Pakistan Journal of Life and Social Sciences
www.pjlss.edu.pk

Public Service Delivery Assessment Using the Citizen Satisfaction Index System in Western Visayas, Philippines

Greta Gabinete[1*], Christine Tanan[1], Jose Ariel Tutor[1] and Maria Lea Escantilla-Lebuna[1]
[1]West Visayas State University, Iloilo City, Philippines

ABSTRACT

Surveys are essential tools in assessing the performance of local government units in their basic societal service deliveries. Using the Citizen Satisfaction Index System (CSIS) which measures the respondent's satisfaction with public services, interviewed 150 respondents covering 29 barangays in Lambunao, Iloilo. Survey was based on this tool's core concepts of awareness, availment, satisfaction and need for action on the service delivery system of the government. Our objectives were to assess the service delivery performance; identify the patterns and trends and correlations among services areas and socio-demographic profiles of the respondents; and rank the service areas accordingly based on the respondent's satisfaction ratings. Results revealed a high awareness rating (81%) but only 51% of those who were aware have availed the basic services. The satisfactory rating was 95%. The unemployed (86%), young adults (36%), and female groups (50%) were well-satisfied with the economic and investment promotion services and support for education programs. Whereas, the male (50%), middle-aged (42%), and employed clusters (14%) were highly concerned about the governance and response of the government. The satisfaction of the elderly group (22%) was very closely related to health services. Ranking the overall satisfaction on services areas using a generalized additive modeling was in the order of health services > support to education > social welfare > environmental management > governance and response > economic and investment promotion > public works and infrastructure. Our findings aid the government officials towards more improved service delivery to its constituents.

INTRODUCTION

In the Philippines, citizen satisfaction surveys have been conducted to determine the strengths and weaknesses of the local government unit, to identify key service areas that need improvement, and to aid in decision-making regarding resource allocations (Walker, 1996; Legaspi, 2016; Bouckaert and van de Walle, 2003). It has become popularly used by public administrators and managers to gauge the level of satisfaction of the service delivery based on the perception and opinion of the citizens (Cassia and Magno, 2009; Kelly and Swindell, 2002; Stipak, 1979; Swindell and Kelly, 2000; Labaria et al., 2017). Survey results led to the development of various forms of interventions and strategies that can be initiated to meet the satisfaction level of the citizens.

Citizen Satisfaction Index System (CSIS) is a survey tool used to assess the performance of local governments. This approach offers citizens a venue to give feedback on the local government performance, regardless of their socio-economic status, political leanings, race/tribe and religious beliefs. It is anchored on the four core concepts of awareness, availment, satisfaction, and needs for action as stipulated in the CSIS. These services are related to health, education, governance, social welfare, public works, environment, economy, and tourism. Feedback gathered will serve as a basis for developing more effective and efficient interventions, policies, and decisions of the local government (DILG, 2019).

Many researchers in the Philippines had used CSIS to assess public feedback on government interventions, published reports of Yecla and Ortega (2020) and

Legaspi (2016) were limited to the presentation of the survey results without an in-depth analysis of the relationships among the factors that can explain the study's outcome (Labaria et al., 2017). Several researchers also focused on small area coverage. As far as we know, we were the first in the Philippines to do an intensive and deeper analysis of CSIS results using complex statistical functions and generalized models in broader area coverage and number of respondents. In the current study, it has been tried to answer the questions of (1) what is the level of awareness, availment, satisfaction, and needs for action in terms of government programs offered to the citizens in Lambunao, Iloilo of Western Visayas, Philippines?; (2) how do these service areas relate to the demographic profiles of the respondents?; (4) Are there significant differences among demographic groups about quality service and their level of satisfaction?; (5) What are the best service areas in so far as the respondents are concerned? (6) what are the issues associated with using the CSIS tool? Using the CSIS survey tool, the service delivery performance of a local government unit in the target sites has been assessed. We identified patterns and trends, and correlations among services areas and socio-demographic profiles of the respondents. We also ranked the service areas accordingly based on the respondent's satisfaction ratings. We highlighted some issues and concerns regarding using the CSIS survey tool. Our results contribute to improving the public service delivery towards achieving a more functional and responsive local government amidst the challenges of constantly changing times.

