The Cebu ALMANAC 2019-2023

Pandemic Crisis and Recovery

Fr. Francisco Antonio T. Estepa, SVD • Genesis B. Bedio • Julius P. Relampagos • Jan Lorenzo G. Alegado • Rejene T. Lakibul • Leny G. Ocasiones • Ubo Pakes • Charles Dominic P. Sanchez • Sweet Maville S. Blanco • Reanne Angel L. Francisco • Joshua M. Tambor • Jose Eleazar R. Bersales • Francisco Largo • Jean Villacensio •

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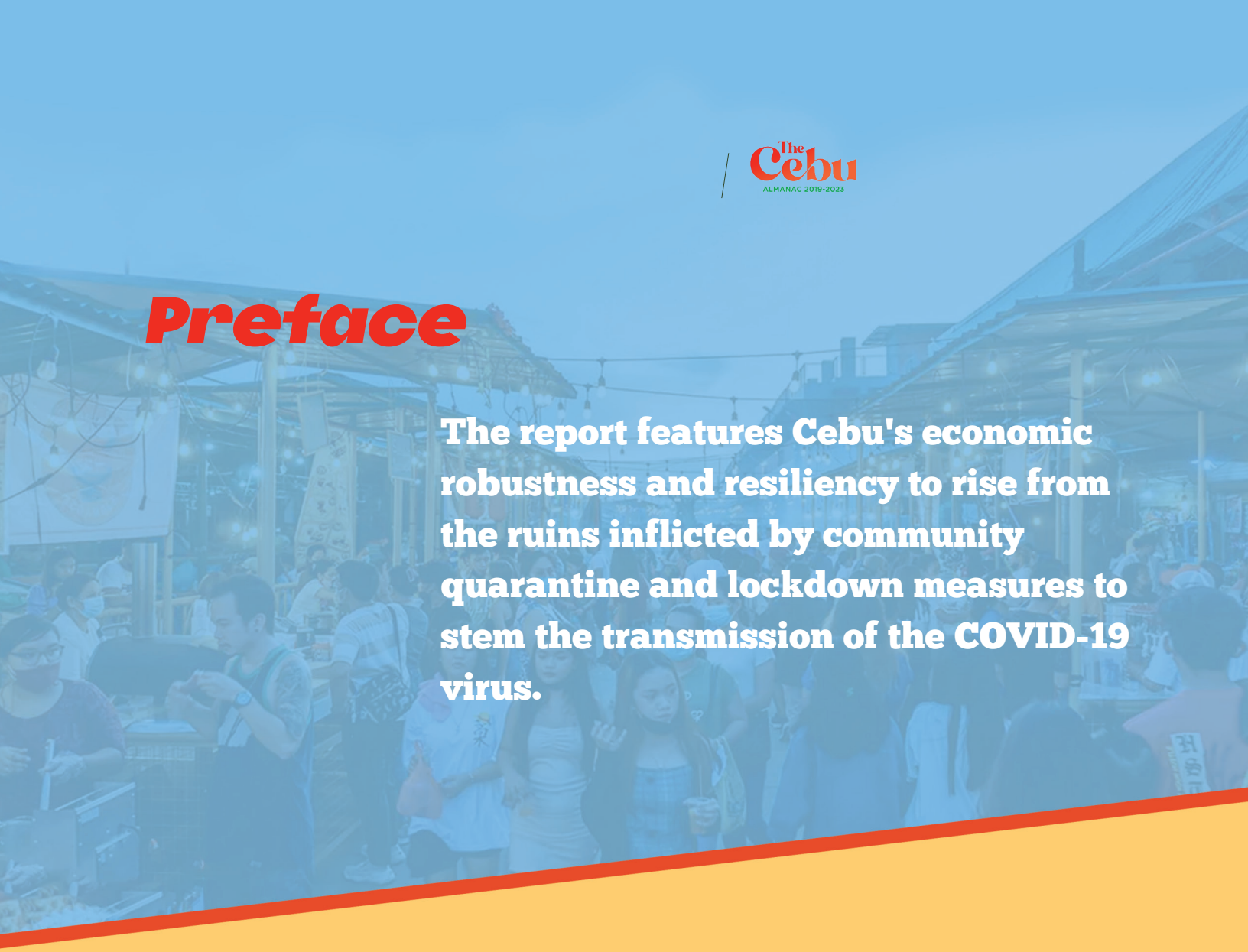
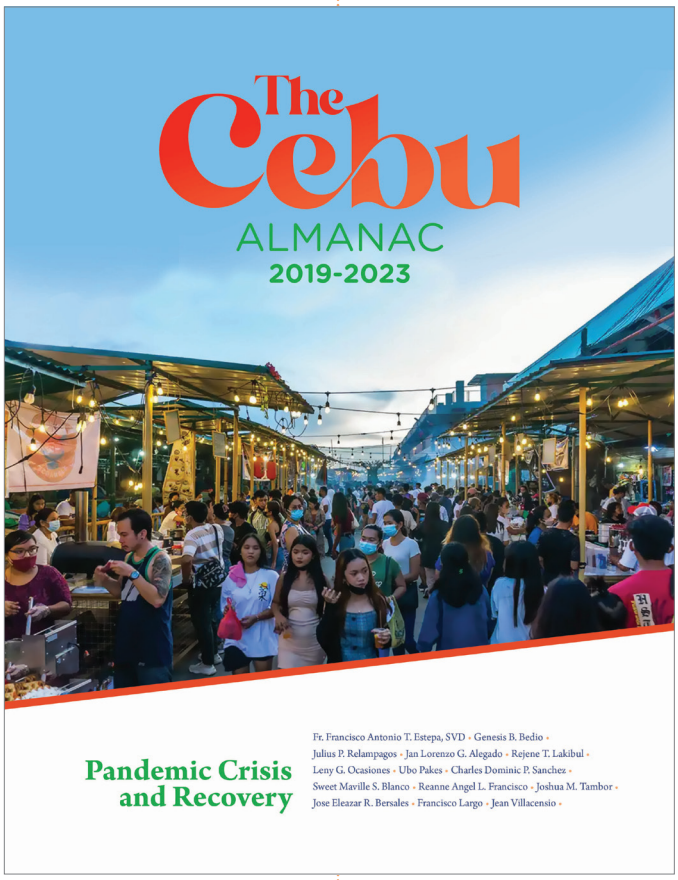
Preface



The report features Cebu's economic robustness and resiliency to rise from the ruins inflicted by community quarantine and lockdown measures to stem the transmission of the COVID-19 virus.

The Cebu Almanac 2019-2023: Pandemic Crisis and Recovery is a special five-year edition on Cebu's journey towards recovery from the economic downturn caused by the COVID-19 pandemic. The report features Cebu's economic robustness and resiliency to rise from the ruins inflicted by the community quarantine and lockdown measures to stem the transmission of the COVID-19 virus. Complying with the stringent mobility restrictions mandated by government in all levels, Cebu's way of life was dragged into the abyss of anxiety as job losses and human deaths from infections surged at the height of the pandemic before the COVID-19 vaccines became available to the general population. Economic and social engagements between peoples, businesses, and communities were profoundly disrupted, and the associated impacts on mental health and wellbeing were unprecedented. Even within local neighborhoods, the paranoia that the virus could be transmitted by air voluntarily and involuntarily confined everyone to their homes

triggering behavioral changes towards the new normal, and only those with access to computing devices, mobile phones, WIFI connections, and electricity remained socially connected in the virtual world.



This edition opens with a welcome message by Fr. Jesuraj Anthoniappen, SVD, USC Vice President for Academic Affairs, encouraging the Cebuano community to remain steadfast in meeting future challenges post-pandemic period. It is followed by a spiritual reflection on the pandemic crisis from a leader's perspective by USC President Fr. Francisco Antonio T. Estepa Jr. underscoring how compassion, resilience, solidarity, innovation, and hope guided the USC community in overcoming the challenges and setbacks caused by the COVID-19 pandemic.

An overview on how the Central Visayas region navigated the economic storm of the pandemic crisis was presented by Genesis Bedio. Using key regional indicators, this section provides an annual comparison of the economic landscape of the Central Visayas during 2019-2023 under (a) the looming threats of the pandemic, (b) the implementation of strict quarantine and lockdown protocols, (c) easing of community quarantine restrictions, and (d) the building of momentum towards growth and recovery.

In the provincial level, Jan Alegado provides a snapshot of how the COVID-19 pandemic affected Cebu's economic growth and the competitiveness of its industries, and despite the economic damage caused by the pandemic Cebu continues to thrive and contribute to the overall growth of the country. Genesis

Bedio reports on the livability potentials and general socio-economic conditions of Cebu as the province squarely faced the threats and challenges posed by the COVID-19 pandemic.

Sectoral analyses and industry performance assessments are included in this edition. Julius Relampagos assesses the demand-supply responses of Cebu's power sector as fully online classes and work-from-home modalities became the new normal leading to dramatic sectoral shifts, albeit temporarily, in electricity consumption that presented new challenges to the province's energy security. Sweet Maville Blanco, Reanne Angel Francisco, Joshua Tambor, and Rejene Lakibul discuss the policy environment and the emergency response preparedness of the health and social services sectors in Cebu City in light of the unforeseen challenges healthcare institutions and workers faced in dealing with the mounting cases of infections and deaths related to the COVID-19 virus.

Research articles on waste recycling and the use population census data on policy planning are included in this edition. Leny Ocasiones and Ubo Pakes demonstrate how women are at the forefront of waste recycling motivated by a desire to promote a healthy environment and minimize cases of solid waste-related diseases and illnesses. Francisco Largo and Jean Villasencio underscore the importance of using the results of the 2020 Census of Population and Housing in planning the government's policy responses to crises of natural or man-made origins like the COVID-19 pandemic.

Even though the COVID-19 pandemic may have restricted physical and social interactions causing temporary setbacks on book fairs and arts events, Cebu's creative arts spirit continues to propel the industry to bounce back from the pandemic crisis. Charles Dominic Sanchez reports on Cebu City's recognition by UNESCO as a creative city owing to its reputation as a hub of trade, culture and innovation. Genesis Bedio discusses Cebu's competitive advantage as a hub of design and the prospects of more job creation in the creatives industry capitalizing

on Cebu's designation as a Creative City of Design. Finally, in the museum and heritage space, Jose Eleazar Bersales reports on how event organizers have turned to online webinars circumventing the mobility restrictions during the COVID-19 pandemic.

The Cebu Almanac is an annual publication of the USC Publishing House. Financial support through research grants was provided by the Research, Development, Extension, and Publications Office (RDEPO).

JULIUS P. RELAMPAGOS, Ph.D.
Manager, USC Publishing House

Welcome Message

"Let us read together, reflect together, and build a future together."

As we tread the paths to recovery following the devastating COVID-19 pandemic, the University of San Carlos is delighted to reach out to the community and share this special edition of *The Cebu Almanac 2019-2023: Pandemic Crisis and Recovery*. This Almanac edition shares the scrutiny of facts, insights, and reflections on how the various sectors of Cebu navigated through the COVID-19 crisis, and offers recommendations on moving forward to address the current challenges and capitalize on the opportunities that open.

The global community is witnessing several emerging trends in various spheres. The generative Artificial Intelligence (AI), for one, is one of the technologies of the this century that might affect every aspect of the human society. It could transform the way we think, interact, respond, and move forward. The conscientious experts, researchers, and leaders

have varied opinions about the way this technology permeatesing through the major sectors of business, health, education, and environment. However, as Cebuanos, we need to be prepared to embrace this global trend in a responsible and ethical way.

Furthermore, knowing and understanding what is happening around us and committing to a common cause are the very essential courses of action that will enable us to live in a sustainable city, and bequeath a livable Cebu to the future generations. As one of the premier educational institutions in the region and beyond, the University of San Carlos is committed to join hands with our Cebuano brothers and sisters in this endeavor.

The Founder and Executive Chairman of the World Economic Forum Klaus Schwab said: We must rebuild trust – trust in our future, trust in our capacity to overcome challenges, and most importantly, trust in each other. "Trust is not just a feeling; it is a commitment to action, to belief, to hope." In the context of building a better future, the USC Publishing House is pleased to publish this special edition as a part of its renewed commitment to thrive amidst the changes and challenges of the post-pandemic times for a sustainable future—through knowledge dissemination.

"Let us read together, reflect together, and build a future together".

Tread PATHS with us.

FR. JESURAJ ANTHONIAPPEN, SVD, Ph.D.
Vice President for Academic Affairs,
University of San Carlos

Contents

SPIRITUAL REFLECTIONS

PHOTOGRAPH BY FREEPIK

Crisis and Roadmap to Recovery: A Spiritual Leader's Perspective

by **Fr. Francisco Antonio T. Estepa, SVD**
University of San Carlos President

"The roadmap to recovery is not a linear path. It will be paved with challenges and setbacks."

The weight of the past two years rests heavy on our shoulders. Empty classrooms, silenced laughter, and anxieties replacing the vibrant hum of academic pursuit – these are but a few stark reminders of the crisis that has tested our resilience.

Yet, amidst the darkness, a beacon of hope persists. It shines through the dedication of our faculty, staff, the unwavering spirit of our students, and the unwavering commitment of our community. This hope finds its source not only in human strength, but also in the profound depths of our spirituality.

The challenges we face demand a response that transcends mere pragmatism. It demands a roadmap to recovery inspired by the guiding principles of our faith. For us at the University of San Carlos, this journey begins with Compassion.

We recognize the suffering endured by our community and extend a hand of support, guided by the empathy and understanding that flows from our shared humanity and our shared belief in a loving God.

IMAGE BY FREEPIK

Resilience is the next pillar on our path. We draw strength from the knowledge that hardships can be overcome, that challenges can be transformed into opportunities. The indomitable spirit of St. Charles Borromeo, our patron saint, serves as a constant reminder of the courage and perseverance required to navigate turbulent times.

Solidarity is our compass. We acknowledge that no one emerges unscathed from a crisis of this magnitude. We commit to walking hand-in-hand with our students, faculty, staff, and the broader community, united in our pursuit of healing and renewal. This solidarity finds its foundation in the belief that we are all connected, children of the same God, called to support and uplift one another.

Innovation fuels our journey. We embrace the lessons learned and adapt to the changing landscape. We leverage technology to bridge physical barriers and ensure continuity of learning. We explore new pedagogical approaches that foster deeper critical thinking, empathy, and a connection to the world around us.

Finally, Hope illuminates our path. We believe in the inherent goodness of humanity, in the power of education to transform lives, and in the promise of a brighter tomorrow. This hope is not blind optimism, but a conscious choice to focus on the possibilities that lie ahead, fueled by our faith in a benevolent God who guides us through darkness towards light.

The roadmap to recovery is not a linear path. It will be paved with challenges and setbacks. But as we navigate this journey, guided by the principles of compassion, resilience, solidarity, innovation, and hope, we know that we are not alone. These principles which are embedded in our University's motto of Scientia (Competence), Virtus (Noble Character), and Devotio (Community Spirit) will guide us in our journey. We draw strength from our shared spirituality, our collective spirit, and our unwavering belief that together, we can emerge from this crisis stronger, more united, and more prepared to face the future.

This is the commitment we make as a university, as a community of faith, and as stewards of knowledge. We invite you to join us on this journey, to contribute your unique talents and perspectives, and to collectively write a new chapter in the story of the University of San Carlos – a chapter marked by resilience, hope, and the transformative power of education and faith.

REPORTS: **REGIONAL DEVELOPMENT**

DESIGNED BY FREEPIK

Navigating the Economic Storm in Central Visayas

by **Genesis B. Bedio**

The succeeding digests from 2019 to 2023 were taken from the Central Visayas Regional Development Report of the Socioeconomic Research Portal for the Philippines (SERP-P) and National Economic Development Authority public document through Central Visayas Regional Economic Situationer. They are presented here as insights of the socio-economic condition in the region to better understand the dynamics before, at the onset and after the COVID-19 pandemic. The highlights in this regional development present socioeconomic findings and performances.

Table 1. Growth Rates of Gross Regional Domestic Product and Gross Value Added Central Visayas: 2018 and 2019

SOURCE: PHILIPPINE STATISTICS AUTHORITY, CITED IN CENTRAL VISAYAS REGIONAL DEVELOPMENT REPORT 2019

Sector	2017-2018	2018-2019
Agriculture, Forestry and Fishing	1.1	0.8
Industry	8.7	3.2
Mining & Quarrying	1.3	1.3
Manufacturing	9.2	(1.5)
Electricity/Stream/Water & Waste Management	3.7	6.9
Construction	11.2	15.2
Services	7.1	7.5
Wholesale and retail trade	5.7	8.8
Transportation & Storage	9.1	6.5
Accommodation & Food Service Activities	17.8	2.1
Information & Communication	6.7	4.0
Financial & Insurance Activities	8.3	16.6
Real Estate & Ownership of Dwellings	4.5	5.5
Professional & Business Services	5.5	1.4
Public Administration & Defense	15.8	13.5
Education	10.5	4.0
Human Health and Social Work Activities	(4.4)	(0.3)
Other Services	7.3	21.9
Gross Regional Domestic Product	**7.1**	**5.9**

Based on 2019 Regional Development Report Central Visayas experienced expansion with some notable sectoral performance in areas of employment and poverty reduction. Though positive developments were recorded, they were described as slower in pace with GRDP growth weakened by 5.9 percent basing from the 7.1 percent of the preceding year. The stronger sectors in 2019 were real estate, wholesale and retail trade, financial/insurance and other services.

According to Table 1, the slow growth were in manufacturing and agriculture. The manufacturing industry was weakened by poor export in agriculture caused by inclement weather and pest infestation (Central Visayas Regional Development Report, 2020).

There was a better prospect in terms of inflation as the region registered the lowest inflation rate at 1.6 percent in the past of four years. The following eight commodities registered lower than the government's target range of 2 to 4 percent, which is a positive outcome:

COMMODITIES

18%  FOOD/NON-ALCOHOLIC	1.6%  RECREATION/CULTURE	0.7%  RESTAURANT/ MISCELLANEOUS GOODS AND SERVICES	0.6%  EDUCATION
1.1%  HOUSING/WATER/ ELECTRICITY/GAS/ OTHER FUELS	1.0%  TRANSPORT	0.5%  CLOTHING/FOOTWEAR	0.1%  COMMUNICATION

ICONS FROM FLATICON.COM

EMPLOYMENT DECLINE

AGRICULTURE
DECLINE OF 18,000 WORKERS

FINANCIAL & INSURANCE ACTIVITIES
DECLINE OF 3,000 WORKERS

REAL ESTATE ACTIVITIES
DECLINE OF 3,000 WORKERS

EDUCATION
DECLINE OF 8,000 WORKERS

OTHER SERVICE ACTIVITIES
DECLINE OF 23,000 WORKERS

ICONS FROM FLATICON.COM

- Food/non-alcoholic: **18%**
- Recreation/culture: **1.6%**
- Housing/water/electricity/gas/other fuels: **1.1%**
- Transport: **1.0%**
- Restaurant/miscellaneous goods and services: **0.7%**
- Education: **0.6%**
- Clothing/footwear: **0.5%**
- Communication: **0.1%**

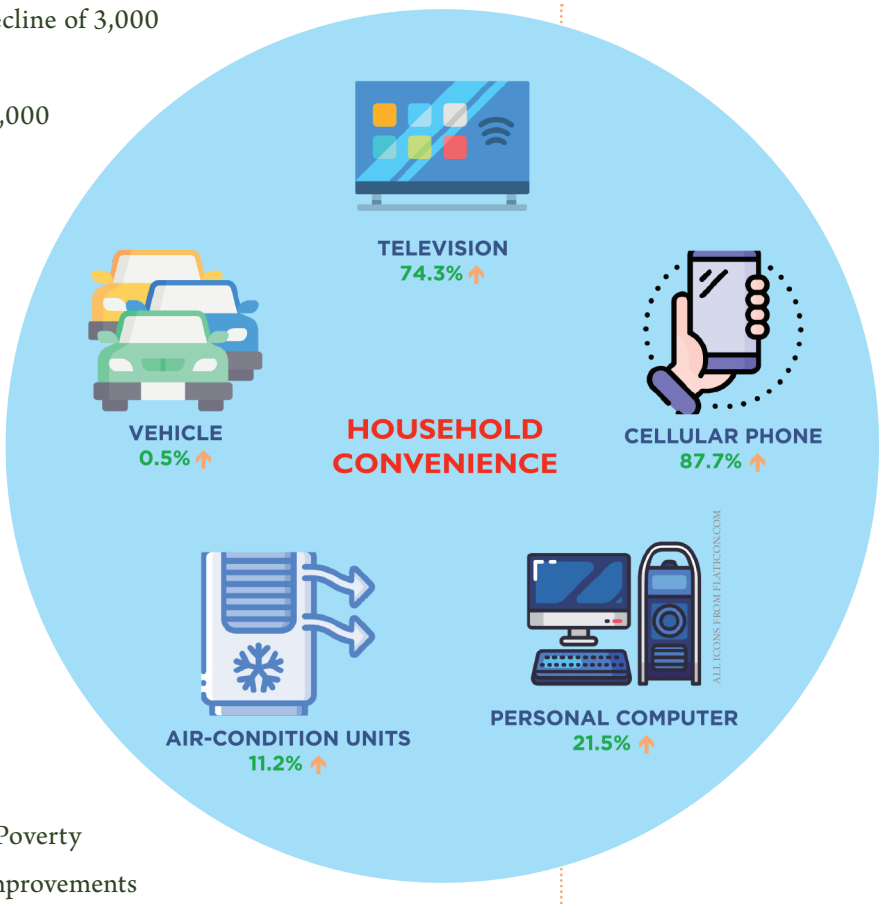
In terms of hitting the employment rate target, the region was able to reach the target rate of 94.8 percent, which means a good number of working-age individuals were employed, despite the challenge of increased number of individuals actively seeking for jobs during this period. As to the labor force participation rate, which includes two conditions – number of individuals seeking for employment and number of individuals who have been employed – an increase from 61.3 percent in 2018 to 62.3 percent in 2019 was recorded. This positive change in employment level was felt across all segments or industries within the region's economy, constituting agriculture, industry, and services. It implies that the number of jobs created by these sectors exceeded the number of jobs that were lost.

Thus, this is the breakdown of sectors that had employment decline:

- Agriculture – with a decline of 18,000 workers
- Financial and insurance activities – with a decline of 4,000 workers

- Real estate activities – with a decline of 3,000 workers
- Education – with a decline of 8,000 workers
- Other service activities – with a decline of 23,000 workers

As earlier explained, these reductions of workers were offset by the number of jobs created. Agriculture, for one, had an expanded workforce of 23,000 workers due to the significant expansion in the fishery subsector with 20,000 workers.



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With regard to poverty, the Annual Poverty Indicator Survey (APIS) noted improvements in sanitation conditions among households in Central Visayas, whereby more families have a better access to sanitation facilities, particularly handwashing facility. Fewer households were without handwashing facility, from 20.9 percent in 2017 to 2.1 percent in 2019. The data stated an increase of handwashing facility from 72.1 percent in 2017 to 93.3 percent in 2019. This implies a better regard or practice of basic hygiene among families with soap and water. As for access to facilities for disposing human waste, a rise of 81.4 percent was recorded in 2019 from 64.1 percent in 2017. Thus, the number of families that acquired the proper facility reduced the incidence of human feces contact.

Another related indicator, household conveniences, shows a high percentage of ownership as shown in the following proportions within the region:

- Television – 74.3 %
- Cellular phone – 87.7%
- Personal computer – 21.5%
- Air condition units – 11.2%
- Vehicle – 0.5%

The amenities mentioned are electronic and transportation conveniences that are responsible for providing comfort to households. The data suggests a wide-spread ownership of these conveniences.

Finally, the 2018 Family Income and Expenditure Survey (FIES) suggested a positive trend towards improved income distribution. This means a reduced incidence of inequality over the years was recorded. The Gini coefficient for Central Visayas decreased to 0.4425 in 2018 from 0.4645 in 2015 which translates to perfect income equality.

The GRDP 2019 reveals that the key sectors in this period needed to overcome the challenges in agricultural sector, enhance human capital, and invest more on climate to stabilize growth. The region still faced the broader challenge of being sustainable. As the data shows, the region remained on track in the pertinent period but had to address the setbacks in export and agriculture sectors which are critical for employment in the region, especially that a significant portion of the region have been dependent on agriculture. The report specifically recommended that policies on enhancing employability of the region's workforce that would start with better training and education should be prioritized. The recommendations for improvement of policies also extended to allocating resources towards projects that address climate change: cushioning its impact and adapting to its effect, thereby creating a conducive environment for businesses and attracting investors and tourists.

DESIGNED BY FREEPIK

2020: Central Visayas Economy Faced Significant Challenges Due to the Impact of the COVID-19 Pandemic

The full brunt of the COVID-19 pandemic on the socio-economic conditions of Filipinos was yet to be felt from its onset to the post-first quarter of 2020. The pandemic officially started in December 2019, and was declared as a public health emergency of international concern on January 30, 2020, and finally declared as a global pandemic on March 11, 2020 (Macusi, Rafon & Macusi, 2022).The timing of impact depended on the severity of the outbreak in countries, and the government responses and structural elements that were in place in the affected regions. Typically, vulnerable countries with broader economic problems showed more marked decline.

In the Central Visayas, the community quarantine limited mobility, and interrupted livelihoods and businesses. As a consequence, the regional economy declined sharply. The Gross Domestic Product in this period experienced a contraction of 9.9 percent – a real term or accurate reflection of change as the rate was adjusted for inflation. In other words, the economy decreased by 9.9 percent, posing a significant decline.

The sectoral performances in this period showed agriculture as resilient growing by 4.2 percent. On the other hand, the industry and services sectors showed significant decline of 18.3 percent and 7.0 percent, respectively.

The agricultural sector cascades into the subsectors of crops, fisheries and livestock. In this particular group of subsectors, the crops was recorded with notable growth vis-à-vis the minimal growth of fishery, poultry and livestock. The positive turnout

Table 1. Growth Rate of Gross Regional Domestic Product, by Industry Central Visayas: 2017-2020

SOURCE: PHILIPPINE STATISTICS AUTHORITY, CITED IN CENTRAL VISAYAS REGIONAL DEVELOPMENT REPORT 2020

Sector	2017	2018	2019	2020
GRDP	**7.1**	**7.1**	**6.2**	**(9.9)**
Agriculture, Forestry, Fishing	7.2	1.1	0.8	4.2
Industry	1.5	8.7	4.9	(18.3)
Services	9.6	7.1	7.3	(7.9)

for crops was due to the favorable weather conditions, reduced pest infestation, and improved farm management (RDR, 2020 p. 2).

On the other hand, the fishery subsector was impeded by poor returns, specifically in aquaculture production which occupies a significant portion of the region's fishery industry.

The low turnout of livestock did not actually apply to all types of animals. Hog production, for instance had managed to surpass its output. However, cattle, carabao, and goat production's output dropped compared to 2019 data.

Despite the overall decline, the information and communication, financial and insurance activities and public administration showed positive growth in 2020.

In terms of industry, all its subsectors' output were affected severely, with construction as the most affected with 36.4 percent contraction. The strict community quarantine measures to control the spread of COVID-19 put industrial operations into a standstill. As there were travel restrictions and challenges in logistics, materials movement for construction and other activities were halted. Even when restrictions eased up in the second half of 2020, the industrial operations were still limited (RDR, 2020 page 2).

Mining and quarrying subsectors suffered a significant decline in this period with 30.6 percent contraction along with manufacturing which declined by 12.9 percent. Because these two subsectors are wide-ranging, they had a critical impact on the economy in multiple fronts: job losses, reduced economic activity and lower regional GDP growth.

Services sector declined with double-digit drop in this period. Specifically, tourism industry, accommodation, food service, transportation, and hospitality as a consequence of domestic and international travel restrictions. These sectors are dependent on visitor arrivals which could imply job losses in hotels, restaurants,

airlines and tour operations. The low arrivals meant a supply chain disruption – a ripple effect throughout the chain that affected food suppliers, transportation companies, and souvenir vendors.

Despite the overall decline, the information and communication, financial and insurance activities and public administration showed positive growth in 2020. Due to the shift to remote working, the Information Technology/Business Process Management (IT/BPM) showed resilience as they easily transitioned to the new remote setup. They were able to immediately turn to alternative work arrangements and schedules.

Remarkably, Cebu accounted for the majority of the region's Gross Regional Domestic Product (GRDP) between 2018 and 2020, while other provinces represented a smaller proportion. Still, it remained a fact that the provinces, including Cebu endured contraction in this period.

The following table shows the growth rates of GDP in Central Visayas in 2020 with Lapu-Lapu City having the highest growth rates in Cebu.

With regard to inflation rate in 2020, Central Visayas had seen higher prices in certain commodity groups like alcoholic beverages, tobacco, furnishings, household equipment, maintenance, and health-related expenses. The excise taxes that were implement as part of the TRAIN Law contributed to the higher prices as vendors of

Table 2. GDP of Different Sectors in Central Visayas: 2020

SOURCE: PHILIPPINE STATISTICS AUTHORITY, CITED IN CENTRAL VISAYAS REGIONAL DEVELOPMENT REPORT 2020

Sector	2019	2020
Central Visayas GRDP	**6.2**	**(9.9)**
Bohol	5.8	(6.9)
Cebu	6.2	(11.2)
City of Cebu	8.0	(10.2)
City of Lapu-Lapu	4.6	(17.7)
City of Mandaue	9.3	(13.0)
Cebu Province, excluding HUCs	4.7	(8.9)
Negros Oriental	6.6	(5.6)
Siquijor	5.5	(5.6)

affected commodities confronted higher excise taxes. The region hit 1.9 percent in this period from 1.6 percent of the previous year.

Given the bleak condition of the health crisis, it was expected that widespread of existed job losses. Around 345,000 were lost. Following this was the rapid rise of unemployment rates – which doubled compared to 2019. To cushion the impact, businesses transitioned to remote work arrangements, reduced work hours, and

suspended operations temporarily. Unfortunately, retrenchments were still reported despite the mitigating courses of action. This was projected to have a potential long-term implications for economic recovery.

In terms of poverty indicators, there was an increase in families that lacked handwashing facilities and access to improved sanitation. It implies reduction of favorability of environment where the incidence of lack of hygiene facilities were recorded. This further becomes an immense barrier to the recovery efforts, and to attracting investors. Thus, according to the RDR report recommendations, the region should prioritize initiatives that address concerns of hygiene and safety of environment from vector-borne diseases to create a conducive investment environment, facilitate job creation, attract investments, and more importantly, fortify the region's healthcare system.

2021:
Easing Restrictions
and Reopening of Economy

The year 2021 was marked with easing of quarantine restrictions in view of increased consumer demand and resumption of air and sea travel. Governments had earlier studied the gradual opening of the economy which included increasing the operations and crowd limit of major establishments.

In Central Visayas, the foreign trade returned and even surpassed the pre-pandemic levels in 2019. This was due to increased demand for goods and services as the economy reopened.

The inflation trend in this year was upward, but the RDR reported it was still below the targeted 2.0 percent by the government. Food inflation signaled a stabilization of prices for essential goods as it was recorded lower compared to 2020. It further implies the improved purchasing power of consumers. Further, supply constraints for corn and the higher local and external demands contributed to the upward trend. What was optimistic was the continued decline of rice prices – with negative inflation rates (Central Visayas Regional Economic Situationer, 2021, p. 8).

Furthermore, various services and commodities contributed to inflation: financial services, personal transport expenses, water supply and various services-related housing, repair, maintenance and security. Fuel prices hike was significant and further broadened the inflation. However, among the provinces in Central Visayas, Cebu had the lowest inflation rate in 2021 at 1.4 percent.

In terms of employment, the average rate improved and underemployment also eased which implies a positive prospect in labor market. Throughout most of 2021there was a positive employment trend in the region. In fact, it recorded the second-highest employment rise among all regions in the country. The province had 92.8 percent (Figure 1) employment rate – higher than the national average of 92.2 percent (p. 10).

Proportionally, the gains in employment resulted in decreased unemployment (to 7.2 percent) in this period. Thus, this was a significant decrease from 10.3 percent

Figure 1. Labor Force Statistics 2020 and 2021

SOURCE: PHILIPPINE STATISTICS AUTHORITY, CITED IN CENTRAL VISAYAS REGIONAL DEVELOPMENT REPORT 2021

Indicators	2020	2022
Labor force participation	58.7%	64.8%
Employment rate	89.7%	92.8%
Unemployment rate	10.3%	7.2%
Underemployment rate	15.8%	14.5%

in 2020. According to the report, more people believed that more jobs were available in 2021 and they gained confidence from the brighter atmosphere brought by eased restrictions and the rollout of vaccines. Further, fewer people worked part-time, and fewer displaced workers was documented compared to 2020.

With the exception of Siquijor, all provinces in Central Visayas recorded an increase in employment rates in 2021. Cebu had the highest increase while Negros Oriental had the highest employment rate. On the other hand, Mandaue City and Siquijor had the highest underemployment rates.

In the agricultural sector, the performance was a mixed of positive and negative growth. Palay, livestock, and egg production showed good prospect with a double-digit growth in production throughout the year. On the other hand, corn, fishery, and poultry reported lower outputs. Due to super typhoon Odette's disruption of farms and plantations, corn production decreased by 16 percent.

The livestock sector increased by 8.2 percent in production – having higher outputs for cattle, carabao, hog, goat. On the other hand, the fishery sector decreased at 6.46 percent from the previous year, along with poultry production. On the contrary, better output was seen in egg production as it continued to expand.

Transportation recorded a remarkable progress from the preceding year whereby aviation and shipping sectors were able to increase their flights and cargo traffic

– possibly attributed to a good number of citizens that were already vaccinated. However, the bottleneck was on the varying travel requirements by local governments. The situation turned worse when super typhoon Odette ravaged Central Visayas: the cargo volume and airport operations were thwarted, as indicated by the lower revenues reported by airlines such as Cebu Pacific Air. On the other hand, the flagship carrier, Philippine Airlines received assistance from its granted bankruptcy protection in the United States – crucial for the airline's debt and financial management.

Meanwhile, the completion of infrastructure projects such as airport expansions were realized, despite the hurdles. The shipping sector's infrastructure, on the other hand, were devastated by the super typhoon – vessels were damaged, and major harbors needed repairs.

The pandemic downturned the tourism industry, and had affected accommodation and food service – specifically restaurants, hotels, accommodations and transportation.

Given the positive gains in the region, Central Visayas was looking at further growth in establishments and operations as further easing up of restrictions had been anticipated to happen the following year, 2022. Furthermore, the recovery initiatives from super typhoon Odette was expected to stimulate substantial economic activities, especially in the construction sector. The anticipated increase in capacity and utilization projected a positive outlook in the labor market sector. On the contrary, export activity was expected to garner challenges due to limited capacity of ships in transporting goods and the rising shipping costs.

2022:
Building Momentum
in Economic Growth

All of the provinces in Central Visayas showed economic expansion in 2022. Lapu-Lapu City achieved the fastest growth rate of 13.2 percent, followed by Mandaue City and Cebu City, making Cebu province the dominant economic force in the region. The key sectors of agriculture, forestry and fishing and industry were the largest shares or contributions to Cebu's economy. Thus, the province of Cebu had the lion's share of 30.1 percent in the regional GDP in 2022, followed by Cebu City and Bohol. On the other hand, Siquijor had the smallest share of 0.9 percent (Figure 1) (PSA 7, 2023 para 1) .

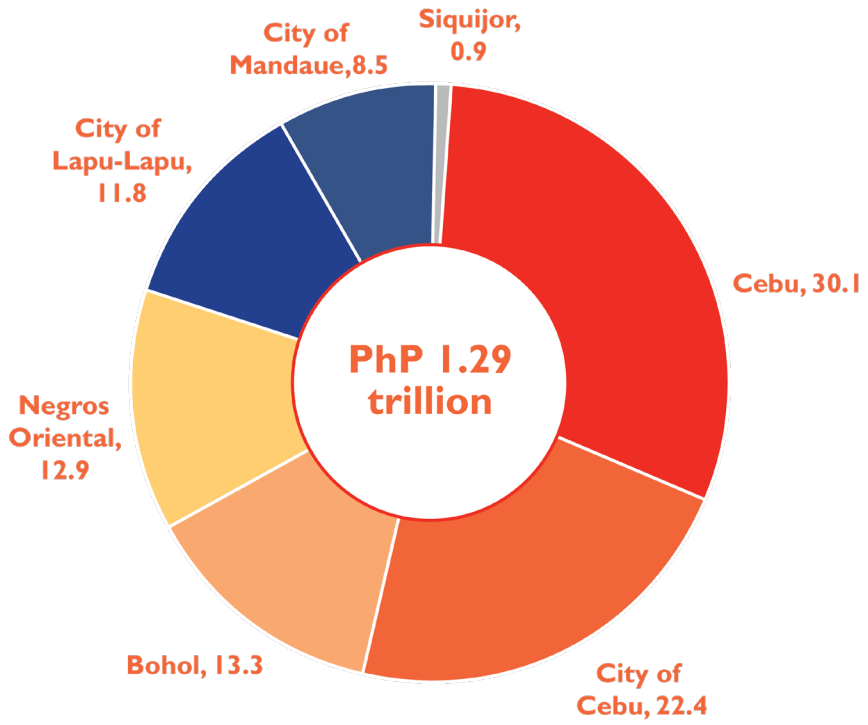

Figure 1. Share of Provinces and HUCs to Central Visayas' GDP at Constant 2018 Prices: 2022 (In Percent)

SOURCE: PHILIPPINE STATISTICS AUTHORITY

The Central Visayas economy grew at a faster rate of 7.6 percent in 2022 compared to 5.4 percent growth in 2021 (PSA 7, cited in Fuentes 2023). This rate demonstrates that the region began treading the road to recovery. As perceived by the general public, the socio-economic climate of 2022 was nearing the pre-pandemic normal stage. But chief statistical specialist of PSA, Leopoldo Alfanta, Jr. claimed that not

everything was back to pre-pandemic stage. However, he affirmed that the region was very close to achieving that status (Fuentes, 2023 para 2).

As foreseen by economic experts, the service sector had the largest contribution in this period, comprising 69.4 percent or Php 892.7 billion of the regional GDP. Included in this sector are wholesale and retail trade, repair of motor vehicles and motorcycles, and transportation and storage.

On the other hand, the industry sector which includes manufacturing and construction contributed 24.1 percent or Php 310.6 billion to the regional economy in this period. Conversely, agriculture, forestry and fishing sector contributed a lesser share of only 6.5 percent or Php 84 billion. Despite its low share, the government has been pushing for the promotion of agriculture as a viable career for younger individuals (Fuentes, para. 11). Thus, the call to produce younger agriculture graduates is deemed urgent nowadays as the industry's workforce is aging and there have to be people who will take over this sector's investments.

Overall, Central Visayas posted a 6.5 percent significant contribution to the national economy in 2022. Particularly, the IT/BPM, construction, real estate, trade and manufacturing were the leading economic driver (PSA 7, The National Economic and Development Authority Region 7: Central ...).

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PHOTO SOURCE: SUGBO.PH FB PAGE

1st pic: The ongoing Cebu BRT Project at Fuente-Osmeña.

2nd pic: Cebu–Cordova Link Expressway (CCLEX) view from South Road Properties (SRP).

In PSA 7's report, the region played a big role in the international trade: top export products and market goods like electronic products and copper metal were the major export products from the region being exported to Japan, China, Thailand, USA and Vietnam. On top of this, the region was recognized for its effort in digitalization, enhancing connectivity, adopting modern technologies, and innovation investments. This proactivity and leveraging on advancements have been critical to technological efficiency and economic growth.

Furthermore, PSA 7 discussed major infrastructure projects that were done in 2022 such as the New Mactan-Cebu 4th Bridge (opened on August 3, 2022) and Cebu Bus Rapid Transit (BRT) – which is currently ongoing. Such has been the multi-faceted approach of the region to address transportation challenges and improve overall mobility in the region.

Currently, the region has an existing strategic planning with the help of The Regional Development Investment Program (RDIP) which translates development goals into tangible programs. This program that is in partnership with the World Bank and United Nations Development Plan can hasten development with sufficient collaboration between stakeholders in place – LGU and private sectors.

Based on these developments, the region has to continue to prioritize sectors that have great prospects: IT/IBM, construction, real estate, trade, and manufacturing; and potentially diversify its export products and markets. Further, it can reinforce trade relations with Japan, China, Thailand, USA and Vietnam and leverage on digitalization, infrastructure development and strategic planning which it has already initiated in order to secure sustainable development and prosperity in the region.

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2023: Central Visayas Economic Landscape, Insights from Q2 2023

In the second quarter of 2023, the Central Visayas experienced varied economic performances across sectors in 2023. Some areas had remarkable increases in production, and others faced deceleration, brought by the outbreak of African Swine Fever (ASF), affecting the livestock production, and the inclement weather. Meanwhile, the region's retail trade experienced a sharp increase in employment as the COVID-19 pandemic waned. In the transport sector, air and sea transportation saw a dynamic shift both in domestic and international mobility caused by changes in routes, cargo volumes, schedules and market demands. Furthermore, foreign trade declined while inflation rates showed a slowing down but still higher than the pre-pandemic levels. The situation of labor market also declined as unemployment and underemployment rates rose (NEDA, Second Quarter 2023 Central Visayas Regional Economic Situationer 2023).

In sum, ... the second quarter of 2023 was characterized by both positive and negative trends across different sectors brought by disease outbreaks, input costs, global trade dynamics, and pressures from inflation."

In terms of agricultural production, there was a more dynamic situation which had both rising and slowing down trends. Agricultural setbacks—the African Swine Fever, foot-and-mouth disease and avian influenza increased the input costs, while the rising prices of oil negatively impacted production. Notwithstanding the decrease in corn and livestock output, there were notable increases in palay production (79.4 percent).

In the transportation sector, the increase in domestic (34.8 percent) and international (251.55 percent) flights, better passenger movements and domestic cargo transport all contributed to robust development in air transportation. On the other hand, sea transportation showed both positive trends in domestic shipcalls and decline in foreign shipcalls and domestic container traffic. The sea transportation sector's experience of decline could have been influenced by global economic condition and inevitable logistical challenges.

PHOTO SOURCE: I AM A CEBUANO FB PAGE

The foreign trade sector declined in performance with decreases in both exports and imports resulting in trade deficit for the region. It implies that the value of imports exceeded the value of exports during this period. This could be caused by broader concerns like changes in demand for the region's goods and services, currency fluctuations, geopolitical tensions, and other external factors.

PHOTO SOURCE: INSIGHTS CEBU FB PAGE

Inflation rate tempered (5.3 percent) in this period compared to the previous quarter (7.1 percent). This was caused by lower prices in food and non-alcoholic beverages. In addition, the consistent and steady production levels contributed to the lowering of food prices. This indicated that there were no significant disruptions or shortages in food supply during this quarter. Furthermore, reduced transport costs was noted and it brought the prices of goods lower. It implies that the overhead cost of transporting food to distribution centers and markets decreased. Factors such as improved infrastructure or streamlined logistics could also have helped mitigate food price escalation.

In terms of employment, the condition of labor market slightly declined in this second quarter of 2023 as there were decreases in employment rate (94.8 percent

in April, from 95.8 percent in January) and job creation, or conversely – an increase in job losses. This condition most often signals a distress in the job market. The rise of employment rate could be an indication that more aspiring employees could not find jobs. Furthermore, an increase of underemployment in this period suggests that more people experienced difficulties in matching their skills with employment opportunities, and the desired working shifts. As of this period, the underemployment was recorded higher than the condition before the COVID-19 pandemic, which could suggest that the labor market had yet to rebound.

The increasing underemployment could partially be a consequence of workers who were employed but sought additional hours or more suitable employment options but could not be accommodated because of prevailing conditions, despite the desire to fully utilize their skills and time.

In sum, the general condition of economic landscape in Central Visayas during the second quarter of 2023 was characterized by both positive and negative trends across different sectors brought by disease outbreaks, input costs, global trade dynamics, and pressures from inflation.

For future outlook, NEDA has been on the lookout for the impact of El Niño on Central Visayas as early as the second quarter of 2023. This was said to potentially reduce agricultural output. It can be recalled that PAGASA issued an advisory as early as March 2023 indicating the unusual warming of sea surface temperatures along the equatorial Pacific which had further developed into a weak El Niño (NDRRMC SITREP No. 8 for El Niño (2023), February 29, 2024 08:00 AM - Philippines (2024). Furthermore, despite the less pessimistic perception of the consumers who were concerned about rising prices and job insecurity – the policy effectiveness remained as evidenced by the economic liberalization laws and international agreements such as bilateral and multilateral trade agreements that aim to attract foreign investments.

