Knowing Why Controls Exist: Internal Control Objectives as Predictors of Staff Awareness in Philippine Local Government Units
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Knowing Why Controls Exist: Internal Control Objectives as Predictors of Staff Awareness in Philippine Local Government Units

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Abstract

Internal control in local government depends not only on prescribed mechanisms but also on whether the personnel who operate them understand the system they are meant to uphold. This study examined which dimensions of internal control predict awareness of internal control among internal control unit (ICU) staff in six cities of the Philippine National Capital Region. Survey data from 131 ICU personnel were analyzed using binary logistic regression, with awareness as the dichotomous outcome and respondents' assessments of five internal control objectives and five internal control standards as predictors. Two objectives were significant at the .05 level: compliance with laws and regulations was associated with higher odds of awareness ($OR = 2.29$, $p = .024$), whereas adherence to managerial policies was associated with lower odds ($OR = 0.48$, $p = .026$). Two further objectives were marginally significant at the .10 level: economical, efficient, effective, and ethical operations ($OR = 1.87$, $p = .080$) and checking the accuracy and reliability of accounting data ($OR = 0.60$, $p = .090$). None of the five standards predicted awareness. The results suggest that staff understanding of internal control is anchored in its purposes rather than in its procedural components, and that the relationship is not uniformly positive. The findings support objective-focused capacity building under the 2023 edition of the Internal Audit Manual for Local Government Units and point to the need for replication with model-fit diagnostics, larger samples, and longitudinal designs.

Keywords: Internal control awareness, internal control objectives, local government units, logistic regression, public financial management

Introduction

Internal control is the system of mechanisms, policies, procedures, and laws through which a public organization safeguards its assets, secures reliable accounting information, adheres to managerial policies, complies with laws and regulations, and pursues economical, efficient, effective, and ethical operations (Department of Budget and Management [DBM], 2016). In the Philippines, local government units (LGUs) are directed to establish and operate internal control and internal audit functions under a series of Office of the President issuances and DBM guidelines. For local governments these are operationalized through the Internal Audit Manual for Local Government Units (IAM for LGUs), first issued in 2016 under Local Budget Circular No. 110 and updated in 2023 under Local Budget Circular No. 153 to align with the Revised Philippine Government Internal Audit Manual (DBM, 2016, 2020, 2023). Yet the effectiveness of any control system ultimately rests on the people who implement it. Controls that are formally in place but poorly understood by staff are unlikely to function as intended (Committee of Sponsoring Organizations of the Treadway Commission [COSO], 2013).

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This human dimension is frequently acknowledged but seldom measured. Studies of public-sector internal audit in developing countries identify the technical and professional competence of personnel, management support, and independence as decisive constraints on the function (Ayagre, 2015; Mihret&Yismaw, 2007; Okodo et al., 2019). Philippine evidence points in the same direction. Employees of Metro Manila LGUs rated the work of their internal audit units favorably but perceived that these units seldom maintained an independent outlook (Sabado et al., 2016); a municipal study recommended continuous professional development as a means of strengthening control activities (Velasco, 2021); and a recent study of municipal internal audit concluded that sustaining reform requires the development of human resources and institutional capacity (Ferriol& Gagarin, 2025). Despite this recognition, little empirical research has quantified which specific dimensions of internal control predict whether staff actually understand the system. Such information would allow oversight agencies to direct scarce training resources to where they would most improve comprehension.

The present study addresses that gap. Drawing on survey data from internal control unit (ICU) staff in six cities of the National Capital Region (NCR), it models staff awareness of internal control as a function of two families of constructs prescribed by the IAM for LGUs: the five internal control objectives and the five internal control standards aligned with the COSO framework. The central question is whether awareness is driven more by familiarity with what internal control is meant to achieve (its objectives) or by familiarity with how it is operationalized (its standards). The distinction has direct practical value because it indicates whether capacity-building efforts should emphasize the purposes of internal control or its procedural components.