MATERIALS AND METHODS

The study site
Lambunao is a landlocked municipality in the province of Iloilo, Western Visayas, Philippines (Figure 1). The municipality has a land area of 407 sq. km., which constitutes 8.14% of Iloilo's total area. Its population, as determined by the 2015 Census, was 73,640. This record represented 3.80% of the total population of Iloilo province. Based on these figures, the population density is computed at 181 inhabitants per square kilometer. The Municipality of Lambunao is composed of 73 barangays (Lambunao LGU, n.d.). Barangay is the smallest local government unit. Using sampling procedures based on the 2019 CSIS Manual for Implementation in Municipalities, 29 sample barangays emerged to be sampled.

Services delivery profile
As a first-class municipality, Lambunao delivers a complete package of services to its constituents. These services are clustered under health service, support to education, social welfare, governance and response, public works and infrastructure, environmental management, and economic and investment promotion. The local government unit provides the different services mandated in the various service areas.

The Citizen Satisfaction Index System (CSIS) sampling procedure
The CSIS utilizes multi-stage probability sampling in selecting the 150 respondents who were interviewed. This sample size had-- a margin of error of ±8% at a 95% confidence level. A The multi-stage probability sampling method was used in selecting the 150 respondents. This method allows each citizen, 18 years old and above, male or female, who have resided at least six months in the Municipality of Lambunao, to have an equal chance to be selected as a respondent for the survey.

Field interviews
The field sampling was conducted by social scientists, researchers and trained field interviewers of West Visayas State University. Field interviews were done from July 1 -14, 2019. DILG has a CSIS portal that can be used by municipalities nationwide. All field data gathered by field interviewers were consolidated and encoded into this database for future reference and analysis. During the interview, only those respondents who are aware of the service will be asked if they availed of the service, and only respondents who availed the service will be asked on satisfaction and need for action.

Data analysis
Descriptive analyses (e.g. frequency, percentages) were used to determine the level of awareness, availment, satisfaction, and assessment for the need for action for the services provided by the local government. To reveal the affinity of the CSIS core concepts and the respondent's general demographic profile, a Principal Component Analysis (PCA) algorithm was applied. The *res.pca* function from the *FactoMineR* package was used to perform the analysis. To determine the best model and rank of the service areas, we used a generalized additive modeling (GAM). The *gam* function from the Mixed Gam Computation Vehicle (*mgcv*) package was used. We used R version 4.0.2 in PCA and GAM analyses (Team, 2020).

RESULTS

General demographic profile of the respondents
In the study, the respondents were primarily young adults (18 – 39 yrs. old, 36%) and middle-aged (40 – 64 yrs. old, 42%). Elderly interviewees only constituted 22% of the total respondents. Unfortunately, the majority of those that were interviewed had no job (86%).