Data and percentages in this section are from Central Visayas Regional Economic Situationar, Second Quarter 2023

2023: Insights *from Third Quarter*

The inflation trends in the third quarter of 2023 were slowing down at 5.5 percent on average from January to September. However, this was still above government's target of 4.0 percent in September 2023. The commodities were dynamic in inflationary rates: some experienced slower inflation: food with most food items hitting lower inflation rates. On the other hand, vegetables, sugar, bread and pasta products had an elevated inflation rate in this third quarter. Furthermore, the highest average inflation rates came from alcoholic beverage and tobacco (10.4 percent), education (6.0 percent), and food and non-alcoholic beverages (5.5 percent) (The National Economic and Development Authority Region 7: Central ... 2023).

Overall, the cities and provinces within the region varied in recorded inflation rates in this third quarter compared to the second quarter. Negros Oriental recorded the highest rate at 6.6 percent in the region, while Lapu-Lapu City had the lowest inflation rate at 2.4 percent. On the other hand, with respect to HUCs, Mandaue City recorded a higher inflation rate.

The data on inflation dynamics provided a reading of how inflation rates changed over time and the regional variations, which are an important information to guide the decisions of policymakers, businesses and the general public.

In terms of labor market, the condition had improved in this quarter compared to the previous as there were positive trends in employment, unemployment and underemployment rates.

Specifically, the region recorded an increase of 96.0 percent in employment rate, which can be attributed to the positive shift in consumer confidence. It means the consumers were more likely to spend their money, invest and take on debt thereby stimulating growth. In addition, the resumption and full operation capacity of establishments allowed the unconstrained movement of people and goods – spurring a higher likelihood of increased revenue and profits, improved standard of living and better employment opportunities as well.

The region enjoyed the lowest unemployment rate, reaching 4.0 percent in this quarter which indicates that more people were successful in seeking jobs and fewer unsuccessful ones. The region also had a significant decrease in underemployment rate which suggests that fewer workers sought additional hours of work or shifted to full-time employment. This further suggests that more workers landed on jobs that match their skills and desired working hours.

In terms of foreign investments, a surge was recorded in this third quarter of 2023, reaching Php 3.87 billion. This implies that in this third quarter there was a growing confidence of foreign investors. The bulk of foreign investment was rated 79 percent of the total authorized investments by the government and investment board. On the other hand, local investments dipped in this quarter to only Php 1.02 billion from Php 3.05 billion from the previous year. This could be attributed to volatile market conditions, or shifts in investor preferences, business priorities and risk perception where local investors were less confident in the economic or investment climate in the region. It implies that local investment towards the succeeding periods would need reassessment from policy makers to re-engage domestic investment.

With respect to poverty reduction efforts, the region had a better performance with a decrease of 31 percent in poverty incidence. Approximately 100,000 individuals in the region were lifted out of poverty and nearly 200,000 individuals were already non-food poor which means they could afford food but not other commodities. This implies that the efforts of the government and other stakeholders to ensure food security, expand training and skills, and putting up infrastructure projects and transforming production sectors were successful.

In economic growth terms, the regional economy achieved an accelerated growth for the past two years, surpassing the pre-pandemic levels. This was made possible by sectoral growth. The sectors of accommodation and food service activities recorded the highest growth rate at 47.2 percent. Next to it were transportation and storage, other services, construction, and information and communication. In terms of contribution, distribution services made 69 percent contribution, industry made

24.1 percent, and agriculture made 6.5 percent. Among the subsectors, wholesale and retail gained the highest share. It reasserts that business and commerce have a great role to play in the development of the region.

The provincial economic outlook was also good. The four provinces of Central Visayas had already exceeded the pre-pandemic levels in this period. Bohol and Negros Oriental showed strong growth in 2022 and they were expected to maintain this momentum for the entire 2023.

Finally, the task on the horizon is to maintain the optimistic inflation levels through supply-demand interventions, according to the report's clincher (Neda, 2023). Further, the region must bear on the challenge of sustaining the low unemployment rates no matter the disruptions. In relation to poverty incidence, the Central Visayas has already attained better income levels. Ultimately the region will scale poverty reduction up by 10.5 percent come 2028.

Data and percentages in this section are from Central Visayas Regional Economic Situationer, Third Quarter 2023

ANALYSIS: **SUSTAINABLE LIVING**

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Livability Potentials *of Cebu*

by **Genesis B. Bedio**

Livability or quality of life pertains to the overall well-being and satisfaction of individuals or communities living in a place, where a simple daily characteristic may have a tremendous influence on wellbeing (Pandey, et al, 2013 cited in Preetha Ravis Sree, 2022). It is analyzed through various aspects of human life and can be related to physical, mental, social, and economic dimensions. As part of the Global South, the Philippines bear on the challenges of improving livability index, especially its highly urbanized cities.

From the data provided by Numbeo, a crowd-sourced database, the quality of life index in Cebu is currently very low (Numbeo, Quality of life in Cebu 2024). Several factors caused the index to dip in this way and the more that the stakeholders study the interactions of these factors, the more chances of reversing the status to a more desirable outcome. Considering its overarching scope, knowing the livability index of a city is critical for policymaking, businesses, and community development. There are several known contributors to the development and implementation of this index. The organizations listed in Table 1 shed light on focal assessment and evaluation of life and livability, and notably, they converge on common variables: stability and safety, healthcare, education, infrastructure, cultural offerings, environmental sustainability, public services, housing, and social inclusion. All of these organizations contribute to the overall transformation of cities for the benefit of their residents based on prioritization of these factors as programmed in their methodologies and objectives.

Knowing the livability index of a city is critical for policymaking, businesses, and community development."

Table 1. Organizations, their Services and Focal Variables in terms of Livability Index

Organizations	Services	Factors or Focus
The Economist Intelligence Unit (EIU)	Surveys Global Livability Index	Stability, healthcare, culture, environment, education and infrastructure
Mercer	Surveys living conditions in cities around the world	Political stability, crime, healthcare, education, and infrastructure
Monocle	Ranks cities	Safety, healthcare, education, public transportation, and cultural offerings
United Nations	Conducts research and reports on human settlements	Housing, sanitation, environmental sustainability and social inclusion

In Numbeo's report, some of the focal variables of the known organizations are covered (i.e. healthcare, climate, safety). However, Numbeo accounted for further variables and more specific categories such as – purchasing power, cost of living, property price to income ratio, traffic commute time and pollution index. Thus, Numbeo computes its data by aggregating and analyzing from user-submitted information on the aforesaid variables. After the data is aggregated, it calculates the place or city's index score with higher scores indicating better way of life. Then, Numbeo generates ranking of cities to identify the places with the highest and lowest quality of life.

Numbeo's sample sizes have greater variability and are gradually changing as more individuals take the survey. But for the time being or reporting period, the data offer an opportunity for an in-depth analysis in addition to identifying potential trends or relationships that will feed into larger studies.

Quality of Life Index

Numbeo used eight indicators of quality of life as shown in Table 2. Each indicator has a specific ideal and non-ideal values as reflected in the interpretations column.

Indicators	Values	Interpretation
Purchasing Power Index	26.37	Very Low
Safety Index	48.65	Moderate
Health Care Index	59.87	Moderate
Climate Index	60.40	High
Cost of Living Index	37.52	Very Low
Property Price to Income Ratio	30.26	Very High
Traffic Commute Time Index	34.67	Low
Pollution Index	84.04	Very High
f Quality of Life Index:	71.58	Very Low

Table 2. Numbeo's Quality of Life Index for Cebu

SOURCE: QUALITY OF LIFE IN CEBU 2024

The purchasing power index showed a very low value (26.37), which means that the residents have affordability struggles in purchasing goods and services based on their income levels. This specifically means that the residents have difficulties in meeting basic needs and eventually will not be able to access essential goods and services such as food, housing, healthcare, and education. In turn, they will attain a generally lower quality of life. In addition, these residents have little discretionary income to buy non-essential goods. With low purchasing power index, the residents are more vulnerable to economic challenges such as low wages and labor market fluctuations and poor economic opportunities.

Safety Index

The safety index (48.65) which is a metric for overall safety and security of a location is interpreted as moderate by Numbeo's report, considering two factors – crime rates and safety (pedestrian). The report excluded natural disaster, public safety measures and infrastructure quality. The higher the index generally means a lower crime rate and a safer environment, while lower index means a higher crime rate and more security concerns. Thus, the moderate safety index mentioned earlier suggests that the safety level of Cebu should be approached with mild precautions as there may be safety issues, but the condition has not yet reached an alarming level. While the safety index is useful

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for self-protection and precautions for both residents and tourists, it is important to contextualize the index by understanding what is comprised by it.

Based on the data, the general perception of the level of crime is moderate at 54.57. As trend shows, the worries about crime has been increasing in the past three years at 55.15, but this figure is still considered moderate. This perceived increase in crime trend translates to neither extreme nor insignificant. In other words, it suggests a non-alarming state yet it portends caution among residents. Furthermore, the subcategories in the succeeding paragraphs give a clearer picture on this general appraisal of safety.

Property crimes such as vandalism and theft are considered moderate (58.30), as well as violent crimes such as assault and armed robbery (52.40), which implies that the incidents related to deliberate defacement of property and burglary and theft are not

overwhelmingly frequent, and instances of physical harm or threat to life are considered noteworthy but generally not alarming.

The issues of home break-ins and theft and being mugged or robbed are rated moderate to low. Specifically, break-ins are at 52.38, being mugged or robbed – at 54.65 and car theft – at 39.47.

The other issues rated moderate to low are home break-ins and theft (52.38), being mugged or rubbed (54.65), and car theft (39.47). This implies concerns about residential safety and security but such are not perceived as substantial or with high risk of injury or loss. Car theft is rated lower than the other issues which means a lesser worry about the security of vehicles which further implies that car theft is perceived as a relatively minor issue.

On the area of drug problem, the residents expressed a high level of concern (64.52). Attributed to this area are drug dealing and drug use. The high rating suggests a high level of concern within the community regarding drug-related activities. This designation portends potential impacts on public safety and overall well-being that should be urgently approached with appropriate measures.

Corruption and bribery concern under this area is also regarded as high at 71.35. This level indicates a widespread perception of corruption and bribery-related activities which may come from direct experiences, anecdotal evidence, news or other sources of information that contribute to such perceived pervasiveness. The designation similarly needs urgent mitigation with appropriate measures.

Overall, corruption and bribery problems are the highest concern of residents, posing a significant livability challenge. This further leads to deteriorated trust and integrity – with underlying concerns about the rule of law and the loss of fairness, transparency and accountability of institutions, if the impact is not mitigated.

The last sub item of Safety is pedestrian safety, in terms of: walking alone during daylight, and walking alone during night. Table 3 shows the distribution:

Table 3. Crime Concerns in Cebu

SOURCE: NUMBEO'S QUALITY OF LIFE INDEX IN CEBU, MARCH 2024

Components of Crime Concerns	Rating	Value
Level of crime	54.57	Moderate
Crime increasing in the past 3 years	55.17	Moderate
Worries home broken and things stolen	52.38	Moderate
Worries being mugged or robbed	54.65	Moderate
Worries car stolen	39.47	Low
Worries things from car stolen	47.64	Moderate
Worries attacked	48.24	Moderate
Worries being insulted	41.48	Moderate
Worries being subject to a physical attack because of your skin color, ethnic origin, gender or religion	32.54	Low
Problem people using or dealing drugs	64.52	High
Problem property crimes such as vandalism and theft	58.30	Moderate
Problem violent crimes such as assault and armed robbery	52.40	Moderate
Problem corruption and bribery	71.35	High

Pedestrian safety in this index is analyzed as a public safety issue when treading the streets with no companion. The data above shows safety walking alone during daylight is high (65.65). This indicates that daylight walking in Cebu is associated with strong perception of safety, and, conversely with lower threat or danger. On the other hand, nighttime safety is rated moderate (43.24). It shows that there is a greater concern among respondents in terms of walking alone during night time possibly in view of

Table 4. Pedestrian Safety in Cebu

SOURCE: NUMBEO'S SAFETY INDEX IN CEBU, MARCH 2024

Components of Pedestrian Safety	Rating	Value
Safety walking alone during daylight	65.65	High
Safety walking alone during night	43.24	Moderate

certain high-risk areas. It conveys the more precautious behavior of pedestrians such as avoiding certain areas, walking with a group, and using other strategies such as staying in well-lit areas.

It must be noted that healthcare Index's latest updated data is June 2023; thus, the ratings discussed pertaining to this area can only cover this period.

Overall, healthcare index's perceived quality is highly optimistic with the index reported at 63.79. This implies that residents have a high level of satisfaction with the skill and competency of healthcare professionals and the quality of the healthcare facilities. The specific components of healthcare that were surveyed are discussed in the succeeding paragraphs.

Table 5. Health Care Index and Satisfaction Rates

SOURCE: NUMBEO'S HEALTH CARE INDEX IN CEBU, JUNE 2023

Components of health care	Rating	Value
Skill and competency of medical staff	63.79	High
Speed in completing examinations and reports	59.48	Moderate
Equipment for modern diagnosis and treatment	62.93	High
Accuracy and completeness in filling out reports	62.96	High
Friendliness and courtesy of the staff	81.03	Very High
Satisfaction with responsiveness (waitings) in medical institutions	45.69	Moderate
Satisfaction with cost to you	50.00	Moderate
Convenience of location for you	62.93	High

The speed in completing examinations and reports is considered moderate (59.48). This designation implies minor issues on how quickly the evaluation of health condition and the turnaround time of reports are accomplished. Issues like this could not significantly reduce the overall patient satisfaction but they may experience tolerable inconveniences.

The Equipment for modern diagnosis and treatment received a high rating (62.93), which could be attributed to the perceived adequateness of the medical instruments and facilities used or experienced in a healthcare facility. This further implies that the healthcare institutions, if not, major healthcare infrastructures in Cebu are state of the art, and the facilities are sufficient to provide wide range of health services. Furthermore, the experience of modern treatments may have contributed to the overall positive experience of the respondents.

The accuracy and completeness in filling out reports are also rated high (62.96). This particular area is attributed to patient records keeping by the healthcare facility, where respondents may have experienced a high-level of diligence and efficiency. This also indicates a high confidence rating in the quality and reliability of medical documentation procedure.

In terms of friendliness and courtesy of the staff, the rating is very high (81.03), suggesting a remarkably pleasant experience of warm, friendly and polite interactions in hospital facilities in the area. The rating further implies that patients and visitors are being treated with a notable kindness, empathy, and compassion demonstrated by hospital staff that in turn create a general supporting and comforting environment of healthcare facilities in the area.

On the other hand, the satisfaction with responsiveness (waitings) component is rated moderate (45.69). This component refers to the length of waiting time for the next procedure or turnaround time for a particular service or report. The moderate rating indicates that the respondents are neither highly dissatisfied nor highly satisfied with the waiting time. It further implies that patients or guests waiting for their procedures

PHOTO SOURCE: CEBU CITY MEDICAL CENTER OFFICIAL FB PAGE

PHOTO SOURCE: CHONG HUA HOSPITAL FB PAGE

may not feel extremely inconvenienced but they are neither pleased with the length of waiting time endured. It is possible that they experienced unexpected delays leading to a moderate concern about access to care and services.

The same moderate rating is reflected for satisfaction with cost to you component (50.00). This pertains to the perception of affordability. The moderate rating implies that the respondents perceived affordability differently, each one could have approached this content from varied barriers defined by their insurance coverage, out-of-pocket expenses and services availed. This rating further indicates a minor issue in respondents' satisfaction with pricing strategy vis-à-vis availed healthcare services. In terms of the broader picture, this perception may impact healthcare utilization and in some cases may increase the cases of patients postponing medical care.

Lastly, the convenience of location for you component attained a high rating (62.93). This component refers to the convenience perceived by patients, or the respondents in this case where they consider the distance as the most accessible, in terms of short

commutes. Or, it may refer to the perception of the best location for seeking medical attention at any given time. The rating reveals that there is a high satisfaction with convenience of location, and that the healthcare facility's location is strategically located. It moreover conveys reduction of time, effort and cost for appointments. Patients, in general, would feel at ease and reassured that the healthcare services are within reach.

The climate index in Cebu is rated high (60.40). A higher climate index means a better quality of life. Thus, Cebu's climate, based on the index is generally favorable. climate index of 100 has a moderate temperature and low humidity, without other perceived undesirable weather condition. Numbeo computes the climate index using dew point and temperature, and humidity level.

The following temperature trend is observed from the recent (2023) data update. The data here account for the average high temperature and the average low temperature in Cebu. Thus, the average high and low temperatures for the region include the typical maximum and minimum temperatures, respectively, as experienced throughout the year.

Months	Average Low Temperature	Average High Temperature
January	24°C	29°C
February	24°C	30°C
March	24°C	31°C
April	26°C	32°C
May	26°C	33°C
June	26°C	32°C
July	25°C	31°C
August	25°C	32°C
September	25°C	32°C
October	25°C	31°C
November	25°C	31°C
December	25°C	31°C

Table 6. Average Low and High Temperatures in Cebu

SOURCE: NUMBEO'S CLIMATE INDEX IN CEBU, JUNE 2023

PHOTO SOURCE: THE EDIK DOLOTINA PROJECT

A gradual increase of temperature trend was recorded from January to May with peak in May at 33°C. Then, thereafter it began to dip slightly with fluctuations. Based on this data May is typically the warmest month and January is the coolest. Between June and September, the average temperature was constant (32 °C) which could be due to prevailing weather patterns or due to the tropical climate which made the temperature relatively high throughout the year.

On the other hand, the data reflects relative stability of the average low temperature (24°C - 26°C), indicating that Cebu, had minimal variation in low temperature between months. The average low temperature is recorded as the typical minimum temperature or lowest point reached by ambient air temperature.

There are differences in low temperatures between months but only varied with 2°C difference, which indicates that the average low temperature remained stable. Despite the hot climate or high average temperature, the average low temperature shows mildness, though the ambient temperature could still feel warm. The slight increase was experienced from January to April, with the lowest temperature in January and February (24°c). Beyond April the temperature remained stable until December.

Overall, the high and low temperature trends in Cebu reflect the typical climate profile of a tropical region, typified by constant warm to hot and mild low temperatures throughout the year.

Table 7. Dewpoint Average By Month (°C)

SOURCE: NUMBEO'S CLIMATE INDEX IN CEBU, JUNE 2023

Months	Low – Dewpoint Average	High – Dewpoint Average
January	22°C	23°C
February	22°C	23°C
March	22°C	23°C
April	23°C	24°C
May	24°C	25°C
June	24°C	25°C
July	23°C	24°C
August	23°C	24°C
September	23°C	24°C
October	23°C	24°C
November	23°C	24°C
December	23°C	24°C

The data in Table 6 shows consistency in dew point range throughout the year, indicating a consistency or minimal deviation in dew point levels. Dew points are the temperatures at which the air is cooled to attain a relative humidity (RH) of 100 percent (US Department of Commerce, 2021). The highest dew points occurred in May and June (25°C), and the lowest was in January, February and March (22°C). Thus, the warmer months were May to August and the cooler

were January to March. The moderate seasonal variation made the dew points fluctuate.

Furthermore, the transition period or the period of shift from one range to another happened in the months of April and September, given that the dew points are observed as increasing or decreasing along with the shift of seasons. April is when the region expects a transition from cooler to warmer temperatures, while September is when the temperature shifts from warmer to cooler.

As the dew point range reveals (22°C to 25°C), Cebu generally experienced humid conditions throughout the year (2023), owing to moderate to high levels of humidity (low to high level of moisture in the air). The values may have varied depending on the specific location, but on the whole, they suggest a humid condition where a feeling of stickiness or heaviness in the air was felt.

As mentioned, the general impression of Cebu's climate is favorable and its weather condition is overall good. However, this could still vary with personal preferences, which implies that other essential elements should be considered. Some may find other temperature profile more favorable. Lifestyle and kind of activities preferred by people may further influence their climate quality perception in Cebu.

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Cost of Living in Cebu

According to Congressional Research Service (CRS) Report, cost of living refers to the amount of money that people need to attain a certain standard of living that is largely based on the prices of goods and services (Congressional Research Service, 2022). It is important to know the cost of living in an area for residents to figure out the right budget for their daily expenses, and meet their financial needs, among others. Based on the cost of living index of Numbeo, Cebu is considered very low (1.5 percent less), relative to Manila (baseline reference). With this profile, the standard lifestyle expenditures in Cebu allow residents to have better affordability of housing, groceries, transportation, healthcare and other essentials.

This means that Cebu delivers a more affordable way of life. To provide a big picture, the estimated monthly costs for a family of four without rental is Php 119,558. On the other hand, a single person without rental would spend Php 34,327.2 a month, thus both are slightly lower than the living cost equivalent in Manila that could reach over 120,000 for a family without rental, and over 36,000 for single persons without rental.

In terms of rent, Cebu has an average cost lesser than in Manila (43.1 percent), indicating that the housing costs in Cebu are significantly lower, and that the living expenses of residents are far more acceptable. Furthermore, the implication of lower living expenses is that more families would be attracted to move to Cebu. More and more single individuals would be looking for jobs in Cebu and establish a better quality of life in the area. Yet the speculated decision to move is solely based on cost considerations, sans other factors.

Numbeo specified the commodities that were part of the survey, and they are included here for further analyses. The logical analysis in relation to cost of living is affordability of goods. Thus, in the succeeding paragraphs the affordability are calculated and analyzed within the given budget or cost of living: 119, 558 for a family of four without rent, and 34,327.2 for a single person without rent. Thus, the formula used is (Cost of Commodity / Overall Cost of Living) * 100.

To see the affordability of commodities, services and amenities for a family of four the succeeding tables present the data, adjusted to four family member. To reduce variations, the computation assumed that all four members of the family consume the same commodities with the exception of basic utility, home internet, private car where one car is commonly shared by the whole family. But the gasoline is considered as consumed by the four members, owing to 4 different destinations or trips (i.e. work/school). Thus, this approach eliminates the complexity of variable consideration such us age and lifestyle of the family members.

Commodities	Average Cost per individual	(x)4	Afford-ability	Interpre-tation
Meal, inexpensive restaurant	242.50	970	0.81	Relatively affordable
3-course Meal for 2 persons, mid-range restaurant	1,100.00	(x) 2 2200	1.84	Reasonably affordable
McMeal	200.00	800	0.67	Relatively affordable
Domestic Beer	82.50	330	0.28	Quite affordable
Imported Beer	170.00	680	0.59	Relatively affordable
Cappuccino	149.51	598.04	0.50	Relatively affordable
Coke	41.90	167.6	0.14	Quite affordable
Water	28.27	113.08	0.09	Very affordable

Table 8. Affordability of Restaurant Commodity at 119,558.0 monthly income for a Family of Four, Without Rental

SOURCE: *NUMBEO'S COST OF LIVING IN CEBU INDEX IN CEBU,* FEBRUARY 2024

Commodities	Average Cost per individual	(x)4	Afford-ability	Interpre-tation
Milk (regular), (1 liter)	103.94	415.76	0.35	Relatively affordable
Loaf of Fresh White Bread (500g)	73.13	292.52	0.24	Relatively affordable
Rice (white), (1kg)	55.50	222	0.19	Quite affordable
Eggs (regular) (12)	118.67	474.68	0.40	Moderately affordable
Local Cheese (1kg)	540.00	2160	1.81	Less affordable
Chicken Fillets (1kg)	294.75	1179	0.99	Moderately affordable
Beef Round (1kg) (or Equivalent Back Leg Red Meat)	417.90	1671.6	1.40	Less affordable
Apples (1kg)	191.67	766.68	0.64	Moderately affordable
Banana (1kg)	73.86	295.44	0.25	Relatively affordable
Oranges (1kg)	249.21	996.84	0.83	Moderately affordable

Table 9. Market Commodity Affordability at 119,558.0 monthly income for a Family of Four, Without Rental

SOURCE: *NUMBEO'S COST OF LIVING IN CEBU INDEX IN CEBU,* FEBRUARY 2024

Commodities	Average Cost per individual	(x)4	Afford-ability	Interpre-tation
Tomato (1kg)	110.62	442.48	0.37	Relatively affordable
Potato (1kg)	120.00	480	0.40	Moderately affordable
Onion (1kg)	217.50	870	0.73	Moderately affordable
Lettuce (1 head)	60.00	240	0.20	Relatively affordable
Water (1.5 liter bottle)	40.86	163.44	0.14	Relatively affordable
Bottle of Wine (Mid-Range)	400.00	1600	1.34	Less affordable
Domestic Beer (0.5 liter bottle)	69.26	277.04	0.23	Relatively affordable
Imported Beer (0.33 liter bottle)	133.33	533.32	0.45	Moderately affordable
Cigarettes 20 Pack (Marlboro)	150.00	600	0.50	Moderately affordable

Table 10. Transportation Affordability at 119,558.0 monthly income for a Family of Four, Without Rental

SOURCE: *NUMBEO'S COST OF LIVING IN CEBU INDEX IN CEBU,* FEBRUARY 2024

Services	Average cost	(x)4	Afford-ability	Interpre-tation
One-way Ticket (Local Transport)	14.00	56	0.05	Relatively affordable
Monthly Pass (Regular Price)	850.00	3400	2.84	Less affordable
Taxi Start (Normal Tariff)	42.00	168	0.14	Relatively affordable (for occasional use)
Taxi 1km (Normal Tariff)	14.50	58	0.05	Relatively affordable (for short distances)
Taxi 1hour Waiting (Normal Tariff)	150.00	600	0.50	Moderately affordable (may not be for regular use)

Services	Average cost	(x)4	Afford-ability	Interpre-tation
Gasoline (1 liter)	70.01	280.04	0.23	Relatively affordable (for transportation needs)
Volkswagen Golf 1.4 90 KW Trendline (Or Equivalent New Car)	1,700,000.00	N/A	Beyond Family budget	Not Affordable/ prohibitively high
Toyota Corolla Sedan 1.6l 97kW Comfort (Or Equivalent New Car)	1,058,500.00	N/A	Beyond Family budget	Not Affordable/ prohibitively high

Utilities	Aver-age cost (Monthly)	(x)4	Afford-ability	Interpre-tation
Basic (Electricity, Heating, Cooling, Water, Garbage) for 85m^2 Apartment	6,082.14	6,082.14	5.09	Less afford-able
Mobile Phone Monthly Plan with Calls and 10GB+ Data	2,299.20	9196.8	7.69	Less affordable
Internet (60 Mbps or More, Unlimited Data, Cable/ADSL)	2,167.87	2,167.87	1.81	Reasonably affordable

Table 11. Utilities Affordability at 119,558.0 monthly income for a Family of Four, Without Rental

SOURCE: NUMBEO'S COST OF LIVING IN CEBU INDEX IN CEBU, FEBRUARY 2024

Sports and Leisure	Aver-age cost (Monthly)	(x)4	Afford-ability	Interpre-tation
Fitness Club, Monthly Fee for 1 Adult	1560	6240	5.22	Less afford-able
Tennis Court Rent (1 Hour on Weekend)	362.5	1450	1.21	Moderately affordable
Cinema, International Release, 1 Seat	250	1000	0.84	Relatively affordable (for occasional entertainment)

Table 12. Sports and Leisure Affordability at 119,558.0 monthly income for a Family of Four, Without Rental

SOURCE: NUMBEO'S COST OF LIVING IN CEBU INDEX IN CEBU, FEBRUARY 2024

Table 13. Education Affordability at 119,558.0 monthly income for a Family of Four, Without Rental

SOURCE: NUMBEO'S COST OF LIVING IN CEBU INDEX IN CEBU, FEBRUARY 2024

Education	Average cost (Monthly)	(x)4	Affordability	Interpretation
Preschool (or Kindergarten), Full Day, Private, Monthly for 1 Child	5979.17	23916.68	20.00	Less affordable (considering substantial impact on finances)
International Primary School, Yearly for 1 Child	132500	530000	443.30	Less affordable (considering substantial impact on finances)

Table 14. Clothing and Shoes Affordability at 119,558.0 monthly income for a Family of Four, Without Rental

SOURCE: NUMBEO'S COST OF LIVING IN CEBU INDEX IN CEBU, FEBRUARY 2024

Clothing and Shoes	Average cost (Monthly)	(x)4	Affordability	Interpretation
1 Pair of Jeans (Levis 501 Or Similar)	254.86	1019.44	0.85	Moderately affordable
1 Summer Dress in a Chain Store (Zara, H&M, ...)	1366.67	5466.68	4.57	Less affordable
1 Pair of Nike Running Shoes (Mid-Range)	4000	16000	13.38	Less affordable
1 Pair of Men Leather Business Shoes	3,583.33	14333.32	11.99	Less affordable

Just to see what the affordability rate is when rental is considered, the following table shows how much impact the types of rentals are on the monthly salary of a family. The option of renting outside of the city allows for relatively affordable affordability, yet it is already bordering towards less affordability – given that 10.88 and 18.39 (for 1 bedroom and 3 bedroom rental outside the city, respectively) are already considered significant allocations, especially when supporting a family of four. However, these allocations may not be that large if there is sufficient budget management.

Apartment Rental Per Month	Average cost (Monthly)	(x)4	Affordability	Interpretation
Apartment (1 bedroom) in City Centre	27857.14	27857.14	23.27	Relatively less affordable
Apartment (1 bedroom) Outside of Centre	13000	13000	10.88	Relatively affordable
Apartment (3 bedrooms) in City Centre	32,000.00	32000	26.76	Relatively less affordable
Apartment (3 bedrooms) Outside of Centre	22000	22000	18.39	Relatively affordable

Table 15. Apartment Unit Affordability at 119,558.0 monthly income for a Family of Four

SOURCE: NUMBEO'S COST OF LIVING IN CEBU INDEX IN CEBU, FEBRUARY 2024

Apartment Rental Per Month	Average cost (Monthly)	(x)4	Affordability	Interpretation
Price per Square Meter to Buy Apartment in City Centre	197407.52	N/A	N/A	Doesn't translate to affordability without area metrics; but relatively expensive on a per square meter basis
Price per Square Meter to Buy Apartment Outside of Centre	70370.43	N/A	N/A	Doesn't translate to affordability without area metrics; but relatively expensive on a per square meter basis

Table 16. Apartment Rental Affordability

SOURCE: NUMBEO'S COST OF LIVING IN CEBU INDEX IN CEBU, FEBRUARY 2024

Salary and Finances	Average
Average monthly net salary (after tax)	22,121.38
Mortgage Interest Rate in Percentages (%), Yearly, for 20 Years Fixed-Rate	7.67

Table 17. Average Salary and Mortgage Interest Rate

SOURCE: NUMBEO'S COST OF LIVING IN CEBU INDEX IN CEBU, FEBRUARY 2024

The data under average monthly net salary (after tax) in Cebu is 22,121.38. this is based on February 2024 reporting period. In highly urbanized areas, with greater financial outlay and obligations, the amount may be considered low. It may be challenging to afford housing if the individual has to joggle other commodities, especially for someone who has dependents. Furthermore, a mortgage interest rate of 7.67 percent is relatively high compared to some other countries in Asia with more developed mortgage markets. It is possible that mortgage interest rates are affected by broader economic conditions. Ultimately, there are varied factors to consider and the computation does not easily translate to affordability unless there are additional information about the house.

To give an idea of the cost of living based on mortgage vis-a-vis an average monthly net salary (after tax) of 22,121.38, the mortgage yearly interest rate for 20 years using the fixed rate of 7.67 and the amount of monthly mortgage should be determined.

The following shows the mortgage interest rate on a yearly basis:

Yearly Interest Rate (Decimal)=1007.67=0.0767

The following show the mortgage interest rate on a monthly basis

Monthly Interest Rate =
(1+Yearly Interest Rate (Decimal)) 1/12 −1
Monthly Interest Rate = (1+0.0767) 1/12−1
Monthly Interest Rate ≈ 0.00622

The following shows the monthly mortgage payment for a 20-year fixed-rate
Monthly Payment=$P\times(1+r)n-1r(1+r)n$

Where:

- ***P*** is the principal amount (the loan amount)
- ***r*** is the monthly interest rate

- ***n*** is the number of payments (number of months in 20 years, which is 20×12=24020×12=240 payments)

Assuming that the principal amount is the same as the average monthly net salary: 22,121.38:

$$\text{Monthly Payment} = 22{,}121.38. \times \frac{0.00622\,(1+0.00622)^{240}}{(1+0.00622)^{240}-1}$$

Monthly Payment ≈ 204.09

As shown above, the estimated monthly mortgage payment is approximately Php 204.09. Further, the following shows the computation of the mortgage payment per month based on the monthly net salary:

Total Cost of Living=
Average Monthly Net Salary+
Monthly Mortgage Payment
Total Cost of Living = 22,121.38+204.09
Total Cost of Living ≈ 22,325.47

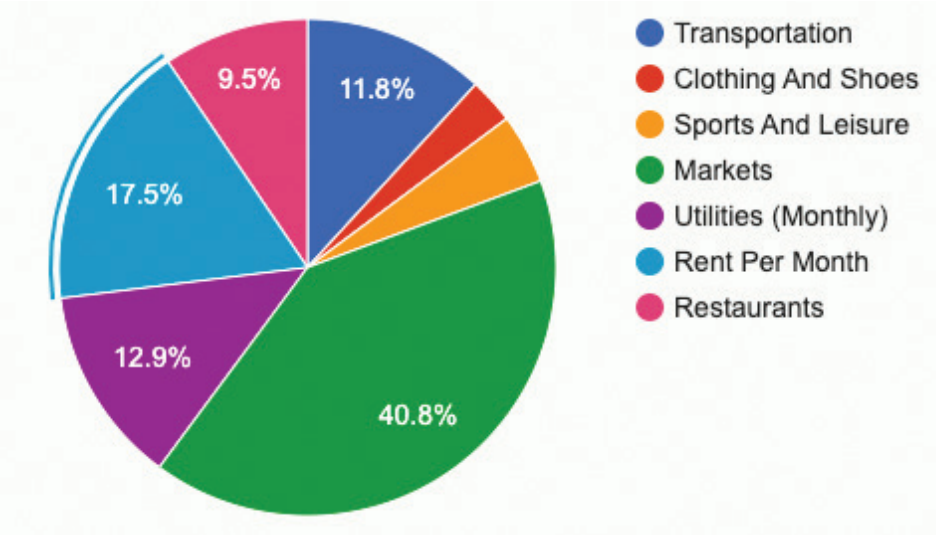
Therefore, the estimated total cost of living based on the given data is approximately Php 22,325.47 per month. This amount has slightly exceeded the family's income. It implies that this kind of financial situation requires reconsideration. Perhaps a cheaper unit should be looked into to still achieve financial stability while paying for mortgage.

The distribution of expenses in Cebu shows a mix of both essential and non-essential spending, including discretionary spending such as leisure and dining activities.

Clothing and shoes comprises the lowest allocation (3 percent) of the overall expenses. It indicates that individuals in Cebu spend modestly on clothing and footwear which means a focus or preference towards more essential purchases.

Figure 1. Graph Showing the Distribution of Expenses Using Numbeo's Statistical Model

SOURCE: NUMBEO'S DISTRIBUTION OF EXPENSES, FEBRUARY 2023



Sports and Leisure has a slightly larger allocation (4.6 percent). This includes the recreational and leisure experiences that individuals in Cebu engaged in such as hobbies, sports, or entertainment – an indication of a balance of spending between essential and the aforementioned amusements and discretionary consumption.

Markets category is a significant portion of the expenses (40.8 percent) which means that a substantial allocation is directed to market purchases such as groceries, fresh products, and other essential items for regularly use. This high percentage implies the high prioritization in this area or the focus on necessities.

Utilities category comprises 12.9 percent or a moderate spending which indicates that a moderate budget is allotted towards essential services and maintaining a comfortable standard of living. Thus, this further implies the prioritization of meeting the basic needs and essential utilities, rather than premium amenities or services.

Rent Per Month comprises 17.5 percent or a substantial portion of the budget being allocated towards housing expenses. The percentage shows that residents show urgency in securing suitable living arrangements in Cebu.

Restaurants constitutes 9.5 percent of the budget dedicated to dining out or meals at restaurants. This percentage indicates that residents allot a moderate portion of their budget towards meals outside the home, which further reflects the preference for culinary enjoyment and convenience beyond the home-cooked meal experience.

In sum, the distribution of expenses show a balance between essential and non-essential spending. It further sheds light on priorities, spending habits of residents of. Cebu. The data furthermore reflect the importance of meeting the basic needs while enjoying the convenience and the joy of recreational activities and dinging experiences.

Table 18. Estate and Housing Market Rate

SOURCE: NUMBEO'S PROPERTY PRICES IN CEBU, N.D.

Index	Rate
Price to Income Ratio:	30.26
Mortgage as Percentage of Income:	296.26
Loan Affordability Index:	0.34
Price to Rent Ratio - City Centre:	38.80
Price to Rent Ratio - Outside of Centre:	25.50
Gross Rental Yield (City Centre):	2.58
Gross Rental Yield (Outside of Centre):	3.92
Price to Income Ratio:	30.26

Property Prices in Cebu

The metrics above provides an overview of the housing market and its affordability in Cebu. In Numbeo's assessment, Cebu has a very high property price to income ratio. Residents in Cebu would experience a significant disproportionateness with respect to their average income levels against the average property prices, and thus housing may be less affordable for the residents.

Price to income Ratio reflects affordability challenge, owing to the high ratio of 30.26. This implies that residents may find it difficult to stretch their finances further, as

Panoramic View of Real Estate Developments in IT Park Cebu City.

this could mean reaching a financial strain. Further, this could mean a barrier to homeownership in Cebu. As homeownership poses a challenge, the rental market would experience a market pressure, eventually escalating the rental costs.

The *mortgage as percentage of income* shows excess in the proportion that is allotted for mortgage (296.26 percent), suggesting that the mortgage surpassed the borrower's income, and thus posing high financial distress on the part of the borrower.

Loan Affordability index, which measures the ability of individuals, and the comfort with which they can manage repayment obligations of a loan, under their current financial situation, indicates that borrowers are challenged to qualify for a loan or satisfy monthly payments. The index is at 0.34 percent which means a relatively low

index; however, it means less affordability for the borrowers. They need to allocate approximately 34 percent of their median income to a median home.

In terms of *price to rent ratio*, the central part of the city is at 38.80 percent, while the suburban is at 25.50 percent. The former indicates that it would take 38.80 years, approximately, of rental income to cover the cost of property purchase in the city center. In contrast, suburban properties, which is lower in this area, would take approximately 25.50 years of rental income to cover the property purchase. The lower rent to suburban ratio shows that it is more cost-effective to buy a property than renting outside of the city. Conversely, it would be more prudent to rent rather than buy properties in the city center citing the higher price to rent ratio.

Gross Rental Yield, which is the total gross rent collected from a property against property market value or purchase price (Rohde, 2022), shows higher gross rental outside of the city than in the city (3.92 percent and 2.58 percent, respectively). Thus, in terms of investment attractiveness, this indicates that it is more attractive to buy properties in the suburban areas, and rental property owners would have a better rental income in such locations.

The data and metrics of estate and housing market shown in Table 18 presents a significant concern on incomes and mortgage affordability. It may be viable for individuals in Cebu to rent in view of the price to rent ratios situation.

Traffic congestion along Lopez Jaena Street, Subangdaku, Mandaue City

PHOTOGRAPH BY PATRICKROQUE01, 2024 (CC BY-SA 4.0). RETRIEVED FROM WIKIMEDIA COMMONS.

Traffic in Cebu

Traffic in Cebu is described by Numbeo according to the indices of traffic, time, time expenditure, inefficiency, and CO2 Emission, using empirical formulas. Such data determine areas of concern that have important implications on urban planning and current and future transportation investments.

Congestion, a traffic event when road speeds decline and queues of vehicles appear, is very high or severe in Cebu (153.54). This index potentially creates longer commute times. Thus, according to the data, the average one-way commute time in Cebu is 34.67 minutes. Statista revealed that a significant portion of its respondents (28 percent) in a mobility survey (2023) across the nation spend an average of 15 to 29 minutes daily, one-way, to work, school, or university (Statista Research Department, 2024). This implies a moderate commute time. However, the data may vary as commuting

times adjust widely with specific influencing factors, but this range of commuting times is understood as substantial in terms of its impact on time allocation.

The *amount of time spent or invested in traffic*, or *time expenditure* is measured as the total commuting per year in hours, is measured cumulatively at 511.38 (hours). If valued, this implies significant consumption of the individual's time for commuting. Spending this much hours is equivalent to more than 21 full days or nearly three weeks of time dedicated solely to commuting. This implies significant reduction of leisure pursuits and family activities; and it will have a significant impact on productivity.

Inefficiency Index, which is the quantified measurement of the experiences of inefficient or less than the ideal commuting situation, is currently at a moderate level of inefficiency in Cebu (227.52). This value typifies an unpredictable travel time, (where waiting time is longer whether in the bus station or during congestion). Other consequences include increased fuel consumption, which in turn would increase transportation costs for individuals. Time lost would also likely increase with attempts to transfer to an alternative transportation method.

Based on *CO2 Emission Index*, Cebu attained a value of 6,589.00. This amount is the quantified carbon dioxide emissions from transportation vehicles. Carbon dioxide emissions is the release of greenhouse gases and/or their precursors into the atmosphere over a specified period of time (Eurostat, *Glossary: carbon dioxide emissions*). This value is computed based on traffic time using grams for the return trip. The estimated average emission index for one-way commute to the destination is divided by 2. Thus in formula form:

$$\text{CO2 Emission (one-way)} = \frac{\text{CO2 Emission Index}}{2}$$

Where:

- CO2 Emission (one-way) is the estimated CO2 emission for a one-way commute to work (in grams).
- CO2 Emission Index is the CO2 emission index provided, representing CO2 consumption due to traffic time (in grams for the return trip).

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Cities Comparable to Cebu, and their Carbon Emissions in Grams:

- Bali, Indonesia: 5047.78
- Kuala Lumpur, Malaysia: 8451.55
- Dominican Republic: 7640.00
- Hanoi, Vietnam: 3400.16
- Bangkok, Thailand: 8166.57
- Panama City, Panama: 6982.73
- Guatemala City, Guatemala: 13,100.50
- Bogota, Colombia: 5159.83
- Port Vila, Vanuatu: 3990.00

Based on comparative analysis, Cebu's *carbon dioxide emission* (6589.00 grams) as compared to other cities outside of the Philippines, falls within the range of emission rate expected for these countries, which were selected (for comparison with Cebu's data) because they are approximately comparable with Cebu City in terms of the dynamics of rapid urbanization, population density, industries, environmental challenges and transportation.

Cebu City's emissions are relatively higher compared to Bali, Vietnam, and Vanuatu, but relatively lower than Panama City, Bogota, and Kuala Lumpur, making Cebu a significant contributor to carbon emissions but not among the highest emitters on the list.

Cities More Advanced than Cebu, and their Carbon Emissions in Grams:

- Singapore : 2437.60
- Hongkong: 1636.10
- Tokyo, Japan: 1,610
- Seoul, South Korea: 2900.98
- Taipei, Taiwan 3122.71

On the other hand, if Cebu City is compared to countries that are leading economic centers, with extensive transportation networks and high quality of life, Cebu City has a remarkably higher emissions rate compared to Singapore (2437.60) and Hong Kong (1636.10) and also higher than Tokyo, Japan (1610), as these countries have efficient public transportation systems, far more advanced than Cebu's. This includes extensive subway networks, buses and trains, encouraging people to reduce their use of private vehicles. In addition, these countries have superior urban planning and their urban layout is far more compact, leading to shorter travel distances and lesser dependence on cars. Furthermore, some of these greater cities have massive investments in renewable energy – solar, wind, and hydroelectric power, thereby significantly reducing carbon footprint.

Pollution Index

Pollution index is the overall pollution levels in an area – in this case, Cebu. takes into account the factors – air and water pollution, garbage disposal, cleanliness, noise and light pollution, green spaces, and comfort in relation to pollution. Numbeo uses weighted index – assigning the highest weight to air pollution, followed by water pollution and accessibility as these are the primary pollution sources. Furthermore, Numbeo computes the exponential function to represent pollution levels, with very high and very low scales, to identify very polluted cities and unpolluted cities, respectively.

The *air pollution index* in Cebu is 84.04 and pollution exponential scale of 150.07. According to this scale and interpretation parameters used by Numbeo, Cebu has a moderate level of pollution using the weighted index. But when it comes to the exponential scale, Cebu's pollution level falls within the relatively high level, indicating significant level of pollution.

Table 19. Pollution in Cebu, Philippines

SOURCE: NUMBEO'S POLLUTION IN CEBU INDEX, 2023

Air Pollution	Rate	High
Drinking Water Pollution and Inaccessibility	52.81	Moderate
Dissatisfaction with Garbage Disposal	74.68	High
Dirty and Untidy	74.37	High
Noise and Light Pollution	65.26	High
Water Pollution	80.77	Very High
Dissatisfaction with Spending Time in the City	72.56	High
Dissatisfaction with Green and Parks in the City	68.99	High

According to the data, Cebu City has high levels of *air pollution* (74.71). This affects the overall perception of livability, since residents need to take serious precautions with regard to harmful pollutants that can lead to respiratory problems and cardiovascular diseases. Being exposed to air pollution for a long period can cause lung diseases – asthma and chronic obstructive pulmonary disease (Asthma and Lung UK), while it can increase the risk of developing heart and circulatory ailments as confirmed by British Heart Foundation (British Heart Foundation, Air Pollution).

