipalities utilized only an average of 72%, 69%, and 78%, respectively, of their annual budgets from 2015 to 2018."

Despite receiving a smaller portion of allocations from national taxes before the Mandanas-Garcia ruling, LGUs have not been able to fully utilize these transfers. In its analysis using a novel data set extracted from audit reports on LGUs' finances, the World Bank (2021) found that provinces, cities, and municipalities utilized only an average of 72 percent, 69 percent, and 78 percent, respectively, of their annual budgets from 2015 to 2018. Under-utilization was worst in capital outlays. In disaster risk reduction, Domingo and Manejar (2018) also observed underspending of funds, short-term planning, and limited mainstreaming of DRR programs. Challenges in technical and financial absorptive capacity of LGUs were observed in other devolved mandates (The World Bank, 2021).

FIGURE 2.1. Average Budget Utilization Rate by LGU Type (2015-2018)



Authors' calculations using a data set compiled by the World Bank (2021)[1]

The LGU underspending is the result of the lack of manpower and technical capacity to properly plan, prepare, implement and monitor projects and services (The World Bank, 2021). The absorptive capacity problem of the LGUs which leads to idle resources and delays in service delivery is expected to worsen with the implementation of the Mandanas Ruling (The World Bank, 2021).

However, Monsod (2016) pointed out that the relationship between budget disbursements and inclusive growth are not straight forward. She emphasized that disbursements are "far less important than how resources are used to increase efficiency, expand the productive capacity of the economy, and promote equity" (Monsod, 2016 p.5). At the national context, Monsod (2016) explained that the reasons for underspending is not bureaucratic incompetence but because planned disbursements have been increasing at a faster rate than actual disbursements. The same may be said for local governments.

Aside from absorptive capacity, other issues that contribute to underspending include "non-alignment of priorities between national and local governments, unclear assignment of functions between national and local governments on fiscal transfers and support and LGU's autonomy on fund utilization" (ULAP, 2016 p.10). Systemic problems in preparing and executing the budget which includes inflated budget estimation and unexpected price changes also contribute to the problem of underspending (Mamaradlo,

Tang, & Wong, 2021). Mamaradlo et al. (2021) argued that underspending will still occur even if limitations in receiving external funds and in spending on specific categories are removed.

Sicat, Mariano, Castillo, Adaro, and Maddawin (2019) also identified weak compliance with the prescribed planning-budgeting process and the need for stricter enforcement of development plans and substantiation of the prioritization of investment programs as the weaknesses of the local government planning and budgeting practices. These weaknesses may have contributed as well to the current state of the LGU fiscal performance.

Beyond Underspending: Fiscal Equity.

To address the imbalance of revenue assignment between national and local, Congress had decided that local governments should receive share from the collection of national taxes in the form of grants. Such allotments served various purposes (Guevara, 2000 pp. 99-100):

1. They are a means through which the national government subsidizes the delivery of local public services and ensures that a minimum level of basic services is delivered by LGUs.

2. Allotments can be used to adjust for disparities in fiscal capacities among LGUs.

3. Allotments can also be used to influence the fiscal behavior of LGUs. The national government may provide specific purpose allotments, which are tied up to priority programs.

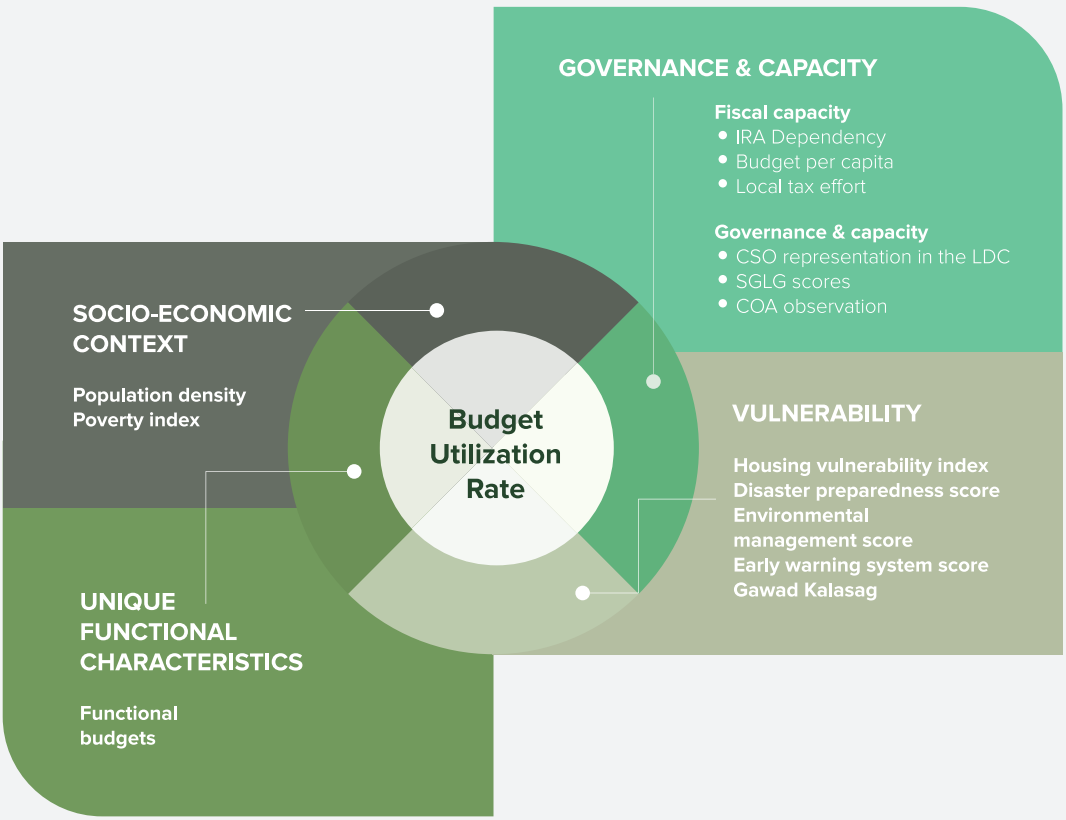
The equity goal of the allotment system is far from accomplished, however. LGUs with more revenues from local sources, higher taxable capacity and more expenditure outlays are unfortunately provided with more grants, instead of resources being directed to LGUs that need them most (Guevara, 2000). The IRA distribution, after all, is designed around a formula based only on population, land area, and equal distribution. With an assured transfer, LGUs are not encouraged to generate their own resources locally. The grant formula does not incentivize LGUs to improve their revenue effort (Guevara, 2000).

Such has created a vertical fiscal imbalance, where LGUs have been largely dependent on IRA, which on average represents more than 60 percent of their revenues (The World Bank, 2021). This study's calculations show that municipalities have been most dependent on IRA with an 83 percent dependence rate, closely followed by provinces at 80percent. Provincial governments are affected by municipal level tax effort because they depend on municipal treasurers to collect provincial taxes (Guevara, 2000). Cities are the least dependent on IRA at 63 percent owing to their capability to generate not only real estate taxes, but also business taxes.

3. Analytical Framework

This study examines the relationship between the budget utilization rate of the LGUs and its sectoral budgets, socio-economic profile, financial performance indicators, governance indicators, competitiveness indicators, and vulnerability indicators. It tests the hypothesis that the budget utilization rate is a function of the LGUs' socio-economic characteristics, the inherent uniqueness of the programs and projects related to functions of the LGUs, the LGUs vulnerability and its management capacity. The diagram below summarizes this analytical framework and the indicators used to measure the various factors.

FIGURE 2.2. Analytical Framework



4. Data and Methodology

The Assembled Data Set

In its analysis of the fiscal impacts of the *Mandanas-Garcia* ruling, the World Bank (2021) assembled a novel data set on local government finances. Not only did it draw from Statement of Receipts and Expenditures (SRE)[2] of the Bureau of Local Government Finance (BLGF), but it also extracted data on approved budgets and actual spending from the LGU audit reports of the Commission on Audit (COA) from 2015 to 2018. The COA data allows for comparison of actual spending (or Actual Budget) against the approved budgets (or Final Budget) not only in the aggregate but also by sector (or function)[3] and by expense class, i.e., Personal Services (PS), Maintenance and Other Operating Expenses (MOOE), Capital Outlays (CO), and Unclassified.

Added to this data set were population and poverty data from the PSA, key indicators from the Seal of Good Local Governance (SGLG) of DILG, and a local housing vulnerability index of Healey et al. (2022) which was computed from census data.

The various scores under the SGLG are used to measure the performance of the LGUs. The SGLG is an institutionalized award, incentive, honor, and recognition-based program of the DILG. The scores included in the analysis are the Peace and Order Score, the Business-Friendliness Score, Business-Friendliness and Competitiveness Score, Environmental Management Score, Financial Administration and Sustainability Score, Disaster Preparedness, and Early Warning System Score. The SGLG data also include the number of LDC members and the number of NGO members in the LDC, and the COA audit findings on the LGU's financial statements (DILG, 2021).

The 2015 housing vulnerability indicator of Healey et al. (2022) accounts for different dimensions of typhoon-related housing vulnerability. These include housing density, housing quality, crowdedness, tenure security, extreme substandard housing, drinking water source, and structural integrity. The score was computed using the 2015 Philippine census (Healey et al., 2022) (*see Annex 2.2. for further information on the data sources*). This indicator was used as a proxy for LGU vulnerability along with the Disaster Preparedness and Early Warning System Scores of the SGLG.

Empirical Strategy

The following regression model was used:

$$lnBUR_{it} = \beta_0 + \alpha\ ln\ ln\ (U_{it})\ + \gamma V_{it} + \delta W_{it} + \epsilon X_{it} + \sigma Y_{it} + \pi Z_{it} + \mu_{it}$$

where BUR_{it} is the budget utilization rate of LGU I at time t, U_{it} is a vector that contains various budget data variables of LGU i at time t, V_{it} is a vector that contains several financial indicators of LGU I at time t, W_{it} is a vector that contains a couple of social data variables of LGU I at time t, X_{it} is a vector that contains the good governance indicators of LGU I at time t, Y_{it} is a vector containing the disaster vulnerability variables of LGU I at time t, Z_{it} is a vector that contains dummy variables indicating whether LGU I is a municipality, city, or province. β_0 is the intercept of the regression equation, α, γ, δ, ϵ, σ, and π are vectors containing the coefficients associated with the variables included in vectors U_{it}, V_{it}, W_{it}, X_{it}, Y_{it}, and Z_{it}, respectively. μ_{it} is the error term of the equation.

The main concern is to examine what correlates with the underspending behavior of LGUs. Several regressions were implemented to look at various variables that are associated with the natural log of the overall budget utilization rate as well as the utilization rate per expense class and per sector or function. The log of the budget utilization rate was computed in order to normalize the skewed distribution of these variables. For the correlates, indicators that represent local fiscal performance (e.g., IRA dependence, sectoral budgets), socioeconomic development (e.g., poverty), good governance (including audit ratings and citizen participation), and disaster vulnerability were also included *(See Annex 2.3. for additional details on the model specification and the complete summary of indicators and data).*

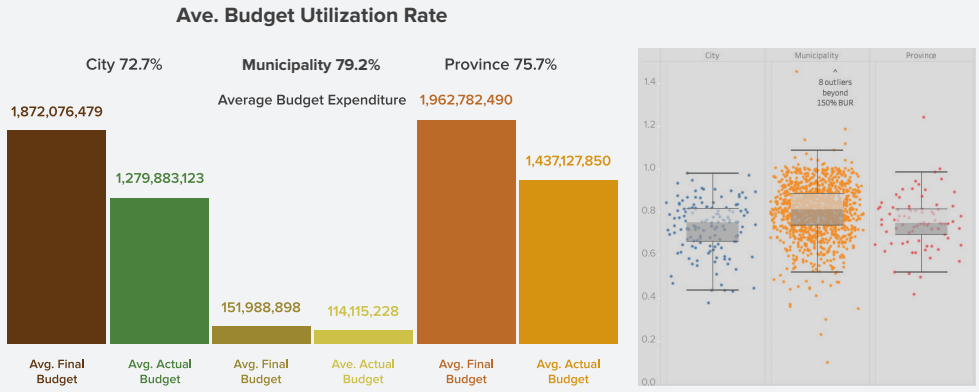
5. Descriptive Statistics

Local fiscal performance

"...the budget utilization rate (BUR) for capital outlays is much lower than the other expenditure classes. It averages 64 percent among all LGUs, with cities having the lowest BUR at 46 percent"

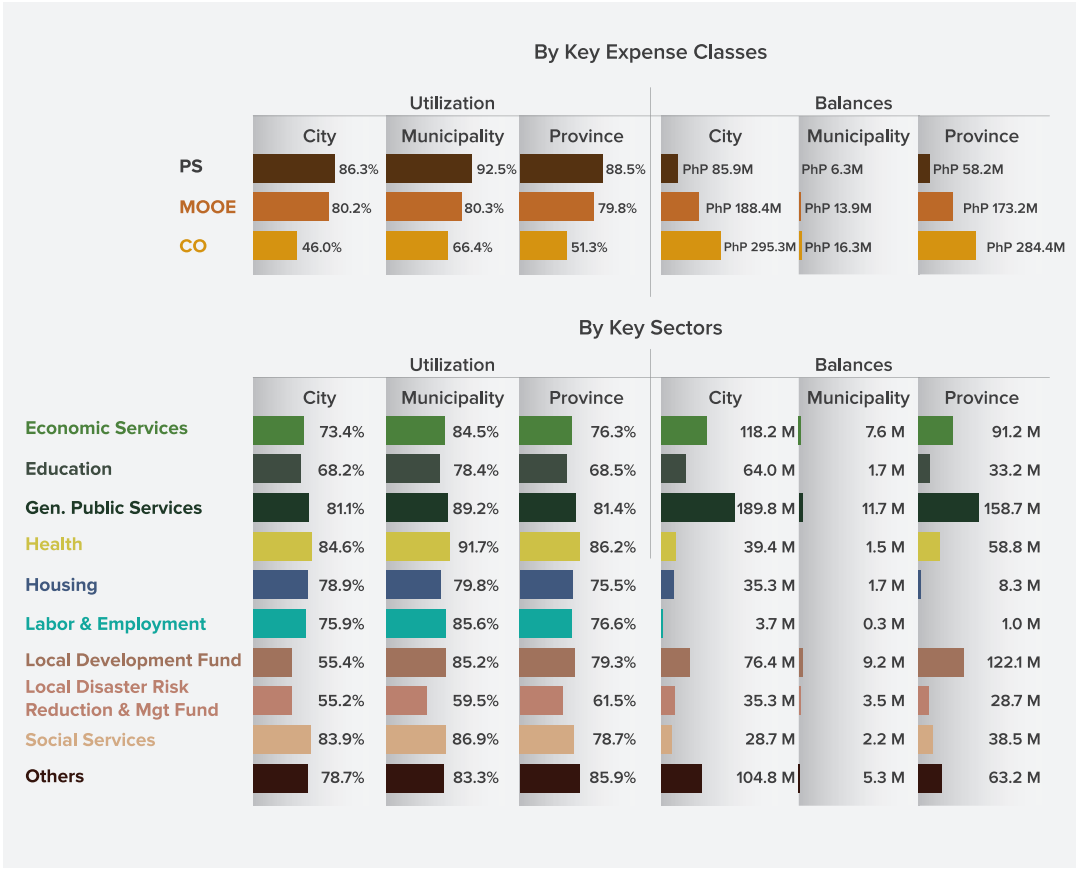
As discussed earlier, there has been a significant gap between LGUs' budget and actual spending from 2015 to 2018: an average of 78 percent budget utilization rate (BUR) across all LGUs.[4] Cities—those tended to collect more internally generated revenue than provinces and municipalities—also tended to have lower budget utilization rates on average. As Figure 2.3. shows, the average budget and expenditure for cities and provinces eclipse the measly average budgets and expenditures of municipalities.

FIGURE 2.3. Average Budget Utilization Rates (2015-2018), and Distribution



As reported by the World Bank (2021), the BUR for capital outlays is much lower than the other expenditure classes. It averages 64 percent among all LGUs, with cities having the lowest BUR at 46 percent. Among functional classes or sectors, BURs are lowest for Local Disaster Risk Reduction and Management Funds (LDRRMFs, 59 percent), Education (77 percent), Housing (79 percent), and Local Development Funds (LDFs, 82 percent). Cities, in particular, are on average able to utilize only a little over half of what they had budgeted for their LDFs and LDRRMFs. Budget balances in General Public Services, Economic Services, and LDFs, are the largest, indicating the magnitude of resources that could be utilized for priority endeavors (*see Figure 2.4.*). The large balances for General Public Services reflect the share of the sector in the total budget of LGUs, which ranges from 33 percent to 45 percent. This is followed by Economic Services and the Local Development Fund (*See Figure 2.5.*).

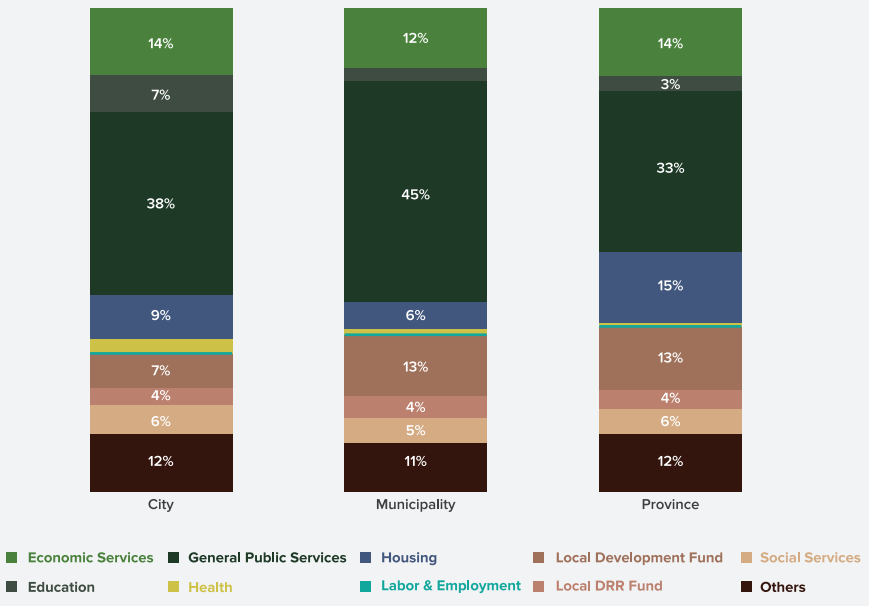
FIGURE 2.4. Budget Utilization Rates and Balances by Expense Class and Sector



"...from 2015 to 2018, cities and provinces have PhP604 million (USD 11.5 million) and PhP527 million (USD 10 million) of average unspent budget, respectively... In 2018, Top 10 underspenders among cities and provinces had a total unspent amount of PhP43.3 billion (USD 819.8 million) and PhP19.2 billion (USD 363.4 million), respectively."

Given these budget utilization rates, from 2015 to 2018, cities and provinces have PhP604.0 million (USD 11.5 million) and PhP527.0 million (USD 10.0 million) of average unspent budget, respectively.[5] In particular, cities on average, for the same period, have average unspent budgets amounting to PhP82.7 million for Local Development Fund (USD 1.6 million), PhP118 million (USD 2.2 million) for Economic Services, and PhP35.9 million (USD 680.3 thousand) for Local Disaster Risk Reduction and Management, among others. Meanwhile, provinces on average, have average unspent budgets amounting to PhP124.0 million for Local Development Fund (USD 2.3 million), PhP81.6 million (USD 1.5 million) for Economic Services, and PhP28.3 million (USD 536.3 thousand) for Local Disaster Risk Reduction and Management. Lastly, cities and provinces, have an average unspent budget for 2015 to 2018 on capital outlays of PhP295.0 million (USD 5.6) and PhP283.0 million (USD 5.4 million), respectively. In 2018 alone, Top 10 under spenders among cities and provinces had a total unspent budget of PhP43.3 billion (USD 819.8 million) and PhP19.2 billion (USD 363.4 million), respectively.

FIGURE 2.5. Budget Breakdown of LGUs (2015-2018)



With respect to financial performance of the LGUs, municipalities are 83 percent dependent on IRA, while cities are 63 percent dependent and provinces are 80 percent dependent. The growth rate of local resources per capita, or the tax effort of LGUs, was also considered. This is at 17 percent for municipalities while cities and provinces are at 3 percent and 19 percent respectively.

Good Governance

The regression analyses include the Financial Administration and Sustainability Score of the SGLG, which looks at the recent audit opinion of the COA, compliance with full disclosure policy of local budget and finances, bids and public offerings, at least 5 percent increase in average local revenue growth for three consecutive years, utilization of the development fund with benchmark of at least 66 percent utilization, utilization of the SGLG Incentive Fund[6] and the approval of the annual budget. About 52 percent of municipalities are compliant; while 64 percent are for cities and 65 percent for provinces.

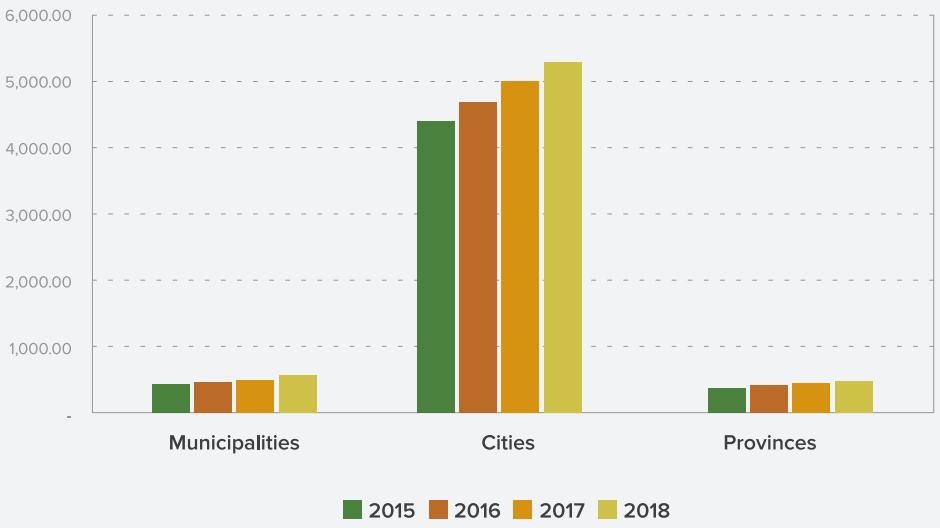
The analysis also includes the percentage of NGOs participating in the local development councils (LDCs) as a measure of the extent of participation of civil society in local governance. The participation rate is 32 percent in municipalities, 30 percent in cities and 31 percent in provinces. Other SGLG scores were also included to measure governance and institutional capacity. The peace and order score accounts for the performance of the LGU on peace and order performance audit, Anti-Drug Abuse Council performance audit, and provision of logistical support to the police. For the peace and order score, 57 percent of municipalities, 71 percent of cities and 82 percent of provinces are compliant.

Business friendliness accounts for the establishment of the economic and investment promotion office, updated citizens charter, simplified business processing and licensing system, computerized tracking of economic data, and updated investment incentives codes. For provinces, they are also required to prove the utilization of grants for road repair and improvement (DILG, 2021). On business friendliness, 64 percent of municipalities, 77 percent of cities, and 78 percent of provinces met the requirement.

Social Development

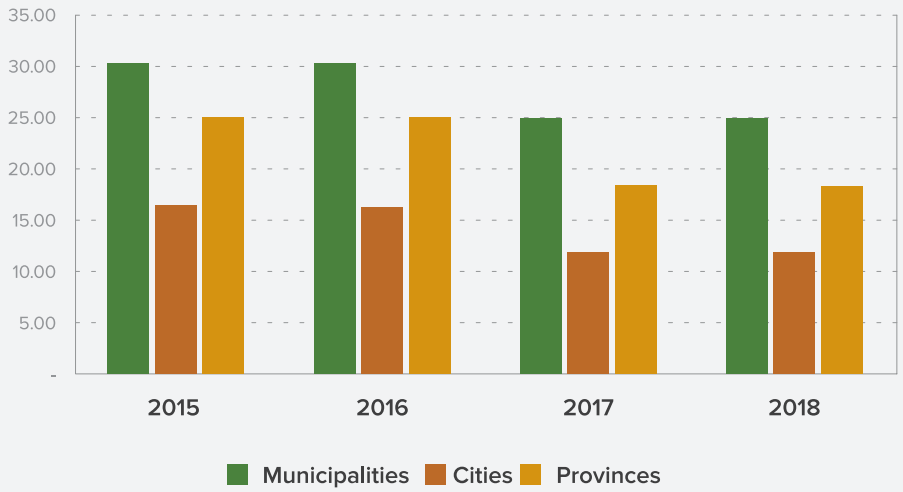
Population density was also included in the analysis. The rate of population growth is highest in cities compared to municipalities and provinces. The following graph summarizes the population density (per sq. km.) in municipalities, cities, and provinces. On average, the population density in municipalities is at 460 individuals per sq. km. The population density in cities is at 4,854 individuals per sq. km. and in provinces it is at 388 individuals per sq. km. (*see Figure 2.6.*).

FIGURE 2.6. Population Density in LGUs (2015-2018)



Meanwhile, poverty incidence is highest in municipalities at 27.50 percent, on average, from 2015-2018. This is 14 percent in cities and 21.73 percent in provinces. As shown below, poverty was decreasing before the COVID-19 pandemic (*see Figure 2.7.*).

FIGURE 2.7. Poverty Incidence in LGUs (2015-2018)



Conduct of Disaster Risk Management and Institutional Strengthening (DRMIS) Visayas Cluster's training on Climate Disaster Risk Assessment (CDRA) in March 2020. Photo by: BLGS

Disaster Risk Reduction

This study hypothesizes that the LGUs' budget utilization and implementation are affected by their exposure to disaster risks, i.e., LGUs that are more prone to disasters encounter more challenges. To measure disaster risk at the LGU level, the housing vulnerability index is used as a proxy variable (Healey et al., 2022). On the average, municipalities have moderate vulnerability at 0.22 and cities have very low vulnerability at -1.94.

Other variables that were used to measure vulnerability comes from SGLG scores on disaster preparedness, environmental management and early warning systems. Disaster preparedness accounts for establishment of structure and human resource complement with respect to disaster risk reduction and management, availability of plans and utilization of funds, availability of early warning system, evacuation management, and systems and structures with respect to search and rescue, emergency response, functioning DRRM center, and established preemptive and forced evacuation policies (DILG, 2021). On these parameters, 34 percent of municipalities, 49 percent of the cities, and 62 percent of provinces are compliant with the SGLG requirements. On the early warning score, 78 percent of municipalities, 91 percent of cities, and 89 percent of provinces are compliant.

Environmental management accounts for the presence of a local solid waste management board, non-operation of open and/or controlled dumpsites, an approved 10-year solid waste management plan or presence of a materials recovery facility, and access to sanitary landfill (DILG, 2021). On environmental management score, 78 percent of municipalities, 87 percent of cities, and 89 percent of provinces are compliant. *For the detailed overall descriptive statistics, and the descriptive statistics per LGU type, you may refer to Tables 2.4.1. to 2.4.4. in Annex 2.4.*

6. Results and Key Findings

"LGUs with audit disclaimers from COA are more likely to have higher BURs than LGUs with unqualified audit reports."

This section discusses the key results of the panel data regression analyses using the model described in Section 4 above. Three variants of the said model where used: 1) includes only of the current and lag values of functional LGU budgets on BUR as covariates; 2) excludes housing and labor budgets to improve the sample size[7]; and 3) controls for variables on socioeconomic development, good governance, and disaster risk. Several regression analyses were run conducted to examine the relationships between the overall BUR and BUR per budget type for all LGUs and for each type of LGU. This resulted in 48 regression analyses, which are described and shown in tables in Annex 2.5. Described below are the key findings that are consistent across the regression analyses as well as other notable observations.

Finding 1: Increased budget size dampens spending performance

The World Bank (2021) already posited that increased LGU budget sizes, particularly for capital outlays, are associated with lower BUR. This study largely affirms this relationship. Furthermore, the regression analyses show consistently that budget per capita, where statistically significant, is negatively correlated with the BUR. The effect size of budget per capita on BUR, however, is quite muted: a PhP10,000 increase in budget per capita results in a decrease of a measly 0.17-0.19 percentage points in the BUR of municipalities, 0.23-0.26 points for cities, and around 0.51 points for provinces. For comparison, the mean budget per capita is PhP 5,205.

FIGURE 2.8. Comparison of Budget Size and BUR

Furthermore, reduced BUR is associated with increases in some of the functional budgets. In the overall model, the budgets for general public services (GPS), education, economic services, and the LDF have negative effects on the budget utilization rate of LGUs. Additionally, for cities, increases in the DRRM budget tend to negatively affect the BUR. Furthermore, an increase in the budget for a functional category is, with some exceptions[8], associated with a lower utilization rate for that category.

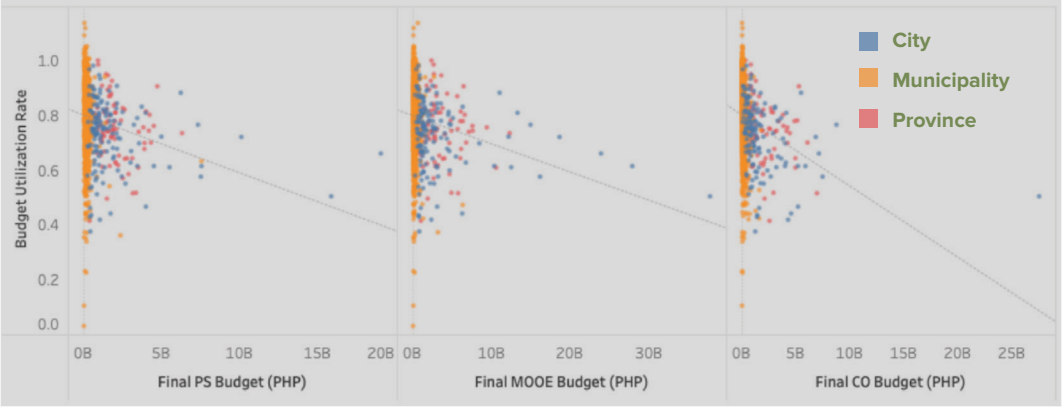
Another notable observation is the positive effect of the previous year's budget—overall and per function—on spending performance. In most of the observations, the previous year's functional budget is seen to have positive effects on budget utilization rates. This is true for the effects of the increase in the one-year lag of the health budget on the budget utilization rate in the overall model; the increase one-year lag of the budget for GPS, education, economic services, and development fund for municipalities; and the development fund, and social services and welfare budget on the budget utilization rates of cities. These results suggest that the implementations of programs and projects under these functional budgets accelerate in the second year.

The behavior of BUR vis-à-vis the health sector budget is interesting. The relationship is positive and statistically significant for the overall model and for municipalities and negative for cities (i.e., higher health budget increases BUR) and provinces. The observation for cities, however, is statistically not significant. Meanwhile, the previous year's health budget has a negative effect on the budget utilization rate of the overall model, municipalities, cities, and provinces. But only the observations for the overall model and municipalities are statistically significant. These are indicative, first, of the assignment of healthcare services functions across LGU types and, second, the narrow fiscal space for healthcare spending at the municipal level.

Finding 2: LGUs struggle to implement capital outlays

The size of the capital outlay budgets is negatively correlated with the BUR of LGUs, particularly for cities and municipalities, indicating that LGUs struggle to implement infrastructure projects and other capital investments. The size of capital outlay budgets is also negatively correlated with the BURs for key functional budgets: general public services, economic services, and the LDF of both cities and municipalities, social services of municipalities, and health services of cities. These budgets tend to have sizeable capital outlays components (e.g., government facilities under general public services and roads under economic services. After all, capital outlays, particularly infrastructure, require more time and technical capability to be undertaken. Weaknesses in planning and design, procurement, and contract management have constrained LGUs' capital outlays spending. Due to delay in implementation of capital outlays, the national government has assisted LGUs in implementing basic infrastructures (Sicat et al., 2019).

FIGURE 2.9. Comparison of Budgets by Expense Class and BUR



This contrasts with the consistent observation that MOOE and PS generally have positive effects on BUR. The MOOE typically consists of consumable items and other recurring expenditures to support day-to-day operations of LGUs (BLGF, 2008). Except for consulting services, MOOE takes a shorter time to be procured, delivered, and translated into expenditure. Thus, the positive relationship between MOOE and BUR can be seen in the main regression model and the analyses for provinces. For the functional budgets, statistically significant and positive relationships can be seen between MOOE and the budget utilization rates of the LDRRMF, education, economic services, and LDF of municipalities; health, and the GPS of cities; and with education and the LDF of provinces.

Similarly, the same effect can be seen for PS, which is statistically significant and positively correlated with the overall BUR and those of GPS, economic services, and social services of municipalities; and LDRRM, GPS, and education of cities. This is not

a surprise as PS includes salaries, wages, and other compensation of permanent, temporary, contractual, and casual employees of the government (Bureau of Local Government Finance, 2008). Interestingly, the PS budget is statistically significant and negatively correlated for the budget utilization rate of social services of cities and health and GPS of provinces, both of which are dependent on manpower.

Finding 3: LGUs vulnerable to disasters tend to have lower budget utilization rates

Another important observation is the relationship between disaster preparedness, vulnerability, and budget utilization rate. A positive correlation can be clearly seen between disaster preparedness, as measured by the early warning score of the SGLG, and budget utilization rate. Meanwhile, disaster vulnerability—as proxied by the housing vulnerability index—is inversely related to the BUR. These are statistically significant in the overall model, and the regression models for municipalities, and cities. This is also seen in the budget utilization rates of LDRRM, health, GPS, economic services, development fund, and social services, CO, MOOE and PS of municipalities; budget utilization rates of LDRRM, education and PS of cities; and the development fund utilization rate of provinces. This is important because it affirms that greater risks to disaster and greater vulnerability of LGUs affect service delivery as reflected by low budget utilization rate.

In contrast, population density and poverty incidence are not statistically significant in the overall, and the regression models for each LGU type. These are statistically significant in the functional budgets' regression models, but there seems to be no clear trend in terms of direction of effect.

Regional and provincial engineers of DILG Region I assessed and validated the damages to infrastructures and agriculture in various LGUs of Ilocos Sur caused by the earthquake in Northern Luzon (2022). Photo from: DILG Region I Facebook page

Conduct of DILG Southern Leyte Audit Orientation and Provincial Team Conference (2021). Photo by: DILG Region VIII

Finding 4: LGUs with good financial performance tend to have lower BUR

This study also tested the relationship of key good financial administration indicators with LGUs' BUR and found a generally inverse relationship. First, financial administration scores under the SGLG are generally inversely related to budget utilization, but statistically significant only in the overall model and the models for municipalities. Second, tax effort—or the growth of local resources per capita—also has a negative and statistically significant relationship with the BUR but only for provinces. Because an increase in local resources leads to an increase in the budget, it is consistent with the observation of a negative relationship between the budget per capita and BUR. It must be noted, however, that IRA dependence does not have a clear relationship with the BUR when the other factors are held constant as per this study's model. Other notable good governance indicators—including civil society membership in LDCs—also did not make a statistically significant dent to the BUR.

Meanwhile, LGUs with audit disclaimers from COA are more likely to have higher BURs than LGUs with unqualified audit reports. This observation is seen to be statistically significant in the overall model and the regression model for municipalities. This can also be seen in the regression model for the MOOE of municipalities. Cities with adverse findings and disclaimer in their COA reports are also more likely to have higher budget utilization compared to LGUs with unqualified audit reports. COA observations are not statistically significant in the regression models for provinces. This observation suggests that the more cautious the municipalities are in their fund utilization, the lower their budget utilization rates are. It supports the findings of the report by the Union of Local Authorities of the Philippines (ULAP) that LGUs face problems with respect to COA audit. The report noted that COA auditors have different interpretations of the rules and regulations, leading to audit observations for the LGUs (ULAP, 2016).

Improvement of the Gaddang road in Aparri, Cagayan (2021). Photo by: DILG Region II

7. Conclusion and Recommendations

The findings above validate the hypothesis that the implementation of the *Mandanas-Garcia* decision will have a negative effect on their spending rate. The LGUs will not be able to keep up with the increase in their current year budget and will tend to keep pushing balances to the following year unless necessary measures are taken to address the institutional and structural constraints to fiscal performance which previous studies have identified. Furthermore, disaster risk exposure and good governance requirements have been found to be key constraints to timely budget utilization: the former hampers governmental operations, while the latter seem to put up roadblocks for LGU spending and delivery.

Given the socioeconomic and environmental situation of the Philippines, the country needs to heavily invest in crisis resilience, recovery, and development at the grassroots level if it is to stand a chance of meeting the SDGs in 2030. However, given the LGUs current fiscal performance, these are precisely the areas which tend to see poor budget utilization rates. With the *Mandanas-Garcia* transition now underway, the level of underspending could increase further, particularly in these crucial areas.

In this regard, the following measures are being recommended:

Recommendation 1: Review fiscal transfers and assignment of functions to LGUs

Long-term reform requires the review of the formula for the allocation of NTA. This measure echoes the recommendations already expressed in previous studies to, among others, rebalance the distribution of resources from cities (which are able to, by default, generate more local income) to provinces and municipalities, inject development considerations like poverty incidence and crisis risk exposure in the distribution formula, and incentivize fiscal and governance performance, among others.

Measures have been taken by the government to include these reform elements in the fiscal transfers to LGUs. This includes the Seal of Good Local Governance (SGLG) Incentive Fund that has been institutionalized under the SGLG Law (R.A. No. 11292) and provided with PhP 1 billion under the 2022 Budget of DILG (DBM, 2021). Other related programs such as the Conditional Matching Grant for Provinces[9] and the Financial Assistance to Local Government Units[10] provide additional capital outlays budgets to LGUs which meet good governance conditions. These have a total of about PhP11 -billion in the 2022 budget.

The government had also proposed a PhP10-billion Growth Equity Fund to assist LGUs which belong to the poorest half of LGUs and have below-median per capita NTA (DBM, 2021b). The enacted budget for 2022, however, only allocates PhP1.25billion to the Growth Equity Fund (DBM, 2021), severely limiting the capability of such fund to equalize horizontal disparities. In the end, these allocations for performance- and equity-based transfers—around PhP13-billion in total—are dwarfed by the nearly PhP1-trillion in NTAs for 2022.

Recommendation 2: Review procurement policies particularly around capital outlay.

Review and reform of government procurement policies need to be undertaken to facilitate the implementation of infrastructure and capital outlays projects. While principle-based procurement and processes that emphasize transparency, fairness, and competition are paramount to ensuring value-for-money, delays caused by unclear policies, hard-to-understand processes, and unnecessary technicalities hamper timely, cost-effective, and quality infrastructure projects.

Steps towards process rationalization have started to be taken by the Government Procurement Policy Board (GPPB) through, among others, simplifying the public bidding documents for infrastructure (reducing the number of pages from 113 to 35); and modernizing the Philippine Government Electronic Procurement System (to, among others, enable electronic bidding) (GPPB, n.d.). Fundamental aspects of the procurement law, however, may need to be revisited, such as; the composition and size of bids, awards committees, the thresholds for requiring formal competitive bidding, and allowing alternative (though still competitive) methods, among others.

Furthermore, conducting pre-procurement processes, which may include the frontloading of procurement requirements, may be necessary to help make the overall procurement process more effective and efficient. This may help indicate in advance the eligibility or quality of performance of LGUs to help assess the appropriateness of the release of their budgets. Moreover, these have to be supported with a more mindful and strategic planning and implementation of Programs, Projects, and

Activities (PPAs) to ensure good timing of procurement and prioritization of items and services in the Annual Procurement Plan (APP). The use of monitoring dashboards must be maximized to ensure that delivery is on track and that high-risk procurements get flagged.

Such policy review and reform must be aided by the following measures: First, continued strengthening and capacity building of procurement units, and their creation if these do not yet exist in certain LGUs; Second, continued strengthening of civil society participation in the observation of bids and monitoring of contract implementation; and, Third, improvement in the capacity of the national government to monitor procurement performance, including the digitalization of procurement monitoring and reporting.

Recommendation 3: Boost oversight as enabler of good governance and delivery.

Two of the findings from the analysis are quite perplexing: 1.) that having a clean audit sheet is associated with slower spending; and, 2.) that civil society participation does not make a dent in either side of the BUR. Before these statements are taken out of context in favor of corruption and impunity, some caveats must be provided to these findings and offer some recommendations to boost budget oversight in the right way.

First, on audit. An independent assurance of the propriety of financial transactions is an indispensable element to the proper functioning of any public financial management system. Audit, when done correctly, is not a fault-finding exercise, but one of advising, even guiding, public managers on how to implement public services more efficiently and effectively. Audit, when oriented to be an enabler, provides opportunities for government entities to rectify their practices, strengthen their systems and capabilities, and even provide bases for the pursuit of policy reforms. Audit is an exercise of integrity - it goes beyond compliance, and importantly - it promotes accountability and performance.

Second, on participation. It must be emphasized that the mere membership of civil society organization (CSOs) in the development bodies of LGUs is a necessary but insufficient metric of public participation and does little justice to the hard work and substantive contribution that CSOs have brought into local governance and public financial management. For future versions of the SGLG, it is recommended that more substantive measurements of the quantity, quality, and impact of CSO participation be included. Global models like the Open Budget Survey and the E-Participation Index may be considered.

Instead of merely involving CSOs for accountability, CSOs that are highly capable can likewise be considered as partners to deliver services in partnership with the government, while still ensuring that proper checks and balances are in place.

Recommendation 4: Capacity Augmentation Support Hand in Hand with Capacity Building.

By putting a Php185-billion (DBM, 2021b) windfall in LGUs' collective coffers, the *Mandanas-Garcia* transition necessitates a massive scaling-up of the capacity of local governments to manage public funds and deliver services. Section 9 of E.O. no. 138 mandates the DILG to oversee the provision of capacity development interventions for LGUs, develop other capacity development strategies, and performance incentive mechanisms, among others, in a bid to boost delivery capacity. Subsequent issuances by DILG, DBM, and other bodies required LGUs to formulate capacity development agendas alongside their devolution transition plans (DTPs). Furthermore, one of the

components included in the DTPs is the Local Revenue Forecast and Resource Mobilization Strategy to help address needs on capacity building, improve local revenue generation, and make resource mobilization more targeted to make LGUs less NTA-dependent.

It must be said at this point that training is insufficient for building capacity: what is needed is a holistic yet tailored capacity support for LGUs. The DILG has already adopted a Capacity Development Framework (DILG, 2021a) and the agency has issued guidelines to apply such framework to the DTPs (DILG, 2021b) towards this effect. These guidelines seek to prioritize the provision of capacity development interventions based on the level of capacity and performance, i.e., those LGUs which are assessed to have scored poorly in both capacity and performance rubrics will be prioritized.

To truly address the unique capacity needs and performance contexts of LGUs, the following steps are being recommended: 1.) to complement the assessment of LGU capacity and performance using the SGLG and other available data, rigorous analysis and identification of pain points and weak areas must be undertaken; 2.) Use the results from Public Financial Management Assessments conducted over the years as a starting point; and 3.) Focus must be given to provinces and cities that tend to have the lowest BURs and largest budget balances considering that it will be logistically difficult to do individualized deep dives per LGU. Cluster analyses may then be employed within these LGUs, (i.e., grouping LGUs according to characteristics, such as level of poverty and disaster risk exposure).

These targeted assessments should then be useful in identifying capacity augmentation in the near-term for problematic areas. Such "surge" of capacities may be a pool of technical specialists who, working with the regional knowledge centers of DILG and the Local Government Academy, can coach and mentor LGU officials in addressing delivery bottlenecks. This assistance may include finalizing terms of references of preferred design specifications, developing and finalizing actual designs and cost estimates, strategic management of the PPAs, data analysis, and knowledge management. In addition, local contractors may also be given technical advice or support to secure the quality of implementation of the PPAs. Inter-LGU exchange of experience and innovations can likewise be facilitated by these specialists. These technical specialists could come not only from the private sector but also from local academe, civil society, and professional organizations. In key regions and provinces, Governance Hubs composed of these multisectoral specialists, have already been established and can be easily tapped for both short-term capacity augmentation and long-term capacity development.