Research Questions

The study sought to identify the determinants of staff awareness of internal control among ICU personnel in the selected LGUs. Specifically, it addressed the following questions:

1. To what extent do the five internal control objectives namely as safeguarding assets; checking the accuracy and reliability of accounting data; adherence to managerial policies; compliance with laws and regulations; and economical, efficient, effective, and ethical operations predict staff awareness of internal control?
2. To what extent do the five internal control standards, namely control environment, risk assessment, control activities, information and communication, and monitoring activities, predict staff awareness of internal control?
3. Taken together, which dimensions of internal control significantly predict awareness, and in what direction?

Hypothesis

The study tested the following null hypothesis at the .05 level of significance. Given the exploratory nature of the analysis, results significant at the .10 level are also reported and are described as marginally significant.

H_0: None of the internal control objectives or standards significantly predicts staff awareness of internal control.

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Significance of the Study

By isolating the dimensions that predict awareness, the study offers oversight bodies such as the DBM and the Commission on Audit (COA), as well as local chief executives, an evidence base for designing focused interventions rather than generic training. The timing is pertinent: in issuing the 2023 edition of the IAM for LGUs, the DBM committed to roll-out activities for all provinces, cities, and municipalities and to capacity-building training for LGU internal audit units (DBM, 2023). Evidence on what shapes staff comprehension can inform the content of that training. The study also adds to the comparatively thin empirical literature on the human determinants of internal control in Philippine LGUs, complementing descriptive accounts of practice with an explanatory model of comprehension.

Literature Review

The literature relevant to this study is organized around three themes: the conceptual distinction between internal control objectives and internal control components or standards; the human determinants of effective internal control; and empirical evidence on awareness and competency in public-sector internal audit and control. Together these themes motivate the explanatory model tested here.

Objectives Versus Components in the Internal Control Framework

Contemporary internal control theory distinguishes between what an organization seeks to achieve and the mechanisms through which it does so. The *Internal Control—Integrated Framework* groups objectives into operations, reporting, and compliance categories and specifies five integrated components—control environment, risk assessment, control activities, information and communication, and monitoring activities—through which those objectives are pursued (COSO, 2013). For the public sector, the International Organization of Supreme Audit Institutions (INTOSAI, 2004) adapted this structure, framing the general objectives of internal control as orderly, ethical, economical, efficient, and effective operations; fulfillment of accountability obligations; compliance with applicable laws and regulations; and safeguarding of resources against loss, misuse, and damage. In the Philippines, the Internal Control Standards for the Philippine Public Sector (ICSPPS) translate the components into standards for government agencies (Commission on Audit [COA], 2016), and the IAM for LGUs adopts a parallel set of five objectives for local governments (DBM, 2016).

By design, the two families are linked: the components or standards are implemented in order to attain the objectives. Empirical work has tended to examine relationships among the components themselves. Rae et al. (2017), for example, used structural equation modeling to test the associations among the five COSO components and found partial support for their links to monitoring quality. Comparatively little attention has been given to how personnel relate to objectives as opposed to components. The conceptual separation is analytically important because it raises the possibility that staff grasp the purposes of internal control more readily than its procedural machinery, or vice versa—an asymmetry that the present study tests directly.

Human Determinants of Effective Internal Control

Internal control is enacted by people and is therefore only as

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strong as their understanding of and commitment to it. The COSO (2013) framework locates this human foundation in the control environment, which encompasses an organization's commitment to integrity and ethical values and to attracting, developing, and retaining competent individuals. The same framework acknowledges that internal control provides only reasonable assurance because of inherent limitations such as faulty human judgment, breakdowns, collusion, and management override. INTOSAI (2004) similarly describes public-sector internal control as an integral process effected by an entity's management and personnel. Because these limitations are fundamentally human, adequate awareness and training are among the principal means of mitigating them. This body of work positions staff awareness not as a peripheral concern but as a core condition for the system's success, which justifies its treatment here as a dependent variable.

