

## Strengthening Tax Evasion Countermeasures of the Bureau of Internal Revenue

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### ABSTRACT:

*Tax evasion remains a persistent challenge in tax administration, particularly in a rapidly evolving digital environment where public sector systems often struggle to keep pace with private sector technological advancement. In the Philippine context, limited empirical studies have examined how sociotechnical factors shape stakeholder perceptions of the Bureau of Internal Revenue's tax evasion countermeasures. This study assessed the perceptions of MSME taxpayers and BIR employees regarding the Bureau of Internal Revenue's tax evasion countermeasures and examined how people, process, technology, and organizational culture influence sustainable advantage in tax administration. Anchored in Sociotechnical Systems Theory, the study used a quantitative descriptive-correlational research design. Data were gathered from 394 MSME taxpayers selected through cluster and random-walk sampling and 59 BIR employees selected through purposive sampling from Revenue District Office 23-A, North Nueva Ecija. A validated Likert-scale questionnaire was used, and the data were analyzed through Partial Least Squares Structural Equation Modeling. Findings show that people, particularly competence, ethical conduct, and collaboration, remain a key strength in the BIR's tax administration system. Both groups recognized human capability as essential in supporting effective processes and technology adoption. Results also show that process and technology are mutually reinforcing, as structured workflows enable better use of digital tools. However, gaps in process clarity, investment in advanced technologies, and innovation-oriented culture limit the full realization of these countermeasures. While MSME taxpayers viewed organizational culture as important in fostering trust and compliance, BIR employees viewed sustainable advantage as more directly influenced by technology. Across both groups, technology emerged as the only consistent and significant driver of sustainable advantage.*

*The study concludes that strengthening tax evasion countermeasures requires a cohesive sociotechnical approach that aligns people, process, technology, and organizational culture to improve institutional responsiveness, support compliance, and sustain public trust.*

**KEYWORDS:** Tax evasion, Tax evasion countermeasures; Bureau of Internal Revenue; sociotechnical systems theory; tax administration; MSME taxpayers; BIR employees; PLS-SEM

### Introduction

Tax evasion remains a persistent challenge in tax administration, particularly in economies where business transactions, financial systems, and compliance behavior are increasingly shaped by technological change [1], [2]. As taxpayers and businesses adopt more sophisticated technologies and transaction structures, traditional monitoring and audit mechanisms may become less sufficient in detecting and addressing non-compliance. This creates pressure on revenue authorities to strengthen enforcement strategies, improve taxpayer services, and develop systems that are responsive to emerging forms of tax evasion [3].

In the Philippines, the Bureau of Internal Revenue has introduced reforms to modernize tax administration, simplify compliance, and strengthen enforcement. These reforms include digital platforms, taxpayer service improvements, enforcement programs, and policy initiatives designed to improve transparency and expand the tax base [4], [5]. Recent government initiatives also emphasize digitalization, stricter enforcement, and updated compliance mechanisms to improve revenue collection and address tax leakages [6], [7]. Despite these developments, tax evasion remains a continuing concern because enforcement capacity is shaped not only by laws and technology, but also by the people who implement them, the processes that guide action, and the organizational culture that sustains reform.

The effectiveness of tax evasion countermeasures therefore cannot be understood through a purely technical lens. Digital tools may improve monitoring, data processing, and taxpayer services, but their impact depends on whether personnel have the necessary skills, whether workflows are clear and adaptable, and whether the organization promotes accountability, integrity, and innovation. Weakness in any of these dimensions may reduce the overall capacity of tax administration to respond to evolving evasion risks. This makes tax evasion countermeasures a sociotechnical concern rather than a technology issue alone.

