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Government Capacity: Evidence from Nepal

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Abstract

Autonomous local governments are essential for maintaining stable economic and social development mechanisms and democratic regimes. The prime objective of the article is to examine the impact of pressure-capacity variables on local governance. Two sources of data, such as NPHC 2021 and LISA are used. Overall local government of Nepal has still weak performance as only 38 percent of total municipals have secured good ranking status. Based on PCP framework, total score of 10 composite indicators generated by LISA and some population management related characteristics (e.g., sex ratio, population density, literacy, household size, and two food coping strategy related variables) have been examined using multiple regression to understand interrelationship response and explanatory variables. The statistical analysis shows that there is a string relationship between pressure and capacity variables. Individually, three population related variables such as sex ratio, literacy and household size are positively correlated with total score of 10 indicators with low coefficient of determination. In addition to strengthening existing gender status, educational level and population growth, more socioeconomic and environment related variables as explanatory variables are necessary to link government capacity and its performance in Nepal.

Keywords: *Local governance, management capacity, performance, population*

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Introduction

Across the world, local governments are in charge of overseeing and providing essential public services. These groups are always at the forefront of creating and implementing creative solutions to brand-new, urgent social issues, from picking up garbage and maintaining clean streets to offering education and assistance to the elderly and disadvantaged. Not only do local governments lead the way in delivering the public services that residents depend on, but they are frequently the state's most visible representation in the public eye. Through their encounters with customers and service users, "street-level bureaucrats" who provide local public services significantly contribute to the construction of citizen identity (Walker & Andrews, 2013; Vinzant & Crothers, 1998). The management and performance of local governments is thus an issue of both timely and enduring importance. In this context, the article is about to examine Nepal's government capacity and its performance. For this purpose, pressure-capacity-performance framework is used.

Concept of Capacity

Concept of capacity is ambiguous. According to Oxford Companion to Philosophy (Honderich, 2005, p.125), a capacity is a power or ability (either natural or acquired) of a thing or person, and as such one of its real (because causally effective) properties. For "ability," the two concepts—capability and capacity—have the same dictionary meaning. Most of the research conducted in political science and public administration define the two concepts interchangeably as either the ability or the power of the government. The work of Choi (2016, 2021) considered capability as the rules or equilibrium that are devised and restricted by political choice, an institution, and the rule of law—adopting the perspective of New Institutional Economics. In addition, from the carrying capacity point of view, it has its roots in the demography (Malthus, 1986) and ecology (Ehrlich, 1971; Seidl & Tisdell, 1999) domains. It was also defined in relation to the impending constraints on resource consumption and environmental deterioration brought on by excessive human activity (Ehrlich & Holdren, 1971). In the 200 years since its inception, carrying capacity research has evolved from studies of the biotic population growth law to comprehensive research covering the demands of human development and the endowments of natural resources (Holdren & Ehrlich, 1974). Applications for carrying capacity have broadened in scope, including carrying capacity for

comprehensive resources and the environment, carrying capacity for land, water, and cultural resources, as well as ecological and environmental carrying capacities (Bao et al., 2020). Carrying capacity is now a key indicator for measuring sustainable development and is used extensively in planning, resource management, and environmental management.

Conceptualization of Government Capacity

The conceptualization of government capacity (GC) occurred in a number of pioneering studies (Burgess, 1975; Bowman, 1988; Donahue et al., 2000; Gargon, 1981). Autonomous local governments play a vital role in developing democratic regimes and establishing stable mechanism for economic and social development. From management point of view, the Office of Management and Budget (Executive Office of the President of the United States) Interagency Study Committee on Policy Management Assistance defined the local management capacity and capability in three general areas (Burgess, 1975, p.709; Gargan, 1981, p.650) :

- Policy Management-"performance on an integrated, cross-cutting basis of the needs assessment, goal setting, and evaluation functions of management: the establishment of priorities; the mobilization and allocation of resources; and the initiation and guidance of the planning, development, and implementation of policies, strategies, and programs."
- Resource Management-"creation and support of the basic administrative tools or support functions which constitute an organization's basic capabilities and bottom line assets. Resource Management cross-cuts functional departments and units and includes personnel administration; property management; ... information management; . . . and financial management...."
- Program Management-"performance of the administrative functions and tactical requirements of executing specific policy by undertaking programs, activities, or services. Program Management provides leadership for the specific functional units of government that provide public services...."

As a member of Study Committee, Burgess notes that local capability in policy, resource, and program management is increasingly important in the implementation of policies which involve a general jurisdictional rather than a specific functional approach to problems (Burgess, 1975).