At the start of 2022, LGUs have an estimated beginning fiscal balance of Php761.5-billion from the previous year (DBM, 2021c): a number that may yet be expected to grow as it had in the past decade. While the *Mandanas-Garcia* ruling may have corrected the computation of LGUs' share in national revenue, it does not guarantee that sufficient resources are mobilized and utilized for social development.

This study supports the argument that the increased funds of the LGUs due to the Mandanas ruling, without any institutional or structural improvements, will result in a decrease in budget utilization and delay in service delivery and program implementation. Else, the PhP761.5-billion in fiscal balances may continue to be parked resources. There is a need to implement structural, institutional and policies reforms for decentralization to work effectively to attain sustainable development.

End notes

1 These calculations excluded outlier LGUs which incurred a budget utilization rate beyond 150%.

2 The Statements of Revenue and Expenditure (SRE) accounts for the LGU's sources of income including locally generated revenues, grants, transfers from foreign or domestic sources, internal revenue allotment, and shares from national wealth. The BLGF also reports the total expenditure and the expenditure of the LGUs by function. These include General Public Services, Education, Health, Nutrition and Population Control, Labor and Employment; Housing and Community Development; Social Security; Social Services and Welfare; Economic Services; Debt Service; and Other Purposes. Local treasurers are required to prepare a Statement of Income and Expenditures (SIE) on a cash and modified accrual accounting basis. The statement serves as an input to the monitoring tools of the national government with regard to financial performance and to assist LGUs with financial operations.

3 Same sectors as in the SRE, i.e., General Public Services, Education, Health, Nutrition and Population Control, Labor and Employment; Housing and Community Development; Social Security; Social Services and Welfare; Economic Services; Debt Service; and Other Purposes. COA however reports the LDF and LDRRMF as distinct sectors or functions (compared to SRE where spending from such funds are distributed across sectors).

4 In the summary analysis, eight (8) LGUs which are outliers—those which have a budget utilization rate of more than 150%—have been excluded as these could distort the analysis. It is nevertheless possible for an LGU to incur a BUR above 100 percent when, for instance, it utilizes its prior year's budgets for MOOE and CO in the current year. The estimates here are close but not identical to the summary statistics presented by the World Bank (2021).

5 Computed based on COA records on Actual and Final budgets based on current accounts.

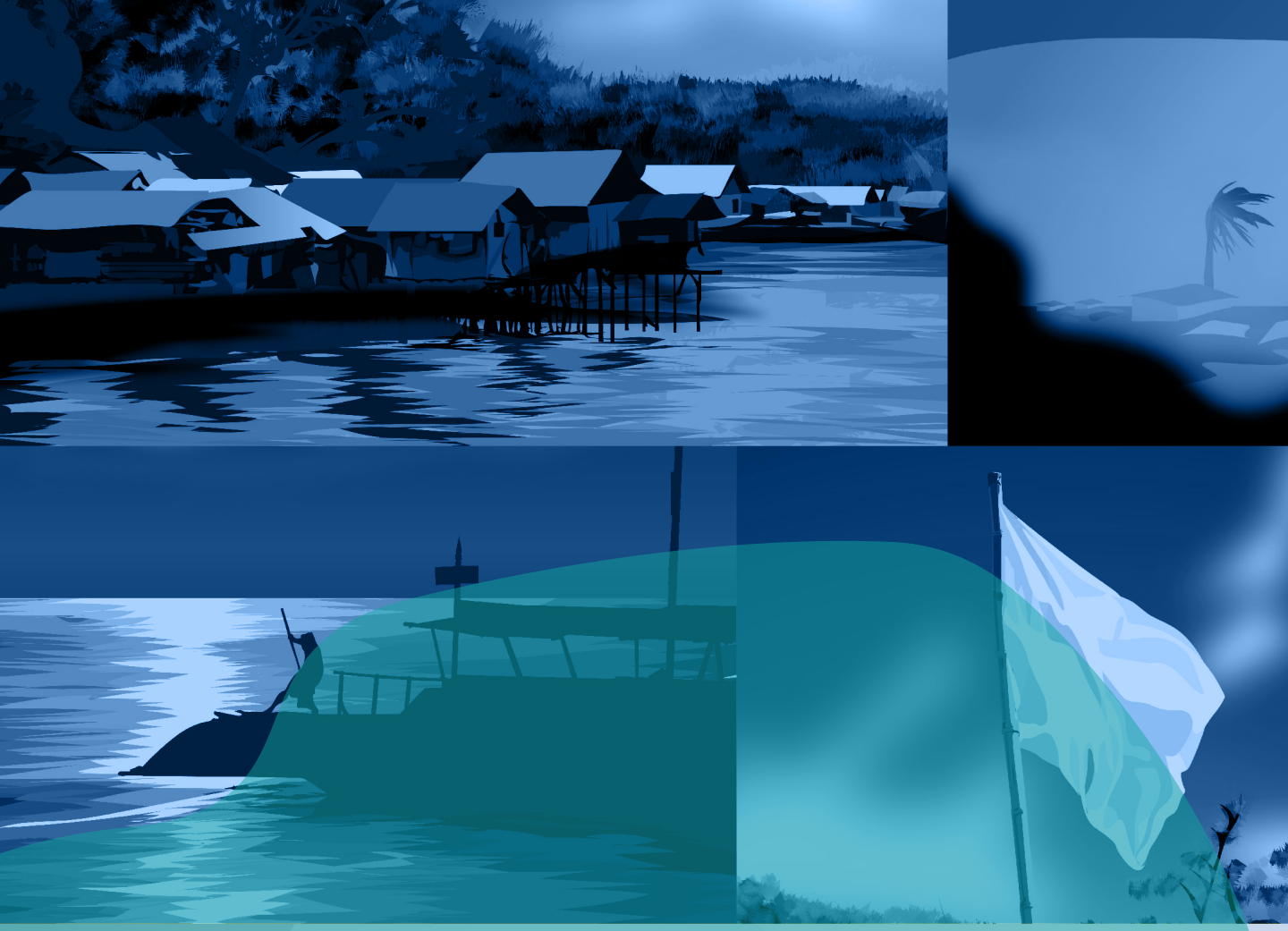
6 Formerly known as the Performance Challenge Fund.

7 Because of missing or NULL entries for the housing and labor budgets in many LGUs particularly municipalities, bulk of observations (LGUs) were dropped in the first variant of the panel regression. By excluding these functional budgets, most of the observations were kept intact.

8 These are the housing budget of cities (positively correlated); and labor budget of municipalities, LDRRMF and LDF of cities, and LDRRMF, labor, and housing budgets of provinces (not statistically significant).

9 Refers to Conditional Matching Grant to Provinces for Road and Bridge Rehabilitation, Upgrading and Improvement

10 Refers to the Financial Assistance to Local Government Units and Support for Capital Outlays and Social Programs



3 Putting the Mandanas-Garcia Resource Infusion to Optimal use

A Strategy for Philippine Local Government Units to Mitigate Losses and Damages from Environmental and Conflict Crises

Amelia Supetran and Maxine Tanya Hamada

"To obtain maximum amounts and the most benefits from unconditional fiscal transfers, the national, subnational and local governments should have a clear multilevel governance strategy for access, distribution and use of crisis-related management funds. It should start with what needs to be addressed, like capacity deficits, and should always situate this against the higher goal of sustainable development."

BFP officers clear out roads from ashfall from the eruption of the Bulusan volcano in Sorsogon (2022). Photo from: BFP Facebook page

1. Introduction

The Philippines is no stranger to crisis[1], being chronically plagued by natural and human-induced emergencies and disasters causing significant losses to lives and economics. Increasing losses and damages from climate-influenced disasters have been increasing, indicating diminishing capacities for sustainable development. Sustainable development cannot happen if losses and damages from natural and anthropogenic threats are not factored into, nor mitigated in the overall long-term development strategy of a country.

In the past decades, the Philippines has encountered several major climate and environmental disasters which presented distinct challenges for national and subnational government units to adapt quickly. Salient among the climate-influenced natural hazards

encountered in the Philippines was the destruction brought about by Tropical Storm Ondoy in 2009, Super Typhoon Yolanda (2013), and Typhoon Odette (2021) (International Names: Ketsana, Haiyan, and Rai, respectively), and for the non-climate influenced natural hazards, the 2020 Taal Volcano eruption.

Environmental emergencies and disasters can also generate a secondary crisis like conflict, because of dislocation which can create competition for scarce resources in the areas where recovery and rebuilding take place. Climate crises can also exacerbate existing conflict. While the transition to a peaceful democracy is now underway, in the South, for instance, particularly the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), still experiences sporadic episodes of violence, often triggered by 'rido'- endemic conflict between warring clans over land, resources, political influence, or past injustices. The situation also gets further complicated by the armed insurgency, which has a presence not only in the Bangsamoro Region, but also in other typically remote localities in the Philippines.

In 2022, the implementation of the Mandanas-Garcia Supreme Court (SC) Ruling will see more fiscal resources downloaded from national to local governments. This will be coupled with more operational responsibility as selected programs, projects, and activities, including those related to crisis management and risk-informed development, are to be devolved to LGUs as part of the government's decentralization (Manasan, 2020). The fiscal download translated to a 37.89 percent increase in the National Tax Allotment (NTA) in 2022 compared to F.Y. 2021 shares of LGUs (Department of Budget Management, 2021).[2] The transition will occur amidst the prevailing need to equip local government units to address crises at the local level. As the Philippines tries to recover from setbacks caused by the COVID-19 pandemic, how may the national and local governments continue to adapt in the medium to long term for better crisis management?

Considering these, this paper aims to answer the following research questions:

1. What factors shape decisions at the local level regarding crisis preparedness, prevention, mitigation, response, and recovery?

2. Do LGUs have adequate human resources, finances, skills, and incentives to support anticipatory governance and evidence-based decision-making and programming?

3. Are there effective mechanisms and incentives for local-level accountability?

4. What will determine planning and budgeting at the local level?

5. How can the national government, donors, and development partners' support LGUs for crisis preparedness, prevention, mitigation, response, recovery, and resilience?

The paper will attempt to dissect the root causes of the seemingly growing chronic incapacity to be able to manage crises in the Philippines. Given that the degree of manageability of a crisis depends on the management framework used and the timeliness and appropriateness of management interventions applied. It will also attempt to discuss opportunities to achieve the Means of Implementation (MOIs), defined in this paper as finance, infrastructure, and technology, to address causes and effects, including crisis triggers and interactions.

2. Climate, Environment, and Conflict as Major Sources of Crisis[3] Triggers in the Philippines

Climate change cannot be discussed in its entirety and implications for the Philippines, without also dissecting the existing status, historical moorings and the nature and scope of the environmental and conflict situations in the country. They are all generally mutually reinforcing and complementary in terms of causes and effects of crisis situations. These crises situations can either be mitigated or they can develop into emergencies and disasters.

Climate and Other Natural Hazard Induced Crises

The Philippines is uniquely situated in the context of natural hazards. It is in the Pacific Ring of Fire and therefore, vulnerable to geologic hazards[4]. It is also located in the typhoon belt, and hence, directly in the typhoon path. It experiences an average of 20 typhoons every year, costing the country an average of 0.5 percent of its annual Gross Domestic Product (GDP). In bad years, it can go up to 0.9 percent of GDP which was incurred in 2013 during Typhoon Haiyan (local name: Yolanda), a 1 in 250-year climate influenced event. The Asian Development Bank estimates that losses and damages from climate-influenced crises at 6 percent of the country's GDP by 2100. The country is, obviously, no stranger to natural hazards and seems to have adapted quite well to them until 2004 when Typhoon Winnie (locally dubbed "Yoyong") caused a massive landslide in Quezon Province[5]. Hundreds died and hundreds more were reported missing. That started the series of frequent climate-influenced events and disasters of the 2000s, which left communities and the whole country confounded. The biggest disaster after Typhoon Winnie was Super Typhoon Haiyan and caused unforeseen losses and damages, affecting an estimated 14 million people across 44 provinces, causing 6,000 deaths, and rendering around 1800 people missing. Total damage was estimated at USD 5.8 billion. The disasters did not stop there. These continued to wreak havoc with a succession of climate-induced disasters after Haiyan, including the most recent Typhoon Rai (locally known as Odette).

Seismic shocks and volcanic eruptions also contribute their fair share to losses and damages in the Philippines. The country has about 300 volcanoes, of which 22 are classified as active and the rest dormant. It also has several fault lines[6] which cause many intermittent earthquakes occurring almost daily, with some being imperceptible. Earthquakes cannot be predicted and adequately prepared for except by using "no regrets" mitigation options like properly designed and reinforced infrastructure and observance of proper protocols like timely and orderly post-event evacuation of the affected population. The "big one" is expected to happen anytime soon for

Metro Manila and the immediate environs because of the West Valley Fault.[7] The five (5) deadliest earthquakes, to date, happened between 1976 and 2013, with casualties ranging from 80 to 3,000.

Human-induced Environmental and Conflict Crises

Environmental Crises

Environmental disasters can result from either human-induced (e.g., leaks, spills, slash and burn farming, illegal logging, blast fishing, unscheduled and unmitigated effluent releases, and the impacts of land use changes and rapid urbanization) or natural hazards (e.g., climate event like unusually heavy rainfall) and are happening at various intensities throughout the country.

Within the human-induced category - The most serious to date are the Marcopper[8] and Philex mine tailings events producing extensive pollution. They started with problems like a chronically leaking mine tailings dam which eventually transformed into an acute (sudden onset) event like a massive tailings release. These are examples of chronic risks rapidly translating into acute disaster events because of human negligence and climate aggravation. Both incidents involved a lapse in human judgement and a lack of preparation or mitigation measures, especially in ensuring that infrastructures are well maintained and management systems and protocols properly followed given their contexts.

While the climate and environmental disasters may have been triggered by natural hazard sources, these events need not necessarily translate to disasters if the proper responses are made in a timely manner. Due to the increasing uncertainty in the hazard's behavior, human behavior for preparation and mitigation becomes confounded, usually translating to disastrous impacts.

CRISIS is defined as "any event or period that will lead, or may lead, to an unstable and dangerous situation affecting an individual, group, or all of society".

EMERGENCY is characterized as "a situation posing a serious and immediate threat to health, life or property requiring urgent intervention".

DISASTER, on the other hand, is "a sudden event, such as an accident or a natural catastrophe that causes great damage or loss of life".

Conflict Crises

The eruption of violent conflict occurs when the root causes are not addressed. Management and mitigation of conflict requires the capacity of the local governments to innovate, adjust quickly, or to be inclusive in their approaches. In 1993, after nationwide and sector-specific consultations, the National Unification Council (NUC) produced a report that laid the groundwork for the Philippines' peace framework that holds to this day.

Signing of a Memorandum of Agreement for the establishment of a Provincial Local Governance Resource Center (PLGRC) or "Katuparan Center ", which main function is to address the needs and concerns of former rebels in the province of Davao del Sur as well as the and Commencement Exercises of the 21 former rebels who were enrolled in the "Tupad Pangako Program", a 3-month program that equipped the former rebels into a series of livelihood and spiritual enrichment in order for them to be effective citizens in their communities. (2021) Photo from: DILG Region XI Facebook page

These consultations identified the most common root causes of the armed conflict and social unrest. Two of the five (5) root causes[9] continue to bear on the country's ability or inability to address conflict, especially conflict related to the environment and natural resources and now exacerbated by climate change. These two are: 1) Poor governance, including lack of basic social services, absenteeism of elected local officials, corruption and inefficiency in government bureaucracy, poor implementation of laws, including those that should protect the environment, and 2) Exploitation and marginalization of Indigenous Cultural Communities including lack of respect and recognition of ancestral domain and indigenous legal and political systems[10].

The National Disaster Risk Reduction and Management Plan of 2011-2028 further makes a link between human security and climate change in the Philippines as it stated that *'Security concerns associated with climate change include the potential conflict over natural resources, population displacement and migration as the result of sea-level rise or other large-scale humanitarian disasters as the result of extreme climate events'.*[11]

3. The Changing Nature and Scope of Crises Triggers

In addition to understanding the nature of these existing root causes of conflict, there is a need to understand the changing nature and scope of these causes. What we have come to expect and use as a basis for planning and governance may no longer be applicable nor reliable.

Climate and Other Natural Hazards

The main problem with climate -influenced hazards is that even if they are expected to occur yearly and at the same average number, their nature has changed. It places communities in situations where familiar events expected with regularity, become unpredictable, rendering the affected and highly vulnerable population unsure of how to respond. Hazard magnitudes[12] are perceived to have increased, hence communities in their path are less familiar when confronted with these circumstances. The reality is hazard magnitudes have not significantly changed but the return periods[13] do change. This breeds confusion and uncertainty in response among the affected population. Typhoon Haiyan was such a phenomenon when preparations were underestimated.[14] Because of these, there is a new national realization that these are "business unusual" times, when norms, and protocols involving responses to hazards will have to urgently change.

Damages in Ilocos Sur caused by the earthquake in Northern Luzon (2022)
Photo from: DILG Region I Facebook page

If the changes in how we prepare, mitigate, or respond do not happen, the increasing uncertainty will continue to make people increasingly vulnerable. As the potentially affected population will be unfamiliar with the degree of danger that they will face, they become uncertain how to respond, and thus underestimate the actual extent and gravity of the danger and its potential impacts.

Human-induced Environmental and Conflict Situations

Pollution[15]

Environmental pollution directly poses an existential threat to humans and the stability of ecosystems on which the former depends for sustenance and livelihoods. Pollution is the introduction of harmful materials into the environment that have deleterious or poisonous effects on people and resources they depend on. Accelerated climate change has been caused by pollution too through the excessive spewing of greenhouse gases into the atmosphere, increasing the amounts that produce the greenhouse effect[16]. The enhanced greenhouse effect is accelerating global warming at a pace that humans and ecosystems cannot keep up with and unable to adjust to in a timely manner.

It is, therefore, clear that the Philippines (as well as, other similarly situated countries globally) is faced with two (2) types of pollution: Ambient and Atmospheric. The ambient pollution affects the quality of the immediate environment around the group(s) of people and their well-being. Atmospheric pollution affects everything and everyone on this planet. Pollution's role and dynamics are important to understand because the processes that cause pollution are the same processes generating the causes of the impacts of climate change, which are also key to its management.

Environmental Degradation[17]

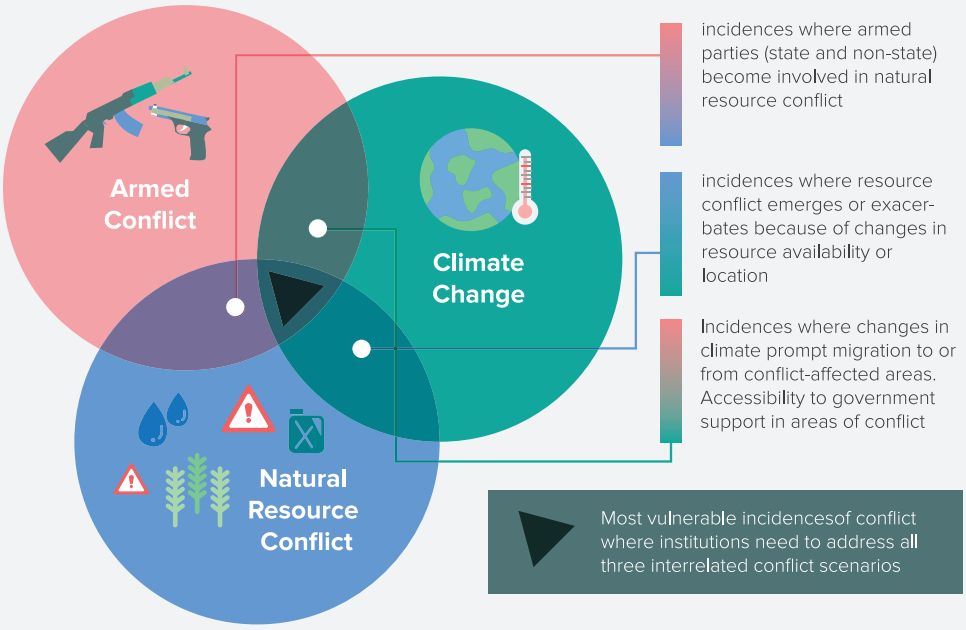
The amount and quality of natural resources on which the majority of the country's vulnerable population depend for food and livelihood, and even serve as a barrier or security from the elements and environmental hazards will be critical to the level of adaptive capacity. This capacity can be built throughout the country in response to various forms of crises. The more robust these resources are, the higher the opportunity for survival and sustainable development of the vulnerable dependent population.

Conflict Situations

For local governments, governance in situations of conflict involves both delivery of basic services to address the roots of conflict as well as a more astute anticipatory governance that aims to prevent and mitigate any untoward downturns driven by sudden and impactful break out of conflict. Often, these situations are not confined to a single local government's jurisdiction but can spill over political and administrative boundaries. To help illustrate what types of conflict may be exacerbated or triggered by climate change, Figure 3.1.[18] identifies possible situations where conflict and climate change may occur in a geographic area.

Bureau of Fire Protection officers assisted in the evacuation area in Labason, Zamboanga del Norte during the havoc of Typhoon Odette in December 2021. Photo from: BFP Facebook page

FIGURE 3.1. Indicative situations of conflict in climate vulnerable areas



4. The Political Economy of Crisis Situations and Crisis Management[19]

Post-disaster analyses events are telling of the factors that are either aggravating or mitigating its outcomes. In a climate-induced crisis, for example, the determinants are not only the hazard and affected population and their support systems, but also the political economy dynamics. This shapes and positions the potential result or outcome in a particular direction. This is, considering that how we respond to crises can also be affected by how our economy operates as well as the dominant economic and political principles and systems that guide the government's decisions.

To understand more fully how the concerned groups in the Philippines, at various levels of governance and sectors, decide and act in crisis situations, the influence of the prevailing political economy dynamics must also be understood. Despite being a mixed economy with the national government incentivizing the private sector and other local concerned groups, including the LGUs themselves, the predilection to centralize power and resources within the national government is still dominant.[20],[21] This may be rooted from the interest of the national government actors to be more active in national political affairs, including in the various phases of crisis management. Regulatory capture by the national government of financial resources, data, and information and other means to systematically manage crisis[22] leave LGUs with little elbow room to provide optimum response services to their constituents in a timely manner. The fact that the LGUs do not have enough financial resources to immediately respond to their constituents' needs in the event of disasters is very telling of this centralized constriction of timely and meaningful action.[23]

There is a tendency of local leadership and institutions to "rely on national directives and planning."[24] This is due in part to the dependency of local governments on national fiscal resources. Access to resources, especially locally generated revenue, remains a major, if not the single most important constraint to local government autonomy. Compounding this, is the way decision and oversight processes are skewed towards national "control" because of audit and accountability measures[25]. There are also isolated but challenging instances where local political actors view conflict or crises as a national security problem diminishing their roles and responsibilities towards effectively managing situations at the local level. As crises and conflict erupt, emergency and reactive funds are the main sources for crises and conflict de-escalation and recovery. These pockets of funds have decision-making processes and structures that are predominantly closed off to broader stakeholder participation and oversight. The cycle of reliance on national planning and use of emergency resources perpetuates a capacity deficit at the local and national leadership to proactively plan for, prepare, and recover from crises and conflict.

The LGU responses and crisis management strategies are disparate and varied. The resourceful ones tend to develop their own crisis management strategies, with less dependence on national government compared to their less resourceful counterparts. Meanwhile, some LGUs use the Post Disaster Needs Assessment (PDNA) process as an opportunity to learn. Given these, we can see that LGUs can be innovative. However, because of no or misinformation, their localities are highly probable to experience disasters because of lack of capacity, pertaining to knowledge and competencies and the other enabling means.

Thus, the role of the political economy model is very apparent and critical in disaster situations. If the free market is alive and well at the local level, and the private sector is involved systematically in crisis prevention, impact reduction, recovery, and development, LGUs will not necessarily be in a situation of mendicancy. This can be further enhanced if preparations like stockpiling of essential goods become a standard procedure, anticipatory adaptation to climate-induced hazard events is systematically undertaken, and results are mainstreamed in development interventions. This way, "Building forward better", which is the new crisis recovery and rebuilding battle cry, can be realized.

The Value of People and their Governments in Mitigating Crises and Creating Solutions

At every stage of crisis response and recovery, human thinking, capacity, and behavior are very crucial as supported by systems, policies, or infrastructure, among others. As shown in previous sections, if humans are creating unnecessary complications in the environment or human-induced crises in the country, they can also mitigate the degree of the problem by addressing their causes[26] and effects. Capacity of local governments is key to addressing the problems caused by crises. This paper posits that even natural hazards can be "mediated"[27] by the application of the right Means of Implementation (MOI). If this is done, the additional financial resources to be provided by the Mandanas-Garcia SC Ruling will have added value. The extent of its actual contribution to the crisis management capacity of the LGUs will be determined by several factors involving the match with actual needs, using climate change, environment, and the root causes of conflict as the entry points.[28]

Role of the Mandanas-Garcia Financial Infusion

The Mandanas-Garcia Supreme Court (SC) decisions provide a signal shift towards reconfiguring the delivery of government services, intergovernmental relations, intergovernmental fund transfers, and multi-level governance capacity. More than the amounts, the SC decisions and the Executive issuances define a path towards greater LGU autonomy and responsibility. Shares of LGUs from national tax (NTA) are unconditional intergovernmental fiscal transfers. This means the national government cannot impose release criteria or performance targets with these funds. In fact, one of the functions of the Committee on Devolution created by Executive Order 138 and chaired by the Department of Budget and Management (DBM), is to *"ensure the elimination of any regulatory or fiscal controls on the automatic release of LGU shares on national taxes, in accordance with Section 286 and 293 of RA 7160, unless such restrictions are warranted under relevant laws."*[29]

A 37.89 percent increase in the NTA[30] in 2022 because of the Mandanas-Garcia SC Ruling is a sizable amount for LGUs, originally seen as an unexpected windfall. However, since the national government agencies would want to execute a further devolution but have not yet, the additional resources may even compromise the implementation efficiency and effectiveness of already devolved functions. The LGUs, therefore, are faced with a dilemma: can they still push through with the intent to use the Mandanas-Garcia SC Ruling money the way they have originally planned, or will they be forced to defray the cost of the impending devolution of more national government functions?

A third option, however, presents itself: LGUs can plan for its strategic use to avert or lessen losses and damages from the crisis. They can view this as investing in structural governance reforms that would stop the financial leakage from losses and damages from the crisis and incur savings for new economic endeavors that would earn them more money because they are resilient. This can be a temporary and stopgap strategy to allow the sustainable development fundamentals to take root and normalize within their locality. But it can also be a significant "game changer" which can catalyze lasting solutions, in this case, providing an operational strategy to systematically reduce their losses and damages from the crisis. It can also start the process of long-term adjustments to our natural environment such that it does not create backlash for us humans through a process now known as Anticipatory Adaptation.

5. The Capacity of LGUs to Manage Crises

With this brief presentation of situations of crises and the political economy determining our management responses in the Philippines, we now look at the capacity and capability of our local government units to manage crises. It has been mentioned that LGU's responses have remained varied with some exerting greater innovation and resourcefulness. It is not that the National Government through the DILG's Local Government Academy has not exerted effort to build the capacities of LGUs. For example, it has endeavored to integrate DRRM in local planning and operations.[31] The DILG has also implemented and monitored programs which aim to build conflict-resilient, sustainable, and economically developed communities[32] However, new developments in the basis for the DRRM actions such as the Probabilistic Risk Analysis approach, requires a revision in the capacity development practices and norms in this area. Management of conflict situations in the country need to be re-examined. Thus, it is important that we review the policy environment that defines this capacity.

Any discussion on Philippine LGU crisis management capacity must consider two crucial policy determinants – resource flow and decision-making. For crises and conflict intervention, budget allocations illustrate an existing policy environment of conditional[33] and unconditional intergovernmental fiscal transfers[34] and a division of LGU mandates between the national government and various levels of local governments. This fiscal environment is national government-led and directed, owing mainly to fiscal resources being concentrated largely at the national level. The dominant objective for conditional intergovernmental transfers is to incentivize local government units to address crises in their areas in exchange for development funds over and above existing local government resources. While the national policy has, on paper, encouraged mainstreaming and embedding of crises management in local plans and budgets, the dominant national political and socio-economic dynamics continue to determine, or drive, local decision- making when it comes to conflict and crises management. A discussion of key national conflict-management government programs is found in Annex 3.4. of this paper.

Complementary to fiscal resources are local governance mechanisms and processes that lay the crucial foundation for embedded capacities to plan for, address, and recover from crises and conflict. While not unique to crises situations, the poor link between planning, budgeting, implementation, monitoring, evaluation, and audit creates a disabling environment for service delivery to mitigate climate risks or address the root causes of conflict. A Commission on Audit 2014 Assessment of DRRM[35] at the local level illustrated the evolution of national policy on institutional responses to disasters and recommended primarily the strengthening of governance coordination and the proper formulation and implementation of local plans to mitigate crises. A quick scan through the experiences below illustrates this state of crisis management.

Climate Change

Before Tropical Depression Winnie, which triggered devastating landslides, the last climate-influenced hazard event that had a great impact was the one triggered by Typhoon Thelma (Uring) in 1991. This caused massive flooding in Ormoc, Leyte, killing more than 5,000 people. Between the Ormoc and the REINA tragedy in 2004, more than a decade passed before the series of disasters started to plague the Philippines with regularity in the 2000s. These are rough indications that the capacities of Philippine communities are being outstripped by the hazards. In the case of environmental and conflict -induced crises, nothing significant in terms of structural reforms have taken place.

Then and now, communities in the Philippines' most climate vulnerable areas have executed disaster risk management protocols and practices that are quite outdated because of relying on what has been passed on through the generations. Many Filipinos still have the notion that they can overcome any type of adversity, without direct government support. But indicators show a capacity deficit among Philippine communities. Therefore, LGU capacity needs significant enhancement. This is being affirmed by the series of periodic reports[36] released by the Intergovernmental Panel on Climate Change[37] which explained the impacts of climatic changes and the decreasing capacity to cope by the affected population. The First IPCC Assessment Report in 1990 became a strong basis for the adoption of a global agreement in the 1992 Rio Summit on Sustainable Development which was dubbed, the UN Framework Convention on Climate Change (UNFCCC).[38] Ultimately, determining how to adjust response protocols require scientific and reproducible technical methodologies, which to date have not really been mainstreamed.[39]

Environment

The country's environment and natural resources continue to deteriorate. This may be an indication that either the capacity development for environmental management has not been enough, or other factors negating capacity-building efforts like a chaotic policy environment, wrong institutional arrangement(s), or worse, other difficult-to-manage issues like corruption. There is also a need for a strengthened management framework for the sector that both addresses safeguard issues involving environmental risks and the value-adding that can optimize the use of resources for the country's sustainable socioeconomic development. Crisis management capacities are still deficient even though the sector's players, especially government functionaries, are the most knowledgeable and the most trained in risk management. The

DILG-7 personnel and UNDP visited Typhoon Odette affected areas and conducted an assessment for post-disaster recovery from January 31 to February 3, 2022 (DILG 7) Photo from: DILG Region VII Facebook page

knowledge and competency capacity has, unfortunately, not been extended to the local level. Or if they have, are insufficient and not integrative enough to address multifaceted issues impinging on environmental management like climate risk and conflict management.

Conflict

Local institutions[40] carry a frontline role in addressing local situations of conflict and de-escalating points of disagreement before they result in violent or destructive emergencies. Ownership by stakeholders ensures the relevance and sustainability of programs across political transitions and political boundaries. Local political leadership plays a crucial role in determining a community's ability to plan for, prevent, mitigate, prepare for, and recover from conflict and crises. This has been recognized and emphasized in several policy instruments.[41] It is, however, also in this context that conflict management becomes vulnerable to political exigencies. As discussed in the section on political economy, the predominant tendency is for local political leaders to defer to, and rely on, national resources and decisions for conflict management.

In instances where local leadership takes a more involved role in crisis and conflict planning and management, there was an indication of better sustainability. In a report on the Mainstreaming Peace and Development in Local Governance Project (MPDLGP), it was found that *"Successful mainstreaming was dependent on consistent technical support for local implementation, as well as the buy-in of local chief executives for the CSPP ethos as a fundamental component of service delivery."*[42]

6. Key Insights on General LGU Capacity[43] For Unconditional Funds

The Mandanas-Garcia SC decision and the resulting fiscal infusion is an unconditional intergovernmental fund transfer. So while the experiences described above refer specifically to LGU's capacity in crisis management, it is equally important to look at LGU capacity to manage their general unconditional funds under which, mainstream crisis and conflict management programs will be included.

According to the Department of the Interior and Local Government's (DILG) LGU Segmentation for Local Capacity Development Support, LGUs can be grouped into four (4) quadrants based on level of capacity (C) and performance (P), namely as follows: Q1: Evolve (high C, high P), Q2: Enable (low C, high P), Q3: Engage (low C, low P), and Q4: Energize (high C, low P) (See Table 3.1. and Figure 3.2.). For this segmentation, 25 Seal of Good Local Governance (SGLG) indicators were used as the basis for the analysis of capacity and performance which also reflect the priority issues of the Mandanas-Garcia SC Ruling implementation. For this metric, capacity was defined as being effective and efficient in the allocation of resources through planning while performance was defined as being able to efficiently spend the funds allocated to local priorities.

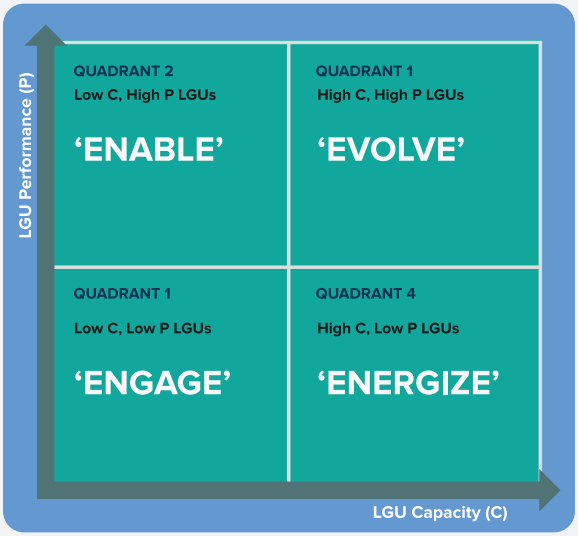
This segmentation exercise showed that LGUs are at varied levels of capacity and performance with the following number of LGUs[44] falling under each quadrant:

TABLE 3.1. Number of LGUs per Quadrant

Quadrant	No. of LGUs
Q1: Evolve (high C, high P)	38 provinces, 621 municipalities, 60 cities
Q2: Enable (low C, high P)	6 provinces, 185 municipalities, 9 cities
Q3: Engage (low C, low P)	21 provinces, 483 municipalities, 31 cities
Q4: Energize (high C, low P)	16 provinces, 191 municipalities, 7 cities

Given the different levels of capacity and performance of the LGUs, once the Mandanas-Garcia SC Ruling is implemented, these LGUs have different capabilities of maximizing the additional financial infusion as well as the already available funds. LGUs in the Q3 or Engage quadrant (low C, low P), for example, might find it more difficult to access and use conditional fund transfers compared to others due to an indicative lack of technical capacities or level of advancement to comply with requirements. Meanwhile, those in Q4 or Energize quadrant (high C, low P) may be able to sufficiently access and allocate funds but need assistance on speeding up budget execution, especially for capital-heavy projects (i.e., infrastructures). Thus, the approach on maximizing the Mandanas-Garcia SC Ruling infusion may need to be designed based on the quadrant where LGUs belong to, taking into consideration their capacity and performance.

FIGURE 3.2. LGU Performance Quadrants



Q1: EVOLVE LGUs with high capacity and high performance into sources of good practice and innovation, and examplars of local governance under full devolution

Q2: ENABLE LGUs with low capacity to unlock capacity issues to seize in full the promises of full devotion and reinforce performance as a result of targeted CapDev solutions

Q3: ENGAGE LGUs with low capacity and Low Performance to catch up with other LGUs, and provide them with targeted CapDev solutions

Q4: ENERGIZE LGUs with high capacity to translate this into high performance in the context of full devolution through targeted CapDev solutions

Meanwhile, in terms of climate-vulnerability, the DILG has identified the following provinces/cities as priorities for Climate Change Adaptation and Disaster Risk Reduction Management for 2022:

TABLE 3.2. DILG Priority Provinces and Cities for Climate Change Adaptation and Risk Reduction Management

Region	Provinces/ Cities
Cordillera Administrative Region	Apayao, Kalinga, Ifugao, Mountain Province
Region 5	Masbate, Sorsogon, Catanduanes
Region 7	Negros Oriental, Siquijor
Region 8	Western Samar, Southern Leyte, Eastern Samar, Northern Samar
Region 9	Samar
Region 10	Zamboanga del Norte
Region 12	Bukidnon
Region 13	Saranggani, North Cotabato, Sultan Kudarat
Bangsamoro Autonomous Region in Muslim Mindanao	Surigao del Norte, Surigao del Sur, Dinagat Islands, Maguindanao, Sulu, Lanao del Sur
Metropolitan Cities	Metro Manila, Metro Iloilo, Metro Cebu, Metro Davao

Conduct of Disaster Risk Management and Institutional Strengthening (DRMIS) Visayas Cluster's training on Climate Disaster Risk Assessment (CDRA) in March 2020. Photo by: BLGS

Meanwhile, Cruz and La Viña (2022) conducted an online LGU Survey from 29 September to 5 November 2021 covering 1,715 provincial, city, and municipal LGUs to also have a sense of the common issues they face. According to this survey, the number and capacity of staff/human resource have been identified as a significant constraint by budget officers in having an efficient and effective use of LGU budgets. This indicates that hiring more staff may be prioritized by LGUs once they receive the additional Mandanas-Garcia SC Ruling funds, given that suspending the personnel services cap is considered and granted by the national government. Meanwhile, some climate and environment-related areas indicated by planning and development officers to have a great need for capacity development using a scale of 0-10 (0 = no capacity support is needed and 10 = capacity development support is urgent) include: agricultural and irrigation services (7.8), environmental management (7.7), natural resources management (7.5.), and energy-related services (7.3). Overall, a significant disparity has been observed In the technical capacity and the preparedness of the LGUs for the Mandanas-Garcia SC Ruling. In general, urbanized LGUs seem to be more prepared to maximize the upcoming additional funds due to the Mandanas-Garcia SC Ruling. Consequently, if not assisted well, other rural and less advanced LGUs may still get left behind.

7. Optimizing the Available Means of Implementation, Including the Mandanas-Garcia Financial Infusion

A Risk Management Framework

Considering the LGU Segmentation data, capacity gaps can be quantified using measurable indicators to monitor a negative change or positive gain. Therefore, if capacity gaps are filled and translated to the execution of systematic response actions, the results of which can be directly correlated to improvements or lack thereof in the outcome. Impacts of interventions can also be more easily and systematically assessed using an objective and reproducible approach or methodology. Particularly, problematic areas can be more precisely pinpointed and corrected.

Nonetheless, this idea can be extended further. Capacity can be made more expansive and tied to the means of implementation. Therefore, the Capacity Assessment should not just focus on the conventional metrics of knowledge and competencies but be expanded to and linked with the MOIs like Finance, Infrastructure, and Technology, as well as to the Systems & Protocols needs of LGUs. But fundamental to this is the use of a Risk Management Framework against which capacity requirements will be matched. Furthermore, for these to be effective, comparability of data in various LGU contexts is much needed.

There are generally three (3) stages applied in the risk management approach with the corresponding risk outcome level(s) chosen per stage or phase of the impact management. These stages are Risk Avoidance or Prevention using 0 risk as the standard outcome measure; Risk Reduction or Mitigation (Expressed as a chosen risk value compared to an acceptable risk level); and Residual Impact Management.

Risk Assessment, as the first step, can either be: Deterministic Risk Assessment or Probabilistic Risk Analysis (PRA). Deterministic Risk Assessment is the prevailing analytical approach but hampered by the limitation of historical data and limited to a single scenario. **Probabilistic Risk Assessment (PRA)**[45], on the other hand, considers all possible scenarios, their likelihood and associated impacts and "completes" historical records by reproducing the physics/ dynamics of the phenomenon and recreating the intensity of many synthetic events.[46] PRA, therefore, can project a hazard event that hasn't happened yet but is likely to happen. It allows potentially affected areas like LGUs vulnerable to climate influenced hazards or conflict situations which have increased uncertainties of occurrence, to plan for their potential impact mitigation using a variety of options. This standard has now been adopted for the Philippines through the Climate Change Commission's (CCC) Resolution prescribing the PRA as the analytical methodology to use as the basis for systematic risk management actions. Figure 3.3. depicts the whole risk management cycle to be applied in

the Philippines by virtue of the CCC policy. It can also be applicable to the two other stand-alone issues of conventional environmental and conflict hazards. The probabilistic approach uses modelling to understand the uncertainties.

Strategic Access and Use of Intergovernmental Transfers: Unconditional and Conditional

National policy has adopted the crisis management strategy of embedding climate change adaptation as well as conflict-sensitive and peace-promoting (CSPP) planning in local development, as its framework[47]. In this regard, in theory, the whole local general budget as shaped by local development plans, investment plans and budget appropriations become crisis-management resources. This answers the question whether the implementation of the Mandanas-Garcia SC Ruling will have a material impact on conflict management at the LGU level.

For crisis and conflict vulnerabilities linked to climate change, the infusion of **unconditional** additional fiscal resources will have greatest impact in LGUs where conflict sensitive and peace-promoting plans as well as local climate change adaptation plans[48] are successfully embedded in Comprehensive Development Plans (CDPs), Comprehensive Land Use Plans (CLUPs), Local Development Investment Programs (LDIPs), Annual Investment Programs (AIPs), Land Resource Management Master Plans (LRMMPs) and Annual Appropriation Ordinances including local special bodies' functionalities and coordination. The use of the probabilistic risk assessment approach should guide these planning processes (see Figure 3.3.).

FIGURE 3.3. The Risk Management Diagram

To obtain maximum amounts and the most benefits from unconditional fiscal transfers, the national, subnational and local governments should have a clear multilevel governance strategy for access, distribution and use of crisis related management funds. It should start with what needs to be addressed, like capacity deficits, and should always situate this against the higher goal of sustainable development. Therefore, these funding opportunities should not be viewed simply in an "opportunistic manner" but part of the longer term enabling of constituencies and improving their quality of life. For this purpose, the series of multilevel implementation strategies and execution plans should be developed in a coherent and complementary manner. After this, the resourcing plans can be developed and strategically executed.

There are several **conditional** incentive funds for crises management.[49] One of these, the Seal of Good Local Governance (SGLG) Incentive Fund was established to award qualifying LGUs that meet certain standards or measures of good governance. These performance measures, represented by seals of good local governance include a core peace and order component, defined as to *"maintain peace and order through activities and support mechanisms that protect constituents from threats to life and security and ensure drug-free communities"* and a core disaster preparedness component defined as *"an LGU's preparedness for any disaster or natural or man-made calamity, by adopting relevant plans, taking proactive actions, and building its capacity to respond effectively to emergencies when needed.*[50] Studies have not yet focused on the effectiveness of these two components of the seal, so it would be informative to look at findings on the general impact of conditional intergovernmental fiscal transfers in improving LGU capacity and performance.

Studies indicate levels of success in improving local governance using conditional grants[51] , as well as increasing amounts spent on national government-defined priorities[52]. There are indications however which show that across local governments, an incentive program like the SGLG and the Performance Challenge Fund (PCF) can also widen the divide between the performing and the capacitated LGUs, and LGUs that, from the onset, are unable to qualify or comply with the incentive fund requirements.[53] This echoes the study above by Cruz and Lavina (2022) on the capacity and performance of urbanized LGUs versus those in the more rural areas. Another intergovernmental fiscal transfer is the Local Government Support Fund -Assistance to Municipalities (LGSF-AM) and a baseline study conducted for the purpose of this fund found out that "there is still room for improvement in terms of development planning (both within LGUs and aligning with national government priorities) and delivering mandates (budget utilization report (BUR) for the Local Development Fund (LDF) and local resource mobilization)"[54]

Conditional grants and intergovernmental fund transfers for crisis, such as; the NDRRM Fund, People's Survival Fund, PAMANA and the Support to Barangay Development will therefore have the

greatest impact when conditions and indicators include the extent to which recipient LGUs have embedded conflict sensitive and peace-promoting plans as well as local climate change adaptation plans in local plans and budgets.