Sociotechnical Systems Theory provides a useful framework for examining this problem because it emphasizes the interaction between social and technical components within an organization [8], [9]. From this perspective, organizational performance improves when people, processes, technologies, and culture are aligned toward a common institutional objective. In the context of the Bureau of Internal Revenue, sustainable tax evasion countermeasures require more than the adoption of digital systems. They require the coordinated strengthening of human capability, process efficiency, technological readiness, and organizational values. Although existing studies have examined tax compliance, digitalization, and enforcement reforms, limited empirical research has assessed how sociotechnical factors interact in the context of Philippine tax evasion countermeasures. There is also a need to compare how external stakeholders and internal implementers perceive these factors. MSME taxpayers experience tax administration through compliance requirements, services, and frontline interactions, while BIR employees experience the internal systems, workflows, and tools used in enforcement. Examining both perspectives can reveal areas of alignment and gaps that may not be visible from a single respondent group. This study addresses this gap by assessing the perceptions of MSME taxpayers and BIR employees regarding the Bureau of Internal Revenue's tax evasion countermeasures in terms of people, process, technology, organizational culture, and sustainable advantage. It further examines the relationships among these sociotechnical factors and determines which factors influence sustainable advantage in strengthening tax evasion countermeasures. By applying Sociotechnical Systems Theory, the study contributes empirical evidence on how tax administration reforms may be better aligned to support institutional responsiveness, taxpayer trust, and long-term enforcement capability.

### Literature Review and Hypotheses Development

Tax evasion countermeasures require more than the enforcement of tax laws or the adoption of digital tools. Tax administration depends on the interaction of institutional capacity, taxpayer-facing processes, technological systems, and the values that guide public service delivery. Prior literature recognizes that tax compliance and enforcement are influenced by the ability of tax authorities to detect non-compliance, provide clear rules, maintain credibility, and sustain trust in the tax system [1], [4]. Technology may improve detection, monitoring, and service delivery, but its value depends on how effectively it is embedded within the broader administrative system [2], [3].

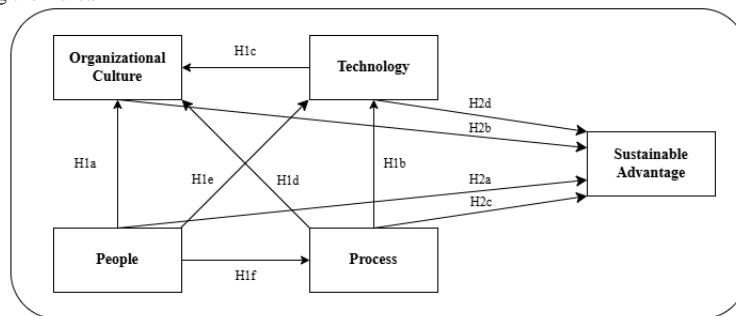
Sociotechnical Systems Theory provides the theoretical foundation for this study. The theory originated from the work of Trist and Bamforth, who emphasized that work systems must be understood through the joint interaction of social and technical elements [10]. Bostrom and Heinen later applied this perspective to information systems, arguing that organizational outcomes depend on the alignment between the technical subsystem, such as tools, methods, and procedures, and the social subsystem, such as people, roles, relationships, and organizational arrangements [11]. More recent sociotechnical studies continue to emphasize that organizational change and digital transformation are most effective when technology is designed and implemented together with people, processes, and organizational conditions [8], [9].

In tax administration, this perspective is particularly relevant because counter-evasion strategies are implemented through both human and technical systems. Skilled personnel are needed to interpret taxpayer behavior, apply audit judgment, communicate rules, and sustain ethical enforcement. Processes provide the structure through which registration, assessment, collection, monitoring, and enforcement activities are carried out. Technology supports these functions through data processing, electronic filing, monitoring tools, information systems, and digital records. Organizational culture, meanwhile, influences whether integrity, accountability, innovation, and service orientation are consistently practiced within the institution.

The people dimension is central to the sociotechnical system because employees translate policies and technologies into actual administrative action. Competence, ethical conduct, collaboration, and adaptability affect how tax officials implement procedures, use digital tools, and interact with taxpayers. In this sense, people are expected to influence both organizational culture and operational processes. Capable personnel can reinforce accountability and professionalism, while also supporting clearer workflows and more effective technology use. This supports the expectation that people significantly influence organizational culture, technology, and process within the tax administration system.