Donahue et al. (2000, p.577) pointed out that management capacity indicates “government’s intrinsic ability to marshal, develop, direct, and control its human, physical, and information capital to support the discharge of its policy directions”. Similarly, Donahue et al. (2000, p.384) described management capacity as a “government’s ability to develop, direct, and control its resources to support the discharge of its policy and program responsibilities”. Second movers adopted the former studies’ conceptualization and expanded or applied capacity according to research focuses. Van Slyke (2003, p. 296) showed management capacity as “personnel, oversight and program audit capabilities, and the necessary communication and political skills”. Particularly, for management capacity, personnel must possess “contract management experience, policy expertise, negotiation, bargaining, and mediation skills”.

However, Gargan (1981, p. 651) rejects the idea that management theory should be the only way to understand local government capability. From the standpoint of national government, he believes that three are particularly significant: federal policy makers and bureaucrats; local political leaders and bureaucrats; and constituencies or users of public services. Any of these might consider what a local government is capable of. From public policy perspective, Honadle (1981, p.577) defined capacity as “the ability to anticipate and influence change; make informed, intelligent decisions about policy; develop programs to implement policy; attract and absorb resources; manage resources; and evaluate current activities to guide future actions.”

Hou et al. (2003, p.300) classified GC as “the administrative capacity approach” and “the governance capability approach.” The former refers to aspects of the administration that considers “the importance of policies, procedures, and resources governing administrative action”. The latter approach embraces external aspects such as political influences.

Some link it to the “infrastructural power” of the state (Fukuyama, 2013), others to the extent to which governance resembles a Weberian bureaucracy (Evans & Rauch, 1999) or to the “quality of government” (Rothstein & Teorell, 2008) or to “formal structural and procedural features of the governmental administrative apparatus with informal elements” (Christensen et al., 2016).

As Lodge and Weigrich (2014) pointed out that the four categories of capacity which are as follows:

- coordination capacity (CC): bringing together disparate organizations to engage in joint action;
- analytical capacity (AC): analyzing information and offering advice in addition to risk and vulnerability assessments;
- regulation capacity (RC): control, surveillance, oversight, and auditing;
- delivery capacity (DC): managing the crisis, exercising power, and actually providing public services.

The paper will pay special attention to AC from management perspective.

Theoretical and Empirical Frameworks

Several well-known ideas on public sector management have been tested in the setting of local government. Local governments and population-environment interactions have been studied using system theories, economic theories of effective service production, contingency theories about organizational design, and resource-based arguments about the capacity and capabilities required for success (Bertalanffy, 1968a, 1968b; Burgess 1975; Honadle, 1981; Malthus, 1986).

Local Government Management Approaches

Table 1 represents the primary management practices associated with each perspective. The potential relationships between the various local government management techniques and local government performance, along with how each strategy may be integrated into O'Toole and Meier's public management model, which offers a concise justification for combining the various management action results. According to their method, public managers must do four basic tasks before deciding how to allocate their resources, which include both money and time. The first is maintaining and making changes to the processes and structures that are presently in place (M1). The second is formulating and implementing a purposeful plan for overseeing the surroundings in which a firm operates (M2). This tactic therefore takes the shape of finding a middle ground between attempting to capitalize on environmental changes and shielding the organization from them (M3/M4) (O'Toole & Meier, 1999). The paper analyzes the local government studies that are under examination using this conceptual framework as a foundation. In the right-

hand column of Table 1 that sees the management techniques that are included in the final analysis.

Table 1

Local Government Management Approaches

Theory	Key Concept	O'Toole and Meier	Anticipated Performance
System Theory	Open system	M1, M3/M4	+
	Closed system	M1, M3/M4	+
Economic	Organization size	M1, M3/M4	+
	Contracting out	M3/M4	- or +
	Competition	M3/M4	- or+
	Collaboration	M3/M4	+
	Coproduction	M3/M4	-
	Contingency	Administrative intensity	M1
Centralization		M1	+
Integration		M1	+
Strategy content		M3/M4	+
Planning		M1	+
Resource-Based	Management system	M1	+
	Staff quality	M1	+
	Personnel stability	M1	+
	Leadership	M1	+
	Human resource management practices	M1	+
	Representing bureaucracy	M3/M4	+
	Networking	M3/M4	+
Population-Ecology	Population Growth	M3/M4	+
	Environment deterioration	M3/M4	+

Adopted from Walker and Andrews (2015)

Population Management

A country's long-term social, economic, and political structure is determined by demographics (e.g., fertility, mortality, and migration). These demographics shape a wide range of intricate issues and possibilities that societies encounter, many of which are important for the expansion and advancement of the economy. Changes in

technology, cultural norms, and behavior, as well as institutional and governmental reforms, can all have an impact on demographic trajectories and the implications they have for development.