Technical and organizational support from NGAs, Development Partners, Civil Society, the Private Sector, and Academe will be greatly needed to accompany the capacity development of LGUs and NGA for this shift. These should target those who do not have the capacity to mainstream CSPP and LCCA in local plans.

Maximizing Access and Use of Climate and Environment Funds[55]

Climate change, which is a very serious global issue, wide-ranging, and comprehensive in its effects, has forced the Community of Nations to come to an agreement to address the problem collectively. But, since only one set of country Parties. The nations which caused the problem must lead the actions to solve it. This is the principle of "Common but differentiated responsibilities" in operation. In 1992, the countries subscribing to the notion of sustainable development by adopting the Agenda 21 Principles, also adopted two major agreements: the 1.) UN Framework Convention on Climate Change to address the accelerating global warming problem from greenhouse gases; and 2.) the Convention on Biological Diversity. For both these agreements, the MOIs were also committed by developed country Parties, primarily financial resources, including for Technology transfer, development and diffusion, and Capacity building of developing countries like the Philippines.

Currently, there are Global Climate and Environment Funds that are not yet maximized in terms of use and access. These are the Green Climate Fund (GCF), the Global Environment Facility (GEF), the Adaptation Fund (AF), and the Multilateral Fund of the Montreal Protocol. Apart from these, International and Regional Banks can also be a source of the previously mentioned funds. The GCF provides for the climate-related needs of Parties from developing countries. The GEF, on the other hand, disburses a mix of environment and climate related funds but at much smaller amounts than GCF and fixed country allocations. Developed countries also use other multilateral routes, notably the Bretton Woods institutions (World Bank and International Monetary Fund), UN agencies, International NGOs (INGOs), bilateral and regional banks and aid agencies. They also do government-to-government direct negotiations for support of developing countries.

The amount that can be accessed from the GCF varies according to the windows. It can reach up to triple-digit million USD, depending on the geographic scope, complexity, and innovation implication of the project. Readiness funds access have notional limits standard for all accessing countries. There are also windows forsmall-to-medium-sized projects and access modalities are theoretically facilitative. Meanwhile, the GEF can be tapped for programmes and projects related to five (5) focus areas namely: Biodiversity, Climate change International waters, Chemicals management and Land degradation to achieve Food, Land use and restoration, and Sustainable

Forest management. The AF can be used to finance adaptation projects and programs of developing country Parties that are particularly vulnerable to the adverse effects of climate change. It was mandated to be resourced with a 2 percent share of the proceeds from the Clean Development Mechanism (CDM) under the Kyoto Protocol project activities and other sources of funding. It is also mandated to serve the Paris Agreement and receive a percentage of the levies from the relevant Article 6 mechanisms. Lastly, funding from international and regional banks are normally composed of complementary funding blended with other sources, including those flowing directly from the Multilateral Environmental Agreements (MEA) funding mechanisms like the GCF, GEF, and AF, among others, for which these banks also serve as Executing Agencies.

Meanwhile, national funds and other funding opportunities such as those from bilateral country partners and civil society organizations may also be tapped. Particularly, these are done through the developed country Parties of the above the MEA's direct private sector investments in developing countries and private sector players of the Philippines itself. These developed countries also provide support through their Embassies and Bilateral Aid Agencies or International NGOs in the relevant programs meant to deliver support in the form of MOIs. With the operationalization of the Paris Agreement (PA), several funding modalities have opened, like the REDD Plus[56] which can be tapped for results-based payments of forest enhancement and conservation actions, the mechanisms of the PA through the market and non-market modalities,[57] and direct funding for Nationally Determined Contribution (NDC) greenhouse gas mitigation Policies and Measures (PAMs) of developing countries. With the formulation of the National Anticipatory Adaptation Plan for Climate Change, additional resources are expected to be available globally and locally.

Access to these resources should be a partnership among various levels of governance structures for efficiency and effectiveness. This would work best if the National Government would lead with clear and operational access strategies or procedures and the sub-national (regional/provincial) and local governments with structured lists of needs and local access strategies and modalities. The institutional arrangement and access protocols should be coherent, deliberate, and systematic, not random and simply opportunistic. Moreover, the Philippines should also ensure that its focal agencies and their respective access strategies, protocols, and systems are in place in a timely manner. Consistency in the focals'[58] designation is paramount to ensuring stability and continuity of access, especially by the LGUs which are at the forefront of responding to climate-related hazards. All these and the quality of proposals determine the timing of access[59] since the due diligence processes of these funding sources are closely linked and are sophisticated in terms of determining the actual situation in localities requesting for funding.[60]

Meanwhile, approximately two-thirds of the MOI support will most likely be in kind: Technologies and Capacity Building. Although technically, the legal language of the Conventions still refers to "financial resources, including for technology transfer, diffusion and development; and capacity building", interpretations vary, including the direct provision of this in-kind support. The Philippine government

should view this as a more strategic opportunity to pursue because of their implications for the realization of the country's modernization and sustainability aspirations. Direct financial support has its pitfalls, especially if the offerings are "concessional" which are then interpreted as borrowings or loans.

However, there may be a need to rethink the appropriateness of capacity building. While the LGUs will have the personnel cap temporarily removed opening an opportunity to bring in new expertise, there is always a limit to absorptive capacity, in particular when it comes to highly specialized scientific fields. Rather than capacity building per se, it may be beneficial to instead set up long-term, institutional agreements in academic institutions – where the capacities already exist – and 'insource' them into the data analytical and advisory process within the government. In this manner, the time of local governments would be spent more on making informed, data-driven decisions to manage crisis, rather than on absorbing the highly technical analysis and reasoning behind the data itself.

To summarize:

1. Make the criteria or performance measures of conditional transfers measure how successfully embedded is crisis planning (probabilistic planning, community resilience, risk identification), budget utilization, and monitoring and evaluation in regular local government processes. This links the conditional transfers to the bigger unconditional transfers.

2. Program the conditional transfers to phase out at a point that LGUs have successfully embedded crises management (both climate and conflict) in their local processes. Move these funds and other funds for local mandates to unconditional releases to LGUs. This would follow the quadrant segmentation of LGUs conducted by DILG – ensuring a more focused and customized approach to support LGU capacity building in such a manner that encourages 'graduation'.

3. Maximize existing un-accessed and underutilized climate change funds with the National Government taking a strategic approach to these offerings and support opportunities, cascading of benefits should reach the LGUs and the other sectors like the Private Sector and Civil Society more efficiently and effectively.

The thesis here is that studies have shown that conditional intergovernmental transfers have the tendency to benefit LGUs with an existing capacity and further marginalize or leave behind LGUs with weak capacity. National government's thrust with regards to crisis management has always been towards embedding these into existing and regular local government processes. If effort is focused on embedding these capacities and enhancing local planning with the frameworks of probabilistic planning and community resilience, then more and more, unconditional intergovernmental fund transfers will benefit both the local and national levels of government in terms of efficiency, effectiveness, and responsiveness of governance to crises.

The transition phase on the implementation of the Mandanas-Garcia SC decision will provide a period where key policies on intergovernmental roles and fiscal transfers can be reviewed and strengthened and capacities or partnerships developed. These policies and the potential shift can be found in Table 3.3.

TABLE 3.3. Opportunities for Mandanas-Garcia SC Ruling Transition

NATIONAL AND LOCAL POLICIES	Opportunities	
	CLIMATE CHANGE ADAPTATION	**CONFLICT SENSITIVE AND PEACE PROMOTING PLANNING**
Philippine Development Plan and Results Matrices	Define Crises Management Standards, Goals, Data sets, Indicators and means of measurement Define probabilistic planning	Define Conflict Management Standards, Goals, Data Sets, Indicators and means of measurement
General Appropriations Act and COA issuances	Sharpen general and special provisions on intergovernmental transfers related to climate crises *(i.e. disaggregate reporting on LDRMMF to reflect prevention and QRF funds)*	Sharpen general and special provisions on intergovernmental transfers related to conflict prevention and management *(i.e intelligence and confidential funds)*
Budget Operations Manual	Define Fiscal Processes, Roles, and Decision-Making loci of Local Government Units for climate change and climate crises funds	Define Fiscal Processes, Roles, and Decision-Making loci of Local Government Units for conflict prevention and management funds
LGU 6-yr Comprehensive Development Plan Comprehensive Land Use Plan Local Development Investment Plan Annual Investment Plans Legislative-Executive Agenda Annual Procurement Plans	Embed climate change adaptation in local planning and link to budgeting and procurement planning Link to regional and national plans and budgeting through Regional Development Council processes Define processes for community resiliency framework considerations in planning and budgeting	Embed conflict sensitive and peace promoting planning in local planning and link to budgeting and procurement planning Link to regional and national plans, budget and national security concerns through the Regional Development Councils and the Regional Peace and Order Councils Define processes for community resiliency framework considerations in planning and budgeting
Local Devolution Transition Plans	Immediately conduct a capacity assessment on climate change adaption (planning, budgeting, implementation and accountability) as a baseline for the capacity enhancement components of local transition plans	With a community resilience framework as guide, identify capacity enhancement priorities for the transition period of the Mandanas-Garcia SC decision implementation in conflict vulnerable areas
National Agency Transition Plans	Sharpen what are the specific sources of data and information for climate change adaptability and planning and how these data are generated and made available to local government units for planning.	Sharpen what is national security and what is local engagement strategy and which mandates remain with national decision making and which are better carried out by local government units (different levels)

TABLE 3.4. Existing Fund Policy Issuances to Strengthen

	UNCONDITIONAL TRANSFERS	CONDIITONAL TRANSFERS
Conflict Sensitive and Peace Promoting Planning at the LGU Level (CSPP) *local expression is the Annual Appropriation ordinance and specifics in the Peace and Order and Public Safety Plans)*	Mandanas-Garcia SC Ruling Implementation of Shares from National Taxes Other revenue Sources	PAMANA (DSWD, NCIP, PhilHealth) 2022 Support to Brgy Development Fund (LGSF) Performance Challenge Fund
Local Climate Change Action Plan *Local expression is the Annual Appropriation Ordinance and specifics In the LRRRM Plan)*		Peoples Survival Fund NDRMMF Performance Challenge Fund

8. Summary of Recommendations

1. Guiding Paradigm and Policy Environment

- The current national crisis management paradigm needs to be re-examined and should not simply be pegged against the existing conventional corporate crisis management norms and practices. The scope of the three-crisis triggers (climate, environment and conflict) discussed in this paper are societal and even global in the case of climate, and hence, must always be examined in their entirety, including interactions with other external factors, especially in the threat or risk assessment stage.

- The current policy and systems and procedures of the National Government reflects a corporate approach which is falling short of what needs to be done in a rapidly evolving environment, especially in the threat assessment stage. Methodological standards should be set and applied for the requisite processes of 1.) assessment[61], 2.) response planning[62], 3.) management and monitoring of the crisis event itself, and 4.) mitigating degree of impacts that do materialize; and 5.) a realistic recovery cum resourcing plan, for fast and timely execution.

- This revised paradigm should translate to a change in the appropriate aspects of the existing relevant policies and their derivatives, i.e., the National Disaster Risk Reduction and Management Law as well as, all the related national and sectoral laws which should reflect safeguard provisions and appropriate indicators (e.g., losses and damages as % of GDP and/or sectoral GVA).

- The quality of the data and their interoperability for production of the necessary crisis management decisions[63] in a timely manner should be ensured. Priority should be focused on the critical elements: Sources of the hazards and their quantitative risks, together with vulnerability data involving exposed elements (population disaggregated by age, sex, and type of disability and their supporting systems: ecosystems, economic systems, and infrastructure).

2. Mainstreaming Revised Procedures and Protocols

- Prescribed new standards and procedures, responsive to the new crisis management paradigm or pursuant to a corollary new policy, should be systematically mainstreamed into the planning,

implementation and monitoring and evaluation processes at all levels of governance- national/sectoral, sub-national/regional, local. The use of conditional fund transfers linked to the capacity of LGUs to maximize their unconditional funds can serve to incentivize this approach.

- This must be done in a systematic and streamlined way, generating the right capacities for implementation. To execute this, a National Capacity Assessment[64] must be done in the context of the required new complementary capacities at various governance levels and horizontally, across the sectors. Results should feed into/guide a national Capacity Development Plan on Risk Reduction and Crisis Management that can become part of the transition plans of both NGAs and LGUs.

- The Plan should already reflect the potential sources and use of the Means of Implementation (Technology, including Approaches, Finance and Capacity Development). To this end, an Implementation Strategy should be drawn up and applied.

- Plan execution should be systematic, time-bound and strictly monitored, with an independent evaluation of the implementation and emerging results undertaken. Based on the evaluation, adjustments in protocols and approaches should be made immediately, noting the urgent nature of the goal, i.e., systematic reduction of losses and damages over time.

3. Drawing up of An Integrated Sustainable Development Indicator(s) System[65]

- To ensure that mainstreaming of new protocols is taken up systematically through a consistently reproducible process, a consolidated indicators system, comprising productivity and growth on the one hand, and safeguards indicators, on the other (e.g., incremental losses and damages as a percentage of GDP and losses and damages as a percentage of GVA) should be adopted.

- Coherence in its application should be observed, hence, a clear and succinct Implementation cum Monitoring Plan should be drawn up to guide the process.

4. Establish Institutional Partnerships with the National Government, the Academe, and LGUs to insource predictive modelling capacities for crisis management

- Considering the findings that lack of staffing/human resource has been identified as a significant constraint for project planning, management, and implementation, it might not necessarily hold true that building the capacity of local governments for in-depth scientific analysis may not be the best solution, since such knowledge takes several years, sometimes a decade, to develop.

DILG XII, through its Local Government Capacity Development Division, conducted a Training-Workshop on Climate and Disaster Risk Assessment on August 9-13 and 23-27, 2021. Photo from: DILG Region XII website

- Given the experience of transferring highly technical tasks to local governments, it may be prudent or wise to tap academic or research institutions, which already have the scientific knowledge, and 'insourcing' this expertise into local governments via long term technical assistance partnerships. In this manner, the analytical advice is delivered in a quick, efficient manner, while the local government personnel have more time and space to focus on using the analytical data for strategic decision-making to manage risk. This shall also further enhance or facilitate knowledge-sharing initiatives among stakeholders, with the National Government still maintaining a crucial role in leading or providing relevant data or information for crisis management.

- Develop mechanisms and platforms to ensure that knowledge and data (including databases, reports, research findings, guidebooks for conduct of research, interpreting and using data, or application of lessons learned, among others) are widely shared across all levels of government and can be considered to be integrated with the Freedom of Information (FOI) initiatives of the government.

9. Conclusion

Crisis of whatever source needs to be systematically analyzed, not only from single and direct triggers but its potential interaction with other factors that might aggravate the initiating event and therefore, complicate the expected outcome. The potential management options of the various crisis stages should also be studied and applied systematically through scenario building and the strategic application of the Means of Implementation. This would mean not only Finance but Technology (and Technical Approaches) and the right Capacities.

The Mandanas- Garcia SC Ruling is a cause for celebration and optimism. It can provide a sizeable amount of money that could significantly address funding gaps for managing crisis at the LGU level[66]. It is also an overt recognition not only of the importance of equity and justice, between and among the elements of a multilevel governance structure, but the critical role of the lowest governance group directly working with the people. Hopefully, this paper was able to convey that money is not always the ultimate solution. If innovation and customization of the crisis management procedures are undertaken, a standardized harmonized approach can be generated which will be easily reproducible and cost effective for the LGUs and frontline communities.

The bold prognosis is that if all branches and levels of Government in this country work harmoniously for a common purpose like crisis management towards a common outcome like Anticipatory Adaptation, the country's development targets will be achieved faster and in a predictable and consistent manner. A common understanding of purpose, transparency, and complementarity are critical but not impossible to achieve synergy, which is key to achieving the main goal of Sustainable Development.

DILG-7 personnel and UNDP visited Typhoon Odette affected areas and conducted an assessment for post-disaster recovery from January 31 to February 3, 2022 (DILG 7). Photo from: DILG Region VII Facebook page

End notes

1 The evolution of a course of danger to the logical outcome. It is also defined as "any event or period that will lead, or may lead, to an unstable and dangerous situation affecting an individual, group, or all of society". See Annex 3.1. for full discussion.

2 A related reference is Diokno-Sicat CJ and V Paqueo. An Assessment of the Criteria Used in the Determination of Philippine LGU Fiscal Viability. Discussion Paper Series No. 2021-25. Philippine Institute for Development Studies, December 2021.

3 A more detailed discussion on the definitions of Crises, Emergencies, and Disasters can be found in Annex 3.1. to this paper

4 The country's Philippine Institute of Volcanology and Seismology estimates an almost daily occurrence of earthquakes, many unnoticeable. The country's volcanoes also intermittently act up and generate emergency situations.

5 Primarily the three contiguous towns of Real, Infanta and General Nakar on the Pacific Ocean side of the archipelago, later dubbed as REINA.

6 Western Philippine Fault, Eastern Philippine Fault, South of Mindanao Fault, Central Philippine Fault, Marikina/Valley Fault

7 The Metropolitan Manila Earthquake Impact Reduction Study (which produced the earthquake impact reduction plan for Metropolitan Manila anticipates the mitigation of the expected impact.

8 A Canadian company operating in the island province of Marinduque.

9 The five categories identified by the National Unification Council (NUC) after extensive consultations became the basis for determining the multi-policy and multi-stakeholder paths to peace. In addition, the report states "Serious concerns were also expressed about, among others, the destruction of the natural environment"

10 Milestones: Policy Journey to Peace, 2006 p.118, Office of the Presidential Adviser on the Peace Process.

11 National Disaster Risk Reduction and Management Plan of 2011-2028, p. 16

12 Dimensions in terms of geographical scope and intensity of the hazard elements, e.g., precipitation, wind strength.

13 A 1 in 100-year event, while covering the same spatial extent in terms of effects, can become more frequent than originally experienced, rendering the potentially affected communities in its path, unprepared and therefore, extremely vulnerable to the succession of climate events of such magnitude that will hit them. Increased losses and damages because of the increased hazard occurrences may not be readily absorbed over time and compromise resilience which have been built up over the years.

14 That a similar event already occurred in the Philippines is unknown because such was not even in the PAGASA's records.

15 A more detailed discussion of the different types of pollution is included in this paper's Annex 3.1.

16 A phenomenon that ensures Earth and all life forms in it can optimally thrive through a temperature comfortable or beneficial for them. However, increasing greenhouse gas emissions from human activities since the time of the Industrial Revolution have caused an accelerated global warming upsetting the temperature balance posing an existential threat to all living things on this planet.

17 ibid

18 This figure is for illustrative and discussion purposes.

19 Type of Economies is discussed in Annex 3.2. For clarity and brevity, the climate change trigger is used as the focus of the analysis.

20 Diokno, Benjamin, Fiscal Decentralization After 20 Years: What Have We Learned? Where Do We Go From Here?, The Philippine Review of Economics Vol XLIX No. 1 June 2012 p. 9. Diokno talks of "creeping re-centralization" where devolved functions for health and social services are increasingly funded by centrally controlled funds substituting local funds.

21 The fund disbursements attest to this situation. While allocations are bigger than the indicated needs, the releases were not commensurate to LGU needs. The World Bank Report for 2015-2018.

22 Bangsal, Novel and Estrada, Miguel Antonio, The Role of Fiscal Decentralization in Reducing Poverty and Inequality: Empirical Evidence Using the Regional Authority Index, Congressional Policy and Budget Research Department (CPBRD) Discussion Paper, Issue No. 1 November 2020. p 13. The paper discusses the measure of "self-rule" as well as "shared rule". The latter measures how much sub-national governments can influence national programs, especially those that affect them. The Philippines scores low on "shared rule".

23 Approval of projects, beneficiaries, target areas, as well as release conditions for crisis funds are still lodged in national agencies as enacted into law by the GAA special provisions such as those for PAMANA, LGSF-AM, NDRMMF, and the LGSF-GEF among others.

24 Interview with a mayor from the Central Visayas Region

25 National funds when implemented at the local level retain their audit and accountability measures with the national agencies where the funds are appropriated.

26 In the case of climate change, generation of greenhouse gases (Carbon Dioxide, Methane, Nitrous Oxide, and the Fluorinated gases) in massive amounts, compromising the atmosphere's capacity to absorb and adjust to the GHGs' potential to enhance global warming.

27 Defined here technically as" to bring about a result such as a desired physical effect in a physical system like climate."

28 Crisis management is a matter of risk (probability of a danger materializing) management, whatever the trigger, whether anthropogenic (human induced) or natural such as climate hazards.

29 EO 138 - Full Devolution of Certain Functions of the Executive Branch to Local Governments, Creation of a Committee on Devolution, and For Other Purposes; Section 7.d

30 Based on the DBM Local Budget Memorandum No. 82, s. 2021, the FY 2022 NTA level is PhP 263,548,501,000 or 37.89 percent higher than the FY 2021 shares of LGUs.

31 Through such initiatives as the Harmonizing Actions in Local Planning for Disaster and Climate Adaptation component of the Support to Environmental Protection and Disaster Resilience Program and the Disaster Risk Management Institutional Strengthening, as well as initiated the development of Operation L!sto manuals.

32 Some of these programs include the Retooled Community Support Program which addresses collective issues identified by communities through the provision of government programs and services while ensuring sustainable development among GIDAs influenced by groups with an agenda counter-productive to peace and development. Other programs include the Capacitating Urban Communities for Peace and Development Program and the Support to the Barangay Development Program, which brings needed development support to conflict-affected and vulnerable communities.

33 This paper looked at conditional intergovernmental fiscal transfers focused on climate and conflict intervention such as the NDRRM Fund, People Survival Fund, Kalayaan Barangay Program, the Payapa at Masaganang Pamayanan (PAMANA) program and the Local Government Support Fund (LGSF) Support to Barangay Development Program. It also looked at the SGLG Incentive Fund that includes criterion for Peace and Development.

34 Unconditional fund transfers refer to those that do not have any requirements for release or performance targets to meet, such as budget support funds or automatic transfers while conditional fund transfers refer to those that have requirements for eligibility, targeting, fund release, and performance checks on delivery of specific fund objectives as well as those that have a defined or limited menu of projects and programs that the fund may be used for.

35 Commission on Audit, Assessment of Disaster Risk Reduction and Management (DRRM) at the Local Level, 2014 p.22

36 The latest is the Sixth Assessment Report.

37 The global expert institution on climate change.

38 This went on to have two protocols to strengthen commitments of Parties, the Kyoto Protocol in 2007 and the Paris Agreement in 2015.

39 Although practices like use of multi-hazard maps have become standard, these are no longer enough as these are "deterministic' instruments reflecting what already happened. That is why the Probabilistic approach has been mandated in the CCC's NCRMF Policy.

40 Local institutions refer to both public, private and civic institutions and organizations.

41 Philippine Development Plan 2017-2023, EO 70, DSWD MC 2020-003, (to be expanded to include other issuances)

42 Haim, Dotan; Fernandez, Maria carmen; Cruz, Micah, Evaluation of Payapa at Masaganang Pamayanan (PAMANA) Program, 2019 UNDP p.28

43 A discussion on, and argument for the need for a systemic analysis of LGU Capacity is included in Annex 3.7. of this paper.

44 Cities are classified into three categories: 1) Highly Urbanized Cities (HUCs) 2 with a minimum population of 200,000 and latest annual income of PhP50 million; 2) Independent Component Cities (ICCs) which are those whose charters prohibit their voters from voting for provincial elective officials; and 3) Component Cities which do not meet the requirements for HUCs and ICCs. Retrieved from: https://legacy.senate.gov.ph/publications/AAG%20on%20cities_FINAL_nov%20%2028.pdf

45 A discussion on deterministic vs probabilistic risk assessment is included in this paper's Annex 3.3.

46 Prevention Web of the UN Disaster Risk Reduction.

47 A scan of national policy evolution towards mainstreaming and embedding conflict and crises management at the local level is presented in this paper's annex.

48 The nature of this Instrument will change, however, as this will have to be aligned to the National Climate Change Anticipatory Adaptation Plan which is starting with the implementation of the NCRMF Policy anchored on the Probabilistic Risk Analysis approach.

49 A scan of national conditional fund transfers to LGUs is provided in this paper's Annex 3.4.

50 Republic Act No. 11292 - "An Act Establishing and Institutionalizing the Seal of Good Local Governance for Local Government Units and Allocating for this Purpose the Seal of Good Local Governance Fund," 2019.

51 Medina-Guce, Czarina UNDP study on SGLG, 2019.

52 Diokno-Sicat, Charlotte Justine, Mariano, Maria Alma P., Castillo, Angel Faye G., and Maddawin, Ricxie B., Local Government Conditional Grants: The Seal of Good Local Governance and the Performance Challenge Fund, Philippine Journal of Development, Volume 46 (2022) No. 1.

53 Ibid.

54 Diokno-Sicat, Charlotte Justine; Adaro, Catharine E.; Maddawin, Ricxie B.; Castillo, Angel, Faye G.; Mariano, Maria Alma P.; Baseline Study on Policy and Governance Gaps for the Local Government Support Fund Assistance to Municipalities (LGSF-AM) Program; Discussion Paper Series 2020-03, Philippine Institute for Development Studies; ; March 2020.

55 Some of the available Global Climate Funds are discussed in this paper's Annex 3.5.

56 Means Reduced Emissions from deforestation and forest degradation and currently piloted under the Green Climate Fund.

57 Market and non-market forms through the PA's Article 6.

58 At all governance levels

59 Fast/efficient or drawn out/ delayed.

60 To ensure complementation and fit for purpose of the requested funding and avoidance of costly duplication.

61 Use of the Probabilistic Risk Assessment Approach in the case of climate. See Annex 3.3. for discussion on this approach

62 For all scenarios: 1. Prevention of impact through zeroing out the risk; 2. Mitigation (lessening or reduction of degree of impact for risks that would materialize; and 3.) a realistic and quick rebuilding plan for areas assessed to be adversely affected.

63 Using a reproducible indicator such as risk, for example.

64 A discussion on, and argument for the need for a systemic analysis of LGU Capacity is included in Annex 3.7 of this paper

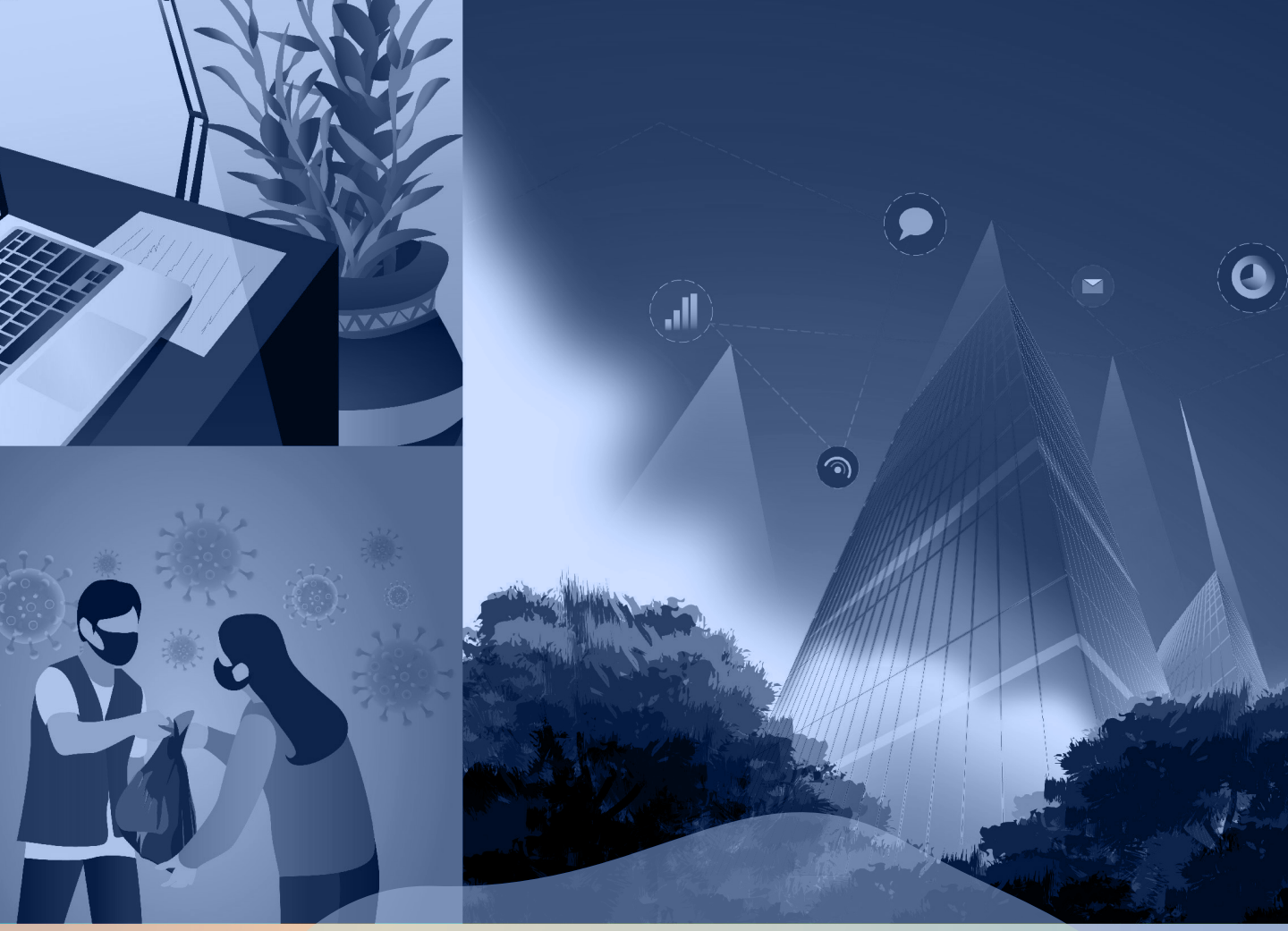
65 Already including the safeguards and their costs.

66 Even to simply put in the pre-requisites of a pragmatic and operational Crisis Management Plan and Protocols.

4 Civic Tech for Social Accountability in Philippine Local Governments

Nuancing citizen feedback and civil society empowerment for the Supreme Court 'Mandanas-Garcia' Ruling implementation

Czarina Medina-Guce



"Civic tech is an enabler, an upgrade of civil society. It is not a silver bullet for the myriad of challenges on CSOs' capacity to participate in governance or the openness of local political regimes to citizen participation and the civic freedoms. The implication is that empowering local CSO capabilities must continue while embedding civic tech in their ways of working."

The Newly-elected Officials (NEO) Orientation Program in San Fernando City, Pampanga led by DILG Secretary Benjamin Abalos Jr. (2022) Photo from: Local Government Academy Facebook page

1. Introduction:
The Challenge of Local Government Accountability

The 2019 Supreme Court ruling on the Mandanas-Garcia petition that corrects the basis of local government shares from national taxes may be seen as a triumph of fiscal decentralization. In 2022, local government units (LGUs) received a National Tax Allotment (NTA)[1] that is higher by PHP 263.55 billion, marking a 37.89 percent increase from the Internal Revenue Allotment of 2021 (DBM 2021). While decentralization theories assert that fiscal autonomy increases the likelihood of effective and efficient service

delivery, the claim assumes and demands high political and managerial capacity from LGUs, e.g., effective leadership and planning, sound local development policy, and efficient procurement and budget utilization. However, assessments point to more insufficiencies in such capacities (World Bank and ADB 2005, Celestino 2013, Candelaria 2014, Sicat, Mariano, Castillo, Adaro et.al. 2019), except for packets of successes in specific service delivery areas and local innovations[2]. To illustrate, the Department of the Interior and Local Government (DILG)'s assessment (2021a) of LGUs in 2019 shows that while most LGUs can pass timely budgets (96.78 percent), only 70.11 percent have approved development plans to support their local expenditure. Utilization-wise, only 67.35 percent of all LGUs spent at nationally prescribed rates on the local development fund, 68.52 percent on the disaster risk reduction and management fund, and 78.78 percent on the education fund (*Table 4.1.*).

While the national government will match lagging local fiscal performance with appropriate capability development interventions for the SC ruling implementation (Executive Order 138 of 2021), interventions to *safeguard the integrity of public expenditure* are still lacking. At most, there are legal and programmatic initiatives promoting transparency, e.g., the campaign for LGUs to pass local Freedom of Information (FOI) policies,[3] requiring LGUs to use the government electronic procurement system,[4] and requiring LGUs to fully disclose all fiscal reports regularly online and in local conspicuous places, among other audit policies.

DILG Region VI held a 3-day Mid-Year Planning Conference at District 21 Hotel, Iloilo City from August 10th to August 12th. Photo from: DILG Region VI website

However, the odds of improved LGU compliance to such prescriptions are not encouraging coming into the 2022 transition (*Table 4.1., Figures 4.1. and 4.2.*):

- From 2016 to 2019, the percentage of LGUs that successfully meet audit requirements fell from 94.23 percent to 69.64 percent.
- The percentage of LGUs that comply with the Full Disclosure Policy requirements[5] dropped from 94.23 percent in 2016 to 79.36 percent in 2018, then spiked to 91.21 percent in 2019, though still lower than three years prior.
- The percentage of LGUs with functional Local Development Councils was at 91.07 percent in 2017 but dropped to 58.62 percent in 2019. DILG (2020) reports that 87 percent of all development councils are convened according to the required 25 percent Civil Society Organization (CSO) representation.[6]

TABLE 4.1. Selected Performance and Accountability-related Indicators, 2019, in percentages

Indicators	All LGUs	Provinces	Cities	Municipalities
Timely passage of the annual budget	96.8	95.1	97.9	94.5
Legislative council-approved Comprehensive Development Plan	70.1	76.5	83.5	68.5
Utilization rate of the 20% Local Development Fund	67.4	76.5	80.7	65.5
Utilization rate of the Local Disaster Risk Reduction Management Fund's 70% allocation for disaster prevention, mitigation, preparedness, and response	68.5	59.3	77.2	68.2
Completion rate of, or fund utilization for the 2018 Local School Plan	78.8	96.3	86.9	77.0
Qualified or unqualified audit opinion and 30% compliance of COA recommendations	69.6	72.8	83.5	68.1
Compliance with the Full Disclosure Policy	91.2	97.5	96.6	90.3
Functional Local Development Councils	58.6	79.0	72.4	56.2

Source: DILG 2021

FIGURE 4.1. LGUs Meeting the Full Disclosure Policy Requirements, in percentages, 2016 to 2019

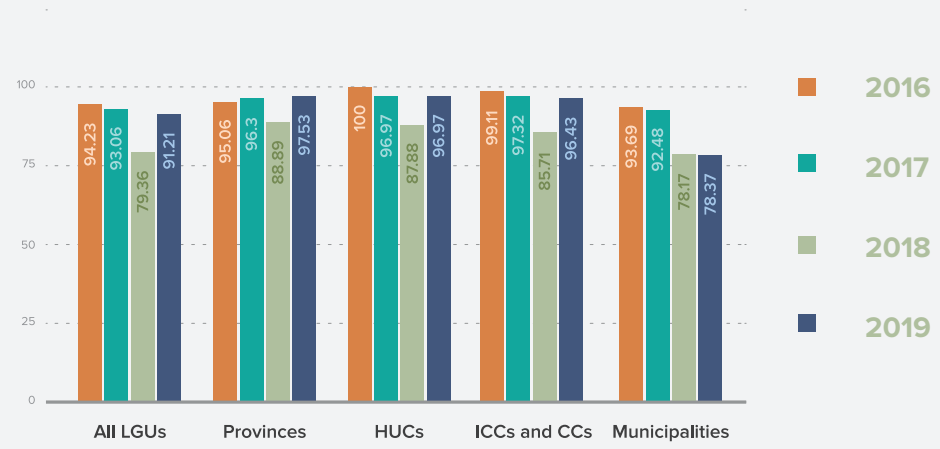
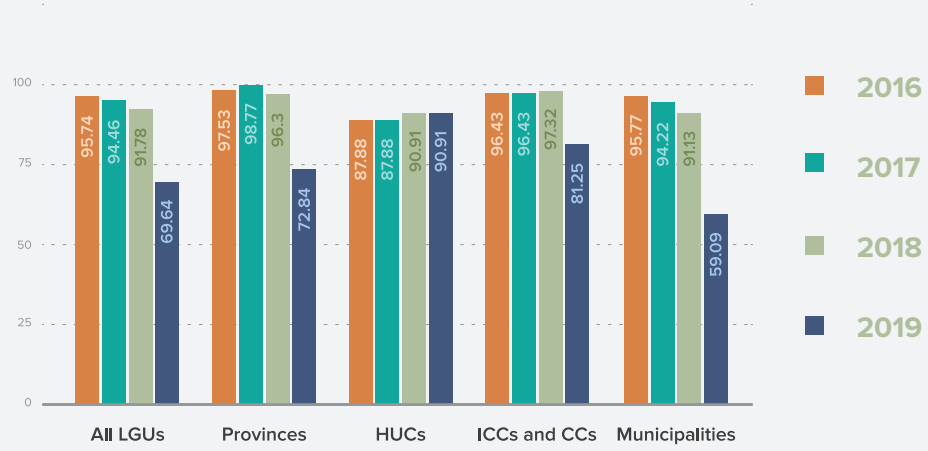


FIGURE 4.2. LGUs Receiving Qualified or Unqualified COA Opinion, in percentages, 2016 to 2019



For local accountability advocates, these matters are aggravated by insufficient legal and administrative follow-through when LGUs fail with such compliances or when citizens flag acts of corruption (Medina-Guce 2018, Medina-Guce and David 2020:85-88). Although LGUs top the list of filed cases in the Office of the Ombudsman (3,189 cases as of year-end 2017[7]), case resolution suffers from the inefficiencies of the Philippine justice system. Nationally recognized local government officials also occasionally receive mainstream media and public scrutiny on such issues,[8] but attention eventually evanesces with the turn of headlines. Overall, all indications point to the Philippine legal and administrative systems being nowhere near ready to scrutinize the spending of the all-fiscally autonomous 81 provinces, 146 cities, 1488 municipalities, and 42,046 barangays, and exercise teeth to hold them to account, when necessary, given the SC ruling implementation.

To this, the national government, with DILG at the helm, has been exploring mechanisms to improve accountability in LGUs. DILG's "Bantay Korapsyon" Program enables the Department to act on complaints and establishes stronger ties with the Ombudsman and Commission on Audit (COA). For this program in 2021, DILG reports 141 complaints filed against local chief executives (LCEs), 3003 complaints acted upon by regional operating units, and 461 investigations regarding the Social Amelioration Program (DILG 2021b:27). In October 2019, DILG also released Memorandum Circular 2019-172 which introduced the imposition of administrative sanctions for LGUs failing to comply with updating their respective medium-term Comprehensive Development Plans and the Comprehensive Land Use Plans, which serve as basis for their annual investment programs and budget allocations. While there had been no such sanctions imposed as of writing of this report[9], DILG reports a 21 percent increase in CDP compliance among LGUs since the policy was issued (Medina-Guce 2022:16).

Furthermore, DILG draws from *social accountability* initiatives of the past decade to inform its 'sweeping' citizen empowerment strategies to match the challenge posed by the LGU NTA increase[10]. One recent effort was the pilot implementation of Development LIVE (or DevLIVE) that explored the transformation of a government monitoring tool into a *civic technology or civic tech*. While the DevLIVE pilot completion was hampered by COVID-19 response, studies highlighted the relevance of civic tech and evidenced its potential to amplify citizen voice and inclusion, equip local CSO agenda-setting, and generate a safe and autonomous digital space in which feedback could trigger LGU responsiveness (Medina-Guce 2019a and 2020a).

DevLIVE: From gov tech to civic tech

Pilot background.

DevLIVE was first conceptualized as a gov tech to source citizen feedback for monitoring, which initially meant submitting technical information on the quality and status of local infrastructure projects funded by the national government but implemented by local governments. However, UNDP and DILG's consultations with CSOs who are working on the area of transparency and accountability, pointed out the importance of accessibility of technology to the citizens. This resulted into a refined set of feedback variables that are framed from the satisfaction of citizen users of the projects: project visibility, functionality, quality; accessibility, timeliness, relevance, and operation and maintenance. DevLIVE's shift towards consolidating citizen feedback as users of the project articulated the desire of UNDP and DILG to develop a truly civic tech from the pilot. DILG deployed DevLIVE in 282 municipalities from June 2019 and intended to complete a feedback loop that ends when LGUs receiving actionable reports from the platform are monitored on their response and the resulting citizens' satisfaction. However, the pilot was halted by the COVID-19 health emergency response of DILG units all over the country.

Assessment highlights.

The assessment of the pilot run was framed for learning regarding its relevance and the possibilities of civic tech at the local level. The report highlighted the following:

[1]

DevLIVE was relevant at three (3) levels:

- First is *technical accessibility,* which allowed more citizens to participate even with low familiarity with the technical specification of projects that usually shape CSO monitoring forms;
- Second is the *relevance of direct participation*, which allowed another element to the inclusion benefits of DevLIVE for citizen engagement; and
- Third is the *relevance of a safe space* which is provided by DevLIVE through backend facilitation of DILG that combines the component of anonymous reporting and validation into the process. The CSOs also appreciated that the response protocols only need one negative report (one citizen) for the responsible LGU to be called out.

[2]

Local CSOs perceived DevLIVE as a potential enabler for more *inclusive evidence-gathering for their development agenda*.CSOs suggested the mainstreaming of its implementation through participatory platforms, such as; the local development councils, special bodies, and project monitoring councils. Anecdotes of reaching stay-at-home mothers and spouses of farmers were also documented, which meant civic tech, when deployed with the activities of local CSOs, could reach citizens who usually do not participate in gatherings organized either by government or CSOs.

[3]

During the pilot run, *effective engagement practices* involved high levels of strategic coordination among actors composed of the DILG offices, CSOs, and LGUs. This includes stakeholder groups leveraging on their respective networks and resources, and when possible, organizing activities with their respective constituencies, especially in the case of CSOs and LGUs. Furthermore, the inclusion of the youth like students and members of the Sangguniang Kabataan, and *professional and neighborhood associations* were also observed. Making DevLIVE an agenda in various *participatory and collaborative platforms* was also seen to encourage more citizens' participation.

Sources: Medina-Guce 2019a and 2020a

Such findings chart hopeful prospects for civic tech at the local level. Its potential outcomes are both developmental and democratic: *developmental* in the sense of LGU responsiveness translating to effective service delivery, returning to the promise of decentralization theories, and *democratic* in the sense of achieving the measure of citizen participation, which is increasing the influence of citizens in governance issues that matter to them (Gaventa 2007, IAP2 2014).

How, then, does civic tech enable social accountability in local governments? This paper dives deeper into the nexus of social accountability and civic tech to sketch pathways for increased development and democratization in Philippine local governance. The analysis first accounts for social accountability enablers and differentiates citizen feedback that benefits government for its own accountability checks versus that which is intentional for enabling citizens and their voice. The second part analyzes civic tech as an 'upgrade' of mechanisms used by civil society mechanisms and to determine tech intended only for government efficiency. The final part seals the pathways of civic tech and social accountability and it accounts for issues that should inform future policy discussions in light of local government service delivery and integrity in the SC ruling implementation.

2. Social Accountability and the Assumptions of Feedback

Social accountability improves *institutional performance* through *empowered citizen voice and participation* aimed at *government response*, especially in contexts with weak anti-corruption institutions (Malena, Forster, and Singh 2004, Fox 2015; U4 Anti-Corruption Resource Centre n.d.). The scope of citizen action aimed at social accountability have varied intermediate frames (Brinkerhoff and Wetterberg 2016): (a) transparency-related, such as social audits, watchdog activities, and independent budget analysis, (b) collaborative in co-producing policies and programs (e.g., participatory budgeting or planning, and health and education boards), and exercising oversight for compliance of standards, and (c) confrontational in interrogating or contesting policies (e.g., right to information campaigns, investigative journalism, and protest action). Nonetheless, every social accountability effort targets at least one among the goals of *effective service delivery, integrity of public institutions and actors, and citizen empowerment* (Brinkerhoff and Wetterberg 2016:10-11).