The process dimension reflects the procedures and workflows that guide the implementation of tax evasion countermeasures. Processes are important because even skilled employees and advanced technologies may underperform when procedures are unclear, slow, or poorly integrated. In tax administration, structured processes help ensure consistency, fairness, accuracy, and timeliness in addressing tax evasion risks. Processes also shape technology use because digital tools become more useful when embedded in clear workflows and supported by standardized procedures. Thus, process is expected to influence both technology and organizational culture. Technology is also an important component of modern tax evasion countermeasures. Tax authorities increasingly rely on digital systems, data analytics, electronic records, and information-sharing mechanisms to improve compliance monitoring and detect suspicious transactions [3], [4]. However, technology should not be viewed as a standalone solution. Its effectiveness depends on whether it is aligned with the people who use it, the processes it supports, and the culture that determines how innovation is accepted and sustained. Within the sociotechnical framework, technology is therefore expected to influence organizational culture and sustainable advantage. Organizational culture represents the shared values, norms, and expectations that shape behavior within the Bureau of Internal Revenue. In this study, organizational culture is used in place of formal organizational structure because values such as accountability, integrity, innovation, and service orientation are directly relevant to tax evasion countermeasures. A supportive culture can reinforce ethical enforcement, encourage improvement, and increase trust in tax administration. When taxpayers experience consistency, fairness, and transparency, organizational culture becomes visible not only internally but also externally through service delivery. Sustainable advantage serves as the outcome variable of the study. In the context of tax administration, sustainable advantage does not refer to business competitiveness but to the Bureau of Internal Revenue's perceived ability to maintain, improve, and adapt its tax evasion countermeasures over time. Sociotechnical literature suggests that long-term organizational effectiveness depends on the alignment of human, technical, and institutional elements [9], [12]. Thus, sustainable advantage is expected to be influenced by people, process, technology, and organizational culture.

Figure 1 presents the research framework of the study. Guided by Sociotechnical Systems Theory, people and organizational culture represent the social subsystem, while process and technology represent the technical subsystem. These sociotechnical factors are examined in terms of their interrelationships and their influence on sustainable advantage in strengthening the Bureau of Internal Revenue's tax evasion countermeasures.



**Figure 1. Research Framework of the Study**

Based on the foregoing discussion, the following hypotheses were tested at the 0.05 level of significance:

**H1:** There are significant relationships among the sociotechnical factors of the Bureau of Internal Revenue's tax evasion countermeasures, namely people, process, technology, and organizational culture.

- H1a:** People significantly influence organizational culture.
- H1b:** Process significantly influences technology.
- H1c:** Technology significantly influences organizational culture.
- H1d:** Process significantly influences organizational culture.
- H1e:** People significantly influence technology.
- H1f:** People significantly influence process.

**H2:** The sociotechnical factors significantly influence sustainable advantage in the Bureau of Internal Revenue's tax evasion countermeasures.

- H2a:** People significantly influence sustainable advantage.
- H2b:** Organizational culture significantly influences sustainable advantage.
- H2c:** Process significantly influences sustainable advantage.
- H2d:** Technology significantly influences sustainable advantage.

**Methodology**

**Research Design:** This study employed a quantitative descriptive-correlational research design to assess the perceptions of MSME taxpayers and BIR employees regarding the Bureau of Internal Revenue's tax evasion countermeasures. The design was appropriate because the study described the respondents' assessment of people, process, technology, organizational culture, and sustainable advantage, and examined the relationships among these sociotechnical factors without manipulating the research environment. The study was anchored on Sociotechnical Systems Theory, which guided the examination of the interaction between the social and technical dimensions of tax administration. In this study, people and organizational culture represented the social subsystem, while process and technology represented the technical subsystem. Sustainable advantage served as the outcome variable, reflecting the perceived long-term capability of the BIR to strengthen tax evasion countermeasures.