Awareness and Competency in Public-Sector Internal Audit and Control

Empirical studies of public-sector internal audit reinforce the salience of awareness and competency while suggesting that these attributes are unevenly distributed. In a study of public-sector organizations in a developing-country setting, internal audit's capacity to enhance governance was found to be limited by the technical and professional skill set of staff, low motivation, limited spending, weak management support, and threats to independence (Ayagre, 2015). In an Ethiopian public-sector case, internal audit effectiveness depended strongly on the quality of the internal audit function and on management support (Mihret&Yismaw, 2007). A conceptual analysis identified auditor competency, management support, independence and objectivity, and regulatory issues as the factors most likely to determine the reliability of internal audit (Okodo et al., 2019), and challenges facing public-sector internal auditors have been documented empirically in South-Eastern Nigeria (Egbunike&Egbunike, 2017). Divergence between what the public expects of auditors and what auditors actually do has been argued to erode trust in public-sector audit, implying that misunderstanding of the function carries governance costs (Oluyombo&Okunola, 2018). Internal audit has also been argued to enhance transparency in public financial management only where units have full independence and are adequately equipped with human capital and infrastructure (Nwaobia et al., 2016).

Philippine local studies point to the same human constraints. Among 510 employees of Metro Manila LGUs, internal audit functions were rated highly and showed a strong positive relationship with governance, yet respondents perceived that internal audit units seldom maintained an independent outlook (Sabado et al., 2016). In a Bulacan municipality, the implementation of control activities was linked to compliance with the financial-administration criteria of the Seal of Good Local Governance, with continuous professional development among the recommended improvements (Velasco, 2021). A more recent survey of municipal governments found moderate to high levels of internal audit transformation, a negative relationship between transformation and the challenges units face, and a need to develop human resources and institutional capacity to sustain reform (Ferriol& Gagarin, 2025).

Synthesis and Research Gap

Taken together, the literature establishes that awareness and

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competency are decisive for effective internal control and that they vary across personnel and settings. What remains underexplored is the structure of that awareness: whether it is predicted more strongly by familiarity with internal control objectives or by familiarity with internal control standards, and whether such relationships are uniformly positive. By estimating an explanatory model in which awareness is regressed on both families of constructs, the present study supplies determinant-level evidence that prior descriptive and correlational accounts have not provided. It does so within a population—LGU internal control staff—whose comprehension directly conditions the quality of local public financial management.

Method

Research Design

The study employed an explanatory, cross-sectional survey design analyzed through binary logistic regression. Logistic regression was appropriate because the outcome of interest—whether a respondent demonstrated awareness of internal control—was dichotomous, and because the analysis sought to estimate the association between this outcome and a set of continuous predictors while expressing effects as interpretable odds ratios (Hosmer et al., 2013). The design extends descriptive assessments of internal control practice by modeling the determinants of staff comprehension.

Participants and Sampling

Participants were the staff of the internal control units, or the equivalent units performing the internal control function, in six NCR cities selected on the basis of economic assets as of 2017: Makati, Quezon City, Pasig, Manila, Caloocan, and Marikina. Five of these cities—Makati, Quezon City, Manila, Pasig, and Caloocan—ranked among the ten Philippine cities with the largest total assets in the COA's 2017 annual financial report on LGUs ("Makati Unseats Quezon City," 2018). Eligibility was restricted through purposive sampling to personnel performing internal control work, combined with on-site selection of qualified staff present during questionnaire administration. Questionnaires were distributed and retrieved through designated contact persons in each city during the latter part of 2019. After data preparation, 131 complete responses constituted the analytic sample. Table 1 presents the respondent profile.