Drinking Water pollution and Inaccessibility has a moderate level (52.81). This could mean that there is a rising concern about water contamination and insufficient water access. The overall quality of drinking water resources may not be severely compromised, but this level of harm needs immediate remedial actions.

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In terms of *dissatisfaction with Garbage Disposal*, the value is moderate (52.81). It implies that there are ineffective waste management systems. This could be due to improper practices, lack of recycling facilities or insufficient collection services. John Paul Gelasque of Cebu City Department of Public Services revealed that its department is not enforcing the no-segragation-no-collection rule because of an ultimatum to collect piles of roadside garbage as part of clearing of garbage operation. All types of garbage go directly to Binaliw landfill, without separating the ones that ought to go to a materials recycling or recovery facility (Seares, 2023 para 3). This implies an inadequate waste reduction initiatives, undermined by the uncoordinated measures of the local government.

Dirty and untidy metrics reveal a high rating of 74.37. The metrics refer to the quality of cleanliness and the maintenance of public spaces, streets and neighborhoods. Public spaces are important for outdoor activities and bringing people together, which has potential lifestyle benefits and economic value (Dempsey and Burton, 2012). With obstructions and unwanted cleanliness issues the quality of place-making and urban aesthetics go down. With Cebu's high rating on this aspect, the perceptions of place associated with the city is negatively impacted.

Light pollution blocking the view of the sky

When it comes to *noise and light pollution metrics*, the rating suggests a high level of noise and light pollution. Noise pollution is noted to disrupt sleep and increase the level of stress, while light pollution is known to cause disturbing light that disrupts nocturnal animals and the quality of sleep of humans (Athens-Clarke County, *Noise and Light Pollution*). Thus, the quality of life of residents in Cebu is threatened by such barriers. In addition, complaints of discomfort from these types of nuisance (pollution) will continue to rise, especially from new tenants. The sources of noise pollution may vary from traffic to cooling towers of a building. On the other hand, light pollution may come directly from streetlights, floodlights, advertising billboards, vehicle lights and recreational lights.

The major pollution problem - *water pollution* is rated very high (80.77). Cebu City's rivers have all failed in terms of coliform counts which is used as indicator of possible fecal contamination. Thus, the following shows the most probable number (mpn) of coliform in the rivers of Cebu:

- Kinalumsan – 13 million mpn

- Butuanon River – 5 million mpn
- Bulacao – 3 million mpn
- Mahiga – 8 million mpn
- Estero de Parian – 240 thousand mpn
- Lahug – 240 thousand mpn
- Guadalupe – 240 thousand mpn

From the aforementioned information, Kinalumsan, Butuanon, Bulacao, and Mahiga exhibit very high levels of fecal coliform contamination; whereas, Estero de Parian, Lahug, and Guadalupe exhibit lower levels of fecal coliform. However, these two groups (Very High and Lower Levels) still demonstrate an existing pollution problem that needs urgent attention to stop the further deterioration of water quality and address potential health risks.

On the *dissatisfaction with spending time in the city metric*, Cebu City attained high dissatisfaction rating indicating a poor experience of the urban environment, or the residents may have found that the city is not favorable to the pursuit of comfort and leisure in view of the problems in pollution and infrastructure and services to name a few.

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On the other hand, *dissatisfaction with green and parks in the city* is rated high (68.99). It means that there is a greater dissatisfaction sentiment with regard to Cebu's landscape. There are three major parks under the care of Cebu City: Plaza Independencia, Fuente Osmeña Circle, and Plaza Sugbo, but there is still a recognized need to designate more open spaces to increase the prospect of beautiful landscapes. Greens and parks are designated spaces for recreational and conservation purposes. They benefit people in terms of promoting physical activities such as walking or jogging, at the same time it provides shade and vegetation. Thus, there is a current move to push for urban green zones, as a result of increasing recognition of the need for spaces that are conducive for solace and relaxation (Malinao, 2021 para. 2).

Sugbo Mercado, an open-air food court at IT Park Cebu, brimming with diverse staples and food delights.

Reprise: Livability in Cebu

The various data presented translate to the bigger picture of a megapolis with enormous challenges. The livability in Cebu City is shaken by worries and woes about affordability and lower environmental quality. Given the strain on purchasing power caused by high housing costs, achieving a comfortable standard of living is perceived as somewhat challenging. Homeownership exacerbates livability concerns, further compounded by the necessity of meeting primary needs in healthcare and security. On the other hand, high pollution index exacerbates public health impact and impose economic cost. Traffic congestion consistently burden the stakeholders especially businesses that lose essential investment hours because of longer travel time; and productivity is not met when work is delayed by long commute. Addressing these issues require a network of efforts from government agencies and communities.

An article written by Cherry Piquero Ballescasas on the responses of various sectors to *the livable city question* have a few gems to behold. Although these responses are

Aerial view of a sustainable projects development (Lamudi, Cebu is Green: Sustainable Projects for eco-conscious investors and Home Seekers 2022)

keenly overstated, they somehow entice a vision for the city such as: having *a diversity of population that is not crowded, no beggars, no squatters, no families left out, and after out no discrimination*. It actually turns the reader back to the relevant question: Do you think there is hope for change towards a livable Cebu?

ANALYSIS: **HEALTH CRISIS**

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Pandemic in Cebu, *in Retrospect*

by **Genesis B. Bedio**

It was on January 30, 2020, that the WHO Director General declared a Public Health Emergency of International Concern, following the recommendation issued by the Emergency Committee. In Cebu, the information was passed down to the DOH 7 and then to the local governments in Cebu City and Cebu Province. The first suspected case of SARS-CoV-2 infection was a 65-year-old physician who was logged among the cases of infectious outbreak in the whole province of Cebu. Urgently, the Cebu City and Cebu Provincial government coordinated emergency responses like command centers, task forces and channels of communication and data logging. The Cebu Governor along with the mayors implemented border control and aligned the level of response to an appropriate containment measure, far more serious than mitigation.

The summation of actions taken was in the light of World Health Organization (WHO), Department of Health (DOH), and Inter-AgencyTask Force for the Management of Emerging Infectious Diseases (IATF-EID) guidelines. However, the impact of responses was undermined by gaps in various aspects such as healthcare, testing and tracing, information and communication, vaccine, equity and community cooperation. This was further beset by the unsettling conditions brought by the extended community quarantine. Though gaps were seen in government protocols and responses, the unforeseen collaboration between local government units (LGUs) and private sectors helped address the needs of the general public whose movements and resources were indefinitely constrained. Unprecedentedly, there was an overwhelming whole-of-government approach to tackle measures such as movement of essential goods and medicine, providing subsidy to low-income households, public transportation, relief distribution and so on (Felisse et al., 2023).

The Challenges and General Condition in Cebu During the Pandemic

Regardless of the medical aid cascading from the international organization to national and local government authorities, Cebu faced enormous challenges on the

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medical front at the outset, and even after a year of fighting the deadly virus. The island was agitated with shortage of personal protective equipment (PPE), limited testing capacity, exhausted healthcare workers, and overwhelmed hospitals at full capacity. The shortage of PPE had been forecasted, citing the absence of a major PPE manufacturer in the country. It was in early March 2020 that Philippine officials talked with local manufacturers to see the possibility of producing surgical masks and protective suit for the country, especially that there was an enormous pressure from the overburdened Cebu's health institutions that depended on local government and private donations for supplies of PPE. The rate at which PPEs depletion was fast: an average of 10 to 15 PPE per day would be used for non-critical cases. This would go up to an average of 25 PPE per day for critical cases (Revita, 2020: para 5).

As regards testing capacity, Cebu could only initially carry out Covid-19 tests in two subnational laboratories – Vicente Sotto Memorial Medical Center (VSMMC) and Cebu Tb Reference Laboratory Molecular Facility (CTRL-MFCT) as of May 2020 which could only jointly examine up to 1000 samples per day. Vivencio Dizon, deputy chief implementer of the IATF-EID had managed to increase this capacity to 3,500 per day by mobilizing the setup of additional subnational testing centers to

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address the backlogs. On top of the problems of supply levels and swiftness of testing samples, depleted manpower was a major setback. Cebu City asked for help from DOH-7 to augment the medical personnel at the hospitals, especially nurses, which led to the rare call for fresh graduate deployment. The then-director of DOH-7 Dr. Jaime Bernadas, plead to healthcare professionals in a stirring statement to join the fold as a call of the time. Though, in this attempt he admitted that there was a sparse response from the healthcare community.

The condition was dismal, as the media described the triages in hospitals. A private hospital in Cebu City was featured with patients queuing in their cars outside of the facility with oxygen tubes, and others were squatting on the sidewalk along the hospital (Magsumbol, 2021: para 6). The overwhelmed manpower due to limited staff and staff on quarantine worsened by the surge of resignation due to exhaustion and unfavorable labor condition could not be remedied squarely at the height of coronavirus affliction. This was a symptom of a broader structural problem. Delayed

benefits and job insecurity were the bane of nurses in Cebu; albeit it is not unique to the island. This unfortunate circumstance marred the local mitigation efforts to address the health crisis as big as the COVID-19 pandemic.

Managing of people and their behavior during the crisis became unpromising as Cebu residents confronted a blunderbuss of communication protocol. Confusion and heightened anxiety arose due to a lack of transparency. From the perspective of risk communication, downplaying the situation or issuing mixed messages was a significant mistake (Manticajon, 2020: para 7). In addition, residents shared inaccurate information from irreputable sources and peddled fake news to the detriment of others. Even the support of the national task force adviser to reduce the one meter physical distance prescribed by WHO to 0.75 meters, and then finally to 0.5 meters was a serious inconsistency with a leading authority in global health emergency and even with our own local health department.

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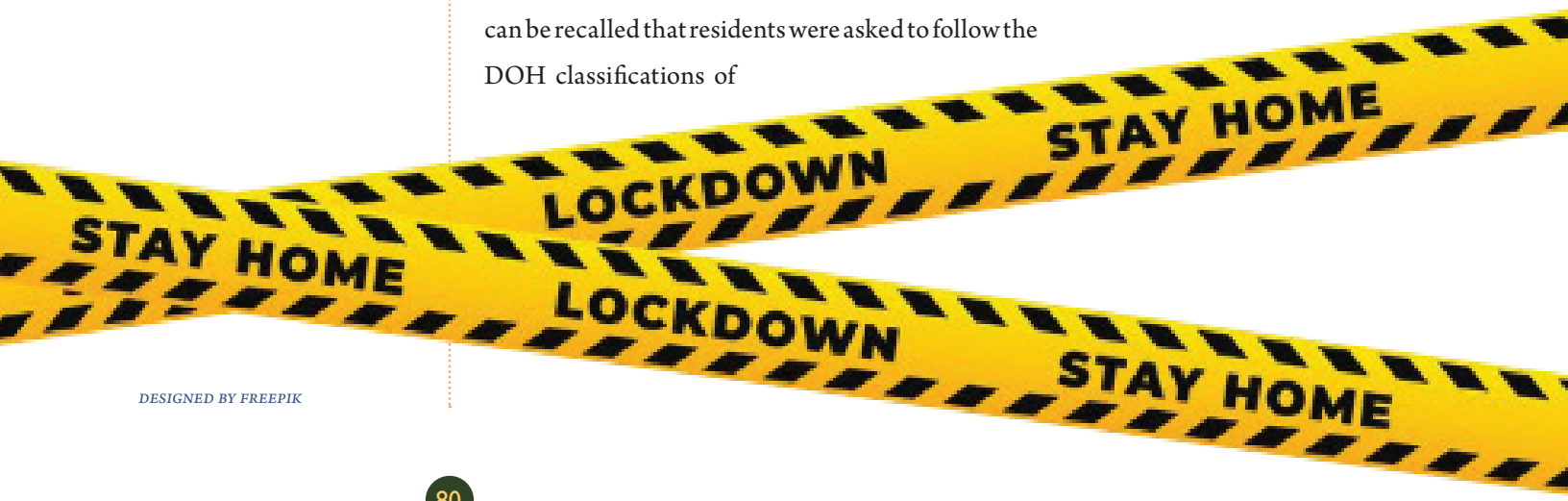
The rhetoric and politics of announcements from government and private organizations were the toolkit of mitigation at the height of the pandemic. Daily reports focused on publication of numbers and upward trends. Though it had served several purposes such as informing the public and raising awareness, it must have desensitized the public to the gravity of the situation over time. The necessity of reporting cases was highly recognized at the height of the coronavirus but it was not invulnerable to arbitrary interpretations of worseness and inaccuracy of data.

An example was Octa Research's report where it has deemed the upward trend of cases in Cebu City as a matter of serious concern, especially

when it was announced by Octa that Cebu could hit 400 new cases in two weeks. Octa did not properly separate the number of cases according to political jurisdiction in the island of Cebu. It aggregated the numbers, instead, making it difficult for local authorities to make informed decisions that involved administrative control within boundaries.

Revocation of the Enhanced Community Quarantine Passes (ECQ) in Cebu City was another occasion for confusion for Cebu City residents. Such quarantine pass was issued by the Cebu City government as recommended by IATF-EID to be replaced with QR-coded quarantine passes reducing the 250,000 original passes to 178,000 (Mascardo et al., 2020 para 10). The directive that was accompanied by the provisional *until further notice* had flouted the assurance that an immediate replacement will be made available. Unfortunately, when the passes were released, there were not enough for households living in a compound, condominium, and apartment, which consequently led to sharing of quarantine passes. Complaints amassed when the one-pass-one-household policy was not met.

As regards community quarantine protocols, Cebu residents were divided in their opinion. Some sectors considered the measure as draconic as opposed to those who thought it was necessary for general safety. For the many unprivileged – they pictured the grimmer – that it was a death sentence. Furthermore, the lack of understanding was also a problem with quarantine violators who claimed that they did not fully understand the quarantine protocols, and that they acted on economic pressure. It can be recalled that residents were asked to follow the DOH classifications of



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Area Classification & Interventions			
CRITICAL ZONE (CRZ)	CONTAINMENT ZONE (CZ)	BUFFER ZONE (BZ)	OUTSIDE BUFFER ZONE (OBZ)
ECQ	Modified ECQ	GCQ	Modified GCQ
MINIMUM PUBLIC HEALTH STANDARDS SHALL BE COMPLIED WITH ALL THE TIME			
POLICIES AND PROTOCOLS ARE BASED ON EXISTING OMNIBUS GUIDELINES			
No movement regardless of age & health status Minimal economic activity except for utility services (i.e. food, power, water, etc.) and critical economic sector No transportation activity except for utility services Suspension of physical classes	Limited movement within zone for obtaining essential services & work Operation of selected manufacturing and processing plants up to a maximum of 50% workforce Limited transporting services for essential goods & services Suspension of physical classes	Limited movement to services & work within BZ and OBZ Operation of government offices & industries up to maximum of 75% workforce Limited transportation services to support government and private operations Flexible learning arrangements; operate at limited capacities to cater to students	Permissive socio-economic activities with minimum public health standards

Table 1. Area Classifications and their Descriptions and Protocols

SOURCE: PRESIDENTIAL COMMUNICATIONS OPERATIONS OFFICE

areas according to Enhanced Community Quarantine (ECQ), Modified Enhanced Community Quarantine (MECQ) General Community Quarantine (GCQ), and Modified General Community Quarantine (MGCQ) cascaded through each LGUs and barangays. The complexity of the criteria in each quarantine classification, in addition to changes over time, regional variations, and community distress – had been attributed by residents as the causes of further confusion.

When the COVID-19 vaccines rolled out, some residents expressed concern regarding how safe the vaccines were. The local governments, in their mandate to assess vaccine demand and identifying priority groups, designating vaccination

sites and coordinating with vaccine stakeholders, had mobilized but encumbered by false claims about vaccines and the highly improbable myths. Another problem encountered was vaccine procurement. But the procurement had to be typically coursed through bureaucratic system. This had caused adverse delays.

Vaccine hesitancy was another stumbling block that stalled the efforts of achieving herd immunity or the objective of preventing the spread of COVID-19. Vaccines are the key to reduce the risk of infection and transmission, but as late as March 2022 around one million were still unvaccinated in the Cebu province as reported by Dr. Keiza Rosario, co-leader of the National Vaccination Operations Center (NVOC) (Erram, 2022: para 3). The large number of unvaccinated could be attributed to the large population of Cebu province with 44 municipalities, 1,202 barangays and 6 component cities.

Apart from these reason, the Cebu Capitol's consultant on health affairs cited the lack of accessibility, and the aftermath of Typhoon Odette (Rai) as causes of the underachieved vaccination goal. The consultant further specified logistic problems affecting access to vaccine because communities are remotely located.

Frameworks for Crisis Management

Looking back at these challenges calls to mind several theories that, in retrospect, could explain the collective experience of communities in the whole Island of Cebu. So far, at many instances in the local and national pandemic responses the prominent frameworks that emerge are crisis management through increasing supply, capacity planning, risk communication, social capital, health behavior change and decentralization theories.

Crisis Management Through Increasing Supply

Looking for suppliers of PPE was the logical response to shortage at the height of increased demand, nationwide. Department of Trade and Industry directed local manufacturers to produce medical-grade face masks, even beverage companies had shifted to production of hygiene products and donated alcohol to LGUs and public hospitals. DTI followed the strategy of diversifying sources of PPE to address the impact of shortage within Philippine territory in line with Pfeffer and Salancik's (1978) minimization of dependency theory which proposed that organizations should minimize dependency on external sources to survive and thrive [during crisis]. The Confederation of Wearable Exporters of the Philippines (Conwep) was instrumental in this endeavor for its members have shifted their operation into facemask-making. It shows that putting to task or exerting influence over major stakeholders can control dependency and redirect attention to resiliency. Add to this was the strategy of establishing rapprochement with NGOs to help mitigate the impact of shortages.

Capacity Planning and Management

Before the health crisis resulted in an influx of patients in hospitals, capacity planning and management had been the anticipative strategy of Cebu hospitals to prepare for the long queue and patient volume. Notwithstanding, these hospitals were still swamped with patients and reached critical level in terms of occupancy. But with the groundwork done, they were able to incrementally calibrate their responses as the situation developed. This planning had been done mostly with preparation of isolation areas and optimizing resources such as bed capacity, staff and medical supply inventory. It is reported that Cebu Doctor's Hospital in Cebu City set up an Acute Respiratory Infection + Diarrhea (ARID) at the medical arts area of the hospital anticipating massive outbreaks as early as March 2020. This center is distant

A medical worker helping a colleague put on a plastic shoe cover.

PHOTOGRAPH BY M. JOKO APRIYO PUTRO SMITH, 2020 (CC BY-SA 4.0). RETRIEVED FROM WIKIMEDIA COMMONS.

from the emergency room of the said hospital to protect other patients. Further, this center was equipped with consultation barriers and designated entrance and exits. Nurses and doctors were assigned in the area to do primary care and testing or initial screening. For Hospitals with only one building, a tent-based triage area for incoming patients was set up such as in provincial hospitals. Though the repurposed tents were limited they had buffered the surge in patients, helped minimize the risk of transmission, and allowed doctors and nurses to respond with flexibility and scalability. Seeing the overwhelming need, large-capacity tents were donated by the Philippine Red Cross to Cebu City, Mandaue City and Talisay City. They were fully equipped with medical supplies. Thus, the contribution of private organizations significantly improved triage situations and had proven the importance of social capital in terms of sharing of resources.

As with capacity planning, the augmentation of facilities in Cebu involved balancing demand and resources. Adjusting resource allocation and managing the capacity constraints were handled by local hospitals through regular forecasting of cases to the local government units. As the situation turned critical after a year from the onset of community transmission, the Cebu City government knew that the massive outbreak could spin out if medical facilities were not augmented. As part of this augmentation the Cebu City government fast-tracked the reopening of the new Cebu City Medical Center building. It was timely that the hospital operations were already active in February 2021 and even started accepting patients as early as December 29, 2020 in its Out-Patient Department. In the province, additional equipment such as high-flow machines were made available by the provincial government to enable provincial hospitals to entertain moderate and severe cases, thus, minimizing referrals to major hospitals that had already reached critical level in terms of capacity.

Another capacity mitigation, and one that served as midway point was the strategy of managing patients at the township level, specifically at LGU health centers before they proceeded to medical facilities. This coordinated solution had eased up the major hospitals in Cebu and proved that community-based intervention could make a big difference. Thus, the adoption of the community-level response sped up the containment efforts and clustering of cases.

Risk Communication

At the height of the pandemic, the under-scrutinized communication style of government authorities had inopportunely stirred belief towards inaccurate information. Communication is more complex during crisis because it has to methodically consider literacy, emotional reception, and quality of information as variables to compose a public message under a stressful situation. Peter Sandman (1988), the proponent closely associated with risk communication, created a model that encapsulate the requisites in this dire situation: Risk equals Hazard plus Outrage. As a no-nonsense theory, this points to the technical and emotional reactions inherent

in crisis that must be routinely checked each time risk communication happens. The model instructs that when there is a misunderstanding of the hazard the response is to educate; and when there is an outrage the response is first to acknowledge fears and concerns and then build trust. Both aspects could ably be demonstrated by spokespersons of government task force, if implemented.

However, the problem was caused by too many mouthpieces and too many press conferences to listen to. Based on Sandman's model, too many crisis communicators could easily make the pronouncements vulnerable to mistakes or blunder. Although this is observed as factual, LGUs had different needs and had to conduct a separate press conference as a means to adapt or explain to their constituents how the national pronouncement would specifically take effect in their cities.

At certain point, the cascading of information were impacted by inadvertent miscommunication of the original statement, and sometimes commentaries that interpreted the official statements to the public contributed to misinterpretations. Customarily – Cebu City, Mandaue City, Lapu-Lapu City and the Cebu Provincial Government held separate press conferences on executive orders. But these were made on top of announcements coming from national agencies such as Philippine Information Agency, Presidential Communications Operations Office, Radio Television Malacañang, and People's Television Network. All these channels disseminate information on IATF resolutions. If such multiple official media structure would be retained then the Sandman model could help put a logical standard for communication where the format should be uniform, leaner and targeted. Finally, dissemination of information should follow an efficient flow from handling of straight information to handling of emotions and social relations.

On the other hand, building trust had been challenging with subsequent incidents, especially in Cebu City where the National Government intervened midway in its containment and crisis management, ordering the revocation of quarantine passes and taking over the overseeing role through then-Secretary of Department of Environment and Natural Resources (DENR), Roy Cimatu. The image of authority

in Cebu was sort of undercut and challenged. This was despite the levelheaded confidence of the Cebu City LGU in the situation and its assurance that things were under control despite the surge of cases. Trust was also challenged when officials laid blame the increasing cases of COVID-19 on each other before Cimatu took over as overseer. Despite its perceptive measure, the national government's response might have sent a more distressing signal, especially that the deployment of Cimatu was received with speculations of military takeover and of relieving the mayor and other LGU chief executives of their duty. The 'outrage' element could have been addressed with more specific written order and with a more softened message, defocusing on militarized action towards an LGU.

In addition to occasions of miscomprehension and aggravation of distress the World Health Organization identified the following causes of incoherence of information which help explain the inadequacies in risk communication in our region (WHO, cited in Liu, 2020):

1. When government [attempts] to communicate about what is still unknown regarding COVID-19.
2. When government changes recommendations and guidance over time
3. When various organizations provide conflicting information or recommendations about COVID-19,
4. When people hear different recommendations that apply in different locations.

LGU's had assigned trusted messengers but the circumstances above were hardly avoided. As a general observation, the quality and manner with which communication was delivered in our region were often not up to par with WHO's standard or the standard of risk communication.

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Social Capital

The relationships and communitarian spirit that were forged during the lockdown in Cebu manifested in simple gestures of mutual support. Through community pantries, which were assumed to have surfaced first in NCR, the problem on food insecurity and financial difficulties had been mended provisionally. This initiative became an inspiration for Cebuanos to activate their community spirit and look out for one another. In Guadalupe Cebu City, a youth group called One Guadalupe, led by Michael Angelo Quijada partnered with Sangguniang Kabataan of the said barangay to set up two community pantries (Saavedra, 2021: para 2).

With the concept of mutual aid and solidarity in mind, this grassroots initiative made available goods such as food, toiletries, and other essential items to the immediate community. The principle of taking what you need and donate what you could turned out effective with cooperative residents. The idea of community pantries is not new, but it had received a renewed attention in April of 2021 when Patricia Non of Quezon City turned a bamboo cart into a donation wagon, encouraging people to start the community pantry phenomenon. Afterwards, the same initiatives spread out to the rest of the country – and this inspiration became Quijada's resolution. By using his connections to 20 school and student organizations the initiative gained traction. This showed the power of social capital where a force multiplier naturally transpired. The sociologist Mark Granovetter (1973) better explained this as the strength of weak ties where acquaintances, distant friends, and different social circles come together to provide new opportunities – in this case, the access to goods.

On the other hand, volunteer groups such as the Bayanihan Mission (Community Mission) and FundLife organized a fundraising to respond to food emergencies across Cebu. The former is an NGO that promotes quality of life in the Philippines and the latter is concentrated on experiential education for vulnerable children – but had turned to relief operations at the wake of the pandemic. The mobilization of these two NGOs were important in activating a network of volunteers that in turn galvanized cooperation and collaboration across townships. Robert Putnam (2000), a political scientist conveyed in Bowling Alone: The Collapse and Revival of American Community that engagement in community activities is essential in building social cohesion, a value needed in times of crisis, where individuals maintain a good level of trust. Putnam (2000) stated this in the midst of declining social capital in his region. Perhaps Putnam had this conclusion because of the pre-eminent independence of people in the twenty-first century. But, when the pandemic came – regardless of which community people were in, they sought to foster mutual support for the sake of survival against the collective challenge. The initiatives of private individuals and organization showed an antidote to the surplus effects of the epiphenomena of self-autonomy, isolationism and individualism brought by modernity. At some point, though unsavory, the pandemic reactivated civic engagements.

Intellectual cooperation was also seen in the community, when young entrepreneurs put their skills together and used their knowledge to execute a project with the local government. A combined group of professionals and students created BirdsEye mobile application. It was a contact tracing mobile software that was made available in Cebu as a centralized application for local government units and businesses to monitor movements of individuals in terms of: visited places, transportation, temperature, and symptoms reported at checkpoints. Kenneth Canales, the project leader of BirdsEye demonstrated the idea that mobile apps development and programming were the important resources to offer during the period where data were the key to attaining swift decision-making, early detection of cases, efficient identification of contacts, and public awareness.

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Handwashing was one of the themes of the campaigns against the spread of SARS-Cov-2 virus.

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Canales worked with a team of faculty members and alumni from the University of San Carlos to develop this contact tracing app – a testament of the significance of the contribution of knowledge and the solidarity of educators and tech professionals in providing technological assistance to the local government. One theory that supports Canales' engagement is the concept of technological resilience. Cebu's information technology-business process management (IT-BPM) was considered one among the resilient sectors owing to the opportunity for creation of new jobs in the e-commerce and healthcare sectors spurred by the pandemic (Lorenciana, 2021: para 6).

Big organizations and companies made a great leap as well in fighting the COVID-19 pandemic. The Ramon Aboitiz Foundation, Inc. (RAFI) partnered with Cebu City government and the Metropolitan Cebu Water District (MCWD) for its

handwashing campaign to quell the spread of the virus. RAFI provided facilities such as portable sinks (Hunawan Stations) at public places like that in bus terminals, parking lots, and jeepney stops; and furthermore educated the public about good hygiene practices through trucks with loudspeakers going around the underserved communities (*Aboitiz Family Joins Campagin to Combat COVID-19 in Metro Manila & Cebu, 2020: para 4-5*).

Diligence of companies like Universal Robina Corp. had also helped confront the health crisis by timely manufacturing of pharmaceutical grade alcohol. The supply of alcohol was tight after the fits of panic buying across Cebu. As a result, purchase limits were set by the local government to buffer the scarcity, which was the logical authoritative solution at that time to restore fair distribution, and more importantly reduce stress among consumers. International Pharmaceuticals, Inc. (IPI) had donated thousands of liters of alcohol to hospitals and health centers before the lockdown in Cebu. It had guaranteed that production of ethyl alcohol would not be affected and assured that they were replenishing their stocks in the market. Meanwhile, other companies like San Miguel Corp. (SMC) and Ginebra San

Aboitiz family joins campaign to Combat COVID-19 in Metro Manila and Cebu 2020.

COURTESY PHOTO: ABOITIZ.COM

Miguel, Inc. (GSMI) transformed their distilleries into alcohol supply production. This process, known as production optimization, steered changes and streamlined the company's production in view of the need to meet the demands, yet under the verity of humanitarian effort to promote the welfare of others.

Health Behavior Change

Government authorities in Cebu continually reinforced the regulation of wearing mask through memoranda and resolutions to address the challenge of compliance. It was in April 2020 that IATF ordered the use of face mask in public spaces, which was followed by the resolution on wearing face shields in select public spaces by August 2020 (IATF 2020, Res 18 and IATF Res 88, respectively), making the wearing of masks and face shields a mundane part of the lifestyles of Cebuanos. However, some residents were recalcitrant about wearing face masks, especially in densely populated areas and shanties where it would normally be uncomfortable to wear masks due to the hot temperature inside the houses.

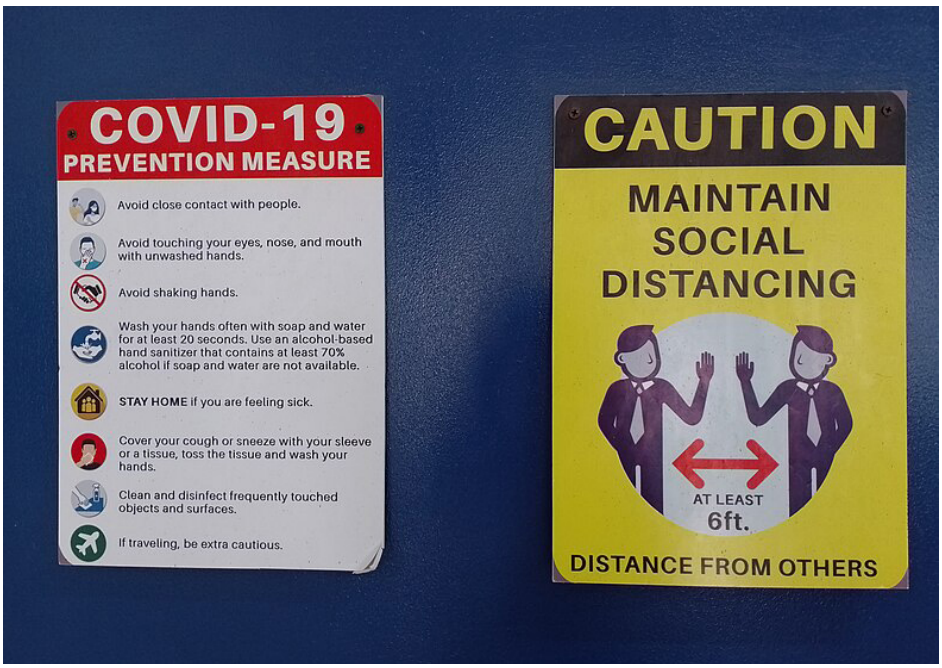
Health behavior change (HBC) in Cebu as in many parts of the country was as challenging as compounding issues of urban informality, housing insecurity, overcrowding and congestion. HBC is a framework with the primary goal of placing new health behaviors to improve health outcomes related to Prochaska and DiClemente's Stages of Change model (1970). The DOH 7 ensured that the rationale of wearing mask was disseminated and understood as the first stage of health behavior change. But the restrictive environment of the pandemic made health modification grueling. It is necessary to look at some social theories to see in perspective the challenges encountered by LGUs such as Albert Bandura's social cognitive theory (1977) where he explained the interaction of the social, environmental, and personal factors in health behaviors. Authorities would profit from this theory in terms of better understanding of the problem of compliance. Following this theory, the observed monocular approach of some local governments that focused on assuring the residents that everything is dealt with and reminding them to calm down had fallen short on the process of changing behavior and gradually motivating people to cooperate.

President Rodrigo Roa Duterte holds a meeting with members of the Inter-Agency Task Force on Emerging Infectious Disease (IATF-EID) at the Matina Enclaves in Davao City

PHOTOGRAPH BY JOEY DALUMPINES, 2020 (CC BY-SA 4.0). RETRIEVED FROM WIKIMEDIA COMMONS.

Behaviors are highly defined by social norms – that explains why the adjustment to the new health protocol was met with problems. The wearing of mask and social distancing entailed modification of social interaction, work behavior, transportation norms, and office-work norms. Just about any social space had been affected by the adjustment, while the pre-pandemic behavior had remained, for a time, as the default consciousness of individuals. Thus, it was difficult to transition to physical distancing as most of public spaces were built for interaction and the lifestyle of people in Cebu generally were based on close, familial encounters.

Though the various strata in the society believed that wearing mask was an effective way to protect themselves and others, a segment of the strata may have also believed that other expenses were the priority over mask-buying, especially with low-income



Social distancing and preventive measures signage at University of Cebu, Banilad.

PHOTOGRAPH BY PAUL GORDUIZ106, 2020(CC BY-SA 4.0). RETRIEVED FROM WIKIMEDIA COMMONS.

families. Presumptively, the positive perception of wearing mask could increase with higher income families in the context of priority. This could easily be demonstrated by correlational studies, and could prove that health behavior change is better approached in multiple strategies as suggested by Bandura.

Decentralization

The national government empowered local authorities to manage the pandemic. First they were given authority to decide and implement quarantine measures, conduct contact tracing and establish isolation and quarantine facilities. Further, the national government allowed LGUs to adapt their responses to the specific needs of their communities following the national guidelines that were cascaded by the national agencies such as the DOH and IATF-EID.

In terms of testing, the government decentralized laboratory services and established regional laboratories to improve the turnaround time – enabling timely identification

of cases. This was part of the localized response and capacitating the local health authorities to better respond to outbreaks.

On the process of resource allocation the LGUs were given the discretion to allocate resources such as financial assistance, medical supplies, and relief goods. Though the delivery of assistance and goods was fraught with delays there were cities and townships that had strategized to abate the impact of delays.

The LGUs in Cebu each had their mandate but were freely implementing directives proportional to the situations on the ground. The granular lockdowns and the logistics and protocols on incoming OFWs were all handled with utmost discretion of the LGUs. This is a manifestation of the atmosphere of local autonomy and empowerment of local executives, and in addition, this explains why there were regional differences in terms of methods and preparations such as – recruitment of agencies and partners for repatriation of OFWs; accommodations and quarantine resorts, and the use of technologies like the internet to facilitate the transfer of repatriated citizens. Further, each LGUs had their hands on health protocols, vaccination program where they had the choice to purchase vaccines ahead of the government, public education, community-based surveillance and even imposing sanctions. An example of tailored response of Cebu City and Cebu Province was the imposition of monetary penalties and sanctions to quarantine and health protocol violators (i.e. community service). This was for a time being implemented when there was a surge of cases attributed to unauthorized crowding and breaking of stay-at-home order. Another autonomous measure was the local governments' emergency purchase of vaccines, initiating the deal with suppliers before the national guidelines for purchasing vaccines were released. The president ratified this emergency purchase citing the Local Government Code and the procurement reform law.

However, on top of the efforts on policing the pandemic, the Cebu's highly urbanized cities had been able to share its strategies or best practices with the Office of the Presidential Assistant for the Visayas (OPAV) as shown below – to serve as a basis for crafting a manual which other LGUs can use as a guide in formulating their own mitigating measures (Newman, 2020: para 2):

Cebu City's Best Practices

1. Creation of cluster clinics, barangay isolation centers and quarantine facilities
2. Augmentation of contact tracing teams
3. Widespread testing

Mandaue City's Best Practices

1. Establishment of Emergency Operations Center (EOC)
2. Adding of Data management team to EOC
3. Augmenting data transparency
4. Massive information dissemination

Lapu-Lapu City's Best Practices

1. Widespread information drive
2. Strict implementation of quarantine protocols
3. Implementing novel ideas like a [sic] 'roaming casket' as a reminder of the risks of contracting the virus

Conclusion

In retrospect, the conditions that Cebu had gone through were vexatious. But good practices emerged even in the absence or insufficiency of resources, especially with our situation in the global south where broader problems compound every time we confront a crisis.

On the health sector, the problems were manpower, medical supplies, insufficient facilities, low salaries and exhausted doctors and nurses that caused some of them to quit. On the government – delays, miscommunication, inconsistencies and lack

of transparency, and supervening interventions that caused confusion and logistical difficulties. On the community – the lack of cooperation, uncircumspect sharing of false information, difficulty in adopting to the new health behavior required by health authorities, and refusal to be vaccinated – all constituted an acutely vexing situation.

Despite the harrying problems, the good news was there were international and private individuals and organizations that showed altruism in their act of kindness through donations to help address the problems encountered by Cebu. The fact is, in times of crisis, the lifelines are activated, and the local government should be ready to swiftly usher these donors to work with agencies and grassroots organizations to facilitate distribution and so on. With sufficient understanding of how to use social capital in times of crisis and the rapprochement with donors, the crisis should be abated significantly.

Capacity planning was notably demonstrated by leading hospitals with sufficient resources to prepare equipment and facilities for the surge of patients, but the condition was bleaker with primary and secondary hospitals that lacked the resources to adequately deal with the surge. This presents an opportunity to generally improve lower-level health facilities, especially government-run hospitals. They will have to expand eventually to serve more patients in the future, especially that Cebu's population is projected to reach 3.8 million by 2030.

Physical planning such as setting up extended triage within hospital compounds was a wise use of available space, and showed the resourcefulness and flexibility of the hospital administrators in the time of adversity. The values of industry and collective efforts demonstrated by their personnel despite the limited performance capacities were the qualities that had kept these hospitals afloat. Perhaps the intrinsic values of the health professionals were the strong resources that alleviated the inadequate capacity at the time when these hospitals were inundated with COVID-19 patients. The most benevolent reciprocation to these extraordinary efforts is for the government to allot and promptly release compensations for the well-being of the workers in the health service sector.

Under risk communication, the government sector had not performed at its finest and had mostly focused on one-dimensional approach of crafting the message, making the government's crisis communication stern and less strategized, and often streamlined on trends and numbers and pushing for calm community and promising citizens that the situation is handled, without addressing the outrage using sympathetic stratagem and targeted communication. For one, risk communication is multifaceted – it is cornered by a lot of socio-personal triggers, that, as it appears, must be relearned by public communicators through a series of training and retooling. On the other hand, the presence of multiple media is good but the format of messaging should have been harmonized to avoid multiple interpretations of the message. Consistency is important to the listening public.

Our social circles are our social capital, and they are extremely important in sharing of resources from goods to technology during crisis. Furthermore, it is important that our leaders or the local governments have good relationships with different industries and private sectors as they will provide the networks where LGUs can leverage to address existing gaps. Goodwill and mutual respects have to be forged between stakeholders without being overshadowed by political intent as this could turn off potential donors and resource sharers. A list of companies and their resource capacities should be prepared immediately to activate the network when the need arises.

The health behavior of a community does not change drastically overnight. The persistent reminders and strategized communication and education should help the community transition slowly to the new health behavior. These measures would keep them in line and eventually accustom their minds to the new normal. The authorities must gradually police protocols where citizens will not be penalized immediately for non-compliance. The usual escalating warnings have to be implemented – first, and second warnings as a gesture of compassion during times of crisis.

Finally, distributing authority and power from the central authority or government was the only way to manage the entire nation, especially an archipelago. Decentralized functions should be the immediate reference for decision-making even in the state

of emergency unless these are temporary modified through executive orders and presidential decrees. An actively performing local government would always find ways to initiate and use the Local Government Code to enforce or implement measures in the absence or delay of national guidelines in times of crisis. The LGUs of Cebu had been conscientious in following executive orders however there were setbacks, especially with LGUs that are extremely remote from the urban centers where most essential supplies were brought. They were also fraught with logistics and prioritization problems, causing implementation delays. The national government can address logistics issues by looking into the specific hindrance such as infrastructure problems like inaccessible roads. Further, if there were shortage of skilled workers, the LGU must work with the national government to ensure logistics operation have enough manpower.

Addressing the aforesaid factors would need a lot of proactive planning and collaboration between stakeholders to ensure that delays are reduced.

The purpose of looking on the details that transpired during the pandemic is part of revisiting the scene of the crime where stakeholders can evaluate the merits of the actions that were taken and note the ineffectual ones. The theories and perspectives mentioned here would help describe the situations and connect them with broader issues or universal themes. They also help to key in possible solutions to the identified gaps which will be part of a guidebook for future crisis. As has been commonly stated – the theories place our attention on past mistakes, errors, and problems that must be met with critical thinking, and not only by the book.

The truth is there are no preparedness measures sufficient to respond to the crisis as large as the COVID-19 pandemic. The basic principle that had guided Cebu was keeping every resident safe. Regardless of successes and failures, our governments were moving in multiple fronts but the pandemic had made novices of us all.

RESEARCH STUDY:
ECONOMIC GROWTH

PHOTO BY CEBU INSIGHTS PH

A Survey of Cebu's Economic Growth and Competitiveness *Amid the COVID-19 Pandemic*

by **Jan Lorenzo G. Alegado**

Contrary to popular belief, the name "Queen City of the South" was used to describe Iloilo City during the Spanish colonization that lasted until the early part of the 20th century (Funtecha, 1992). By the 1930s, the title became closely associated with Cebu City—the capital of Cebu province. This is highly attributed to its impressive and sustained economic growth over the years outside Metro Manila (Letigio, 2023). Even as the whole country suffered terribly from the COVID-19 pandemic, Cebu continued to achieve exemplary feats—from being considered as one of the best islands in the world (Erram, 2022a) to being one of the top choices for outsourcing destinations (Erram, 2022b).

Furthermore, recent estimates from the Philippine Statistics Authority for 2022 reveal that Cebu is one of the largest provinces in the country in terms of output and the largest economy in the Visayas area (PSA, 2024a). With respect to the city, Cebu's economy grew by 8.4 percent, which was higher compared to its growth rate in 2021 (PSA, 2024a). In addition, according to the Commission on Audit, Cebu is considered the richest province in the Philippines in terms of declared assets amounting to PhP 235.7 billion in 2022 while the cities of Mandaue and Cebu were among the wealthiest cities in the country placing 6th and 8th, respectively (Erram, 2023). Notwithstanding the impacts of the pandemic, Cebu's various contributions to the regional economy of Central Visayas and the whole country are significant (Lorenciana, 2021). Like the rest of the country, it faces many challenges in going back to the pre-pandemic track considering that other local government units (LGUs) are also doing equally well or even better than Cebu.

Now, there are several other LGUs in the Philippines that have also exhibited remarkable growth and, to some extent, are considered more competitive than Cebu. For example, Western Visayas posted the highest growth rate in the country for 2022 and Aklan, one of its provinces, boasts an impressive growth of 22.5 percent for the same period (PSA, 2024b). As development policies and programs continue to make successful strides, economic growth has ceased to be exclusive to huge metropolitans while simultaneously, political power has gradually diffused away from the nation's

capital. Given the changing political and economic landscape in the country, can Cebu maintain its sobriquet as the richest province in the country? Likewise, does Cebu City still have the features befitting its title as the "Queen City of the South"? With the expansion of economic activities across the country, Cebu's ability to outgrow other local economies and remain at the top of its game remains to be seen. This article examines current data and issues regarding Cebu's economic growth and its competitiveness relative to other LGUs in the country in the context of COVID-19 pandemic. By emphasizing these indicators, this paper aims to stimulate the discussion on the relevance of LGUs as drivers of growth and development and to highlight Cebu's economic performance in recent years.

Linking Economic Growth and Competitiveness

The positive link between competitiveness and economic growth is supported in the literature, but the direction of this relationship remains ambiguous. For instance, Kordalska and Olczyk (2016) revealed that economic growth causes competitiveness among low-income countries, but - found that among high-income countries, this relationship is reversed, i.e., competitiveness drives economic growth. As commonly-defined, economic growth refers to the increase in productive capacity of a country over a period of time.

Competitiveness, on one hand, is described as "the set of institutions, policies, and factors that determine the level of productivity of a country" (Cann, 2017). Moreover, evidence suggests that countries that are highly competitive are also the same countries that experienced high economic growth (Turok, 2004). According to World Bank (2015), competitive cities around the globe share similar characteristics and one of these attributes is the above average economic growth. While some cities grow at an average of 4-5 percent in terms of annual income per capita, the top ten percent most competitive cities grow at an average of 13-14 percent with respect to the same indicator between 2005 and 2012.