Changes in the population can affect the economy's structural productivity growth, living standards, savings rates, investment, and underlying growth rate. Additionally, the long-term Government's financial management, public service delivery, social inclusion can all be impacted by demographic shifts. Furthermore, it is reasonable to anticipate that variations in national demographic trends will have an impact on physical infrastructure development. Therefore, understanding shifting demographics and the difficulties they present is helpful in defining the relationship between socioeconomic growth and capacity.

The public service administration and the growth rate of potential output will probably experience downward pressure due to changes in the population. Because they depend on complex social dynamics, the timing and amount of these effects are unclear. Changes in the population may also have an impact on the business cycle and the mechanism used to transmit financial policy. The optimal course of action will need monetary authorities to continuously assess these structural and cyclical implications. Fiscal and financial management will be faced with obstacles by demographic developments as well. It is anticipated that growing fiscal imbalances will result in larger levels of government debt relative to GDP, which could push interest rates higher and discourage profitable investment. However, there are methods that can be taken to somewhat counteract the negative effects of changing demographics on the economy.

Three fundamental factors—population growth, variations in fertility and mortality, and related shifts in the age structure of the population—are driving the Nepalese demographic transition.

Public Policy

Developmental and redistributive policies are the two basic categories of public policy. Redistributive policies deal with the reallocation of resources within society, while developmental policies deal with the various indicators as shown in conceptual framework to support economic growth. In terms of policy design, redistributive policies are typically overseen by the national government in many nations. This is because, regardless of where they reside, all citizens of a nation

should, at the very least, be entitled to the same minimal welfare benefits. Local governments are responsible for developing policies since local developments have unique characteristics that must be taken into account when designing and implementing them. Furthermore, Shahi (2023) emphasized that monitoring mechanism should be institutionalized to increase effective service delivery, accountability and transparency of local governments.

Development Plans (1956-2024)

Throughout the sixty years of history of development plans in Nepal, nine five-year and five three-year plans have been put into action. The political landscape saw multiple transformational shifts during this time, but the gains made in the fields of infrastructure development, modern transportation, economics, and society have not materialized as anticipated. Nepalis, meanwhile, are comparatively more conscious now than they were previously. Modern society has evolved. Although they haven't eliminated, discrimination, inequality, and exclusion on the basis of class, gender, and ethnicity are declining gradually. During this time, significant advancements have been made in social security, drinking water, health, and education. Urban infrastructure, communication and information technology, and road transportation have all made substantial strides in the infrastructure industry. Nonetheless, further work has to be done in the other infrastructure sectors, such as air transportation and hydroelectricity. To meet the public's rising expectations and advance as a wealthy and developed country, result-oriented execution through short-, medium-, and long-term plans is required. A sizable portion of the population still lives below the poverty line, despite a notable decline in both absolute and multidimensional poverty. Until quite recently there has been a trend of young people going abroad in search of job because of lack of employment opportunities in country of origin. The industrial sector's economic contribution has decreased, although the trade imbalance has remained significant. In the fields of social security, inclusiveness, and environmental protection, significant progress has been accomplished. The plan's objectives in the areas of industrialization, economic growth, production and productivity, excellent governance, high-quality healthcare and education, and a clean and pollution-free environment have not been met (GoN, 2023).

Conceptual Framework for Government Capacity

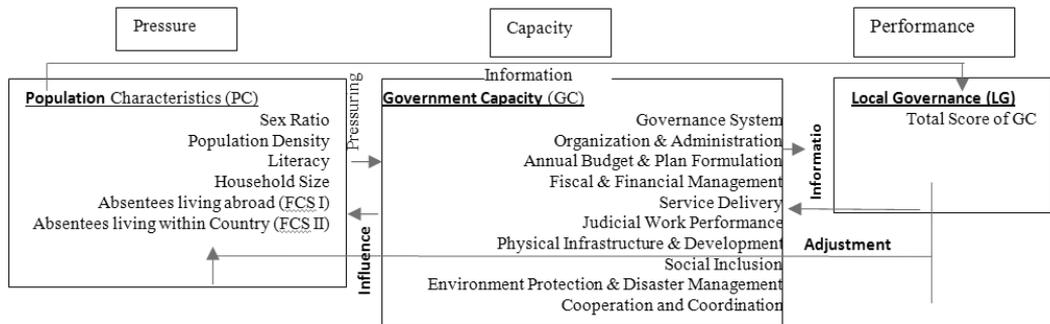
The work of Choi (2021) showed that population characteristics as pressure variables have positive association with government capacity and its performance. Thus, this study builds a pressure-capacity-performance (PCP) conceptual framework to examine a relationship between indicators as shown in Figure 1. With the economic development, during the process of human resource use, when people's irrational activities exceed the GC, such problems related to food security may exert 'pressure' on the GC. With pressure, the original system is bound to take performance measures according to various capacity indicators.