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Table 1: Demographic Profile of the Respondents (N = 131)

Variable	Category	f	%
Sex	Female	82	62.6
	Male	49	37.4
Age	21–30 years	35	26.7
	31–40 years	14	10.7
	41–50 years	24	18.3
	50 years and above	58	44.3
Highest education	University/college graduate	111	84.7
	Postgraduate	20	15.3
Salary grade	SG 1–10	47	35.9
	SG 11–24	81	61.8
	SG 25 and above / no response	3	2.3
Tenure in government	5 years or less	46	35.1
	6–15 years	19	14.5
	More than 15 years	66	50.4

Note. Percentages are computed on $N = 131$ and rounded to one decimal place; rounding may cause totals to differ slightly from 100%. SG = salary grade.

Instrumentation

Data were collected with a researcher-developed survey questionnaire comprising four parts: the respondent profile, the profile of the internal control unit, the assessment of the five internal control objectives, and the assessment of the five internal control standards. Each objective and standard was measured by indicator statements rated on a four-point forced-choice Likert scale (1 = *least extent* to 4 = *greatest extent*). The instrument was reviewed and approved by the study's academic adviser and evaluation panel and was pilot-tested on 30 ICU staff in Manila. The pilot yielded a Cronbach's alpha of .864 across 30 items (Table 2), which falls within the range generally regarded as acceptable for internal consistency (Tavakol&Dennick, 2011).

Table 2: Reliability Statistics of the Survey Instrument

Statistic	Value
Cronbach's alpha	.864
Cronbach's alpha based on standardized items	.862
Number of items	30

Note. Computed from the pilot administration ($n = 30$).

Variables and Measures

The dependent variable was a binary indicator of awareness of internal control, coded 1 if the respondent demonstrated understanding of internal control and 0 otherwise, derived from the survey responses. The 10 predictors were the respondent-level assessments of the five internal control objectives and the five internal control standards.

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Table 3 summarizes the operationalization and coding of all variables.

Table 3: Operationalization and Coding of Study Variables

Code	Variable	Role	Measurement
—	Awareness of internal control	Dependent	Binary (1 = aware, 0 = not aware)
SA	Safeguarding assets	Predictor (objective)	Mean rating, 1–4 scale
CARA	Checking accuracy and reliability of accounting data	Predictor (objective)	Mean rating, 1–4 scale
AM	Adherence to managerial policies	Predictor (objective)	Mean rating, 1–4 scale
CLR	Compliance with laws and regulations	Predictor (objective)	Mean rating, 1–4 scale
EE	Economical, efficient, effective, and ethical operations	Predictor (objective)	Mean rating, 1–4 scale
CE	Control environment	Predictor (standard)	Mean rating, 1–4 scale
RA	Risk assessment	Predictor (standard)	Mean rating, 1–4 scale
CA	Control activities	Predictor (standard)	Mean rating, 1–4 scale
IC	Information and communication	Predictor (standard)	Mean rating, 1–4 scale
MA	Monitoring activities	Predictor (standard)	Mean rating, 1–4 scale

Note. All predictors were measured on the four-point forced-choice Likert scale used in the survey instrument.

Data Analysis

A binary logistic regression model was estimated with awareness of internal control as the outcome and the 10 internal control constructs entered simultaneously as predictors. For each predictor the model yielded an unstandardized coefficient (B), its standard error (SE), a Wald z statistic, and a two-tailed p value. Coefficients were exponentiated to obtain odds ratios (OR), and 95% confidence intervals (CIs) for the odds ratios were computed as $\exp(B \pm 1.96\,SE)$ from the estimated coefficients and standard errors. An odds ratio greater than 1 indicates that higher assessments of a construct are associated with greater odds of awareness, whereas an odds ratio below 1 indicates lower odds. Predictors were evaluated at the .05 level of significance, and results significant at the .10 level were flagged as marginal. The fitted model can be expressed as the following logit equation:

$$\text{logit}(P) = -1.780 + 0.241(SA) - 0.517(CARA) - 0.735(AM) + 0.828(CLR) + 0.625(EE) + 0.079(CE) + 0.405(RA) + 0.128(CA) - 0.019(IC) - 0.727(MA)$$

where P denotes the probability that a respondent is aware of internal control and each predictor represents the respondent's assessment of the corresponding construct.