Cebu–Cordova Link Expressway (CCLEX) view from South Road Properties (SRP).

In the Philippines, a study conducted by Villamejor-Mendoza (2020) using a mixed method approach revealed that inherently competitive cities with better economic outcomes such as higher human development index, low poverty incidence, and higher share of the national budget performed better with competition. The study pointed out the need to investigate the factors that influence low levels of competitiveness of some LGUs in the country.

In line with the foregoing inquiry, Encarnacion et al. (2023) demonstrated that economic dynamism was highly associated with competitiveness. The study further argued that the level of economic dynamism among cities and municipalities that are geographically close to one another are also highly correlated leading to the "clustering pattern in the economic space" among these LGUs. Similar results were also observed by Cambel and Albacea (2021) using an alternative model of competitiveness index across the different localities in the Philippines. They found that comparable levels of competitiveness occur among cities and municipalities that are clustered together. The study was able to provide the empirical context linking competitiveness and economic performance of LGUs in the country.

As a form of national response to the global movement toward competitiveness, the Philippines established the Cities and Municipalities Competitiveness Index (CMCI) Survey in 2013. The primary objective of the index survey is to measure the competitiveness of LGUs and promote local economic development. The index—which is based on the works of Porter's (n.d. in CMCI, n.d.) diamond model of competitiveness, uses the following pillars, namely, economic dynamism, government efficiency, infrastructure, resiliency, and innovation (CMCI, n.d.). Aside from ranking the cities and municipalities in the Philippines, the survey also ranks provinces based on the weighted revenues and population of each province with the exclusion of data coming from highly-urbanized cities (HUCs). Similarly, the Philippine Statistics Authority published the Provincial Product Accounts covering the period 2018-2022, which provides figures for Gross Domestic Product and growth rates down to the provincial level. In the past, the disaggregation of the national output was only limited to the regional level, which somehow constrained the ability to examine economic performance at a more local level.

Cebu's State of Economic Growth and Competitiveness

Cebu is regarded as one of the centers of economic affluence outside Metro Manila (Letigio, 2023). The province and its namesake capital city—Cebu City, continue to reach significant milestones in various dimensions of development (Erram, 2022a; 2022b; 2023; Letigio, 2023). The following figures show the side-by-side comparison of Cebu's ranking based on the province's growth rates and its competitiveness scores relative to other provinces in the country. As can be seen in both Figures 1a and 1b, none of the provinces from Central Visayas—where Cebu is a part of, landed in the top five for each respective indicators. For 2022, Cebu, which ranked 71st overall, had the lowest growth rate among the four provinces in Central Visayas. In terms of ranking by competitiveness in 2023, Cebu ranked 52nd among the 82 provinces included in the CMCI survey. Despite the absence of any statistical tests to show the association between the two indicators, some patterns emerge. For one, none of the top five provinces in either ranking have any highly urbanized cities within their respective geography. This has quite an implication on how the provincial competitiveness scores are generated. Another pattern observed is that almost all provinces in Central Visayas ranked at the bottom half for both indicators—with the exception of Negros Oriental, which secured the 31st spot for provincial growth rates and Siquijor, which earned the 38th spot for competitiveness ranking.

Moving from the provincial rankings, the next set of figures presents the ranking of selected HUCs in the Philippines based on their growth rates and their competitiveness scores.[1] Although Cebu City posted a remarkable economic growth of 8.4 percent from 2021 to 2022, this pales in comparison to the other HUCs that ranked higher than the city. Even Lapu-Lapu City, one of the HUCs from Cebu Province, outperformed Cebu City by a margin of 6.3 percentage points.

1 HUCs from the National Capital Region (NCR) were intentionally removed from the figure because they were also excluded in the PPA 2018-2022 released by the PSA. As of January 29, 2024, the PSA announced that it will release the PPA for the NCR (PSA, 2024c).

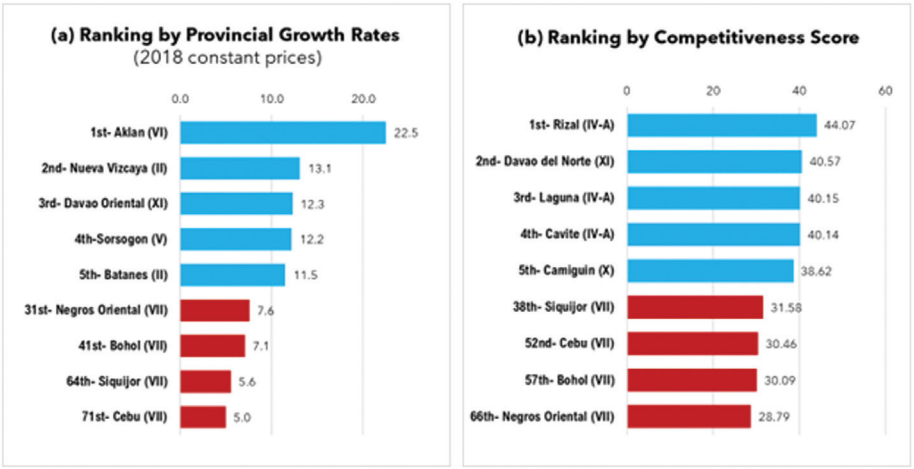


Figure 1. Ranking of Provinces by Growth Rates and Competitiveness Score, Philippines: 2022 & 2023

Note: Figures 1a and 1b are based on the author's compilation using the Provincial Product Accounts of the Philippine Statistics Authority (PSA, 2024a, 2024b) and the Cities and Municipalities Competitiveness Index Survey for 2023 by the Department of Trade & Industry–Competitiveness Bureau (CMCI, n.d.).

Meanwhile, in Figure 2b, none of the HUCs from Cebu made it to the top ten most competitive HUCs in the Philippines in 2023. Nevertheless, it is still worth mentioning that Cebu City was closing in at the 13th spot—a huge improvement from the previous survey period, which earned the city the award for the "Most Improved Highly Urbanized Cities" in 2023. As opposed to the results presented in the previous figures, the HUCs from Cebu province have done relatively well considering the performance of the province for the same indicators.

To make a more compelling case for the province and the city of Cebu, the next section provides a discussion about the sources of their respective growth. Figure 3a shows the distribution of the regional output among the four provinces in Central Visayas while Figure 3b highlights the distribution of Cebu's output among the three major sectors that make up its economy.[2] As described in the following figures, the province of Cebu produces the majority of the region's output that shows its significance in advancing the local economy of Central Visayas.

2 Aside from the expenditure approach to the Gross Domestic Product (i.e., consumption, investment, government expenditure, and next exports), the PSA also classifies it according to industrial origin, i.e., agriculture, forestry, and fishery (AFF), industry, and service sectors (PSA, n.d.).

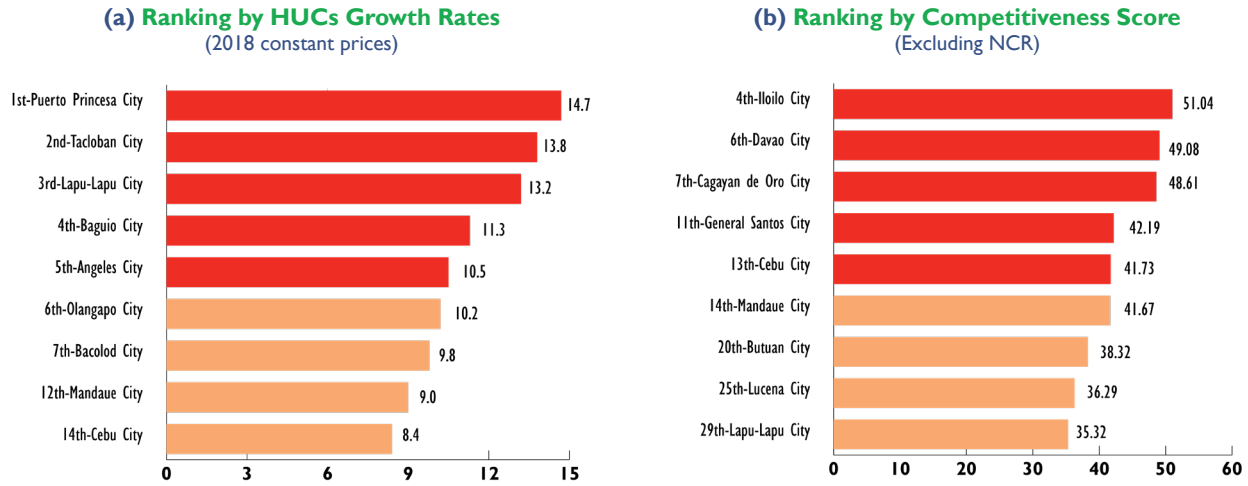


Figure 2. Ranking of HUCs by Growth Rates and Competitiveness Score, Philippines: 2022 & 2023

Note: Figures 2a and 2b are based on the author's compilation using the Provincial Product Accounts of the Philippine Statistics Authority (PSA, 2024a, 2024b) and the Cities and Municipalities Competitiveness Index Survey for 2023 by the Department of Trade & Industry–Competitiveness Bureau (CMCI, n.d.).

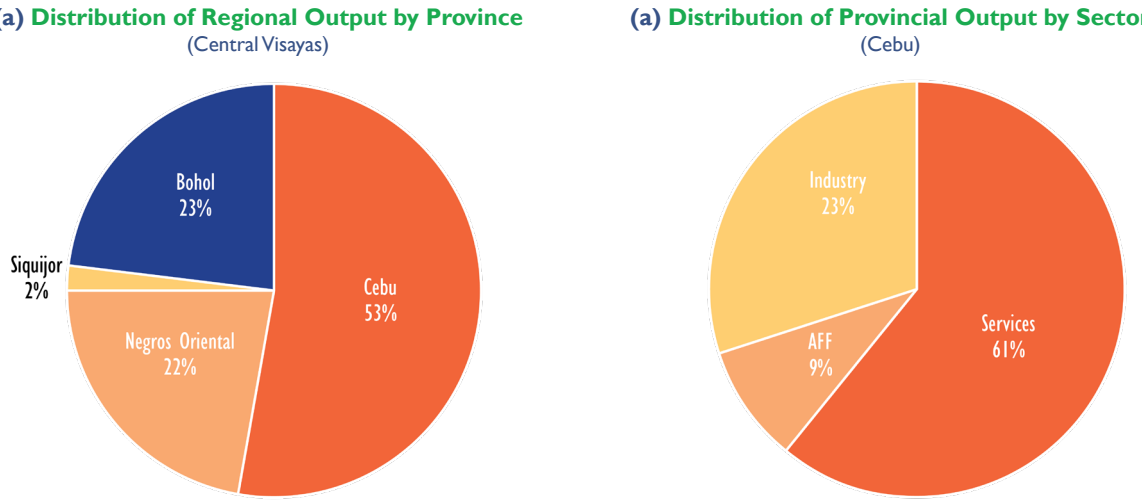


Figure 3. Distribution of Output by Provinces and Sector: 2022

Note: Figures 3a and 3b are based on the author's compilation using the Provincial Product Accounts of the Philippine Statistics Authority (PSA, 2024a, 2024b)..

In addition, a huge portion of the province's output comes from the service sector—followed by the industry and AFF sectors, respectively. For 2022, Cebu's service sector was estimated at around PhP 237.8 billion and its major contributor was the wholesale and retail trade including repair of motor vehicles and motorcycles accounting for about 24 percent of Cebu's entire service sector (excluding the data from the three HUCs in the province). While it is true that Cebu province (as well as the city) has the largest local economy in the region, its growth rates over the years have not fared well compared with other provinces in the same region. Since 2019, the economy of Cebu province has recorded lower than the national average and in the most recent period, it posted the lowest growth at 5 percent compared with other provinces in the region (PSA, 2024a). For policymakers, this poses a challenge when it comes to attracting businesses as this indicator measures how conducive a local economy is for potential investments.

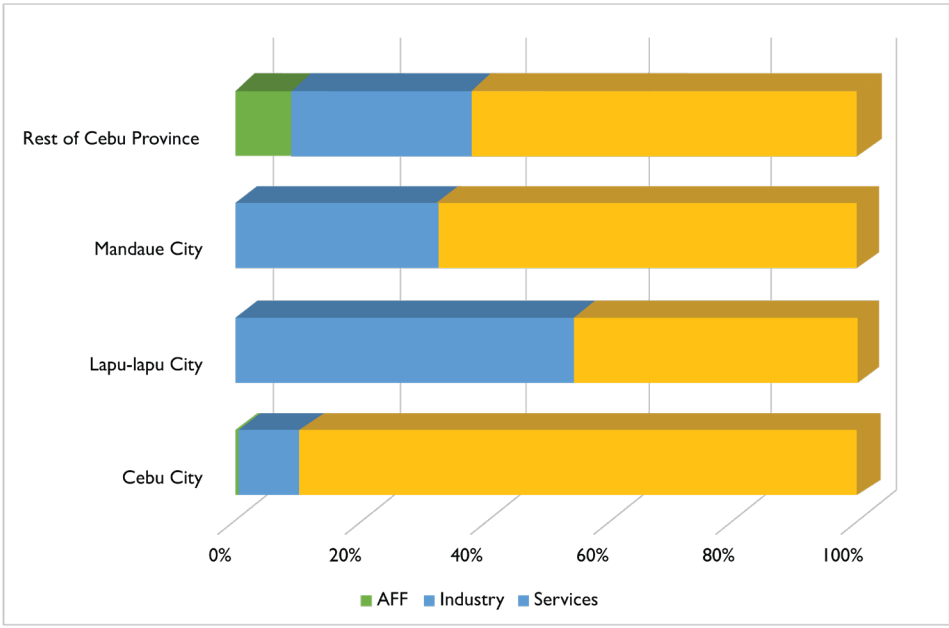


Figure 4. Distribution of Total Output by LGUs and Economic Sector: 2022

Note: Figure 4 is based on the author's compilation using the Provincial Product Accounts of the Philippine Statistics Authority (https://psa.gov.ph/statistics/ppa). For illustration and comparative purposes, the total value of Cebu province's output is added to the total value of the three HUCs in the same province.

The next figure highlights the performance of Cebu City and other HUCs in the province with respect to the production of good and services by sector. Among the three major economic activities, the service sector comprises the biggest portion of output for the cities of Cebu and Mandaue while the local economy of Lapu-Lapu City is predominantly industrial.[3] Lastly, the rest of Cebu province is also largely dominated by service sector. It is evident how the entire economy of Cebu is service-oriented, and this fact could explain why it continues to experience relatively faster growth since it is well-established in the literature that the service sector grows more rapidly than the other major sectors in the economy (Gill, 2021).

Cebu's Performance Amidst the COVID-19 Pandemic

This section provides a quick look at the economic indicators of Cebu province and its HUCs in the context of COVID-19 pandemic. As shown in Figure 5, the impact of the pandemic is glaring across the LGUs, which indicate the devastation that the pandemic brought on their local economies. In 2020, the decline in Cebu's provincial output was lower than the national and regional average by 1.3 percentage points.[4] In the succeeding years, Cebu was able to slightly recover from the pandemic achieving 5.4 percent growth in 2021 and 5.0 percent growth in 2022—only this time. Its recovery was much lower than the national average.

Meanwhile, out of the three HUCs in Cebu, Lapu-Lapu City suffered the highest decrease in production at 16.7 percent while Cebu City experienced a decline of about 10.8 percent. In 2021, Cebu City's economy was able to bounce back much faster than the other two cities, but eventually, due to the resumption of economic activities across the country, the cities of Mandaue and Lapu-Lapu grew much faster

3 Using the Philippine Standard Industrial Classification, PSA calculates the output for the industry sector based on the following activities: mining and quarrying, manufacturing, electricity, steam, water, and waste management, and construction (PSA, n.d.).

4 The country's GDP growth rate at 2018 constant prices for 2020 was -9.5 while Central Visayas' GDP growth rate was also estimated at -9.5.

than Cebu. For cities that rely heavily on the service sector like Cebu City, the impact of the pandemic seems to be less worse than those cities that rely on manufacturing like the cities of Mandaue and Lapu-Lapu. This could be attributed to the fact that during the pandemic, most manufacturers temporarily shut down while several businesses under the service sector were able to take advantage of online mode and work-from-home arrangements.

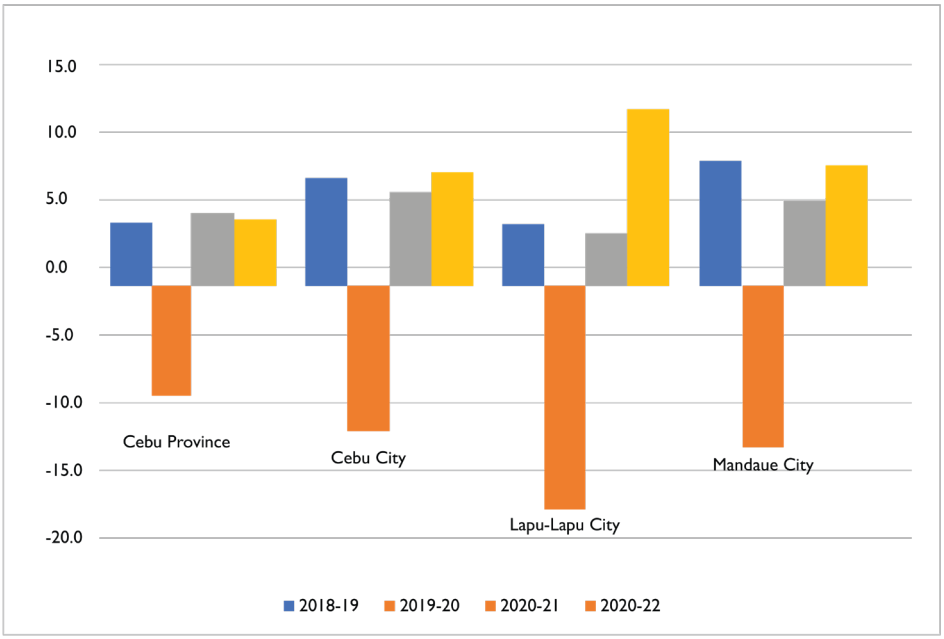


Figure 5. Growth Rates of Cebu Province and Its HUCs: Before and After the Pandemic

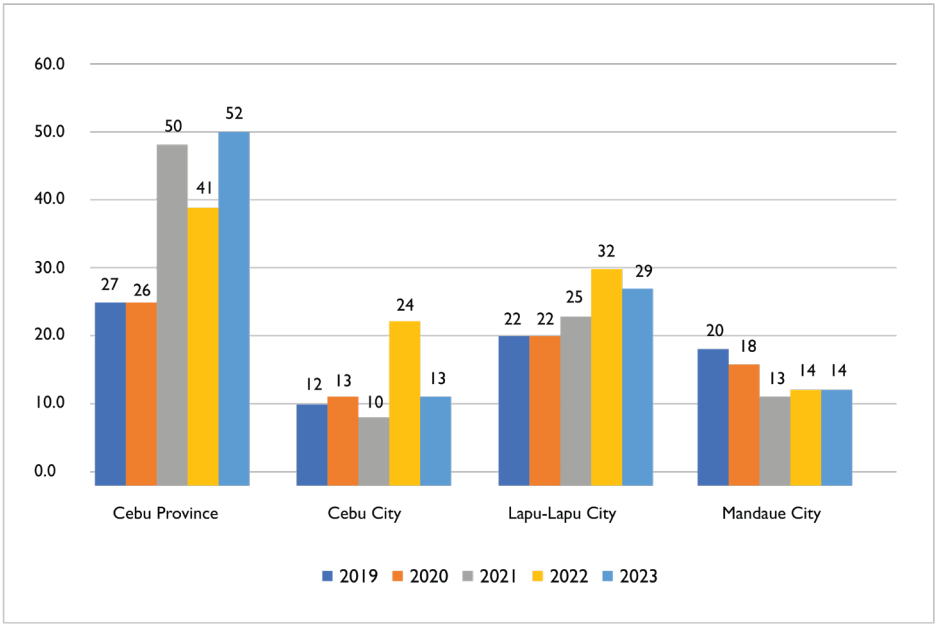
Note: Figure 5 is based on the author's compilation using the Provincial Product Accounts of the Philippine Statistics Authority (PSA, 2024a, 2024b).

On the other hand, Figure 6 presents the overall competitiveness rankings of Cebu province and the three HUCs before and after the COVID-19 pandemic.[5] Before the onslaught of the pandemic, Cebu's ranks in the provincial ranking were relatively higher, but in the aftermath of the economic shutdown brought by COVID-19, the province's competitiveness performance suffered a major blow—from 26th rank in

5 For Figure 7, higher values indicate lower ranks in the competitiveness ranking. Likewise, the figures representing the current year used the data from the previous period, e.g., the ranking for 2023 uses the data collected for the previous period. This is based on the survey design of CMCI (CMCI, n.d.)

2020 to 50th rank in 2021. A few years after the pandemic, the negative impact of the pandemic seems to have lingering effect on Cebu's provincial ranking. In terms of the HUCs performance, an opposite trend is observed for the cities of Cebu nd Mandaue. In 2021, both cities were ranked higher compared to the previous period while Lapu-Lapu City's rank took a dip by three levels. For cities that used to experience faster growth, their recovery in the competitiveness ranking seems to be much faster than cities with slower growth rates.

Figure 5.
Competitiveness Ranking of Cebu Province and Its HUCs: Before and After the Pandemic



Note: Figure 6 is based on the author's compilation using the Cities and Municipalities Competitiveness Index Survey for 2023 by the Department of Trade & Industry–Competitiveness Bureau (https://cmci.dti.gov.ph/rankings.php).

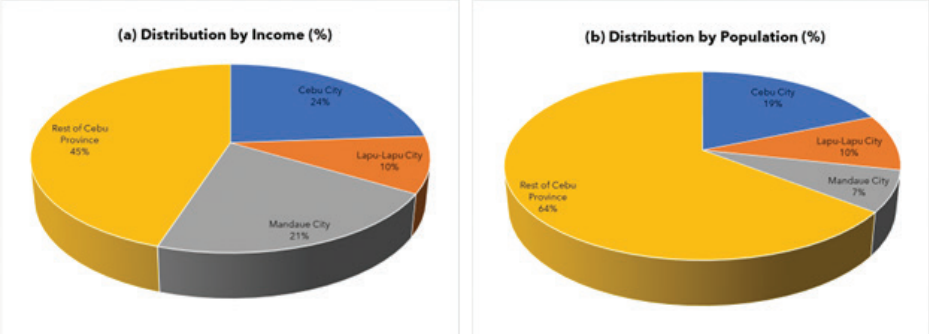
Issues with the Provincial Competitiveness Score

In addition to the discussion regarding Cebu's economic performance in the recent past, this article would like to bring up some issues with respect to the province's competitiveness. While growth rates are quite insightful in diagnosing an economy's health, determining its competitiveness is equally important as this gauges its readiness to generate and grow its own wealth as well as enable its people to achieve higher standards of living. As previously mentioned, the CMCI survey ranks not only cities and municipalities, but also the 82 provinces of the Philippines. The competitiveness scores for the provincial ranking are calculated based on the weighted population and income of the provinces—where population and income variables are assigned with equal weights (CMCI, n.d.).

With respect to this ranking, one of the observed disadvantages in Cebu is that it is the only province that has the most number of HUCs as opposed to other provinces. Among the top five most competitive provinces in the country based on the 2023 CMC survey results, none of the provinces have any HUCs, which means that the population and income data of their respective cities and municipalities were all included in the computation of their competitiveness scores. Inclusion of such data in the index can help improve their provincial ranking, especially if those cities or municipalities are equally competitive. To illustrate, the province of Rizal in Region 4A was awarded the most competitive province in 2023 and its lone component city, Antipolo, ranked third for the most competitive component cities in the same period. Additionally, five of its first class-municipalities dominated the top ten most competitive municipalities in the country for 2023.

As presented in the following figures, more than half of the revenue of the province comes from its three highly urbanized cities (Figure 7a). In terms of the distribution by population, a huge majority of the population is located outside of the three HUCs (Figure 7b). Assigning equal weights to these two variables could magnify the

Figure 7. Distribution of Cebu Province (including HUCs) by Income and Population: 2022



Note: Figures 7a and 7b are based on the author's compilation using the Provincial Product Accounts of the Philippine Statistics Authority (PSA, 2024a, 2024b) and the Cities and Municipalities Competitiveness Index Survey for 2023 by the Department of Trade & Industry–Competitiveness Bureau (https://cmci.dti.gov.ph/rankings.php). For illustration and comparative purposes, the total revenue and population of Cebu province were added to the total revenues and populations of the three HUCs in the same province.

inherent disadvantage of similarly-situated provinces where there are HUCs whose data are excluded from the calculation of the index. Cambel and Albacea (2021) made a similar observation and proposed that varied weighting techniques be explored when generating competitiveness scores as an alternative to what is currently being used in the CMCI survey. Given the weight distributions used in the calculation of provincial scores, it is not surprising to see why Cebu's competitiveness performance is subpar at best. Excluding the data coming from these HUCs, where most economic activities occur, can certainly have inadvertent and negative implications for the competitiveness index of a province like Cebu.

Moving Forward

Despite the underwhelming performances of the Cities and the provinces of Cebu in terms of economic growth and competitiveness ranking, they still remain as two of the strongest local economies in their own categories not only in the region but also in the Philippines. Given the limitations of how the estimates are calculated and the economic damage caused by COVID-19 pandemic, it is noteworthy that both the city

and province of Cebu continue to thrive and significantly contribute to the overall growth of the country. This can even provide opportunities for collaboration between the provincial government and the respective governments of the three HUCs in the pursuit of inclusive growth and development for the entire Cebu province.

Aside from engaging in competition among LGUs in the same economic space, there is also a need for cooperation particularly on areas where complementarities in policies and programs are much needed such as housing development, solid waste management, food and water security, among others. Lastly, this article highly recommends that any instruments used to gauge the economic performance of provinces must consider the effects of the number of HUCs within its geography. However, this could potentially become a superficial excuse and one that must be avoided by those in power who could otherwise steer the course of Cebu's economic trajectory towards better performance. After all, both the city and the province of Cebu have their own reputations to uphold.

RESEARCH STUDY: **SOLID WASTE MANAGEMENT**

DESIGNED BY FREEPIK

Women and waste recycling initiatives: *The Cebu experience*

by **Leny G. Ocasiones** and **Ubo Pakes**

Waste management is one of the major hurdles the Philippines must overcome as a developing country. Poorly managed solid waste results to the contamination of ground water sources, creates obnoxious odors and aesthetic deterioration resulting to adverse public health problems such as typhoid fever, dysentery, tuberculosis, parasitism, malaria, respiratory ailments, and dengue (Huhtala, 1999). The existing evidence on the interconnectedness of poor solid waste management and adverse health outcomes calls to action by all stakeholders in understanding, prioritizing, and addressing the issue of solid waste in our midst to ensure that our environment and health are preserved.

The Philippines has about 100 million people generating an average of 0.3 to 0.7 kilograms of garbage daily (Macawile and Su, 2009). This figure is expected to increase by 40% at the end of the decade especially with the inefficient waste management in the country. To resp ond to this problem, the Philippine Ecological Waste Management Act of 2000 was legislated, which aimed, among others, to ensure the protection of public health and environment, to set the guidelines and targets for solid waste avoidance and volume reduction through source reduction and waste minimization measures, including , composing, recycling, reuse, recovery and other before collection, treatment and disposal in appropriate and environmentally sound solid waste management facilities in accordance with ecologically sustainable development principles. Sustainable Waste Management is also included in SDG's. the The United Nations Environmental Programme states that with Target 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management. The indicator measures the progress of performance of a city's municipal solid waste (MSW).

Women have an especially powerful role in making decisions relating to sustainable consumption. Their contribution to the management of the natural environment, including environmental protection frequently takes place at local level where decentralized action is most needed and of crucial importance (Beijing Platform for

Action, 1995). In Cebu, various efforts of women's organizations have been noted which are supported by the Southern Partners Fair Trade Corporation and the Women's Resource Center of Visayas. These women's organizations are scattered throughout Cebu province and are mostly grassroots women who are not only generating income for themselves but also contributing to the protection of the environment through solid waste recycling.

Since women in most societies tend to have initial control over the generation and reuse of waste in the household, it is relevant to ask whether these are, within the "special relationships" of poor people to waste, further distinctive aspects of women's work that warrant particular, even separate attention (Fuhredy, 1990). In developing countries like the Philippines, women's relationship with the environment is considered vital to their daily lives (Guiriba, 2013).

This article describes the efforts of the women's organizations (from the sources of the solid wastes to how these are being processed and where the recycled products are being distributed) and enhance awareness of the contributions of women's organizations in recycling solid waste materials.

Solid Waste Management and Health

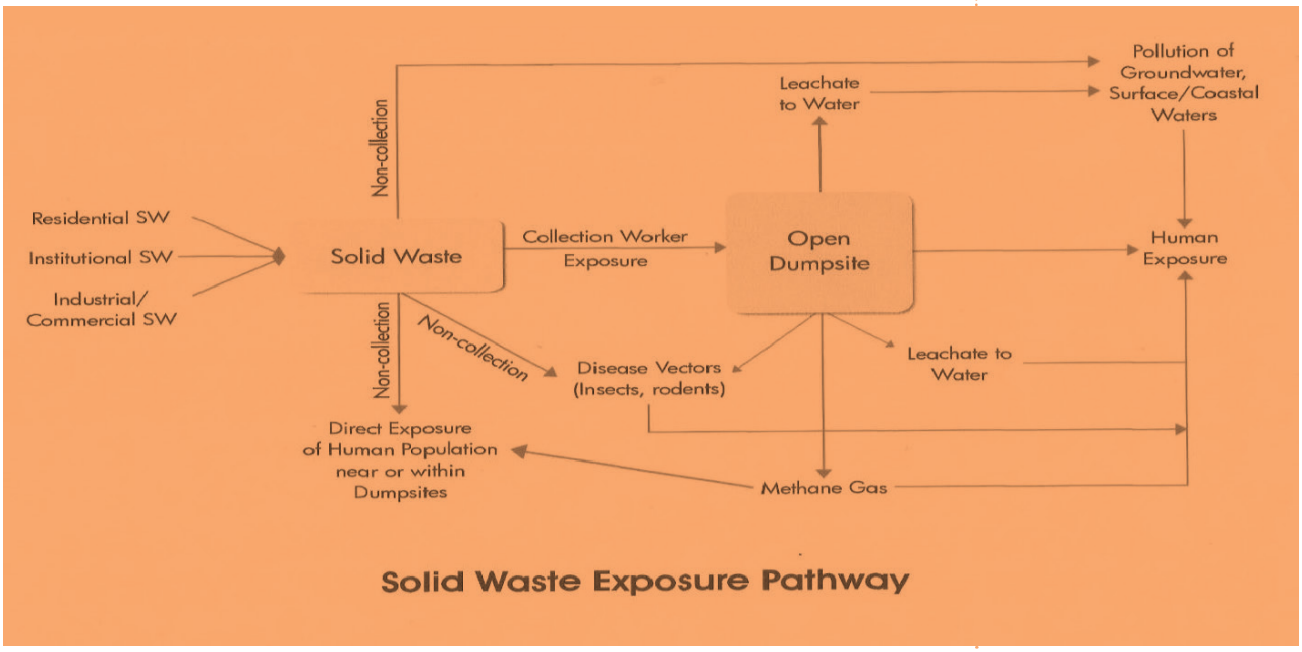
Solid waste has adverse effects on health and is one of the major reasons why solid waste management is a top environmental and public health issue in the Philippines and elsewhere (Ziraba et al, 2016). Waste not properly managed, especially excreta and other household and community waste , is a serious health hazard and leads to the spread of infectious diseases. Solid-waste management is the discipline associated with controlling the generation, storage, collection, transfer and transport, processing, and disposal of solid waste in a manner that is in accordance with the best principles of health, economics, engineering, conservation, aesthetics, and other environmental considerations, and that is also responsive to public attitude s. In its scope, solid-waste management includes all administrative, financial, legal,

planning, and engineering functions involved in the solutions to all problems of solid waste (Hwa, 2007). Leachate from solid waste can contaminate ground- and surface water sources. Insects and pests in open dumpsites are disease vectors. In addition, methane gases from dumpsites can affect the health of exposed communities and contribute to global warming. Coastal and marine pollutants affect aesthetics and seriously harms marine life . Improperly managed solid waste also can result in increased flooding and destruction of infrastructures due to clogged waterways.

The disease pathway associated with the poor handling of solid waste becomes manifest usually through direct exposure of humans and the pollution of surface water and groundwater due to leachate from open dumps (See Figure 1). The World Health Organization and the World Bank estimate that approximately 88% of diarrhea cases worldwide can be attributed to poor water quality, sanitation, and hygiene. In the same manner, poor water quality, sanitation, and hygiene cause 100% of cholera cases, 100% of helminthiasis cases, 50% of hepatitis cases, and 50% of typhoid and paratyphoid fever cases.

Figure 1. Solid Waste Exposure Pathway.

SOURCE: NATIONAL SOLID WASTE MANAGEMENT COMMISSION (NSWMC, 2008).



There are other environmental costs associated with improperly disposed municipal solid wastes. These include pollution of surface and marine waters that could deplete fish and other marine resources, damages to infrastructures from worsened flooding incidence due to clogged waterways, increased cost of dredging and coastal cleanups and loss of aesthetic value.

In its 2008-2014 Report, the National Solid Waste Management Commission (NSWMC), presented a hierarchy of options as shown in Figure 2. It starts with avoidance where a person avoids acquiring things that he/she will not be using after all and wil l eventually be discarded and become part of the garbage problem. Next is reduction where you reduce your consumption. Instead of buying more and end up throwing them later, you identify a specific amount that you need and that's the only thing you will acquire. This is followed by reusing the things that can still be reused, recycling or putting things into another use, followed by recovery, treatment and safe disposal . In all these options, reusing and recycling are considered to be the most preferred options.

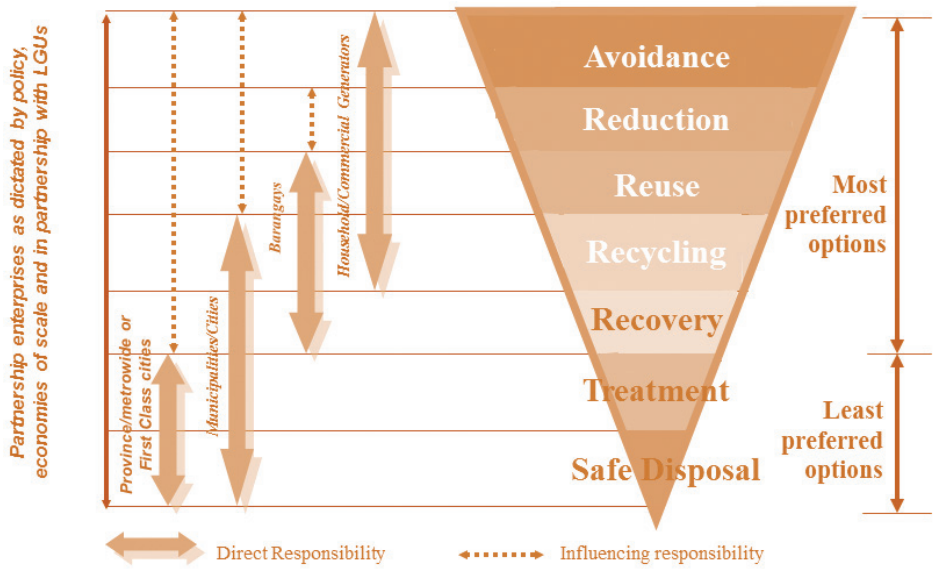


Figure 2.

SOURCE: NATIONAL SOLID WASTE MANAGEMENT COMMISSION (NSWMC, 2008).

Recycling can be defined as the recovery of useful materials (such as paper, glass, plastic, metals, construction and demolition material) and organics from the waste stream (e.g. municipal solid waste), along with the transformation of the materials to make new products to reduce the amount of virgin raw materials needed to meet consumer demands (EPA, 2016) . It is necessary to associate recyclable materials and recycling flows with the physical processes involved in transforming recyclable materials into useful products, providing reusable materials to intermediate and final consumers and delivering donated food to those in need to estimate the economic activity attributable to recycling. EPA defines that the scope of recycling activities does not include materials that are recovered or reused during the initial production stage, but rather on materials already distributed into the economy.

These processes can then be associated with specific product and service industries to estimate the direct, indirect and induced economic activity attributable to recycling, reuse and food donation. Recycling processes and activities include a range of activities including: (1) material collection; (2) separation, cleaning and/or other processing (e.g., baling plastic bottles); (3) transformation of recyclable materials into marketable products; (4) distribution, storage and service delivery (e.g., distribution of food to and from food banks); and (5) transportation between each stage. For this analysis, recycling activities are defined to include all of these activities.

PHOTO BY FREEPIK

Solid Waste Management in the Philippines

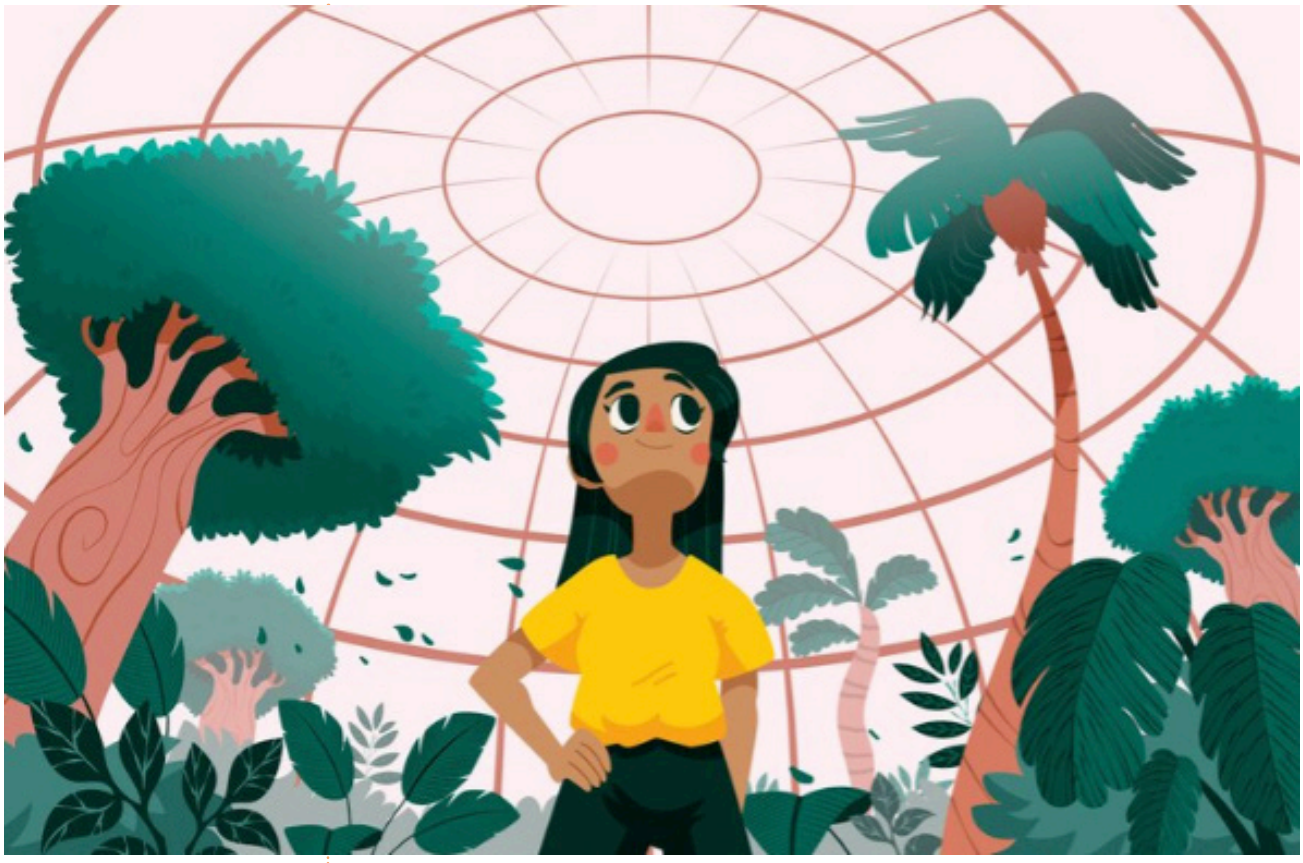
The Philippines' waste generation continues to rise with the increase in population, improvement of living standards, rapid economic growth, and industrialization especially in the urban areas (Senate of the Philippines, 2017). The National Solid Waste Management Commission (NSWMC) calculated that from 37,427.46 tons per day in 2012, the country's waste generation steadily increased to 40,087.45 tons in 2016 with an estimated average per capita waste generation of 0.40 kilograms per day for both urban and rural areas. Solid waste are generated from residential, commercial, industrial and institutional sources. (NSWMC, 2015).

Cebu City alone grappled with an daily average of 325,000 kilograms (or 325 tons) of waste in 2012 (Cabrera, 2012) but this ballooned to 500,000- 700,000 (or 500-700 tons) in 2021 (Magsumbol, 2021) .

The Philippine Ecological Waste Management Act of 2000 was legislated, aiming, among others, to ensure the protection of public health and environment, to set the guidelines and targets for solid waste avoidance and volume reduction through source reduction and waste minimization measures, including, composing, recycling, reuse, recovery and other before collection, treatment and disposal in appropriate and environmentally sound solid waste management facilities in accordance with ecologically sustainable development principles. Sustainable Waste Management is also included in SDG's. The United Nations Environmental Program states that with Target 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management. The indicator measures the progress of performance of a city's municipal solid waste. The Act specifically mentioned the need for every local government unit (LGU) to come up with a solid waste management plan with recycling as one of the major components. It also requires the Department of Trade and Industry (DTI) for Inventory of Existing Markets for Recyclable Materials (Section 1) and Eco-labeling (Section 2).

The country's solid waste typically contain more organic components than other materials. Disposed waste is dominated by biodegradable waste with 52 %, followed by recyclable waste (28 %) and residuals at 18 % (NSWMC) . The significant shares of biodegradables and recyclables indicate that composting and recycling have great potential in reducing solid waste. Hwa (2007) argues that understanding the waste generated, the availability of resources, and the environmental conditions of a particular society are important to developing an appropriate waste-management system.

It is thus the interest of this study to document the ongoing recycling efforts at the barangay level, especially those initiated by women's organizations as these are often undocumented and/or unacknowledged.



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Theoretical underpinnings

Studies examining gender differences in environmental perception are often driven by an interest in understanding women's role in the environmental movement and in harnessing them as managers of the environment (Momsen, 2010). While it is often asserted that women's relationship with the environment is special and that women are more motivated than men to work for the enhancement of the sustainability of the environment, this has resulted to development agencies assuming that there is that natural connection between women and environment in allocating financial aid thereby creating serious risks of "simply adding environment to the already long list of women's caring roles, instrumentalizing women as a source of cheap or unrewarded labour" (Leach et al. 1995: 7).

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'Ecofeminism' has been defined as 'a movement that makes connections between environmentalisms and feminisms: more precisely, it articulates the theory that the ideologies that authorize injustices based on gender, race and class are related to the ideologies that sanction the exploitation and degradation of the environment' (Sturgeon 1997: 25). Ecofeminism consists of several strands relating to the connections between women and nature: first, the co-domination of women and nature (Plumwood 1993; Warren 1990); second, Shiva (1989) extends this to blame Western science and colonial development policies for the negative impact of economic development on both the environment and on women's lives in the global South. Cultural ecofeminists emphasize the importance of biology in bringing women closer to nature, arguing that the female biological processes of pregnancy and childbirth are the source of women's power and ecological activism.

Ecofeminism also tends to essentialize nature itself. It considers nature to encompass all ecological aspects of the environment as well as natural (biological) human needs and capacities. Leach et al. argue that 'equating "the environment" with "nature" can obscure the historical and continued shaping of landscapes by people, often within conceptions of society and environment as inseparable' (1995: 3). Such arguments further undermine the overarching view of ecofeminism. It was presented at the 1992 Rio UNCED Global for a as being generalizable to all women. As Braidotti et al. (1994: 164) note, essentialist ecofeminism was seen as a source of women's empowerment by reversing 'patriarchal power structures and [placing] women at the top of new gynocentric hierarchies. However, they concluded that: 'Despite its powerful mobilizing potential, this approach may become a self-defeating strategy, in particular as it has marginalized other approaches in ecofeminism and led to the disenchantment of many women in the environmental movement with associating themselves with ecofeminist positions' (Braidotti et al. 1994: 165).