**Respondents and Sampling:** The study was conducted within the jurisdiction of BIR Revenue District Office 23-A, North Nueva Ecija. The respondents consisted of two groups: MSME taxpayers and BIR employees. The inclusion of both respondent groups allowed the study to compare external stakeholder perceptions with internal implementer perspectives. For MSME taxpayers, the population consisted of 24,856 registered MSMEs under RDO 23-A as of June 2024. The final sample size was 394 MSME taxpayers, determined using Slovin's formula at a 5% margin of error. Cluster sampling was first applied by treating the cities and municipalities under RDO 23-A as clusters. During fieldwork, random-walk sampling was used within each cluster to identify eligible respondents. Field enumerators began from central locations such as public markets, commercial areas, or barangay offices and followed a systematic walking pattern. Every second eligible establishment was selected as a sampling point. If the taxpayer, business owner, or qualified representative was unavailable, the enumerators proceeded to the next eligible establishment using the same pattern.

For BIR employees, the target population consisted of 68 personnel involved in tax compliance, assessment, enforcement, and administrative functions within the same RDO. The final sample size was 59 BIR employees, also determined using Slovin's formula at a 5% margin of error. Purposive sampling was used because the study required respondents with direct knowledge of tax administration processes and the implementation of tax evasion countermeasures. The employee respondents included the Revenue District Officer, Assistant Revenue District Officer, four supervisory personnel, and 53 rank-and-file employees directly involved in tax assessment, collection, enforcement, and support services.

**Research Instrument**

Data were gathered using a validated structured questionnaire. The questionnaire consisted of respondent profile items and Likert-scale statements measuring five constructs: people, process, technology, organizational culture, and sustainable advantage. The people construct assessed the skills, competence, professionalism, integrity, and collaboration of BIR personnel. The process construct measured the clarity, efficiency, updating, fairness, and supportiveness of workflows and procedures. The technology construct focused on the effectiveness, usefulness, investment, collaboration value, and security of digital tools and systems. The organizational culture construct measured leadership, innovation, integrity, and accountability. The sustainable advantage construct assessed the perceived long-term capability of the BIR to maintain and strengthen tax evasion countermeasures. Table 1 presents the constructs, indicator codes, number of indicators, and measurement focus used in the study.

**Table 1. Constructs and Indicators of the Study**

Construct	Indicator Codes	No. of Indicators
People	P1-P5	5
Process	PR1-PR5	5
Technology	T1-T5	5
Organizational Culture	O1-O3	3
Sustainable Advantage	SA1-SA5	5

The questionnaire used a four-point Likert scale, where 4 represented Strongly Agree, 3 Agree, 2 Disagree, and 1 Strongly Disagree. The weighted mean ranges were interpreted as follows: 3.26 to 4.00 as Strongly Agree, 2.51 to 3.25 as Agree, 1.76 to 2.50 as Disagree, and 1.00 to 1.75 as Strongly Disagree. The instrument was validated by the research adviser, a statistician, and a subject matter expert to ensure clarity, content validity, and alignment with the objectives of the study.

**Data Collection Procedure:** Prior to data gathering, the researcher secured the necessary approvals and coordinated with the selected revenue district office. Data collection was conducted from February 25 to March 31, 2025. For MSME taxpayers, questionnaires were distributed across the cities and municipalities covered by RDO 23-A using the sampling procedures described above. For BIR employees, questionnaires were distributed to selected personnel within the same revenue district office. The survey was administered through both online and paper-based modes, depending on respondent availability and field conditions. Online questionnaires were distributed through Google Forms, while paper-based questionnaires were administered during fieldwork. Participation was voluntary, and informed consent was obtained from all respondents.