To investigate the link between various types of indicators, this study develops a pressure-capacity-performance (PCP) conceptual framework. As the economy grows and human resources are used, and irrational behavior surpasses the growth curve, issues pertaining to food security may put "pressure" on the growth curve. Under duress, the original system will inevitably use other capacity indicators to determine performance. Thus, the systemic pressure may be released by devising strategies and utilizing technical innovation to unleash the potential of GC. Performance metrics will then result in additional pressure, which will modify the state of GC systems. Performance metrics ought to be updated as a result. A PCP model for government capacity is created by this cycle of "action-feedback-action."

PC represents the strain that socioeconomic and demographic factors—such as the sex ratio, population density, literacy rate, and migration as a means of coping with the growing population—have on GC. The resources supporting Nepal's socioeconomic growth are reflected in the status of GC. LG is a reflection of the good deeds that people have done to better the GC, such establishing sensible policies and enhancing the governance structure. The prospective government capability and future direction of municipal in Nepal are assessed in this study by a coupling analysis of PC, GC, and LG. Therefore, the systematic strain may be alleviated by developing strategies and utilizing technical innovation to release resources and environmental potential carrying capacity.

Figure 1

Pressure-Capacity-Performance (PCP) Conceptual Framework



Data and Method

Two types of data sources are used to analyze the government capacity in Nepal. They are LISA (<https://lisa.mofaga.gov.np/home>) and National Population and Housing Census 2021 (<https://censusnepal.cbs.gov.np/results>).

Introduction to LISA

In order to guarantee economic equality, prosperity, and social justice, Nepal enacted a new constitution in 2015, changing from a centralized unitary state to a federated nation. With the passage of the new constitution, Nepal's sub-national governments (SNGs) system, structure, and operation have undergone a profound paradigm change. The federal government, located at the center of the country, the seven provincial governments that supervise each province, and the 753 local governments (in 293 municipalities and 460 rural municipalities) are the three levels of government defined by the constitution.

The constitution provides exclusive and concurrent rights and responsibilities, as outlined in schedules five through nine, to ensure basic devolution of authority to the various levels of government. The three tiers of government are envisioned by the constitution to have a non-hierarchical relationship based on the concepts of coexistence, cooperation, and collaboration. The three tiers of government are treated as independent full governments (exclusive functions) that are dependent on one another via common "Rules" (concurrent functions) under the federalism envisioned by the constitution. All sectors are included in the comprehensive devolution.

A score includes an average score of 10 thematic indicators. They are physical infrastructure development, social inclusion, environment protection and disaster management, organization and administration, annual budget and plan formation, fiscal and financial management, service delivery, judicial work performance, and collaboration & coordination. (see also, McDonald, 2020). To evaluate government capacity, 100 questions were formulated through the self-assessment of these thematic areas. The weightage of each question is given as per Local Level Institutional Capacity Self-Assessment) Guidelines 2019 (2077).

Evaluation Process	Weightage (%)	Result analysis and basis for weightage
Overall scenario*	21	Four conditions are assigned for overall scenario. The head of the Department/Division/Branch of the concerned local level must select the condition of the work done by his office. In this scenario, zero marks are given for condition 1, 0.5 marks for condition 2, 0.75 marks for condition 3, and 1 mark for condition 4.
Procedural scenario**	34	Within this scenario, three (weak, normal, and excellent) conditions are assigned, and zero points are given for weak, 0.5 points for normal and 1 point for excellent.
Quantitative scenario***	45	Within this scenario, there are three conditions for each indicator (weak, normal and excellent) are assigned, and zero is given for weak, 0.5 for normal and 1 for excellent.

Source: LISA Guidelines, 2019 (<https://lisa.mofaga.gov.np/home>)

Note: * Indicators showing the overall condition of the local level, ** Public administration and service delivery that address local concerns day-to-day, *** Resultant indicators that can be compared, measured, and quantified.

Based on the weightage mentioned above, each indicator was evaluated through a number of questions as follows.