Both Rocheleau et al. (1996) and Leach et al. (1995) point out the difficulty experienced by many researchers in reconciling ecofeminist views with the everyday situations found in the field. They stress the need to provide a local context for any study of gender and the environment, by contextualizing development in the social and natural environment. Kirk argues that a sense of place is something few ecofeminists address, 'perhaps because many of us live in urban areas or are relatively mobile' (1998: 192). On the other hand, to assume that certain cultural groups have a natural affinity with the land is equally essentialist. Thus, ecofeminism suffers from multiple essentialisms, not only of women and of ethnic groups but also of nature/environment itself. An awareness of these underlying assumptions makes it possible to carry out relevant community-based environmental work, while avoiding essentialist arguments about the uniqueness and profundity of land-based local cultures.

Feminist political ecology as utilized by Rocheleau et al. (1996) brings together much of ecofeminism but takes into account the above-mentioned critiques. It deals with how gender interacts with class, race, ethnicity, national identity and situated knowledge to shape experiences of and interest in the environment. Feminist

political ecology, perhaps combined with a materialist ecological feminism, provides a stronger theoretical framework for studies of gender and environment than an uncritical acceptance of the term 'ecofeminism'.

This study anchors itself to the feminist political ecology acknowledging the intersectionality of gender, class, geographical location and the women's unique/situated experiences shaping their participation to waste recycling in particular and commitment to environmental sustainability and community health in general.

Methodology

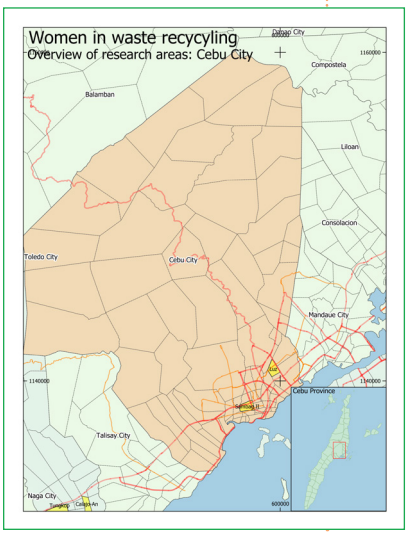
This study sought to determine the contributions of women's organizations in recycling solid waste materials thereby enhancing awareness of the importance of solid waste recycling and the benefits it could bring to communities and women's organizations. Specifically, it sought to:

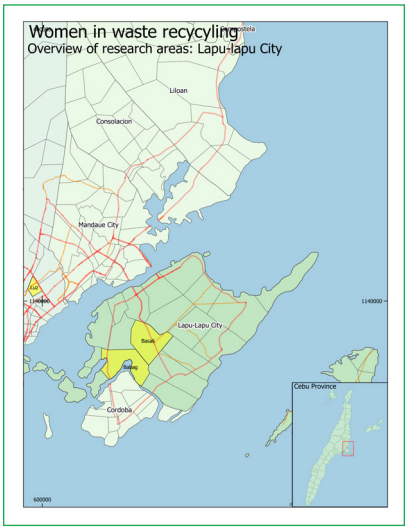
1. Identify the women's organizations that are actively involved in waste recycling.
2. Document the processes employed in recycling solid waste.
3. Examine the challenges faced in the community and how these are addressed.
4. Assess the women's perceptions regarding the benefits of solid waste recycling, and
5. Using GPS and GIS, determine the sources of solid waste, the recycling sites, and the destination of recycled products.

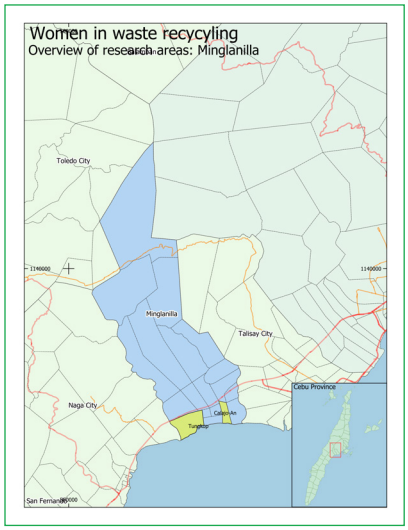
The study is descriptive in nature as it tried to capture the lived experiences of the women's organizations engaged in recycling activities. Women's experiences were documented and thematically analyzed. Methods included the use of existing sources from various Local Government Units and NGOs, key informant interviews, focus group discussions, and spatial survey using ODK. Observation, hanging-out, KII and FGD methods were used to obtain community data, perceptions and impressions regarding the recycling program.

The project covers a total of six barangays from two cities and one municipality. All six barangays were identified by the partner agency, WRCV, as communities that have women's initiatives in solid waste recycling. For Cebu City, Barangays Luz and Sambag-2 , for Lapu-Lapu City, Barangays Basak and Babag, and for the Municipality of Minglanilla, Barangays Calajo-an and Tungkop. These research sites (Figures 7, 8, and. 9) have been reported to have women engaged in recycling solid waste materials, turning them into bags, pouches, pencil cases and folders.

The study did 12 Key Informant Interviews (KII) in the six barangays in three municipalities with two study participants from each barangay (N=12). Key informants were chosen based on one's key role or important participation in the recycling projects in the organization for at least six months in the research sites, e.g. an NGO leader who facilitated a recycling project, leader/officer of the women's organization, trainer of the recycling project, or a representative from the barangay LGU involved in a recycling project. Of the 12 key informants, 10 were women and 2 were men. Eight of the key informants are directly engaged in waste recycling process while the other four have supporting roles in the recycling initiatives. Their age ranges from 29 to 65 years old and with varied educational background from elementary graduate to Masters' degree holders. They are all attached to an organization , three







are barangay officials while others are with women or non-government organizations (NGOs) mostly based in their respective barangays.

Cebu City is a coastal highly urbanized city in the Central Visayas region. Although administratively independent due to its distinction as highly urbanized city, Cebu City is commonly grouped with the island province of Cebu. The highly urbanized city also serves as the provincial capital as well as the regional center of Central Visayas.

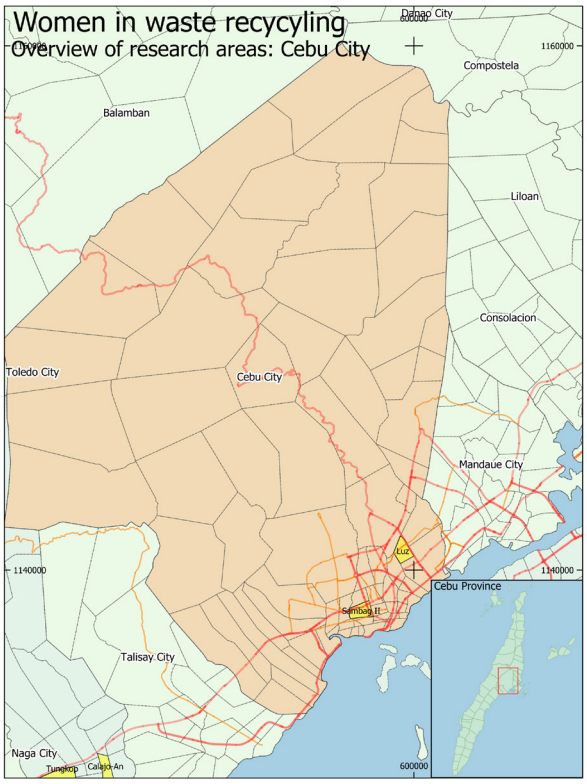


Figure 7. Project sites Luz and Sambag-2 in Cebu City.

The city has a land area of 315.00 square kilometers or 121.62 square miles. Its population as determined by the 2015 Census was 922,611. This represented 12.47% of the total population of the Central Visayas region. Based on these figures, the population density is computed at 2,929 inhabitants per square kilometer or 7,586 inhabitants per square mile. Cebu City has 80 barangays as shown in the following table, with Barangay Luz (population 18, 313) and Sambag 2 (population: 11,223) as two of the research sites.

Figure 8. Project sites Babag and Basak in Lapu-Lapu City.

Lapu-Lapu, formerly known as Opon, is a coastal highly urbanized city in the Central Visayas region. Although administratively independent due to its distinction as highly urbanized city, Lapu-Lapu is commonly grouped with the island province of Cebu. The city has a land area of 58.10 square kilometers or 22.43 square miles. Its population as determined by the 2015 Census was 408,112. This represented 5.52% of the total population of the Central Visayas region. Lapu-Lapu has 30 barangays with Barangays Babag (population: 22,256) and Basak (population: 59, 873) as research sites.

Minglanilla is a coastal municipality in the island province of Cebu. The municipality has a land area of 65.60 square kilometers or 25.33 square miles which constitutes 1.33% of Cebu's total area. Its population as determined by the 2015 Census was 132,135. This represented 4.50% of the total population of Cebu province, or 1.79% of the overall population of the Central Visayas region. Based on these figures, the population density is computed at 2,014 inhabitants per square kilometer or 5,217 inhabitants per square mile. Minglanilla has 19 barangays, two of them are Tungkop, with a population of 11, 003 and Calajo-an, with a population of 11,583 are research sites.

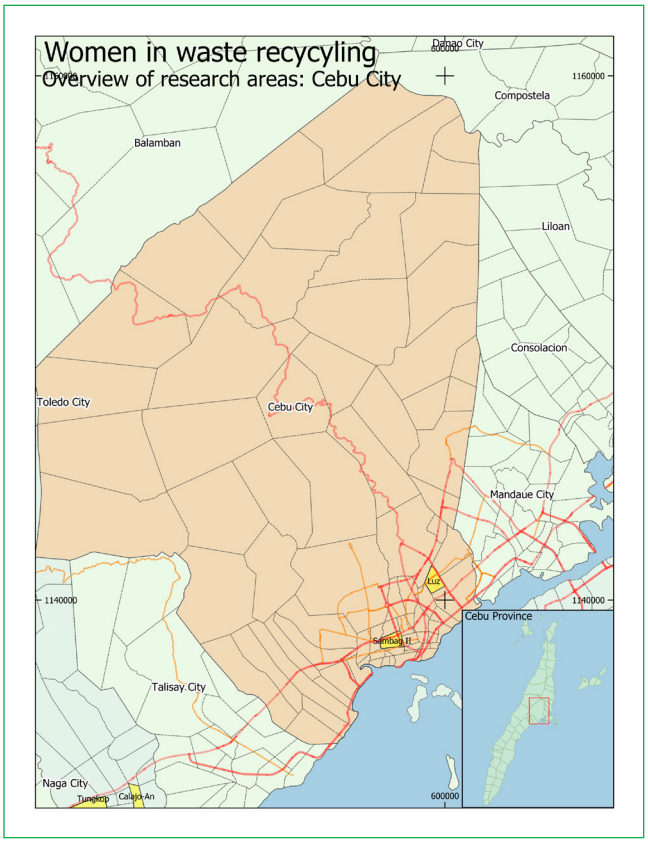


Figure 9. Project sites Calajo-an and Tungkop in Minglanilla, Cebu.

Study Population

Of the 12 key informants, 10 were women and 2 were men. Eight of the key informants are directly engaged in waste recycling process while the other four have supporting roles in the recycling initiatives. Their age ranges from 29 to 65 years old and with varied educational background from elementary graduate to Masters' degree holders. They are all attached to an organization, three are barangay officials while others are with women or non-government organizations (NGOs) mostly based in their respective barangays.

For the FGD component, a total of 61 females and 1 male participated, with ages ranging from 31 to 73 years old. The highest number of FGD participants came from Barangay Babag in Lapu-lapu City (N-13) while the FGD with the smallest number of participants

was in Barangay Sambag 2, Cebu City (N=7). Majority of the participants attained high school education (N=27) and are married (N= 43).

Spatial Data Collection

Smartphones have become more and more common and powerful over the last years and changed the way we communicate. It is estimated that in the Philippines there are about 82 million smartphones, so that about 80% of the population has a smart phone. Of these, Android is the dominant platform. Using the advantages of these small computers, several tools have been developed to facilitate structured data collection. Open Data Kit (ODK) is a set of tools that allows data collection using Android devices and data submission to an online server, even without Internet connection or cell phone signal at the time of the survey (Pakes and Subong, 2017). It can be easily used in the field and can use the GPS and camera of the device in the survey and since many people own a smartphone, surveyors often easily master the software. Once data have been collected with ODK Collect, the data are uploaded and managed using ODK Aggregate which is also capable of of basic analysis and can send data to external applications for further processing.

Two sets of prescribed questions to be incorporated in the ODK questionnaire which were parts of the questionnaire from the Key Informant Interviews. These questions that pertain to possible location information were converted into an ODK digital survey form. It was intended that the main source of data for the locations would be the KII as it was expected that the workflow of the KII better matches the use of the digital tool than FGD. This is because it may be easier to meet the KII contact persons in their workplaces that in meeting with groups. For this reason, those parts of the KII interview form that related to location or those parts that could be entered more efficiently using ODK than writing were converted into a form for ODK collect

Android devices were used in this survey to map the location of each Key Informant Interview. ODK Collect was installed in each device. This application renders forms

into a sequence of input prompts that apply from logic, entry constraints, and repeating sub-structure and can work without network (internet) connectivity (opendatakit.org, n.d.). The questionnaires were downloaded and users work through the prompts (questions) and save and submit the form at any point. Since the application can function without network connectivity, users submit the final forms to the server once they have connection to the internet.

A briefing and orientation for the KII specialists/surveyors was conducted. As a result of the training and subsequent discussions, some changes to the survey form were made, mainly pertaining to the preferred workflow of the surveyors.
Data collection using ODK and the KII and took place from October 1 to October 24. During this period, no problems with ODK or uploading the data were mentioned, but not all data were uploaded immediately as some surveyors wanted to double check their data before uploading. A total of 21 surveys was uploaded, but this includes some mock surveys that were used for testing. These were purged before the analysis of the data will start.

Data Processing and Analysis

Data gathered from the KII and FGD were documented, transcribed, and translated. Transcribed texts were sorted based on the themes from the topics on the interview guide. Secondary data gathered and field notes were utilized to enhance and validate the results. Spatial data were processed using Microsoft Excel program and presented in Google Earth while QGIS was used for the processing and presentation of the geographic data.

To map the locations in a GIS, actual coordinates must be available. These have been collected with the GPS feature of ODK. Other locations are more descriptive and vary very much, ranging from relative detailed as sitio, barangay, LGU or street, barangay, LGU to more generic as the only the name of a business or barangay or LGU. Using Google Earth all these locations have been located and all coordinates

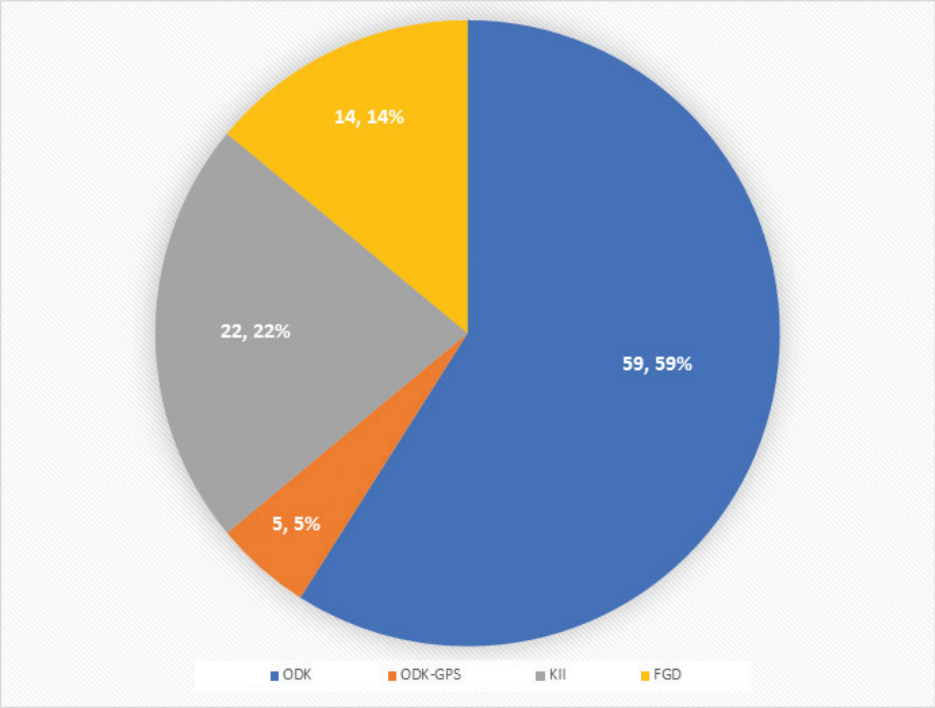


Figure 12. Source of spatial data.

have been entered in an Excel spreadsheet. An overview of the source of the locations is given in the following graph.

All in all, 100 locations were collected but not all were used to make the maps. In several cases, the KII or FGD data did not give new locations, but rather added detail to existing locations or different respondents mentioned the same locations. In these cases, only one of the two were used in making the map. Using QGIS a separate shape file layer was made for the data from every women's organization.

Results and Discussion

Study participants produced a lot of products out of recycling ranging from all-purpose round rugs locally known as trapo, foot rug known as trapo sa tiil to vermicompost, enzymes, charcoal made of paper, rope made of paper, bags, pouches, and coiled paper.

All the study participants overwhelmingly agree for the need to recycle solid waste and are mostly involved in the process. Many of them, however, have limited understanding of the term and perceive waste recycling as synonymous to reduction, segregation, and reuse.

Nonetheless, it is very evident from the responses that study participants are aware of the waste management problem and its interrelatedness to health and environmental issues in their communities and the country. A few of the participants, however, reveal a deep understanding of the concept of waste recycling, pointing the need to not just reduce or reuse but to transform recyclable waste into something else that will be useful in the long run.

When it comes to benefits of recycling, majority of the women mentioned economic benefits first and foremost followed by benefits in the environment, health, family, and organizational solidarity. Five out of the six FGDs conducted summarily mentioned recycling benefits as primarily providing them additional income. Additional income also dominated the answers of the key informants as nine out of 12 mentioned it as the benefits that they get from doing recycling.

For some women such as those in Barangays Babag (Lapu-Lapu) and Calajo-an (Minglanilla) who were not trained to recycle solid waste or were trained but find recycling to be too cumbersome and tedious, waste segregation and selling them is the preferred option. While the price is not much (see Table 1), they believe that they still earn no matter how little.

Table 1. Recyclable materials and their selling price.

Material	Price (PhP)
Glass bottles (Kulafu, Emperador)	**0.50 /pc**
Plastic bottles	**2.00/kilo** (when picked up by wandering buyers)
	5.00/kilo (Junk Shop)
Cans	**2.00/kilo** (when picked up by wandering buyers)
	4.00/kilo (Junk Shop)

Next to economic benefits, study participants cited the importance of lessening the garbage through waste recycling. By doing so, they say their community becomes cleaner and there were fewer instances that their drainage was clogged and therefore flooding is prevented. They also mentioned that burning or daob has been greatly lessened due to recycling. It is important to note that all study participants say it can help the environment, but many are not able to articulate why.

Barangays Babag (Lapu-lapu) and Tungkop (Minglanilla) placed 3rd and 5th respectively in their respective city/municipality in having the highest number of dengue cases. Study participants from their areas believe that engaging in waste segregation and recycling have significant impact in this health problem.

Most study participants mentioned that engaging in waste recycling has strengthened their family ties. Family members, upon seeing their wives, mothers doing the recycling projects and seeing the outcome of the endeavor eventually help in the recycling initiatives of the women. Some participants in the FGD also mentioned of children learning and appreciating the importance of waste management and recycling.

Organizational bonding and unity of members were two of the common responses to the question on the effects of waste recycling to their organization. Study participants cited the advantage of being able to work with fellow women and having the opportunity to engage in conversations regarding their everyday lives.

There were however admitted organizational problems along the way. One participant cited the unequal sharing of proceeds from the sale of the recycled products while another mentioned that some are lazy and are not able to deliver what are expected of them.

The Women's Involvement in Waste Recycling

The women's knowledge on the importance of waste recycling in augmenting family income, environment, health, family and organizational unity became the basis for the active involvement of most participants. The involvement varies however from one participant to another. Emy, a 61-year-old widow from Sambag 2 is one of the most sought-after trainor of Non-government organizations and the Cebu City government. Pina of Barangay Luz is also a trainer and specializes in making diamond bags made of the back portion of stickers coming from a big pharmaceutical company in Barangay Kasambagan. Her two other colleagues are in-charge of weaving and rosary-making, respectively, all using recycled materials. Aside from being a trai nor, she also takes charge of the costing of their recycled products. Ira, also of Barangay Luz and a colleague of Pina, is the one in charge of marketing/looking for prospective buyers.

Others like Chai of Barangay Calajo-an does her own initiatives by using the remaining materials of her brother who is an events-organizer or would ask her husband to bring lotto paper from work. Chai didn't have any formal training but having to stay at home when she was pregnant made her recall their elementary and high school projects of coiled paper and origami and posted her products online. She now gets orders for parties or as souvenirs for weddings and birthdays.

Four of the study participants who are barangay officials show their support and encouragement to the waste recycling initiatives in various ways such as provision of sewing machines and a display area of recycled products. In the six barangays included in the research sites, only Barangays Luz (Cebu City), Basak (Lapu-lapu) and Tungkop (Minglanilla) have active involvement in waste recycling. These barangays have partial or full support from their barangay officials to the women's initiatives. Also, Barangays Luz and Tungkop have active women's organizations that spearhead the recycling activities.

The three other barangays, Sambag 2 (Cebu), Babag (Lapu-Lapu) and Calajo-an (Minglanilla) have no existing recycling programs but have individual women doing recycling activities and tapped by either the barangay or the women's organization to display their products on specific barangay or provincial activities or train other women in their barangays.

The Challenges Faced in the Community and How these were Addressed

While an overwhelming response tells of economic benefits and income augmentation as a result of doing recycling, study participants revealed that their income is never enough to sustain their needs. Ester, an FGD participant of Barangay Basak cried when we asked about the challenges they faced and had this to say:

"Problema? Kanang bisag maningkamot og maayo, kuwang gyod siya. Dili gyud igo" (Problem? It's that no matter how hard you try, it's still lacking. It is never enough).

Chai of Barangay Calajo-an agrees that the income is there but "..di gyud ingon nga nakasapar, pero in terms nga akong anak nay pangayuon, makahatag gyud ko labi na kung layo pa kayo ang sweldo sa akong bana, kanang atong gitawag ug tingbitay... sama karon" (I can't really say it's enough but at times when my child needs something, I can really provide especially when the salary of my husband is still far off, just like now).

This might explain the lamentation of key informant Rey, a Sambag 2 barangay official on the absence of sustainability of their waste recycling project. He pointed out that their barangay has been very supportive to women by providing sewing machines and a space where they can work and yet they shy away from the project and leaves only few individuals doing the recycling at home.

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Barangay's Lack of Concern, Incompetence

A notable observation of study participants on the challenges they face is the failure of barangays to implement the "waste segregation law" (RA 9003). Under this law, barangays play a crucial role in the implementation of solid waste management by having their own Material Recovery Facility (MRF). Some participants say their barangay did not give importance to waste management and another one went further by saying that their barangay is incompetent.

No less than a barangay official of Babag, also a study participant, said that they have not fully implemented the RA 9003.

Absence or lack of community participation in waste management/segregation was also another challenge raised by study participants. They pointed out that some people in their barangays are gahi ug ulo (hard-headed) and refuse to keep or segregate their waste.

Another serious concern raised by study participants is the scarcity of recyclable materials. Oftentimes they lack the materials for their products and need to respond to a specific order by a client that they end up buying their materials.

The absence of a market where they can expect direct sales is also a serious concern. As of now, the organizations and individuals engaged in waste recycling are depending on orders from LGUs or organizations or on occasional invitations from malls, fiestas to display their products. These are of course not regular. For study participants, having a regular display area where people can easily come and see their products would have made a big difference.

In sum, the challenges encountered mentioned by study participants were of income from recycled products as not enough, lack of concern or competence of barangay LGUs, lack of cooperation from the community, scarcity of recyclable materials and the absence of a market/display area for the products.

The sources of solid waste, the recycling sites, and the destination of recycled products

The study collected spatial information for three kinds of locations to determine (1) the availability of recyclable materials in the locality, (2) accessibility in processing and (3) how far recycled products have reached . All in all, this led to a total of 100 locations.

Most of the study participants work in a very local scale when it comes to the sourcing of solid waste (Figure 15). Most locations are in the barangay or within the municipality. Only if there are specific locations where materials can be sourced like donations or purchases from companies etc. the sources are very specific and may be further away. Processing is mostly done at home or at the barangay hall and there are not specific waste recycling sites where efforts are combined in a permanent and structural way. Also, the sales of the recycled products are quite fluid. Whenever the network allows, there are sales or displays in the barangay hall or upscale areas in metro Cebu. Most products appear to be sold through the established network of the individuals or the organization.

The study also noted that there is a demand for recycled products abroad as the sales in Belgium and Germany indicate. Also, through the SPFTC network international sales

are realized, but without these partnerships, the overseas market is difficult to reach and to sustain for the women's organizations.

In Figure 15, a map of the research areas with all locations are plotted. Some organizations are able to source or sell materials to areas outside of Metro Cebu (e.g. Manila, Germany and Belgium)

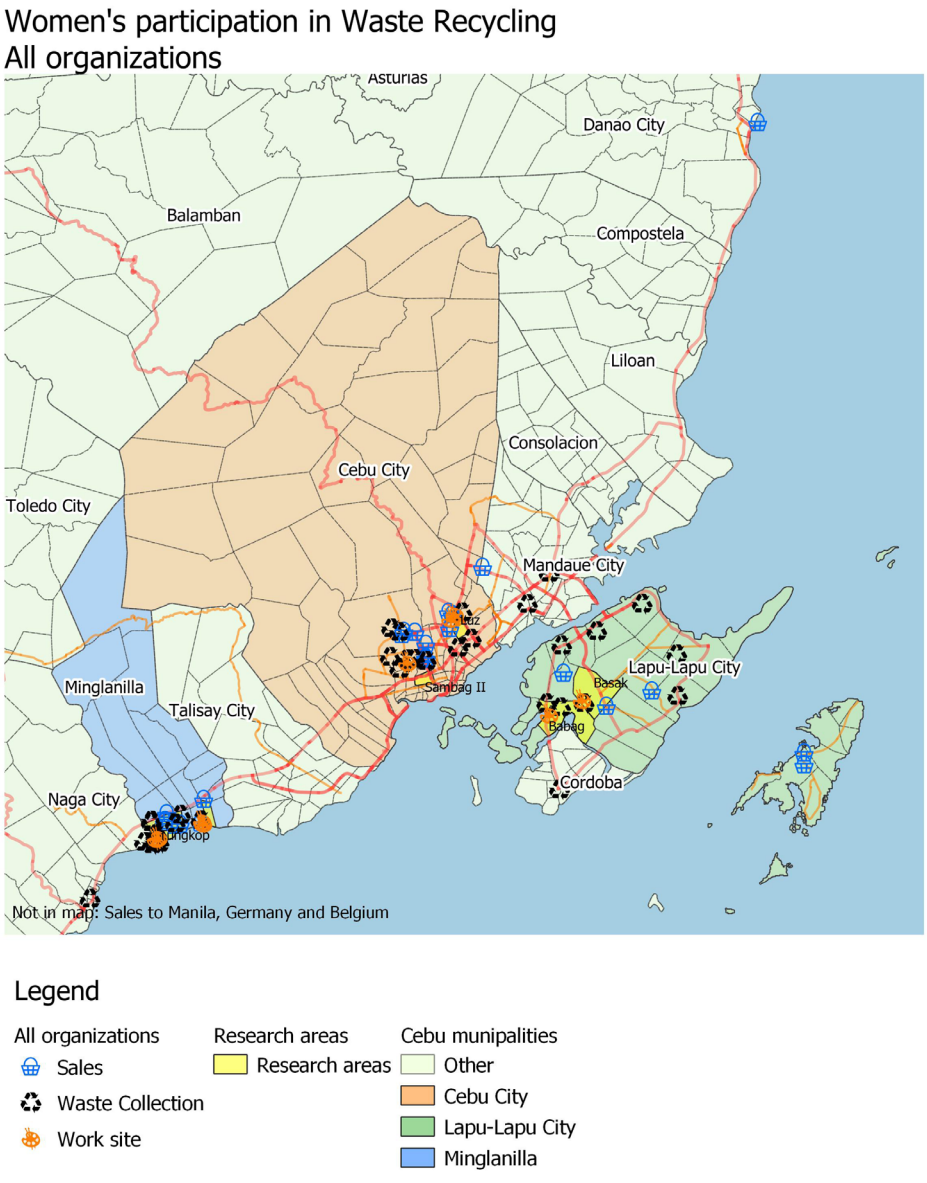


Figure 15. Map of all project sites and recycling activities.

Conclusions and Recommendations

This study shows that the Philippines is facing an immense challenge in managing solid waste. While more than half of the waste is organic, about 28 % are considered recyclables which should highlight the recycling efforts in the country to address the growing garbage problem. At the center of these efforts are women and their organizations spearheading various direct recycling programs.

The study, set in the six barangays of metro Cebu showed that women are at the forefront of the direct waste recycling activities ably supported by their organizations, non-government organizations (NGOs) and/or with their barangay officials. This positionality is guided by the women's perception on waste recycling as synonymous to waste reduction, segregation, reuse and conversion of waste into something useful. There is need to deepen women's understanding in the gravity of the waste problem and how their efforts play an important role in addressing the problem. The barangays play an important role in this through education and training activities on solid waste management. This role should be strengthened since challenges faced by study participants include the lack of concern or competence of barangay LGUs, lack of cooperation from the community, the scarcity of recyclable materials and the absence of a market/display area for the products.

Women's participation to waste recycling is mainly motivated by the economic gain/ income augmentation for the women and their families but also on the women's concern and desire for a healthy environment which they relate to avoidance or minimization of diseases such as dengue, cough, colds and asthma attacks.

The process of recycling is time-consuming, tedious and repetitive and adds to the multiple bur den of women. On top of this, it does not compensate women commensurate to the time and effort they pour in resulting to women saying that their income is never enough. There is thus a need for standardization of prices for women's recycled products and the need to educate the community that patronizing recycled products means empowering women and contributing to healthier and cleaner community.

The women's recycled products are locally sourced, made and sold. While there were few instances that the products reached Manila, Germany and Belgium, it was through the facilitation of a fair-trade NGO. Thus, while the income generated from the women's recycling efforts was aptly described by the women as "di gyud paigo" (never enough), the authors maintain that this description also accurately describes the impact of waste recycling efforts of the study participants in this study in particular and the Philippine efforts in general.

In studying the spatial data, the use of Open Data Kit (ODK) proved to be very useful and handy. However, in this research it has become clear that the locations as collected in the field and those provided by the GIS maps do not always match. A nationwide survey of the administrative boundaries from barangay up to provincial level and making these data available for research and management purposes would be recommended.

The descriptive way in which the research participants describe the locations where they collect, process and sell the products varies greatly from case to cas e. In many cases however it is described as sitio, barangay or as just as barangay. For mapping purposes, these descriptions are quite vague and make reliable mapping difficult due to the big differences in possible accuracy. A complicating factor is that the Philippines does not have a standardized way of describing house or address locations. This would however greatly enhance the possibilities and accuracy of descriptive geographic locations.

RESEARCH STUDY:
POLITICS & GOVERNANCE

PHOTO BY THE EDIK DOLOTINA PROJECT

Health and Social Services in Cebu City *During the COVID-19 Pandemic*

by **Sweet Maville S. Blanco, Reanne Angel L. Francisco, Joshua M. Tambor**, and **Rejene T. Lakibul**

The COVID-19 virus was said to have emerged in Wuhan, China in December 2019. Months thereafter, the World Health Organization (WHO) declared COVID-19 as a global pandemic. In the Philippines, the first case of COVID-19 can be traced back to a tourist from Wuhan, China. The Department of Health of the Philippines confirmed that the virus entered the country on three separate times (Austriaco, 2020). Since then, the country continued to grapple with the brunt of the pandemic with several thousands of recorded cases of death.

In Cebu City, one of the earliest confirmed cases of COVID-19 was from a tourist who visited the city on January 20, 2020 (Macasero, 2020). This was the day after the celebration of the 2020 Sinulog Festival, which had an estimated two million foreign and domestic attendees. During this time, there were no quarantine protocols in place, and no polymerase chain reaction test or rapid antigen test administered. There was also no mandate yet for masks and any personal protective equipment. Consequently, Cebu City became a hotspot of the virus with three high case surges from March 2020 to September 2021. In June 2020, the city became the country's epicenter for active and new cases (Dancel, 2020).

Given that Cebu City is a highly urbanized metropolitan and the sixth most populated city in the Philippines (PSA, 2020), it was important for the local government unit (LGU) to lead COVID-19 responses and to implement mitigation and recovery measures. It was also necessary to draw lessons and reflection on the case of Cebu City in managing the COVID-19 pandemic. This is considering that the city has direct contributions to the performance of Metro Cebu as the second international gateway in the Philippines and as the top-ranked destination for competitive economic activities.

As such, this study primarily examined the health and social services of the local government of Cebu City during the COVID-19 pandemic from March 2020 to September 2021. Specifically, the study (1) mapped out significant turning points and decisions by the LGU; (2) determined the policies, initiatives, and interventions

on health and social services as implemented by the LGU; and (3) documented the challenges and opportunities encountered by Cebu City to address the risks of the COVID-19 pandemic.

Materials and Methods

This case study employed documents review and key informant interview as its research methods. It obtained secondary data from the official website of the City Government of Cebu, the Cebu City Public Information Office, and different legitimate news agencies that cited executive orders, memorandum orders, city ordinances, LGU initiatives, and politically defining events. It also processed articulations and validations from the Cebu City Emergency Operations Center (EOC) and Cebu City Legislative Council members. Moreover, the research was approved by the University of San Carlos – Research Ethics Committee.

Timelines were created to visualize the sequence of events on how Cebu City governed its affairs during the pandemic. Thematization was made on identified policies and initiatives to help clarify contexts and their connections. Finally, tabulations were made on the documented challenges and opportunities encountered by Cebu City, which were then verified by the key informants.

Results

Figures 1, 2, and 3 represent the three timelines showing politically defining activities, initiatives, and policies from March 2020 to September 2021. The said activities and initiatives were either exclusively pursued by the local government unit of Cebu City or through partnerships with civil society organizations. Initiatives done solely by the private sector are not included in the timelines. The timelines are thematized according to "seasons", which is the term being used by the Cebu City EOC.

First Season: A Lesson on Urgency. The figure above shows that the first batch of confirmed cases in the city was announced on March 18, 2020 (CNN, 2020). This was only after Cebu City was placed under the General Community Quarantine (GCQ). According to the Inter-Agency Task Force for the Management of Emerging Infectious Disease (IATF-MEID), GCQ is a type of quarantine with moderate and lenient measures. The first laboratory in the city to test for COVID-19 was the Vicente Memorial Medical Center (VMMC), which did not open until March 20, 2020 (Sabalza, 2020). Prior to this, all samples for laboratory tests were flown to Manila, which is the capital of the Philippines.

Despite the GCQ status, it was only on April 2020 that the wearing of face masks became mandatory through Executive Order No. 66. Cebu City EOC verified that, "the practice of rules being implemented before a formal written ordinance was common since the procedure of drafting and formalizing it would take time but actions have to be done."

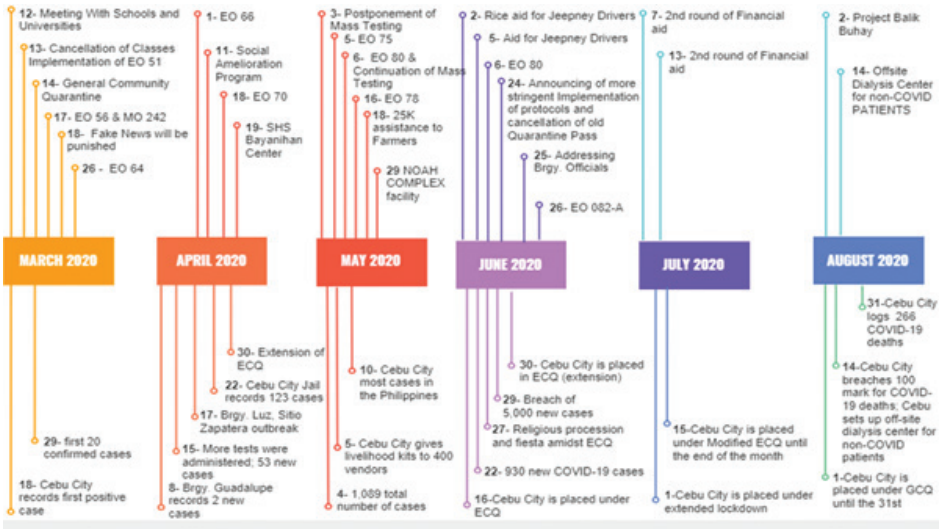


Figure 1. Cebu City COVID-19 Timeline from March to August 2020

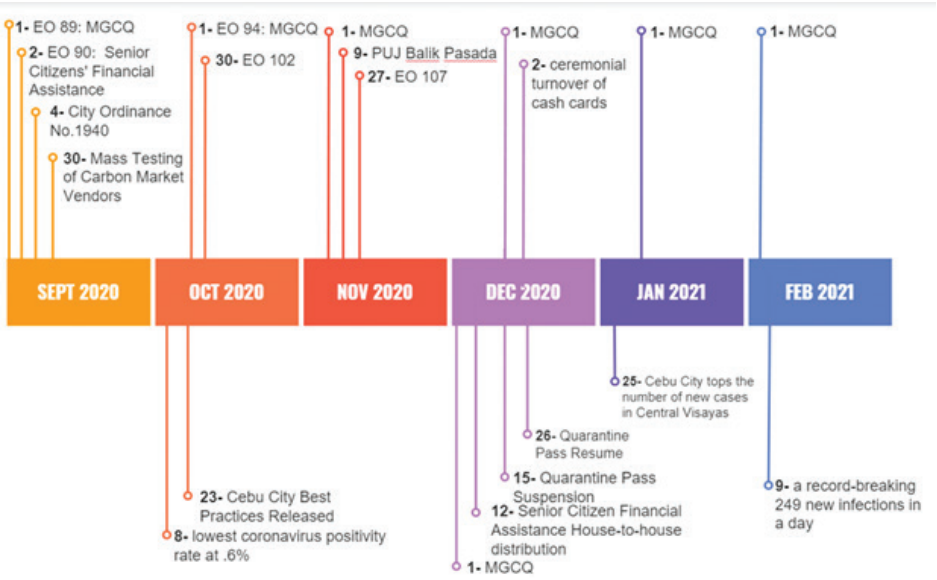


Figure 2. Cebu City COVID-19 Timeline from September 2020 to February 2021

Through Executive Order No. 64, the Enhanced Community Quarantine (ECQ) was implemented in the city on March 26, 2020. This is considered the strictest quarantine classification in the country. According to the Omnibus Guidelines on the Implementation of Community Quarantine in the Philippines by IATF-MEID, there were stringent limitations on movement and transportation of people upon the activation of ECQ. In addition, ECQ also imposed strict regulations on the operation of industries, on the provision of food and essential services, and on the enforcement of these protocols by uniformed personnel.

Cebu City struggled in confronting the first wave of the pandemic especially with the surge of cases. It forced the city to implement ECQ for five months (Carlos, 2020). Moreover, the COVID-19 pandemic placed health system under pressure and stretched its capacity. This observation was verified by the Cebu City Health Department. It confirmed that during the first surge of cases in June 2020, the health system was "overwhelmed with patient load." The observation was also verified by the members of the Cebu City Legislative Council and EOC. They articulated that the city was "like all other cities, and all other countries in the world, [since] we have

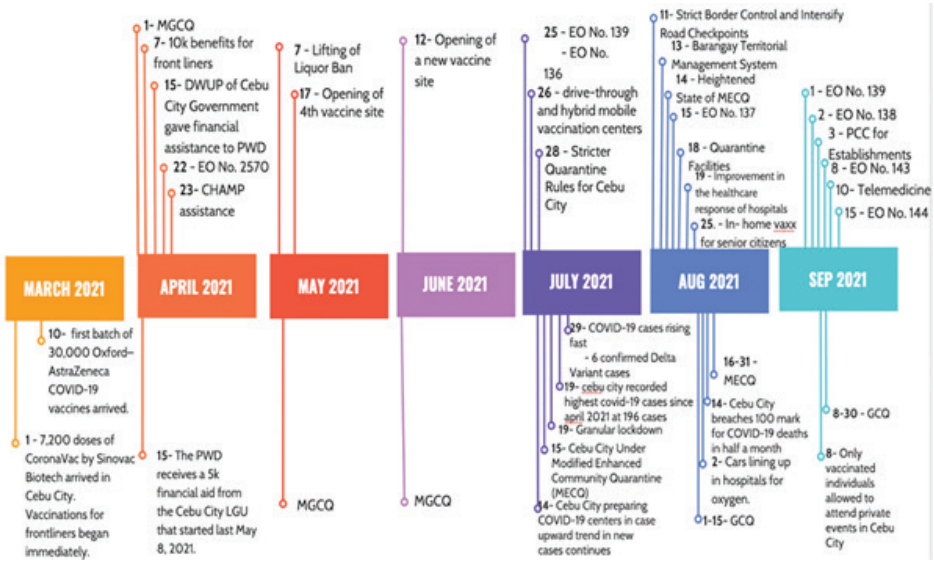


Figure 3. Cebu City COVID-19 Timeline from March 2021 to September 2021

no experience with the pandemic and a global health crisis, and everything was uncertain in our every movement."

Second Season: A Picture of Contrasts. The figure above depicts Cebu City in two contrasting pictures. There was a month with the lowest COVID-19 positivity rate, and there was also a month with high positivity rate due to a new surge. It was on September 2020 when the COVID-19 situation improved. By this time, the city was placed for the first time under Modified General Community Quarantine (MGCQ), which is the lowest quarantine classification. The local government attributed the improvement to the results of the 5-month-long ECQ.

Furthermore, the lowest positivity rate was recorded on October 2020. By November 2020, Cebu City's Jeepney Task Force through the Balik Pasada Program reopened jeepney routes. This allowed selected Traditional Public Utility Jeepney (TPUJ) units to operate in Guadalupe, Lahug, and Carbon Public Market as test runs for the resumption of jeepney operations in the city. During the last quarter of the year, Cebu City maintained a low positivity rate of COVID-19 cases, which resulted in the consistent implementation of the Modified General Community Quarantine (MGCQ) for the next 5 months.

On December 15, 2020, quarantine passes were suspended for the Christmas holidays (Letigio, 2020), which allowed more mobility for the residents. In an interview with then local chief executive of Cebu City, there was a mention that "the reason quarantine passes were suspended during Christmas was to allow the people to keep the tradition of attending the Simbang Gabi or Misa de Gallo" (Semilla, 2020). This ease of restrictions resulted in the post-holiday outbreak. It became the second season of the surge in the city as recorded by the Cebu City EOC. In January 2021, the city topped the positivity rate of COVID-19 in Central Visayas (Macasero, 2021). In February 2021, a record-breaking rate of new positive cases in a single day occurred (Yumol, 2021).

Even if Cebu City was on its second surge with record-breaking cases, the city remained in the lowest quarantine classification of MGCQ (Mayol, 2021). There is incongruence between the rising number of infections tallied by Cebu City in its post-holiday outbreak versus the relaxed quarantine status. This merited discussions on how the government, both local and national, would decide on quarantine classifications to be imposed to local governments across the country.

Third Season: Pipedreams and Pitfalls. Beginning March 2021, the response of the Cebu City LGU was concentrated on providing financial assistance to vulnerable sectors (Sunstar, 2021). However, medical front-liners were not given the same priority in terms of monetary assistance (Casas, 2021). The Cebu City Health Department stated that "selected medical front-liners would receive not more than P3,000 per month as hazard pay and P5,000 as special risk allowance." Medical front-liners were overworked and underpaid not only by the national government but also by the local government. Many front-liners have died, became sick, and have resigned or retired early (UP PRO, 2020), and yet their compensation was not commensurate with the labor they provide in curbing the number of positive cases.

From April 30 to May 10, 2021, Cebu City EOC recorded the lowest critical care occupancy rate at 11.1% and a 1.45% daily positivity rate for the city (Cebu Bulletin PH, 2021). In fact, Executive Order Number 136 lifted the liquor ban and adjusted

curfew hours in the city. As cases declined, the city eased restrictions and relaxed enforcement. This was substantiated by a member of the city legislative council and Cebu City EOC. They stated: "we have to learn how to self-regulate regardless of the community quarantine status as we should be cautious and mindful of the basic health protocol."