Social accountability conceptual frameworks vary richly on the analytical foci and entry points,[11] but there is relative consonance about its *critical enablers*, summarized per area and actor in Table 4.2. Underlying these enablers is the argument that *social accountability can only be realized by state action*. Citizens may achieve varying successes in *putting pressure* on government but translating the pressure into political response is still primarily in the realm of government (ANSA-EAP 2010, Poli, Meknassi, Thindwa, Kumagai et.al. 2020). Motivating government decision-makers to appropriately respond, therefore, is the wild card in social accountability practices.

TABLE 4.2. Consolidated Social Accountability Enablers

Area/Actor	Enabling Factors
Civil Society, CSOs, Citizens	• Empowered and autonomous: political, social, organizational, fiscal • Capacity to sustain participatory engagements
Engagement space (context-sensitive)	• Conducive power relations between state and citizens • Enabling contributions of other actors., e.g., media, private sector, development partners • Strong exercise of civic freedoms (association, expression, assembly) • Mechanisms to ensure openness, fairness, and inclusion • Transparency and access to information • Mechanisms to enforce consequences of failure to fulfill mandates and agreements
Government, Political Leadership, Bureaucrats	• Political capacity to deliver on its policies • Modern and professional administration (versus being subjected to patronage politics) • Open, competent, credible, and reform-oriented leadership

Sources: ANSA-EAP 2010, Brinkerhoff and Wetterberg 2016, Camargo and Stahl 2016, Poli, Meknassi, Thindwa, Kumagai et.al. 2020

The enablers of social accountability initiatives are challenging to achieve, but possible, nonetheless. In the Philippines, there have been several social accountability programs through the years (ANSA-EAP 2010:33-52). For instance, the Right to Know Right Now coalition's campaign for access to information continues to face political blockages and delays for a congress legislation, but it gained a partial gain with the Executive Order No. 2 of 2016 mandating information disclosure from executive agencies. The Concerned Citizens of Abra for Good Government's public monitoring of infrastructure projects, which traces its beginnings to citizen action under the Marcos dictatorship, has transformed into a model for local participation. Meanwhile, the internationally recognized Citizen Participatory Audit program, piloted by the Affiliated Network for Social Accountability in East Asia and the Pacific (ANSA-EAP) from 2012 to 2014, has been formally institutionalized as the flagship citizen engagement program of the Commission on Audit through a 2018 resolution ensuring sustained funding and implementation. In this program, citizen volunteers and NGOs are trained and incorporated into the commission's audit teams, which not only strategize and conduct audit activities, but they also contribute to various program and policy discussions within the commission. (COA 2013, Dela Cruz and Suerte-Cortez 2015, Aguinaldo 2017, Tan 2019, ANSA-EAP n.d., GIFT n.d.).

The varying successes of these civil society-led initiatives may be tied to the effectiveness of guarantees that the target government offices receive, internalize, and respond to citizen feedback. This is described as *government responsiveness* in governance literature while the process, on the other hand, is called closing the feedback loop in the innovations circle. Hence, citizen feedback links social accountability and civic tech for the latter boosts CSOs' *strategies for voice and influence aimed to attain appropriate and satisfactory government response*. Feedback is the building block of voice.

The use of the term 'feedback', however, also requires clarification considering that oftentimes it is loosely applied in discussions on citizen participation process and project monitoring activities. This analysis qualifies feedback as a broad category that may be categorized according to its scope, intent, and immediate beneficiary (*Table 4.3.*), with notable implications for closing feedback loops.

TABLE 4.3. Feedback Types and Immediate Beneficiary

Feedback type: Scope, Intent	Immediate Beneficiary	Examples
Invited The feedback parameters and data points are pre-defined by government.	*Government* Vetting/triangulating government information; Troubleshooting defined government mechanisms	*Project monitoring platforms, mechanisms; Transparency portals* *National government:* Department of Budget and Management's Project DIME (Digital Information for Monitoring and Evaluation)[12] Local government: Project Monitoring Committees[13]
Demand-specific Feedback expresses a need tied to a specific government service. *Neutral:* Technical requests and clarifications (gaps of access to information) *Contentious:* Grievances or complaints (gaps in delivery of demanded services)	*Citizens* Platforms and mechanisms that cater to individual concerns; Designated, streamlined, protected spaces for specific needs	*Helplines, hotlines, help desks* *National government:* Electronic Freedom of Information, Civil Service Commission Contact Center ng Bayan, Land Transportation Franchising and Regulatory Board Public Assistance and Complaints Desk/Hotline,[14] Philippine Statistics Authority Feedback and Redress Mechanisms[15] Local government: CSO desks Barangay Violence Against Women Helpdesks (PCW 2012)
Deliberative Feedback fuels claim-making and dialogue. It expresses collective concerns and intended to generate a public good.	*Both* Government: Legitimacy and policy effectiveness Citizens (represented by CSOs): Access to agenda-setting, resource allocation, other decision-making	*Councils, committees, and boards; Townhalls* *Local government:* Local Development Councils, Local special bodies (Health Board, Education Board, Peace and Order Council), People's Council

First, the scope of *invited feedback* is pre-defined by and immediately benefits the government. While citizens benefit from accessing information, they serve an *instrumental* purpose of populating datasets for government's verification and troubleshooting. In a sense, the government outsources its monitoring function to citizens. Within the course of the feedback engagement, there are spaces for participation indeed, and there is democratic value in providing and sustaining such spaces. However, at large, citizens would have to *wait until their feedback translates to project-facilitated services* for their participation to yield felt impact, demonstrating a passive and inefficient feedback loop. Such delay in translating their submitted feedback to felt benefits strains citizen trust in the process and erodes political efficacy, or *participatory frustration* (Fernandez-Martinez, Garcia-Espin, and Jimenez-Sanchez 2020).

For example, a documented unintended consequence is citizens' dissociation of monitoring from an empowering social accountability action to unrewarding volunteer work:

> The question of funding is most contentious when it comes to providing honoraria to [citizen monitors]. The contention stems from the perspective of CSOs that, if a citizen spends eight hours a day, several days a week to perform monitoring tasks for government [public financial monitoring] requirements, then the stretch in time and opportunity cost makes the task approximate working arrangements. As one CSO informant notes, (paraphrased):
>
> 'The issue of giving honoraria to citizen monitors comes to light because, *in practice, they just function as augmentation of a government task.* If you think about it, the bottom line of the sentiment is that they feel the service is not commensurate to the incentives, and we're not even talking about finances here. *If citizens feel they are more deeply heard, that their work influences government decisions,* and they are not spending their days going to one project site to another, then maybe the honoraria won't be an issue. It's service, not work. But it seems they feel it's work.' (Medina-Guce 2020b:39, *highlights added*)

The social accountability intervention, therefore, is to remove the passive waiting element and enable civil society's *appropriation* of government information for its autonomous agenda. As per examples of independent citizen budget tracking[16] and FOI practice reports,[17] monitoring feedback is *claimed* by civil society and articulated as calls for policy, process, and budget reforms constituting a different set of *actively* pursued feedback loops.

Second, feedback may also be *demand-specific*, which implies a clear ask forwarded by the citizen. The expression of the demand may be *neutral* (or technical and informational) or *contentious* (in the form of grievances or complaints). These temperaments of the demand expression, nonetheless, both highlight the need for specific information or service that the government ought to provide. Response mechanisms to these demands are interesting in analyzing social accountability because *they do not require a collective voice* to trigger government action. If functional and effective, these mechanisms move government resources with each received citizen request or report.

Such is observed with the mechanisms of the Presidential Communication Operations Office (PCOO)'s electronic FOI (https://www.foi.gov.ph/) platform, which as of 2020, received 42,086 information requests from 12,912 citizen-users (PCOO FOI 2020a), and the Civil Service Commission (CSC)'s *Contact Center ng Bayan*[18] which has resolved 92.23percent of the 6,612 frontline service delivery-related reports received from multiple platforms from January to October 2021 (CSC 2021). For both mechanisms, national policies clearly set implementation protocols for accountable offices and required resources, response time standards, and modalities to reach citizens to close feedback loops (PCOO FOI 2020b, CSC n.d.). However, demand-specific government mechanisms do not always follow through with citizen demands. For example, local Violence Against Women (VAW) helpdesks may be prevalent in barangays all over the country, but in 2018, less than 20percent are fully compliant with established standards (World Bank 2020a:33). Reports also persist of VAW officers discouraging women to pursue cases, to "sort out" sexual harassment issues as a private familial matter (David, Albert, Vizmanos 2017:31-32). Such portrays a broken loop scenario wherein government received the feedback but failed to internalize the nature of the claim (i.e., for the VAW helpdesk to activate government resources to uphold women's rights).

And thirdly, feedback may also be intended to engage deliberative platforms, which requires the *transformation of citizen feedback (information) into a collective claim (voice).* Deliberative feedback may draw from the earlier two types but is now aimed towards producing a citizen-defined public good. Meanwhile, government also immediately benefits from this feedback if it is committed to gain from the public trust and legitimacy that participatory governance facilitates. As citizen participation frameworks assert, the measure of participation is the extent of influence of the public on government decisions (Arnstein 1969, IAP2 2014). This requires, however, that citizens and their representative CSOs operate with the necessary capitals, e.g., political, social, and organizational, to establish a position of influence in the deliberative space. Hence, echoing an earlier point on critical enablers, the final determinant of social accountability success is the pivotal trigger that moves the government to respond.

Engr. Harold Ray T. Rosales of DILG Region XI introduced the DevLIVE mobile app to the participants then proceeded with the viewing of the Development Live (DevLIVE) mobile app video presentation. The DevLIVE is an application that allows citizens to provide feedback on the implementation status - progress, timeliness and effectiveness - of local infrastructure projects. Photo from: DILG XII Feature Story submission for DILG Annual Report 2020

Articulating these citizen feedback nuances is essential in future social accountability discussions to ensure that the social character is upheld. Specifically, these questions need to be answered: *What is the theory of the feedback loop and its assumptions? How does feedback as a process empower citizens? How does feedback transform into voice of an empowered civil society to put forward broader aims of inclusion of marginalized sectors, e.g., women, LGBTQI+, indigenous peoples, youth, and the poorest of the population? Finally, how does the social accountability initiative turn the critical knobs for the appropriate government response?* When it comes to using technologies to respond to these questions, one clear social accountability booster is civic tech.

3. Civic Tech:
Upgrading Civil Society's 'Operating System'

To substantiate *how civic tech boosts social accountability*, another clarification must be made on *what civic tech is*, particularly its difference from 'gov tech,' and *what makes it work in local settings*.

The 'civic' in the tech

While both aim to improve governance and service delivery, *gov tech refers to technologies that benefit government processes*, including but not limited to modernizing systems for allocative efficiency, improving user-centeredness of transactions with citizen-clients, and using big data for transparency and decision-making (Bouganim 2014, Van Ransbeeck 2019, World Bank 2020). Meanwhile, *civic tech benefits the exercise of civic life* (or civil society as theoretically defined as the associational space and actors independent of government and the market). For example, civic tech in other countries support community organizing and agenda-setting, coalescing for policy advocacies, and facilitating associational activities, to name a few (Bouganim 2014, Van Ransbeeck 2019). With these definitions, it is notable that majority of tech innovations in the Philippines are gov tech, even the ones intended to 'open government' and enable citizen participation (*Table 4.4.*).

TABLE 4.4. A Shortlist of Gov Tech with Citizen Participation Elements

Program	Goals	Assumed/Targeted Citizen Roles, if any
Open Data Philippines and National Government Portal[19]	To increase availability and utilization of government data that will pave the way toward data-driven governance (for the government), and data-driven innovation and development (for the general public)	The program seeks to increase the public's use of the data, which is currently "sub-optimal," thus with other factors, "inhibit government data from attaining not only its economic value, but also its true and intrinsic potential as building blocks for good governance."
Philippine Government Electronic Procurement System (PhilGEPS)	To work with civil society and government stakeholders to identify contracting data that will be subjected to mandatory publication using machine-readable formats	It will allow civil society organizations, media and the public in general to analyze and monitor government contracts providing them with better means to provide feedback and participate in government decision-making. It will enable citizen-partners/auditors, to be involved in public audit activities using the PhilGEPS
Project DIME (Digital Information for Monitoring and Evaluation)	To establish an efficient, effective, and participatory monitoring, validation and reporting mechanism for selected government infrastructure programs and projects through an interactive transparency website	"The feedback mechanism of the transparency website will enable the citizens to be involved in the monitoring of selected infrastructure programs and projects at their localities, and for [agencies] to address/respond to the issues/concerns raised."

Reference: OGP-PH 2020 (Commitment narratives)

The distinction is useful to conceptually categorize the client and intermediate aim of tech innovations, echoing much of the social accountability and invited feedback concerns from the previous section. *While any tech is still essentially a tool, every tech is intentionally developed with a value proposition for an intended user.* In this sense, tech posing as the civic type but in practice benefits government falls short in evidencing itself against citizen/civil society empowerment outcomes, *because citizens are not the tech's clients, but the eventual beneficiaries of the tech's boost of government*. To illustrate, the civic outcome of transparency portals (particularly the static data repository type) is an offshoot of CSOs and interested parties developing claims out of the disclosed government information. If CSOs and citizens are not equipped to appropriate the information and make nothing of it, then the transparency portal stands idle and unutilized. This is because such type of technology was designed to feed into government's aim to practice transparency and be legitimized for it but without addressing the essential requisite of citizens' capacity to use the disclosed, often technical and voluminous, documents. In such scenarios, gov tech is claiming a higher-level civic outcome *without establishing its contribution to the change pathways,* while using public resources to sustain static data repositories *without strategically and purposively facilitating the value* it proposes for the public.

The scenario presented, however, helps highlight that in practice, civic tech and gov tech demand each other's effectiveness. GovtechFund (Bouganim 2014) provides a helpful metaphor of both being *"operating systems"* – gov tech for government, and civic tech for civil society. As such, fulfilling the potential of both innovations require a high degree of interoperability. To illustrate, civic tech demands access to *information*, e.g., government data on project locations and status, budget allocation and expenditure, from which citizens can base their feedback and civil society can use as evidence for claim making. Meanwhile, gov tech is maximized when it is *user-centered,* which entails addressing the last mile of making government information (which is usually voluminous and highly technical) more comprehensible to citizens and CSOs. In the Philippines, this idea is pronounced in government efforts to steer away from setting up mere document repositories to user-friendly interactive gov tech (e.g., portals providing project visuals, analytics, geotags, and other consolidated information). While gov tech improves in this manner, the pathways to develop more civic tech in the Philippines, especially at the local governance level, are still unclear.

Simply put, using technology for promoting civic practices is not mainstream in the Philippines. There is no national policy reference that concretely establishes the goal of developing civic tech, and as such, there is also no baseline of information about the extent that CSOs possess forms of civic tech in their advocacy and participation tools. The absence of such policy orientation may be attributed to a *feasibility argument* such that a civic tech-facilitated boost in governance is not imagined as an immediate plausible scenario with current government capacities. The reason almost always immediately cited is the lack of a r*eliable internet connectivity infrastructure* that can service communities outside of urban centers, especially in geographically isolated and disadvantaged areas (which is 27.36percent of all Philippine barangays [DOH 2020]). Another hindrance is the *setting up and maintenance costs* that could rise incrementally as the tech's

DILG Region VII conducted the Citizen Satisfaction Index System (CSIS) utilization conference in the southwestern town of Dumanjug, Cebu last June 15, 2022. Photo from : DILG Region VII Facebook page

implementation is scaled up and out. However, these two reasons may be soon rendered irrelevant by civic tech that is built and implemented precisely to address such limitations.

Such is Mahintana Foundation Inc.'s open data kit (ODK), which has become the civic tech of choice of the multi-sectoral coalitions and the provincial and several municipal LGUs in Central Mindanao. ODK is an open-source data collection and analysis tech that features offline functionalities (meaning, it could store information offline until a connection is available to upload the data collected to a cloud), highly customizable content and design, and complementation with other data visualization and analysis apps and software (ODK 2020). Primarily through the European Union-supported RESOURCEGov project (n.d.) for strengthening CSO participation in local governance, Mahintana Foundation deployed ODK in an impressive range of engagements including social accountability direct action (such as for the Open Government Partnership international commitments of the Province of South Cotabato[20]), service delivery and capacity-building for other local CSOs, and tech transfer/sharing with LGUs for improving data systems for infrastructure, health, social welfare, waste management, and local revenues (*Annex 4 for details*).

To state the point differently, if a CSO's effective use of civic tech could accomplish all such things in some of the most remote areas in the country with high poverty levels and limited-to-no internet connectivity, then civic tech with similar design and deployment sensibilities should be imaginable for other local governments.

Lessons for local

For *pursuing civic tech in local governance*, the examples – Mahintana Foundation's ODK and the DevLIVE pilot (summarized in *Table 4.5.*) – provide insights that resonate with global civic tech analysis (Gigler, Custer, Bailur, Dodds, et.al. 2014, Knight Foundation 2015, Network Impact 2015, World Bank 2016, Herringshaw 2017, Peixoto and Fox 2017, Peixoto and Sifry 2017, Gilman 2018, Gelb, Mittal, and Mukherjee 2019, Hartley 2019, Kermeen 2020, Pew Research Center 2020).

TABLE 4.5. Summary of Civic Tech Lessons from Mahintana Foundation's ODK and DevLIVE Pilot

Civic Tech Principles/Lessons	Mahintana Foundation's Open Data Kit	DevLIVE pilot for a civic tech shift
CSO ownership	[a] The civic tech is identified with the CSOs (Mahintana Foundation and its partners and coalitions) which helps legitimize political capacity among stakeholders. [b] CSOs can command the purpose, design, and implementation of the civic tech with agility and responsiveness to their agenda and priorities.	"The pilot implementation surfaced DevLIVE's observed relevance in three levels. First is the relevance of the technical accessibility, which allowed more citizens to participate even with low familiarity with the technical specification of projects that usually shape CSO monitoring forms. Second is the relevance of direct participation, which allowed another element to the 'inclusion' benefits of DevLIVE for citizen engagement. And third is the relevance of a safe space provided by DevLIVE that combines the anonymous reporting and validation components in the process." (Medina-Guce 2020a:3)
Strategic focus on boosting civil society aims and capacities	[a] CSOs have the technical and analytical capacity on the civic tech use and customization that establishes their technical and analytical capacity. The civic tech enables them to programmatically counterpart with government and other sectoral partners and boost the technical component of policy proposals and advocacies. [b] CSOs adjust the civic tech implementation to respond to the practical realities of their members and communities represented (e.g., internet connectivity, gadget costs).	[a] CSOs foresee DevLIVE's use value as a strategic advocacy and lobbying instrument if the CSOs can access the backend and customize the tech for a broader scope of monitoring and policy engagement functions (i.e., beyond local government infrastructure projects). [b] "DevLIVE is seen as (a) a more cost and time-efficient alternative for CSOs and citizens to send feedback to their municipal governments, (b) a mechanism to help CSOs prioritize which communities to visit for public dialogues, and (c) a strategic way to adjust to the funding and mobility restrictions during and post-pandemic to conduct community-level activities." (Medina-Guce 2020a:4)
Complementation with other civil society empowerment efforts	[a] The civic tech serves as a tool for CSOs to conduct comprehensive needs assessment of their communities, of which process boosts the mobilization and collaborative activities of NGOs, POs, volunteers, and even government. [b] The civic tech increases the capacity of CSOs to propose and deliver projects funded by international development partners and private sector.	[a] DevLIVE is seen as a potential booster to the quality and range of CSOs' contribution to Local Special Bodies and Project Monitoring Councils. [b] The civic tech showed promise as a platform to concretely mobilize communities. During the pilot, effective engagement practices involved high levels of strategic coordination among stakeholder groups leveraging on each other's networks and resources. Volunteer engagement of the youth (students and Sangguniang Kabataan) and professional and neighborhood associations were also observed. (Ibid)

First, civil society must have *ownership* of the civic tech. Ownership means not just at a symbolic (branding) or role-specific level, but more strongly on the *practical command of the tech* to respond to emerging social needs. Doing so implies different ways of exercising agency between citizens and CSOs. *Citizens (as individuals)* serve as front-end co-creators who directly benefit from the content and results of civic tech, and are not simply treated as uploaders of information. Meanwhile, *CSOs serve as back-end owners who can steer and wield civic tech in agile and effective ways*. To use an earlier metaphor, if civic tech is the operating system of civil society, then CSOs must be able to code it, and not just use what the published interface offers. In this way, civic tech becomes part of the tools, spaces, and strategies that CSOs use at will in direct response to citizen needs.

Second, civic tech *alone* cannot serve all concerns of citizen populations. Expecting civic tech to mystically solve what the combined efforts of government and civil society cannot accomplish in the status quo is misplaced. Any tech of such scale would naturally be exorbitantly expensive to create, deploy, and sustain, which then traps the argument back to the issues of connectivity and costs as hindrances to civic tech development. The question should not be 'how civic tech could address inclusion'. Instead, the question should be, *how civic tech could most effectively 'upgrade' civil society's strategies for inclusion*. The difference there lies in the outcome attribution to civic tech, if it is expected to deliver a magical technical solution alien to a *local context, or it emerges from a dedicated analysis of civil society's empowerment needs to pursue its goals.* At the heart of this point is a resistance against the technocratic, 'power blind' approaches to governance and development that privilege problem-solving technologies over problematizing the dynamics of power arrangements (Hirst 2000, Mayntz 2004, Haus 2010). Civic tech should always be coherent with *what strengthens the agency of the people in their context*. To do so, there are lessons to learn from social innovations:

- On the tech side, civic tech should be *designed by (or with) the people it intends to empower*, not designed for them. This is most basic yet highly overlooked because ICT innovations – even the ones intended to empower the people – still thrive in the realm of tech design experts. This applies to all inclusion-exclusion category is targeted e.g., *gender, poverty, digital literacy,* and deployed with a profound understanding that marginalization is often *intersectional.* This means, for example, that designing a civic tech for women should account if they are also poor, educated, or members of indigenous groups, et.al. Increasing caution is raised against 'design thinking' tech methods especially when the problem explanations and user voice is assumed and superficially represented, and not backed by processes that democratize and evidence the problem definition (Ersoy 2018, Iskander 2018, Dell'era, Magistretti, Cautela, et.al. 2020).

DILG Caraga conducted a face-to-face rollout orientation on the Guidelines for the Results-Based Monitoring and Evaluation (RBME) of LGU Infrastructure Projects (RLIP) last September 12, 2022 at Grand Palace Hotel, Butuan City. Photo from: DILG CARAGA Region Facebook page

- On the *civic* side, civic tech should be *embedded in mainstream 'offline' civil society strategies,* e.g., organizing and dialogues, project monitoring activities, representational duties in councils and assemblies, and piloting innovations to produce proofs of concept for government to adopt. This entails a high level of political savvy to constitute a theory of change sealing the connection of the civic tech to the political opportunities in civil society's intended use.

- On the *outcomes,* civic tech implementation should observe d*isciplined monitoring and evaluation practices* (e.g., randomized controlled trials, comparative outcomes mapping-harvesting, and other related impact evaluation approaches). Since civic tech works best when coherent with civil society strategies, it needs to be assessed with the intent to evidence what works in specific contextual issue permutations. For instance, global and local evidence point to high levels of civic tech and participatory success when government counterparts are politically receptive. How could, then, civic tech empower civil society in less politically conducive localities? Another example would be, does a CSO's use of civic tech to improve its programmatic interventions motivate citizens to sustain and expand the scope of their participation; and if so, what about the civic tech helped? The discipline in evidencing these kinds of questions is not meant to be academic, rather possibly a game changing intervention to understand and support civil society empowerment at the local level.

And thirdly, civic tech alone does not empower citizen voice or strengthen civil society. While civic tech needs to be

purposively designed for these outcomes, its success rests on *local CSOs' effective wielding of the tech* for their independent agenda and the *quality of political-civic spaces* that would legitimize citizen feedback and participation in governance. *Civic tech is an enabler, an upgrade of civil society*. It is not a silver bullet for the myriad of challenges on CSOs' capacity to participate in governance or the openness of local political regimes to citizen participation and the civic freedoms. The implication is that empowering local CSO capabilities must continue while embedding civic tech in their ways of working.

These lessons informing civic tech in local governance pose immense challenges, but with encouraging opportunities when compared with the directions that global civic tech is treading. Digital Communities (2015) see the trend of digital civic engagement developing with traditional and new services delivered by local governments. 'Smart cities' are developing more 'eParticipation' tech corresponding to levels of citizen participation (from being informed to empowered) in city infrastructure development (Gasparro 2018). And a Pew Research Center study (2020) predicts more digital innovation by 2030 aimed at enhancing democracy including digital civic engagement-driven policymaking and local communities' connectivity to larger advocacy support networks. In the Philippines, the implementation of the LGU NTA increase could – rather, should be a major push towards the direction of developing civic tech for local governance.

4. Civic Tech for Local Social Accountability: Strengthening the Pathway

The discussions of social accountability and civic tech to enrich the policy development on LGUs in the SC ruling implementation scenario have emphasized the following:

Social accountability is a pathway to improve service delivery, integrity of government, and citizen empowerment. The success of social accountability initiatives, however, highly anchors on the *effectiveness of the guarantees that government will receive, internalize, and respond to citizen feedback.* It is therefore of utmost importance that citizen feedback is not invited in ways that government predefines its content and purpose and leaves the citizens' benefits for having had participated passive and unclear. The 'social' character in social accountability is best pursued when *civil society can assert and improve on its associational and agenda-setting goals in the process of giving feedback.* In this sense, the social accountability outcome of citizen empowerment is not limited to them having had the space to feedback and then benefiting when services are eventually given. Citizen empowerment emerges more from them actively shaping the *transformation of citizen feedback to a collective voice.*

Civic tech is a clear way to boost social accountability efforts by upgrading the 'operating system' of civil society to pursue its goals. Civic tech must be distinguished from gov tech to emphasize that *civil society must have ownership to customize, appropriate, and wield the civic tech at will to exercise strategic agility* for its advocacies and activities. In this way, civic tech emerges from analysis of CSOs' empowerment gaps and aims for their improvement; it does not and should not be treated as a silver bullet to solve inclusion or CSO capability issues. The metaphor of upgrading civil society's operating system means *to stimulate CSOs' effectiveness, efficiency, and impact, while observing the utmost levels of coherence* with the priorities, strategies, and context of the civil society's power dynamics with its government counterparts.

In this last section, this analysis outlines considerations that need to figure into future policy discussions.

Local CSO capacity backslides from COVID-19. Social accountability and civic tech both rely heavily on capacity of CSOs to deliver on its goals. Operationally, however, such CSO capacity is at a most challenged state because of the effects of the COVID-19 pandemic restrictions on physical (face-to-face) activities, which has been the primarily modality of local CSO organization and mobilization. The restrictions on conducting activities also reduce the opportunities of local CSOs to implement project grants supported by development organizations both domestic and international. Vignettes of local CSOs unable to compensate local staff and maintain operations are ballooning. The calls for financial support are highly pronounced in CSO conversations, and not just on the pre-pandemic goals of scale and sustainability, but also on more

Conduct of Citizen Satisfaction Index System (CSIS) Orientation in Southern Leyte. The CSIS serves as a tool for drawing in applicable information for gauging citizen satisfaction that can be used for agenda-setting of economic and human development plans and goals of LGUs. (2022) Photo by: DILG Region VIII

basic issues of organizational survival. The Asia Foundation reports that in the Philippines and nearby southeast Asian neighbors, CSOs working on the democratization and human rights issues are more constrained with the pandemic exacerbating democratic regression and civic freedoms (Nixon 2020).

While the strength of CSO relations with their communities is helping provide relief and essential services for the marginalized, the pandemic-induced CSOs' capacity backslides is a matter that needs to be collectively addressed by government, development partners, and even the private sector. Decreased capacity of CSOs will decrease the chances of success of any social accountability initiative in the coming years. Instead of treating the pandemic as a hindrance to investing on civic tech, it should be one compelling reason precisely to facilitate greater capacity of CSOs to thrive against future complex challenges.

Role of the national government. For the implementation of the SC ruling, national government takes less of direct project implementation roles and pivots to exercise greater oversight functions on LGUs (Executive Order 138 of 2021). In terms of social accountability policy goals, recent DILG-led initiatives point in the right direction, e.g., the policy directing LGUs to establish local CSO desks and people's councils,[21] capacity development and orientations to CSOs to encourage accreditation to the local councils,[22] streamlining of the participatory project monitoring committees in all LGUs,[23] and introducing participatory governance metrics on government programs.[24]

In continuing with these initiatives and introducing future social accountability and civic tech interventions, national government would benefit from the following insights:

- The DevLIVE pilot showed high appreciation of local CSOs on the *intermediary role* that DILG national and regional offices played to collect the feedback information *while providing a safe autonomous space* for the citizens (Medina-Guce 2020a:17). Such implies that national government could strengthen civic tech for social accountability by providing *legitimacy and political weight* to the mechanisms of grievance and redress.

- National government should strengthen *mainstream participatory mechanisms* instead of creating new top-down measures, which has had unintended power imbalance effects in the previous participatory budgeting national program (Aceron 2019). From the same experience, however, evidence points to the *strengthening of local civil society's social capital* from the *political and fiscal resources* from national government (Manasan, Adaro, and Tolin 2017). These findings reinforce the point that social accountability is better facilitated when the focus is on what empowers civil society, instead of introducing outside-mechanisms into local dynamics.

- DILG's *LGU assessments* – particularly the Seal of Good Local Governance – has shown relative success in *establishing priority result* areas that LGUs should accomplish. Such prioritization influence is attributed not necessarily on the fiscal rewards for passers (which are petty compared to the NTA increase), but more on the political recognition and messaging around the prestige and credibility associated with the assessment (Medina-Guce 2019b). DILG may again leverage on its influence on LGU priorities by including civic tech and social accountability indicators in future assessments of LGU performance.

Resources for civic tech and social accountability. An earlier point argued that the costs of civic tech need not be exorbitant if it could leverage (or even enhance) existing open source, self-customizable tools for CSOs, such as Mahintana Foundation's ODK. But even the example required resources from an international project grant to take off. Moreover, government financing of civic tech falls right into gray value judgment-packed discussions on whether civic tech and social accountability should be financed by government if civil society is meant to own and benefit from the data and the tech itself.

To these issues, a World Bank – Global Partnership for Social Accountability study forwards *five financing strategies:* building the brand, selling social accountability services, selling by-products of social accountability services, selling government savings, and securing and managing assets (Salamon, Geller, and Sokolowski 2014). These strategies would still need support from government and development partners but are seen to produce more sustained gains for social accountability CSOs.

Complementing, not replacing, institutional reforms. All social accountability efforts begin and return to the power question – if the citizen voice, its strategies, and tactics empowered through the initiative triggers the motivations of government to respond. While literature points to relevance of social accountability efforts in contexts with weak anti-corruption institutions, *social accountability does not replace – rather complements – institutional reforms.* Social accountability expands the pathways for institutional performance and integrity through enabling the essential role of citizens in robust democracies. In practical terms, however, if social accountability efforts fail to close feedback loops, then there must be appropriate recourse for government to uphold citizen voice and correct lapses in its bureaucracy and actors. For example, what if local CSOs show that discrepancies are abound with LGUs' local spending? What if LGUs refuse citizen access to information? What if LGUs fail to follow transparency in procurement? These scenarios imply that social accountability and civic tech efforts must always problematized within the larger discussions of *sustainable development and democratization reforms*. The Sustainable Development Goals establish anchors for these (*Table 4.6.*), and it is important to note that social accountability and civic tech outcomes are under the cluster of goals of promoting peaceful and inclusive societies and building effective, accountable, and inclusive *institutions*.

TABLE 4.6. Social Accountability and Civic Tech Outcomes in the Sustainable Development Goal #16

	Description
Goal 16.5	Substantially reduce corruption and bribery in all their forms
Goal 16.6	Develop effective accountable and transparent institutions at all levels
Target 16.6.2	Proportion of the population satisfied with their last experience of public services
Goal 16.7	Ensure responsive, inclusive, participatory, and representative decision-making at all levels
Target 16.7.2	Proportion of population who believe decision-making is inclusive and responsive

Source: Gelb, Mittal, and Mukherjee 2019

5. Concluding Notes

This analysis engages the national government's direction of promoting social accountability in local governments against the landscape of local government performance and integrity as LGUs receive their larger share of the Philippine funds from 2022 onwards. Legal accountability structures may not be ready for such the scale of the challenge, but the Filipino people will deliver to keep LGUs on their feet – that is the hope, the theory of change, for government reformers, CSOs, and development partner to support.

To this the analysis established how civic tech boosts social accountability through 'upgrades' in local civil society's associational and advocacy initiatives. Social accountability should be intentional towards the aims and beneficiary of feedback – not one that reduces citizen participation into government data, but that which consolidates and enables collective voice. Civic tech, then, should be a tool emergent and wielded by civil society to empower its voice, grounded in the power dynamics of local governance.

DILG 7 Director Leocadio T. Trovela turned over 11 brand new laptops, one printer, and a scanner to DILG Bohol on June 24, 2022.
Photo from: DILG Region VII Facebook page

End notes

1 The LGU share is now termed 'National Tax Allotment' (from Internal Revenue Allotment) to reflect the SC ruling that the just shares must be based more than the internal revenue collection of national government.

2 There are several award programs in place that recognize LGU innovations and notable achievements in specific service delivery areas, to name a few: Galing Pook Awards for innovation, GAWAD KALASAG for disaster response and management, Seal of Child-friendly Local Governance, Philippine Chamber of Commerce and Industry's Most Business-Friendly LGUs Award, and the National Competitiveness Council's LGU Competitiveness Index.

3 This pertains to the Presidential Communications Operations Office and Department of the Interior and Local Government Joint Memorandum Circular 2018-01, "Reiteration of Executive Order No. 2, S. 2016, 'Operationalizing the People's Right to Information and the State Policies of Full Public Disclosure and Transparency in the Public Service."

4 This pertains to the Philippine Government Electronic Procurement System (PhilGEPS): https://www.philgeps.gov.ph/.

5 The Full Disclosure Policy requires LGUs to upload regular and timely fiscal reports in the NG portal and to display such reports in at least three local conspicuous places.

6 While the same report attributes the compliance gap to the inability of local CSOs to submit accreditation requirements, the 1991 Local Government Code (Republic Act 7160) mandates LGUs to constitute the council and other special bodies (councils on health, education, and peace and order) to ensure CS participation in local governance.

7 Data from the Office of the Ombudsman, received by the author in April 2018.

8 Examples are when Ilocos Norte Governor Imee Marcos was called in a Congress panel regarding violations on vehicle purchases (https://www.rappler.com/nation/206660-house-committee-recommendation-charges-imee-marcos-vehicles-procurement), and media coverage for graft convictions, e.g., Samar Governor Milagrosa Tan (https://www.rappler.com/nation/235615-sandiganbayan-upholds-graft-conviction-samar-governor-milagrosa-tan) and Laguna Governor ER Ejercito ().

9 DILG has considered the effect of the COVID-19 pandemic on LGU activities to delay the administrative sanctions introduced in MC 2019-172.

10 Interview with Richard Villacorte of the DILG Support for Local Governance Program, July 6, 2021

11 Fox (2015) provided a comprehensive summary of social accountability frameworks, e.g., the World Bank's accountability gaps and pathways, 'short route' approach, and 'supply-demand' of good governance; and vertical-horizontal accountability and vertical-diagonal accountability approaches.

12 Project DIME website: https://www.dime.gov.ph/

13 PMC roles and composition are outlined in DILG Memorandum Circulars 2004-78, "Organization/Reactivation of Project Monitoring Committees (PMCs) in Local Government Units," 2019-188, "Organization or Reconstitution of Sub-regional PMCs," and 2020-70, "Reconstitution of PMCs in Provinces, Municipalities, Cities and Organization of PMECs in Barangays."

14 LTFRB Public Assistance and Complaints website: https://ltfrb.gov.ph/complaints/

15 Philippine Statistics Authority feedback and redress website: https://psa.gov.ph/article/feedback-and-redress-mechanisms

16 A sample report of the independent citizen budget tracking on COVID19 funds may be accessed here: https://www.researchgate.net/publication/340777351_Spend_Faster_To_Stop_Hunger_COVID19PH_Citizens'_Budget_Tracker_Second_Report_13-17_April_2020.

17 FOI practice reports, as implemented by the Right to Know Right Now Coalition, are published in the Philippine Center for Investigative Journalism website. For a sample, refer to this March 2017 report: https://pcij.org/article/851/action-inaction-on-requests-for-peoples-foi-manuals.

18 Contact Center ng Bayan website: https://contactcenterngbayan.gov.ph/

19 Open Data Philippines (data.gov.ph) and National Government Portal (gov.ph)

20 For the Province of South Cotabato's Open Government Partnership commitments, refer to the OGP website: https://www.opengovpartnership.org/members/south-cotabato-philippines/.

21 DILG Memorandum Circular 2021-054, "Amendment to the DILG Memorandum Circular No. 2021-012 on the Establishment of Civil Society Organization Desk and Institutionalization of People's Council in the Local Government Units."

22 The project is one of the commitment milestones of DILG to the Open Government Partnership under the Philippine 2019-2022 National Action Plan. Refer to: https://www.opengovpartnership.org/members/philippines/commitments/PH0056/.

23 DILG Memorandum Circulars 2004-78, "Organization/Reactivation of Project Monitoring Committees (PMCs) in Local Government Units," 2019-188, "Organization or Reconstitution of Sub-regional PMCs," and 2020-70, "Reconstitution of PMCs in Provinces, Municipalities, Cities and Organization of PMECs in Barangays."

24 The Participatory Governance Metrics is a joint project of the DILG and the UNDP, currently undergoing pilot implementation for national and local projects. The technical report on the metrics may be accessed via https://www.academia.edu/43881770/Participatory_Governance_Metrics_Tool_and_Technical_Notes.

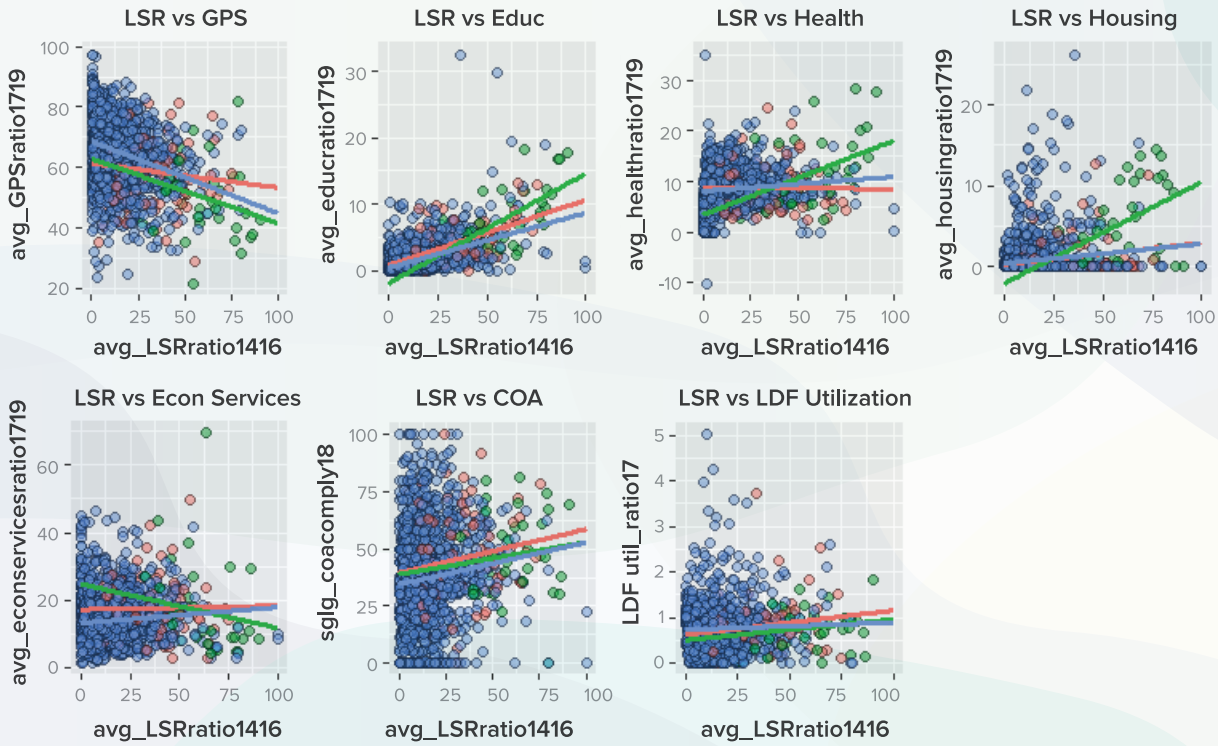
Annexes

Chapter 1:

From Dependency to Autonomy: Local Governance, Fiscal Capacity, and the Outlook for LGU Performance in the Post-Mandanas Transition

Annex 1.1. Supplementary Charts and Results

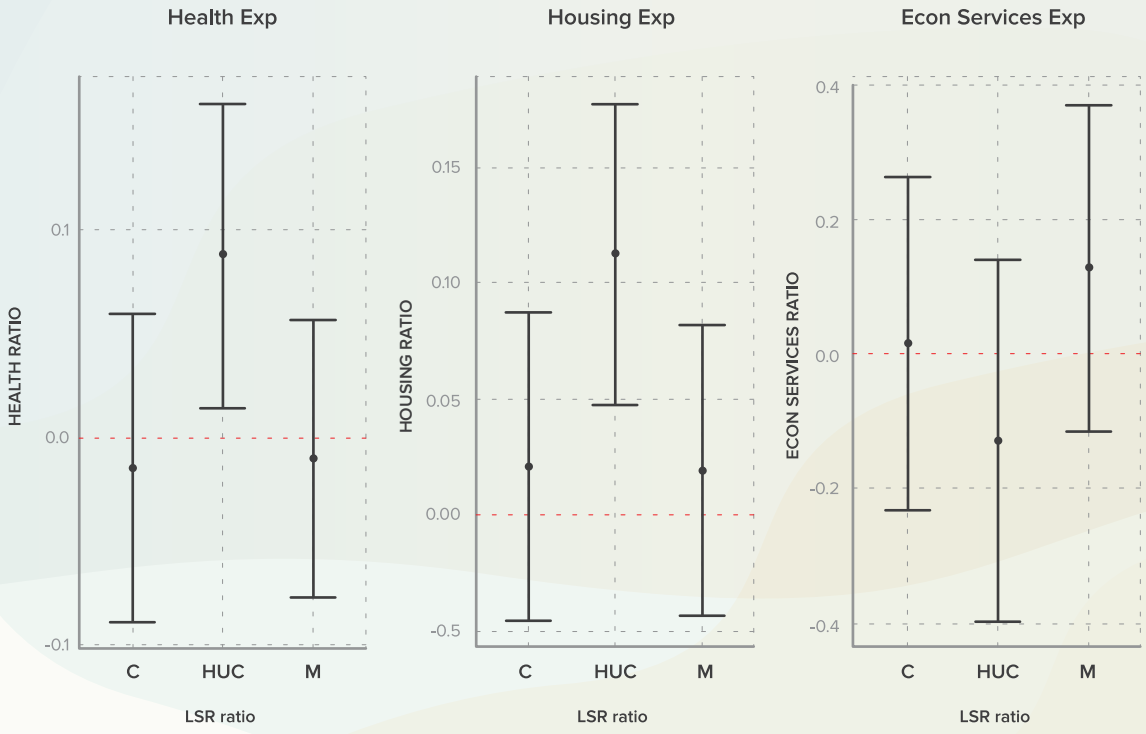
FIGURE 1.1.1. Visual Inspection of Main Variables of Interest



Source: Authors

In the figure above, we graph the group-varying trends for HUCs, component cities, and municipalities, based on their average local source revenue ratios (horizontal axis) with respect to the different dependent variables used in our hierarchical models. As can be observed, we have varying intercepts and varying slopes for our expenditure-related dependent variables (i.e. GPS, education, health, housing, and economic services spending ratios by LGUs) and only varying intercepts for our public financial management variables (i.e. COA recommendation compliance and LDF utilization rates). These justify our modeling choices adopted in Part 3 of the paper.