Thematic Area	Total Score	No. of questions for each scenario			Total Questions
		Overall	Procedural	Quantitative	
Governance System	9	3	4	2	9
Organization and Administration	8	2	3	3	8
Annual Budget and Plan Formulation	11	2	4	5	11
Fiscal and Financial Management	11	2	4	5	11
Service Delivery	16	2	4	9	16
Judicial Work Performance	7	1	3	3	7
Physical Infrastructure and Development	13	3	4	6	13
Social Inclusion	10	2	4	4	10
Environment Protection and Disaster Management	9	1	3	5	9
Collaboration and coordination	6	2	1	3	6
Total	100	21	34	45	100

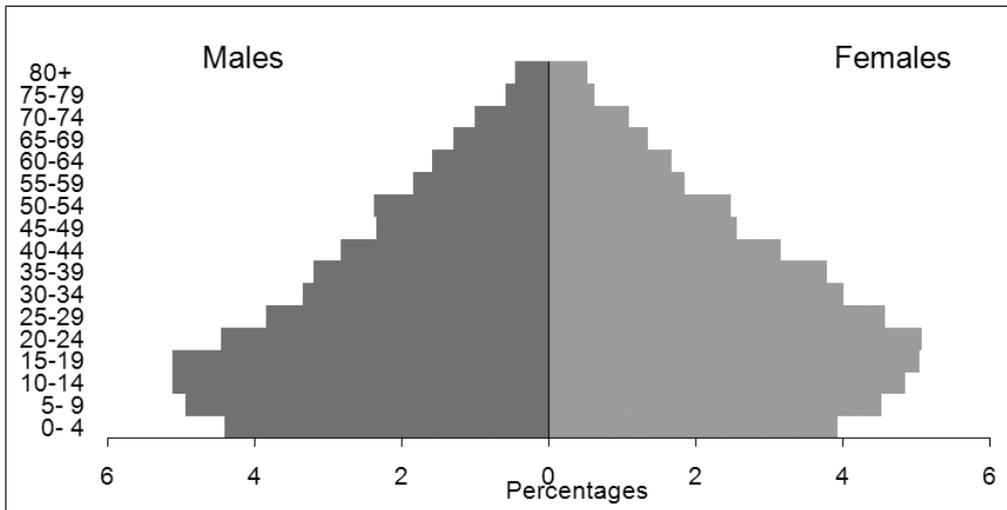
Source: LISA Guidelines, 2019 (<https://lisa.mofaga.gov.np/home>)

Introduction to NPHS

According to the 2021 National Population and Housing Census (NPHC) (NSO, 2023), Nepal has 29,164,578 people in total, with 14,253,551 (48.98 percent) men and 14,911,027 (51.02 percent) women. Consequently, sex ratio is 95.59 which is slightly higher than in 2011 (94.16). Similarly, the population density is 198 in 2021, which was 180 in 2011.

Figure 2

Population Pyramid Showing Nepal's Population Composition



Nepal represents a lower population density than the average for Southern Asia (314 people per square kilometer). Nepal's population is very youthful, with 47.5 percent of people under 24 (NSO, 2023). By ecological belt, the highest population density is 460 in the Terai region, and the lowest is 34 in the Mountain region. Similarly, the average household size is recorded highest in the Terai (4.73), followed by Mountain (4.33) and Hill (3.99).

In 2022, MoHP et al. (2022) report that the overall fertility rate is 2.1 per woman and the net migration rate is -4.2 percent. The significant drop in fertility over the past 20 years and the relatively small percentage of elderly people (10.2 percent in 2021) who are 60 years of age or older are to blame for the low dependent ratio (42.3 percent) (NSO, 2023).

With a significant increase from 41.9 years in 1972 to 72.4 years in 2022, life expectancy has increased significantly (UNCB, 2023). According to MoHP et al. (2022), Nepal has also achieved significant progress in lowering the child death rate (under the age of five), which dropped from 256.7 in 1972 to 31.1 in 2022.

Nepal has a low level of education (5.1 years of schooling in 2021) and a poor HDI, ranking 143 out of 191 nations in 2021 (UNDP, 2022). Since 2002, Nepal's mean number of years of education has grown, although it is still low—roughly half of the median for the world (UNCB, 2023).

The World Bank has categorized Nepal as a lower middle-income nation, with a GDP purchasing power parity (PPP) per person of \$3,996.7 in 2020 (World Bank, 2022). Notwithstanding its achievements in reducing poverty and income inequality, Nepal continues to rank among the poorest nations in Asia due to its sluggish economic development (Cosic et al., 2017). Due to its geography and frequent natural catastrophes, which have a detrimental impact on economic growth, its GDP per capita growth rate is less than half of South Asia's average (2.4 percent against 7.1 percent in 2021).