During the same period that the vaccine became available in Cebu City, the Delta variant caused an outbreak on August 2021 (Saavedra, 2021). On July 6, 2021, the first six confirmed delta variant cases in Cebu City were reported (DOH, 2020). As the city recorded again its highest COVID-19 cases, it was placed under Modified Enhanced Community Quarantine (MECQ). This time, the city imposed granular lockdowns instead of a city-wide lockdown beginning on July 19, 2021 (Dagooc, 2021). The granular lockdown was implemented in barangays with high infection rates. It activated the Barangay Territorial Management System – a method of aligning inter-village coordination to minimize the movement of residents (PNA, 2021). This arrangement was confirmed by the Barangay Affairs Committee, stating that the cooperation of the barangays made the isolation of hotspot areas possible without impairing the mobility of the rest of the city amidst heightened restrictions.

Only two weeks thereafter, Cebu City was classified back to GCQ even if it breached its 100-mark for COVID-19 related deaths in just half a month (Letigio, 2021). It was at this point that the bi-weekly change in community quarantine status in the city began. The third season of cases showed Cebu City LGU struggling yet again. But the difference this time was the availability of the vaccines. During the third surge, private hospitals were filled with COVID-19 patients. Some of them even had to line up outside the hospitals with oxygen tanks (Israel, 2021).

Policies and Initiatives on Health. Table 1 below highlights health-related policies and other significant undertakings or turning points of the Cebu City LGU. It covers policy agenda such as *Health Protocols, Quarantine Levels, Restriction, Vaccination, and Health Initiatives.*

Table 1. Health Policies and Initiatives

Policy/ Program	Descriptions	Policy Agenda
Executive Order 51 series of 2020	This policy provided the Cebu city guidelines and safety precautions against COVID-19.	Health Protocol
Executive Order 66 series of 2020	This policy required the wearing of mask by all persons in public places. Public and private establishments were mandated to refuse entry to persons without face masks.	
Stringent Implementation Ordered	This implemented the barangay lockdown and required the issuance of new quarantine passes. Barangay officials were to identify the households in their jurisdiction. Distribution of relief good would also be done in coordination with members of the Philippine National Police. Supplemental budget of P500 million was disbursed for relief assistance to residents.	Health Protocol
Contact Tracing	This program mobilized 80 contact tracing teams, one for each barangay. It provided an incentive of P10,000 each to health care workers in Cebu City's private hospitals for the next three months. Trainings were conducted with Baguio City LGU and its Contact Tracing Team.	
Services for Vaccinated Individuals	Indoor dining in restaurants and personal care services in spas and salons were now allowed but only for vaccinated individuals.	Health Protocol
Protocol Compliance Certificate (PCC) for business owners	PCCs were issued to public establishments, which must at all times adhere to the conditions for which the PCC was granted. Any violation shall result in the immediate revocation of the PCC, without prejudice to the closure of the establishment.	
Executive Order No. 75 series of 2020	This policy ordered the institutionalization of the Project Balik Buhay. It provided details on the conduct of strategic community testing for the coronavirus disease in the city. A total of one billion pesos is allocated for the purchase of rapid test kits and other equipment, and for the salary of medical personnel.	
Executive Order No. 52-A series of 2020	This policy provided the guidelines on the enforcement of the General Community Quarantine (GCQ).	Quarantine Levels
Executive Order No. 060 series of 2020	This policy declared for Cebu City to be under the Enhanced Community Quarantine (ECQ).	
Executive Order No. 082-A Series of 2020	This order amended items under section 2 of executive order number 82 series of 2020. It provided new schedules for the Carbon Public Market Complex. It suspended the number coding scheme for vehicles and adjusted the curfew schedule. The new QPASS was introduced.	

Table 1. Health Policies and Initiatives

Policy/ Program	Descriptions	Policy Agenda
Executive Order No. 94 series of 2020	This policy reiterated the guidelines on the enforcement of the Modified General Community Quarantine (MGCQ).	Quarantine Levels
Executive Order Number 137 series of 2020	This policy implemented the Oplan Puyo, which was an order enforcing a heightened state of Modified Enhanced Community Quarantine (MECQ).	
Executive Order 70 series of 2020	This policy established a number coding scheme to regulate vehicles in Cebu City during the period of enhanced community quarantine.	Restriction
Executive Order 102 series of 2020	This order established the Balik Pasada Program for Traditional Public Utility Jeepneys (TPUJS) and provided its guidelines.	
Barangay Territorial Management System	This policy introduced the system for village territory control against COVID-19. It implemented a method of aligning inter-village coordination to minimize the movement of residents. Village chiefs were to manage their own territories.	
Reimposition of strict border control amid Covid-19 spike	This policy reimposed strict border control and intensified road checkpoints to minimize the movement of people amid the rising COVID-19 cases and the presence of the Delta variant in Cebu.	Restriction
Executive Order 136 series of 2021	This policy reimposed the liquor ban and adjusted the curfew hours. Guidelines were also provided for clarification.	
Cancellation of All Classes in All Levels	This policy declared the cancellation of classes in all levels starting March 16 until March 28, 2020. Educational institutions were mandated to implement distance learning to all students to continue the fulfillment of their educational requirements.	
Memorandum Order 2020-242	This policy suspended the visitation privilege at the Cebu City Jail and Operation Second Chance.	Restriction
Executive Order Number 056 series of 2020	This policy suspended the operations of all enclosed recreational centers, fitness centers, gyms, movie houses, or movie theaters, casinos, bars, and clubs.	
Executive Order Number 80 series of 2020	This policy ordered the temporary suspension of the requirements for a license on bicycles flying the streets of the city.	
Cancellation of Quarantine Passes in Cebu City	The Department of Interior and Local Government directed the Cebu City LGU to cancel all quarantine passes issued to Cebu City residents.	
Fourth Vaccination Site	The University of Cebu Senior High campus was designated as the fourth vaccination site. There were 27,000 AstraZeneca vaccines allotted and 8,000 vaccines for the city government of Cebu.	Vaccination

Table 1. Health Policies and Initiatives

Policy/ Program	Descriptions	Policy Agenda
NOAH Mega Vaccination Site	NOAH Complex became the fifth vaccination site. It was first used as a quarantine facility for the isolation. It prioritized senior citizens with the Johnson & Johnson vaccines.	Vaccination
In-home Vaccination Program	This program allowed the vaccination of bedridden individuals. It encouraged everyone to register at pabakunata.com.	
Project Balik Buhay (PBB)	This program provided free-of-charge vaccines and medical personnel through the PBB Private Sector Vaccination Centers. It was in collaboration with Office of the Presidential Assistant for Visayas, IATF-MEID, and Department of Health-Region 7.	
200-bed Covid-19 modular hospital	This designated a place for isolation of people who tested positive for COVID to prevent the spread of the disease.	Health Initiatives
Off-site dialysis center for non-COVID patients	The facility, which has 10 dialysis machines, would be operational starting Friday, August 14, until December 31, 2020. The facility was placed outside of the Vicente Sotto Memorial Medical Center (VSMMC) to prevent the transmission of SARS-CoV-2 to renal patients in need of dialysis treatment.	
Telemedicine ordinance	CCMC, CHD, and the city should be able to provide the means in enabling telemedicine services and systems including assistance support, medical appointment, and monitoring and diagnostics.	
Mass testing of market vendors	2,000 market vendors were subjected to swab testing. This initiative was in collaboration with the regional Department of Health and the City Health Department.	

Protocols. Health protocols from the World Health Organization, the Department of Health, and the IATF-MEID were adhered to by the local government of Cebu City. Local health protocols emphasized the "test, trace, isolate, and treat" strategy. In early 2020, laboratories for COVID-19 virus detections were only operational in NCR (Sabalza, 2020), which resulted in limited testing and unreliable daily records of COVID-19 cases.

Quarantine Level. Cebu City was placed in seven different community quarantine levels for 19 months. Quarantine levels were mandated and determined by IATF-

MEID. As seen in the "second season" in Figure 2 above, there were instances that despite the high level of COVID-19 cases, the city remained to be under the most relaxed community quarantine classification.

Restriction. Restrictions imposed by the Cebu City LGU were mainly on traffic management, curfews, and border control. Granular lockdowns were implemented at a barangay level to limit inter-barangay movement. Penalty-based policies were imposed for non-compliance to the restrictions.

Vaccination. Cebu City LGU had its vaccine rollout on March 2021 (PCOO, 2021), three months after the global rollout. Vaccine mandates of Cebu City emphasized the utilization of private establishments as vaccination centers.

Health Initiatives. Cebu City LGU initiated modular hospital, off-site dialysis center, telemedicine, and mass testing. These initiatives targeted vulnerable sectors in the community.

Policies and Initiatives on Social Services. Table 2 below shows Cebu City LGU's policies and initiatives on social services, which are categorized into two policy agenda, i.e. *financial aid and in-kind assistance.*

Table 2. Social Service Policies and Initiatives

Policy/ Program	Descriptions	Policy Agenda
Social Amelioration Program	This program identified 262,000 households in Cebu City as beneficiaries for the emergency cash subsidy program from the Department of Social Welfare and Development.	Financial Aid
25K Financial Assistance to Cebu City Farmers	This program allowed the distribution of 25,000 pesos to 289 farmers in Cebu City. It is in close collaboration with the Department of Agriculture.	
2nd Round of Financial Assistance for 80 Barangays in Cebu City	The Cebu City LGU released 1 million pesos of monetary aid to each of the 80 barangays in the city to aid them in buying rice, food packs, and other necessities for their residents.	Financial Aid
Executive Order Number 90 series of 2020	This policy established the guidelines on the distribution of financial assistance to senior citizens for the months of June, July, and August 2020.	
Executive Order Number 107 series of 2020	This order established the guidelines on the distribution of financial assistance to persons with disability for the months of July up to December of 2020.	
DWUP Financial Assistance for Persons with Disabilities (PWD)	Cebu City LGU, through its Division for the Welfare of Urban Poor, distributed 5,000 pesos of financial aid to persons with disability for the months of January to May 2021. The distribution was headed by the City Hospitalization and Medicines Program (CHAMP). Barangay Cogon Pardo was the first barangay to conduct the house-to-house distribution.	Financial Aid
Executive Order No. 75 series of 2020	This policy ordered the institutionalization of the Project Balik Buhay. It provided details on the conduct of strategic community testing for the coronavirus disease in the city. A total of one billion pesos is allocated for the purchase of rapid test kits and other equipment, and for the salary of medical personnel.	
Executive Order Number 139 series of 2021	This policy granted financial assistance to Cebu City residents for the burial and cremation expenses of COVID-related deaths	
Executive Order Number 143 series of 2021	This policy provided the guidelines on the house-to-house distribution of financial assistance to persons with disability for the months of June, July, August, and September 2021.	Financial Aid

Table 2. Social Service Policies and Initiatives

Policy/ Program	Descriptions	Policy Agenda
Executive Order Number 144 series of 2021	This policy mandated the house-to-house distribution of financial assistance to senior citizens from July to September 2021.	Financial Aid
Ordinance Number 2570	This ordinance established a food bank in Cebu City in times of public health emergencies and disasters. This was in collaboration with the Department of Social Welfare and Development.	In-Kind Assistance
Project Balik Buhay	This program served as a road map for businesses to (re)open safely. It required businesses to have health infection and prevention control officer, to submit duly signed statement of management responsibility, to comply to government-imposed guidelines and other regulatory measures and protocols.	
Rice for Jeepney Drivers	The Cebu City Government distributed 50-kilos of rice to 1,000 public utility jeepneys last June 2, 2020. This in coordination with Land Transportation Franchising and Regulatory Board (LTFRB) and Department of Transportation (DOTr).	
Livelihood Kits for Vendors	The Department of Labor and Employment (DOLE) in Central Visayas distributed 20,000 pesos worth of livelihood assistance kits to 400 vendors in Cebu City. The livelihood assistance kits comprise starter implements for different projects like carpentry, dressmaking, and steel works among others.	In-Kind Assistance
CHAMP Assistance	On Friday, April 23, 2021, another batch of Cebu City residents received rice, face masks and alcohol from the Cebu City LGU through its CHAMP.	

Financial Aid and In-Kind Assistance. Cebu City LGU focused on providing financial aid as a response to the economic effects of a five-month-long ECQ in the first season of the pandemic. This is evident in the following policies: DSWD-Social Amelioration Program, 25K Financial Assistance to Cebu City Farmers, Financial Assistance for 80 Barangays, DWUP-Financial Assistance for PWDs, and Executive Order Nos. 90, 107, 139, 143, and 144. Such financial assistance from the Cebu City LGU was intended to help vulnerable groups as the pandemic immobilized businesses and left many individuals unemployed. In addition, there were resolutions and proposed ordinances on social service that have now been shelved by the legislative

council of Cebu City such as the ordinance on food bank. This specific ordinance was signed by the Cebu City local chief executive but remained unimplemented.

Initiatives of Cebu City LGU. The Cebu City LGU implemented health initiatives such as Telemedicine (Malinao, 2021), mass testing of market vendors (PNA, 2020), and the creation of an off-site dialysis center for non-COVID patients (Ecarma, 2020). During the first GCQ in the city, the LGU provided Personal Protective Equipment (PPE) for different front liners (Ayuman, 2020). Health initiatives also included in-home vaccination program for senior citizens, healthcare workers, people with comorbidities, or the vulnerable sector (Saavedra, 2021). On the other hand, social service initiatives by the LGU included the CHAMP assistance, Ordinance Number 2570, Project Balik Buhay, rice subsidies to jeepney drivers, and livelihood kits for 400 vendors.

Challenges and Opportunities of Cebu City LGU. At the onset, the LGU's uncertainty on how to immediately respond to the pandemic was rooted on the nature of the crisis, and on the lack of training for pandemic approaches. When the Cebu City LGU was able to map out the nature and extent of the crisis, the challenge evolved to limited personnel, logistics, and lack of first or second-level facilities. There was also difficulty in lobbying and communicating information to 80 barangays of Cebu City as well as in coordinating with adjacent and surrounding LGUs such as Mandaue City and Lapu-Lapu City. A member of the Cebu City EOC even noted that the multi-faceted nature of the crisis was not considered by the LGU until the "economy, livelihood, barangays, and the delivery of basic services had been affected".

The private sector, close collaboration with Cebu City LGU, was essential in materializing different initiatives during the pandemic. Cebu City EOC utilized a whole-of-government approach while valuing inputs from the private sector in the creation of strategic responses. Across Metro Cebu, CSOs reacted swiftly in the early days of the pandemic (FundLife International, 2020). According to representatives of the Cebu City LGU, the Cebu Chamber of Commerce and Industry (CCCI),

Ramon Aboitiz Foundation, Inc. (RAFI), and Emergency Rescue Unit Foundation (ERUF) are some of the private organizations that have valuable participation and contributions to COVID-19 response and recovery. Aside from technical knowledge, private organizations provided other types of resources such as food for personnel, transportation, data and its management, and other in-kind contributions.

DISCUSSION

Top-Down, Reactive, and Highly Militarized

An observable pattern from the responses of key informants revealed that at the outset, Cebu City LGU was grappling with strategies to address the COVID-19 crisis. Also, the pandemic placed health systems under pressure and stretched the LGU's capacity especially during the first wave of virus transmission. The cause of the lack of knowledge on how to handle the situation is allegedly due to the nature of the health crisis being a new occurrence. No country was well prepared to manage COVID 19. However, the Philippines, in general, had prior experiences with different communicable and transmissible diseases in recent history such as the severe acute respiratory syndrome (SARS) crisis in 2003, the outbreak of Avian Influenza (Bird Flu) from 2004 to 2007, the swine flu pandemic H1N1 of 2009, and the MERS-CoV scare in 2014.

It can be deduced that the lack of immediate border closure was attributed to heavy top-down governance. A key informant validated this observation that a centralized response from the national government was not prompt in the call for urgency in the localized problems of LGUs. This consequently slowed down Cebu City LGU in its COVID-19 response. This matter is consistent with the main criticism of the top-down approach, that is, it neglects strategic initiatives of other policy subsystems besides central decision-makers (Crosby et. al., 2017).

The pandemic has multifaceted and intersectional repercussions. It continues to affect the economy, health sector, and governance. As a response thereto, the

PHOTO BY THE EDIK DOLOTINA PROJECT

whole-of-government approach was operationalized in the Philippines. The said approach emphasized the importance of good leadership thereby creating spaces for collaboration and platforms for partnerships that can address multi-sectoral issues such COVID-19 pandemic. However, United Nations High Commissioner for Human Rights Michelle Bachelet commented on the Philippines's response to COVID-19 as "highly militarized" following the arrest of 120,000 individuals for curfew violations (UN, 2021). This militaristic approach to combat the pandemic was met with criticisms.

As the pandemic progressed, the economy of Cebu City was heavily considered in policy-making decisions. The Philippine Department of Health even surmised that it is harder to elevate the community quarantine in areas contributing 45% to the region's employment rate or 28% to the region's economy, which is the case for Cebu City. Therefore, the changes in quarantine classifications in the city are highly motivated by its "socioeconomic affairs" in the region.

The third season showed how the responses of the Cebu City LGU, after facing two prior waves of cases, remained to be reactive. The responses were not enough to prevent another surge of COVID-19 cases. This experience points out that LGUs should not solely rely on vaccination programs as the only mitigating measure to the pandemic. The health initiatives made it clear that the vaccine rollout should not only be strengthened but also supplemented with other health programs and projects. Verily, the COVID-19 response is an issue of governance that should not be limited to mere provision of services but also meticulous planning and mobilization of resources and stakeholders.

Unprecedented, Barangay-Driven, and Penalty-Based

Action plans for bottom-up system was highlighted in the establishment of isolation and quarantine centers at the barangay level, which is the smallest unit of government

or political subdivision in the Philippines. The barangays played a key role in strengthening the implementation of protocols and guidelines at the community level (Cebu City LGU, 2020). This was confirmed by a member of the Cebu City legislative council. It was acknowledged that the barangay was at the forefront in the process of isolating positive cases, monitoring, tracing, and pulling out infected individuals. Barangay Isolation Centers (BIC) became the important facilities and viable alternatives in the quarantine system of Cebu City.

As the pandemic progressed, the terminology and language that described how individuals should follow health protocols have shifted from encouragement to a stern mandate. Executive Order No. 51 was implemented in March 2020 and the term "strongly encouraged" was used for the practice of social distancing and frequent disinfection. Later on, Executive Order No. 137 was issued on August 2021. It made use of the word "mandatory" for the wearing of face masks and stay-at-home order.

Timing and context were also important in determining the effectiveness of border control. There was also a need for other complementing measures such as mass testing, quarantine, and contact tracing. In addition, there were penalties imposed for non-compliance which were met with several criticisms. Despite repeated implementation of such policies, they yielded the same results as evident in the three separate waves of COVID-19 surges.

Social democracy in the context of the COVID-19 pandemic emphasized the necessity of a science-based approach that perceives public health as a democratic and scientific mobilization of state capacity. Following this, policies must be based on facts and science rather than mere speculation or assumptions.

Initiatives of the LGU as Mere Reinforcements

At the beginning of the pandemic, it was emphasized that national guidelines must be followed by all political subdivisions. However, localized problems needed localized solutions. In fact, it is enshrined in the Local Government Code of 1991 that LGUs shall enjoy local autonomy and shall create policies and programs for the different needs of their locality. The LGU's proximity to its people and the issues on the ground enable better assessment and creation of initiatives. Apparently, LGUs that implemented localized initiatives were met with some issues.

President Rodrigo Duterte stated that "the LGUs' actions must be in sync and in unison with the national government's directives in this state of national health emergency and calamity" (Luna, 2020). Hence, LGUs during the pandemic were heavily dependent on national policies such as the IATF-MEID guidelines and the Bayanihan-to-Heal-as-One Act. Local initiatives served as mere reinforcements. They were constrained, cautious, and closely monitored by the national government.

Moreover, Cebu City LGU's social services during the pandemic were primarily concentrated on the provision of cash assistance to vulnerable sectors. This should not have been the case. According to Rema Hanna (2019), social services must not begin and end only with direct monetary assistance. While financial assistance is crucial, it must also be complemented with more sustainable forms of social safety nets that are aligned with Book I, Section 3 (a) of the Local Government Code of 1991. The provision states that "There shall be an effective allocation among the different local government units of their respective powers, functions, responsibilities, and resources." Indeed, sustainability and stability should be the goal of social services by local government units.

Challenges and Opportunities of the LGU

As the pandemic progressed, the issue became less about the uncertainty of the situation and more about the crisis management capabilities of the Cebu City LGU. Verily, the challenges experienced by Cebu City validated the argument of Local Government Theory, i.e. that administrative issues are evident in the decentralization system of developing countries (Faguet, 2008). These administrative issues affect the crisis management of local government units. The occurrences of different challenges point to the (in)capacity of the LGU to establish a preventative and proactive approach to local governance.

Opportunities were seen in the form of collaboration with civil society organizations in the city. While Cebu City EOC utilized a whole-of-government approach, it still reached out to the private sector for help. Local government theory clarifies this to mean that local governments and private sectors must counterbalance each other and not dominate each other (Faguet, 2008). A "stable tension" must exist between the LGU and its stakeholders to create a "healthy distrust" or competitive interaction. One key informant added that "accountability and transparency" on different donations were crucial in establishing a healthy CSO-LGU partnership in Cebu City.

Finally, CSOs have proven to be critical collaborators in the city's response to the COVID-19 pandemic. However, there should not be too much reliance on the programs and projects of CSOs as these may be ad-hoc and only supplementary to the responses of the LGU.

Policy Recommendations

First, there is a need to revisit the Local Government Code of 1991 or RA7160. This can help clarify the intentions of decentralization amidst the changing contexts and demands of the barangays. The revisit can also shed light on how interlocal governance can be implemented as well as how national-local management and coordination can be improved.

Second, Cebu City LGU must strengthen its healthcare capacity and health emergency response. It must learn how to proactively engage with other LGUs for the complementation of expertise and resources. Since crises like the COVID-19 pandemic are borderless, collaboration on emergency response amongst neighboring LGUs is imperative.

Third, financial assistance can be rationalized to include other sustainable forms of social and economic safety nets. Also, Cebu City LGU must invest on upskilling its workforce, on upgrading its healthcare systems and processes, and on innovating its health emergency response through data science and advanced technology.

Fourth, Cebu City LGU must design a collaboration workplan with the private sector so that health and social services would not be confusing and on a standstill during a pandemic. It can also map out civil society organizations and other collaborators as well as create a database of their expertise and resources. This way, the Cebu City LGU can activate its mobilization mechanisms with much ease, efficiency, and effectiveness.

Lastly, proper communication is crucial to having multiple efforts that are aligned and complementary (Soriano, et al. 2020). Hence, Cebu City LGU can improve its communication protocol and platforms so that strategic information-sharing among its different units and agencies can be expected. It is also best to invest on timely and relevant communication tools and technologies in order to improve the delivery of basic services and to expand the reach to stakeholders in the most effective way possible.

Conclusion

This study examined Cebu City LGU's health and social services at the height of COVID-19 pandemic. It concluded the following: First, the top-down and centralized approach of the government constrained Cebu City's ability to do emergency response. It took the city months before it imposed lockdown and travel restrictions due to administrative issues and unclear nation-local coordination. Second, Cebu City's health services were dependent on national policies. Oftentimes, the approaches implemented were top-down, highly militarized, and penalty-based. Third, Cebu City's social services were primarily characterized by cash subsidies and in-kind assistances that were reactive and mere reinforcements to national line agencies. Innovations were restrained and sustainability action plans were not clearly apparent. Lastly, social democracy on public health can be a good alternative paradigm to the current governance in Cebu City. This paradigm encourages clearer interlocal collaboration, proactive nation-local coordination, strategic decentralized functions, and well-defined capacities to perform especially during health crisis.

ANALYSIS: **ENERGY**

DESIGNED BY FREEPIK

Cebu's Power Supply and Demand: Pandemic, Recovery, and Outlook

by **Julius P. Relampagos**

The COVID-19 pandemic caused significant shifts in the electricity consumption and power generation in the Philippines starting in early 2020 when the first set of quarantine restrictions came into effect in March 2020. The recurring imposition of the various levels of community quarantine restrictions on physical movement and social distancing caused an upward shift in electricity use towards the residential sector as schools and companies implemented the online classes and work-from-home modalities. Companies have implemented new business models and practices that reinforce the need for isolation and separation and some job tasks are being performed on a distributed—often at home–basis. The emergence of these opportunities prompted people to build new skills and to shift away from energy-intensive forms of transportation and to instead adopt telecommuting, virtual meetings, and online education (Sarkis, et.al, 2022).

As shown in Figure 1, there was a sharp increase in the electricity consumption in the residential sector by 12.2% from 30,552 GWh in 2019 and to 34,292 GWh in 2020, while the commercial and industrial sectors' consumption declined by 18.6% (from 25,476 GWh in 2019 to 20,727 GWh in 2020) and 9.3% (from 28,194 GWh in 2019 to 25,566 GWh in 2020), respectively.

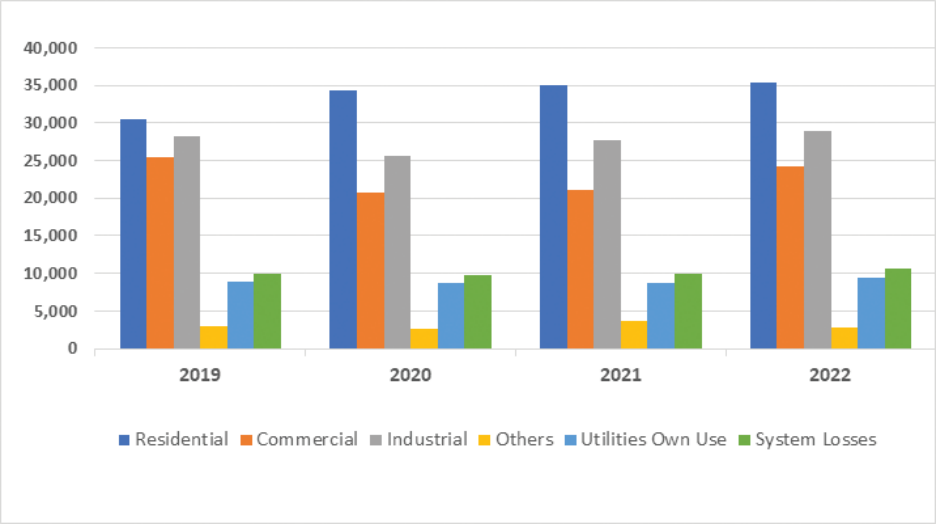


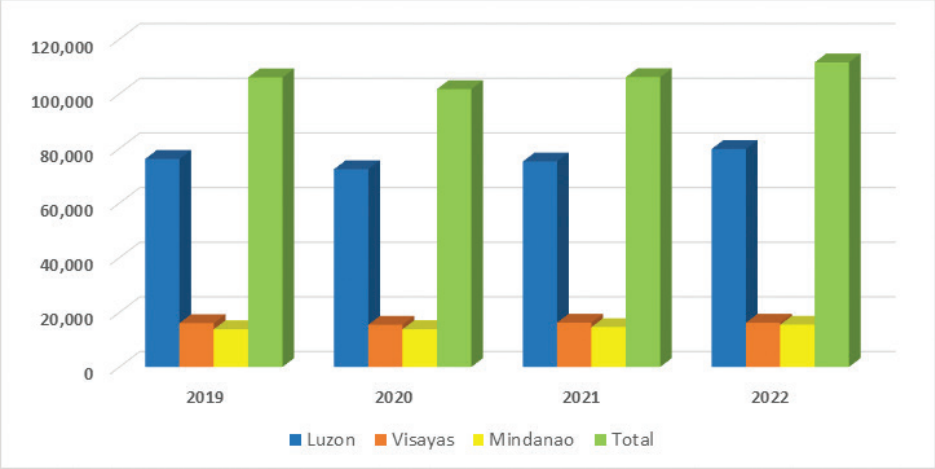
Figure 1. Philippines' Electric Power Consumption, GWh, 2019-2022

SOURCE: DEPARTMENT OF ENERGY, POWER STATISTICS 2022.

The resulting reduction in the system load requirements led to adjustments in the electricity generation of the power plants in the country. The production response was instantaneous as the adjustments in electricity demand sent a market signal through the Wholesale Electricity Spot Market (WESM) to reduce power generation of participating plants in response to a lower demand. Consequently, total power generation declined between 2019 and 2020 as shown in Figure 2. At the height of the COVID-19 pandemic before the vaccine rollout, the total electricity generation declined by 4% from 106,041 GWh in 2019 to 101,756 GWh in 2020. The Philippines used a combination of renewable and nonrenewable energy sources to meet demand for registered participants in the WESM.

Figure 2. Philippines' Gross Power Generation, GWh, 2019-2022

SOURCE: DEPARTMENT OF ENERGY, POWER STATISTICS 2022.



The community quarantines mandated by the government to stem the spread of COVID-19 virus introduced opportunities to effect behavioral changes and long-term actions that have implications on the power industry in the country. Behavioral changes have evolved due to restrictions in movement and interaction such as sheltering in place, social distancing, and reductions in work-related travel in terms of both commuting and other forms of transportation. These opportunities, which are preferable from a cost and convenience perspective over the longer term, are likely to bring profound changes in the way energy is used and produced in the economy.

Cebu's Power Supply and Demand: Pandemic and Recovery

a. Power Generation

Cebu's power supply sector is composed of four sub-sectors that include generation, transmission, distribution, and retail supply.[1] Generation and retail supply operate in an open and competitive market environment, while transmission and distribution operate as a regulated common electricity carrier business subject to the ratemaking powers of the Energy Regulatory Commission (ERC). The organization of the power supply in the country is the result of regulatory reforms instituted by the Philippine Government through the passage of Republic Act No. 9136, also known as the Electric Power Industry Reform Act (EPIRA) of 2001.

Electricity in Cebu is primarily generated using coal which, on average during the period 2018-2022, accounted for about 95% of the total power generation in the province. Utilizing the circulating fluidized bed (CFB) coal and pulverized sub-critical coal technologies, the coal-fired power plants are operated by non-NPC/ independent power producers that include the Global Business Power-Cebu Energy Development Corporation (GBP-CEDC), KEPCO-Salcon Power Corporation (KSPC), Global Business Power-Toledo Power Corporation (GBP-TPC), and Therma Visayas, Inc. (TVI).

Power generation that uses renewable energy technologies remains a very small fraction of about 2% of Cebu's total generation output during the pandemic period. First Toledo Solar Energy Corporation (FTSEC) operated a ground mounted solar PVs in Toledo with an installed and dependable capacity of 60 MW and 48 MW, respectively. Cebu I Electric Cooperative, Inc. (CEBECO I) operates run-of-the-river type hydroelectric power plants in Barili and Badian.

1 Section 5, R.A. 9136.

At the peak of the COVID-19 pandemic in 2020, in response to a lower power demand the generated electricity in the province declined by about 3% to 5,377,779 MWh from the previous year's level of 5,527,308 MWh. As shown in Table 1, there was a marked decline in the year-to-year electricity generation from diesel sources by about 60% in 2020 because of the logistical restrictions imposed by quarantines globally affecting the movement of oil and refined petroleum products between countries. Global demand in oil decreased by 25% year-on-year in April 2020 largely due to the sharp decline in transport activity both domestic and globally, but also due to reduced demand in commercial and industrial sectors.[2] Electricity generation from renewable energy sources also declined by about 3% in 2020. The decline in power generation from diesel and renewable energy sources was partially offset by an increase in power generation of coal-fired power plants.

Cebu's economy started to bounce back when COVID-19 vaccines became available to the general population in the early 2021 leading to loosening up in quarantine restrictions and gradual return to normal business operations in commercial and industrial activities. As demand for electricity started to rise, Cebu's independent power producers operating coal and diesel power generation facilities began increasing electricity output in 2021. As shown in Table 1, coal and diesel-run power generation facilities increased generation by about 21% and 200%, respectively, in 2021 from the previous year's levels. Thanks to the gradual reopening of international borders, the flow of trade in products and services began to normalize, albeit at a slower pace initially. Transport and logistical challenges of moving people have also been gradually relaxed allowing resumption in some tourism and other economic activities locally and internationally.

2 Asian Development Bank (2021).

	2018	2019	2020	2021	2022
Coal	4,256,261	5,190,282	5,192,669	6,301,830	5,802,561
Oil-based	152,231	246,704	97,601	298,318	256,955
Diesel	152,231	246,704	97,601	298,318	256,955
Gas turbine	0	0	0	0	0
Oil thermal	0	0	0	0	0
Natural Gas	0	0	0	0	0
Renewable energy	87,239	90,322	87,509	79,811	85,289
Geothermal	0	0	0	0	0
Hydro	5,331	5,331	5,331	5,331	2,479
Biomass	0	0	0	0	0
Solar	81,909	84,991	82,178	74,480	82,810
Wind	0	0	0	0	0
Total	**4,495,731**	**5,527,308**	**5,377,779**	**6,679,958**	**6,144,805**

Table 1. Cebu's Gross Power Generation, MWh, 2018-2022

SOURCE: DEPARTMENT OF ENERGY, POWER STATISTICS 2022.

b. Power Transmission Infrastructure and Rising Peak Demand

Figure 3 shows the Visayas transmission system that is composed of five different island sub-grids of (a) Leyte-Samar in Eastern Visayas, (b) Cebu in Central Visayas, (c) Bohol in Central Visayas, (d) Negros in Western Visayas, and (e) Panay in Western Visayas. These sub-grids are interconnected (i.e. ongoing projects) through submarine cables which provide the capability of sharing excess generation between islands to accommodate growing demand for electricity in the Visayas region (TDP 2022-2040, p. 15).

The development of the 230 kV transmission backbone from Cebu up to Panay Island (Cebu-Negros-Panay 230 kV Backbone) and the 230 kV Backbone between Cebu and Bohol are among ongoing projects (see Figure 3a). These projects are intended to accommodate conventional and renewable energy-based generation projects and to improve grid resiliency. As a complement to the Visayas Backbone, gradual establishment of a looping configuration for the 138 kV transmission system to improve system reliability and resiliency is part of the transmission development plan of the National Grid Corporation of the Philippines (NGCP). The Cebu

Figure 3. Visayas Transmission Network

SOURCE: NATIONAL GRID CORPORATION OF THE PHILIPPINES, TRANSMISSION DEVELOPMENT PLAN 2022-2040, P 15.

Figure 3a. Cebu Sub-Grid

SOURCE: NATIONAL GRID CORPORATION OF THE PHILIPPINES, TRANSMISSION DEVELOPMENT PLAN 2022-2040, P 16.

sub-grid has existing AC interconnections with effective transfer capacity as of December 2020 with Leyte and Negros through marine cables providing the capability of sharing excess generation between islands (NGCP 2023).

Cebu, where the country's second largest major urban center of Metro Cebu is located, is regarded as the major load center of the

Visayas transmission network. During the height of the pandemic period, Cebu's peak demand declined to 1,037 MW in 2020 from 1,078 MW in 2019. Peak demand slightly bounced back to 1,148 MW in 2021 when quarantine restrictions began to ease up and economic activities of the province started to pick up. Cebu's peak power demand accounted for about 7% of the country's total peak demand during the height of the pandemic and remained at that level when quarantine restrictions began to ease up. As the major hub in Visayas, the province's system peak demand accounted for about 43% of the entire Visayas transmission network's system peak demand (see Figure 4). With the onset of the COVID-19 pandemic, load center Cebu was placed under longer enhanced community quarantine compared to other areas in the Visayas the effect of which was evident in the recorded decreased demand of large distribution utilities serving the province.[3]

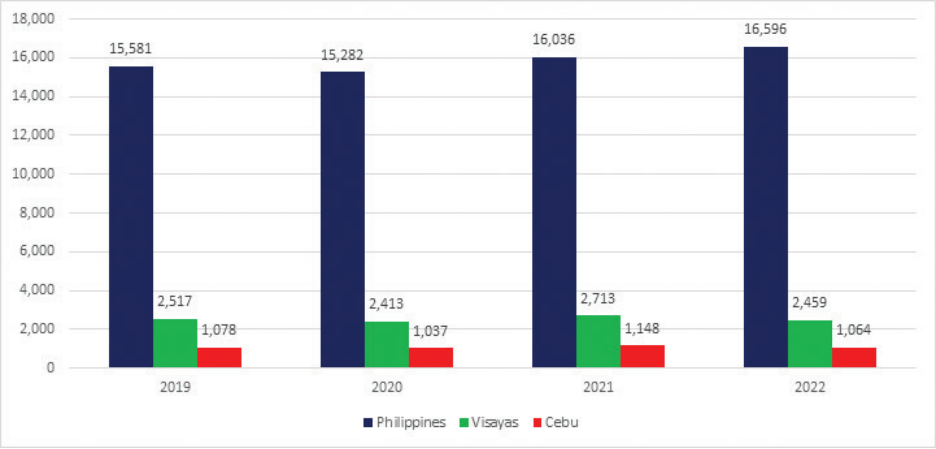


Figure 4. Annual System Peak Demand, MW

SOURCE: DEPARTMENT OF ENERGY, POWER STATISTICS 2022

c. Distribution Utilities and Retail Supply

The province of Cebu is served by a total of nine (9) power distribution utilities, enerzones, and electric cooperatives, namely: Balamban Enerzone Corporation (BEZ), Mactan Electric Company, Inc. (MECO), Mactan Enerzone Corporation (MEZ), Visayan Electric Companay (VECO), Cebu I Electric Cooperative, Inc. (CEBECO

3 NGCP Transmission Development Plan 2022-2040, p. 24.

I), Cebu II Electric Cooperative, Inc. (CEBECO II), Cebu III Electric Cooperative, Inc. (CEBECO III), Bantayan Island Electric Cooperative, Inc. (BANELCO), and Camotes Electric Cooperative, Inc. (CELCO). VECO is Cebu's largest distributor of electricity with a non-coincident peak demand from its captive customers of 561.12 MW in 2020. VECO's customers alone accounted for about 78% of the province's total peak demand.[4]

During the COVID-19 pandemic, power distribution utilities throughout the country operated on skeletal manpower and reduced man-hours to comply with the quarantine restrictions in place in their jurisdictions. Reductions in energy demand due to lockdowns have reduced revenue, but operational costs have not decreased. Power utilities have been one of the most severely affected, many of whom were not in strong financial shape before the pandemic. These utilities have experienced the combination of decreased revenues as demand declined and then reduced payment from end-consumers who are less able to pay because of the pandemic (ADB 2021).

d. WESM: Visayas Performance and Cebu-Based Participants

The Philippine government passed the Republic Act No. 9136, otherwise known as the Electric Power Industry Reform Act (EPIRA) of 2001, which provided the framework for the restructuring of the power industry. As part of the framework promoting deregulated electricity market operations, the Wholesale Electricity Spot Market (WESM) was established and started its first commercial operations in Luzon in 2006 (see Figure 5). The commercial operations were expanded in 2010 allowing power industry participants from the Visayas region to join the WESM. In 2017, the Department of Energy launched the WESM Mindanao. The WESM is the hub for trading electricity as a commodity, and is the venue for efficient scheduling, dispatch, and settlement of energy injections and withdrawals in the Philippine Grid. Linking the market participants and creating a more dynamic power industry throughout the country, the WESM is a flagship innovative solution in balancing demand and supply of electricity, thus providing a platform for establishing a market clearing price for electricity as a commodity.

4 Department of Energy, 2021-2030 Consolidated Distribution Development Plan. In 2020, the Cebu's total peak demand reported in the Plan does not include Mactan Electric Company, Inc. (MECO); MECO has not submitted its own distribution development plan for 2021-2030.

Figure 5. Philippine Wholesale Electricity Spot Market

SOURCE: DEPARTMENT OF ENERGY, INTRODUCTION TO THE WHOLESALE ELECTRICITY SPOT MARKET (WESM), P. 49

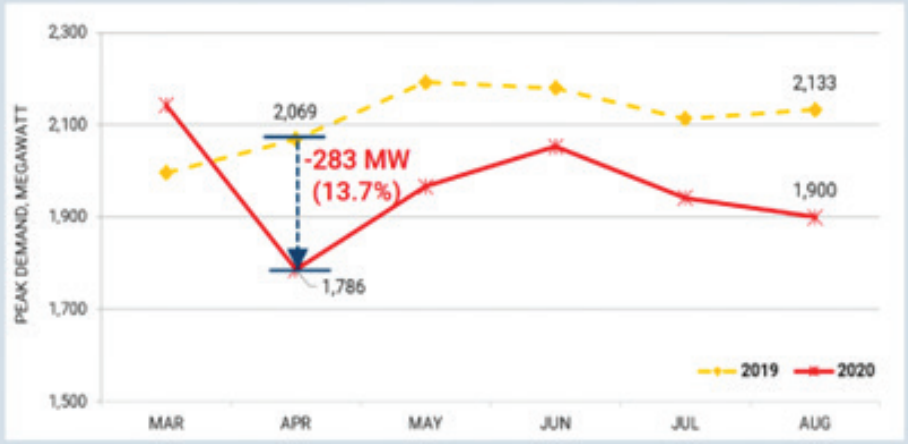
During the first six (6) months of the imposition of COVID-19 quarantine measures in the country, the peak demand in the Visayas WESM substantially declined by 13.7% to 1,786 MW in April 2020 from 2,069 MW in April 2019 as shown in Figure 6.[5] The magnitude of the reduction in demand was unprecedented and a direct result of a nationwide lockdown virtually halting economic activities in the region, and the entire country, to stem the transmission of the coronavirus. Electricity demand is clearly a bellwether metric for predicting a country's economic performance. Cebu, as the largest electricity user in the Visayas region, accounted for about 43% of total peak demand in the Visayas Grid.

In the WESM 2020 Summary Report, prices in the WESM decreased by 54.8% in 2020 compared with 2019. This is primarily due to the significant reduction of electricity consumption in Luzon and Visayas as a result of the restrictions imposed by the government to minimize the transmission of COVID-19 virus. The average Effective Spot Settlement Price (ESSP) for 2020 was recorded at P2.450 per kWh which was a significant decrease from P5.425 per kWh last 2019. Meanwhile, the lowest ESSP for 2020 was recorded at P1.502 per kWh during April, while the ESSP peaked at P3.526

5 There is no available IEMOP report on market operations highlights in the provincial grid level.

Figure 6. Monthly Peak Demand in the Visayas WESM 2019-2020

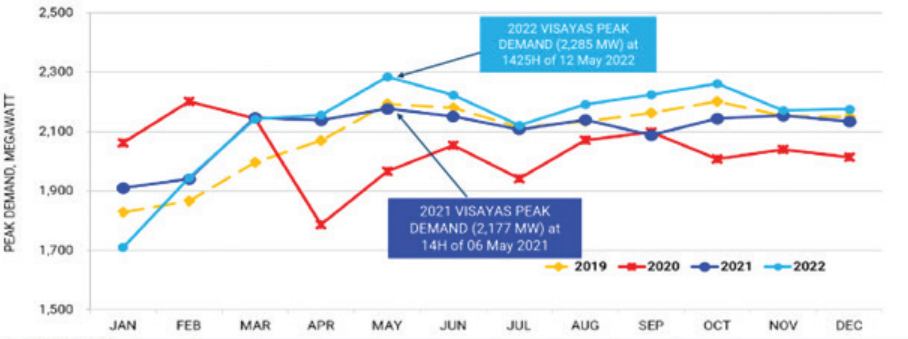
SOURCE: INDEPENDENT ELECTRICITY MARKET OPERATOR, MARKET OPERATIONS HIGHLIGHTS MONTHLY MEDIA BRIEFING FOR AUGUST 2020, P. 7



PEAK DEMAND	MAR	APR	MAY	JUN	JUL	AUG
2020	2,143	1,786	1,966	2,053	1,941	1,900
2019	1,996	2,069	2,193	2,180	2,113	2,133

Figure 7. Peak Demand in the Visayas WESM 2019-2022

SOURCE: INDEPENDENT ELECTRICITY MARKET OPERATOR, MARKET OPERATIONS HIGHLIGHTS MEDIA BRIEFING FOR NOVEMBER 2022 WESM RESULTS, P. 8



PEAK DEMAND (MW)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC*	YEAR
2022	1,710	1,944	2,143	2,156	2,285	2,222	2,121	2,191	2,225	2,261	2,171	2,176	2,285
2021	1,910	1,941	2,146	2,138	2,177	2,151	2,107	2,140	2,089	2,145	2,154	2,135	2,177
2020	2,063	2,201	2,143	1,786	1,966	2,053	1,941	2,071	2,099	2,008	2,040	2,013	2,201
2019	1,829	1,865	1,996	2,069	2,193	2,180	2,113	2,133	2,162	2,201	2,153	2,150	2,201

*As of 11 December 2022

per kWh during September. The decrease in WESM prices was largely attributed to adequate supply coupled with a substantial decrease in demand (IEMOP 2021).[6]

When the COVID-19 vaccines became available to the general population starting in early 2021, some easing off in the stringent quarantine restrictions allowed business and commercial operations to slowly return to normal. Electricity demand in 2021 returned to pre-pandemic levels. As shown in Figure 7, recovery in the power sector continued and by the end of 2022 peak demand in the Visayas region was higher compared to the 2021 levels.