**Data Analysis:** After data collection, the responses were compiled, reviewed, cleaned, and prepared for analysis. Frequency and percentage distribution were used to summarize the profile of the respondents. Weighted mean and standard deviation were used to describe the respondents' assessment of people, process, technology, organizational culture, and sustainable advantage. Reliability was assessed using Cronbach's Alpha and composite reliability. Cronbach's Alpha was used to evaluate the internal consistency of the items under each construct, while composite reliability was used to further assess whether the indicators consistently measured their respective latent constructs. Partial Least Squares Structural Equation Modeling was used to test the hypothesized relationships among the constructs. The analysis examined the structural paths among people, process, technology, organizational culture, and sustainable advantage for both MSME taxpayers and BIR employees. Hypotheses were tested at the 0.05 level of significance. The results were interpreted based on path coefficients, t-statistics, p-values, and the corresponding decision on whether each hypothesized relationship was supported or not supported. The bootstrapping output from the PLS-SEM analysis is presented in the Results section as Figure 2. PLS-SEM Structural Model Using Bootstrapping, while the detailed path results are presented in the succeeding hypothesis test tables.

**Results:** The results are presented according to the measurement model assessment, descriptive assessment of the sociotechnical dimensions, and structural model testing. The analysis compared two respondent groups: MSME taxpayers and BIR employees. All hypotheses were tested at the 0.05 level of significance using Partial Least Squares Structural Equation Modeling.

**Table 2. Reliability and Consistency of Constructs**

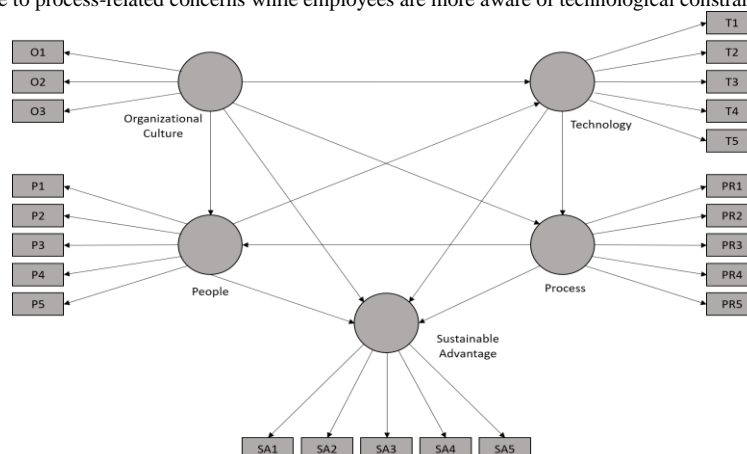
Dimension	Cronbach's Alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
People	0.706	0.797	0.790
Process	0.743	0.748	0.827
Technology	0.773	0.825	0.849
Organizational Culture	0.732	0.769	0.849
Sustainable Advantage	0.744	0.746	0.830

Table 2 presents the reliability results for the five constructs: people, process, technology, organizational culture, and sustainable advantage. The Cronbach's Alpha values ranged from 0.706 to 0.773, exceeding the minimum acceptable threshold of 0.70 for internal consistency [13]. Composite reliability values likewise met the recommended threshold, with rho\_A values ranging from 0.746 to 0.825 and rho\_C values ranging from 0.790 to 0.849. These results indicate that the constructs were measured reliably and were appropriate for further structural model analysis. Table 3 presents the descriptive assessment of the sociotechnical dimensions by respondent group. Composite means and standard deviations were used to summarize the perceptions of MSME taxpayers and BIR employees regarding people, process, technology, organizational culture, and sustainable advantage in the BIR's tax evasion countermeasures.