FIGURE 1.1.2. Estimated Varying-Slope and Varying-Intercept Coefficients for Health, Housing, and Economic Services Expenditure



Source: Authors

For a meticulous reader, our plot for LSR vs. Economic Services also features HUC-specific effects but in a negative direction. In Figure 1.1.2., we show the group-specific coefficient for HUCs/ICCs on the rightmost plot: as can be observed, our 95% confidence interval continues to cross the zero line, indicating that our group-specific estimate is still statistically indistinguishable from zero. As the practical difference between the slopes between HUCs, and component cities/municipalities is less pronounced for this variable, we continue to emphasize our results in Table 1.2., which remain more demanding from a multilevel modeling point of view.

Annex 1.2. Selected UNDP-DILG LGU Online Survey Results

TABLE 1.2.1. Mean scores for the level of capacity development needed across devolution areas

	#Total
Agricultural and irrigation services	7.8
School Infrastructure	7.2
Natural resources management	7.5
Employment Facilitation	7.2
Environmental management	7.7
Energy-related services	7.3
Revenue mobilization	7.6
Health services	8.0
Industrial development and investment support	7.7
Maintenance of Peace and Order	6.6
Road and bridge infrastructure	7.7
Flood, sewerage, waterworks infrastructure	7.8
Social welfare	7.8
Housing and urban development	7.7
Transportation services	7.1
Telecommunications services	7.3
Tourism Services	7.5
Others	5.0

Note: PDOs were asked: "Given the implementation of the Mandanas-Garcia SC Ruling, how much capacity development support from the national government do you expect that your LGU will require across the following devolution areas? Please select the level of capacity development support that you think is needed by your LGU across the functional areas below, on a scale of 0-10."

TABLE 1.2.2. Mean scores, by type of LGU, for the level of capacity development support needed across devolution areas

	Level of Government			
	Component City	Highly Urbanized City (HUC) or Independent Component City (ICC)	Municipal	Provincial
Agricultural and irrigation services	7.4	5.3	8.0	7.5
School Infrastructure	6.4	6.3	7.4	5.8
Natural resources management	7.1	6.8	7.7	6.7
Employment Facilitation	6.8	6.3	7.3	6.0
Environmental management	7.3	7.2	7.8	6.9
Energy-related services	7.5	6.6	7.4	7.6
Revenue mobilization	7.1	7.0	7.8	6.9
Health services	7.6	7.3	8.1	7.6
Industrial development and investment support	7.3	7.4	7.7	7.6
Maintenance of Peace and Order	6.1	6.0	6.7	6.0
Road and bridge infrastructure	7.0	7.0	7.8	7.1
Flood, sewerage, waterworks infrastructure	7.5	6.6	7.9	7.1
Social welfare	7.5	7.3	7.8	7.5
Housing and urban development	7.6	7.3	7.8	7.6
Transportation services	6.9	6.6	7.2	6.5
Telecommunications services	7.0	6.8	7.4	7.6
Tourism Services	7.2	6.2	7.6	6.8
Others	4.6	3.1	5.2	3.2

Note: PDOs were asked: "Given the implementation of the Mandanas-Garcia SC Ruling, how much capacity development support from the national government do you expect that your LGU will require across the following devolution areas? Please select the level of capacity development support that you think is needed by your LGU across the functional areas below, on a scale of 0-10."

TABLE 1.2.3. Mean scores, by region, for the level of capacity development support needed for a specific devolution area (energy-related services)

	Regions																	
	Autonomous Region In Muslim Mindanao (ARMM)	Cordillera Administrative Region (CAR)	MIMAROPA Region	National Capital Region (NCR)	Region I (Ilocos Region)	Region II (Cagayan Valley)	Region III (Central Luzon)	Region IV-A (CALABARZON)	Region IX (Zamboanga Peninsula)	Region V (Bicol Region)	Region VI (Western Visayas)	Region VII (Central Visayas)	Region VIII (Eastern Visayas)	Region X (Northern Mindanao)	Region XI (Davao Region)	Region XII (SOCCSKSARGEN)	Region XIII (Caraga)
Energy-related services	7.7	8.1	5.8	7.5	8.1	6.5	7.3	6.8	7.1	7.4	7.6	7.3	7.2	7.7	7	7.6		

Note: PDOs were asked: "Given the implementation of the Mandanas-Garcia SC Ruling, how much capacity development support from the national government do you expect that your LGU will require across the following devolution areas? Please select the level of capacity development support that you think is needed by your LGU across the functional areas below, on a scale of 0-10."

TABLE 1.2.4. Percentage of planned plantilla hiring for different sectors

	#Total
General Public Services and Administration	
	41.5
Hiring new plantilla staff	58.5
#Total cases	590
Education and Manpower Development Services	
	71.9
Hiring new plantilla staff	28.1
#Total cases	590
Health Services	
	11.7
Hiring new plantilla staff	88.3
#Total cases	590
Labor and Employment Services	
	60.3
Hiring new plantilla staff	39.7
#Total cases	590
Housing and Sanitation Services	
	67.3
Hiring new plantilla staff	32.7
#Total cases	590
Community Development Services	
	65.1
Hiring new plantilla staff	34.9
#Total cases	590
Social Welfare Services	
	16.1
Hiring new plantilla staff	83.9
#Total cases	590
Agricultural and Fisheries Services	
	21.5
Hiring new plantilla staff	78.5
#Total cases	590
Environmental and Natural Resource Management	
	27.1
Hiring new plantilla staff	72.9
#Total cases	590
Tourism Services	
	49.8
Hiring new plantilla staff	50.2
#Total cases	590
Infrastructure Development	
	35.9
Hiring new plantilla staff	64.1
#Total cases	590
Other Economic Services	
	56.8
Hiring new plantilla staff	43.2
#Total cases	590

Note: PDOs were asked: “Given the implementation of the Mandanas-Garcia SC Ruling, does your LGU expect to hire more plantilla personnel in the following sectors starting in 2022?”

TABLE 1.2.5. Percentage of planned plantilla hiring, by region, for services and administration

	Autonomous Region In Muslim Mindanao (ARMM)	Cordillera Administrative Region (CAR)	MIMAROPA Region	National Capital Region (NCR)	Region I (Ilocos Region)	Region II (Cagayan Valley)	Region III (Central Luzon)	Region IV-A (CALABARZON)	Region IX (Zamboanga Peninsula)	Region V (Bicol Region)	Region VI (Western Visayas)	Region VII (Central Visayas)	Region VIII (Eastern Visayas)	Region X (Northern Mindanao)	Region XI (Davao Region)	Region XII (SOCCSKSARGEN)	Region XIII (Caraga)
General Public Services and Administration																	
	100	22.7	28.3	58.3	51.3	45.5	65.6	49.2	43.8	42	34	37.1	45.5	29.8	38.5	33.3	38.2
Hiring new plantilla staff		77.3	71.7	41.7	48.7	54.5	34.4	50.8	56.2	58	66	62.9	54.5	70.2	61.5	66.7	61.8
#Total cases	1	44	46	12	39	33	61	59	16	50	47	35	22	47	26	18	34

Note: PDOs were asked: “Given the implementation of the Mandanas-Garcia SC Ruling, does your LGU expect to hire more plantilla personnel in the following sectors starting in 2022?”

TABLE 1.2.6. Percentage of LGUs that use ICT systems in monitoring LGU PPAs

Does your LGU currently use any Information and Communication Technology (ICT) system in monitoring the various PPAs that your LGU is implementing?	
	7.5
No	59.0
Yes	33.6
#Total cases	590

Note: PDOs were asked: “Does your LGU currently use any Information and Communication Technology (ICT) system in monitoring the various PPAs that your LGU is implementing?”

TABLE 1.2.7. Percentage of LGUs that use ICT systems in monitoring LGU PPAs, per Region

	Autonomous Region In Muslim Mindanao (ARMM)	Cordillera Administrative Region (CAR)	MIMAROPA Region	National Capital Region (NCR)	Region I (Ilocos Region)	Region II (Cagayan Valley)	Region III (Central Luzon)	Region IV-A (CALABARZON)	Region IX (Zamboanga Peninsula)	Region V (Bicol Region)	Region VI (Western Visayas)	Region VII (Central Visayas)	Region VIII (Eastern Visayas)	Region X (Northern Mindanao)	Region XI (Davao Region)	Region XII (SOCCSKSARGEN)	Region XIII (Caraga)
Does your LGU currently use any Information and Communication Technology (ICT) system in monitoring the various PPAs that your LGU is implementing?																	
		9.1	6.5	25.0	12.8		4.9	13.6	6.2	6	4.3	5.7	4.5	8.5	7.7		8.8
No		61.4	69.6	33.3	59.0	63.6	68.9	49.2	62.5	52	59.6	57.1	72.7	55.3	57.7	55.6	55.9
Yes	100	29.5	23.9	41.7	28.2	36.4	26.2	37.3	31.2	42	36.2	37.1	22.7	36.2	34.6	44.4	35.3
#Total cases	1	44	46	12	39	33	61	59	16	50	47	35	22	47	26	18	34

Note: PDOs were asked: “Does your LGU currently use any Information and Communication Technology (ICT) system in monitoring the various PPAs that your LGU is implementing?”

TABLE 1.2.8. Mean scores for the extent to which various vaccine stages have constrained implementation of the COVID-19 vaccination program

	#Total
Securing Vaccine Supplies	3.9
Securing Ancilliary Immunization Supplies (e.g. syringes, needles)	3.3
Managing Vaccine Delivery Logistics	3.1
Managing Vaccine Storage (e.g. cold storage facilities)	3.1
Determining eligible and priority vaccine recipients	3.2
Mobilizing workforce for vaccination teams	3.5
Generating public demand for vaccination	5.4
Registering eligible/priority individuals for vaccination	4.2
Ensuring appearance of partly-vaccinated individuals for 2nd dose	4.4
Monitoring and reporting vaccine progress	3.2
Managing waste from the vaccination program	2.8
Ensuring availability of transport for to-be vaccinated individuals	4.3
Others, please specify	3.8

Note: HOs were asked: "What have been the biggest constraints that your LGU has faced in implementing your COVID-19 vaccination program? On a scale of 0 to 10, please indicate how difficult the following vaccination stages have been for your LGU.

TABLE 1.2.9. Mean scores, per type of LGU, for the extent to which various vaccine stages have constrained implementation of the COVID-19 vaccination program

	Level of Government			
	Component City	Highly Urbanized City (HUC) or Independent Component City (ICC)	Municipal	Provincial
Securing Vaccine Supplies	3.4	5.7	3.9	3.7
Securing Ancilliary Immunization Supplies (e.g. syringes, needles)	2.8	3.7	3.3	2.8
Managing Vaccine Delivery Logistics	1.9	3.9	3.2	3.4
Managing Vaccine Storage (e.g. cold storage facilities)	1.8	3.1	3.2	4.4
Determining eligible and priority vaccine recipients	2.5	3.8	3.2	3.1
Mobilizing workforce for vaccination teams	2.2	5.0	3.6	4.1
Generating public demand for vaccination	3.8	5.5	5.5	5.0
Registering eligible/priority individuals for vaccination	3.0	5.4	4.3	4.4
Ensuring appearance of partly-vaccinated individuals for 2nd dose	3.5	4.5	4.6	3.7
Monitoring and reporting vaccine progress	2.7	4.2	3.2	4.4
Managing waste from the vaccination program	1.6	3.3	2.9	3.9
Ensuring availability of transport for to-be vaccinated individuals	2.8	3.9	4.5	4.1
Others, please specify	2.4	3.0	3.9	5.0

Note: HOs were asked: "What have been the biggest constraints that your LGU has faced in implementing your COVID-19 vaccination program? On a scale of 0 to 10, please indicate how difficult the following vaccination stages have been for your LGU."

TABLE 1.2.10. Mean scores, per region, for the extent to which generating public demand for the vaccine has constrained implementation of the COVID-19 vaccination program

	Regions															
	Cordillera Administrative Region (CAR)	MIMAROPA Region	National Capital Region (NCR)	Region I (Ilocos Region)	Region II (Cagayan Valley)	Region III (Central Luzon)	Region IV-A (CALABARZON)	Region IX (Zamboanga Peninsula)	Region V (Bicol Region)	Region VI (Western Visayas)	Region VII (Central Visayas)	Region VIII (Eastern Visayas)	Region X (Northern Mindanao)	Region XI (Davao Region)	Region XII (SOCCSKSARGEN)	Region XIII (Caraga)
Generating public demand for vaccination	5.7	6.1	5.3	4.5	5.7	4	4.8	6.2	6.2	5.9	6	5	6.1	4.7	2.4	6.6

Note: HOs were asked: "What have been the biggest constraints that your LGU has faced in implementing your COVID-19 vaccination program? On a scale of 0 to 10, please indicate how difficult the following vaccination stages have been for your LGU."

TABLE 1.2.11. Percentage of LGUs, per region, that spent budgetary resources for passive/digital contract tracing system

	Regions															
	Cordillera Administrative Region (CAR)	MIMAROPA Region	National Capital Region (NCR)	Region I (Ilocos Region)	Region II (Cagayan Valley)	Region III (Central Luzon)	Region IV-A (CALABARZON)	Region IX (Zamboanga Peninsula)	Region V (Bicol Region)	Region VI (Western Visayas)	Region VII (Central Visayas)	Region VIII (Eastern Visayas)	Region X (Northern Mindanao)	Region XI (Davao Region)	Region XII (SOCCSKSARGEN)	Region XIII (Caraga)
Deployed a passive/digital contract tracing system																
	64	60	14.3	63.3	76.9	54.8	81.6	83.3	74.2	37.5	80	56.2	52.9	50	50.0	78.6
Yes in 2020			14.3			3.2					5	6.2	11.8	10		
Yes in 2020,Yes in 2021	28	35	57.1	30.0	15.4	35.5	18.4	16.7	25.8	56.2	5	31.2	29.4	40	33.3	21.4
Yes in 2021	8	5	14.3	6.7	7.7	6.5				6.2	10	6.2	5.9		16.7	
#Total cases	25	20	7	30	13	31	38	6	31	16	20	16	17	10	6	14

Note: HOs were asked: "Did your LGU spend your own budgetary resources in 2020 and 2021 forresponding to the COVID-19 pandemic through the following types of health measures? Please check all boxes below that apply for 2020 and 2021 respectively."

TABLE 1.2.12. Mean scores for the extent to which different constraints may impede maximizing additional Mandanas funds

	#Total
Number of Staff/Manpower	5.3
Capacity of Staff in Project Planning and Preparation	4.7
Capacity of Staff in investment/budget programming	4.2
Capacity of Staff in Project Management and Implementation	4.9
Capacity of Staff in Monitoring and Evaluation	4.8
Capacity of Staff in Other Technical Skills (please specify)	4.7
Coordination challenges with national government agencies	4.7
Coordination challenges with other LGUs	3.9
Coordination challenges within the LGU	4.1
Coordination challenges with other actors (e.g. private sector, suppliers, clients, etc.)	4.6
Procurement difficulties	4.3
Difficulties with securing documents, permits, and clearances	3.7
Lack of data and records need for planning and project preparation	4.5
Lack of additional local funding for investment projects	6.2
Institutional constraints on use of local funds (e.g. local funds as collateral, cash-based budgeting of NG-funded LGU programs)	4.4
Others, please specify	4.0

Note: BOs were asked: "What constraints are likely to prevent your LGU from fully using/spending the additional funds provided to it by the Mandanas-Garcia SC Ruling starting next year? Please assess the following possible constraints on a scale of 0-10. Zero (0) means that you do not expect the item to be a problem for your LGU, and ten (10) means that you expect it to be a critical constraint to your LGU's ability to fully absorb/utilize your expanded National Tax Allotment (NTA)."

TABLE 1.2.13. Mean scores, per type of LGU, for the extent to which different constraints may impede maximizing additional Mandanas funds

	Level of Government			
	Component City	Highly Urbanized City (HUC) or Independent Component City (ICC)	Municipal	Provincial
Number of Staff/Manpower	5.1	3.5	5.4	4.5
Capacity of Staff in Project Planning and Preparation	5.0	3.7	4.8	3.3
Capacity of Staff in investment/budget programming	4.4	3.1	4.3	3.2
Capacity of Staff in Project Management and Implementation	5.1	3.7	5.0	3.7
Capacity of Staff in Monitoring and Evaluation	4.8	4.3	4.9	4.8
Capacity of Staff in Other Technical Skills (please specify)	5.3	3.7	4.7	3.7
Coordination challenges with national government agencies	4.9	4.1	4.8	4.1
Coordination challenges with other LGUs	4.3	3.2	3.9	3.5
Coordination challenges within the LGU	4.2	3.0	4.2	3.2
Coordination challenges with other actors (e.g. private sector, suppliers, clients, etc.)	4.8	3.6	4.6	3.5
Procurement difficulties	3.5	4.8	4.4	4.2
Difficulties with securing documents, permits, and clearances	4.5	3.0	3.7	3.0
Lack of data and records need for planning and project preparation	5.0	4.6	4.5	3.2
Lack of additional local funding for investment projects	5.5	4.6	6.4	5.6
Institutional constraints on use of local funds (e.g. local funds as collateral, cash-based budgeting of NG-funded LGU programs)	4.9	2.9	4.4	3.9
Others, please specify	4.0	2.5	4.1	3.0

Note: BOs were asked: "What constraints are likely to prevent your LGU from fully using/spending the additional funds provided to it by the Mandanas-Garcia SC Ruling starting next year? Please assess the following possible constraints on a scale of 0-10. Zero (0) means that you do not expect the item to be a problem for your LGU, and ten (10) means that you expect it to be a critical constraint to your LGU's ability to fully absorb/utilize your expanded National Tax Allotment (NTA)."

TABLE 1.2.14. Mean scores, per region, for the extent to which the number of available staff/manpower may impede maximizing additional Mandanas funds

	Regions																		
	Autonomous Region In Muslim Mindanao (ARMM)	Cordillera Administrative Region (CAR)	MIMAROPA Region	National Capital Region (NCR)	Region I (Ilocos Region)	Region II (Cagayan Valley)	Region III (Central Luzon)	Region IV-A (CALABARZON)	Region IX (Zamboanga Peninsula)	Region V (Bicol Region)	Region VI (Western Visayas)	Region VII (Central Visayas)	Region VIII (Eastern Visayas)	Region X (Northern Mindanao)	Region XI (Davao Region)	Region XII (SOCCSKSARGEN)	Region XIII (Caraga)
Number of Staff/Manpower	5	5.4	4.8	3.3	4.9	5.3	4.4	4.7	5.7	5.8	5.5	6.6	5.6	5.4	6	4.2	6.4

Note: BOs were asked: "What constraints are likely to prevent your LGU from fully using/spending the additional funds provided to it by the Mandanas-Garcia SC Ruling starting next year? Please assess the following possible constraints on a scale of 0-10. Zero (0) means that you do not expect the item to be a problem for your LGU, and ten (10) means that you expect it to be a critical constraint to your LGU's ability to fully absorb/utilize your expanded National Tax Allotment (NTA)."

TABLE 1.2.15. Mean scores for the extent to which capacity development is needed for various budget planning and execution areas

	#Total
Aligning local budget plans and goals with national development plans, goals, and strategies	5.2
Preparing and submitting PPA budget proposals	4.7
Preparing project procurement management plans	5.1
Preparing annual procurement plans	5.0
Evaluating budget proposals	4.6
Preparing the local expenditure program	4.1
Preparing summary of financial and physical performance targets and cash program	5.3
Obligating and disbursing funds	3.9
Adjusting cash program for shortages and overages	5.0
Monitoring and reporting statements of receipts and expenditures	4.5
Monitoring and reporting of physical outputs and accomplishments	5.5
Evaluating budget performance of each department/office	4.9
Others (please specify)	2.7

Note: BOs were asked: "How much capacity development support will your LGU need from the national government across the following budget planning and execution areas? Please select the level of capacity development support that you think is needed by your LGU across different areas, on a scale of 0-10. Zero (0) means that your LGU does not need any capacity building in the given area, and ten (10) means that capacity building in that area is an urgent priority for your LGU."

TABLE 1.2.16. Mean scores, by region, for the extent to which capacity development is needed for aligning local budget plans with national budget plans

	Regions																	
	Autonomous Region In Muslim Mindanao (ARMM)	Cordillera Administrative Region (CAR)	MIMAROPA Region	National Capital Region (NCR)	Region I (Ilocos Region)	Region II (Cagayan Valley)	Region III (Central Luzon)	Region IV-A (CALABARZON)	Region IX (Zamboanga Peninsula)	Region V (Bicol Region)	Region VI (Western Visayas)	Region VII (Central Visayas)	Region VIII (Eastern Visayas)	Region X (Northern Mindanao)	Region XI (Davao Region)	Region XII (SOCCSKSARGEN)	Region XIII (Caraga)
Aligning local budget plans and goals with national development plans, goals, and strategies	5.4	5.2	3.3	4.6	5.6	4.9	5.1	6.5	5.9	4.9	5.8	5.4	5.2	5.3	5.4	5.3		

Note: BOs were asked: "How much capacity development support will your LGU need from the national government across the following budget planning and execution areas? Please select the level of capacity development support that you think is needed by your LGU across different areas, on a scale of 0-10. Zero (0) means that your LGU does not need any capacity building in the given area, and ten (10) means that capacity building in that area is an urgent priority for your LGU."

TABLE 1.2.17. Mean scores, by region, for the extent to which capacity development is needed for preparing procurement management plans

	Regions																	
	Autonomous Region In Muslim Mindanao (ARMM)	Cordillera Administrative Region (CAR)	MIMAROPA Region	National Capital Region (NCR)	Region I (Ilocos Region)	Region II (Cagayan Valley)	Region III (Central Luzon)	Region IV-A (CALABARZON)	Region IX (Zamboanga Peninsula)	Region V (Bicol Region)	Region VI (Western Visayas)	Region VII (Central Visayas)	Region VIII (Eastern Visayas)	Region X (Northern Mindanao)	Region XI (Davao Region)	Region XII (SOCCSKSARGEN)	Region XIII (Caraga)
Preparing project procurement management plans	5.2	4.6	2.7	5	5.9	4.6	4.6	6.4	5.3	5	5.5	4.2	5.8	5.4	6.6	5.5		

Note: BOs were asked: "How much capacity development support will your LGU need from the national government across the following budget planning and execution areas? Please select the level of capacity development support that you think is needed by your LGU across different areas, on a scale of 0-10. Zero (0) means that your LGU does not need any capacity building in the given area, and ten (10) means that capacity building in that area is an urgent priority for your LGU."

TABLE 1.2.18. Mean scores for the extent to which BOs agree with different statements

	#Total
Our LGU will have a hard time in fully utilizing the additional budgetary resources provided by the Mandanas ruling's implementation.	4.2
The cap on Personnel Services (PS) spending contributes to staff bottlenecks in utilizing our LGU's budgets.	6.7
Increasing our own-source revenues will help our LGU improve its service-delivery capacities	8.6
Strengthening citizen's participation in local governance will help our LGU improve its service-delivery capacities	8.0
Increasing our own-source revenues will help our LGU achieve more efficient local budget implementation	8.6
Strengthening citizen's participation in local governance will help our LGU achieve more efficient local budget implementation	7.9

Note: BOs were asked: "Please rate the following statements according to how much you agree (10) or disagree (0) with these."

TABLE 1.2.19. Number of LGUs willing to adopt various local taxes

	#Total
Business Taxes	
	59
Yes	548
#Total cases	607
Real Property Taxes	
	149
Yes	458
#Total cases	607
Idle Land Taxes	
	494
Yes	113
#Total cases	607
Real Property Transfers	
	441
Yes	166
#Total cases	607
Delivery Vans and Truck	
	453
Yes	154
#Total cases	607
Amusement Places	
	429
Yes	178
#Total cases	607
Professionals	
	461
Yes	146
#Total cases	607
Community Tax	
	138
Yes	469
#Total cases	607
Franchise Taxes	
	440
Yes	167
#Total cases	607
Sand, gravel and other quarry resources	
	481
Yes	126
#Total cases	607
Printing and Publication	
	508
Yes	99
#Total cases	607
Special Levies on Lands Benefitted by Public Works Projects and LGU-funded improvements	
	525
Yes	82
#Total cases	607
Others, please specify	
	479
Yes	128
#Total cases	607

Note: Treasurers were asked: "Is your LGU planning to significantly expand your revenue collections from the following local taxes, as part of your Devolution Transition Plan (DTP) for the implementation of the Mandanas-Garcia SC Ruling?"

TABLE 1.2.20. Percentage of LGUs, by type of LGU, willing to adopt various local taxes

	Level of Government			
	Component City	Highly Urbanized City (HUC) or Independent Component City (ICC)	Municipal	Provincial
Business Taxes				
	13.0	14.3	6.2	64.3
Yes	87.0	85.7	93.8	35.7
#Total cases	54	21	504	28
Real Property Taxes				
	13.0	14.3	26.6	17.9
Yes	87.0	85.7	73.4	82.1
#Total cases	54	21	504	28
Idle Land Taxes				
	61.1	33.3	87.1	53.6
Yes	38.9	66.7	12.9	46.4
#Total cases	54	21	504	28
Real Property Transfers				
	20.4	23.8	83.3	17.9
Yes	79.6	76.2	16.7	82.1
#Total cases	54	21	504	28
Delivery Vans and Truck				
	27.8	23.8	84.9	17.9
Yes	72.2	76.2	15.1	82.1
#Total cases	54	21	504	28
Amusement Places				
	35.2	23.8	78.4	35.7
Yes	64.8	76.2	21.6	64.3
#Total cases	54	21	504	28
Professionals				
	27.8	23.8	86.3	21.4
Yes	72.2	76.2	13.7	78.6
#Total cases	54	21	504	28
Community Tax				
	29.6	19.0	18.5	89.3
Yes	70.4	81.0	81.5	10.7
#Total cases	54	21	504	28
Franchise Taxes				
	37.0	19.0	80.8	32.1
Yes	63.0	81.0	19.2	67.9
#Total cases	54	21	504	28
Sand, gravel and other quarry resources				
	66.7	61.9	84.9	14.3
Yes	33.3	38.1	15.1	85.7
#Total cases	54	21	504	28
Printing and Publication				
	42.6	28.6	93.1	35.7
Yes	57.4	71.4	6.9	64.3
#Total cases	54	21	504	28
Special Levies on Lands Benefitted by Public Works Projects and LGU-funded improvements				
	77.8	61.9	90.1	57.1
Yes	22.2	38.1	9.9	42.9
#Total cases	54	21	504	28
Others, please specify				
	81.5	85.7	77.8	89.3
Yes	18.5	14.3	22.2	10.7
#Total cases	54	21	504	28

Note: Treasurers were asked: “Is your LGU planning to significantly expand your revenue collections from the following local taxes, as part of your Devolution Transition Plan (DTP) for the implementation of the Mandanas-Garcia SC Ruling?”

TABLE 1.2.21. Mean scores for the extent to which capacity development is needed for different dimensions of revenue mobilization

	#Total
Local revenue forecasting	7.7
Local revenue planning	7.8
Local tax assessment	7.7
Local tax administration	7.8
Local revenue collection	7.9
Local revenue collection management	7.7
Local tax policy formulation	7.9
Collecting and analyzing economic data for tax purposes	7.7
Taxpayer engagement and communications	7.8
Determining and setting reasonable rates of fees and charges	7.9
Running self-sustaining economic enterprises	7.9

Note: Treasurers were asked: "How much capacity development support from the national government will your LGU require across the following revenue mobilization areas, given the future impact of the COVID-19 pandemic on LGUs' National Tax Allotment (NTA) levels? Please select the level of capacity development support that you think is needed by your LGU across different areas, on a scale of 0-10. Zero (0) means that no capacity development support is needed at all, and ten (10) means that capacity development support in this area is an urgent priority."

TABLE 1.2.22. Mean scores, by type of LGU, for the extent to which capacity development is needed for different dimensions of revenue mobilization

	Level of Government			
	Component City	Highly Urbanized City (HUC) or Independent Component City (ICC)	Municipal	Provincial
Local revenue forecasting	7.5	6.5	7.8	7.4
Local revenue planning	7.5	6.8	7.9	7.4
Local tax assessment	7.3	6.3	7.9	7.0
Local tax administration	7.7	6.4	7.9	7.3
Local revenue collection	7.7	7.0	8.0	7.0
Local revenue collection management	7.3	6.1	7.8	7.1
Local tax policy formulation	7.7	7.4	8.0	7.8
Collecting and analyzing economic data for tax purposes	7.7	7.4	7.8	7.2
Taxpayer engagement and communications	7.8	6.9	7.9	7.2
Determining and setting reasonable rates of fees and charges	8.0	7.6	7.9	7.5
Running self-sustaining economic enterprises	7.7	6.9	7.9	7.5

Note: Treasurers were asked: "How much capacity development support from the national government will your LGU require across the following revenue mobilization areas, given the future impact of the COVID-19 pandemic on LGUs' National Tax Allotment (NTA) levels? Please select the level of capacity development support that you think is needed by your LGU across different areas, on a scale of 0-10. Zero (0) means that no capacity development support is needed at all, and ten (10) means that capacity development support in this area is an urgent priority."

TABLE 1.2.23. Percentage of LGUs that use any ICT systems for local revenue collection efforts

	#Total
Does your LGU currently use any Information and Communication Technology (ICT) system (e.g. E-TRACS, RBGIS, Manifold GIS, etc.) in your local revenue assessment and collection efforts?	
	4.0
Don't know	1.3
No	51.2
Yes	43.5
#Total cases	607

Note: Treasurers were asked: "Does your LGU currently use any Information and Communication Technology (ICT) system (e.g. E-TRACS, RBGIS, Manifold GIS, etc.) in your local revenue assessment and collection efforts?"

TABLE 1.2.24. Percentage of LGUs, by type of LGU, that use any ICT systems for local revenue collection efforts

	Level of Government			
	Component City	Highly Urbanized City (HUC) or Independent Component City (ICC)	Municipal	Provincial
Does your LGU currently use any Information and Communication Technology (ICT) system (e.g. E-TRACS, RBGIS, Manifold GIS, etc.) in your local revenue assessment and collection efforts?				
	1.9	4.8	3.8	10.7
Don't know		4.8	1.2	3.6
No	22.2	19.0	56.2	42.9
Yes	75.9	71.4	38.9	42.9
#Total cases	54	21	504	28

Note: Treasurers were asked: "Does your LGU currently use any Information and Communication Technology (ICT) system (e.g. E-TRACS, RBGIS, Manifold GIS, etc.) in your local revenue assessment and collection efforts?"

TABLE 1.2.25. Percentage of LGUs, by region, that use any ICT systems for local revenue collection efforts

	Regions															
	Cordillera Administrative Region (CAR)	MIMAROPA Region	National Capital Region (NCR)	Region I (Ilocos Region)	Region II (Cagayan Valley)	Region III (Central Luzon)	Region IV-A (CALABARZON)	Region IX (Zamboanga Peninsula)	Region V (Bicol Region)	Region VI (Western Visayas)	Region VII (Central Visayas)	Region VIII (Eastern Visayas)	Region X (Northern Mindanao)	Region XI (Davao Region)	Region XII (SOCCSKSARGEN)	Region XIII (Caraga)
Does your LGU currently use any Information and Communication Technology (ICT) system (e.g. E-TRACS, RBGIS, Manifold GIS, etc.) in your local revenue assessment and collection efforts?																
	6.8	4.9	11.1	4.3	3.2	3.8	3.3		1.9	2.6			4.4	11.1	9.5	3.6
Don't know	4.5			2.1			1.6		1.9	1.3		4.2		3.7		
No	79.5	68.3	11.1	61.7	77.4	44.2	50.8	76.9	58.5	43.4	37.1	75.0	17.8	22.2	47.6	39.3
Yes	9.1	26.8	77.8	31.9	19.4	51.9	44.3	23.1	37.7	52.6	62.9	20.8	77.8	63.0	42.9	57.1
#Total cases	44	41	9	47	31	52	61	13	53	76	35	24	45	27	21	28

Note: Treasurers were asked: "Does your LGU currently use any Information and Communication Technology (ICT) system (e.g. E-TRACS, RBGIS, Manifold GIS, etc.) in your local revenue assessment and collection efforts?"

TABLE 1.2.26. Number of LGUs that used budget for various social amelioration efforts

	#Total
Distributed food relief packages	
	67
Yes in 2020	71
Yes in 2020,Yes in 2021	340
Yes in 2021	10
#Total cases	488
Distributed essential medicines	
	223
Yes in 2020	25
Yes in 2020,Yes in 2021	225
Yes in 2021	15
#Total cases	488
Distributed LGU-funded cash transfers	
	323
Yes in 2020	57
Yes in 2020,Yes in 2021	102
Yes in 2021	6
#Total cases	488
Set up community kitchens and community pantries	
	346
Yes in 2020	29
Yes in 2020,Yes in 2021	75
Yes in 2021	38
#Total cases	488
Set up non-mobile community palengkes/tiangges/talipapas	
	362
Yes in 2020	34
Yes in 2020,Yes in 2021	89
Yes in 2021	3
#Total cases	488
Set up of mobile or online kitchens, palengkes/tiangges/talipapas	
	387
Yes in 2020	28
Yes in 2020,Yes in 2021	69
Yes in 2021	4
#Total cases	488
Procured the produce of local farmers and fisherfolk	
	348
Yes in 2020	39
Yes in 2020,Yes in 2021	95
Yes in 2021	6
#Total cases	488
Provided other protective measures for local farmers' and/or fisherfolk livelihoods (e.g. financial subsidies, input support)	
	325
Yes in 2020	24
Yes in 2020,Yes in 2021	131
Yes in 2021	8
#Total cases	488
Provided support for backyard gardening and alternative food production	
	272
Yes in 2020	32
Yes in 2020,Yes in 2021	166
Yes in 2021	18
#Total cases	488
Provided financial support to business enterprises	
	378
Yes in 2020	18
Yes in 2020,Yes in 2021	83
Yes in 2021	9
#Total cases	488
Provided alternative livelihood and skills training programs for unemployed / displaced households	
	296
Yes in 2020	19
Yes in 2020,Yes in 2021	147
Yes in 2021	26
#Total cases	488
Provided temporary shelters for vulnerable groups	
	347
Yes in 2020	22
Yes in 2020,Yes in 2021	111
Yes in 2021	8
#Total cases	488
Provided support for e-learning/online learning activities for youth and students (e.g. sim cards, data, ICT equipment)	
	338
Yes in 2020	15
Yes in 2020,Yes in 2021	117
Yes in 2021	18
#Total cases	488
Provided support for homeschooling activities for youth and students	
	288
Yes in 2020	37
Yes in 2020,Yes in 2021	153
Yes in 2021	10
#Total cases	488
Others, please specify	
	433
Yes in 2020	12
Yes in 2020,Yes in 2021	35
Yes in 2021	8
#Total cases	488

Note: SWDOs were asked: "Did your LGU allocate or realign your own budget for responding to the COVID-19 pandemic for the following types of social amelioration efforts in 2020 and 2021? Please check all boxes below that apply."

TABLE 1.2.27. Percentage of LGUs, by type of LGU, that used budget to support homeschooling

	Level of Government			
	Component City	Highly Urbanized City (HUC) or Independent Component City (ICC)	Municipal	Provincial
Provided support for homeschooling activities for youth and students				
	55.3	41.2	60.2	57.9
Yes in 2020	4.3		8.4	5.3
Yes in 2020,Yes in 2021	36.2	58.8	29.6	31.6
Yes in 2021	4.3		1.7	5.3
#Total cases	47	17	405	19

Note: SWDOs were asked: "Did your LGU allocate or realign your own budget for responding to the COVID-19 pandemic for the following types of social amelioration efforts in 2020 and 2021? Please check all boxes below that apply."

TABLE 1.2.28. Number of LGUs that used datasets to disburse cash during COVID-19

	#Total
Did you use any of the following datasets to determine cash transfer beneficiaries during the COVID-19 pandemic?	
	56
Community-Based Monitoring System	56
Did not use any data	25
Listahan / National Household Targeting System	98
Other data (please specify):	61
Own LGU Registry / Social Welfare List	192
#Total cases	488

Note: SWDOs were asked: "Did you use any of the following datasets to determine cash transfer beneficiaries during the COVID-19 pandemic?"

TABLE 1.2.29. Percentage of LGUs with an LPTRP

	#Total
As of September 30, 2021, has your LGU prepared a Local Public Transport Route Plan (LPTRP)?	
	2.4
No	42.7
Yes	55.0
#Total cases	211

Note: TOs were asked: "As of September 30, 2021, has your LGU prepared a Local Public Transport Route Plan (LPTRP)?"

TABLE 1.2.30. Percentage of LGUs with an LPTRP, by region

	Regions															
	Cordillera Administrative Region (CAR)	MIMAROPA Region	National Capital Region (NCR)	Region I (Ilocos Region)	Region II (Cagayan Valley)	Region III (Central Luzon)	Region IV-A (CALABARZON)	Region IX (Zamboanga Peninsula)	Region V (Bicol Region)	Region VI (Western Visayas)	Region VII (Central Visayas)	Region VIII (Eastern Visayas)	Region X (Northern Mindanao)	Region XI (Davao Region)	Region XII (SOCCSKSARGEN)	Region XIII (Caraga)
As of September 30, 2021, has your LGU prepared a Local Public Transport Route Plan (LPTRP)?																
				6.7	18.2				4.8				4.3			
No	47.1	45.5	77.8	33.3	45.5	47.1	41.4		38.1	31.2	44.4	42.9	34.8	50	33.3	60
Yes	52.9	54.5	22.2	60.0	36.4	52.9	58.6	100	57.1	68.8	55.6	57.1	60.9	50	66.7	40
#Total cases	17	11	9	15	11	17	29	1	21	16	9	7	23	6	9	10

Note: TOs were asked: "As of September 30, 2021, has your LGU prepared a Local Public Transport Route Plan (LPTRP)?"

TABLE 1.2.31. Percentage of LGUs that adopted different safety measures for PUVs

	#Total
Facilitated the adoption of Automatic Fare Collection Systems (AFCS) by PUVs	
	81.5
Yes	18.5
#Total cases	211
Required PUVs to open windows while in transit	
	41.2
Yes	58.8
#Total cases	211
Established PUV-only lanes on major roads	
	80.6
Yes	19.4
#Total cases	211
Required PUVs to adopt an active contract-tracing system	
	49.8
Yes	50.2
#Total cases	211
Required PUVs to adopt a passive/digital contract-tracing system	
	69.2
Yes	30.8
#Total cases	211
Established natural ventilation protocols for PUV queues and terminals	
	39.8
Yes	60.2
#Total cases	211
Posted infomercials and posters reminding commuters of good sanitation practices in transport terminals	
	26.1
Yes	73.9
#Total cases	211

Note: TOs were asked: "Since the beginning of the COVID-19 pandemic in 2020 in the Philippines, has your LGU adopted the following safety measures and/or protocols for the operation of public utility vehicles??"

TABLE 1.2.32. Percentage of LGUs that used budget for different COVID-responsive actions in transport services

	#Total
Service-contracted PUVs to provide public transport services (1)	
	66.4
Yes in 2020	10.4
Yes in 2020,Yes in 2021	21.3
Yes in 2021	1.9
#Total cases	211
Provided transport services for medical frontliners	
	43.6
Yes in 2020	10.4
Yes in 2020,Yes in 2021	42.2
Yes in 2021	3.8
#Total cases	211
Provided transport services for persons other than medical frontliners	
	46.9
Yes in 2020	10.9
Yes in 2020,Yes in 2021	38.4
Yes in 2021	3.8
#Total cases	211
Provided delivery services for essential goods	
	46.9
Yes in 2020	12.3
Yes in 2020,Yes in 2021	37.0
Yes in 2021	3.8
#Total cases	211
Deployed active contract tracing systems for public transport services	
	60.2
Yes in 2020	4.7
Yes in 2020,Yes in 2021	30.3
Yes in 2021	4.7
#Total cases	211
Deployed passive/digital contract tracing systems for public transport services	
	68.7
Yes in 2020	4.7
Yes in 2020,Yes in 2021	21.8
Yes in 2021	4.7
#Total cases	211

Note: TOs were asked: "Did your LGU undertake allocate or realign your own budgetary resources for the following COVID-responsive actions for transport services in 2020 and 2021? Please check on the boxes below only if resources from your LGU's budget were allocated for the following items in 2020 and 2021 respectively."

Chapter 2:
Breaking Down the LGU Fiscal Performance: A Study on the Budget Utilization Rate

Annex 2.1. Devolved functions of national government agencies

National government agency	Devolved function
Department of Agriculture (DA)	Agriculture and fishery extension services; regulation of agricultural and fishery activity; conduct of agricultural and fishery research; procurement and distribution of certified seeds; purchase, expansion, and conservation of breeding stocks; construction, repair, and rehabilitation of water impounding systems; support to fishermen, including purchase of fishing nets and other materials.
Department of Environment and Natural Resources (DENR)	Forest management services; mines and geosciences services; environmental management services; reforestation projects; integrated social forestry projects; water rehabilitation projects.
Department of Health (DOH)	Extension of medical and health services through provincial health office and district, municipal, and Medicare community hospitals; purchase of drugs and medicines; implementation of primary health care programs; field health services; aid to puericulture; construction, repair, rehabilitation, and renovation of provincial, district, municipal, and Medicare hospitals; provision for the operation of five-bed health infirmaries.
Department of Public Works and Highways (DPWH)	Repair and maintenance of infrastructure facilities; water supply projects; communal irrigation projects.
Department of Social Welfare and Development (DSWD)	Implementation of community-based programs for rebel-returnees; provision for the operation of a day-care center in every barangay; provision for poverty alleviation in low-income municipalities and depressed urban barangays.

Source: (Llanto, 2012 p. 42)

Annex 2.2. Summary of Data Sources

Relevant Data	Data Source	Agency	Unit	Years available
• Overall expenditure • Local Disaster Risk Reduction Management Fund (LDRRMF) • Labor and Employment • Housing and Community Development • Health, Nutrition and Population Control • General Public Services • Education • Economic Services • LGU Development Fund • Social Services and Welfare • Capital Outlays (CO) • Maintenance and Other Operating Expenses (MOOE) • Personal Services • IRA • Locally sourced revenue • Growth in Locally Sourced Revenue per Capita	Statement of Receipts and Expenditures (SRE)	BLGF-DOF	By LGU type	2015-2018 (some LGUs have missing data)
Budget data • Total budget • Local Disaster Risk Reduction Management Fund (LDRRMF) • Labor and Employment • Housing and Community Development • Health, Nutrition and Population Control • General Public Services • Education • Economic Services • LGU Development Fund • Social Services and Welfare • Capital Outlays (CO) • Maintenance and Other Operating Expenses (MOOE) • Personal Services (PS) • COA Audit Observation	Audited Financial Statements of LGUs (drawn by World Bank, 2021)	COA	By LGU type	2015-2018

Relevant Data	Data Source	Agency	Unit	Years available
• Peace and order score • Business-friendliness and Competitiveness score • Environmental management score • Financial Administration Score • SGLG Early warning system score • SGLG Disaster preparedness score • Gawad Kalasag	SGLG dataset	DILG	By LGU type	2015-2018
• No. of LDC members • No of NGO representatives as council members in the LDC	SGLG dataset	DILG	By LGU type	2016-2018
• Population	Census of Population and Housing	Philippine Statistics Authority	By LGU type	2015, 2020
• Poverty estimates	Small Area Poverty Estimates	Philippine Statistics Authority	By LGU type	2015, 2018
• Housing vulnerability index		(Healey et al., 2022)		2015

Annex 2.3. Model Specification: Outcome and Explanatory Variables

To recall, the following regression model was used to analyze the relationship between the budget utilization rate of LGUs and the various indicators:

$$lnBUR_{it} = \beta_0 + \alpha\ ln\ ln\ (U_{it}) + \gamma V_{it} + \delta W_{it} + \epsilon X_{it} + \sigma Y_{it} + \pi Z_{it} + \mu_{it}$$

where BUR_{it} is the budget utilization rate of LGU i at time t, U_{it} is a vector that contains various budget data variables of LGU i at time t, V_{it} is a vector that contains several financial indicators of LGU i at time t, W_{it} is a vector that contains a couple of social data variables of LGU i at time t, X_{it} is a vector that contains the good governance indicators of LGU i at time t, Y_{it} is a vector containing the disaster vulnerability variables of LGU i at time t, Z_{it} and is a vector that contains dummy variables indicating whether LGU i is a municipality, city, or province. β_0 is the intercept of the regression equation, α, γ, δ, ϵ, σ, and π are vectors containing the coefficients associated with the variables included in vectors U_{it}, V_{it}, W_{it}, X_{it}, Y_{it}, and Z_{it}, respectively. μ_{it} is the error term of the equation.