Overall results on the core concept per service area
On the level of awareness, 81% of the 150 respondents were aware of the various programs and services
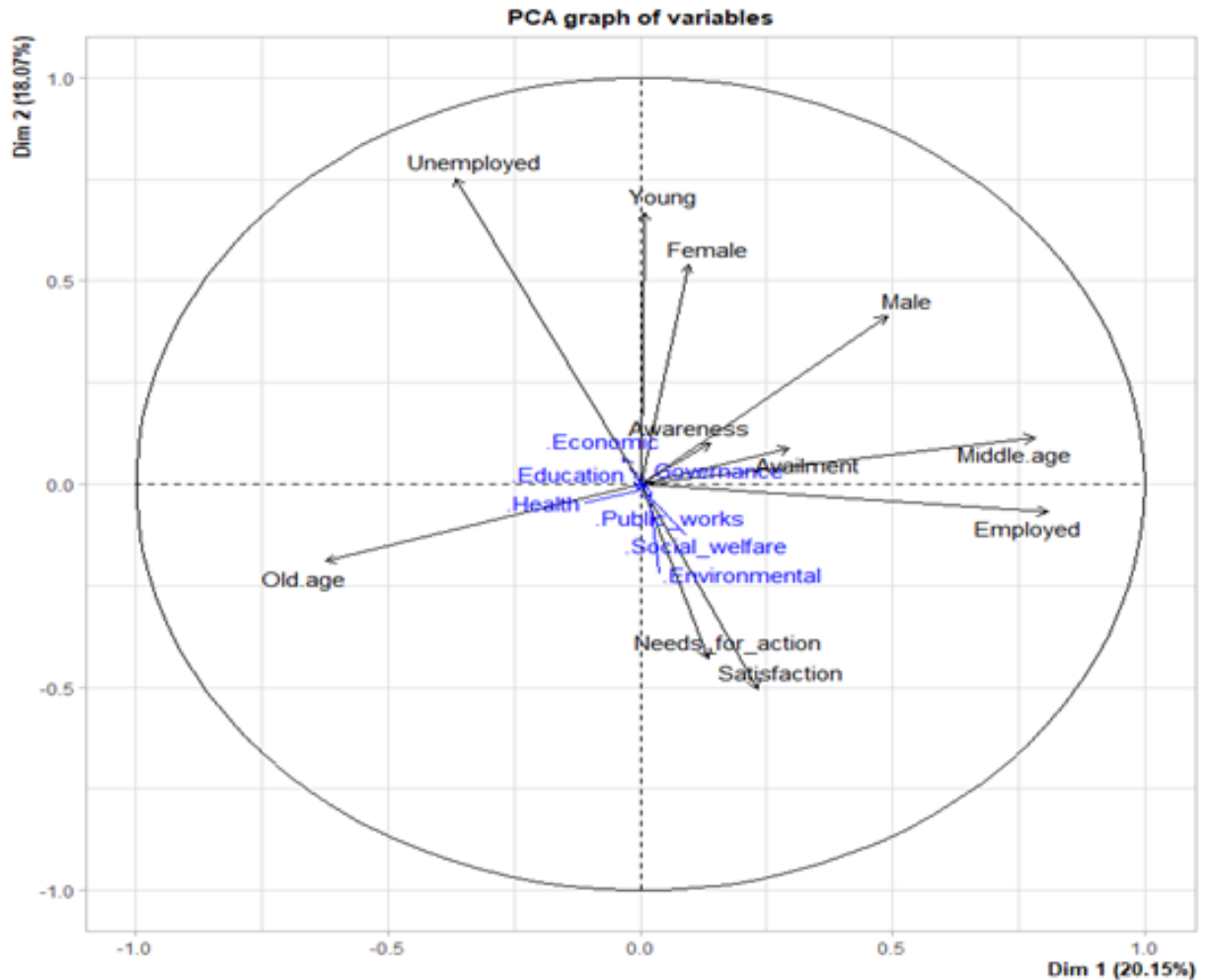
Figure 1: Principal component analyses (PCA) on the respondent's general demography and the percentage scores of the core concept areas (awareness, availment, satisfaction, and needs for action) of the Citizen Satisfaction Index System (CSIS). The various service areas provided by the local government units were superimposed and simultaneously projected on the space defined by the PCA axes 1 (horizontal) and 2 (vertical). The correlation between respondents' demographic profiles and core concept areas is used as coordinates of the variables.

provided by the local government unit. A 'high' adjectival rating was considered in this regard wherein health services was highly known (89%). Moreover, 57% of the respondents were not fully aware of the economic and investment promotion services (Table 1). In terms of the level of availment, not all respondents that were aware of the government services had availed of these opportunities since only 51% had availed the programs. This adjectival rating posed the overall availment to be 'fair'. Based on the responses per service area, the support to education (30%), social welfare services (31%) and economics and investment promotion services (32%) were less likely to have been availed thus with low ratings (Table 1). In contrast, public works and infrastructure services (84%; high rating) were mostly availed by the respondents. It was also found that out of the 51% that have availed of the

basic government services, 95% of them were satisfied with what they have availed, which constitutes a 'high' adjectival rating (Table 1). On a per service area basis, >95% of those who have availed were highly satisfied with the health services. The services that citizens were mostly dissatisfied with were those programs and projects from public works and highways. Out of the 51% of responses that have availed of the basic services, 75% of them have clamored for more actions needed by the government, especially on social welfare aspects (83%). Among these, the top 3 social welfare services needing improvement is an additional support system for senior citizens, more social welfare programs, and the timely release of benefits for identified less fortunate group in the society. Table 2 presents the recommended areas that need further efforts to improve the delivery of services.