Ethical Considerations

Participation was voluntary and responses were treated confidentially. Because the subject matter was sensitive, respondents were not required to identify their specific unit. Endorsements were secured from the local chief executives of the participating cities before data collection.

Results and Discussion

Overall Model

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The binary logistic regression estimated the odds of staff awareness of internal control as a function of the five internal control objectives and the five internal control standards. Two predictors reached significance at the .05 level, and both were internal control objectives: compliance with laws and regulations (CLR) and adherence to managerial policies (AM). Two further objectives were marginally significant at the .10 level: economical, efficient, effective, and ethical operations (EE) and checking accuracy and reliability of accounting data (CARA). None of the five internal control standards—control environment, risk assessment, control activities, information and communication, or monitoring activities—predicted awareness at either threshold. The null hypothesis was therefore rejected for CLR and AM, was rejected only at the more lenient .10 level for EE and CARA, and was retained for the remaining six constructs. The full coefficient and odds-ratio results are reported in Table 4.

Table 4: Binary Logistic Regression Predicting Staff Awareness of Internal Control (N = 131)

Predictor	*B*	*SE*	*OR*	95% CI for *OR*	*z*	*p*
Internal control objectives						
Safeguarding assets (SA)	0.241	0.313	1.27	[0.69, 2.35]	0.77	.440
Checking accuracy and reliability (CARA)	−0.517	0.305	0.60	[0.33, 1.08]	−1.70	.090†
Adherence to managerial policies (AM)	−0.735	0.330	0.48	[0.25, 0.92]	−2.22	.026*
Compliance with laws and regulations (CLR)	0.828	0.368	2.29	[1.11, 4.71]	2.25	.024*
Economical, efficient, effective, and ethical operations (EE)	0.625	0.358	1.87	[0.93, 3.77]	1.75	.080†
Internal control standards						
Control environment (CE)	0.079	0.312	1.08	[0.59, 1.99]	0.25	.800
Risk assessment (RA)	0.405	0.356	1.50	[0.75, 3.01]	1.14	.256
Control activities (CA)	0.128	0.390	1.14	[0.53, 2.44]	0.33	.744
Information and communication (IC)	−0.019	0.375	0.98	[0.47, 2.05]	−0.05	.959
Monitoring activities (MA)	−0.727	0.446	0.48	[0.20, 1.16]	−1.63	.103
Constant	−1.780	0.972	0.17	—	−1.83	.067†

Note.B = unstandardized logistic coefficient; *SE* = standard error; *OR* = odds ratio (exponentiated*B*); CI = confidence interval, computed as exp(*B* ± 1.96 *SE*). † $p < .10$. * $p < .05$.

Direction of the Significant Associations

The four significant and marginally significant predictors did not operate in a single direction. Two objectives showed positive associations with awareness. Compliance with laws and regulations had an odds ratio of 2.29 (95% CI [1.11, 4.71], $p = .024$): each one-unit increase in the assessed extent of this objective was associated with more than a doubling of the odds of awareness. Economical, efficient,

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effective, and ethical operations had an odds ratio of 1.87 (p = .080), corresponding to roughly 87% higher odds, although its confidence interval includes 1. By contrast, two objectives showed negative associations. Adherence to managerial policies had an odds ratio of 0.48 (95% CI [0.25, 0.92], p = .026), indicating approximately 52% lower odds of awareness per one-unit increase, and checking accuracy and reliability of accounting data had an odds ratio of 0.60 (p = .090), corresponding to about 40% lower odds, again with a confidence interval that includes 1. Because the predictors are mean ratings on a four-point scale, a one-unit increase represents a substantial shift in a respondent's assessment. Table 5 summarizes these predictors and the direction of each association.