Cebu-based independent power producers (IPP) and power distribution utilities registered to become WESM participants when the Visayas Grid was integrated into the Wholesale Electricity Spot Market. As mandated by EPIRA, only persons or companies registered with the Independent Electricity Market Operator (IEMOP) may inject and withdraw electricity from the Philippine Grid.

WESM-registered independent power producers with generation operations in Cebu include Cebu Energy Development Corporation (CEDC), East Asia Utilities Corporation (EAUC), Toledo Power Company (TPC), KEPCO SPC Power Corporation, Citicore Solar Cebu, Therma Visayas, Inc. (TVI), Therma Power Visayas, Inc. (TPVI), amongst others.

Of Cebu's power distribution utilities, the following are registered participants of the Visayas WESM: Balamban Enerzone Corporation (BEZ), Mactan Electric Company, Inc. (MECO), Mactan Enerzone Corporation (MEZ), Visayan Electric Companay (VECO), Cebu I Electric Cooperative, Inc. (CEBECO I), Cebu II Electric Cooperative, Inc. (CEBECO II), and Cebu III Electric Cooperative, Inc. (CEBECO III).

Due to the COVID-19 pandemic, the scheduled implementation of the Enhanced WESM Design and Operations (EWDO) was affected. Barring the effects of the COVID-19 pandemic, the Energy Regulatory Commission approved the Pricing Determination

6 https://www.iemop.ph/news/the-wesm-2020-summary-report/

Methodology (PDM) on 29 December 2020, which allowed for shorter scheduling and pricing intervals determined in the WESM from one (1) hour to five (5) minutes, among other amendments to WESM rules and market manuals (Power Development Plan 2020-2040, p. 26).

Cebu's Power Sector Outlook

a. Energy Security Challenges

The national government's policy focus to achieve energy security in the country is to promote affordability, accessibility, reliability, self-sufficiency, and energy independence.[7] Historically, the Philippines has one of the highest electricity prices in the Asian region.[8] In Cebu, based on the rates charged by two major power distribution utilities (VECO and MECO) and three electric cooperatives (CEBECO I, CEBECO II, and CEBECO III), the average electricity rate in December 2023 was highest for commercial customers at 10.96 pesos per kilowatt-hour, followed by residential customers at about 10.62 pesos per kilowatt-hour, and 8.79 pesos per kilowatt-hour for industrial customers.[9] The differences in the average electricity rates across distributors and electric cooperatives are a result of the dynamics of demand and supply by franchise areas and geographic locations.

Fluctuations in power supply and demand are an inherent characteristic of a deregulated electricity market, which are to be expected when the generation and retail supply sub-sectors of the power industry are open to competition as allowed in EPIRA. While fluctuations are often associated with power transmission and distribution challenges (e.g., limitations in the power infrastructure assets), the fluctuations observed during the pandemic period are a result of generation adjustments due to restricted economic activities. Decreases and/or fluctuations in consumption like those caused by the COVID-19 pandemic can affect electricity grid operation, balancing, and forecasting

7 See NEDA, Philippine Development Plan 2023-2028, p. 269; DOE, Philippine Energy Plan 2018-2040, p. xi.
8 NEDA Philippine Development Plan 2023-2028, p. 269; see also Ravago, M.V. (2023).
9 Department of Energy https://www.doe.gov.ph/expanded-rural-electrification?q=electric-power/electricity-rates-residential; https://www.doe.gov.ph/expanded-rural-electrification?q=electric-power/electricity-rates-commercial; https://www.doe.gov.ph/expanded-rural-electrification?q=electric-power/electricity-rates-industrial

(Buechler, et.al., 2022). Understanding and anticipating the impacts of shocks like COVID-19 on the electricity sector is critical to maintaining grid reliability and building resilience to adverse events.

High electricity prices tend to be symptomatic of the challenges faced by the power sector. Addressing these challenges to help steer the country towards energy security require instituting energy policies that (a) encourage more investments in the power generation, (b) expand the use renewable energy sources and promote fuel source diversity and mix in power generation, (c) improve the capacity and efficiency of the transmission and distribution networks, and (d) promote new emerging technologies in power supply to meet growing electricity demand in Cebu, while allowing the power industry to respond effectively to natural disasters (e.g., typhoon) and human-caused external shocks (e.g., pandemic).

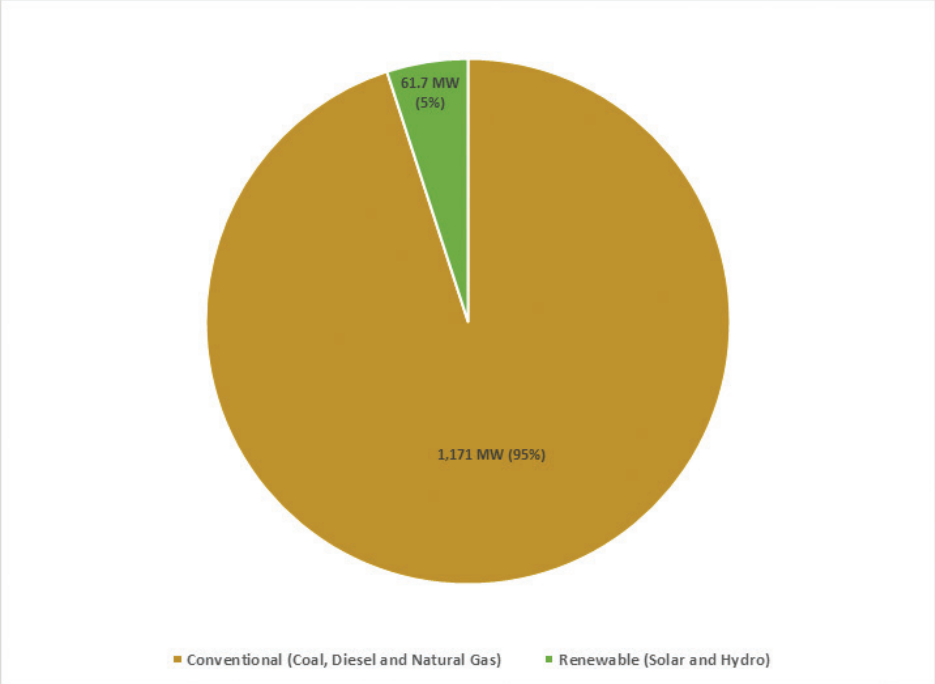
Cebu's electricity generation has for decades been dominated primarily by coal fuel source, with capacity from coal-fired power facilities of about 960 MW constituting 78% of the installed capacity in 2023. In Figure 8, the combined conventional power plant type (coal, diesel, and natural gas) totals 1,171 MW or about 95% of the installed capacity. Meanwhile, renewable energy sources (solar and hydro) make up a very small amount of about 61.7 MW or 5% of the installed capacity. First Toledo Solar with an installed capacity of 60 MW from its ground mounted solar PVs in Toledo, Cebu started commercial operations in June 2017 (see Table 2). The Department of Energy is steering its efforts towards the development of an optimal energy mix to meet its agenda on energy security. The optimal mix strategy requires the use of all available energy resources to meet the country's growing energy needs.

As shown in Table 2, during the height of the COVID-19 pandemic in August 2020, Therma Power-Visayas Inc. started the commercial operations of its facility in Naga, Cebu after taking over the Naga Power Plant Complex from its previous operator the Salcon Power Corporation.[10]

10 https://aboitizpower.com/about-us/our-businesses/power-generation/thermal/therma-power-visayas-inc

Figure 8. Total Installed Capacity of Cebu's Existing Power Plants, November 2023

SOURCE: CALCULATED FROM DEPARTMENT OF ENERGY'S EXISTING POWER PLANTS VISAYAS GRID NOVEMBER 2023.



The Department of Energy issued department circular in August 2019 entitled "Providing a Framework for Energy Storage System in the Electric Power Industry", recognizing the applications and the benefits of energy storage system (ESS) as an emerging technology in the improvement of the electric power system in accordance with the objective of ensuring the quality, reliability, security, and affordability of the supply of electric power.[11] It recognizes that the ESS technologies are applied to serve a variety of functions in the generation, transmission, and distribution of electric energy. Among the ESS, the Battery Energy Storage System (BESS) is still considered a new technology in the Philippines with various applications for the transmission system including provision of ancillary services, transmission facility upgrades deferment, and transmission congestion relief (TDP 2020-2040, p. 40).

Cebu opened its first battery storage system facility when Toledo Battery Energy Storage System with an installed capacity of 23.7 MW operated by SMGP BESS Power,

11 Department of Energy, Department Circular No. DC2019-08-0012

Inc. started its commercial operations in August 2023.[12] ESS will be one of the key elements in the proposed Smart Grid Roadmap towards power system modernization in the province (NGCP 2023, p. 40).

Power grid congestion due to transmission disruptions continues to hamper the reliability of energy supply[13], thus affecting electricity prices and affordability. During the pandemic, electricity prices were affected by congestion due to the outage of a damaged Cebu-Negros submarine cable prompting the Energy Regulatory Commission (ERC) to issue an order on 20 September 2021 suspending collection of congestion charges.[14]

Outside major franchise areas of major power distribution utilities, most electric cooperatives in the country face financial and management issues due to the lack of long-term power supply agreement, high incidence of power pilferages, unreliable distribution system (due to obsolete, aged or dilapidated distribution facilities), and inability of customers to pay. Some electric cooperatives charge lower rates than private distribution utilities, but more brownouts and low-voltage episodes attend their power supply (Fabella, et. al. 2018).

b. Supply and Demand Outlook

Investing in additional power generation capacity and ancillary services to meet the growing electricity demand is imperative to secure Cebu's long-term power supply. Ancillary services are essential support services needed to sustain the transmission capacity and maintain the power quality, reliability, and security of the grid. As identified in the Transmission Development Plan 2022-2040, the project clusters based on geographic locations to enhance resiliency, system reliability, and island interconnections in the Visayas Grid include: (a) Leyte, Samar, and Bohol 230/138 kV Backbone Projects, (b) Negros and Panay 230/138 kV Backbone Projects, and (c) Metro Cebu 230/138 kV Backbone Projects. These project clusters enable sharing

12 See Department of Energy, List of Existing Power Plants-Visayas Grid, November 2023.

13 NEDA, Philippine Development Plan 2023-2028, p. 271.

14 https://www.iemop.ph/news/iemop-submitted-to-erc-the-guidelines-to-implement-suspension-of-charges-affected-by-the-damaged-cebu-negros-submarine-cable/

Table 2. List of Existing Power Plants in Cebu, November 2023

Facility Name	Sub-type	Capacity		No. of Units	Operator/ Location	Date Commissioned/ Commercial Operation
		Installed	Dependable			
COAL - GRID						
CEDC Coal U1	Circulating Fluidized Bed Coal	83.7	82	1	GBPC - Cebu Energy Development Corporation, Toledo City, Cebu	April 2010
CEDC Coal U2		83.7	82	1		June 2010
CEDC Coal U3		83.7	82	1		January 2011
KSPC Coal U1	Circulating Fluidized Bed Coal	110.5	93.3	1	KepCo-Salcon, Naga, Cebu	November 2010
KSPC Coal U2		110.5	93.3	1		March 2011
TPC TG4 (Sangi)	Pulverized Sub Critical Coal	26.3	20	1	Global Business Power Corporation - TPC, Toledo City	December 1982
TPC TG5 (Sangi)		40	40	1		March 1983
TPC 1A Expansion	Circulating Fluidized Bed Coal	83.7	82	1		October 2015
TVI U1	Circulating Fluidized Bed Coal	169	150	1	Therma Visayas, Inc.	April 2019
TVI U2		169	150	1		September 2019
DIESEL - GRID						
TPVI DPP	Bunker/ Diesel Internal Combustion	44.6	40.6	6	Therma Visayas, Inc.	August 2020
TPC Carmen Station		45.8	40	4	Global Business Power Corporation - TPC, Toledo City	March 1979
DIESEL - EMBEDDED						
Cebu Private Power	Bunker/ Diesel Internal Combustion	70	64	10	Cebu Private Power Corp., Cebu City	April 1998
East Asia Utilities (MEPZA)		49.6	45.5	4	East Asia Utilities Corp., Cebu City	December 1997
HYDRO - EMBEDDED						
Basak	Run-of-River Type HEPP	0.5	0.3	2	CEBECO I, Badian, Cebu	September 1996
Mantayupan		0.5	0.3	2	CEBECO I, Barili Cebu	August 1995
Matutinao		0.7	0	3	CEBECO I, Badian, Cebu	May 1990

Facility Name	Sub-type	Capacity		No. of Units	Operator/ Location	Date Commissioned/ Commercial Operation
		Installed	Dependable			
NATURAL GAS - EMBEDDED						
DESCO Natural Gas	Gas Engine	1	0	1	DESCO Inc. Bogo City, Cebu	February 2012
SOLAR - GRID						
First Toledo Solar	Ground Mounted Solar PVs	60	48	1	Citicore Solar Cebu	June 2017
TOTAL CAPACITY - CEBU		**1232.8**		**1113.3**		

SOURCE: DEPARTMENT OF ENERGY, LIST OF EXISTING POWER PLANTS VISAYAS GRID NOVEMBER 2023.

	2023	2024	2025	2030	2035	2040
Panay	502	539	580	825	1,172	1,647
Cebu	1,294	1,390	1,496	2,126	3,019	4,244
Bohol	115	123	133	188	268	376
Leyte-Samar	331	356	383	544	773	1,086
Negros	449	483	520	739	1,049	1,474
Total	**2,691**	**2,891**	**3,112**	**4,422**	**6,281**	**8,827**

Table 3. Visayas Projected Demand 2023-2040, MW

SOURCE: NGCP, TRANSMISSION DEVELOPMENT PLAN 2022-2040, P. 25

of resources, including manpower, project partner/suppliers, and knowledge. With clustering, resources can be optimized which would result in lower costs, better flexibility, and higher productivity.[15]

Within Cebu Island where the load center is located, the development of new 230 kV load substations and implementation of new 230 kV transmission line extensions are required to ensure adequate supply facilities in the long term. Similar to other urbanized areas, securing right-of-way in Cebu is also a major challenge in transmission project implementation (NGCP 2023, p. 97)

15 See NGCP, Transmission Development Plan 2022-2040, pp. 33-35. See also Department of Energy, Power Development Plan 2020-2040, p. 79.

As shown in Table 3, Cebu is projected to lead the increase in power demand in the Visayas Grid. By 2030, Cebu's peak demand is expected to reach 2,126 MW or about 64% higher than the 2023 level. By 2040, the province's peak demand will have increased by more than threefold to 4,244 MW from the 2023 level.

Comparing the projected demand in Table 3 and the installed capacity of existing power plants in Table 2, Cebu faces potential power supply shortages during peak periods starting 2024-25. To make up for the shortage, Cebu will have to import electricity during peak periods from other provinces where it has interisland transmission interconnections like Leyte-Samar and Negros. NGCP projected that by 2025, the power demand in Cebu will be 1,496 MW, while existing and committed capacity of Cebu's power generation facilities will be 1,174 MW. The gap is expected to increase by 2040 when power demand in Cebu is projected to reach 4,244 MW, while total capacity is projected to be around 2,012 MW only (NGCP 2023, p. 199).

Ensuring the adequacy of the power system entails the ability of Cebu's generation, transmission, and distribution assets to cover peak load, while taking into consideration the uncertainties in both the generation availability and generation capacity. Loss-of-load events and power supply disruptions are costly and pose risk to the economic growth of the province. To ensure the security and reliability of the power grid, electric power generating units are identified as Must-Run Units (MRUs). Thus, Cebu-based power generation facilities that are registered participants of the WESM play a key role; these are facilities with reactive power generation/absorption capability and their use shall be based on the location where voltage problem exists.

Under the WESM Rules, MRUs are generating units identified and instructed by the System Operator - the National Grid Corporation of the Philippines (NGCP), to provide the needed power supply on a real-time basis or on a particular schedule deemed necessary to ensure the reliability and security of power supply in the grid, especially during times of supply shortfall. MRUs are power generating units that are operated in times when (a) there is insufficient power supply offers in the WESM and/or (b) there is a need to provide reactive power for voltage support to address system

security requirement and maintain the stability of the grid. The Department of Energy continues to assess the performance of the generation units and if warranted, uses the necessary policies and effect changes to the WESM Rules. The considerations and criteria in the selection of MRUs are specified the WESM Dispatch Protocol Manual.

Conclusion and Recommendations

Cebu needs more investments in power generation and ancillary services to meet its growing electricity demand, which is projected to increase as the provincial economy recovers from the pandemic and sustains its robust economic growth. Given the lack of committed new projects in power generation, the province faces the risk of power supply shortages during peak demand periods, thus, increasing its reliance on imported electricity from neighboring provinces with interisland transmission connections with Cebu. Enhancing the reliability of electricity supply is at risk with insufficient level of ancillary services that help maintain the proper flow and direction of electricity and address imbalances between supply and demand.

Investing to promote fuel source diversity and optimal fuel mix would be a step in the right direction to enhance the resiliency of the province's power sector. The modernization of Cebu's grid, and the Visayas grid to a large extent, to accommodate more renewable energy appears to be moving at a slow pace, and while Cebu is one of a handful of jurisdictions in the country that have commenced commercial generation projects on ground mounted solar PVs and battery energy storage systems, more needs to be done in increasing the share of renewable energy sources in power generation in the province which at current level of about 5% is substantially low. Upgrading and modernizing the transmission and distribution lines to support efficient transition to cleaner energy will enhance the trade competitiveness of Cebu's export products in global markets that have strict environmental standards on clean energy use and low carbon footprint production processes. Modernizing transmission and distribution lines will also enhance Cebu's capability to address the threats to grid resiliency due to natural and man-made disasters.

Overall, Cebu's roadmap for power sector development aligns with the national government's initiatives to achieve national energy development as outlined in the Department of Energy's Power Development Plan 2020-2040. The province's roadmaps for the generation, transmission, distribution, supply, electricity market, off-grid development, and total electrification in the province are anchored on three main goals: (a) energy security, resiliency, affordability, and sustainability, (b) transparent and fair playing field in the power industry, and (c) electricity access for all.

ANALYSIS: **POPULATION DYNAMICS AND POLICY RESPONSES**

PHOTO BY CEBU INSIGHTS PH

The Population of Cebu:
Highlights from the 2020 Census of Population and Housing

by **Francisco M. Largo** and **Jean Villacensio**

An accurate count of populations is needed if a coherent and appropriate response to negative events, such as pandemics, is to be made. Certain characteristics of populations most relevant to the vulnerability of these populations to these events would also need to be known. This note presents the latest population count of Cebu province and its highly urbanized cities and selected properties of populations that would have helped inform a policy response against the COVID-19 Pandemic. In general, however, knowledge of population levels and characteristics is needed for proper provision of public goods and services, including those that mitigate the effects of crises of natural or man-made origin.

The latest population counts and growth rates based on the 2020 Census of Population and Housing is presented followed by age structures and population densities. As the availability of water and sanitation services is important for public health, we end with a presentation of available data on household access to these services. It is also especially important that official government counts are employed in policy responses. The primary responsibility for acquiring primary data remains with the Philippine Statistics Authority (PSA). Any use of other statistical sources would have to be noted with the consequent care and qualification attached to such use. Any gaps in official sources and counts would have to be noted for proper lobbying for corrective measures.

PHOTO BY CEBU INSIGHTS PH

Population Count and Growth Rates

Cebu including its highly urbanized cities (HUC) – Cebu, Lapu-Lapu, and Mandaue, registered a total population of 5,151,274 persons according to the 2020 Census of Population and Housing (Philippine Statistics Authority, 2023a). The Philippine Statistics Authority (PSA) observes the practice of reporting data for Cebu Province excluding data from HUCs which are reported separately. We do the same for this article. The most populous local government units (LGUs) are the Cebu City (964,169), Lapu-Lapu City (497,604), Mandaue City, (364,116), Talisay

REGION VII (CENTRAL VISAYAS) and CEBU: 2000, 2010, 2015, AND 2020

REGION, PROVINCE, AND CITY/MUNICIPALITY	TOTAL POPULATION				POPULATION GROWTH RATE (in percent)			
	1-May-00	1-May-10	1-Aug-15	1-May-20	2000-2010	2010-2015	2015-2020	2010-2020
REGION VII (CENTRAL VISAYAS)	5,706,953	6,800,180	7,396,898	8,081,988	1.77	1.61	1.88	1.74
CEBU *	2,160,569	2,619,362	2,938,982	3,325,385	1.94	2.22	2.63	2.41
ALCANTARA	11,532	13,556	15,160	16,910	1.63	2.15	2.32	2.23
ALCOY	13,497	14,757	16,979	19,186	0.90	2.71	2.60	2.66
ALEGRIA	20,677	22,072	23,300	25,620	0.65	1.04	2.02	1.50
ALOGUINSAN	24,180	27,650	32,100	34,466	1.35	2.88	1.51	2.23
ARGAO	61,010	69,503	72,366	78,187	1.31	0.77	1.64	1.18
ASTURIAS	38,961	44,732	47,857	55,397	1.39	1.29	3.13	2.16
BADIAN	30,400	37,699	37,912	43,735	2.17	0.11	3.05	1.49
BALAMBAN	59,922	71,237	87,177	95,136	1.74	3.92	1.85	2.93
BANTAYAN	68,125	74,785	79,084	86,247	0.94	1.07	1.84	1.44
BARILI	57,764	65,524	73,862	80,715	1.27	2.31	1.88	2.11
CITY OF BOGO	63,869	69,911	78,120	88,867	0.91	2.14	2.75	2.43
BOLJOON	13,380	15,027	16,344	17,525	1.17	1.61	1.48	1.55
BORBON	28,571	31,598	35,526	38,187	1.01	2.25	1.53	1.91
CITY OF CARCAR	89,199	107,323	119,664	136,453	1.87	2.09	2.80	2.43
CARMEN	37,351	44,648	51,325	57,897	1.80	2.69	2.57	2.63
CATMON	25,083	28,320	30,471	33,745	1.22	1.40	2.17	1.77
COMPOSTELA	31,446	42,574	47,898	55,874	3.07	2.27	3.29	2.75
CONSOLACION	62,298	106,649	131,528	148,012	5.52	4.07	2.52	3.33
CORDOVA	34,032	50,353	59,712	70,595	3.99	3.30	3.58	3.43
DAANBANTAYAN	69,336	74,897	84,430	93,502	0.77	2.31	2.17	2.24
DALAGUETE	57,331	63,239	67,497	74,596	0.99	1.25	2.13	1.66
DANAO CITY	98,781	119,252	136,471	156,321	1.90	2.60	2.90	2.74
DUMANJUG	39,666	46,754	51,210	57,823	1.66	1.75	2.59	2.15
GINATILAN	14,073	15,327	15,919	16,906	0.86	0.72	1.27	0.98
LILOAN	64,970	100,500	118,753	153,197	4.46	3.23	5.50	4.30
MADRIDEJOS	29,020	34,905	36,429	42,039	1.86	0.82	3.06	1.88
MALABUYOC	17,015	18,426	19,373	19,770	0.80	0.96	0.43	0.71

REGION, PROVINCE, AND CITY/MUNICIPALITY	TOTAL POPULATION				POPULATION GROWTH RATE (in percent)			
	1-May-00	1-May-10	1-Aug-15	1-May-20	2000-2010	2010-2015	2015-2020	2010-2020
MEDELLIN	43,113	50,047	55,332	59,605	1.50	1.93	1.58	1.76
MINGLANILLA	77,268	113,178	132,135	151,002	3.89	2.99	2.85	2.92
MOALBOAL	23,402	27,676	31,130	36,930	1.69	2.26	3.66	2.92
CITY OF NAGA	80,189	101,571	115,750	133,184	2.39	2.52	3.00	2.74
OSLOB	22,472	26,116	27,893	29,264	1.51	1.26	1.01	1.14
PILAR	11,226	11,564	11,308	12,506	0.30	-0.43	2.14	0.79
PINAMUNGAJAN [1]	51,715	57,997	65,955	75,131	1.15	2.48	2.78	2.62
PORO	21,397	23,498	25,212	26,232	0.94	1.35	0.84	1.11
RONDA	16,808	18,582	20,360	21,005	1.01	1.75	0.66	1.23
SAMBOAN	16,659	18,613	20,884	20,373	1.11	2.21	-0.52	0.91
SAN FERNANDO	48,235	60,970	66,280	72,224	2.37	1.60	1.82	1.71
SAN FRANCISCO	41,327	47,357	55,180	59,236	1.37	2.95	1.50	2.26
SAN REMIGIO	44,028	51,394	57,557	65,744	1.56	2.18	2.84	2.49
SANTA FE	22,956	27,270	28,603	34,471	1.74	0.91	4.00	2.37
SANTANDER	13,842	16,105	17,857	18,527	1.52	1.98	0.78	1.41
SIBONGA	38,281	43,641	48,186	53,424	1.32	1.90	2.19	2.04
SOGOD	27,432	30,626	35,108	39,447	1.11	2.63	2.48	2.56
TABOGON	27,827	33,024	39,013	41,432	1.73	3.22	1.27	2.29
TABUELAN	19,373	22,292	25,630	28,907	1.41	2.69	2.56	2.63
CITY OF TALISAY	148,110	200,772	227,645	263,048	3.09	2.42	3.09	2.74
CITY OF TOLEDO	141,174	157,078	170,335	207,314	1.07	1.55	4.22	2.81
TUBURAN	51,845	58,914	63,866	68,167	1.29	1.55	1.38	1.47
TUDELA	10,401	9,859	11,296	11,304	-0.53	2.62	0.01	1.38
CITY OF CEBU (Capital)	718,821	866,171	922,611	964,169	1.88	1.21	0.93	1.08
CITY OF LAPU-LAPU (OPON)	217,019	350,467	408,112	497,604	4.91	2.94	4.26	3.56
CITY OF MANDAUE	259,728	331,320	362,654	364,116	2.46	1.73	0.08	0.95

Notes:

* Excludes City of Cebu, City of Lapu-Lapu, and City of Mandaue.

1 Correction of barangay name from Pinamungahan; Municipal Mayor Certification.

Sources: Philippine Statistics Authority, 2000 Census of Population and Housing, Philippine Statistics Authority, 2010 Census of Population and Housing, Philippine Statistics Authority, 2015 Census of Population, Philippine Statistics Authority, 2020 Census of Population and Housing

City (263,048) and Toledo City (207,314). The latter are all HUCs or component cities. For the municipalities, the largest in terms of population are Liloan (153,197), Minglanilla (151,002), Consolacion (148,012), Balamban (95,136), and Daanbantayan (93,502). The smallest municipalities in terms of population size were Tudela (11,304), Pilar (12,506), Ginatilan (16,906), Alcantara (16,910), and Boljoon (17,525). Table 1 provides the population counts and growth rates of Cebu and the its HUCs.

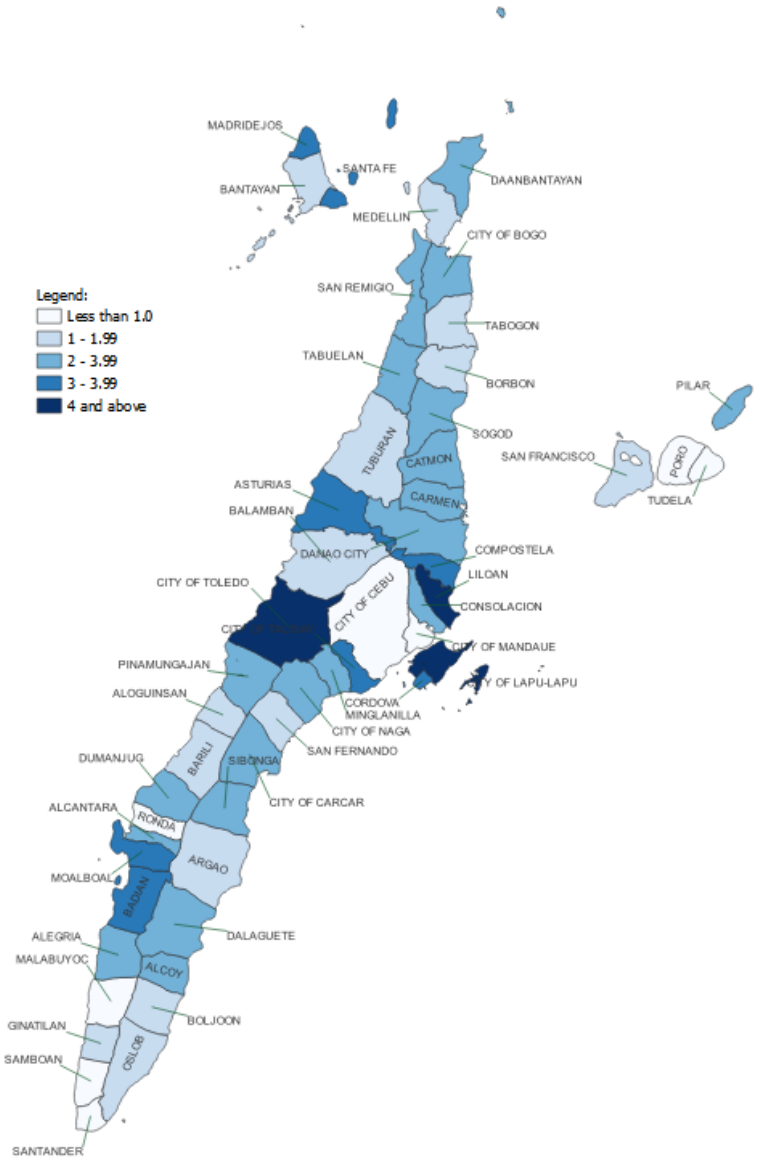


Figure 1. Annual Population Growth Rate of the Cities and Municipalities of Cebu

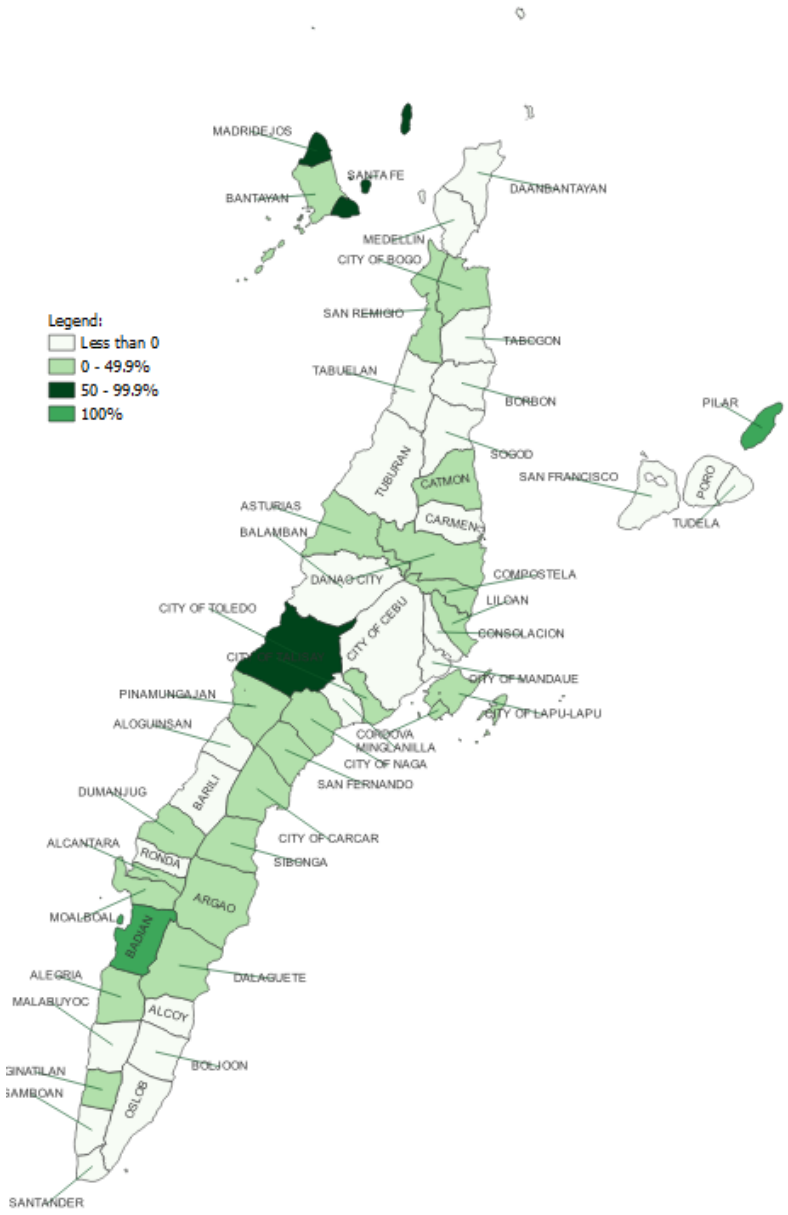


Figure 2. Percent Increase in Annual Population Growth Rate between 2010-2020 and 2015-2020 of the Cities and Municipalities of Cebu

The total population of Cebu increased from the total of 4,632,359 reported in 2015. Cebu, as a whole , recorded an annual growth rate of 2.26% between 2015 and 2020. Cebu Province grew at an annual rate of 2.6%. Mandaue City and Cebu City grew much slower at 0.08% and 0.93%, respectively. Lapu-Lapu City stood out among HUCs with a relatively high 4.26% over the same period. The variation around the overall growth

rate of 2.6% for Cebu would show which local government units are experiencing accelerating growth. Figure 1 shows this information for all 53 administrative units of Cebu including HUCs. The local government units with the highest levels of population growth from 2015-2020 are Liloan (5.5%), Toledo City (4.22%), Santa Fe (4%), Moalboal (3.66%), and Cordova (3.58%).

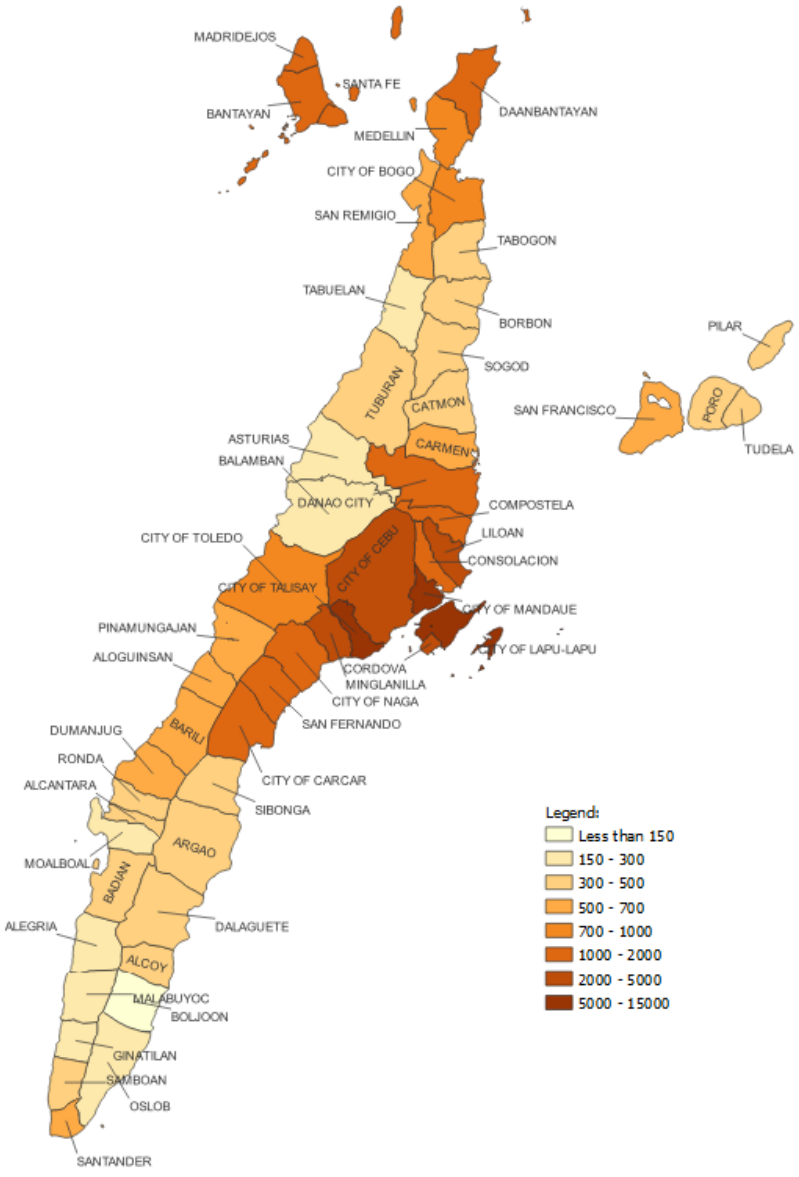
The figure above corroborates the findings of Gultiano et al. (2015) as cited in Gultiano and Largo (2017) indicating that migration would first occur in HUCs and must eventually dissipate to outlying residential centers. This can also be seen when comparing the growth rates between the two previous intercensal periods 2010-2015 and 2015-2020. Figure 2 shows the percentage increases in population growth rates for the LGUs of Cebu. Twenty eight local government units had growth rates from the period of 2015-2020 greater than growth rates from the period of 2010-2015. The most pronounced increases were those of Pilar, Badian, Santa Fe which all saw more than a doubling of population growth rates across the two intercensal periods.

Population Density

Given the relatively fixed land areas, any changes in population counts would change the population densities of local government units. This information needs to be accounted for as population density could be a positive or negative factor in terms of the efficiency of responses to crises. The latter would primarily depend on the nature of the crisis. In the case of the COVID-19 pandemic, the transmission was most pronounced in the highly dense urban areas which suggests that these areas should be prioritized in terms of intervention. Cebu had a population density of 964 persons per square kilometer. Figure 3 shows the population densities of the cities and municipalities of Cebu in terms of persons per square kilometer.

The most densely populated LGUs in Cebu were also the most densely populated cities outside the National Capital Region: Mandaue City (14,461 persons per square kilometer) and Lapu-Lapu City (8,565 person per square kilometer). The

Figure 3. Population Density of the Cities and Municipalities of Cebu: 2020



City of Talisay and Cordova were other LGUs with very high densities compared to the average for Cebu as a whole. The lowest densities were reported for Boljoon (150 persons per square kilometer), Tabuelan (205), Oslob (217), Ginatilan (241), and Balamban (285).

Age Structure

The age composition of local populations could be an important factor in determining the impact of crises and the needed interventions. The COVID-19 pandemic, for example, had a disproportionate effect on older age groups (Tejada-Vera and Kramarow, 2022; World Health Organization, 2022). As regards policy responses, the government focused on lockdowns and mobility restrictions which were clearly imposed on vulnerable groups, and based on age. These lockdowns also involved mobility restrictions on children.

Figure 4 shows the population pyramids of Cebu Province and the three HUCs. Cebu Province has a relatively young population in 2020 with 32% of the population below the age of 15, with a working age population of 15-64 which accounts for another 62% of the population. The Cities of Cebu and Mandaue show larger proportions of

Figure 4. Population Pyramids for Cebu Province and Cities of Cebu, Lapu-Lapu and Mandaue, 2020 Census of Population and Housing

persons in the 20-24 and 25-29 age groups indicating a high proportion of young urban dwellers of working age living in their own domiciles. In all four jurisdictions, elderly women begin to account for higher proportions of individuals with increasing age.

Access to Water

Given the importance of water and sanitation in certain public health concerns, the data on access to these services need to be available for public policy responses. An example of a crafted policy was on hand washing, where it was prescribed as one of the transmission prevention measures against COVID-19. Whether or not households could depend on water availability would be an important data. However, the disaggregated counts for such data in the Province of Cebu and the Cities of Cebu, Mandaue, and Lapu-Lapu are still unavailable. Therefore, the results for Region VII are presented, taking into consideration that Cebu comprises slightly over 64% of the total population for the region, suggesting that regional proportions could be temporarily applied to them.

Figure 5 shows the main sources of water for cooking reported by households in Region VII from the 2020 Census of Population and Housing. Eighty four percent of the households in the region reported having access to forms of improved water sources. This is lower than the 88 percent reported for the entire Philippines. However, given that the same water source might be utilized for hand washing, the near-universal access to improved water sources remains a source of optimism. However, dimensions of quality such as purity and degrees of accessibility need to be further clarified. The Sustainable Development Goal for Water (SDG 6) calls for access to safely managed water services or access to improved and contamination-free water services within 30 minutes of travel (United Nations, 2017). Investigation into the quality dimension remains a gap.

Similarly, access to safe drinking water is major public health concern. Access to safely managed drinking water sources is monitored explicitly in response to SDG 6's call

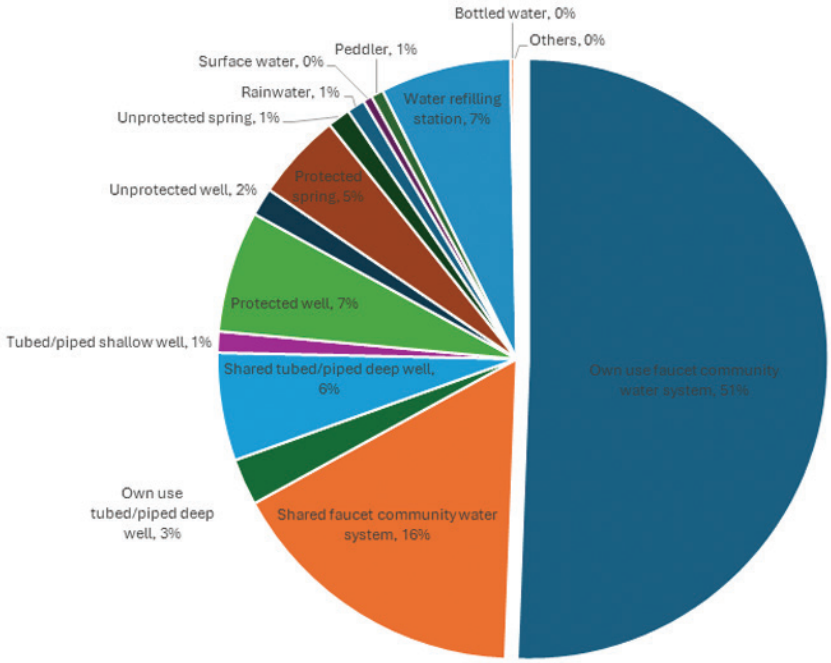


Figure 5. Main Source of Household Water Supply for Cooking, Region VII, 2020 Census of Population

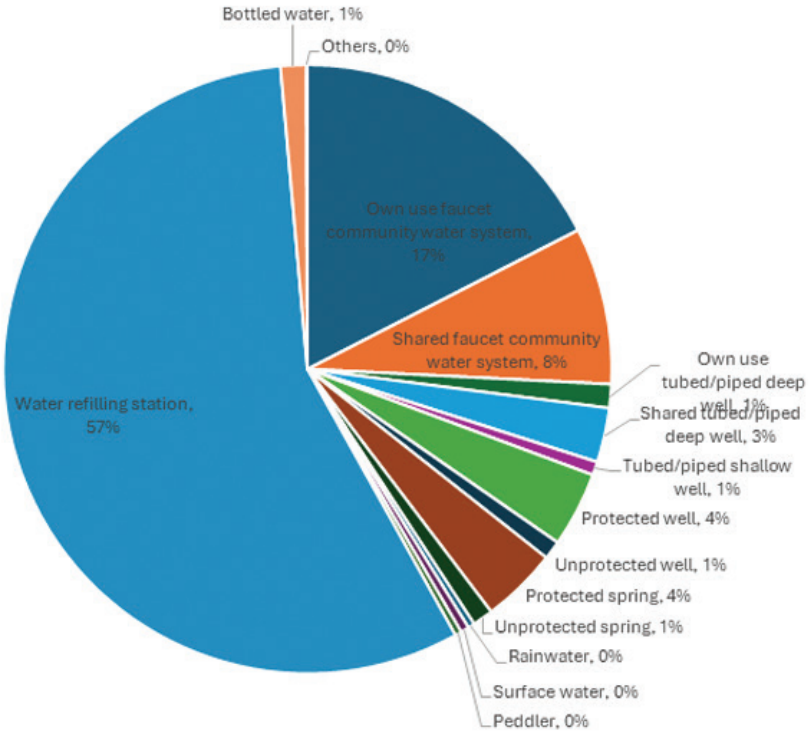


Figure 6. Main Source of Household Water Supply for Drinking, Region VII, 2020 Census of Population

for universal access by 2030. Figure 6 shows the reported sources of drinking water for households in Region VII from the Census of Population and Housing. Based on the data, water refilling stations now account for the majority of household sources of drinking water. The proportion for Region VII (57%) is higher than the 46 percent reported for the entire country in the 2020 CPH. Other improved sources of drinking water account for the bulk of drinking water sources. This led to a reported near-universal access to improved sources for drinking water (98%). Again, the concern would then shift to aspects of the quality of use.