Table 1: Percentage rating of core concept area areas (Awareness, Availment, Satisfaction, and Needs for Action) for each service area. The basic services per service area were also presented

Services Areas	Basic Services	Core concepts percentage rating (%)			
		Awareness	Availment	Satisfaction	Action Needs
1. Health services	Vaccination for infants/children; Pre-natal/post-natal/child birth services; General Consultations/Access to secondary health care; Free Basic Medicine or Low-Cost Medicine Program; Prevention and Management of Diseases; Family Planning/ Reproductive Health services	89	52	98	72
2. Support to education	Medical and/or nutritional services to school clinics; Sports programs and activities; Scholarships and other assistance programs for students; Alternative Learning System /Special Education Programs	88	30	98	71
3. Social welfare services	Child and Youth Welfare Program; Women's Welfare Program; Persons With Disabilities (PWD) Welfare Program; Older Persons / Senior Citizens Program; Family and Community Welfare Program	78	31	97	83
4. Governance and response	Delivery of Frontline services; Provision of municipal services to the barangays; Peace and Order and Public Safety-related responses; Disaster Risk Reduction and Management; Public information services	88	62	95	71
5. Environmental management	Community-based Greening Projects; Air Pollution Control Program; Solid and water waste management; Clean-up Programs	81	65	96	74
6. Public works and infrastructures	Barangay and municipal hall, roads and bridges; public markets; public parks, sport centers, Public cemetery; Flood control management system	84	84	86	78
7. Economic and investment promotion	Public employment services; Micro business enterprises; Investment promotion; Access to irrigation facilities; Water and soil conservation projects; Post-harvest facilities; Farm trading; Organization of farmers and fishermen	57	32	93	73
	Overall Rating :	81	51	95	75

Table 2: Top 3 reasons for satisfaction/dissatisfaction and area that needs action per service area based on 150 respondents in Lambunao, Iloilo, Philippines.

Services Areas	Reasons for Satisfaction	Reasons for Dissatisfaction	Needs for Action
Health services	- free, good, and quality service - safer birth delivery - birth controlled significantly	- not quality medicine - lack of advanced facilities/equipment - limited slots for health programs	- more effective health programs - improve information drive - the fair distribution of medicines
Support to Education	- good services - children became more active in sports - free tuition	- lack of advanced school facilities - poor sports grounds - overcrowded classrooms	- improve school facilities - more scholarship grants - provide additional teachers
Social welfare Services	- day-care centers are effective - women empowerment - financial assistance to poor families	- delays in the release of benefits - programs are not for everyone - limited programs	- implement more programs - additional support to senior citizens - timely release of benefits
Governance and response	- fast delivery of LGU services - conflicts resolved immediately - training drills for calamities	- delays in the processing of transactions - some services are not free - lack of traffic facilities	- improve the processing of documents - massive information drive - fairness in transactions
Public works and infrastructures	- safer road networks - a venue for social gathering - clean marketplace	- poor quality of infrastructures - market flooded during the wet season - lack of street lights	- construction of more roads/canals - development of parks/recreation sites - install more street lights
Environmental Management	- cleaner and greener surroundings - proper garbage disposal - availability of garbage collectors	- odor pollution due to piggeries - improper garbage segregation - poor enforcement of law	- promote tree planting -provide more awareness campaign - strict implementation of the law
Economics and Investment Promotion	- provided job opportunities - local productions being promoted - more tourists were attracted to the site	-no proper sanitation at tourist sites - insufficient agricultural programs - delays in delivery of services	- make programs more sustainable - intensive information drive - more livelihood projects

Table 3: Generalized additive model (GAM) analyses were done to rank predictor variables according to their ability to explain the respondents' overall satisfaction based on the service areas provided by the local government unit and the respondent's general demographic profile.

Dependent variable		Best model predictors	Multiple R^2	Inter-cept	Coefficients		F value	P-value
					1	2		
Overall satisfaction (service areas)			0.99	8.27				
	1st	Health services			2.21	3.68	3506	< 0.0001
	2nd	Support to education			-4.73	3.87	2178	< 0.0001
	3rd	Social welfare			-4.04	2.95	1902	< 0.0001
	4th	Environmental services			5.81	2.84	1526	< 0.0001
	5th	Governance			3.98	3.21	1114	< 0.0001
	6th	Economic services			4.21	3.25	899	< 0.0001
	7th	Public works			1.03	2.70	827	< 0.0001
Overall satisfaction (respondent's profile)			0.12	8.26				
	1st	Employed			6.94	4.95	3.8	< 0.05
	2nd	Old age			-1.36	4.76	2.1	< 0.05
	3rd	Young adult			-4.42	3.67	1.2	< 0.05
	4th	Male			1.66	3.21	1.2	< 0.05
	5th	Middle-aged			-1.48	7.48	0.2	< 0.05
	6th	Unemployed			7.27	3.23	0.1	< 0.05
	7th	Female			-9.06	1.01	0.1	< 0.05