**Table 3. Descriptive Assessment of Sociotechnical Dimensions by Respondent Group**

Dimension	MSME Taxpayers Composite Mean	MSME Taxpayers SD	Interpretation	BIR Employees Composite Mean	BIR Employees SD	Interpretation
People	3.06	0.53	Agree	3.24	0.60	Agree
Process	2.85	0.51	Agree	3.12	0.52	Agree
Technology	3.03	0.50	Agree	2.95	0.55	Agree
Organizational Culture	2.98	0.45	Agree	3.14	0.66	Agree
Sustainable Advantage	2.95	0.48	Agree	3.05	0.57	Agree

As shown in Table 3, both respondent groups generally agreed that the BIR's tax evasion countermeasures are supported by its people, processes, technology, organizational culture, and sustainable advantage. Among MSME taxpayers, People obtained the highest composite mean (3.06), while Process obtained the lowest mean (2.85), suggesting that taxpayers viewed BIR personnel positively but perceived process clarity and updating as areas for improvement. Among BIR employees, People also obtained the highest composite mean (3.24), while Technology obtained the lowest mean (2.95), indicating that employees recognized human capability as a strength but saw limitations in technology investment and adoption. Overall, the results suggest that both groups view the BIR's countermeasures positively, although taxpayers are more sensitive to process-related concerns while employees are more aware of technological constraints.



**Figure 2. PLS-SEM Structural Model Using Bootstrapping**

Figure 2 presents the PLS-SEM structural model tested through bootstrapping. The model examined the relationships among people, process, technology, organizational culture, and sustainable advantage. The bootstrapping procedure generated the path coefficients, t-statistics, and p-values used to determine whether each hypothesized relationship was supported. Table 4 presents the structural model results for MSME taxpayers. For this group, nine out of ten paths were supported. People did not significantly influence organizational culture, indicating that taxpayers may not directly observe how BIR personnel shape internal culture. However, Process significantly influenced Technology, Technology significantly influenced Organizational Culture, Process significantly influenced Organizational Culture, People significantly influenced Technology, and People significantly influenced Process. These results show that MSME taxpayers perceived the BIR's tax evasion countermeasures as an interconnected system in which people, processes, and technology reinforce one another.

**Table 4. Hypothesis Test Results for MSME Taxpayers**

MSME Taxpayers	Path	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values	Verdict
H1	People -> Organizational Culture	0.020	0.024	0.072	0.276	0.783	Not Supported
H2	Process -> Technology	0.445	0.444	0.056	7.894	0.000	Supported
H3	Technology -> Organizational Culture	0.226	0.229	0.085	2.675	0.007	Supported
H4	Process -> Organizational Culture	0.370	0.367	0.085	4.358	0.000	Supported
H5	People -> Technology	0.265	0.262	0.057	4.604	0.000	Supported
H6	People -> Process	0.500	0.500	0.061	8.184	0.000	Supported
H7a	People -> Sustainable Advantage	0.160	0.159	0.044	3.643	0.000	Supported
H7b	Organizational Culture -> Sustainable Advantage	0.366	0.364	0.056	6.600	0.000	Supported
H7c	Process -> Sustainable Advantage	0.133	0.134	0.062	2.151	0.031	Supported
H7d	Technology -> Sustainable Advantage	0.339	0.341	0.054	6.251	0.000	Supported

For the sustainable advantage paths, all four relationships were supported among MSME taxpayers. People, organizational culture, process, and technology all significantly influenced sustainable advantage. This indicates that taxpayers perceive long-term counter-evasion capability as dependent on the combined effect of human competence, clear procedures, effective technology, and a culture that promotes trust, fairness, and compliance.

Table 5 presents the structural model results for BIR employees. For this group, five out of ten paths were supported. People significantly influenced Organizational Culture, Technology, and Process, showing that employees viewed human competence, ethical conduct, and collaboration as central to the internal functioning of the BIR. Process also significantly influenced Technology, confirming that clear workflows and procedures support the use of technological tools.