Outcome Variables

The primary concern of this study is to examine what correlates with the underspending behavior of local government units. Several regressions were run to look at various variables that are associated with the natural log of the overall budget utilization rate as well as the utilization rate per expense class and per sector or function. The log of the budget utilization rate was computed to normalize the skewed distribution of these variables. The analyses were done per budget and per type of LGU.

- Overall budget
- Local Disaster Risk Reduction Management Fund (LDRRMF)
- Labor and Employment
- Housing and Community Development
- Health, Nutrition and Population Control
- General Public Services
- Education
- Economic Services
- LGU Development Fund
- Social Services and Welfare
- Capital Outlays (CO)
- Maintenance and Other Operating Expenses (MOOE)
- Personal Services

Explanatory Variables

The natural log of the current lag values of the following budget data of the following items were used as regressors of the overall budget.

- Local Disaster Risk Reduction Management Fund (LDRRMF)
- Labor and Employment
- Housing and Community Development
- Health, Nutrition and Population Control
- General Public Services
- Education
- Economic Services
- LGU Development Fund
- Social Services and Welfare
- Capital Outlays (CO)
- Maintenance and Other Operating Expenses (MOOE)
- Personnel Services (PS)

For the budget utilization rate of each functional budget, the natural log of the current and lag budget, and the CO, MOOE and PS were included as regressors.

The following variables were included to incorporate the financial situation of local governments.

- Budget per capita (Total budget divided by the LGU population)
- IRA dependency (IRA as percentage of total revenue of the LGU)
- Growth in locally sourced revenue per capita (measures the degree of improvement of the tax effort exerted by the LGU)
- Dummy variables indicating the COA opinion on the LGU audit report (unqualified, qualified, adverse, disclaimer)
- Financial administration score (SGLG)

For social context, the 2015 and 2018 poverty data of the LGU were included. The 2015 data was also used for 2016, while the 2018 data was also used as entry for 2017. The small area poverty estimates were also included in the model for cities and municipalities.

The following 2015-2018 SGLG indicators were also used to indicate good governance and citizen participation:

i. Peace and order score
ii. Business-friendliness and Competitiveness score
iii. Environmental management score
iv. Percentage of CSOs/NGOs in the LDC

This study also hypothesizes that the vulnerability of LGUs to disaster may affect their budget utilization rate. The following variables were incorporated to measure LGU vulnerability:

i. 2015 Housing vulnerability index (Healey et al., 2022). Same entries were used for 2016-2018
ii. SGLG Early warning system score
iii. SGLG Disaster preparedness score

In the analysis of the LDRRMF budget utilization rate, a variable was included to indicate whether the LGU is a Gawad *Kalasag* awardee or not. Gawad *Kalasag* is the program of the National Disaster Risk Reduction and Management Council (NDRRMC) that recognizes best practices of disaster risk reduction and management (DRRM), and humanitarian response and action (Office of Civil Defense, undated).

Dummy variables for LGU type were also included in the analysis.

Annex 2.4. Summary Statistics

Table 2.4.1. Descriptive Statistics (all LGUs) 2015-2018

	n	2015	n	2016	n	2017	n	2018
Budget utilization rate M(SD)	1,440	0.836	1,516	1.085	1,510	0.790	1,556	0.789
		(0.590)		(11.139)		(0.301)		(0.227)
budget per capita M(SD)	1,440	4063.671	1,516	4357.636	1,510	4830.336	1,556	5205.883
		(5876.123)		(8917.904)		(12600.530)		(10614.360)
Functional budgets								
Development Fund M(SD)	1,255	42,220,000.00	1,226	44,000,000.00	1,323	49,200,000.00	1,380	59,200,000.00
		(97,400,000.00)		(82,700,000.00)		(95,000,000.00)		(135,000,000.00)
Economic Services M(SD)	1,326	48,300,000.00	1,387	54,000,000.00	1,373	59,500,000.00	1,415	75,800,000.00
		(154,000,000.00)		(204,000,000.00)		(252,000,000.00)		(275,000,000.00)
Education M(SD)	733	27,200,000.00	976	25,200,000.00	1,011	29,300,000.00	1,060	36,000,000.00
		(110,000,000.00)		(99,300,000.00)		(139,000,000.00)		(176,000,000.00)
General Public Services M(SD)	1,403	136,000,000.00	1,468	115,000,000.00	1,465	170,000,000.00	1,516	190,000,000.00
		(373,000,000.00)		(400,000,000.00)		(591,000,000.00)		(487,000,000.00)
Health, Nutrition, and Population Control M(SD)	1,195	35,300,000.00	1,248	45,000,000.00	1,252	47,500,000.00	1,306	54,700,000.00
		(120,000,000.00)		(167,000,000.00)		(162,000,000.00)		(203,000,000.00)
Housing and Community Development M(SD)	282	26,500,000.00	277	35,600,000.00	284	37,600,000.00	282	38,900,000.00
		(97,500,000.00)		(121,000,000.00)		(127,000,000.00)		(117,000,000.00)

	n	2015	n	2016	n	2017	n	2018
Labor and Employment M(SD)	178	3,665,162.00	183	4,763,825.00	186	4,752,886.00	211	5,308,250.00
		(12,600,000.00)		12,100,000.00		(12,300,000.00)		(13,330,000.00)
Local Disaster Risk Reduction Management Fund M(SD)	1,298	16,400,000.00	1,346	15,000,000.00	1,375	17,400,000.00	1,420	19,700,000.00
		(92,500,000.00)		(38,100,000.00)		(46,400,000.00)		(52,700,000.00)
Social Services and Welfare M(SD)	1,319	17,000,000.00	1,372	22,400,000.00	1,371	26,600,000.00	1,419	33,200,000.00
		(63,700,000.00)		(95,400,000.00)		(114,000,000.00)		(195,000,000.00)
Capital Outlays M(SD)	1,411	78,100,000.00	1,473	78,900,000.00	1,485	26,600,000.00	1,536	127,000,000.00
		(266,000,000.00)		(266,000,000.00)		(114,000,000.00)		(372,000,000.00)
Maintenance and Other Operating Expenses M(SD)	1,429	150,000,000.00	1,505	164,000,000.00	1,502	176,000,000.00	1,544	209,000,000.00
		(438,000,000.00)		(507,000,000.00)		(503,000,000.00)		(659,000,000.00)
Personal Services M(SD)	1,430	98,500,000.00	1,501	110,000,000.00	1,499	120,000,000.00	1,542	130,000,000.00
		(222,000,000.00)		(263,000,000.00)		(324,000,000.00)		(307,000,000.00)
Population Density (per sq km) M(SD)	1,593	768.88	1,593	826.98	1,592	885.57	1,593	943.18
		(3,052.45)		(3,227.00)		(3,410.08)		(3,596.15)
Poverty Incidence M(SD)	1,714	28.58	1,715	28.58	1,714	23.38	1,714	23.37
		(16.49)		(16.49)		(17.62)		(17.62)
Ratio of NGO representatives in the LDC M(SD)	1,703	0.29	1,703	0.29	1,692	0.32	1,679	0.38
		(0.09)		(0.09)		(0.52)		(1.03)

	n	2015	n	2016	n	2017	n	2018
Growth of local revenue source per capita M(SD)	1,704	0.13	1,703	0.13	1,709	0.23	1,709	0.14
		(0.89)		(0.97)		(1.24)		(0.63)
Housing Vulnerability Index M(SD)	1,633	0.034	1,633	0.034	1,632	0.035	1,633	0.034
		(2.63)		(2.63)		(2.632)		(2.631)
Rate of IRA Dependency M(SD)	1,697	0.818	1,701	0.811	1,672	0.824	1,703	0.801
		(0.16)		(0.18)		(0.16)		(0.18)
COA observations								
Unqualified n (%)	1,687	111 (6.58%)	1,715	118 (6.88%)	1,705	132 (7.74%)	1,706	121 (7.09%)
Qualified n (%)		1,472 (87.26%)		1,502 (87.58%)		1,512 (88.68%)		1,505 (88.218%)
Disclaimer n (%)		57 (3.38%)		46 (2.68%)		17 (1.00%)		20 (1.17%)
Adverse n (%)		26 (1.54%)		23 (1.34%)		21 (12.30%)		22 (1.29%)
SGLG Scores								
Peace and Order Score n(%)	1,715	1,497 (87.29%)	1,715	1.096 (63.91%)	1,715	934 (54.46%)	1,715	507 (29.56%)
Business Friendliness Score n(%)		1.432 (83.50%)		886 (51.66%)		1,268 (73.94%)		914 (53.29%)
Environmental Management Score n (%)		1,442 (84.08%)		1,371 (79.94%)		1,477 (86.122%)		874 (50.96%)
Early Warning Score n (%)		1,624 (94.70%)		1,181(68.86%)		1,464 (85.364%)		1,171 (68.28%)
Disaster-preparedness Score n (%)		1,099 (64.08%)		378 (22.04%)		770 (44.90%)		297 (17.32%)
Financial Administration Score n (%)		1,517 (88.46%)		796 (46.41%)		938 (54.69%)		408 (23.79%)

Table 2.4.2. Descriptive Statistics (municipality) 2015-2018

	n	2015		2016	n	2017	n	2018
Budget utilization rate M(SD)	1,148	0.85	1,204	1.17	1205	0.80	1,241	0.80
		(0.65)		(12.45)		(0.33)		(0.23)
budget per capita M(SD)	1,148	4032.42	1,204	4346.05	1205	4945.46	1,241	5212.44
		(6,453.41)		(9,805.20)		(14,047.98)		(11,749.70)
Sectoral budgets								
Development Fund M(SD)	994	18,400,000.00	966	20,000,000.00	1,061	23,600,000.00	1,097	27,400,000.00
		(20,800,000.00)		(12,700,000.00)		(22,800,000.00)		(60,400,000.00)
Economic Services M(SD)	1,050	19,400,000.00	1,095	16,800,000.00	1,090	25,500,000.00	1,117	23,000,000.00
		(72,800,000.00)		(22,800,000.00)		(227,000,000.00)		(46,400,000.00)
Education M(SD)	554	4,964,460.00	758	6,497,619.00	789	6,004,420.00	826	7,913,762.00
		(10,300,000.00)		(28,100,000.00)		(20,000,000.00)		(30,250,000,000.00)
General Public Services M(SD)	1,119	60,200,000.00	1,168	65,900,000.00	1,167	79,500,000.00	1,203	84,900,000.00
		(57,200,000.00)		(51,700,000.00)		(184,000,000.00)		(75,400,000.00)
Health, Nutrition, and Population Control M(SD)	945	9,450,749.00	979	11,000,000.00	985	11,200,000.00	1,020	12,900,000.00
		(9,993,339.00)		(32,400,000.00)		(11,400,000.00)		(220,800,000.00)
Housing and Community Development M(SD)	202	6,743,595.00	190	5,288,787.00	193	6,667,820.00	199	9,109,354.00
		(19,700,000.00)		(7,885,433.00)		(17,100,000.00)		(24,100,000.00)
Labor and Employment M(SD)	119	1,550,835.00	120	1,982,010.00	115	1,600,951.00	129	1,986,050.00

	n	2015		2016	n	2017	n	2018
		(3,085,242.00)		(4,125,813.00)		(2,678,255.00)		(3,680,098.00)
Local Disaster Risk Reduction Management Fund M(SD)	1,030	8,787,741.00	1,072	6,396,536.00	1,096	7,268,954.00	1,129	7,754,486.00
		(96,200,000.00)		(5,665,237.00)		(7,698,037.00)		(7,515,065.00)
Social Services and Welfare M(SD)	1,043	6,334,466.00	1,085	8,535,997.00	1,089	12,200,000.00	1,117	9,533,796.00
		(9,843,529.00)		(41,200,000.00)		(75,800,000.00)		(14,500,000.00)
Capital Outlays M(SD)	1,122	24,500,000.00	1,169	26,300,000.00	1,186	31,400,000.00	1,221	44,900,000.00
		(38,900,000.00)		(37,900,000.00)		(44,400,000.00)		(85,000,000.00)
Maintenance and Other Operating Expenses M(SD)	1,138	55,800,000.00	1,195	56,400,000.00	1,198	68,500,000.00	1,229	69,900,000.00
		(117,000,000.00)		(52,100,000.00)		(185,000,000.00)		(69,700,000.00)
Personal Services M(SD)	1,138	45,600,000.00	1,192	48,200,000.00	1,195	59,600,000.00	1,227	56,400,000.00
		(57,300,000.00)		(40,700,000.00)		(226,000,000.00)		(32,100,000.00)
Population Density (per sq km)	1,366	410.26	1,365	441.93	1,364	476.13	1,365	509.74
		(861.60)		(952.19)		(1,052.98)		(1,157.67)
Poverty Incidence M(SD)	1,375	30.11	1,375	30.13	1,374	24.89	1,374	24.89
		(16.38)		(16.37)		(14.90)		(17.89)
Ratio of NGO representatives in the LDC M(SD)	1,365	0.29	1,364	0.29	1,354	0.33	1,342	0.40
population density (per sq km)		(0.09)		(0.09)		(0.58)		(1.15)

	n	2015		2016	n	2017	n	2018
Growth of local revenue source per capita M(SD)	1,480	0.14	1,479	0.14	1,483	0.23	1,484	0.15
		(0.94)		(1.04)		(1.24)		(0.66)
Housing Vulnerability Index M(SD)	1,376	0.215	1,375	0.221	1,374	0.222	1,375	0.221
		(2.57)		(2.57)		(2.57)		(2.57)
Rate of IRA Dependency M(SD)	1,360	0.837	1,361	0.829	1,340	0.843	1,363	0.820
		(0.15)		(0.16)		(0.14)		(0.17)
COA observations								
Unqualified n(%)	1,464	98 (6.69%)	1,489	100 (6.72%)	1,479	118 (7.98%)	1,480	1374 (92.84%)
Qualified n(%)		1,272 (86.89%)		1,306 (2.89%)		1,308 (88.44%)		1,299 (1.28%)
Disclaimer n(%)		50 (3.42%)		43 (2.89%)		16 (1.08%)		19 (1.28%)
Adverse n(%)		25 (1.71%)		18 (1.21%)		14 (0.95%)		19 (1.28%)
SGLG Scores								
Peace and Order Score n(%)	1,490	1,295 (86.91%)	1,489	923 (61.99%)	1,488	758 (50.94%)	1,489	393 (26.39%)
Business Friendliness Score n(%)		1,235 (82.89%)		746 (50.10%)		1,063 (71.44%)		759 (50.09%)
Environmental Management Score n(%)		1,270 (85.23%)		1,185 (79.58%)		1,284 (86.29%)		716 (48.09%)
Early Warning Score n(%)		1,409 (94.56%)		979 (65.75%)		1,246 (83.74%)		989 (66.42%)
Disaster-preparedness Score n(%)		932(62.55%)		270 (18.13%)		626 (42.07%)		223 (14.95%)
Financial Administration Score n(%)		1,316 (88.32%)		661 (44.39%)		783 (52.62%)		320 (21.49%)

Table 2.4.3. Descriptive Statistics (municipality) 2015-2018

	n	2015	n	2016	n	2017	n	2018
Budget utilization rate M(SD)	124	0.739	133	0.725	128	0.707	137	0.728
		(0.17)		(0.15)		(0.14)		(0.16)
Budget per capita M(SD)	124	5935.122	133	5864.248	128	6138.995	137	6925.402
		(2,395.24)		(2,933.22)		(2,693.90)		(3,576.46)
Sectoral Budgets								
Development Fund M(SD)	106	148,000,000.00	105	152,000,000.00	101	157,000,000.00	122	181,000,000.00
		(172,000,000.00)		(149,000,000.00)		(123,000,000.00)		(179,000,000.00)
Economic Services M(SD)	116	206,000,000.00	122	292,000,000.00	118	259,000,000.00	133	385,000,000.00
		(304,000,000.00)		(577,000,000.00)		(357,000,000.00)		(711,800,000.00)
Education M(SD)	94	143,000,000.00	102	147,000,000.00	107	177,000,000.00	113	225,000,000.00
		(263,000,000.00)		(246,000,000.00)		(371,000,000.00)		(480,000,000.00)
General Public Services M(SD)	120	646,000,000.00	125	727,000,000.00	123	788,000,000.00	137	851,000,000.00
		(1,050,000,000.00)		(1,110,000,000.00)		(1,740,000,000.00)		(1,270,000,000.00)
Health, Nutrition, and Population Control M(SD)	108	138,000,000.00	119	194,000,000.00	115	196,000,000.00	130	213,000,000.00
		(287,000,000.00)		(427,000,000.00)		(397,000,000.00)		(498,000,000.00)
Housing and Community Development M(SD)	52	108,000,000.00	55	151,000,000.00	61	147,000,000.00	54	154,000,000.00
		(205,000,000.00)		(238,000,000.00)		(245,000,000.00)		(226,000,000.00)
Labor and Employment M(SD)	37	11,200,000.00	42	13,600,000.00	44	14,200,000.00	51	14,400,000.00

	n	2015	n	2016	n	2017	n	2018
		(25,800,000.00)		(22,100,000.00)		(22,600,000.00)		(23,900,000.00)
Local Disaster Risk Reduction Management Fund M(SD)	112	64,300,000.00	112	68,700,000.00	117	82,200,000.00	127	96,000,000.00
		(94,000,000.00)		(93,900,000.00)		(127,000,000.00)		(140,000,000.00)
Social Services and Welfare M(SD)	115	74,600,000.00	120	113,000,000.00	115	113,000,000.00	132	186,000,000.00
		(108,000,000.00)		(228,000,000.00)		(206,000,000.00)		(572,000,000.00)
Capital Outlays M(SD)	123	408,000,000.00	131	404,000,000.00	125	471,000,000.00	137	585,000,000.00
		(664,000,000.00)		(726,000,000.00)		(939,000,000.00)		(892,000,000.00)
Maintenance and Other Operating Expenses M(SD)	123	725,000,000.00	132	839,000,000.00	127	834,000,000.00	137	1,070,000,000.00
		(1,130,000,000.00)		(1,390,000,000.00)		(1,250,000,000.00)		(1,790,000,000.00)
Personal Services M(SD)	124	410,000,000.00	131	483,000,000.00	127	481,000,000.00	137	567,000,000.00
		(546,000,000.00)		(684,000,000.00)		(653,000,000.00)		(785,000,000.00)
Population Density (per sq km)	144	4,406.00	145	4,701.48	145	5,003.26	145	5,305.04
	-	(9,046.54)		(9,473.76)		(7,748.19)		(10,436.50)
Poverty Incidence M(SD)	144	16.29	145	16.20	145	11.75	145	11.75
	-	(11.62)		(11.63)		(10.84)		(10.84)
Ratio of NGO representatives in the LDC M(SD)	144	0.30	145	0.30	144	0.29	144	0.30
population density (per sq km)	-	(0.12)		(0.12)		(0.01)		(0.07)

	n	2015	n	2016	n	2017	n	2018
Growth of local revenue source per capita M(SD)	144	0.02	144	0.02	145	0.14	144	0.04
	-	(0.22)		(0.18)		(0.64)		(0.19)
Housing Vulnerability Index M(SD)	143	-1.907	144	-1.946	144	-1.946	144	-1.946
	-	(2.44)		(2.48)		(2.48)	0.00	(2.48)
Rate of IRA Dependency M(SD)	144	0.633	145	0.631	139	0.634	145	0.621
	-	(0.24)		(0.23)		(0.23)	0.00	(0.23)
COA observations								
Unqualified n(%)	143	6 (4.20%)	145	8 (5.52%)	145	3 (2.07%)	145	6 (4.14%)
Qualified n(%)		130 (90.91%)		128 (88.28%)		134 (92.41%)		135 (93.10%)
Disclaimer n(%)		4 (2.80%)		2 (1.38%)		1 (0.69%)		1 (0.69%)
Adverse n(%)		1 (0.70%)		5 (3.45%)		7 (4.83%)		3 (2.07%)
SGLG Scores								
Peace and Order Score n(%)	144	134 (93.06%)	145	114 (79.17%)	145	104 (72.22%)	145	56 (38.89%)
Business Friendliness Score n(%)	144	121 (84.03%)	145	89 (61.81%)	145	132 (98.61%)	145	102 (65.28%)
Environmental Management Score n(%)	144	124 (86.11%)	145	141 (97.92%)	145	142 (98.61%)	145	94 (65.28%)
Early Warning Score n(%)	144	137 (95.14%)	145	130 (90.28%)	145	142 (98.61%)	145	118 (81.94%)
Disaster-preparedness Score n(%)	144	91 (63.19%)	145	57 (39.58%)	145	88 (61.11%)	145	49 (34.03%)
Financial Administration Score n(%)	144	127 (88.19%)	145	85 (59.03%)	145	97 (67.36%)	145	61 (42.36%)

Table 2.4.4. Descriptive Statistics (province) 2015-2018

	n	2015	n	2016	n	2017	n	2018
Budget utilization rate M(SD)	80	0.764	81	0.764	81	0.729	81	0.755
		(0.13)		(0.13)		(0.13)		(0.27)
budget per capita M(SD)	80	2482.196	81	2410.440	81	2696.124	81	2988.150
		(2,320.63)		(2,225.70)		(2,499.56)		(2,436.55)
Sectoral budgets								
Development Fund M(SD)	68	258,000,000.00	72	238,000,000.00	74	301,000,000.00	72	374,000,000.00
		(224,000,000.00)		(137,000,000.00)		(210,000,000.00)		(314,000,000.00)
Economic Services M(SD)	74	252,000,000.00	78	246,000,000.00	80	277,000,000.00	80	354,000,000.00
		(336,000,000.00)		(260,000,000.00)		(274,000,000.00)		(416,000,000.00)
Education M(SD)	44	78,500,000.00	54	80,800,000.00	59	97,400,000.00	64	92,700,000.00
		(126,000,000.00)		(132,000,000.00)		(157,000,000.00)		(133,000,000.00)
General Public Services M(SD)	75	554,000,000.00	79	585,000,000.00	80	679,000,000.00	80	770,000,000.00
		(353,000,000.00)		(420,000,000.00)		(549,000,000.00)		(639,000,000.00)
Health, Nutrition, and Population Control M(SD)	62	286,000,000.00	68	318,000,000.00	70	360,000,000.00	70	423,000,000.00
		(202,000,000.00)		(216,000,000.00)		(244,000,000.00)		(312,000,000.00)
Housing and Community Development M(SD)	15	30,800,000.00	16	29,400,000.00	16	16,900,000.00	17	40,800,000.00
		(47,400,000.00)		(44,700,000.00)		(25,500,000.00)		(85,400,000.00)
Labor and Employment M(SD)	15	3,142,997.00	15	3,846,719.00	20	3,721,444.00	21	5,990,411.00
		(3,124,479.00)		(4,567,724.00)		(3,230,818.00)		(6,453,840.00)

	n	2015	n	2016	n	2017	n	2018
Local Disaster Risk Reduction Management Fund M(SD)	70	65,600,000.00	71	72,900,000.00	73	79,700,000.00	74	87,200,000.00
		(34,900,000.00)		(63,900,000.00)		(42,000,000.00)		(46,500,000.00)
Social Services and Welfare M(SD)	74	92,400,000.00	79	90,400,000.00	80	119,000,000.00	79	142,000,000.00
		(201,000,000.00)		(191,000,000.00)		(248,000,000.00)		(277,000,000.00)
Capital Outlays M(SD)	74	413,000,000.00	79	381,000,000.00	79	527,000,000.00	81	689,000,000.00
		(515,000,000.00)		(349,000,000.00)		(502,000,000.00)		(626,000,000.00)
Maintenance and Other Operating Expenses M(SD)	75	758,000,000.00	79	805,000,000.00	80	895,000,000.00	81	1,040,000,000.00
		(539,000,000.00)		(548,000,000.00)		(617,000,000.00)		(740,000,000.00)
Personal Services M(SD)	75	460,000,000.00	79	501,000,000.00	80	546,000,000.00	81	603,000,000.00
		(245,000,000.00)		(258,000,000.00)		(298,000,000.00)		(325,000,000.00)
Population Density (per sq km)	81	342.46	81	372.78	81	403.10	81	433.42
		(488.84)		(550.22)		(613.08)		(676.83)
Poverty Incidence M(SD)	81	25.07	81	25.07	81	18.40	81	18.40
		(14.94)		(14.94)		(13.57)		(13.57)
Ratio of NGO representatives in the LDC M(SD)	81	0.30	81	0.30	81	0.31	81	0.32
population density (per sq km)		(0.07)		(0.07)		(0.12)		(0.10)
Growth of local revenue source per capita M(SD)	80	0.17	80	0.04	81	0.49	81	0.06
		(0.36)		(0.25)		(1.98)		(0.42)

	n	2015	n	2016	n	2017	n	2018
Housing Vulnerability Index M(SD)								
Rate of IRA Dependency M(SD)	80	0.813	81	0.808	81	0.809	81	0.788
		(0.11)		(0.13)		(0.11)		(0.14)
COA observations								
Unqualified n(%)	80	7 (8.75%)	81	10 (12.35%)	81	11 (13.58%)	81	9 (11.11%)
Qualified n(%)	80	70 (87.50%)		68 (83.95%)		70 (86.42%)		71 (87.65%)
Disclaimer n(%)	80	3 (3.75%)		1 (1.23%)		0 (0.00%)		0 (0.00%)
Adverse n(%)		0 (0.00%)		0 (0.00%)		0 (0.00%)		0 (0.00%)
SGLG Scores								
Peace and Order Score n(%)	81	68 (83.95%)	81	59 (82.84%)	81	72 (88.89%)	81	58 (71.60%)
Business Friendliness Score n(%)		76 (93.83%)		51 (62.96%)		73 (90.12%)		53 (65.43%)
Environmental Management Score n(%)		48 (59.26%)		45 (55.56%)		51 (62.96%)		64 (79.01%)
Early Warning Score n(%)		78 (96.30%)		72 (88.89%)		76 (93.83%)		64 (79.04%)
Disaster-preparedness Score n(%)		76 (93.83%)		51 (62.96%)		56 (69.14%)		19 (23.46%)
Financial Administration Score n(%)		74 (91.36%)		50 (61.73%)		58 (71.60%)		27 (33.33%)

Annex 2.5. Regression Analyses

This paper analyzes LGU budget performance using the regression model discussed in the paper and detailed in Annex 2.3. Three variants of this model were used in the panel data regression analyses: 1) includes only the current and lag values of functional LGU budgets on BUR as covariates; 2) excludes housing and labor budgets to improve the sample size[1]; and 3) controls for variables on socioeconomic development, good governance, and disaster risk.

These variants were used in the analyses for: the overall BUR for all LGUs; the overall BUR for each type of LGU (i.e., Province, City, and Municipality), and on the BUR for key budget types (functional and expense class). This resulted in several regression analyses, which are fleshed out in detail, with accompanying tables, in the succeeding sections. For brevity, only the main, significant findings are discussed in the main part of this paper.

All LGUs

A panel data regression analysis was conducted to analyze the data of all the LGUs from 2015 to 2018. Table 2.5.1. shows three regression models. The first model only includes all the current and lag values of the functional budgets of the LGUs. This is to see whether functional budgets have lag effects on the budget utilization rate given the fact that the budget allows for continuing appropriation. While this model has high explanatory power as represented by the R2, the sample size is small because there are very few reports on housing and labor data.[2]

Model 2 excludes the budgets for housing and labor including its lag values. The explanatory power has been reduced but a bigger sample size is reflected. The results show that budget per capita is negatively correlated with the budget utilization rate. An increase in budget per capita by PhP10,000 will reduce the budget utilization rate by .17 percentage points. The various effects of some of the functional budgets can also be seen. A one percent increase in the health budget will result in a .074 percent change in the budget utilization rate. However, increases in the budget of general public services (GPS), education and economic services and the development fund will result in the decrease in the budget utilization rate. Similarly, their previous year's budgets have significant effects, but the direction of the effects are reversed. Previous year's health budget has a negative effect on the current budget utilization rate while the previous years GPS, education and economic services budgets have positive effects on the current year's budget utilization rate. Capital outlay is also negatively associated with the budget utilization rate. This makes sense as infrastructure normally requires longer execution periods. Previous year's budget for personal services also increases the current year's budget utilization rate. In Model 3, where all other indicators were added, the statistically significant variables in model 2 remain significant. The direction of effects remains the same. There are other statistically significant variables in the 3rd model. Previous year's development fund budget and the MOOE also have positive effects on the current budget utilization rate.

[1] Because of missing or NULL entries for the housing and labor budgets in many LGUs particularly municipalities, bulk of observations (LGUs) were dropped in the first variant of the panel regression. By excluding these functional budgets, most of the observations were kept intact.

[2] See descriptive statistics Annex 2.4. Tables 2.4.1 to 2.4.4. for reference.

However, none of the socio-economic indicators are statistically significant. With respect to the financial data, compliance with the financial administration score results in lower budget utilization rate. With respect to the COA observation, LGUs with audit disclaimer from COA are more likely to have higher budget utilization rate than LGUs with unqualified audit reports.

Looking at the vulnerability scores, higher utilization rate is positively correlated with the early warning score and negatively correlated with the housing vulnerability index. Note that a negative score in the housing vulnerability index means decreasing vulnerability. The correlations of the BUR with both covariates suggest that a local government unit that is less vulnerable and more prepared for disasters may tend to have a higher budget utilization rate.

Table 2.5.1. Panel Regression Analysis on the Budget Utilization Rate of LGUs (2015-2018)

VARIABLES	[1]		[2]		[3]	
city (dummy)	**-0.174**	**	0.016		-	
	(0.083)		(0.038)			
municipality (dummy)	**-0.225**	**	0.001		-0.025	
	(0.104)		(0.046)		(0.040)	
budget per capita	**-0.000**	*	**-0.000**	***	**-0.000**	***
	(0.000)		(0.000)		(0.000)	
log_housing budget	-0.002					
	(0.025)					
log_labor budget	**0.075**	*				
	(0.032)					
log_ldrrmf	-0.019		-0.006		-0.008	
	(0.041)		(0.019)		(0.026)	
log_health budget	0.031		**0.074**	***	**0.090**	***
	(0.052)		(0.022)		(0.024)	
log_GPS budget	0.029		**-0.099**	***	**-0.118**	***
	(0.097)		(0.032)		(0.036)	
log_education budget	0.035		**-0.026**	***	**-0.033**	***
	(0.029)		(0.010)		(0.012)	
log_economic services	0.039		**-0.061**	***	**-0.062**	***
	(0.030)		(0.013)		(0.014)	
log_development fund	0.023		**-0.023**	*	**-0.024**	*
	(0.027)		(0.013)		(0.014)	
log_social services and welfare	**-0.114**	***	-0.010		-0.001	

VARIABLES	[1]		[2]		[3]	
	(0.040)		(0.015)		(0.017)	
log_capital outlay	**-0.090**	***	**-0.030**	***	**-0.030**	**
	(0.028)		(0.010)		(0.012)	
log_MOOE	-0.067		0.002		-0.009	
	(0.162)		(0.029)		(0.032)	
log_personal services	0.103		-0.035		-0.061	
	(0.219)		(0.037)		(0.041)	
lag_final budget	**-0.497**	**	-0.065		-0.077	
	(0.199)		(0.053)		(0.059)	
laglog_housing budget	0.017					
	(0.028)					
laglog_labor budget	-0.012					
	(0.029)					
laglog_ldrrmf	-0.048		0.012		0.013	
	(0.042)		(0.021)		(0.023)	
laglog_health budget	-0.037		**-0.088**	***	**-0.095**	***
	(0.044)		(0.020)		(0.022)	
laglog_GPS budget	0.045		**0.102**	***	**0.094**	**
	(0.116)		(0.034)		(0.039)	
laglog_education budget	-0.009		**0.019**	*	**0.020**	*
	(0.025)		(0.010)		(0.012)	
laglog_economic services budget	0.048		**0.033**	**	**0.030**	*
	(0.036)		(0.014)		(0.016)	
laglog_development fund	-0.066		0.016		**0.023**	*
	(0.046)		(0.012)		(0.013)	
laglog_social services and welfare budget	0.053		0.006		-0.005	
	(0.039)		(0.015)		(0.017)	
laglog_capital outlay	0.055		-0.014		-0.011	
	(0.041)		(0.013)		(0.014)	
laglog_MOOE	0.218		0.048		**0.077**	**
	(0.175)		(0.035)		(0.039)	
laglog_personal services	0.164		**0.142**	***	**0.172**	***
	(0.221)		(0.041)		(0.045)	
population density					0.000	
					(0.000)	

VARIABLES	[1]	[2]	[3]	
poverty incidence			0.000	
			(0.001)	
% of NGO in the LDC			0.003	
			(0.009)	
Local resource growth rate per capita			-0.003	
			(0.015)	
IRA dependency			-0.052	
			(0.063)	
financial administration score			**-0.037**	*
			(0.019)	
peace and order score			0.013	
			(0.018)	
business friendliness score			-0.009	
			(0.019)	
environmental management score			-0.026	
			(0.021)	
early warning score			**0.041**	*
			(0.022)	
disaster preparedness sore			0.032	
			(0.020)	
housing vulnerability index			**-0.011**	***
			(0.004)	
COA obs [qualified]			-0.015	
			(0.028)	
COA obs [adverse]			-0.084	
			(0.071)	
COA obs [disclaimer]			**0.236**	**
			(0.104)	
Constant	1.08E+00	-0.154	0.071	
	(0.757)	(0.336)	(0.408)	
Observations	127	1,429	1,203	
R-squared	0.565	0.229	0.259	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Model 2 excludes housing and labor budget. Lower explanatory power but more samples

Municipalities

Applying the same three regression analyses but only among municipalities, the first model with the labor and housing budgets reduced the sample size significantly and has affected the results of the regression model. Meanwhile, the results of the regression analysis for municipalities using models 2 and 3, where the labor and housing budgets were excluded, are consistent with the overall analysis. Increases in budget per capita, GPS, education, economic services, development fund and capital outlay will result in a decrease in the budget utilization rate. An increase in the health budget increases the budget utilization rate. Similarly, the lags of these functional budgets have the opposite effect. The lag of personal services also has a positive effect on budget utilization rate. This may be attributed to the delayed release of increases in salary of local government employees.

The financial administration score is negatively correlated with the budget utilization rate. The variables pertaining to vulnerability are consistent with the overall findings that the less vulnerable the LGU is, the higher the budget utilization rate.

Consistent results with respect to COA observations can also be seen. Municipalities with audit disclaimer from COA are more likely to have higher budget utilization rate than municipalities with unqualified audit reports.

Table 2.5.2. Panel Regression Analysis on the Budget Utilization Rate of Municipalities (2015-2018)

VARIABLES	[1]	[2]		[3]	
budget per capita	0.000	**-0.000**	***	**-0.000**	***
	(0.000)	(0.000)		(0.000)	
log_labor budget	0.022				
	(0.040)				
log_housing budget	-0.015				
	(0.039)				
log_ldrrmf	0.036	0.007		0.004	
	(0.061)	(0.023)		(0.028)	
log_health budget	-0.055	**0.112**	***	**0.113**	***
	(0.088)	(0.025)		(0.026)	
log_GPS budget	0.104	**-0.121**	***	**-0.121**	***
	(0.151)	(0.037)		(0.040)	
log_education budget	0.043	**-0.022**	*	**-0.033**	**
	(0.041)	(0.013)		(0.014)	
log_economic services	0.045	**-0.076**	***	**-0.075**	***

VARIABLES	[1]	[2]		[3]	
	(0.061)	(0.016)		(0.017)	
log_development fund	0.120	**-0.037**	**	**-0.036**	**
	(0.100)	(0.015)		(0.016)	
log_social services and welfare	-0.031	0.006		0.015	
	(0.081)	(0.018)		(0.020)	
log_capital outlay	-0.044	-0.018		**-0.022**	*
	(0.034)	(0.012)		(0.013)	
log_MOOE	0.030	-0.013		-0.022	
	(0.220)	(0.033)		(0.035)	
log_personal services	0.210	-0.057		**-0.081**	*
	(0.288)	(0.041)		(0.045)	
lag_final budget	-0.004	-0.007		-0.023	
	(0.319)	(0.060)		(0.065)	
laglog_labor budget	0.017				
	(0.035)				
laglog_housing budget	0.043				
	(0.055)				
laglog_ldrrmf	-0.021	0.011		0.017	
	(0.056)	(0.024)		(0.025)	
laglog_health budget	0.002	**-0.094**	***	**-0.101**	***
	(0.067)	(0.022)		(0.024)	
laglog_GPS budget	-0.198	**0.116**	***	**0.103**	**
	(0.206)	(0.041)		(0.044)	
laglog_education budget	-0.019	0.018		0.022	
	(0.035)	(0.012)		(0.014)	
laglog_economic services budget	0.021	**0.039**	**	**0.038**	**
	(0.068)	(0.017)		(0.018)	
laglog_development fund	-0.095	**0.026**	*	**0.027**	*
	(0.114)	(0.015)		(0.016)	
laglog_social services and welfare budget	-0.003	-0.015		-0.022	
	(0.083)	(0.019)		(0.020)	
laglog_capital outlay	0.001	**-0.026**	*	-0.018	
	(0.055)	(0.014)		(0.015)	
laglog_MOOE	-0.128	0.040		0.069	
	(0.246)	(0.039)		(0.042)	
laglog_personal services	-0.200	**0.101**	**	**0.128**	**
	(0.334)	(0.047)		(0.050)	

VARIABLES	[1]	[2]	[3]	
population density			0.000	
			(0.000)	
poverty incidence			0.000	
			(0.001)	
% of NGO in the LDC			0.003	
			(0.009)	
Local resource growth rate per capita			-0.002	
			(0.017)	
IRA dependency			-0.035	
			(0.070)	
financial administration score			**-0.035**	*
			(0.21)	
peace and order score			0.023	
			(0.020)	
business friendliness score			-0.015	
			(0.021)	
environmental management score			-0.030	
			(0.023)	
early warning score			**0.044**	*
			(0.024)	
disaster preparedness sore			0.023	
			(0.023)	
housing vulnerability index			**-0.010**	**
			(0.005)	
COA obs [qualified]			-0.016	
			(0.030)	
COA obs [adverse]			0.010	
			(0.092)	
COA obs [disclaimer]			**0.233**	**
			(0.108)	
Constant	2.166	-0.085	0.123	
	(1.390)	(0.403)	(0.453)	
Observations	73	1139	1037	
R-squared	0.396	0.230	0.254	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Models 2 & 3 excludes housing and labor budget. Lower explanatory power but more samples

Cities

With respect to cities, the regression results again show the negative relationship between budget per capita and the budget utilization rate. The LDRRMF, capital outlay and the previous year's budget are negatively associated with the budget utilization rate. An increase in previous year's development fund and social services and welfare budget will result in higher current budget utilization rate.

Similarly, less vulnerable cities are more likely to have a higher budget utilization rate. This is represented by the positive relationship between the budget utilization rate and the disaster preparedness score and the negative relationship between housing vulnerability index and the budget utilization rate.

COA observations are not statistically significant in the regression models of cities.

Table 2.5.3. Panel Regression Analysis on the Budget Utilization Rate of Cities (2015-2018)

VARIABLES	[1]		[2]		[3]	
budget per capita	-0.000		**-0.000**	***	**-0.000**	***
	(0.000)		(0.000)		(0.000)	
log_labor budget	0.217					
	(0.149)					
log_housing budget	-0.170					
	(0.130)					
log_ldrrmf	0.196		-0.095		**-0.106**	*
	(0.134)		(0.060)		(0.063)	
log_health budget	-0.031		-0.077		-0.096	
	(0.116)		(0.055)		(0.058)	
log_GPS budget	0.132		-0.031		-0.101	
	(0.239)		(0.069)		(0.071)	
log_education budget	**0.171**	*	-0.003		-0.005	
	(0.078)		(0.020)		(0.021)	
log_economic services	**0.127**	*	0.026		0.024	
	(0.063)		(0.025)		(0.025)	
log_development fund	**0.151**	*	0.021		**0.047**	*
	(0.078)		(0.023)		(0.025)	
log_social services and welfare	-0.105		**-0.057**	**	-0.022	
	(0.088)		(0.027)		(0.030)	
log_capital outlay	**-0.311**	***	**-0.175**	***	**-0.167**	***
	(0.093)		(0.030)		(0.031)	

VARIABLES	[1]		[2]		[3]	
log_MOOE	-0.446		**0.245**	***	**0.252**	**
	(0.486)		(0.092)		(0.099)	
log_personal services	-0.636		0.131		0.123	
	(0.683)		(0.127)		(0.131)	
lag_final budget	-0.550		-0.438		**-0.354**	***
	(0.638)		(0.130)		(0.133)	
laglog_labor budget	-0.086					
	(0.113)					
laglog_housing budget	0.177					
	(0.105)					
laglog_ldrrmf	-0.199		0.043		0.035	
	(0.122)		(0.053)		(0.055)	
laglog_health budget	0.071		0.005		-0.012	
	(0.115)		(0.055)		(0.057)	
laglog_GPS budget	**0.391**	*	0.100		0.088	
	(0.215)		(0.071)		(0.072)	
laglog_education budget	-0.015		0.000		-0.002	
	(0.076)		(0.018)		(0.019)	
laglog_economic services budget	0.143		0.013		0.008	
	(0.089)		(0.026)		(0.026)	
laglog_development fund	**0.332**	*	0.020		**0.034**	*
	(0.157)		(0.018)		(0.018)	
laglog_social services and welfare budget	**0.172**	**	**0.060**	**	**0.048**	*
	(0.076)		(0.026)		(0.029)	
laglog_capital outlay	-0.200		0.059		0.052	
	(0.155)		(0.042)		(0.042)	
laglog_MOOE	-0.247		0.020		0.002	
	(0.528)		(0.103)		(0.106)	
laglog_personal services	0.975		0.150		0.171	
	(0.745)		(0.123)		(0.126)	
population density					0.000	
					(0.000)	
poverty incidence					-0.001	
					(0.002)	
% of NGO in the LDC					0.118	
					(0.178)	

VARIABLES	[1]	[2]	[3]	
Local resource growth rate per capita			0.001	
			(0.025)	
IRA dependency			0.117	
			(0.146)	
financial administration score			-0.039	
			(0.038)	
peace and order score			-0.026	
			(0.035)	
business friendliness score			0.005	
			(0.041)	
environmental management score			0.011	
			(0.052)	
early warning score			-0.045	
			(0.060)	
disaster preparedness sore			**0.084**	**
			(0.035)	
housing vulnerability index			**-0.020**	*
			(0.011)	
COA obs [qualified]			-0.057	
			(0.087)	
COA obs [adverse]			-0.179	
			(0.111)	
COA obs [disclaimer]			-	
Constant	-2.759	-0.264	-0.420	
	(2.337)	(0.539)	(0.754)	
Observations	37	171	166	
R-squared	0.950	0.557	0.591	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Models 2 & 3 exclude housing and labor budget. Lower explanatory power but more samples

Provinces

Only two models (2 and 3) are presented with respect to provinces as the inclusion of labor and housing budget data leads to a very small sample size. Nevertheless, the negative relationship between the budget per capita and budget utilization rate can still be seen. However, a negative relationship between the health budget and the budget utilization rate can now be observed. The same negative relationship can also be gleaned between the previous year's budget for GPS and the budget utilization rate. The MOOE budget is also positively correlated with the budget utilization rate.