Key demographic components that drive the level of satisfaction with basic services

In the Principal Component Analysis (PCA) circle, we found that the affinity of the unemployed cluster, the young adults, and the female group, is closely related to the economic and investment promotion services and support to the education service area (Figure 1). Meanwhile, the male groupings, middle-aged, and the employed cluster of respondents were more concerned about the governance and response services. The satisfaction of the elderly group is more related to health services which commonly are the concerns of these societal groups in maintaining their health and well-being as senior citizens. While the public works and infrastructure services, social welfare services, and environmental management appeared to be closely related to the satisfaction core concept regardless of demographic groupings, these also related to the service areas that need more action.

Ranking of overall satisfaction from among all service areas and demographic profiles

General additive modeling (GAM) revealed that the combined satisfaction level of all service areas explained 99% (R^2 = 0.99) of the variations in the citizens' overall satisfaction (Table 3). The best predictor for overall satisfaction is health services, while the components which can explain the least are the public works and infrastructure services. GAM revealed their ranking on this order: health services > support to education > social welfare > environmental management > governance and response > economic and investment promotion > public works and infrastructure (Table 3). This result aids local government officials in shaping their priorities and targets on which service area needs more attention (Table 3). In terms of the overall satisfaction based on general demographic profile, GAM revealed that the combined effect of sex (male/female), age (young, middle-aged, old), and employment status (employed and unemployed) could explain 12% of the variations in the overall satisfaction of the respondents. The best model revealed that the employed group can best explain the overall satisfaction although they only constitute 14% of all the respondents. The weakest predictor is the female cluster. The ranking of variables that can best explain the level of satisfaction is in this order: employed>old age> young adult>male>middle-aged>unemployed>female.

DISCUSSION

Overall assessment on the local government services

Health service was viewed by the citizens as most prominent (Yecla and Ortega, 2020), but this is in contrast to another study which reported otherwise (Torreno, 2017). It must be noted that most of the projects in the Philippines came with a meager budget. With limited budget comes fragmented programs that will hardly reach the greater number of rural farmers in our study sites, hence, the lack of awareness on agricultural facilities and farming-related programs of the local government.

The top reason for non-availment is the failure of the government to effectively disseminate the information on government programs down to the grassroots level. The availment of services is usually dependent on the economic, educational, and health status of the citizens as well as the perceived importance of the services to

them. Where citizens are in the middle-income group as evidenced by their not being beneficiaries of the 4Ps program (a social service program for low-income families), they tend not to avail free health and educational services. Legaspi (2016) also mentioned that the availment of services could also be related to the respondents' socio-economic status.

Citizens were least satisfied with public works and highways services. They have seen that most of the barangay roads were unsatisfactorily maintained. Roadside canals and flood control infrastructures were less appreciated. This could be due to flooding incidence in some areas during torrential rains which made the citizens give low ratings on this aspect. Factors such as compliance, responsiveness, and service on time, may have a positive impact. The lower level of satisfaction will lead to public distrust. Poor delivery of services may affect the perception of the citizens (Susanto and Goodwin 2010). Failure of the government to offer quality services will develop into public distrust, while highly acceptable and well-planned programs and services will raise the trust in the government.

Citizens clamored for more action on the social welfare aspects. The government must therefore identify the needs of the constituents and design policies to address these issues in the hope of attaining more responsive social welfare development. These interventions must be allocated with budgetary requirements to be implemented and effect change.

Associating the demographic profile with the level of satisfaction

Social demographics play an important role concerning the level of satisfaction and trust in the local government (Christensen et al., 2020). Based on our knowledge, we have not seen any literature that ranked the citizens' overall satisfaction based on service areas or demographic profiles. We were the first to explore this aspect using the GAM analysis.