**Table 5. Hypothesis Test Results for BIR Employees**

BIR EMPLOYEES	Path	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values	Verdict
H1	People -> Organizational Culture	0.712	0.716	0.125	5.688	0.000	Supported
H2	Process -> Technology	0.554	0.538	0.147	3.766	0.000	Supported
H3	Technology -> Organizational Culture	0.226	0.228	0.139	1.624	0.104	Not Supported
H4	Process -> Organizational Culture	-0.004	-0.012	0.173	0.022	0.983	Not Supported
H5	People -> Technology	0.312	0.321	0.125	2.485	0.013	Supported
H6	People -> Process	0.863	0.855	0.047	18.493	0.000	Supported
H7a	People -> Sustainable Advantage	0.214	0.219	0.134	1.595	0.111	Not Supported
H7b	Organizational Culture -> Sustainable Advantage	0.233	0.229	0.144	1.621	0.105	Not Supported
H7c	Process -> Sustainable Advantage	0.187	0.187	0.100	1.861	0.063	Not Supported
H7d	Technology -> Sustainable Advantage	0.384	0.383	0.090	4.269	0.000	Supported

However, Technology did not significantly influence Organizational Culture, and Process did not significantly influence Organizational Culture. This suggests that employees may view culture as shaped more by people and leadership than by systems or procedures. For the sustainable advantage paths, only Technology significantly influenced Sustainable Advantage. People, Organizational Culture, and Process did not show significant direct effects on Sustainable Advantage. This result indicates that BIR employees perceive technology as the most immediate and measurable driver of long-term counter-evasion capability.

Table 6 compares the structural results of MSME taxpayers and BIR employees. The strongest convergence appears in the People to Process, Process to Technology, and People to Technology relationships. Both groups recognized that competent personnel support process effectiveness and technology adoption. These findings affirm the sociotechnical view that human capability anchors system performance, while clear processes enable technology to function effectively.

**Table 6. Comparative Summary of Structural Results between MSME Taxpayers and BIR Employees**

Hypothesis	Structural Path	MSME Result ( $\beta$ , p-value)	MSME Verdict	BIR Employee Result ( $\beta$ , p-value)	BIR Verdict
H1	People → Organizational Culture	$\beta = 0.020$ , $p = 0.783$	Not Supported	$\beta = 0.712$ , $p < 0.001$	Supported
H2	Process → Technology	$\beta = 0.445$ , $p < 0.001$	Supported	$\beta = 0.554$ , $p < 0.001$	Supported
H3	Technology → Organizational Culture	$\beta = 0.226$ , $p = 0.007$	Supported	$\beta = 0.226$ , $p = 0.104$	Not Supported
H4	Process → Organizational Culture	$\beta = 0.370$ , $p < 0.001$	Supported	$\beta = -0.004$ , $p = 0.983$	Not Supported
H5	People → Technology	$\beta = 0.265$ , $p < 0.001$	Supported	$\beta = 0.312$ , $p = 0.013$	Supported
H6	People → Process	$\beta = 0.500$ , $p < 0.001$	Supported	$\beta = 0.863$ , $p < 0.001$	Supported
H7a	People → Sustainable Advantage	$\beta = 0.160$ , $p < 0.001$	Supported	$\beta = 0.214$ , $p = 0.111$	Not Supported
H7b	Organizational Culture → Sustainable Advantage	$\beta = 0.366$ , $p < 0.001$	Supported	$\beta = 0.233$ , $p = 0.105$	Not Supported
H7c	Process → Sustainable Advantage	$\beta = 0.133$ , $p = 0.031$	Supported	$\beta = 0.187$ , $p = 0.063$	Not Supported
H7d	Technology → Sustainable Advantage	$\beta = 0.339$ , $p < 0.001$	Supported	$\beta = 0.384$ , $p < 0.001$	Supported

The main divergence appears in the relationships involving Organizational Culture and Sustainable Advantage. MSME taxpayers viewed process and technology as significant influences on organizational culture, while BIR employees did not. MSME taxpayers also viewed all four sociotechnical factors as significant drivers of sustainable advantage, while BIR employees identified only technology as significant. These results show that taxpayers perceive sustainability through the visible experience of fairness, clarity, service, culture, and technology, while employees perceive sustainability more through operational technology and system capability.