Compared to the preceding regressions, local resource growth rate per capita appears to be a statistically significant covariant to the BUR. It suggests that an increase in the tax effort of the province will negatively affect the budget utilization rate. This is consistent with the results of the budget per capita. An increase in the tax effort will increase the income and therefore the available budget of the province which will then decrease the budget utilization rate.

The environmental management score is also positively correlated with the budget utilization rate. Unfortunately, the housing vulnerability index for provinces is not available and the other vulnerability scores are not statistically significant correlates of the BUR.

The COA observations are not statistically significant for provinces.

Table 2.5.4. Panel Regression Analysis on the Budget Utilization Rate of Provinces (2015-2018)

VARIABLES	[1]		[2]	
budget per capita	-0.000		**-0.000**	**
	(0.000)		(0.000)	
log_ldrrmf	0.010		0.001	
	(0.038)		(0.041)	
log_health budget	**-0.236**	**	**-0.227**	**
	(0.090)		(0.095)	
log_GPS budget	0.023		-0.008	
	(0.096)		(0.100)	
log_education budget	**-0.048**	*	-0.051	
	(0.029)		(0.032)	
log_economic services	-0.036		-0.049	
	(0.053)		(0.058)	
log_development fund	0.023		0.043	
	(0.060)		(0.066)	

VARIABLES	[1]		[2]	
log_social services and welfare	0.022		0.003	
	(0.043)		(0.047)	
log_capital outlay	-0.061		-0.042	
	(0.038)		(0.042)	
log_MOOE	0.114		**0.186**	*
	(0.094)		(0.112)	
log_personal services	0.255		0.183	
	(0.231)		(0.244)	
lag_final budget	0.114		-0.014	
	(0.266)		(0.281)	
laglog_ldrrmf	0.067		0.089	
	(0.139)		(0.154)	
laglog_health budget	0.064		-0.011	
	(0.086)		(0.090)	
laglog_GPS budget	**-0.193**	*	**-0.256**	**
	(0.111)		(0.119)	
laglog_education budget	0.024		0.031	
	(0.031)		(0.034)	
laglog_economic services budget	-0.021		-0.019	
	(0.056)		(0.059)	
laglog_development fund	-0.044		-0.048	
	(0.043)		(0.044)	
laglog_social services and welfare budget	0.024		0.038	
	(0.045)		(0.048)	
laglog_capital outlay	0.027		0.055	
	(0.052)		(0.056)	
laglog_MOOE	0.023		0.060	
	(0.145)		(0.151)	
laglog_personal services	-0.235		-0.142	
	(0.232)		(0.249)	
population density			0.000	
			(0.000)	
poverty incidence			0.000	
			(0.003)	
% of NGO in the LDC			0.070	
			(0.234)	
Local resource growth rate per capita			**-0.134**	*

VARIABLES	[1]	[2]	
		(0.068)	
IRA dependency		-0.130	
		(0.243)	
financial administration score		-0.084	
		(0.060)	
peace and order score		-0.033	
		(0.062)	
business friendliness score		0.108	
		(0.065)	
environmental management score		**0.108**	**
		(0.051)	
early warning score		0.051	
		(0.092)	
disaster preparedness sore		-0.003	
		(0.053)	
COA obs [qualified]		-0.090	
		(0.074)	
COA obs [adverse]		-	
COA obs [disclaimer]		-	
Constant	1.255	3.411	*
	(1.508)	(1.732)	
Observations	119	119	
R-squared	0.276	0.373	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

*hvi excluded as no hvi for provinces

**Sample was too small when the housing and labor budgets were included as regressors.

Budget utilization rates for the functional budgets of municipalities

Will the same relationships described above hold true if the dependent variable is replaced with the BURs of specific budget items or classes? In this analysis, the various budget utilization rates of the functional budgets and the CO, PS, and MOOE budget classifications are regressed. On their current and previous year's budget. The other covariates were also included in these regressions: the budget classifications (CO, PS, and MOOE) and their lag budget; budget per capita, population density, poverty incidence, the various financial, governance, and vulnerability and COA observations as regressors in the models.

Table 2.5.5. shows the regression results for the budget utilization rates of LDRRM, health, GPS, education, economic services, development fund, and social services for municipalities. The results show that the utilization rates of the various functional budgets are negatively correlated with their current budget. An increase in the current budget will result in the decrease of their respective budget utilization rates. This is statistically significant for LDRRM, health, GPS, education, economic services, and development fund. The lags of their budgets are also statistically significant and are positively correlated to their current budget utilization rate. This suggests a delay in the implementation of some items in the budget for at least a year.

The budget per capita is again negatively correlated to budget utilization rate but is only statistically significant for health and economic services. Consistent with the previous findings, capital outlay is negatively correlated with budget utilization rate. It is statistically significant for GPS, economic services, development fund and social services. MOOE is positively correlated and statistically significant for LDRRM, education, economic services, and development fund. Personal services is also positively correlated and statistically significant for GPS, economic services and social services. The lags of MOOE and PS are also both positively correlated. The lag of MOOE is statistically significant for LDRRM, GPS, and the development fund. The lag of PS is statistically significant for LDRRM, health development fund and social services.

Population density is statistically significant, but its effect varies. It is positively correlated with the budget utilization rate for GPS and development funds and negatively correlated with the budget utilization rate for economic services. Poverty incidence is positively correlated and statistically significant for LDRRM, GPS, economic services, development fund, and social services.

IRA dependency is statistically significant, but a clear trend cannot be seen in terms of its relationship with the budget utilization rate. It is statistically significant and negatively correlated with LDRRM but statistically significant and positively correlated with health and GPS. The financial administration score is statistically significant and positively correlated with the budget utilization rate for LDRRM, and the development fund.

Business friendliness score is also statistically significant but with varying effects. It is positively correlated with budget utilization rate for education but negatively correlated with health. Similarly,

the environmental management score is showing a mixed trend with positive correlation on budget utilization rate of health but negative correlation on the budget utilization rate of education.

Consistent with previous findings, early warning score, disaster preparedness and negative correlation with housing vulnerability index suggests greater preparedness and less vulnerability of LGUs are correlated with higher budget utilization rates of the LDRRM, health, GPS, economic services, development fund, and social services.

COA observations are not statistically significant.

Table 2.5.5. Panel Regression Analysis on the Budget Utilization Rate of Various Functional Budgets of Municipalities (2015-2018)

	LDRRM		HEALTH		GPS		EDUCATION		ECON		DEVFUND		SOC SERV	
log_co	-0.021		0.007		**-0.024**	***	-0.017		**-0.034**	***	**-0.063**	***	**-0.019**	***
	(0.017)		(0.006)		(0.004)		(0.013)		(0.007)		(0.017)		(0.007)	
log_mooe	**0.103**	**	0.022		0.019		**0.085**	***	**0.083**	***	**0.100**	**	-0.017	
	(0.045)		(0.015)		(0.012)		(0.031)		(0.019)		(0.043)		(0.017)	
log_ps	0.025		-0.021		**0.059**	***	-0.007		**0.062**	***	-0.046		**0.036**	*
	(0.049)		(0.017)		(0.013)		(0.032)		(0.023)		(0.051)		(0.021)	
laglog_co	**-0.048**	***	-0.003		-0.004		-0.001		-0.009		**-0.051**	***	-0.005	
	(0.017)		(0.006)		(0.004)		(0.012)		(0.007)		(0.018)		(0.007)	
laglog_mooe	**0.115**	***	0.018		**0.023**	**	0.012		0.007		**0.102**	**	0.015	
	(0.043)		(0.015)		(0.011)		(0.031)		(0.018)		(0.043)		(0.016)	
laglog_ps	**0.089**	*	**0.040**	**	0.015		-0.004		0.024		**0.116**	**	**0.034**	*
	(0.050)		(0.018)		(0.013)		(0.031)		(0.020)		(0.049)		(0.019)	
budget per capita	-0.000		**-1.75e-06***	*	-0.000		-0.000		**-0.000**	***	-0.000		-0.000	
	(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)	
population density	0.000		0.000		**0.000**	**	0.000		**-0.000**	**	**0.000**	**	0.000	
	(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)	
poverty incidence	**0.004**	***	0.000		**0.001**	***	0.001		**0.001**	***	**0.004**	***	**0.001**	*
	(0.001)		(0.000)		(0.000)		(0.001)		(0.001)		(0.001)		(0.001)	
% of NGO in the LDC	0.016		0.004		-0.004		0.005		0.002		-0.021		-0.001	

	LDRRM		HEALTH		GPS		EDUCATION		ECON	DEVFUND		SOC SERV	
	(0.019)		(0.007)		(0.005)		(0.013)		(0.009)	(0.019)		(0.009)	
Local resource growth rate per capita	-0.020		-0.006		0.000		0.007		0.006	-0.011		0.005	
	(0.016)		(0.009)		(0.004)		(0.023)		(0.006)	(0.016)		(0.007)	
IRA dependency	**-0.210**	*	**0.122**	***	**0.104**	***	0.121		-0.064	-0.054		-0.003	
	(0.119)		(0.042)		(0.032)		(0.090)		(0.050)	(0.122)		(0.048)	
financial adminitration score	**0.080**	**	-0.014		-0.004		0.010		0.024	**0.065**	*	-0.004	
	(0.037)		(0.013)		(0.010)		(0.028)		(0.015)	(0.037)		(0.015)	
peace and order score	-0.008		-0.002		-0.007		-0.004		0.000	-0.002		-0.010	
	(0.037)		(0.013)		(0.010)		(0.027)		(0.015)	(0.037)		(0.015)	
business friendliness score	0.013		**-0.025**	**	0.006		**0.047**	*	0.004	0.042		-0.016	
	(0.037)		(0.013)		(0.010)		(0.027)		(0.015)	(0.037)		(0.014)	
environmental management score	-0.026		**0.027**	*	0.005		**-0.053**	*	-0.010	-0.009		0.013	
	(0.041)		(0.014)		(0.011)		(0.031)		(0.016)	(0.041)		(0.016)	
early warning score	0.061		0.021		0.002		0.044		0.023	**0.115**	***	**0.057**	***
	(0.043)		(0.015)		(0.011)		(0.032)		(0.017)	(0.042)		(0.017)	

	LDRRM		HEALTH		GPS		EDUCATION		ECON		DEVFUND		SOC SERV
disaster prepared-ness sore	0.066		0.004		**0.021**	*	0.009		-0.019		**0.098**	**	0.005
	(0.042)		(0.014)		(0.011)		(0.031)		(0.017)		(0.042)		(0.016)
housing vulnerability index	**-0.014**	*	**-0.008**	***	**-0.006**	***	-0.008		**-0.006**	*	-0.006		0.000
	(0.008)		(0.003)		(0.002)		(0.006)		(0.003)		(0.008)		(0.003)
COA obs [qualified]	-0.009		-0.024		-0.019		-0.007		-0.026		-0.086		-0.025
	(0.057)		(0.019)		(0.015)		(0.039)		(0.023)		(0.058)		(0.022)
COA obs [adverse]	0.027		-0.059		-0.007		0.083		-0.013		-0.123		-0.038
	(0.167)		(0.054)		(0.043)		(0.127)		(0.068)		(0.151)		(0.065)
COA obs [disclaimer]	-0.014		-0.002		0.003		-0.136		-0.070		0.087		-0.003
	(0.145)		(0.055)		(0.039)		(0.132)		(0.064)		(0.138)		(0.063)
kalasag	0.625												
	(0.393)												
Constant	**-2.322**	***	-0.082		**0.821**	***	**-0.997**	**	-0.115		**-1.424**	**	-0.314
	(0.647)		(0.224)		(0.172)		(0.460)		(0.273)		(0.669)		(0.253)
Observations	2,602		2,392		2,921		1,618		2,655		2,337		2,646
R-squared	0.044		0.047		0.161		0.039		0.227		0.079		0.051

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Budget utilization rates for the standard budget classifications of municipalities

The same regression models were implemented for CO, PS and MOOE of the municipalities. Table 2.5.6. summarizes the results of these regression models.

Like the functional budgets, the current budget of the item is negatively correlated to the budget utilization rate of that budget. The CO budget is statistically significant and negatively correlated with budget utilization rate for CO. The MOOE is negatively correlated to the budget utilization rate of MOOE and the budget of PS is negatively correlated to the budget utilization rate of PS. Similarly, PS and MOOE are positively correlated to the budget utilization rate of other budgets. The MOOE budget is positively correlated to the budget utilization rate of the CO and the PS. PS budget is positively correlated to the budget utilization rate of the MOOE.

Consistent also with previous findings the lag of the budget is positively correlated with the budget utilization rate of the item. The lag of the MOOE budget is positively correlated and statistically significant for the budget utilization rate of MOOE. The lag of the PS budget is positively correlated and statistically significant for the budget utilization rate of PS.

Similarly, budget per capita is negatively correlated and statistically significant for the budget utilization rate of PS. Population density is positively correlated with the budget utilization rates of CO and MOOE. Poverty incidence is positively correlated with the budget utilization rate.

CSO participation in the LDC is statistically significant and is negatively correlated to the budget utilization rate of MOOE.

IRA dependency is statistically significant and positively correlated with the budget utilization rate of CO and PS. Other SGLG scores like peace and order score and business friendliness are also statistically significant and positively correlated to the budget utilization rate of CO and PS.

The effect of disaster preparedness and vulnerability is again consistent with the previous regression models showing positive relationship between disaster preparedness/lower vulnerability and budget utilization rate for CO MOOE and PS.

LGUs with a qualified COA observation are less likely to have higher budget utilization rates for PS than LGUs with unqualified COA observation. On the other hand, LGUs that have COA reports with disclaimer are more likely to have higher budget utilization for MOOE than LGUs with unqualified COA observations.

Table 2.5.6. Panel Regression Analysis on the Budget Utilization Rate of Major Budget Classification of Municipalities (2015-2018)

	CO		MOOE		PS	
log_co	**-0.201**	***	0.006		0.006	
	(0.015)		(0.006)		(0.006)	
log_mooe	**0.101**	***	**-0.105**	***	**0.070**	***
	(0.036)		(0.013)		(0.013)	
log_ps	0.034		**0.075**	***	**-0.141**	***
	(0.040)		(0.015)		(0.015)	
laglog_co	-0.009		**-0.011**	*	-0.004	
	(0.015)		(0.006)		(0.006)	
laglog_mooe	**0.058**	*	**0.051**	***	**-0.029**	**
	(0.034)		(0.013)		(0.013)	
laglog_ps	0.005		-0.012		**0.053**	***
	(0.039)		(0.014)		(0.015)	
budget per capita	-0.000		-0.000		**-0.000**	***
	(0.000)		(0.000)		(0.000)	
population density	**0.000**	**	**0.000**	***	0.000	
	(0.000)		(0.000)		(0.000)	
poverty incidence	0.000		**0.001**	***	0.000	
	(0.001)		(0.000)		(0.000)	
% of NGO in the LDC	0.000		**-0.012**	*	0.001	
	(0.019)		(0.007)		(0.007)	
Local resource growth rate per capita	-0.004		-0.001		0.007	
	(0.016)		(0.006)		(0.006)	
IRA dependency	**0.333**	***	0.050		**0.078**	*
	(0.116)		(0.043)		(0.043)	
financial administration score	0.034		-0.022		-0.020	
	(0.036)		(0.013)		(0.013)	
peace and order score	**0.065**	*	0.008		**0.023**	*
	(0.035)		(0.013)		(0.013)	
business friendliness score	**0.099**	***	0.018		-0.001	
	(0.035)		(0.013)		(0.013)	
environmental management score	-0.055		**-0.034**	**	0.002	
	(0.040)		(0.015)		(0.015)	
early warning score	0.022		0.019		-0.017	
	(0.041)		(0.015)		(0.015)	

	CO		MOOE		PS	
disaster preparedness score	**0.066**	*	0.020		0.011	
	(0.040)		(0.015)		(0.015)	
housing vulnerability index	**-0.017**	**	**-0.005**	*	**-0.008**	***
	(0.008)		(0.003)		(0.003)	
COA obs [qualified]	-0.010		-0.006		**-0.043**	**
	(0.056)		(0.020)		(0.021)	
COA obs [adverse]	0.092		0.019		-0.045	
	(0.162)		(0.060)		(0.061)	
COA obs [disclaimer]	0.179		**0.107**	**	-0.032	
	(0.140)		(0.052)		(0.053)	
Constant	**-1.140**	**	**-0.381**	*	**0.717**	***
	(0.533)		(0.196)		(0.199)	
Observations	2,989		3,035		3,031	
R-squared	0.107		0.037		0.051	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Budget utilization rates for the functional budgets of cities

The regression results for the BUR of specific budget categories of cities are consistent with the previous regressions in the case of municipalities. Table 2.5.7. shows the regression results for the budget utilization rates of LDRRM, health, GPS, education, economic services, development fund, and social services for cities. The results show that the utilization rates of the various functional budgets are negatively correlated with their current budget. An increase in the current budget will result in the decrease of their respective budget utilization rates. This is statistically significant for LDRRM, health, GPS, education, economic services, and social services. The lags of their budgets are also statistically significant and positively correlated to their current budget utilization rate of health and GPS. This suggests a delay in the implementation of some items in the budget for at least a year.

The CO budget is also negatively correlated with the budget utilization rates for health, GPS, economic services, and the development fund. MOOE is positively correlated and significant for health and the GPS. The PS budget is positively correlated f to the budget utilization rate of LDRRM, GPS, education but is negatively correlated for social services.

Again, budget per capita is negatively correlated and statistically significant for health and GPS. Population density is statistically significant and negatively correlated to the budget utilization rate for social services. Poverty incidence is negatively correlated to the budget utilization rate of health, and social services.

The percentage of CSO participation in the LDC is statistically significant and positively correlated to the budget utilization rate of health.

The growth of local resources per capita is statistically significant and negatively correlated with the budget utilization rate of social services.

The environmental management score is statistically significant and positively correlated to the higher budget utilization rate of GPS.

Consistent with previous findings, results of the disaster preparedness score and housing vulnerability index suggest preparedness and low vulnerability are positively correlated with the budget utilization rate for LDRRM, and education. Greater vulnerability as measured by the housing vulnerability index, however, is positively correlated with social services. It suggests that the higher the vulnerability, the higher the budget utilization rate is for social services. It is not surprising though because as a community becomes more vulnerable to disaster, the spending will be higher for social services.

With respect to COA observations, LGUs with adverse findings on the COA report are less likely to have higher budget utilization rates for LDRRM, education, and the development fund compared to LGUs with unqualified audit reports. However, LGUs with adverse findings on the COA report are more likely to have higher budget utilization rate for economic services. On the other hand, LGUs with disclaimer in the COA reports are more likely to have higher budget utilization compared to LGUs with unqualified audit reports.

Table 2.5.7. Panel Regression Analysis on the Budget Utilization Rate of Various Functional Budgets of Cities (2015-2018)

	LDRRM	HEALTH	GPS	EDUCATION	ECON	DEVFUND	SOC SERV
log_ldrrmf	-0.115						
	(0.148)						
laglog_ldrrmf	0.089						
	(0.125)						
log_health		**-0.157** ***					
		(0.034)					
laglog_health		**0.071** **					
		(0.034)					
log__gps			**-0.306** ***				
			(0.047)				
laglog__gps			**0.173** ***				
			(0.045)				
log_educ				**-0.096** **			
				(0.040)			
laglog_educ				0.053			
				(0.037)			
log_econ					**-0.200** ***		
					(0.034)		
laglog_econ					0.030		
					(0.034)		
log_devfund						0.025	
						(0.091)	
laglog_devfund						0.037	
						(0.069)	
log_socserv							**-0.091** ***

	LDRRM		HEALTH		GPS		EDUCATION		ECON		DEVFUND		SOC SERV	
													(0.025)	
laglog_socserv													0.032	
													(0.026)	
log_co	-0.098		**-0.049**	***	**-0.030**	*	-0.077		**-0.129**	***	**-0.222**	**	-0.008	
	(0.085)		(0.018)		(0.015)		(0.049)		(0.031)		(0.091)		(0.027)	
log_mooe	-0.032		**0.060**	*	**0.102**	***	0.069		-0.038		0.072		-0.008	
	(0.255)		(0.034)		(0.037)		(0.093)		(0.065)		(0.152)		(0.062)	
log_ps	**0.376**	**	0.051		**0.079**	*	**0.174**	**	0.073		0.236		**-0.147**	*
	(0.171)		(0.053)		(0.048)		(0.083)		(0.083)		(0.149)		(0.081)	
laglog_co	-0.113		-0.018		**-0.042**	***	**-0.121**	**	0.005		-0.067		-0.029	
	(0.079)		(0.016)		(0.015)		(0.048)		(0.030)		(0.086)		(0.024)	
laglog_mooe	0.073		-0.036		0.014		0.003		-0.024		-0.018		**0.089**	*
	(0.268)		(0.031)		(0.032)		(0.082)		(0.059)		(0.131)		(0.048)	
laglog_ps	0.043		**0.106**	**	-0.003		0.073		0.081		-0.156		0.107	
	(0.158)		(0.052)		(0.047)		(0.071)		(0.068)		(0.120)		(0.078)	
budget per capita	-0.000		**-0.000**	**	**-0.000**	***	-0.000		0.000		0.000		0.000	
	(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)	
population density	0.000		0.000		0.000		0.000		0.000		0.000		**-0.000**	**
	(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)	
poverty incidence	-0.011		**-0.004**	**	-0.002		-0.004		-0.003		-0.001		**-0.005**	**
	(0.007)		(0.002)		(0.002)		(0.005)		(0.003)		(0.007)		(0.002)	
% of NGO in the LDC	0.014		**0.250**	*	0.119		-0.135		0.370		-0.088		-0.079	
	(0.639)		(0.144)		(0.132)		(0.388)		(0.247)		(0.902)		(0.190)	
Local resource growth rate per capita	0.072		0.020		0.020		-0.001		-0.010		-0.038		**-0.102**	***
	(0.099)		(0.023)		(0.024)		(0.059)		(0.044)		(0.174)		(0.033)	
IRA dependency	**1.200**	**	**0.184**	*	0.043		**0.655**	**	-0.302		0.581		**-0.384**	**
	(0.463)		(0.102)		(0.105)		(0.286)		(0.201)		(0.514)		(0.152)	
financial administration score	-0.020		-0.004		-0.026		0.119		0.047		-0.046		-0.053	

	LDRRM		HEALTH		GPS		EDUCATION		ECON		DEVFUND		SOC SERV	
	(0.117)		(0.027)		(0.027)		(0.075)		(0.051)		(0.132)		(0.039)	
peace and order score	0.092		0.012		-0.024		0.031		-0.038		0.062		0.002	
	(0.117)		(0.026)		(0.026)		(0.071)		(0.049)		(0.120)		(0.038)	
business friendliness score	-0.060		-0.011		-0.006		-0.079		0.015		0.179		-0.025	
	(0.129)		(0.030)		(0.029)		(0.085)		(0.057)		(0.135)		(0.043)	
environmental management score	-0.040		0.000		**0.094**	**	-0.035		-0.091		0.134		0.042	
	(0.172)		(0.039)		(0.038)		(0.101)		(0.075)		(0.170)		(0.056)	
early warning score	0.137		0.044		-0.015		**0.267**	**	-0.039		-0.198		-0.075	
	(0.177)		(0.042)		(0.039)		(0.116)		(0.080)		(0.175)		(0.062)	
disaster preparedness score	0.045		0.024		**0.079**	***	0.000		0.080		0.175		0.047	
	(0.112)		(0.026)		(0.026)		(0.070)		(0.050)		(0.121)		(0.037)	
housing vulnerability index	**-0.056**	*	0.009		0.008		**-0.041**	**	0.015		-0.038		**-0.030**	***
	(0.033)		(0.008)		(0.007)		(0.020)		(0.014)		(0.034)		(0.011)	
COA obs [qualified]	-0.012		0.065		0.081		-0.005		0.092		-0.073		0.041	
	(0.232)		(0.055)		(0.052)		(0.157)		(0.097)		(0.239)		(0.073)	
COA obs [adverse]	**-1.004**	**	0.019		-0.123		**-0.371**	*	**0.261**	*	**-1.073**	***	0.010	
	(0.395)		(0.079)		(0.078)		(0.212)		(0.149)		(0.391)		(0.109)	
COA obs [disclaimer]	-0.014		0.166		**0.245**	**	-		0.253		0.150		0.019	
	(0.512)		(0.123)		(0.122)				(0.226)		(0.506)		(0.171)	
kalasag	0.278													
	(0.278)													
Constant	**-5.910**	***	**-1.060**	**	-0.069		**-2.726**	**	**3.638**	***	0.533		**1.200**	*
	(2.185)		(0.507)		(0.498)		(1.232)		(0.966)		(2.210)		(0.720)	
Observations	278		295		321		250		300		240		296	
R-squared	0.162		0.279		0.330		0.220		0.333		0.176		0.207	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Budget utilization rates for the standard budget classifications of cities

The regression models for the budget utilization rates of CO, MOOE and PS for cities are presented in Table 2.5.8. Again, the capital outlay budget is statistically significant and negatively correlated with the budget utilization rate of the capital outlay. The PS budget is positively correlated and statistically significant for the budget utilization rate of the capital outlay. The lag of the capital outlay budget is statistically significant and negatively correlated with the budget utilization rate of MOOE and PS. Poverty incidence is statistically significant and negatively correlated with the budget utilization rate of CO and PS. Similar to the previous observation, higher CSO participation in the LDC is statistically significant and positively correlated with the budget utilization rate of PS.

It is also noteworthy that the growth rate of the local resource per capita is statistically significant and negatively correlated with the budget utilization rate of CO. Disaster preparedness score is statistically significant and positively correlated with the budget utilization rate of MOOE. Similar to the observations in the regression models of the budget utilization rate of social services, greater vulnerability as indicated by the positive higher value of the housing vulnerability index is statistically significant and positively correlated with PS.

Table 2.5.8. Panel Regression Analysis on the Budget Utilization Rate of Major Budget Classification of Cities (2015-2018)

	CO		MOOE		PS	
log_co	**-0.319**	***	0.006		-0.003	
	(0.074)		(0.013)		(0.012)	
log_mooe	-0.128		-0.032		-0.039	
	(0.168)		(0.029)		(0.027)	
log_ps	**0.328**	**	0.040		0.005	
	(0.159)		(0.028)		(0.025)	
laglog_co	0.041		**-0.025**	**	**-0.045**	***
	(0.070)		(0.012)		(0.011)	
laglog_mooe	-0.097		0.0509*		0.009	
	(0.150)		(0.026)		(0.024)	
laglog_ps	-0.035		0.000		0.020	
	(0.137)		(0.024)		(0.022)	
budget per capita	-0.000		**-0.000**	***	**-0.000**	***
	(0.000)		(0.000)		(0.000)	
population density	0.000		-0.000		-0.000	
	(0.000)		(0.000)		(0.000)	
poverty incidence	**-0.018**	**	-0.000		**-0.003**	**

	CO		MOOE		PS	
	(0.008)		(0.001)		(0.001)	
% of NGO in the LDC	-0.474		0.025		**0.194**	*
	(0.666)		(0.117)		(0.106)	
Local resource growth rate per capita	**-0.602**	***	0.032		-0.004	
	(0.120)		(0.021)		(0.019)	
IRA dependency	0.456		0.076		-0.132	
	(0.508)		(0.090)		(0.081)	
financial administration score	0.046		0.013		0.026	
	(0.134)		(0.024)		(0.021)	
peace and order score	0.087		-0.022		-0.031	
	(0.129)		(0.023)		(0.020)	
business friendliness score	0.041		-0.002		-0.015	
	(0.143)		(0.025)		(0.023)	
environmental management score	0.000		-0.037		-0.006	
	(0.188)		(0.033)		(0.030)	
early warning score	0.144		-0.040		0.010	
	(0.197)		(0.035)		(0.031)	
disaster preparedness score	0.033		**0.062**	***	0.016	
	(0.130)		(0.023)		(0.021)	
housing vulnerability index	-0.021		0.004		**0.013**	**
	(0.035)		(0.006)		(0.006)	
COA obs [qualified]	-0.053		0.065		0.049	
	(0.265)		(0.047)		(0.042)	
COA obs [adverse]	-0.102		-0.064		0.061	
	(0.408)		(0.070)		(0.063)	
COA obs [disclaimer]	0.433		0.080		**0.184**	*
	(0.620)		(0.109)		(0.098)	
Constant	2.842		**-0.995**	**	**0.974**	***
	(2.283)		(0.401)		(0.361)	
Observations	336		338		338	
R-squared	0.202		0.127		0.193	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Budget utilization rates for the functional budgets of provinces

Table 2.5.9. presents the results of the regression models for the budget utilization rates of the functional budgets of provinces. The results are also largely consistent with those observed in the cases of municipalities and cities. The results show that the utilization rates of the various functional budgets are negatively correlated with their current budget. An increase in the current budget will result in the decrease of their respective budget utilization rates. This is statistically significant for health, GPS, education, economic services, development fund and social services. The lags of their budgets are also positively correlated to their current budget utilization rate but none are statistically significant.

On the other hand, the capital outlay budget is again statistically significant and negatively correlated with the budget utilization rate of economic services. MOOE budget is statistically significant and positively correlated with the education and development fund budget utilization rate. Interestingly, the PS budget is statistically significant and negatively correlated for the budget utilization rate of health and GPS. The lags of the MOOE and PS budgets are statistically significant and positively correlated with education and development funds, the budget utilization rates for MOOE and health and economic services budget utilization rate for PS. There is negative correlation between the percentage of CSO participation in the LDC and the budget utilization rate of LDRRM and education.

The IRA dependency is statistically significant and positively correlated with the budget utilization rate of GPS, the development fund, and social services. Financial administration score is statistically significant and positively correlated with social services budget utilization rate.

Moreover, environmental management core is statistically significant and positively correlated with the economic services budget utilization rate. Early warning score is statistically significant and positively correlated with the development fund utilization rate.

One of the caveats that needs to be emphasized in the regression models for provinces is the low number of observations. This might explain the inconsistency in some of the findings like the budget for personnel services and the CSO participation in the LDC.

Table 2.5.9. Panel Regression Analysis on the Budget Utilization Rate of Various Functional Budgets of Provinces (2015-2018)

	LDRRM	HEALTH	GPS	EDUCATION	ECON	DEVFUND	SOC SERV
log_ldrrmf	-0.502						
	(0.353)						
laglog_ldrrmf	-0.142						
	(0.385)						
log_health		**-0.111** **					
		(0.052)					
laglog_health		0.067					
		(0.047)					
log__gps			**-0.302** ***				
			(0.070)				
laglog__gps			0.015				
			(0.074)				
log_educ				**-0.204** ***			
				(0.068)			
laglog_educ				0.119			
				(0.073)			
log_econ					**-0.316** ***		
					(0.059)		
laglog_econ					**0.217** ***		
					(0.054)		
log_devfund						**-0.431** ***	
						(0.144)	
laglog_devfund						-0.088	
						(0.106)	
log_socserv							**-0.164** ***
							(0.059)

	LDRRM	HEALTH	GPS	EDUCATION	ECON	DEVFUND	SOC SERV
laglog_socserv							0.066
							(0.060)
log_co	-0.031	-0.009	-0.028	-0.073	**-0.132** ***	-0.013	-0.059
	(0.089)	(0.021)	(0.023)	(0.076)	(0.043)	(0.078)	(0.053)
log_mooe	0.434	0.041	0.094	**0.407** **	-0.013	**0.699** ***	0.001
	(0.275)	(0.063)	(0.067)	(0.206)	(0.117)	(0.215)	(0.156)
log_ps	-0.702	**-0.303** **	**-0.341** **	-0.442	-0.384	-0.448	-0.205
	(0.551)	(0.141)	(0.143)	(0.473)	(0.248)	(0.468)	(0.335)
laglog_co	-0.037	-0.031	0.026	-0.024	0.027	0.025	0.044
	(0.089)	(0.020)	(0.022)	(0.070)	(0.039)	(0.073)	(0.050)
laglog_mooe	0.401	0.003	**0.142** **	-0.142	0.034	-0.134	0.053
	(0.259)	(0.064)	(0.068)	(0.214)	(0.116)	(0.208)	(0.155)
laglog_ps	0.480	**0.258** *	0.185	0.337	**0.547** **	0.344	0.003
	(0.519)	(0.132)	(0.136)	(0.492)	(0.237)	(0.438)	(0.320)
budget per capita	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
population density	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
poverty incidence	0.004	0.000	-0.001	-0.004	0.004	-0.003	-0.005
	(0.006)	(0.002)	(0.001)	(0.005)	(0.003)	(0.005)	(0.003)
% of NGO in the LDC	**-1.142** *	-0.048	0.094	**-0.727** *	-0.038	-0.653	-0.035
	(0.677)	(0.150)	(0.162)	(0.438)	(0.286)	(0.550)	(0.388)
Local resource growth rate per capita	0.029	-0.013	0.005	-0.129	0.002	-0.007	0.022
	(0.050)	(0.019)	(0.013)	(0.147)	(0.023)	(0.042)	(0.032)
IRA dependency	-0.001	-0.115	**0.292** *	0.029	-0.003	**0.896** *	**0.965** ***
	(0.624)	(0.141)	(0.153)	(0.465)	(0.273)	(0.532)	(0.363)
financial adminitration score	0.033	0.011	-0.024	0.098	0.000	0.089	**0.163** *

	LDRRM	HEALTH	GPS	EDUCATION	ECON	DEVFUND	SOC SERV
	(0.150)	(0.036)	(0.038)	(0.114)	(0.068)	(0.126)	(0.091)
peace and order score	0.164	0.055	0.015	-0.063	-0.009	-0.226	-0.018
	(0.173)	(0.043)	(0.044)	(0.129)	(0.079)	(0.146)	(0.105)
business friendliness score	0.033	0.027	0.033	0.096	-0.018	-0.125	0.051
	(0.170)	(0.040)	(0.042)	(0.131)	(0.075)	(0.136)	(0.101)
environmental management score	0.172	0.012	-0.017	0.100	**0.120** **	0.033	-0.074
	(0.132)	(0.033)	(0.033)	(0.103)	(0.059)	(0.113)	(0.079)
early warning score	-0.105	0.040	0.027	0.003	-0.006	**0.313** *	0.007
	(0.209)	(0.054)	(0.052)	(0.181)	(0.094)	(0.172)	(0.126)
disaster preparedness sore	-0.020	-0.015	0.048	-0.093	-0.073	0.141	-0.100
	(0.148)	(0.035)	(0.038)	(0.109)	(0.066)	(0.123)	(0.090)
COA obs [qualified]	0.024	0.037	0.003	-0.127	0.006	-0.252	-0.046
	(0.191)	(0.048)	(0.051)	(0.154)	(0.092)	(0.157)	(0.123)
COA obs [adverse]	-	-	-	-	-	-	-
COA obs [disclaimer]	0.578	-0.084	-0.084	-	-0.096	0.657	-0.066
	(0.838)	(0.198)	(0.227)		(0.399)	(0.703)	(0.539)
Constant	-0.263	**1.513** *	**3.639** ***	-0.145	0.005	-0.800	**4.034** **
	(3.343)	(0.803)	(0.841)	(2.762)	(1.440)	(2.752)	(1.982)
Observations	199	190	226	149	223	198	224
R-squared	0.163	0.165	0.316	0.15	0.338	0.183	0.197

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Budget utilization rates for the budget classifications of provinces

The last table presented below are the results for the panel regression analysis of the budget utilization rate of the major budget classification of provinces. This is again consistent with previous observations. The capital budget outlay is statistically significant and negatively correlated with the budget utilization rate of the capital outlay. However, the PS budget is negatively correlated and statistically significant for the budget utilization rates of MOOE and PS. The lag of the capital outlay budget is statistically significant and positively correlated with the budget utilization rate of CO. Poverty incidence is statistically significant and negatively correlated with the budget utilization rate of CO and PS.

Among the SGLG scores, only the early warning score is statistically significant and positively correlated with the budget utilization rate of CO.

Table 2.5.10. Budget Utilization Rate of Major Budget Classification of Provinces (2015-2018)

	CO		MOOE		PS	
log_co	**-0.287**	***	-0.020		0.004	
	(0.076)		(0.020)		(0.016)	
log_mooe	0.174		-0.044		0.021	
	(0.223)		(0.060)		(0.048)	
log_ps	-0.679		**-0.241**	*	**-0.291**	***
	(0.476)		(0.128)		(0.102)	
laglog_co	**0.149**	**	-0.015		-0.013	
	(0.071)		(0.019)		(0.015)	
laglog_mooe	-0.016		**0.158**	***	-0.008	
	(0.222)		(0.059)		(0.048)	
laglog_ps	0.292		0.113		**0.252**	***
	(0.451)		(0.121)		(0.097)	
budget per capita	-0.000		-0.000		-0.000	
	(0.000)		(0.000)		(0.000)	
population density	0.000		-0.000		0.000	
	(0.000)		(0.000)		(0.000)	
poverty incidence	-0.007		0.001		0.002	
	(0.005)		(0.001)		(0.001)	
% of NGO in the LDC	0.019		-0.197		-0.005	
	(0.556)		(0.149)		(0.119)	
Local resource growth rate per capita	0.021		-0.002		-0.004	
	(0.045)		(0.012)		(0.010)	

	CO		MOOE	PS
IRA dependency	0.669		-0.064	-0.004
	(0.521)		(0.140)	(0.112)
financial administration score	0.149		-0.033	-0.028
	(0.130)		(0.035)	(0.028)
peace and order score	-0.222		0.065	0.047
	(0.149)		(0.040)	(0.032)
business friendliness score	-0.084		0.022	-0.011
	(0.143)		(0.039)	(0.031)
environmental management score	-0.014		0.033	0.014
	(0.113)		(0.030)	(0.024)
early warning score	**0.362**	**	-0.008	0.023
	(0.178)		(0.048)	(0.038)
disaster preparedness sore	0.026		0.003	-0.002
	(0.127)		(0.034)	(0.027)
COA obs [qualified]	-0.282		-0.007	-0.001
	(0.173)		(0.046)	(0.037)
COA obs [adverse]	-		-	-
COA obs [disclaimer]	0.702		-0.083	-0.021
	(0.774)		(0.208)	(0.166)
Constant	**6.057**	**	0.736	0.513
	(2.791)		(0.749)	(0.599)
Observations	226		226	226
R-squared	0.189		0.12	0.076

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Chapter 3:
Putting the Mandanas-Garcia Resource Infusion to Optimal Use: A Strategy for Philippine Local Government Units to Mitigate Losses and Damages from Environmental and Conflict Crises

Annex 3.1. Understanding Hazards, Risks, Crises, Emergencies, and Disasters

To identify appropriate entry points in the planning and programming continuum and use them for effective crisis management, it is important to understand the triggers of the crisis, their evolving manifestations, and the strategic use of the Means of Implementation (Finance, Technology[3] and Capacity[4]) to resolve the crisis to a successful conclusion. Generally, a Crisis is defined as "any event or period that will lead, or may lead, to an unstable and dangerous situation affecting an individual, group, or all of society".[5] **Crises** and their management, whether environmental, climate change, or conflict triggered, have determinant effects on the achievement of the SDGs by 2030. In the human security framework[6], these are the sudden downturns that have disproportionate effects on long-term and sustainable economic growth and development. This two-pronged capacity to deliver and anticipate risks is crucial towards attaining development goals and protecting gains that have already been achieved. **Conflict** can be specifically defined as *"a situation where two or more parties perceive that their interests are incompatible, express hostile attitudes, or pursue their interests through actions that damage the other parties. These parties may be individuals, small or large groups, and countries."*[7]

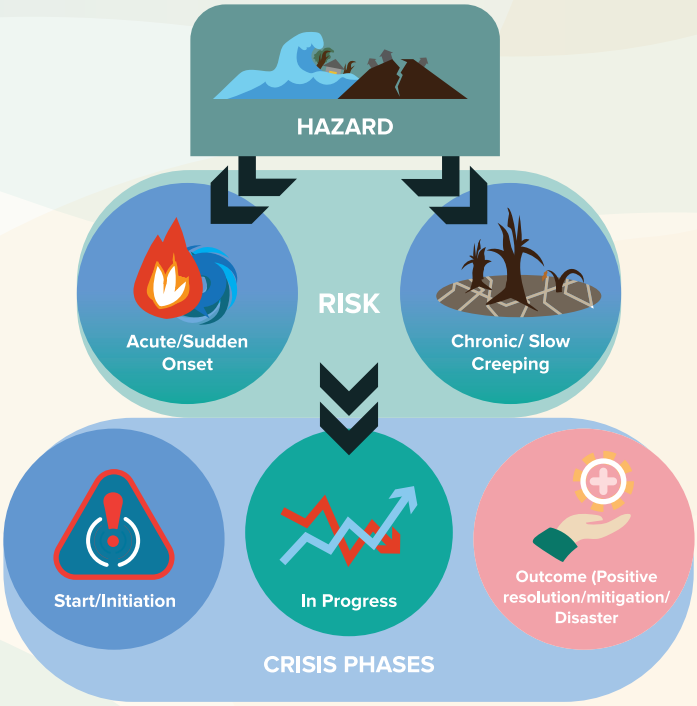
Any crisis can be triggered by a wide range of situations. However, for purposes of formulating options for its optimal resolution, its definition and triggers discussed in this paper are limited to climate, environmental factors, and the conflict situation in the Philippines. Two other concepts need to be defined clearly to ensure that the right interventions are made at the right time: Emergency and Disaster. **Emergency** is an unforeseen or sudden occurrence, especially danger posing a serious and immediate threat to health, life or property requiring urgent intervention.[8] **Disaster**, on the other hand, is a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.[9] Disaster events generally create emergencies. Or if unmanaged, emergencies can translate to disasters. Disasters and emergencies

[3] Including the Management approach
[4] Knowledge, skills, policy environment, systems and protocols of implementers
[5] There are many available definitions, but this was chosen because of its comprehensiveness and inclusivity, rendering it easy for operationalization, applicable to any type of "unstable" situation needing resolution.
[6] HUMAN SECURITY HANDBOOK: An integrated approach for the realization of the Sustainable Development Goals and the priority areas of the international community and the United Nations system. P. 10 A distinctive element of human security is its focus on early prevention to minimize the impacts of threats, to engender long-term solutions, and to build human capacities for undertaking prevention and enhancing resilience if prevention is not feasible.
[7] Thomas-Holder and Henry, 2007 as cited in DILG-OPAPP-JMC-No.1 s.2020, Conflict Sensitive and Peace Promoting (CSPP) mainstreaming in the Community Development Plan (CDP), Annex A: Definition of terms.
[8] According to Republic Act 10121
[9] Ibid.

generally differ in terms of scope, with emergencies having limited geographic scope while disasters involve larger areas and affected elements (people, ecosystems). Climate, environmental factors, and conflict situations, therefore, are part of a continuum dealing with the evolving nature of risk. **Risk** is generally defined as "the probability of a negative or adverse impact happening from a potential threat, whether natural or human-induced/ generated." Risks can either be **acute** (sudden onset with potentially large, unexpected consequences) or **chronic** (slow creeping but can also potentially translate to large negative consequences if unmanaged early).

Figure 3.1.1. depicts the evolution of the crisis elements from source to outcome. The hazard is the origin of the danger which may not necessarily translate to impacts like deaths, morbidities, and socioeconomic losses if there are no elements within its area of influence that could be affected. When a hazard event (such as a drought, flood, cyclone, earthquake or tsunami) occurs, triggering a loss of life and damage to infrastructure, it highlights the reality that society and its assets are vulnerable to such events. Vulnerability can be due to exposure of communities to hazards because of their geographical location or the characteristics of the society (including individuals), infrastructure, assets, and other processes or services which make them more prone to damage or destruction. In between the appearance of the hazard and its interaction with exposed elements, interventions can be resorted to: 1.) totally avoid the hazard effects (i.e., prevention), 2.) lessen the degree of impacts if the interaction cannot be prevented (i.e., mitigation); and 3.) recover quickly if a disaster happens from the interaction.