Table 5: Summary of Significant and Marginally Significant Predictors of Awareness

Predictor (objective)	***OR***	***p***	**Level**	**Direction of association**
Compliance with laws and regulations (CLR)	2.29	.024	$p < .05$	Positive (higher odds)
Adherence to managerial policies (AM)	0.48	.026	$p < .05$	Negative (lower odds)
Economical, efficient, effective, and ethical operations (EE)	1.87	.080	$p < .10$	Positive (higher odds)
Checking accuracy and reliability (CARA)	0.60	.090	$p < .10$	Negative (lower odds)

Note. All four predictors are internal control objectives; none of the five internal control standards reached significance at either level. *OR* = odds ratio.

Non-Significant Predictors

The remaining six predictors were not statistically significant. Among the objectives, safeguarding assets (*OR* = 1.27, p = .440) showed no reliable association with awareness. Among the standards, control environment (*OR* = 1.08, p = .800), risk assessment (*OR* = 1.50, p = .256), control activities (*OR* = 1.14, p = .744), information and communication (*OR* = 0.98, p = .959), and monitoring activities (*OR* = 0.48, p = .103) all failed to predict awareness at conventional thresholds; monitoring activities came closest. The uniform non-significance of the five standards is the model's most consistent pattern: although several standards had odds ratios above 1, none attained significance, indicating that variation in the assessed standards did not reliably distinguish aware from unaware respondents.

Objectives as the Locus of Awareness

The analysis yields one clear and theoretically meaningful pattern: staff awareness of internal control is predicted by familiarity with internal control objectives, not by familiarity with internal control standards. Every predictor that reached significance at either level belongs to the objectives family, while none of the five standards did. This asymmetry is consistent with the conceptual architecture of the COSO framework and its public-sector and Philippine adaptations, in which objectives express the ends of internal control and components or standards express the means (COSO, 2013; COA, 2016; INTOSAI, 2004). The results suggest that ICU staff internalize the purposes of internal control more readily than its procedural components, and that their comprehension of the

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system is anchored in why controls exist rather than in how they are technically constituted.

This finding extends prior scholarship that treats awareness and competency as decisive but largely undifferentiated conditions for effective control (Ayagre, 2015; Mihret&Yismaw, 2007; Okodo et al., 2019). By distinguishing objectives from standards as predictors, the study specifies the locus of that awareness: it is objective-centered. The strongest and most robust association—compliance with laws and regulations, whose confidence interval lies entirely above 1—fits the legalistic orientation of Philippine public-sector control, in which the internal control and internal audit functions are framed by a dense body of statutory and administrative mandates (DBM, 2016, 2023). The practical implication is that capacity building intended to deepen comprehension should foreground the objectives of internal control, because these are the dimensions empirically tied to whether staff understand the system at all. Training that treats procedural standards in isolation may do less to build genuine comprehension.

Interpreting the Negative Associations

The two negative predictors—adherence to managerial policies and checking accuracy and reliability of accounting data—are less expected, since higher assessments of these objectives were associated with lower odds of awareness. One plausible reading, advanced cautiously as a hypothesis for future testing rather than as a confirmed mechanism, is that these two objectives correspond to highly routinized, task-embedded activities. Staff who rate them highly may be deeply engaged in day-to-day procedural and accounting work without necessarily connecting that work to the overarching concept of internal control. This reading is congruent with the view that internal control is a process effected by personnel throughout the organization rather than a narrow finance task (COSO, 2013; INTOSAI, 2004), and with Philippine findings that favorable ratings of internal audit work can coexist with reservations about how the function operates (Sabado et al., 2016). Only the coefficient for adherence to managerial policies was significant at the .05 level, so the negative associations should not be over-interpreted; they do, however, indicate that the relationship between operating internal control and understanding it is not uniformly positive.