Between 2014 and 2019, the percentage of people living in poverty fell from 30.1 to 17.4%, with the greatest concentration of poverty being in rural municipalities. According to GoN (2021), poverty rates are higher in rural municipalities (28%) than in urban municipalities (12.3%). Agriculture accounts for over one-third of the nation's GDP, and 57 percent of its population works in agriculture (FAO, 2023). Raising the financial returns from agriculture is challenging due to poor productivity, fragmentation, and degradation of the land, low per capita arable land availability (0.082 hectares per person, less than half of the world average) (FAO, 2023).

Remittances made up 23.1 percent of GDP in Nepal in 2022, compared to 7.9 percent in Pakistan, 5.1 percent in Sri Lanka, 4.7 percent in Bangladesh, and 3.3 percent in India. Nepal is one of the top ten nations with the highest percentages of remittances. (Chandra, 2023). In Nepal, 81.6 percent of households in urban areas and 77.7 percent in rural areas have access to sufficient drinking water when needed. More than 90 percent have access to improved sanitation (NSO, 2023).

Electricity is widely available, with 82.2 percent of homes in rural areas and 94.4 percent in urban areas having access to it. Less than half of the households in the province of Karnali (47.3 percent) have access to electricity, making it stand out. Regarding phone access, 78 percent of all households have one, although there is a difference in the percentage of rural (4.9 percent) and urban (19.9 percent) regions that have access to a computer and the internet (21.5 percent in rural, 45.7 percent in urban) (NSO, 2023).

With its varied terrain, which includes plains, hills, mountains, and wetlands, Nepal is prone to natural calamities. Based on the 2021 ND Gain indicator, Nepal is ranked 126th out of 182 countries, suggesting that it is not well prepared (120th most ready) and that it is very vulnerable (42nd most susceptible) (UND, 2022).

Urban municipalities have 66.17 percent of their total population, whilst rural municipalities have 33.83 percent. The population of urban and rural municipalities was 63.19 percent and 36.81 percent. The Terai area is home to 53.61 percent of the total population (15,634,006), followed by the Hill region (40.31 percent, or 11,757,624 people) and the Mountain region (6.08 percent, or 1,772,948 people) in 2021. About 76 percent of the nation's population who is five years of age or older is literate. The literacy rate for men is 83.6 percent, compared to 69.4 percent for women. The overall literacy rate in the 2011 census was 65.9 percent; the male literacy rate was higher at 75.1 percent than the female rate at 57.4 percent.

Table 2

Some Population Management Variables with LISA's Total Score, 2023

Place of Residence	Total Score*	Sex Ratio	Density	Literacy	Household Size	HDI	Food Coping Strategy (FCS)		
							Working outside home	Absentees living within country	Absentees living abroad
Nepal	0.644	95.59	198	0.762	4.37	0.602	0.382	0.133	0.234
Urban/Rural									
Urban	0.667	96.06	373	0.785	4.31	0.647	0.462	n/a	0.238
Rural	0.626	95.59	105	0.719	4.51	0.561	0.241	n/a	0.224
Ecological Belt									
Mountain	0.627	97.28	34	0.728	4.33	0.564	0.221	0.222	0.156
Hill	0.666	94.65	192	0.809	3.99	0.623	0.389	0.202	0.252
Terai	0.617	96.11	460	0.731	4.73	0.563	0.399	0.090	0.235
Province									
Koshi	0.661	95.02	192	0.797	4.16	0.580	0.322	0.129	0.227
Madhes	0.526	100.55	633	0.547	5.29	0.510	0.407	0.066	0.218
Bagmati	0.660	99.36	301	0.821	3.89	0.661	0.537	0.150	0.181
Gandaki	0.670	90.37	115	0.817	3.92	0.618	0.391	0.206	0.314
Lumbini	0.700	92.01	230	0.781	4.49	0.563	0.348	0.126	0.270
Karnali	0.644	95.27	60	0.761	4.61	0.538	0.231	0.142	0.171
Sudurpaschim	0.626	89.51	138	0.762	4.67	0.547	0.261	0.157	0.298

Source: <https://censusnepal.cbs.gov.np/results>, *<https://lisa.mofaga.gov.np/home>

According to the 2021 provincial population distribution, Bagmati province has the largest population share (20.97 percent) and Karnali province has the lowest (5.79 percent). Similarly, the province of Madhesh has the second-highest population. Comparably, in terms of population in 2021, Koshi, Lumbini, Sudurpaschim, and Gandaki Province rank third, fourth, fifth, and sixth, respectively.