Gender biases and the level of satisfaction

There is no conventional association of gender with service satisfaction as the results are country-specific, site-dependent, and are primarily case-to-case basis. A study in Greece showed that women are more demanding than men but tend to rate the services with a higher level of satisfaction (Psomas et al., 2020). Although, women in Japan have more overall trust in the government and thus in implementing government programs (Christensen et al., 2020). In contrast, another study in India showed that males tended to rate higher satisfaction than females (Bouranta et al., 2015) and were more delighted and pleased with the services received than women (Dewan and Mahajan, 2014).

In our study, the level of satisfaction of women is mainly associated with educational and economic services, while men were more concerned with the

governance of how the local government implements projects and their responses to citizen demands. Women can be more demanding, especially when it pertains to their children's education as well as the livelihood aspects. This indicates that some educational services may not be enough for women, thus wanting them to demand more and therefore their lower level of satisfaction.

In contrast, males with primordial concern over governance had the highest satisfaction level. This is primarily because most of the male salaried workers are at the forefront of many government-related activities and programs in the countryside. They are always the first to be aware and receive such service, and thus be more satisfied than their unemployed counterparts.

Employment status in association with service satisfaction

Our study showed that employed individuals tend to be more satisfied than unemployed citizens. In the Philippines, the majority of the employed classes of society are more educated people, and most of the unemployed are less educated. It was said that the lower the educational background, the higher it becomes their perceptions of service quality and satisfaction (Psomas et al., 2020). Most unemployed and less educated people look up to service providers who are good at instilling confidence in citizens while they perform the service delivery. These gestures made less-educated people feel safer when they received assistance and services and were thus more satisfied (Chatzoglou et al., 2013). However, this does not occur in our study. Since we found that unemployed individuals are mostly concerned with livelihood opportunities and educational opportunities. The unemployed group comprises housewives, younger people, and most students. These demographic classes are the lowest two predictors of the level of satisfaction in the GAM analysis of our study. Since the unemployed were less satisfied with the services, hence, the notion that uneducated/unemployed citizens trust the government better and are more satisfied did not occur in our research. This means that the economic and investment (e.g. livelihood opportunities) and educational services (e.g. scholarships, vocational training) did not become more satisfying for this unemployed group. In the case of the students, they are less likely to be satisfied as they are still demanding more educational reforms or assistance from the government. Yet contrasting results were also found from other studies (Psomas et al., 2020; Dewan and Mahajan, 2014).

Moreover, another study surprisingly revealed that the employed or working class do not trust the local government and are more skeptical about the politicians or the local government leaders (Christensen et al., 2020). This notion was confirmed by Bouranta et al., (2015) and Psomas et al (2020) that the employed or

mostly educated people are more demanding and less appreciative of government services. Various studies have conflicting results, but overall, employment status has a more dominant impact on determining trust and satisfaction in the local government system (Hudson, 2006; Mishler and Rose, 2001; Youniss et al., 2002; Drakos et al., 2019).

Age-aggregated level of satisfaction

Based on the GAM analysis, the most satisfied age group is the elderly, then young adults the middle-aged group is less likely to be happy. Indeed, age variability significantly impacts the service quality dimensions and satisfaction level in our study. Differences in the level of service satisfaction based on the age of the respondents were also documented in previous studies (Dimitriades and Maroudas, 2007; Zafiropoulos and Vrana, 2008; Dewan and Mahajan, 2014; Mitropoulos et al., 2018). Depending on the age classes, age may positively or negatively affect the citizen's service satisfaction. However, differentiating this relationship among different countries gives a complex picture. A study in Greece found that the elderly tended to report a higher level of satisfaction with the health/hospital services than the younger ones (Mitropoulos et al., 2018). This is consistent with the study in India, which stated that older respondents tended to have higher satisfaction than younger-aged individuals by Bouranta et al., (2015). These results are consistent with our study where more senior citizens need various services, especially health services. They, therefore, are more appreciative of the prompt delivery of these services. While a study mentioned that older people/elderly in Japan are likely to trust the government officials, the opposite responses were taken from Norway, with the elderly being less likely to trust the government (Christensen et al., 2020). Meanwhile, an author reported that younger people are likely to be satisfied with the public sector than the older generation (Mayne and Hakhverdian, 2017), which gives leeway for influence to younger people in a less traditional society. Overall, our study conforms to the notion that as citizens get older, their dependence on government interventions and social services is becoming stronger. When they were still young or in their middle age, they were still capable of helping themselves, and thus were less dependent on government services.