The Non-Significance of the Standards

The uniform non-significance of the standards is itself informative. Within this population of internal control staff, variation in how the procedural standards are assessed does not discriminate between those who understand internal control and those who do not. Combined with prior evidence that internal audit is constrained where units lack independence, resources, and clearly understood roles (Egbunike&Egbunike, 2017; Nwaobia et al., 2016; Oluyombo&Okunola, 2018), the result reinforces the view that procedural compliance and conceptual comprehension are distinct attainments. Strengthening one does not automatically strengthen the other.

Limitations

Several limitations bound these conclusions. First, awareness of internal control was measured as a self-reported binary outcome, which captures comprehension imperfectly and may be subject to social-desirability bias. Second, the cross-sectional design precludes causal inference; the associations reported are predictive rather than causal. Third, the sample comprised 131 staff from six NCR cities, most of

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them among the country's most asset-rich LGUs, which limits generalizability to less-resourced LGUs and other regions. Fourth, the model includes 10 predictors; even under the most favorable possible split of the outcome, the smaller outcome category could contain at most 65 respondents, or 6.5 events per predictor, below the commonly cited guideline of about 10 (Peduzzi et al., 1996). Coefficient estimates may therefore be imprecise, and the marginal results in particular should be treated as tentative. Fifth, model-fit and diagnostic statistics—such as a likelihood-ratio test, a goodness-of-fit test, pseudo-R^2, and classification accuracy (Hosmer et al., 2013)—were not available for reporting, so the model's overall explanatory power cannot be characterized. Sixth, the data were collected in 2019, when the 2016 edition of the IAM for LGUs was in force; the 2023 edition and its accompanying training roll-out (DBM, 2023) may since have altered staff familiarity with both objectives and standards. Finally, the four-point forced-choice scale, while reducing neutral responding, constrains measurement granularity.

Conclusions and Recommendations

Conclusions

This study modeled the determinants of staff awareness of internal control among ICU personnel in six cities of the National Capital Region. Using binary logistic regression, it found that internal control objectives, rather than internal control standards, predict awareness. Compliance with laws and regulations was positively associated with awareness and adherence to managerial policies negatively associated with it at the .05 level; economical, efficient, effective, and ethical operations (positively) and checking accuracy and reliability of accounting data (negatively) were associated with awareness at the .10 level; and none of the five standards was significant.

The study makes three contributions. Conceptually, it shows that the objectives–standards distinction central to the COSO framework is not merely theoretical but maps onto how internal control staff comprehend the system, with objectives as the operative locus of awareness. Methodologically, it moves the literature from description of internal control practice toward explanation of its human determinants by specifying and estimating a predictive model. Practically, it indicates that efforts to strengthen comprehension—and thereby the effective operation of internal control—should be objective-focused, while signaling that routinized procedural engagement does not guarantee, and may even diverge from, integrated understanding.

Recommendations

Based on these findings, the following recommendations are offered:

1. The DBM and the COA, in the roll-out and capacity-building activities for the 2023 edition of the IAM for LGUs, may give explicit emphasis to the objectives of internal control—particularly compliance with laws and regulations and economical, efficient, effective, and ethical operations—and present each internal control standard in terms of the objective it serves rather than as a stand-alone procedure.
2. Local chief executives and ICU heads may design orientation and in-service learning sessions that help staff whose work centers on managerial

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policies and accounting data connect their routine tasks to the broader purposes of the internal control system, for example through case discussions that trace how a specific check supports compliance or ethical operations.

3. Training designers and human resource units may assess learning outcomes at two levels—understanding of the purposes of internal control and mastery of its procedural standards—so that gains in one are not mistaken for gains in the other.
4. Future researchers may replicate the model with larger samples sufficient to meet events-per-predictor guidelines, report the distribution of the outcome and full model-fit diagnostics, employ multi-item measures of awareness, and extend the analysis to provinces, municipalities, and LGUs outside the NCR operating under the 2023 edition of the IAM for LGUs. Longitudinal and mixed-methods designs would help establish whether objective-focused training causally improves comprehension and would test the routinization explanation proposed for the negative associations.

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