One important tool for reducing household vulnerability or food insecurity is the food coping strategy (FCS). To do this, households send their economically engaged member to the marketplace and business (both domestically and internationally), converting the family mode of production to the capital mode of production. Initially, a person hopes to find work close to their home. If unsuccessful, s/he would rather relocate inside the nation. In the event that neither effort succeeds, the person eventually looks for work overseas.

Those who are absent and reside overseas comprise 2,190,592 individuals, or 23.4 percent of 1,555,961 families. 1,799,675 (82.2 percent) men and 390,917 (17.8 percent) women make up the total number of absentees residing overseas. Nepal's food security score in the Global Food Security Index for 2022 was 74 out of 113, with the lowest score coming from the sustainability and adaptability facet. According to data from the Nepal Demographic and Health Survey (MoHP et al., 2022), 14 percent of households experienced food insecurity in 2022. Compared to the national average, a greater number of families in rural regions (18.1%) experienced food insecurity; of the provinces, Karnali Province had the greatest rate (36.6%), while Gandaki Province had the lowest (8.7 percent). Of the 14,983,310 people who worked in the year before to the census, 61.8 percent were employed in the household sector, making it the biggest industry. Next in the row are non-financial corporations, 32.7 percent, 3.9 percent, 1.1 percent, and 0.4 percent correspondingly, the government, financial corporations, and non-profit institutions serving families. The institutional sector of 0.1 percent has not been disclosed.

Results and Discussion

In the analysis, the general rule of thumb is that a self-assessment score of .70 and above is good, .80 and above is better, and .90 and above is best (highly influenced by the concept of Cronbach, 1951). Fourteen municipals (one municipality from Bagmati, and 13 (seven municipalities & six rural municipalities) from Madhes Province) have not assessed their organizational capacity self-assessment by the end of fiscal year 2022-23.

Table 3*Organizational Capacity of Municipals by Urban-Rural*

Position	Score ranges	No. of Municipals		%
		Rural (%)	Urban (%)	Total
Excellent	90-100	11 (2.42)	12 (4.21)	23 (3.11)
Better	80-89	37 (8.15)	43 (15.09)	80 (10.83)
Good	70-79	97 (21.37)	77 (27.02)	174 (23.55)
Poor	0-69	309 (68.06)	153 (53.68)	462 (62.55)
		454 (100.00)	285 (100.00)	739 (100.00)

Source: <https://lisa.mofaga.gov.np/home>

About 33 percent of rural municipals are being able to meet the minimum level of performance level, which is 13 percent lower that of urban's performance. About 24 percent of municipals (174) met minimum criteria of being good. Around six in every 10 municipals have still low local government capacity.

Table 4*Organizational Capacity of Provinces*

Thematic Areas	KH	MD	BG	GD	LB	KN	SP	Nepal
Governance System	85.40	75.88	84.58	87.48	88.58	83.97	84.15	84.09
Organization & Administration	71.85	63.24	72.06	75.04	73.85	76.98	71.16	71.58
Annual Budget & Plan Formulation	68.94	62.27	67.05	66.71	68.47	68.84	64.75	66.69
Fiscal & Financial Management	76.34	64.41	73.69	79.39	80.75	76.27	74.64	74.72
Service Delivery	73.93	62.44	70.22	75.2	76.81	72.49	68.87	71.24
Judicial Work	84.67	59.23	89.5	79.66	86.76	75.18	75.37	78.82
Performance Physical Infrastructure & Development	52.92	37.88	53.86	50.45	52.77	43.94	45.72	48.44
Social Inclusion	56.88	46.3	58.22	62.06	66.88	63.96	58.35	58.34
Environment Protection & Disaster Management	49.13	36.36	50.82	50.33	52.93	48.80	47.10	47.70
Cooperation & Coordination	36.31	21.14	40.89	44.46	52.33	30.27	27.56	36.13
Total Score	66.34	54.05	66.21	67.52	70.11	64.85	62.57	64.36
Overall Scenario	65.57	51.81	67.48	69.24	71.17	64.83	63.97	64.56
1Procedural Scenario	61.14	45.95	61.03	63.49	66.42	57.58	56.50	58.71

2Quantitative Scenario	70.62	61.23	68.53	69.75	72.41	70.37	66.49	68.53
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Source: <https://lisa.mofaga.gov.np/home>

Note: KH=Koshi, MD=Madhes, BG=Bagmati, GD=Gandaki, LB=Lumbina, KR=Karnali, SP=Sudurpaschim

Determinants of Thematic Areas

The study has considered sex ratio, population density, literacy, household size, three food coping strategy (working outside home, absentees living within country and abroad) as major determinants of thematic areas mentioned above. All indicators mentioned above are normalized and used Cronbach' (1951) Alpha to test its reliability, suggesting all indicators have better (more than 0.80) data quality (see Table 5).