Drawbacks in the CSIS Survey Tool

Surveys are important tools in assessing the level of performance of local government officials in their delivery of basic services. It is effective to cover wider areas and more people in making the assessment. However, there is no single survey without any flaws. For one, the CSIS survey tool has some limitations in reflecting the accurate level of satisfaction of the citizens.

Previous studies question the validity of the data and information from surveys as a basis for decision-making as the expressed satisfaction may not reflect the service performance and the statistical and conceptual complication in analyzing subjective indicators of performance (Stipak, 1979; Kelly and Swindell, 2002). In our study, we believe that there are factors relative to the satisfaction level of the citizens that may not be captured in the survey tool. We supposed that the citizens' interest in specific service areas is primarily anchored on their sources of income/livelihood. Considering that our study site is a landlocked municipality, if the majority of our respondents are not engaged in fishery activities, thus their level of awareness of fishery-related services is low. Information capture is also a factor. One of the leading reasons for the non-availment of the services in our study is the information gap. The lack of information on a particular service area does not capture their interest. Less awareness ends up in non-availment of the services or may have partly availed/participated in government-led programs and activities but dissatisfied because of disinterest. Another caveat is the socio-economic status of the respondents. Those who can afford services from private entities may end up not interested in government services, resulting in a low level of awareness and thus non-availment of the essential programs of the government. The respondent's satisfaction may also be due to high expectations of the services. Higher expectations, if not met, may contribute to dissatisfaction with the services being rated. Indeed, satisfaction surveys may not generate results that fully and adequately represent the actual level of satisfaction of the citizens (Townsend, 2000 and Higgins, 2005).

Conclusion

Using the CSIS survey tool in Lambunao, Iloilo, the Philippines on seven local government unit service areas revealed a high awareness rating (81%), availment index (51%), satisfaction rating (95%), especially on health services. However, 95% also clamored for more actions mainly for public works and infrastructure.

The unemployed, young adults, and female groups were more concerned with economic and investment promotion services and support for education programs. In contrast, the satisfaction of the male, middle-aged and employed clusters are highly concerned with the governance and response of the government, while the satisfaction old-age (senior citizens) group is very closely related to health services. Ranking of services according to the overall satisfaction is in this order: health services > support to education > social welfare > environmental management > governance and response > economic and investment promotion > public works and infrastructure.

While we recommend using CSIS tools as an effective tool in assessing the level of performance of the local government officials in their delivery of services, we also provided some drawbacks in using this survey tool. Overall, we believe that CSIS is a powerful tool for assessing the performance of the local government's service delivery system. Our findings aid the government officials by providing a deeper understanding of the CSIS survey results that will ultimately pave the way towards more improved service delivery and interventions to its constituents.

Conflicts of Interest
The authors declared no conflict of interest.

REFERENCES

Bouranta, N, Y Siskos, and N Tsotsolas, 2015. Measuring police officer and citizen satisfaction: comparative analysis, Policing: An International Journal, 38: 705-721.

Bouckaert, G, van de Walle, S. 2003. Comparing measures of citizen trust and user satisfaction as indicators of good governance: Difficulties in linking trust and satisfaction indicators. International Review of Administrative Sciences, 69: 329–343.

Cassia F and F Magno, 2015. Explaining Citizen Surveys Non-Adoption in Local Government. In: Campbell, C. (eds) Marketing in Transition: Scarcity, Globalism, & Sustainability. Developments in Marketing Science: Proceedings of the Academy of Marketing Science. Springer, Cham. (https://doi.org/10.1007/978-3-319-18687-0-108)

Chatzoglou P, D Chatzoudes, E Vraimaki and A Diamantidis, 2013. Service quality in the public sector: the case of the citizen's service centers (CSCs) of Greece, International Journal of Productivity and Performance Management, 62: 583-605.

Christensen T, K Yamamoto and S Aoyagi, 2020. Trust in local government: Service, Satisfaction, Culture and Demography. Administration and Society. 52: 1268–1296.

Department of Interior and Local Government (DILG) 2019. Citizen Satisfaction Index System Manual for Implementation in Municipalities version 2019.0.2. Bureau of Local Government Supervision, Department of Interior and Local Government, Quezon City, Philippines.