Figure 3.1.1. Diagram Depicting Crisis Elements and Stages[10]



[10] Sources to Outcomes

Sources of Crises Triggers and Impacts

a. Climate Change

Climate change is a natural phenomenon that has been complicated by humans. Accelerating climate change is a consequence of global pollution: one that occurs at the atmospheric level; hence, the impacts are also global, wide-ranging, and comprehensive. The Intergovernmental Panel on Climate Change (IPCC)[11] has categorically stated that the Earth's climate has changed naturally over the past 650,000 years, moving in and out of ice ages and warm periods. Changes in climate occur because of alterations in the Earth's energy balance, which result from an external factor or "forcing"—an environmental factor that influences climate. However, during the Industrial Revolution (1760-1840), massive amounts of greenhouse gases – or gases that absorb infrared radiation and reradiate it back on Earth (i.e., carbon dioxide and chlorofluorocarbons) - were released into the atmosphere and radically altered this balance, resulting in enhanced global warming and accelerated climate change which continues up to this day. These phenomena have an adverse impact on the environment, including the loss of habitats that could provide a vital "sink" or source of natural absorption of these greenhouse gases.

The most concerning effects of climate change are its impacts on weather hazards like cyclonic storms (tropical cyclones, tornadoes), heat waves, droughts, sea level rise, etc.., intensifying their impacts (e.g., flooding, stronger winds), and accelerating their occurrence. Climate-influenced hazards are observed to be intensifying or their return periods shortened such that humans and the ecosystems and life forms around them are unable to adapt in a timely manner. The Philippines, as a developing country, did not and does not contribute significantly to the global warming problem, emitting only 0.3 percent of the global emissions. However, as a country uniquely situated in the direct path of tropical cyclones, it is sustaining losses and damages annually averaging 0.5 percent of its GDP. For a country with a chronic 20 percent poverty, it is a cost that the Philippines cannot afford to incur, seriously slowing down its efforts to attain sustainable development.

The intensifying and increasingly unpredictable behavior of climate-influenced hazards requires the Philippines to rethink its approach to managing climate-induced risks. It can no longer rely simply on the autonomous responses of frontline communities to enable the country to survive and thrive over the long term. For the unfolding saga involving massive and costly impacts from climate change, there is a need to plan and put in place anticipatory adaptation measures way in advance of the expected disastrous effects[12]. The country's lessons from the impacts of one of the events like the COVID-19 pandemic and the Typhoon Haiyan debacle indicate that we cannot afford to take on the accumulating and compounding cost of losses and damages from acute climate-induced events taking place almost with regularity.

[11] *The Intergovernmental Panel on Climate Change is the only body mandated to produce the most extensive report on global climate change* "with a clear scientific view on the current state of knowledge on climate change and its potential environmental and socio-economic impacts". It was established by the World Meteorological Organization and the United Nations Environment Programme in 1988.

[12] Decades, not just a few years.

b. Environmental Pollution and Natural Resources Degradation

It is important to understand the role, nature, extent and value of the country's environmental resources and the interacting factors affecting them because they can be sources of both risks and solutions to potential impacts when crises involving them translate to emergencies and disasters.

1.) Pollution

Environmental pollution directly poses an existential threat to humans and the stability of ecosystems on which the former depends for sustenance and livelihoods. Pollution is the introduction of harmful materials into the environment that have a deleterious or poisonous effect on people and the resources that they depend on. Accelerated climate change has been caused by pollution too through the excessive spewing of greenhouse gases into the atmosphere, increasing the amounts that produce the greenhouse effect[13]. The enhanced greenhouse effect is accelerating global warming at a pace that humans and ecosystems cannot keep up with and are unable to adjust to in a timely manner.

It is, therefore, clear that the Philippines (as well as, other similarly situated countries globally) is faced with two (2) types of pollution: Ambient and Atmospheric, the former affecting the quality of the immediate environment and around group(s) of people and their well-being, and the latter, everything, and everyone on this planet. Pollution's role and dynamics are important to understand because the processes that cause pollution are the same ones generating the causes of and key to the management of the impacts of climate change or causing conflict.

Air and water pollution are among the top causes of concern for Filipinos and other peoples residing in the Philippines. The qualities of these environmental media are of extreme importance because they affect people's health, livelihoods, and overall quality of life. They can aggravate the acute[14] effects of a primary crisis trigger, i.e., either from a climate hazard or conflict, specifically on human security and quality of life. The impacts of the primary crisis trigger then multiply and become enhanced, complicating the solution and magnifying costs.

Air Pollution

Chronic air pollution[15] is produced by mobile sources such as vehicles, stationary sources like industrial installations and area sources. Area sources include activities such as aircraft operations, structural fires, marine transfer, etc. The main concern on air pollution is its impacts on the health and wellbeing of the exposed population.[16] According to the 2016 WHO Report, air pollution is causing about 120,000 deaths yearly in the Philippines, mostly in the metropolitan areas. The cost of outdoor air pollution related morbidity was estimated by the World Bank at PhP 950 million in 2004. Cost components comprise productivity loss (i.e., income and time loss due to absence from work and household activities, comprising the biggest at PhP 502 million or USD 11 million, disease treatment at PhP 360 million, or USD 8 million and a government subsidy of PhP

[13] A phenomenon that ensures Earth and all life forms in it can optimally thrive through a temperature comfortable or beneficial for them. Accelerated global warming upsets this temperature balance posing an existential threat to all living things on this planet.
[14] Immediate, severe and intense
[15] Regulated pollutants include Sulfur Oxides (SOx), Nitrous Oxides (NOx), Carbon Monoxide (CO), Volatile Organic Compounds (VOC) and Particulate Matter (PM).
[16] These same drivers of conventional pollution are the ones producing the greenhouse gases which cause accelerated climate change and global warming.

88 million, or USD 2 million). The sources of conventional air pollution like fossil fuel run energy installations, transport, industrial facilities, and water pollution among others, also emit greenhouse gases into the atmosphere[17].

Water Pollution

Rapid urbanization and increasing economic activities in the agriculture and industry sectors generated water pollution in many areas of the Philippines. As population and economic activities grew, especially in the country's urban centers, so did the pollution of major water bodies like the Pasig River and Laguna de Bay, which also contribute to the greenhouse gases released in the atmosphere. The DENR's Environmental Management Bureau (EMB) sounded the alarm about the rapid deterioration of the quality of the country's inland waters in early 2000 using compliance to the Philippine ambient standards[18] as the main metrics. Growing toxicity in the form of heavy metals was also reported.

The Philippines has extensive freshwater resources which comprise surface waters generally abundant and sufficient for its peoples' needs. However, despite the scope of this type of water supply, the country has a low per capita freshwater availability, compounded by many water-related problems, primarily pollution.

The quality of the country's coastal waters is also considered to have deteriorated because of pollution caused by sewage, industrial effluents, mine tailings, oil from shipping operations, and agricultural run-off. Increasing population and intensifying economic activities were reported as the main sources of pollution of the Philippine coastal waters. Chronic water pollution threatens uses like fisheries, domestic water use, and tourism activities, posing direct health impacts on dependent populations. Like air, the country's waters generally suffer from chronic pollution. This situation is aggravated by periodic industrial accidents that create acute crises situations which the Philippines is normally unprepared for.

As pollution compromises or reduces the carrying capacities of life support systems like terrestrial and water-based ecosystems, a secondary crisis like fish kills can be devastating, especially for a population directly dependent on them for food and livelihood. In general, an environment-related crisis like pollution can severely compromise the level of adaptive capacities of dependent populations, including organisms. Water pollution can also generate toxic and greenhouse gases, which could subsequently contribute to global warming and aggravate other related environmental threats.

2.) Natural Resources Degradation and Depletion

The amount and quality of natural resources on which the majority of the country's vulnerable population depend for food, livelihood, and even for barriers or sources of security from the environmental hazards will be critical to the level of adaptation capacity of communities. This capacity can be built throughout the country in response to various forms of crises. The more robust these resources are, the higher the opportunity for survival and sustainable development of the vulnerable dependent population. To add to these, the preservation of forests, vegetation, soils, or other natural resources can further serve as sinks for greenhouse gases which can help mitigate climate change.

[17] Not currently regulated by the Philippine Government.
[18] The main indicators of water quality are Biological Oxygen Demand (BOD) and Dissolved Oxygen (DO).

2.1. Land and Terrestrial Resources

The country's total land area is estimated at 300,000 sq. km. or 30 million hectares, excluding land underneath the water bodies. Being an archipelagic country with an increasing population and resource-dependent economic activities, land and its resources are becoming even more invaluable for the Philippines. Unfortunately, the usable portions are not only limited but becoming more susceptible to hazards like landslides and erosion. The Philippines' per capita usage of land can be determined from its population density[19], established at 370.16 people per square kilometer in 2021. This is a 1.34 percent increase from 2020 at 365.27 people per square kilometer or a 1.35 percent increase from 2019. From the point of view of crisis management, this is a cause for concern, noting that the population are packed into limited space, often straddling on dangerous areas like coasts or uplands susceptible to erosion, limiting disaster risk management options when crisis situations occur such as the onslaught of climate hazards.

The qualities of available land[20] and critical resources therein also matter because they represent adaptation potential for food and medicine production, as well as other materials needed for regular socioeconomic undertakings, as well as crisis situations. They are also critical for siting settlements safely. From the point of view of human security, the country's population should be settled in relatively safe areas not particularly vulnerable to natural and anthropogenic hazards. The lack of such areas is contributing to the increasing vulnerability of the majority of the country's population which are packed either in the increasingly climate vulnerable coastal areas or are driven further up the unstable highlands or right into water bodies for lack of habitable land.[21] Approximately 60 percent of the country's cities and municipalities are on the country's coasts.

2.2 Forests and their Biodiversity

Forests are critical ecosystems stabilizing climate, regulating the water cycle, and providing habitat for numerous life forms. As such, they have invaluable adaptation value for humans. However, they are also among the most vulnerable and open to rampant degradation and indiscriminate destruction. The country's forest cover was estimated at about 12 million hectares or approximately 40 percent of the country's total land area in the 1930s. Towards the end of the eighties, forest cover drastically shrunk to 6.46 million hectares or 21 percent of the country's total land area. With reforestation efforts, the government reported a doubling of forest cover in 2010 but reported forest loss of approximately 46.8kha[22]. Benefits from the country's forest lands are estimated at USD 100billion yearly, notwithstanding the fact that only half of the country's 12-million-hectare forest lands are forested.

The importance and criticality of the Philippines' remaining old growth forests are in the form of biodiversity resources which are estimated to have significant health and wealth creation value, representing not only socioeconomic development potential but capital for long term sustainable development. The Philippines is considered one of the most mega diverse countries in the world, hosting around 13,500 plant species, representing 5 percent of the world's flora; 32 percent of which are endemic and found only in the country's old growth forests. This endemicity is one of the

[19] People per sq. km
[20] With special consideration for the siting of agricultural endeavors like farming.
[21] The problem is primarily more legal, noting that many of the poor don't have security of tenure to lands which can accommodate them safely and productively.
[22] Natural forest

highest in the world, ranking 4th, with almost half of its 8,000 flowering plants unique only to the Philippines. Almost half of its terrestrial vertebrate species comprising mammals, amphibians, reptiles, mollusks, and insects, are also endemic only to the Philippines.

2.2.3 Marine Resources and Biodiversity

The Philippines has extensive maritime territorial waters, including an Exclusive Economic Zone (EEZ) estimated at 2.2 million sq. km. Approximately 70 percent of its 81 provinces and 60 - percent of its 1,700 cities and municipalities are on the country's coasts. As such, a significant number of the country's population reside in these areas and are dependent on these locations' marine resources and ecosystem services. A major percentage of the country's poorest families are also in these localities, fisherfolk households with a higher poverty incidence than the rest of the country. The country's coastal areas were estimated to contribute around 60 percent to the country's GDP in 2000. The marine ecosystems (excluding the continental shelf) can contribute a conservative monetary value of USD 966.6 billion to the economy. Coastal population, however, are also among the most vulnerable, with limited land on which they can build safe settlements. They are normally the most exposed to climate hazards, as well as, hazards with seismic origins such as tsunamis.

However, the country's coasts are also prolific and host ecosystems important for adaptation and long-term socioeconomic development. These ecosystems comprise mangroves and other beach vegetation, corals, and seagrasses. The enormous variety of life forms in these areas has earned the Philippines the title of the "center of the center" of global marine biodiversity. The country is located at the apex of the Coral Triangle, considered the global center of marine biodiversity.

The country's **mangroves** serve as an interface between the coastal and the terrestrial environments. As such, they are a critical barrier to the coastal hazards and perform many critical functions like water filtration, coastal erosion prevention, coastal protection from storms, carbon storage, food, timber, biodiversity protection and provision of livelihoods. They provide a firm foundation for the Philippines' coastal fisheries by serving as nurseries for fish, prawns, crabs, bivalves and other invertebrates. Even as they serve as coastal barriers and provide adaptation support to coastal communities, they are also casualties of crisis, directly bearing the brunt of the elements and the destructive actions of humans such as their being cleared to give way for other uses like fishponds.

Philippine **corals** serve as habitats and shelter for many marine organisms. They are particularly important for fisheries and other dependent industries, such as tourism, food, and drug manufacturing. They also serve as breakwaters for Philippine coastlines. They are now also being used to provide records of climatic events and anthropogenic impacts, through changes in coral growth patterns. However, unsustainable practices such as blast and cyanide fishing have degraded them significantly. Climate change too, is now considered a major threat to coral reefs by increasing both the temperature and the acidity of the ocean and also due to sea level rise which could affect the light availability needed for coral formation.

Seagrasses are not only ecologically important for the Philippines as a support ecosystem to economically important sub-

sectors like fisheries but are commercially important themselves. The Philippines hosts 13 of the 60 globally known species of seagrasses and hosts a wide variety of fish, mollusks, nematodes, turtles, dugongs, manatees, fish, geese, swans, sea urchins and crabs. As such, they represent critical adaptation resources which can fill not only socioeconomic needs, but also critical as barrier and adaptation resources in times of crises such as for food and medicine, roofing, and coastal stabilizers. They are, however, also extremely vulnerable to coastal hazards like typhoons, tidal waves, volcanic activity, and pests and diseases. These are in addition to chronic threats like eutrophication.

Lastly, following China and Indonesia, the Philippines is the world's third largest producer of **seaweed**.[23] There are 893 identified species of seaweeds which are sold in raw or processed forms. Apart from its economic use, seaweeds can also serve as carbon sinks which help control the amount of carbon dioxide in the atmosphere. Some regions in the Philippines which are major producers of seaweeds are the Bangsamoro Autonomous Region in Muslim Mindanao, Region 4B, and Zamboanga Peninsula.[24] Same as seagrasses, seaweeds are also vulnerable to coastal hazards and eutrophication.

Solid Waste Management

One of the ways to mitigate the effects of pollution and natural resources degradation is through solid waste management (SWM). SWM entails proper and systematic management of various kinds of solid waste (such as food and non-food waste) from waste generators (i.e., through segregation) to disposal (i.e., use of sanitary landfills, mechanical and biological treatment plants, etc.) so that these shall have minimal effect on the environment and the communities. If not monitored and sustained, accumulation and mismanagement of waste may lead to land, water, and air pollution that may have detrimental impact on human health and wellbeing, biodiversity, and economic outcomes, among others. SWM needs to be properly planned and executed, taking into consideration the financial, technological, transportation, administrative, or human resource needs, among others, to make it effective and efficient.

In the Philippines, SWM remains a major challenge. Although there is a national framework for solid waste management in the country, it is not being fully implemented by local governments. The local governments have inadequate facilities (i.e., materials recovery facilities and sanitary landfills) and low compliance on submission of 10-year Solid Waste Management Plans (51 percent compliance as of 2016).[25] Furthermore, although there is some evidence that Filipinos generally practice pro-environmental behaviors – such as segregation or recycling[26] – the effect of these behaviors do not seem to easily reflect on the management of solid waste on a larger scale. The accumulation of marine litter, including plastics, in major rivers in the country remains persistent

[23] FAO. (2018). The global status of seaweed production, trade and utilization. https://issuu.com/globefish/docs/the_global_status_of_seaweed_production__trade_and/1?ff&showOtherPublicationsAsSuggestions=true

[24] Bureau of Fisheries and Aquatic Resources – Department of Agriculture. (2019). Philippine fisheries profile. https://www.bfar.da.gov.ph/publication.jsp?id=2375#post

[25] Schröder, P. (2020). Regional: Supporting Implementation of Environment Related Sustainable Development Goals in Asia and the Pacific (Philippine Subproject), Circular Economy in the Philippines. https://www.adb.org/sites/default/files/project-documents/50158/50158-001-tacr-en_0.pdf

[26] Sabio, G.S. (2012). Are We A Greener Nation Now? Trends in Pro-Environmental Behaviors of Filipinos (1993-2010). Paper to be presented at the 65th Annual WAPOR Conference in Hong Kong, June 14-16, 2012. https://wapor2012.hkpop.hk/doc/papers/ConcurrentSessionsV/VC/VC-3.pdf

in the country. The Pasig River, a major river in Metro Manila, accounts for 63,000 tons of plastic entering oceans from rivers per year[27], where 70 percent come from households.[28]

The Department of Environmental and Natural Resources' Environmental Management Bureau (EMB) projects that the Philippines would generate 23.6 million tons of waste by 2025[29], with Region 4A and the National Capital Region generating the greatest volume of waste with 3.9 million and 3.8 million tons, respectively. Some factors affecting these could include the rapid population growth and urbanization.

[27] Ocean Cleanup (2021). River Plastic Emissions to The World's Oceans. https://theoceancleanup.com/sources/
[28] UNDP (2021). An Experiment on Satellite Remote Sensing of Plastic Waste in Pasig River. https://www.ph.undp.org/content/philippines/en/home/blog/an-experiment-on-satellite-remote-sensing-of-plastic-waste-in-pa.html
[29] https://app.powerbi.com/view?r=eyJrIjoiNjc4OTE2OTktMDdhMC00YzM1LTkwMjEtYWUxMDIyMjI0MWMwIiwidCI6ImY2ZjRhNjky LTQzYjMtNDMzYi05MmIyLTY1YzRlNmNjZDkyMCIsImMiOjEwfQ%3D%3D&pageName=ReportSection&fbclid=IwAR264Sfm3ocn SBovLnpGgdSKXljXQeGAx9JpZIxcAS3YyV4voqVpHzPTBNw

Annex 3.2. Types of Economies

Generally, three types of economies exist: 1.) Free-Market 2.) Command; and 3.) Mixed.

In a **Free market economy**, also known as the **Capitalist economy**, "businesses and individuals have the freedom to pursue their own economic interests, buying and selling goods in a competitive market, which naturally determines a fair price for goods and services." Under this type, the law of supply and demand, rather than a central government, regulates production and labor. Companies sell goods and services at the highest price consumers are willing to pay and workers earn the highest wages that companies are willing to pay for their services. A purely Capitalist economy is a free-market economy where profit motive drives all commerce and forces businesses to operate as efficiently as possible to avoid losing market share to competitors.

The second type is **Command economy**, also known as a **Centrally planned economy that operates** under the total control of a country's government. In a command economy, government central planners determine what goods and services will be produced, the amount of goods and services produced, and the costs to the consumers. In more stringent command economies, government officials also dictate public investments allowed by the free market. Additionally, command market governments can also issue mandates on incomes earned by citizens. Competition largely doesn't exist in a command economy. All decisions are made by the government and all businesses are controlled by the government. The government has total control over the country's critical resources and all companies, whether state or privately owned. Command economies have primarily been chosen by Communist States like North Korea and Cuba.

Lastly, the third type is **Mixed Economy**, which combines the elements of the free-market and command economies. Even with the free market as the main economic paradigm, the government plays an important role in taking action to direct the economy. These moves are made for a variety of reasons; for example, some are designed to protect certain industries or help consumers. It is generally defined as an economic system blending elements of a market economy with those of a planned economy, markets with state interventions, or private with public enterprise. A mixed economy has three of the following characteristics of a market economy: 1.) It protects private property; 2) It allows the free market and the laws of supply and demand to determine prices; and 3.) It is driven by the motivation of the self-interest of individuals. The United States of America is a graphic example of a mixed economy. Likewise, the Philippines has a Mixed Economy.

Global Ranking

Based on the 2022 Index of Economic Freedom, Singapore, with its extremely low tax rates, minimal regulations on businesses, and highly capitalist system of economics, ranked as the highest economically free in the world. Other Free market economies close on the heels of Singapore are Switzerland, Ireland, , and New Zealand. Table 3.2.1. shows the top 10 free market economies of 2022. Out of 184 countries ranked, the Philippines was 80th.

Table 3.2.1. Top 10 Countries: 2022 Index of Economic Freedom[30]

Rank	Country	Overall Score
1	Singapore	84.4
2	Switzerland	84.2
3	Ireland	82.0
4	New Zealand	80.6
5	Luxembourg	80.6
6	Taiwan	80.1
7	Estonia	80.0
8	Netherlands	79.5
9	Finland	78.3
10	Denmark	78.0

[30] The 2022 Index considers 12 aspects of economic freedom (grouped into four broad categories: 1) Rule of Law, 2) Government size, 3) Regulatory efficiency, and 4) Market openness) in 184 sovereign countries from July 1, 2020, through June 30, 2021. Retrieved from: https://www.heritage.org/index/pdf/2022/book/2022_IndexofEconomicFreedom_Highlights.pdf

Annex 3.3. The Deterministic Versus the Probablistic Risk Assessment Approach

Assessment as the basis for planning is a standard, but the most critical step in the whole continuum of planning and implementation processes. This is even more so for disaster risk reduction and management purposes.

The United Nations Office for Disaster Risk Reduction (UNDRR)[31] identifies two (2) approaches currently being used for climate and disaster risk assessments: the Deterministic and the Probabilistic approaches. It characterizes the two, as follows *"Deterministic risk assessment considers the impact of a single risk scenario, whereas Probabilistic risk assessment considers all possible scenarios, their likelihood, and associated impacts." It goes on to further describe the two, to wit: "Deterministic approaches are used to assess disaster impacts of a given hazard scenario, whereas probabilistic methods are used to obtain more refined estimates of hazard frequencies and damages."*

In terms of differences, UNDRR goes on to further describe that "Probabilistic risk assessment simulates those future disasters which, based on scientific evidence, are likely to occur. As a result, these risk assessments resolve the problem posed by the limits of historical data. In contrast, a deterministic model treats the probability of an event as finite. The deterministic approach typically models scenarios, where the input values are known, and the outcome is observed." The major differences are provided in Box 3.3.1.

To understand the changing nature of climate hazards in the country in the context of these two analytical approaches, UNDP and the Climate Change Commission, undertook a series of projects to test an innovative approach to hazard analysis, as precursors to detailed risk analysis. The realization from these endeavors was that risk assessments of potential hazard events cannot be done in the same way as in the past and must have a more expansive and comprehensive" projection" aspect to it. One of these projects[32] piloted the "probabilistic" risk analysis approach in the San Pedro San Pablo Bay involving the 7 municipalities and one city (Tacloban) of Leyte Province. This approach is obviously different from the business-as-usual deterministic methodology in that the latter relies on available evidence of similar past events and not projections of potential hazard magnitude extrapolated from past hazard phenomena.

[31] Formerly known as UNISDR or United Nations International Strategy for Disaster Reduction
[32] RAPID or the "Resilience and Preparedness Towards Inclusive Development" project. The Rebuild project ("Resilience Capacity Building for Cities and Municipalities to Reduce Disaster Risks from Climate Change and Natural Hazards") used a primarily Deterministic Risk Analysis but focused on mainstreaming of results in CLUPs.

Box 3.3.1. Description of Probabilistic and Deterministic Approaches

Probabilistic Approach	Deterministic Approach
Considers all risk scenarios, including projected ones Assesses impacts and frequencies of composite scenarios Includes scenarios likely to occur including those that have not yet happened	Uses single risk scenario derived from past observations Assesses impacts of a single given hazard scenario Treats probability of an event as finite, based on past observations

Annex 3.4. Conflict Management Related Programs – Additional Information

Kalayaan Barangay Program

The Kalayaan Barangay Program[33] (KBP) sought to bring development projects down to the barangay level in barangays affected by conflict. The impact of this program was limited by fiscal constraints at the national level that initially prompted national agencies to simply attribute existing projects in target areas to be considered as KBP interventions. Subsequent budget allocations sought to augment national agency budgets therefore kept the implementation with NGAs and the Philippine military. There has been no study on the impact this program had on LGU capacity for conflict or crisis intervention.

Payapa at Masaganang Pamayanan (Pamana)

The Payapa at Masaganang Pamayanan (PAMANA) program considered and emphasized the track of mainstreaming conflict sensitivity and peace promoting planning at the local level. This direction emerged with and complemented the government's shift to a human security approach and a whole-of-government strategy to address conflict. *"PAMANA's approach of harmonizing development efforts targeted at conflict zones under a single framework is distinct from previous programs that were largely donor-driven, relied on existing agency budgets, focused on one specific conflict, or were primarily implemented by the military."*[34]

This intergovernmental fiscal transfer signaled a shift in government policy that sought to embed CSPP both at national level agency as well as LGU development planning and implementation. An evaluation study of the PAMANA program has key insights that may help indicate the areas of functionality that matter most in conflict vulnerable LGUs. Significant gains were cited in establishing a single framework for development in conflict vulnerable areas, in increased governance capacity and local government legitimacy, and in economic gains such as an increase in registered business. At the same time, political transitions, difficult inter-agency coordination, and project delays were identified as risks that affected trust-in-government by citizens and peace partners.[35]

Further, and more striking, *"In many cases, the economic gains borne by PAMANA projects did not significantly reduce local armed group presence or the incidence of violence. While PAMANA projects in barangays already cleared of NPA presence reduced the likelihood of re-affectation, projects in NPA-affected barangays resulted in an increased likelihood that the NPA would retain a presence. PAMANA was associated with a decrease in extremist violence but also with increased local crime. Our case studies revealed that, in some cases,*

[33] The Kalayaan Barangay Fund special provision in the General Appropriations Act (GAA) read "Use and Release of Funds for the Kalayaan Barangay Program. Funds under the Kalayaan Barangay Program shall be used to transform conflict-afflicted communities into peace and development areas through accelerated barangay-focused rehabilitation and development. Barangays to be included in the program shall be determined by the President upon recommendation of the Office of the Presidential Adviser on the Peace Process (OPAPP) and the Secretary of DND"

[34] Haim, Dotan; Fernandez, Maria carmen; Cruz, Micah, Evaluation of the Payapa at Masaganang Pamayanan (PAMANA) Program, 2019 UNDP Executive Summary.

[35] ibid

PAMANA projects exacerbated tensions between armed groups. Nearly 80 percent of survey respondents in Maguindanao reported that armed groups undermined project implementation."[36]

Throughout the PAMANA evaluation report, the emphasis on stakeholder "ownership" was clear both as an outcome and as a measure of implementation success. LGU ownership of project interventions goes back to the two crucial policy determinants – resource flow and decision-making. With the Kalayaan Barangay Program and to some extent the PAMANA program, these are still conditional fund transfers from the national government. The success of the program in addressing conflict and transforming communities depended on the appropriateness of the set conditions, and the interest of the local government to comply.

Local Government Support Fund: Support to the Barangay Development Program

The LGSF-Support to Barangay Development Program is the fund allocation for barangay LGUs that have gone through the convergence of the Retooled Community Support Program of the Armed Forces of the Philippines (AFP) and the Department of National Defense) (DND). A main difference in implementation strategy for this program places the responsibility and accountability for the implementation of identified projects with the local chief executive of the implementing LGU. This strengthens the direction of building ownership and engagement of local stakeholders. LGSF as a fund transfer mechanism from national to local government removes national government agencies from the implementation phase of identified projects ideally giving them more opportunity to focus on setting standards and outcome-level goals for conflict management. The direct fund transfers, as of this study, are primarily to the provincial and municipal levels of LGUs where the identified barangays are located. One of the main reasons for this presumably is the size of fund downloads per identified barangay. Studies previously done on barangay level capacity to directly implement or bid out projects place the majority of Philippine barangays as having the capacity to implement projects ranging from 1-5 million pesos.[37] This either supports or strains the vertical linkages among the various levels of LGUs and the capacity to plan and implement across political boundaries and transitions.

There has not yet been any evaluation study conducted on the LGSF-SBDP or the RCSP impact on conflict management and mainstreaming CSPP at the local level. Current identified challenges of the program include implementation delays and underutilization of appropriated funds. While these issues are not unique to conflict-management programs, the implications of delays, as evaluated in the PAMANA evaluation may have negative impact on building trust in government, and legitimacy of local government institutions.

[36] ibid
[37] Will look for DAP/DILG survey on barangay implementation levels (circa 2016)

Annex 3.5. Global Climate and Environment-Related Funds

a. The Green Climate Fund

These financial resources are made to flow through the multilateral route, primarily the Operating Entities of the Financial Mechanisms[38] of these Conventions like the Green Climate Fund (GCF)[39], the Global Environment Facility (GEF) and the Adaptation Fund (AF)[40].

The GCF provides for climate related needs of developing country Parties. The GEF, on the other hand, disburses a mix of environment and climate related funds but at much smaller amounts than GCF and fixed country allocations. Developed countries also use other multilateral routes, notably the Bretton Woods institutions (World Bank and International Monetary Fund), UN agencies, International NGOs (INGOs), bilateral and regional banks and aid agencies. They also do government-to-government direct negotiations for support of developing countries.

The amount that can be accessed from the GCF varies according to the windows. It can reach up to triple digit or in millions of USD depending on the geographic scope, complexity, and innovation implication of the project. Readiness Funds access have notional limits, standard for all accessing countries. There are also windows for small to medium sized projects and access modalities are theoretically facilitative.

b. The Global Environment Facility

The Global Environment Facility is a Funding Mechanism established during the Rio Earth Summit to address the most urgent environmental problems. It works on five (5) focal areas, as follows: Biodiversity, Climate change International waters, Chemicals management and Land degradation. It also aims to achieve results in the following impact areas: Food, Land use and restoration, and Sustainable Forest management. To date, it has funded more than 5,000 projects and programs. One of its most notable initiatives is its Small Grants Programme (SGP) which is operating in 135 countries. The GEF also manages special thematic funds like the Special Climate Change Fund (SCCF) for all developing country Parties of the UNFCCC and the Least Developed Countries Fund (LDCF) for eligible LDCs.

c. The Adaptation Fund

The Adaptation Fund (AF) is a financing mechanism established in 2001 under the Kyoto Protocol (KP) of the UNFCCC to finance adaptation projects and programs of developing country Parties that are particularly vulnerable to the adverse effects of climate change. It was mandated to be resourced with a 2% share of the proceeds from the Clean Development Mechanism (CDM) under the KP project

[38] "A mechanism for the provision of financial resources on a grant or concessional basis, including for the transfer of technology. It functions under the guidance of and is accountable to the COP, which shall decide on its climate change policies, programme priorities and eligibility criteria for funding. Through this mechanism, developed country Parties (Annex II Parties) provide financial resources to assist developing country Parties implement the Convention."

[39] The National Government should endeavor to develop a focused program of access for LGUs directly from the GCF, either through the Readiness funds, the fast track, and simplified processes (SAP and EDA) and the Full Proposals route.

[40] With the operationalization of the Paris Agreement's Article 6, the Adaptation Fund's resources are expected to increase significantly from the share of proceeds of the mechanisms. Access is also more developing country friendly.

activities and other sources of funding. It is also mandated to serve the Paris Agreement and receive a percentage of the levies from the relevant Article 6 mechanisms. It shall continue to receive the share of proceeds, if available, from the relevant activities of the Kyoto Protocol until the proceeds from the PA start to come in.

d. Multilateral Fund of the Montreal Protocol

The Montreal Protocol Multilateral Fund was established as an interim mechanism in 1991 and became permanent in 1994, to help developing countries comply with their obligations under the Protocol to phase out the use of ozone-depleting substances (ODS)[41] at an agreed schedule. The Montreal Protocol, which became operational in 1987, is a "global agreement to protect the stratospheric ozone layer by phasing out the production and consumption of ozone-depleting substances (ODS)."

e. International and Regional Banks

Funding from developed country Parties of the MEAs also find their way to the International Development Banks (IDBs), e.g. World Bank/International Finance Corporation[42] and the regional banks, e.g. Asian Development Bank. These normally comprise complementary funding blended with other sources, including those flowing directly from the MEA funding mechanisms like the GCF, GEF, AF, etc. , for which these banks also serve as Executing Agencies.

[41] ODS are used in refrigeration, foam extrusion, industrial cleaning, fire extinguishing and fumigation.
[42] Collectively known as the Bretton Woods Institutions.

Annex 3.6. National and Local Sources of Disaster Risk Reduction and Management (DRRM) and Climate Change Adaptation (CCA) Funds

A technical report by the World Bank Group (December 2020) titled: **"Public Expenditure Review: Disaster Response and Rehabilitation in the Philippines"** authored by Rong Qian (Senior Economist), Benedikt Lukas Signer (Program Coordinator), Tatiana Skalon (Disaster Risk Finance Specialist), and Zidni Marohombsar (Public Financial Management Consultant) comprehensively discussed national and local funding sources for post-disaster spending in the Philippines.

Some of the national and local funding sources described in the report are:

- The National Disaster Risk Reduction and Management Fund
- Quick Response Fund
- Agency-Specific Budgets
- National Government Program or Project Subsidies to Government Corporations
- Unprogrammed and Contingent funds
- Local Disaster Risk Reduction and Management Fund

For additional information, the report may be accessed at https://openknowledge.worldbank.org/handle/10986/35064

Annex 3.7. Impacts of the Increasing Capacity Deficits

The capacity deficits of local government units (LGUs), unfortunately, cannot simply be ignored nor swept under the rug, because they have real negative impacts in terms of disasters which translate into mortalities and damages with high economic costs. If these deficits or gaps are addressed in a timely manner, hazard events need not necessarily translate to disasters. At this stage, risks can be manipulated and if preparations are well made, negative impacts like deaths and economic losses can be averted or significantly lessened. Loss of lives from a disaster is difficult for families who experience them and normally it cannot be compensated in whatever form. The impacts of these capacity deficits in terms of losses[43] and damages[44] that translate to disasters are provided in the tables below:

Table 3.7.1. Top 10 Tropical Cyclones with the Highest Number of Deaths

Hazard Event	Dates of Occurrence [a,b,d,e]	Deaths
Haiphong	Sept.21- Oct.6, 1881	20,000[e]
Haiyan (Yolanda)	Nov. 6-9, 2013	6,300[a]
Thelma (Uring)	Nov. 2-7, 1991	5,101[b]
Bopha (Pablo)	Dec.2-9, 2012	1,268 [c]
Angela	Sept. 20-26, 1867	1,800[d]
Winnie	Nov. 27-29, 2004	more than 800[b]
(Name unavailable)	October, 1897	1,500[d]
Fengshen (Frank)	June 18-23, 2008	1,501 [c]
Ike (Nitang)	Aug. 31- Sept.4, 1984	1,363 [c]
Durian (Reming)	Nov.26-Dec.1,2006	1,399 [c]

Sources:
a - National Disaster Risk Reduction and Management Council (NDRRMC)). Final Report re Effects of Typhoon "Yolanda" (Haiyan). November 6-8, 2013. Retrieved from: https://web.archive.org/web/20201105102044/https://ndrrmc.gov.ph/attachments/article/1329/FINAL_REPORT_re_Effects_of_Typhoon_YOLANDA_HAIYAN_06-09NOV2013.pdf

b - typhoon2000.ph. The Twelve Worst Typhoons of the Philippines (1947- 2009). 2010. Retrieved from: http://www.typhoon2000.ph/stormstats/12WorstPhilippineTyphoons.htm)

c - United Nations Office for the Coordination of Humanitarian Affairs (OCHA). Philippines: Destructive Tropical Cyclones From 2006 to 2016. March 2017. Retrieved from: file:///C:/Users/undpp/Downloads/ocha_phl_destructive_typhoons_2006_to_2016.pdf

d - Ribera, P., R. Garcia-Herrera, and L. Gimeno. Historical deadly typhoons in the Philippines. July 2008. Retrieved from: https://core.ac.uk/download/pdf/33107674.pdf

e - Start Network. Anticipating cyclones is difficult - but not impossible. February 5, 2019. Retrieved from: https://reliefweb.int/report/philippines/anticipating-cyclones-difficult-not-impossible

[43] Defined in this annex as deaths.
[44] Defined in this annex as cost of damage to properties (infrastructure, productive, social, and cross-sectoral).

Table 3.7.2. Top 10 Tropical Cyclones with the Highest Costs

Hazard Event	Dates of Occurrence [a,b]	Cost[a] (PhP)
Bopha (Pablo)	Dec.2-9, 2012	43.2 billion
Haiyan (Yolanda)	Nov. 6-9, 2013	93.0 billion
Parma (Pepeng)	Sept. 30- Oct. 10,2009	27.2 billion
Nesat (Pedring)	Sept. 26-28, 2011	15.4 billion
Fengshen (Frank)	June 18-23, 2008	12.3 billion
Ketsana (Ondoy)	Sept. 24 – 27, 2009	10.9 billion
Mike (Ruping)	Nov.10 – 14, 1990	10.8 billion
Angela (Rosing)	Oct.30 – Nov 4, 1995	10.9 billion
Flo (Kadiang)	Oct. 2 – 6, 1993	8.75 billion
Megi (Juan)	Oct. 15 – 20, 2010	12.0 billion

Sources:
a - National Disaster Risk Reduction and Management Council (NDRRMC). Final Report re Effects of Typhoon "Yolanda" (Haiyan). November 6-9, 2013. Retrieved from: https://web.archive.org/web/20201105102044/https://ndrrmc.gov.ph/attachments/article/1329/FINAL_REPORT_re_Effects_of_Typhoon_YOLANDA_HAIYAN_06-09NOV2013.pdf

b - typhoon2000.ph. The Twelve Worst Typhoons of the Philippines (1947- 2009). 2010. Retrieved from: http://www.typhoon2000.ph/stormstats/12WorstPhilippineTyphoons.htm

Losses and damages (both direct and indirect) as a percentage of GDP (both average and dissected per event/locality and assessed against an acceptable target) should be consistently monitored and mainstreamed into development planning, implementation, and monitoring processes.

The need for a Systematic Analysis of LGU Capacity

As expounded in the body of this paper, there is a perception of diminishing capacities to address climate change and other triggers of crisis. In reality, however, humans have remained where they had been in terms of their level of knowledge and capacity when the threat started changing and worsening. Nonetheless, as previously emphasized, humans must learn to adapt.

The use of intuition and common sense while helpful may not be enough considering the complexities usually offered by crisis situations, as such, the adaptation process is also evolving. There is a need to identify and address the capacity deficits[45].

In executing responses to a problem, several steps must be systematically undertaken:

1.) Scientific/technical assessment of the problem or studying the hazard or crisis trigger using assessment techniques and methodologies;

[45] Including the other Means of Implementation, i.e. Finance and Technology

2.) Planning the responses based on the results of the assessment in a systematic and coordinated fashion;

3.) Implementation of the measures drawn up in the planning stage, including piloting if necessary to make sure they work;

4.) Monitoring and evaluation of the execution of the response measures; and

5.) Adjusting implementation and continuing research and development based on revised assumptions emanating from the lessons learned.

Apart from these, a more precise analysis of the capacity gaps should be conducted in the form of a formal Capacity Assessment[46] to ensure that the incremental capacity development (i.e. knowledge and competencies, among others) will be fit for the purpose and address the gaps. Moreover, this may be expanded to determine capacities to conduct probabilistic risk assessment that may include analysis of climate change scenarios and understanding and interpretation of their impacts as informed by both scientific and local or indigenous knowledge. All of these are necessary to further improve both national and local government planning.

[46] Refer to UNDP's Capacity Assessment User's Guide.

Chapter 4:
Civic Tech for Social Accountability in Philippine Local Governments: Nuancing Citizen Feedback and Civil Society Empowerment for the Supreme Court 'Mandanas-Garcia' Ruling Implementation

Annex 4. Civic Tech Range: Mahintana Foundation's Open Data Kit

Objectives	Nature of ODK use (Ongoing and pipelined)	Deployment Location	Partners (Shortlist)
Social accountability (direct action)	*COVID-19 Relief Operations* Profiling (temporary residents, unemployed, and vulnerable individuals) of 41,426 households Transparency in budget and distribution of relief goods (Mahintana Foundation 2020)	South Cotabato: Polomolok	LGU of Polomolok, barangay LGUs, Sanggunian Kabataan (youth council)
	Open Government Partnership commitments Open Monitoring and Evaluation, Open Contracting, Open Legislation (Mahintana Foundation 2018, 2019)	South Cotabato	*(RESOURCEGov project)* South Cotabato provincial LGU, South Cotabato Integrity Circle
Service delivery (with other CSOs)	*Project implementation: Solar panels* Survey for potential beneficiaries of solar home panels Project preparation: distribution, installation, verification of the solar home panels	Sultan Kudarat (selected municipalities)	*(SOLARES project)* Electric cooperatives, MAKIMA
Capacity-building of other local CSOs	*Cooperatives' information system* Efficiency of loan applications, credit recommendations and approval, and membership applications	Sultan Kudarat: Lebak	*(SOLARES project)* Bacbacan Multipurpose Cooperative

Objectives	Nature of ODK use (Ongoing and pipelined)	Deployment Location	Partners (Shortlist)
Tech transfer/ sharing with government (From civic tech to gov tech)	*Inventory of roads and bridges* Data collection for LGU compliance to the national requirement (inventory)	Koronadal City	Koronadal LGU Engineering Office
	Congressional project monitoring (No current systems for the district)	South Cotabato 1st Congressional District: General Santos City, Polomolok, Tupi, Tampakan	*(RESOURCEGov project)* Congress Representative
	Universal Health Care implementation Profiling of households to input to the local investment plan for health and other strategic plans	Koronadal City, municipalities of Sto. Nino, T'boli, Tantangan, Tampakan and Lake Sebu	*(HEALTH Plus project)* South Cotabato Provincial Health Office, Association of Municipal/ City Health Officers of the Philippines– South Cotabato Chapter
	PhilHealth information system Information consolidation for completeness of submissions to PhilHealth electronic claims	Sarangani (six province-managed public hospitals)	*(HEALTH Plus project)* Sarangani LGU Provincial Management Committee, PhilHealth Region 12
	Social welfare services information system Profiling and monitoring of beneficiaries	South Cotabato	*(RESOURCEGov project)* Department of Social Welfare and Development Region 12, Areas-Based Standard Network (ABSNET) South Cotabato Cluster [multi-sectoral coalition]
	Waste collection and monitoring information system Data gathering and monitoring tool for the coastal clean-up and preservation of Sarangani Bay	Sarangani: municipality of Maasim and selected barangays	Sarangani Province Empowerment and Community Transformation Forum, Inc. (SPECTRUM), Maasim Municipal Environment and Natural Resources Office
	Local revenue improvement Tax mapping: data collection and monitoring	Region 12; e.g., Polomolok municipality, North Cotabato	*(RESOURCEGov project)* Department of Finance – Bureau of Local Government Finance Region 12; Polomolok Municipal Treasurer's Office; Action Against Hunger; North Cotabato provincial LGU

Sources: As cited in-text, and all entries in the Mahintana Foundation's website (https://www.mahintana.org/) tagged with "open data kit," accessed on August 29, 2021

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Chapter 1:

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DECENTRALIZATION, DIGITALIZATION, AND DEVELOPMENT

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United Nations Development Programme
Philippines Country Office
15th Floor North Tower, Rockwell Business Center Sheridan
Sheridan Street corner United Street
Highway Hills, 1554 Mandaluyong City Philippines
Email: registry.ph@undp.org Website: https://www.ph.undp.org/