**Discussion**

The findings support the central argument that tax evasion countermeasures are sociotechnical in nature. Both MSME taxpayers and BIR employees recognized the importance of people in strengthening processes and supporting technology adoption. This indicates that human capability remains the foundation of tax administration. Competence, ethical conduct, and collaboration allow policies, workflows, and digital systems to be translated into actual enforcement and service delivery. The strong relationship between People and Process in both groups is especially important. It shows that counter-evasion efforts do not depend only on formal procedures, but also on the people who interpret, apply, and sustain those procedures. For MSME taxpayers, this relationship reflects the need for capable BIR personnel who can guide taxpayers through compliance requirements. For BIR employees, it reflects the internal reality that staff competence and initiative influence how procedures are implemented and improved.

The significant relationship between Process and Technology in both groups also confirms that technology is more effective when supported by clear and structured workflows. Digital tools cannot function well if the processes behind them are unclear, delayed, or inconsistently applied. This finding is important for the BIR because it suggests that investments in technology should be accompanied by process streamlining, standardization, and user support.

The divergence in organizational culture is also notable. BIR employees perceived people as a strong influence on organizational culture, while MSME taxpayers did not. This suggests that employees experience culture internally through professionalism, ethics, and collaboration, while taxpayers may only perceive culture when it is reflected in frontline service, clear communication, and consistent enforcement. In this sense, culture may exist internally but may not always be visible externally. The sustainable advantage results reveal the most important difference between the two groups. MSME taxpayers viewed all four dimensions as significant contributors to sustainable advantage, suggesting that external stakeholders expect tax evasion countermeasures to be strengthened through a complete system of capable people, clear processes, reliable technology, and trustworthy culture. BIR employees, however, identified only technology as a significant direct driver. This may indicate that employees recognize technology as the most concrete tool for sustaining enforcement, while also experiencing institutional constraints that limit the direct effect of people, process, and culture on long-term outcomes.

Overall, the results suggest that the BIR's tax evasion countermeasures may be strengthened by aligning internal reforms with external stakeholder experience. Technology is consistently important, but it should not be treated as a stand-alone solution. Its value depends on people who can use it, processes that can support it, and a culture that can make reforms credible and trusted. The findings therefore reinforce the value of Sociotechnical Systems Theory in understanding tax administration reform.

#### **Conclusion**

This study examined how people, process, technology, and organizational culture relate to sustainable advantage in strengthening the Bureau of Internal Revenue's tax evasion countermeasures. Using the perspectives of MSME taxpayers and BIR employees, the study found that people are central to process effectiveness and technology adoption. Both groups recognized that competent and ethical personnel help make tax administration systems work.

The findings also show that process and technology are mutually reinforcing. Clear and structured workflows support the effective use of digital tools, while technology contributes to stronger monitoring, coordination, and enforcement capability. However, the results also reveal important perception gaps. MSME taxpayers viewed organizational culture and all sociotechnical dimensions as important to sustainable advantage, while BIR employees identified technology as the only direct driver of sustainable advantage. The study concludes that strengthening tax evasion countermeasures requires an integrated sociotechnical approach. The BIR should not rely on technology alone, even though technology emerged as the most consistent driver of sustainable advantage. Long-term improvement requires the alignment of capable people, clear processes, reliable technology, and an organizational culture that is felt not only internally but also by taxpayers through fair, transparent, and consistent service.

Based on the findings, the study recommends continuous capacity building for BIR personnel, process simplification, sustained investment in technology, and stronger mechanisms for making integrity, accountability, and innovation visible in taxpayer-facing services. Future studies may expand the scope to include other revenue district offices, national office personnel, or enforcement units, and may use qualitative methods to capture deeper insights into institutional constraints and taxpayer experiences.

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The author did not receive financing for the development of this research.

#### **Data Availability**

The data that support the findings of this study are available from the corresponding author upon reasonable request, subject to confidentiality and data privacy considerations.

#### **Conflict of Interest**

The author declares that there is no conflict of interest.

#### **Ethics Statement**

This study was conducted with informed consent from all respondents. Participation was voluntary, and confidentiality and data privacy were observed throughout the data collection and analysis process.

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