Dewan M and S Mahajan, 2014. Customer satisfaction and the moderating effect of demographics in public sector banks. IOSR Journal of Business and Management, 16: 29-35.

Drakos K, C Kallandranis and S Karidis, 2019. Determinants of Trust in Institutions in Times of Crisis: Survey-Based Evidence from the European Union. JCMS Journal of Common Market Studies, 57: 1228-1246.

Dimitriades Z and T Maroudas, 2007. Demographic predictors of service satisfaction in Greek public organizations. Measuring Business Excellence, 11: 32-43.

Higgins, Paul. 2005. Performance and User Satisfaction Indicators in British Local Government.Public Management Review, 7: 3.

Hudson J , 2006. Institutional trust and subjective well-being across the EU. KYKLOS: International Review for Social Sciences, 59: 43-62

Kelly J and D Swindell, 2002. A Multiple-Indicator Approach to Municipal Service Evaluation: Correlating Performance Measurement and Citizen Satisfaction Across Jurisdictions. Public Administration Review, 62: 610–621.

Labaria EC, CK Gotanco and MJ Caleda, 2017. Framing the Role of and Defining Criteria for Usefulness of Citizen Surveys in Local Urban Environment Management: The case of the Local Government Unit of Quezon City, Philippines. Environment and Urbanization Asia. 8: 214-229.

Lambunao LGU. 2022. Local Government Unit profile. https://lgulambunao.com/.

Legaspi P, 2016. Citizen Satisfaction in LGU's: The Case of CSIS in Dagupan. Proceedings. The 4th Conference of Magsaysay Awardees: Good

Governance and Transformative Leadership in Asia. Mahasarakham University, Thailand.

Mayne Q and A Hakhverdian, 2017. Ideological congruence and citizen satisfaction: Evidence from 25 advanced democracies. Comparative Political Studies: 50: 822–849.

Mishler W and R Rose, 2001. What Are the Origins of Political Trust?: Testing Institutional and Cultural Theories in Post-communist Societies. Comparative Political Studies, 34: 30–62.

Mitropoulos P, K Vasileiou and I Mitropoulos, 2018. Understanding quality and satisfaction in public hospital services: a nationwide inpatient survey in Greece. Journal of Retailing and Consumer Services, 4: 270-275.

Psomas E, N Bouranta, M Koemtzi and E Keramida, 2020. Determining the impact of service quality on citizens' satisfaction and the role of citizen's demographics. The case of the Greek's citizen's service centers. The TQM Journal (www.doi.org/10.1108/TQM-12-2019-0274).

Team, RC. 2021. A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria.

Stipak B, 1979. Citizen Satisfaction with Urban Services: Potential Misuse as a Performance Indicator. Public Administration Review, 39: 46–52.

Susanto TD and R Goodwin, 2010. Factors influencing citizen adoption of SMS-Based e-Government Services. Electronic Journal of e-government, 8: 75-87.

Swindell D and J Kelly, 2000. Linking Citizen Satisfaction Data to Performance Measures: A Preliminary Evaluation. Public Productivity and Management Review, 24: 30–52.

Torreno FN. 2017. Citizens' satisfaction index on the health services of the local government unit of Binalonan, Pangasinan. Advanced Practice Nurse, 17: 3.

Townsend M, 2000. Quantitative Measurement of Service User Preferences for Mental Health Care: A Comparison between Consumer Satisfaction Surveys and Conjoint Analysis. Journal of Psychiatric and Mental Health Nursing, 7: 287–288.

Walker M, 1996. How Are We Doing? Using Citizen Surveys to Improve Government Management. England: Berkshire Advisors, Inc.

Yecla JL and T Ortega, 2020. Local Government Unit's Health Services as Viewed by the Citizens of Banga, Aklan. Journal of Academic Research, 5: 1-14.

Youniss J, S Bales, V Christmas-Best, M Diversi, M McLaughlin, and R Silbereisen, 2002. Youth Civic Engagement in the Twenty-First Century. Journal of Research on Adolescence, 12:121–148.

Zafiropoulos C and V Vrana, 2008. Service quality assessment in a Greek higher education Institute. Journal of Business Economics and Management, 9: 33-45.