Table 5

Some Descriptive Statistics and Cronbach's Alpha Value

	Mean	SD	Median	Skewness	Kurtosis	SE	Alpha
Thematic Areas	0.65	0.18	0.67	-1.08	2.12	0.01	0.8326410
Governance System	0.82	0.17	0.89	-2.61	8.71	0.01	0.8443954
Organisation & Administration	0.70	0.23	0.75	-0.85	0.54	0.01	0.8414668
Annual Budget	0.65	0.19	0.68	-0.81	1.33	0.01	0.8414549
Financial Management	0.73	0.19	0.77	-1.33	2.72	0.01	0.8415841
Service Delivery	0.70	0.19	0.72	-1.18	2.05	0.01	0.8375714
Judicial Performance	0.77	0.25	0.86	-1.23	0.99	0.01	0.8439645
Infrastructure Development	0.47	0.23	0.48	-0.10	-0.47	0.01	0.8402416
Social Inclusion	0.57	0.26	0.60	-0.37	-0.67	0.01	0.8402104
Environment Management	0.47	0.22	0.44	0.04	-0.41	0.01	0.8405592
Coordination	0.35	0.32	0.29	0.57	-0.89	0.01	0.8498199
Population Management Variables							
Sex Ratio	0.34	0.12	0.35	-0.02	1.07	0.00	0.8737840
Density	0.03	0.06	0.01	9.20	112.60	0.00	0.8645460
Literacy	0.65	0.17	0.68	-0.73	0.39	0.01	0.8563730
Household Size	0.40	0.18	0.36	0.76	0.26	0.01	0.8859492
FCS I	0.41	0.21	0.38	0.42	-0.44	0.01	0.8702291
FCS II	0.26	0.18	0.21	1.44	2.36	0.01	0.8709288

As shown in Table 4, two thematic areas (governance, and organization and administration) are found effective comparatively as compared to other areas at provincial level. Only Lumbini province has satisfied the minimum level of threshold (0.70) for overall and quantitative scenarios. Overall, all three scenarios are observed below the threshold level in Nepal.

Multiple Regression Analysis

Several explanatory variables are used in multiple linear regression, sometimes referred to as multiple regression, a statistical approach that predicts the value of a response variable. Multiple linear regression's main goal is to simulate the linear connection between the response (dependent) variables and the explanatory (independent) variables (Bluman, 2012).

$$Y_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \dots + \beta_p X_{ip} + \epsilon$$

where, for $i=n$ observations:

Y_i = response variable (Total Score)

X_i = explanatory variables (sex ratio, population density, literacy, household size, FCSs)

β_0 = y-intercept (constant term)

β_p = slope coefficients for each explanatory variable

ϵ = the model's error term (also known as the residuals)

The output of multiple regression analysis is as follows.

Residuals:

Min	1Q	Median	3Q	Max
-0.56761	-0.08652	0.00737	0.09455	0.44057

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	0.62714	0.06171	10.162	< 2e-16 ***
Sex Ratio	-0.21776	0.09851	-2.211	0.0275 *
Density	-0.15838	0.13844	-1.144	0.2532
Literacy	0.28400	0.04745	5.985	4.03e-09 ***
FCS I	-0.05940	0.05103	-1.164	0.2449
Household size	-0.18862	0.04716	-4.000	7.26e-05 ***
FCS II	0.05163	0.05005	1.031	0.3028

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.1578 on 520 degrees of freedom

Multiple R-squared: 0.2172, Adjusted R-squared: 0.2081

F-statistic: 24.04 on 6 and 520 DF, p-value: < 2.2e-16

The regression analysis shows that there is a strong relationship between total performance of 10 composite indicators as a dependent variable and six pressure variables (p -value <0.0001). But the values of R^2 is very low suggesting more confounding are needed to explain dependent variable on independent variables. When focusing on the single variable, only three pressure variables such as sex ratio, literacy and household size are positively correlated with government's capacity.

Conclusion

Some population management related characteristics such as sex ratio, population density, literacy, household size, and two food coping strategy related variables (based on NPHC 2021) are examined to what extent the total score of 10 thematic indicators of LISA data (as response variable), generated by Ministry of Federal Affairs and General Administration/Nepal has been affected. Approximately 38 percent of total municipalities (Rural: 32 percent and Urban: 46 percent) has good government capacity. The multiple regression analysis is also used to examine the PCP framework that shows that sex ratio, literacy and household size are associated with the total score of 10 thematic areas of LISA.

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