To conclude, we have highlighted the results from the 2020 Census of Population and Housing which are essential to proper planning of policy responses to crises of natural or man-made origins. We have pointed out the need for accurate counts of persons and their distribution across Cebu for such purposes. Changes in this spatial distribution over time showed that some LGUs are experiencing more growth than others. The age distribution of the population is also important in certain contexts. The age distributions for Cebu Province and the HUCS were presented. Finally, we used the access of households to water to point out certain gaps in the data. First, disaggregated data for the province and other LGUs in Cebu are not yet available. Second, the data on access to water presented a rosy picture but did not address the quality of access. We hope that this article directs policymakers to scrutinize critically important data sources, empowering them to formulate evidence-based policies. Ultimately, we aim to underscore the necessity for further enhancements in data collection and use.

ANALYSIS: **CREATIVE INDUSTRY**

PHOTO BY JOSE T. JOYA GALLERY FB PAGE

Contextualizing the Cebu Art Book Fair *in the Era of Globalization*

by **Charles Dominic P. Sanchez**

An Apparent Scarcity

A little over a month after Supertyphoon Odette cleaved through the Visayas and parts of Mindanao, Cebu-born poet Lawrence Ypil posted on his Facebook timeline a link to an online literary folio that received a respectable amount of attention. Titled Odette in the Dark, the folio was envisioned as a "space" where Cebuanos could share their experiences of that night of the storm, and the long days, weeks, and months that followed. In his January 21 post, Ypil (2022) wrote, "We wanted to know how people fared in the storm's aftermath. What they did in the dark in the light of candles. How many hours it took to get fuel, how many days it took before they drank iced water."

Figure 1. Zines, postcards, and artworks on display at CABF 2022 (photo by Denise Corina Sanchez)

Odette in the Dark was an admirable endeavor because its namesake storm was a collective experience that only someone from Cebu, along with other affected provinces, could give as detailed and impactful a narrative as possible—not unlike how only someone in Tacloban at the time Yolanda made landfall in 2013 could talk about the devastation there. Odette, in other words, was an event no Hollywood film, no K-drama, no Japanese anime (the modes of storytelling Cebuanos tend to enjoy) could ever hope to recapture. Odette in the Dark was, in essence, a storytelling platform for Cebuanos, by Cebuanos.

Although Cebu City, and the province by extension, prides itself on being the most urbanized area of the Philippines outside of Metro Manila, opportunities and spaces for narrating, publishing, and distributing distinctly Cebuano narratives are noticeably trim compared to what the nation's capital has to offer. Given the overall cultural diversity of our country, and the fact that other provinces have successfully branded themselves as places where publishing and reading are alive (such as Iloilo and Davao, which have hosted nationally oriented book fairs), this is a surprisingly unfortunate state of affairs.

Such a scarcity in the Cebuano landscape is far from attributable to a lack of artistic talent. As recently as 2019, Cebu City was recognized by UNESCO as a creative city (one of only three Philippine cities to hold such a distinction) under its design category, owing to its reputation as a "hub of trade, culture and innovation." Over the past few decades, Cebu has cultivated a reputation as a go-to place for outsourced needs relating to multimedia and information technology. Additionally, collaborations between local creatives and entrepreneurs, through initiatives like Cebu Design Week and Cebu Arts Week, provide avenues for "cross-sectoral collaborations and multi-disciplinary approaches to achieving unique and effective results" (UNESCO, 2019).

Perhaps no other initiative, though, has devoted itself more to the idea of "telling stories" than the Cebu Art Book Fair (CABF). After first being held at the Crossroads Mall in Banilad, Cebu City, in July 2022 (with over 2,500 fairgoers in attendance), CABF enjoyed a second run in September of 2023, this time at the Jose Joya Gallery at the University of the Philippines-Cebu (Bautista, 2023). The involvement of local talent in the planning, organizing, and promotion of the event spoke of just how genuinely community-driven it is compared to most other fairs geared toward the creative sector.

The Art Book Fair: Historical and Cultural Antecedents

A quick dive into the history of the "art book" form will ultimately yield a singular name: Printed Matter. First established in 1976 by artists based in Tribeca, New York, the nonprofit organization dedicated itself to the "dissemination, understanding, and appreciation of artists' books and publications" (Printed Matter, n.d.). One notable way it did and continues to do this is through the New York Art Book Fair, the world's leading artists' book fair that draws more than 35,000 attendees each year. Why exactly would artists (by this we mean of the visual sort) prefer publishing their work in book form rather than, say, displaying at a gallery where more lucrative offers can

be made? Apart from the wider reach that printing affords, the decades of the latter half of the twentieth century witnessed the art world become more "commodified"—in other words, more expensive and more difficult for artists to enter (as well as innovate) without taking into account market concerns. If one wanted to make it into the art scene—or any other creative industry—one had to adhere to certain norms and expectations in relation to the type of art one could create, the audiences it would appeal to, and the state or corporate institutions that could possibly support it. It didn't help that this period also saw the prevalence of economic and political thought that espoused austerity, the privatization of public services, and the loosening of trade restrictions—all of which further enabled the encroachment of multinational entities into local cultural spaces.

Because of this history, contemporary art is largely characterized by a division of the "establishment" (broadly speaking, works that are produced by institutions and individuals with much influence and cultural capital) and "anti-establishment" (works that are excluded from or deliberately avoid what society considers "mainstream" or "commercial" at a given time). A book fair such as the annual one at Frankfurt, for example, would be considered by many creatives as an "establishment" event because it involves the participation of big publishing names that observe the formalities associated with their industry (including sales and marketing rights, which may not necessarily have the writer's best interests in mind). An art book fair, on the other hand, will likely eschew with such conventions, while simultaneously allowing the space for artists of different backgrounds and media to collaborate, commingle, and ultimately "[find] alternative routes to creating and distributing art on their own terms" (Bouillis qtd. in Represent, 2019).

In the Philippines, one notable event that expressly sets itself apart from the mainstream is Better Living through Xeroxography (BLTX). Founded on the "philosophy of potluck—specifically, its manifestations as the traditional Filipino economic practice of ambagan" (Titi, 2015), BLTX touts itself as a more sustainable and inclusive alternative to the country's established publishing industry, which, those outside the mainstream allege, permits only a select few voices, thereby

heavily regulating which ideas can proliferate societal discourse (hence the term "gatekeeping" being thrown around a lot in anti-establishment circles). The model seems to be working: BLTX is still growing strong more than a decade since it was first proposed in a manifesto printed in a 2009 issue of the *Philippine Free Press*.

Specifics of the Cebu Art Book Fair

While it may not be as explicit as BLTX in its resistance of the mainstream and commercial, CABF still draws heavily from the community-driven, DIY tradition of providing lesser-known artists the platform to have their work reach a wider audience, and shedding light on stories and perspectives that would have otherwise been drowned out by more dominant, more marketable modes of storytelling.

So how exactly does CABF do this?

As someone who has always liked "being part of things that allow people to tell stories," co-founder Mark Deutsch (who was, incidentally, also involved in the creation of Odette in the Dark) looks at CABF as an initiative with two important

Figure 2. The crowd at CABF 2022, held at the Crossroads Mall in Banilad, Cebu City

(PHOTO COURTESY OF ERIK TUBAN)

aspects. The first "layer" is its grassroots quality. By encouraging practically anyone with an interest in storytelling to create some kind of narrative medium, CABF removes many of the obstacles that are part and parcel of "more formal" modes of publishing. Deutsch, in a personal communication (September 7, 2023), cited one exhibited zine that detailed a person's experience living with a stutter. The material was deeply personal—but it likely would have had to deal with multiple hurdles before seeing print under a more commercially concerned publishing house.

The second aspect is the frequently overlooked notion of a book serving as some sort of "artifact"—that is, according to Merriam-Webster, "an object remaining from a particular period" (n.d.). One highlight of the 2023 CABF, for instance, was the zine All Flew Over: A Tribute Zine to Kukuk's, which derives its name from the storied hangout in Lahug that recently shuttered (and is a riff on the 1962 Ken Kesey

Figure 3. Exhibitors displaying their works at CABF 2023, held at the Jose Joya Gallery in UP-Cebu

(PHOTO COURTESY OF ERIK TUBAN)

novel One Flew over the Cuckoo's Nest). The zine collected pictures and write-ups by artists paying homage to "the last standing bastion of rock n roll on this side of Gorordo" (Cebu Art Book Fair, 2023). All Flew Over thus preserves for posterity memories of a place that no one can physically return to, of a time no one can relive. Future generations, as well as individuals who have never been there, however, can still get a sense of what the location was like thanks to this zine.

Marc Abuan, book designer and Deutsch's CABF co-founder, states that the fair format not only allows for the exhibition of more texts about life in Cebu, but it also encourages dialogue between readers and creators, which could potentially lead to collaborations that result in collectively produced narratives—consequently subverting prevailing assumptions about the individual writer being the sole author of a work. The zine titled Circling Fuente, for example, which was produced by a group of designers, "[centers] on the terrain and urban texture of Fuente Osmeña circle." As years pass, Circling Fuente will not only go on to become a snapshot of the "fleeting moment in time that was 2023," but it will also serve as a testament of what creative minds can come up with when working together (Abuan, personal communication, September 28, 2023).

This empowering of creatives and concern for the community is attested to by both event collaborators and exhibitors. Ivy Marie Apa, a faculty member of UP Cebu, where the 2023 CABF was held, has described the fair as an opportunity to "[democratize] the local artworld by allowing emerging talents to break free from traditional gallery structures and exhibit their work directly to the public." In this way, CABF gives artists a greater sense of agency over their work at the individual level, while communally allowing for a more "inclusive and accessible [Cebu] art scene" (personal communication, September 12, 2023). PAWN Press founder, Erik Tuban, one of the exhibitors at both iterations of the fair, lauds CABF's "honest system" in which artists "exchange ideas, trade banter with, and soak into the overall air of camaraderie" (personal communication, January 19, 2024). He especially appreciates how CABF asks only for a small percentage of sales, unlike most other fairs that charge exorbitant table fees for exhibitors. CABF is clearly proof that when

commercial interests are set aside for the well-being of the community, reception among all parties concerned will prove positive.

Hopes and Challenges

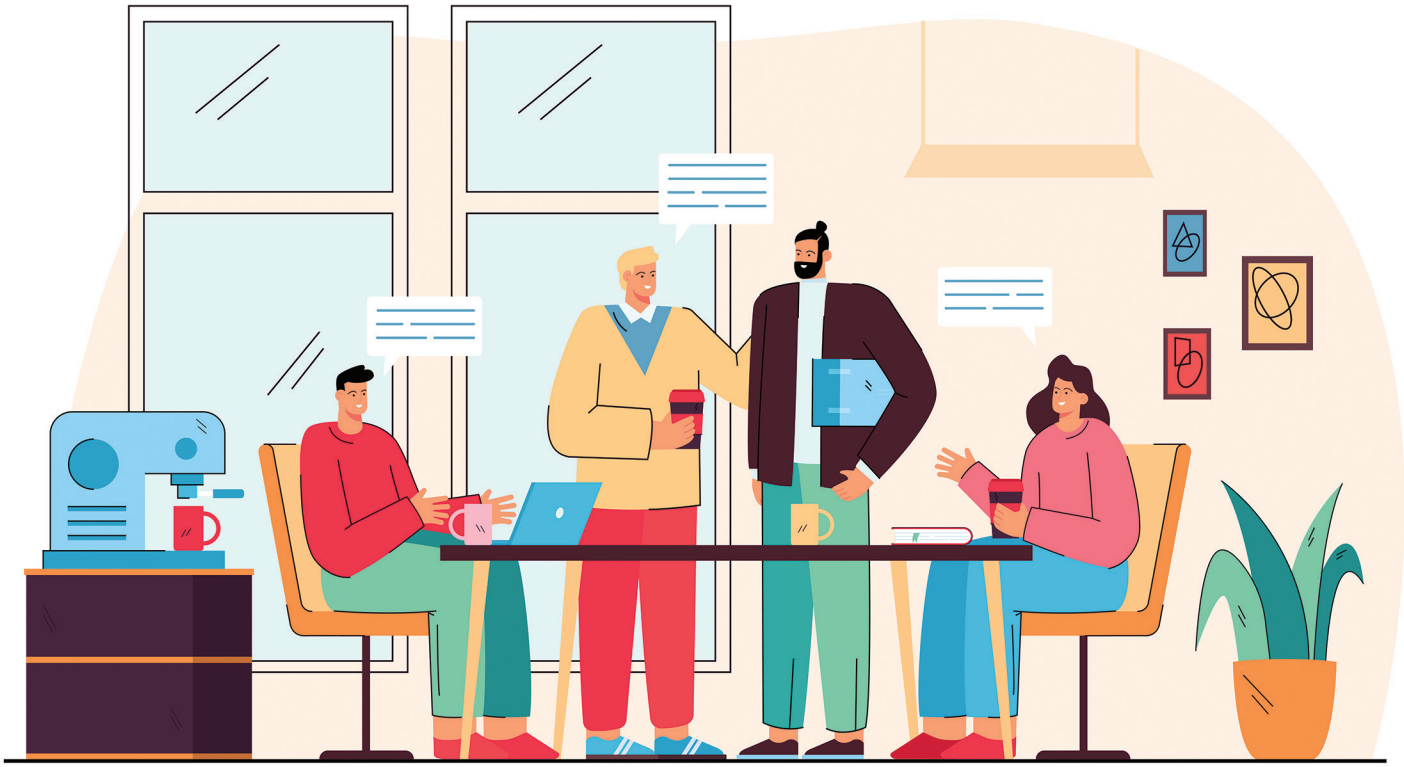
CABF may not be as expressly countercultural as BLTX or all the other art book fairs from which it draws its lineage—but from an outsider's viewpoint, one can see that it makes an effort to raise questions about what it means "to make art and be an artist" in the age of neoliberalism (Sherlock, 2013). The community-run aspect is praiseworthy enough—and quite the feat, considering how many cultural events in Cebu typically rely on the sponsorship of big-name donors or the goodwill of state-backed institutions. Hopefully, this ethos prevails for as long as CABF exists.

Its focus on storytelling, however, is, in this writer's opinion, of paramount importance.

Earlier in this piece, I mentioned how Cebuanos (yours truly included) exhibit a preference for stories from other cultures and languages—narratives that are more readily accessible because the market has deemed them worthy of distribution on account of their popularity (which, under a corporatized scheme, translates into profitability). In the twenty-first century, there are few, if any, Cebuano narratives outside of urban legends and social media content that cut across classes and successfully penetrate the public consciousness. This, I would argue, has resulted in a lack of rootedness and a disorientation among Cebuanos in this "era of corporate-driven globalization" (Bello, 2009). It has thus become easy for many of us to buy into the rhetoric and perspectives offered by other cultures—or worse, feel an envy due to what we perceive are deficiencies on our end.

CABF plays a crucial role in disseminating stories that are extremely relatable—culturally, geographically, temporally, and even personally—and will thus help us make better sense of these turbulent times. Cebuanos who have always wanted to

tell distinctly Cebuano stories can rest easy knowing there is an avenue for them to impart what they know onto the society they proudly consider themselves a part of. As to whether or not there will be an audience is ultimately up to us—that wider segment of Cebuanos that enjoys stories in whatever form and derives insights from them. It is my sincerest hope that this curiosity for stories told from our own milieu only grows and results in greater turnouts at future editions of CABF.



ANALYSIS: **CREATIVE INDUSTRY**

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Cebu's Co-working Spaces: A Microcosm of Creative Hub and Creative Convergence

by **Genesis B. Bedio**

Photograph by Freepik

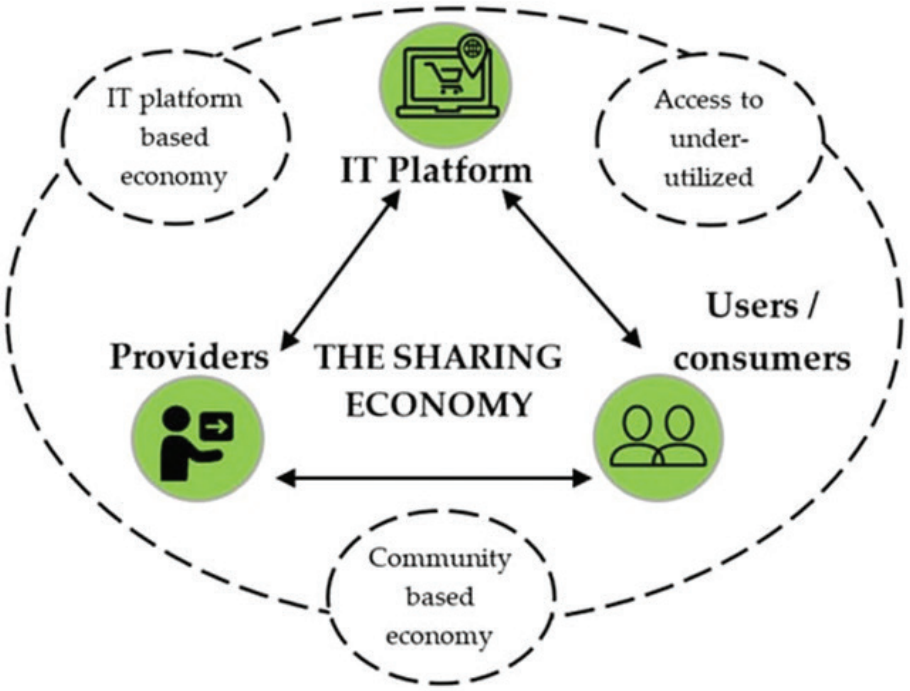
Jude Stanley Crisostomo candidly exalted a project he ardently pursued prior to the Covid-19 pandemic, during the Sugbo Entertainment Expo: Create Trip Summit on October 21-22, 2023. Crisostomo founded the co-working space at Mango Avenue – Cebu Making Space. It is one of the best examples of a multi-pronged establishment, housing a woodworking workshop at the same time a studio for photographers and film-makers, and a gallery for budding artists to incubate their ideas. Crisostomo understood the big role of collaboration in the course of wringing out creative potentials to make new brands, create, and explore. He shares an altruistic vision to bring together creative businesses, especially in the Cebu midtown district, prospectively to pool resources together in achieving common goals, enhancing innovations, and acquiring mutual benefits such as connections, meaningful encounters, and other practical and tacit advantages.

The venues and spaces for artistic pursuits should be seen as the future of workplace, especially in view of the remarkable shifts in the paradigm of work.

Dissecting the Co-working Ecosystem

The co-working environment is part of a shared economy where individuals join forces, give- and-take, and share resources. Brad Neuberg is credited for the launching of the co-working movement in San Francisco in 2005, and in the past 2 decades since, many empirical studies were made to understand this phenomenon (Messina, 2005; Fayard and Weeks, 2008; Martin and Knott, 2009; McHardy, 2010; Miscione, Marleen, Huysman and Gawer, 2015). The sharing economy maxim articulates the 21st century's zeitgeist to promote shared and smart use of spaces, thereby reducing the need to convert more rent-outs and maximizing the use of available spaces. In addition, shared spaces reduce overhead cost while catering to more groups in one floor area. Business-to-business and peer-to-peer market such as Airbnb or Grab demonstrated this cost-efficient business model, where businesses and clients find each other through a website without the sellers owning a residential space or a car to provide their services. The National Statistics Authority provided a working definition of sharing economy to cast a clear outlook of such business model:

Sharing economy is a subset of digital economy pertaining to economic activities in which there is sharing of asset, either tangible (physical asset such as car or accommodation) or non-tangible (services/talent or info/data; digital asset), clearly no transfer of ownership or full consumption of asset i.e., it should still be possible for re-use except if it is unusable anymore, made possible via and any internet network or digital platform that contains cross-border transaction as well (Estimating the Sharing Economy of the Philippines, 2022).



The Sharing Economy Model (Karobliene and Pilinkiene, 2021)

The sharing economy framework described by Karobliene and Pilinkiene (2021), in an attempt to establish a concept for the relationships between sharing economy and the sustainable development goals primarily involves providers and consumers connected to an IT Platform. Providers, instead of exclusive owners are responsible for giving consumers access to assets that are usually under-utilized such as a

Conceptual presentation of Co-working Amenities. Illustration from Infosys Limited

condominium unit, office space, storage space, car, tools and even intangibles like skills and expertise. On the other hand, the IT platform provides a secure system for moderating and facilitating interactions and economic transactions (Karobliene and Pilinkiene, 2021:3). The ecosystem is a good analogy for the wide variety of stakeholders that sharing economy supports – commuters, travelers, entrepreneurs independent professionals, remote workers, and lifestyle geeks. It creates a sort a system that is comparable to a biodiversity – with different personas playing roles in the cycle of work, exchange of ideas and other collaborative processes. At the same time, there are economic values from the resources inherent in the system. Some of them are expressed in goods, and some in education and research that lead to startups.

Shared assets like laboratories serve as hub for research and experimentation, and just like the ecosystem, the shared domain becomes a living laboratory of ideas and creativity. Besides that is the resiliency to disruptions, which ecosystems exhibit through inherent contiguity or adjacency of resources that negate distance in case of emergencies.

In broad terms, the co-working amenities range from workspaces to food and beverage – two cohering categories in the hassle of work. The demanding work periods most often stall the meal breaks of workers, driving co-working space hosts to provide food and beverages for their clients. They are made available as part of their co-working benefits. In addition, the amenities extend to business services like photocopying and help desks to facilitate business applications and other basic transactions that neophyte entrepreneurs might need. The most important perk is the rendering of space and the space planning that provide an experience of office trends and hybrid work models.

The sharing of facilities and tools has been the ad hoc solution to the sparse availability of specialized equipment, and the technological disadvantages experienced by workers who have no access to computers and software, and other necessary equipment they have to use for a project. For the creatives, their facilities entail complex resources like machine shops, gallery, studio, fablab (fabrication laboratory) like that of Cebu Making Space's.

The co-working model is one of the best ways to demonstrate equity and inclusivity where creatives and non-creative workers can access the same equipment with a level of support from co-working colleagues and space managers. With this communal utility, there is a relative ease of sharing expertise to help with the operation and trouble-shooting of equipment. The University of the Philippines, Cebu is one of the foremost drivers of university-based fabrication laboratory that was created as part of the partnership project with Department of Trade and Industry (DTI) and the support of Department of Science and Technology (DOST). The basic services of UP's fablab are 3D printing, large-format printing, and vinyl cutting. The facility has

conference rooms and computers for 3D modeling and design, where students learn and acquire different making experiences from instructors.

The workshop setting of UP Cebu's fablab has been made available outside of university setting through the initiative of White brick visual communication studio, the creative ensemble behind Cebu Making Space, whose hosts and head makers extended the impact of institutional learning to the public space. According to Stephanie Tudtud, head maker of Cebu Making Space, their efforts have been about knowledge dissemination through hosting talks, workshops, and events that, in turn, activate the creative spirit of the community. Mounting a collaborative space in this

Cebu Making Space conducts puso-making demo in their co-working space.

PHOTO COURTESY BY CEBU MAKING SPACE

format exports not only the instructional domain of educational institutions but the value of well-being and positive interventions to clients with individualized needs.

Ultimately, sharing secures a social support for the client (Boboc et al. 2014, cited in Murad, 2020). In fact, Murad (2020) wrote that the physical factor of ambience is only secondary to the social, which includes positive feedback and meaningful conversations in every interaction. Boboc et al. (2014) claimed that sharing opens an opportunity for social support connections such as coworker contact, networking, and collaboration. On the other hand, the shared environment efficiently tweaks into a casual space for sharing stories, fruitful frittering, and spontaneous events. As Crisostomo quipped: hanging out was the order-of-business in their co-making space.

The idea of *co-location* or multiple entities in close proximity is also embedded in the framework of a co-working space. The advantage of this feature is resiliency. When all the vital tools and facilities are in the same location, critical needs during unfavorable weather conditions are easily met. Thus, with sufficient back-up facilities the co-working community would be spared from temporary inconveniences brought by mobility problems caused by subsequent impact of typhoons such as flooding, transportation disruption, and power outage. If the co-working space is equipped with back-up power and communication protocols during a bad weather condition, it can sustain the vital activities of co-working space users. The procurement of sufficient auxiliary support was one of the contingencies realized by co-working space hosts in Cebu when the super typhoon Odette hit the region.

Streamlined Bespoke Space

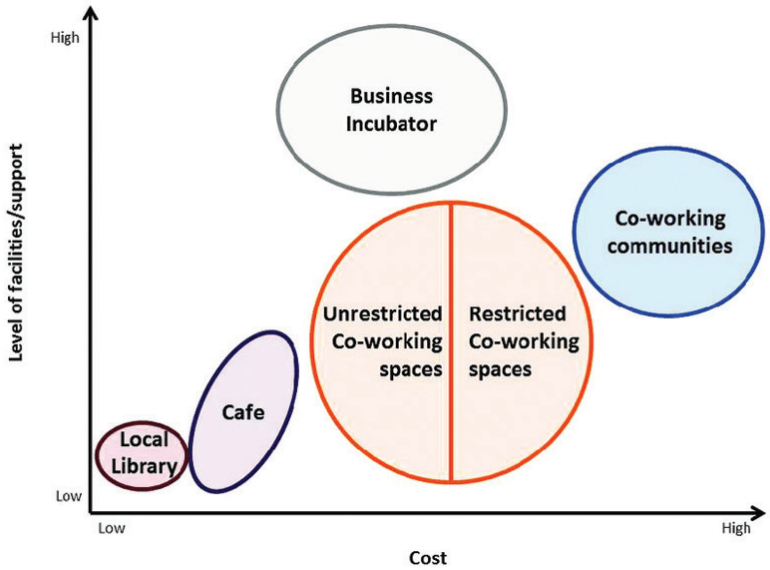
The co-working business tackles a wide range of needs and challenges. For one, there is a need to designate areas for specific needs. Just as studying would need a quiet place, drafting, fabricating and printmaking require access to shops, workstations, assembly space, and storage. The more commonly observed amenities are communal

area, meeting rooms, cubicle, break room, and shower rooms. They provide the needed convenience and comfort for the clients. However, they cannot address distinct tasks and the diverse productivity needs of co-working clients.

The dilemma of highly-specific task accommodation is the lack of space flexibility, as shown in Graph 1. With a *low level* of facilities or support, the flexibility diminishes. This has been experienced by remote workers in a local library, café, restricted or unrestricted co-working spaces. These establishments have a limited focus such as providing a common area for diners, prompting mobile workers to settle at a coffee table or a bar counter, along with other customers. However, following the popularity of a co-working arrangement, dedicated spaces have now been designed, combining openness and privacy. Part of the design strategy is breaking up areas for a target group and a target activity, while at the same time apportioning spaces that are flexible. Thus, *co-working communities* type, as indicated in Graph 1 has the highest value in terms of flexibility and at the same time the most expensive type of co-working environment because it needs to cater to a more diverse membership from different industries and backgrounds.

Graph 1: Relationship between the level of support accorded to different co-working concepts and their costs.

SOURCE: *DELWP*



The idea of a more streamlined bespoke space crept up at the cue of changing attitude towards work – such that it is no longer seen as tied up to a dreary computer terminal, and straightforward functional space. Instead it is seen as a more vibrant, hedonic, and well- being-driven sanctuary. By its design, it has become attractive to the fledgling entrepreneurs who are about to set up their first dream business. They use the co-working space to actualize that dream. There – they will find their mentors and colleagues who will further steer their talents towards a fruitful direction.

Hosting a bespoke coworking space has a potential to further increase productivity by minimizing incompatible spaces and facilities experience and tailor-making a space for more optimized workspace possibilities. With this, a more apposite term comes to mind: co-habiting space (Lindsay, 2013 and Laing, 2013). It is described as a work environment organized by a smaller circle of individuals who usually have the same interest, and who intend to benefit from each other's knowledge and experience. The term also calls to mind a bunch of clique or crew whose members are friends from high school or alumni from the same alma mater who have just joined the workforce. The coalesced social networks of these people in the same social circle has a potential to increase the number of *co-habiters*.

Creative Convergence

Using *communitarianism* and collectivism as business creeds, the pragmatic goal of co-working spaces connects with the larger phenomenon of creative convergence (Jenkins, 2006) where various creatives flock in one space – an adaptation of the Bauhaus' (19th century school of design, architecture and applied arts) unity of all the arts creed. If one would pay close attention to the operational structure of a co-working space, it is a microcosm of a larger and broader creative convergence that people witness in popular destinations like Hollywood – the hub for film and entertainment, Paris – the hub for fashion, art, and museums, Silicon Beach – the hub for technology and the arts; and Cebu as the hub of design.

DESIGNED BY FREEPIK

The initiative to assemble in one place the different creative domains is an index of global trend which has started in Mid-2010s, concurrent with the rise of start-up companies and freelancers. Yosha Wijngaarden remarked in his article *Cultivating Fertile Learning Grounds* that the creative laborers are the target of co-working spaces because they normally engage in project-based and freelancing jobs. According to GCash and Payoneer's record, about 1.5 million Filipinos are registered in international online platforms as freelancers as of 2023 (Lee-Tan, 2023: para. 2). To appreciate this figure, it would help to reflect on self-employed earnings growth rate published by Philippine Institute for Development Studies (PIDS), where it recorded an increase of 208-percent in freelance revenues in 2020. Despite the absence of disaggregated figures, it remains an encouraging rate for Cebu-based creatives while gauging the prospect of more creative jobs based on the acclamation that Cebu gets from its designation as a *Creative City of Design*.

Cebu's creative convergence is connected with its rich cultural heritage, and the recent confluence of art and entrepreneurship. Events like Create Cebu, Cebu Design Week, Sugbo Entertainment Expo, Cebu Literary Festival and Gabii sa Kabilin are foregrounds of the preeminent love of Cebuanos for creativity and culture; and these big events and movements have their microcosm in humble headquarters like co-working spaces, maker spaces, museums, and other creative outlets. In addition,

Cebu is strategically located near the middle of the archipelago which portends to be a strategic geographic location for drawing connections with northern and southern regions. Its international airport naturally makes it conducive for transcontinental participation, as indeed persistently demonstrated in cultural events like the Sinulog festival. Looking at Cebu alone, as a thriving creative region, the creative convergence foreshadows new forms of creative expressions. The Kabilin Center, for one, which has recently opened its exhibit: *Saulog* by Steve de Leon is a leading example of a substrate for new art forms. De Leon showcases the amalgamation of fashion and eco-spirituality and it is but fitting that his works are featured by Kabilin Center, as a symbolic pivot of an expanding and interconnecting cultural expressions.

The designation of Cebu as a Creative City of Design increases the prospect of more creative establishments growing in the city. Thus, the city must anticipate an increase in investment from design-related businesses that soon will repute the city as an investment and employment destination for creatives. It has been recommended by Cebu creative industry players that a creative hub around the North Reclamation Area (NRA) will be developed. This will enlist international companies in film, animation, and game development in one organic network. The area was chosen by the City Planning and Development Office for its clusters of warehouses – perfect for housing huge studios.

Meanwhile, the current creative entertainment sites in Cebu City are spread across midtown, uptown and downtown areas: Mango Avenue, Cebu IT Park, Crossroads Mall, Streetscape, Ayala Center Cebu, Capitol Site, The Greenery, and Il Corso to name a few. Despite the earmarked space for the creative district, it is sensible to retain their creative zone status for the diffusion of creative activities, and the complementation of the primary creative orbit. With the future designation of NRA as a creative hub, the outlook for more convergence between creative sectors and collaborative spaces will even get better. More maker spaces will be built for the growing population of creative workers that will find employment in international companies that will set base in Cebu's creative hub. When this plan is realized, the

creative forces will multiply and creative entrepreneurs will find ripe opportunities that will no longer be hard to navigate using the co-working space ecosystem. All they have to do is connect with venture capitalists, tech agents, cultural workers, and other creative units present in this space to move their projects forward.

Impact and Next Phase

The venues and spaces for artistic pursuits should be seen as the future of workplace, especially in view of the remarkable shifts in the paradigm of work. Adapting to the global work trends and seeing international companies through our economic doors are the specific measures of this new paradigm. This will be possible through:

Changes in work attitude. Makers and co-working spaces are symptoms of a changing global work culture; and recently they have challenged the traditional systems, shifting the seat of an organization's productivity from face-time and stiff hierarchical structure to a work-life integration and flatter organizational structure. It will probably take a longer period to see a significant shift to the new global work culture in a traditional culture. Furthermore, the constraints of resources may prove challenging, including the gray areas such as tax obligations , licensing, insurance and liabilities of co-working spaces' hosts and users; vulnerability of intellectual property, and the contentious issue of independent contractorship that raises issues about worker rights, benefits and protection.

Adding New Value on Goods. Creating a common space for co-working clients would lead to the creation of new value on goods. For instance, the collaboration of talents improve the sharing of information and the rate at which obtaining resources happen. All of these are stimulated by the one-stop affordances of co-working environment. By nature, the doctrine of co-working ecosystem is to wheedle innovation and quality improvement on products (del Rosario, 2018) but intellectual property on innovations is often vulnerable in this shared environment. Clear policies and agreements should be one of the primary concerns among collaborators.

In addition, the co-working environment should encourage the ethos of intellectual integrity by offering seminars on copyright, trademarks, and patents. Likewise, IP experts in the co-working community should help educate other members.

Having supportive Policies. To manage the renewed and revitalized creative industry, the Cebu local government has already done the first bold step – meeting with stakeholders to streamline goals that gave birth to the earmarked creative zone. The next leap is implementing this closely with the prime players like educational institutions, government agencies, artists and designers. This would entail the crafting of supportive policies that will provide access to funding and grants for creative projects, startups, and small businesses to nestle in the fertile ground of the future creative district.

PHOTO BY IIOFFICE CEBU FB PAGE

Granting Incentives. Perhaps the government will also grant tax incentives for the outstanding creative establishments as a recognition of their contribution to the cultural development – promotion and preservation of traditions, arts, and creative expressions. The creative industry would need a boost to take flight in the proper direction, and to galvanize its operations in the designated investment hub.

Intensified Cebu Creative Council. And finally, to match

the evolving needs of co-working classes, it should be a primary concern for the government to strengthen the Cebu Creative Council whose heads will ensure order, research, development, and innovation; and inclusivity of the hub to stakeholders -- artists, producers, art managers, directors or entrepreneurs from all echelons.

To preserve the future creative district, zoning regulations around its area should be strictly implemented as with cities in Asia – Tokyo, Seoul, Beijing, Shanghai, Jakarta and Mumbai. The Cebu City Council had already made good leaps with Cultural and Historical Affairs Office (CHAO) on historical assets review and adopting resolutions to declare historical landmarks in Cebu City. In addition, there are private organizations in Cebu such as the Arts Council of Cebu, Tribu Sugbo, and Cebu Artists Incorporated that can renew their collaborations with the local government to mobilize their own operations and leverage the resources, expertise and community support of the creative council.

REPORT:
CULTURAL HERITAGE AND CONSERVATION

PHOTO BY MUSEO SUGBO FB PAGE

Cebu's Heritage Highlights
During and Beyond the Global Pandemic, 2020-2023

by **Jose Eleazar R. Bersales**

On Monday March 16, 2020, Mayor Edgardo Labella ordered the total lockdown of Cebu City, following a similar order by Pres. Rodrigo Duterte for Metro Manila. Eleven days later, Gov. Gwendolyn F. Garcia followed suit, ordering the shutdown of business establishments in the Province of Cebu, requiring all residents of the 51 towns and cities under its jurisdiction to stay at home. This was the start of one of the world's longest and strictest nationwide lockdowns.

In the heritage sector the following events and milestones mark this trying period in the country's recent history:

Financial Assistance

Museums and other heritage sites in Cebu closed their doors and ordered their employees to stay home until further notice. For museums run by local or national government agencies, the salaries and other benefits of regular employees remained undisrupted. But museums and heritage facilities in the private sector did not enjoy the same privilege. As a result, the National Commission for Culture and the Arts (NCCA) instituted a nationwide call to determine the number of cultural workers that had been displaced by the lockdown and worked with the Department of Labor and Employment to avail of emergency financial assistance in the amount of 5,000 pesos. In Cebu, the Central Visayas Association of Museums Inc. (CVAM) submitted a short list of potential beneficiaries while groups of dance choreographers and visual artists also did the same.

Going Online

The pandemic may have temporarily shut down museums and heritage sites, but 'Gabii sa Kabilin' (GSK), the much-anticipated night of heritage when all participating museums and heritage sites in the cities of Cebu, Mandaue and Lapulapu stay open to the public until midnight on the last Friday of May, was undeterred. In a sign of

things to come, GSK 2020 went online with a series of webinars. The University of San Carlos followed suit with the inauguration of a program called Kultura ug Kaagi: The USC Museum Webinar Series on August 8, 2020. The series was soon followed by Palm Grass Heritage Hotel with its own set of webinars which continue to this day.

Resilience was the catchword in the months that followed as Cebu – and the rest of the world – found ways to live in what had come to be called the 'new normal', wearing face masks and, for the Philippines, the dreadfully hot plastic face shields, while maintaining social distance as they patiently waited for the development of vaccines against COVID-19.

Archaeology in a Bubble

Already planned before COVID-19 wreaked havoc on everyone's lives, an archaeological impact assessment (AIA) of the Patria de Cebu project commenced on June 7, 2020. In 2018, Cebu Landmasters Inc. (CLI), had entered into a partnership

Exposing the remains of a horse at the Patria de Cebu site. (JER BERSALES)

agreement with the Archdiocese of Cebu on a mixed-use real estate development where the Spanish-era Archbishop's Palace once stood. Pursuing the concept of a construction bubble where workers were quarantined both at the construction site as well as in their quarters at night, CLI had begun clearing the area which required constant monitoring by archaeologists led by Dr. John Allen Peterson who was contracted to conduct the AIA and archaeological monitoring work. Initial results of the AIA and important finds were eventually presented to the public the following year, April 19, 2021, during groundbreaking ceremonies for the mid-rise structures to be built at the site. Monitoring continued thereafter, which eventually led to the discovery of a horse neatly buried near one corner of the property. DNA and radiocarbon dating of this find is currently being carried out at the University of Uppsala in Sweden.

Commemorating the Quincentennial

On March 29, 2021, the first batch of COVID-19 vaccines purchased by the Philippines arrived from China, signaling the start of a national vaccine roll out initially focused on health workers. It would be just one of a series of purchases that would eventually include those produced in the United States, the United Kingdom and Russia. The vaccine's debut also coincided with the very month when exactly 500 years earlier three Spanish ships under the command of Ferdinand Magellan reached the island of Homonhon, an event that would forever link Spain to the future of the Philippine archipelago in the next three centuries. The following month, on April 7, Magellan and his bedraggled crew reached the shores of Sugbu and encountered for the first time the port settlement's natives led by its chief, Rajah Humabon.

Dubbed the National Quincentennial Commemorations (NQC), the Catholic Bishops Conference of the Philippines and the Archdiocese of Cebu focused on celebrating the first baptism in Cebu on April 14, 2021 at Plaza Sugbo with a re-enactment and a pontifical mass led by the Papal Nuncio, Archbishop Charles Brown and Cebu Archbishop Jose Palma. The event was highlighted by the baptism of 100

children before a crowd of just 700 in attendance, limited in number due to the pandemic. Two weeks later, the Philippine government commemorated the victory of Lapulapu and his warriors in the Battle of Mactan on April 27, 2021 with Pres. Rodrigo Duterte gracing the occasion. A day later, the National Historical Commission of the Philippines (NHCP) inaugurated the Philippine Quincentennial Museum inside the Museo Sugbo Complex with Cebu Governor Gwendolyn F. Garcia, Spanish Ambassador to the Philippines Jorge Moragas Sanchez, and presidential spokesman Sec. Harry Roque as guests of honor.

Archaeological Survey of Northern Cebu

On July 12, 2021, the fifth season of archaeological excavations behind the San Juan Nepomuceno Parish Church and the adjacent Lapyahan Public Beach, both located at the población or town center of San Remigio, commenced. The last

Painstaking work of exposing a burial at Lapyahan Beach, San Remigio. (JER BERSALES)

archaeological field season was carried out on the two sites in 2013. This time around the month-long archaeological study was carried out to inaugurate the Northern Cebu Archaeological Project (NCAP). Funded by Aboitiz Foundation Inc through the National Museum of the Philippines, the project would conduct an archaeological survey of the northern towns of Cebu in the next two years to be carried out University of San Carlos archaeologists Dr. John Allen Peterson and Dr. Jose Eleazar R. Bersales, together with student researchers from the Department of Anthropology, Sociology and History.

In the next 16 months that followed, NCAP surveyed the city of Bogo and the towns of Catmon, Sogod, Borbon, Tabogon, Daanbantayan, Tuburan and the three towns of Bantayan (Sta. Fe, Bantayan, and Madridejos). Excavations were conducted twice in the población of Daanbantayan while coring of the town's Lake Danao was carried out, with samples sent to Australia for analysis. Specimens from human skeletal remains recovered in the San Remigio excavations were sent to the University of Uppsala in Sweden for DNA and radiocarbon analysis.

GSK 2022: Pagsagubang Exhibit

Due to quarantine restrictions still prevailing in May 2022, the Ramon Aboitiz Foundation, Inc. (RAFI), convenor of the annual Gabii sa Kabilin, obtained the consensus of 20 participating museums and heritage sites to shift the event on its 15th year to October in anticipation of a gradual reopening of the cultural an entertainment industry. GSK 2022, with its heme "Padayon" (Moving Forward), in a sense signaled the gradual, caution-filled reopening of museums that had been shuttered by the pandemic. To highlight this milestone, GSK commenced that year at The RAFI Kabilin Center with an exhibit entitled, "Pagsagubang: Courageously Facing the Future" highlighting Cebuano resilience in the midst of the COVID-19 Pandemic. GSK was finally back as an in-person event with 16 museums and four heritage sites participating.

Cebu City Heritage Summit, Heritage Charter and Awards

On December 1 and 2, 2022, the Cebu City Government and its Cultural and Historical Affairs Commission convened the first-ever Cebu City Heritage Summit to tackle the creation of a heritage district within the downtown area of the city and the creation of a charter for the conservation of the city's heritage sites. Led by Mayor Michal Rama and CHAC Chairman, Vice-Mayor Raymond Alvin Garcia, the two-day conference gathered stakeholders coming from business sector of the city as well as local residents to get their comments and inputs following presentations by a social historian, an archaeologist, and three architectural heritage experts.

Stakeholder participants listen to Vice-Mayor Raymond Alvin Garcia during the first Cebu City Heritage Summit.

Cebu City Mayor Michael Rama signing the Heritage District Ordinance during the Cebu Heritage Awards Gala Night

Return of Freedom Park

As part of the Carbon Market Redevelopment Project, a joint venture between the Cebu City Government and Megawide Construction Corp., Freedom Park, once the venue of many political gatherings since World War II ended, was cleared of market stalls in October 2022 to begin its full restoration as an open public square. The restoration included an archaeological impact assessment once again conducted by Dr. Peterson with the assistance of Dr. Bersales and Archie Tiauzon. Significant artifacts and finds were presented during the park's groundbreaking on September

Cebu City Mayor Michael Rama and Megawide Corp. officials lowering the time capsule of the Freedom Park obelisk

8, 2022. The park, with a 15-meter obelisk at its center, was officially inaugurated by Cebu City Government led by Mayor Rama on August 23, 2023.

National Museum Cebu

After closing its galleries inside Museo Sugbo, the Cebu Provincial Museum Complex, in 2013, the National Museum of the Philippines returned to Cebu with a new Museum Branch housed at the former Cebu Customs House and erstwhile Malacañang sa Sugbo. On July 28, 2023, Pres. Ferdinand Marcos Jr led officials in inaugurating the museum which opened to the public three days later. Two years were spent amidst the pandemic to renovate the Customs House, which was built in 1910. The museum houses five large galleries showcasing the museum's ethnographic, archaeological, visual arts and natural history collections focused on Cebu.

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The Cebu ALMANAC 2019-2023

The Cebu Almanac 2019-2023: Pandemic Crisis and Recovery chronicles Cebu's transformative journey through the economic upheaval triggered by the COVID-19 pandemic. This special five-year edition delves into Cebu's remarkable resilience in the face of adversity, showcasing its ability to rebound from the economic downturn. Amid job losses and rising infections, the almanac reflects on Cebu's economic fortitude and societal adaptation to the 'new normal'. From reflections to in-depth analyses of regional economic trends, the almanac provides a comprehensive account of Cebu's response to the pandemic, highlighting the challenges faced by various sectors, from healthcare to waste management, while also celebrating the indomitable spirit of Cebu's creative arts scene. Despite setbacks, Cebu emerges as a beacon of hope, poised to harness its creative potential and rebuild a stronger post-pandemic environment. Published annually by the USC Publishing House, this edition of *The Cebu Almanac* is a testament to the resilience and resourcefulness of Cebu and the continuing commitment of its scholars and experts in tackling areas of concern to address the challenges of recovering from the crisis and to foresee future directions, moving forward.

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