

Targets That Create Jobs? Performance Goals, Incentive Pay, and Employment Growth in Ghanaian Enterprises

Gerald Dapaah Gyamfi, Jeanette Owusu, Racheal Amoah, Peter Agyekum-Boateng

Department of Management Studies, Valley View University, Oyibi, Ghana

DOI: <https://doi.org/10.47772/IJRISS.2026.1014MG0176>

Received: 11 August 2026; Accepted: 17 August 2026; Published: 03 September 2026

ABSTRACT

Formal performance targets can focus organizational attention, while incentive pay can encourage employees to pursue those targets. However, the employment consequences of combining the two practices are uncertain, especially in developing economies. This study examined whether production or service targets were associated with annual employment growth in Ghanaian enterprises and whether performance bonuses linked to targets strengthened that relationship. The analysis used the Ghana World Bank Enterprise Survey 2023. The management-practices module was administered to 307 establishments with at least 20 employees at screening. After invalid responses and incomplete employment histories or controls were removed, the analytical sample contained 244 establishments. Annual employment growth was calculated with the World Bank symmetric formula from permanent full-time employment in the last fiscal year and three fiscal years earlier. Survey-weighted least-squares regression controlled for nonlinear initial employment and firm-age relationships, training, foreign ownership, realized industry and region. The weighted mean annual employment growth rate was 11.2%; 73.0% of establishments reported formal targets and 57.1% reported target-based bonuses. In the full model, target setting was negatively associated with growth when bonuses were absent, $b = -7.68$ percentage points, 95% confidence interval $[-14.34, -1.02]$, $p = .024$. The bonus coefficient was not significant when targets were absent, $b = -4.19$, $p = .365$. The target-by-bonus interaction was positive but nonsignificant, $b = 6.22$, 95% confidence interval $[-4.05, 16.49]$, $p = .235$. Adjusted growth was 16.2% for firms with neither practice, 8.6% for targets without bonuses and 10.6% for firms combining targets and bonuses. Alternative weights, a logically coherent three-category model, alternative growth measures and 1,000 stratified bootstrap replications did not support positive moderation. The findings suggest that targets may be adopted in response to operational pressure rather than functioning as simple growth devices. Bonuses may partially offset the negative target association, but the evidence does not establish that they generate additional employment growth. Managers should connect targets to realistic capacity plans, employee participation and broader growth opportunities rather than treating target-linked pay as an automatic job-creation mechanism.

Keywords: performance targets, incentive pay, employment growth, management control, Ghana, Enterprise Survey

INTRODUCTION

Organizations translate strategy into action through goals, targets, measures and rewards. A production target can tell managers and employees what level of output, service, quality or delivery the firm expects. A performance bonus can make achievement personally valuable. These practices are common because they appear to solve two basic strategic problems: how to direct attention toward priorities and how to motivate effort after priorities are communicated. Goal-setting theory and agency theory both provide reasons to expect improved performance when goals are specific, and incentives are aligned with them (Jensen & Meckling, 1976; Locke & Latham, 2002).

The organizational consequences are nevertheless more complicated than the basic logic suggests. Targets may improve focus, planning and feedback, but they may also narrow attention, encourage gaming or place unrealistic pressure on employees. Bonuses can reward effort, but they may weaken cooperation, promote

short-term behaviour or direct attention only to measured activities. Multitask settings are especially difficult because jobs contain important activities that are not fully captured by a single target (Bonner & Sprinkle, 2002; Holmström & Milgrom, 1991).

Employment growth provides an important but underexamined outcome for this debate. Most management-control studies focus on productivity, accounting returns, sales or employee task performance. A firm may meet output targets without hiring more workers if it improves labour productivity, uses technology or increases work intensity. Conversely, expanding firms may adopt targets and bonuses because a larger workforce requires more formal coordination. Firm-level research in Africa also shows that innovation and organizational capability can have uneven employment consequences (Cirera et al., 2019). The relationship between management control and job creation is therefore theoretically meaningful but empirically ambiguous.

This question is particularly important in Ghana, where formal private enterprises are expected to contribute to employment creation, productivity and structural transformation. Management practices vary widely across firms in developing economies, and structured practices are often associated with better operational outcomes (Bloom & Van Reenen, 2007; Bloom et al., 2013, 2019; McKenzie & Woodruff, 2017). Ghanaian research also shows that the use and performance implications of management-control systems depend on organizational context and strategy (Acquaah, 2013). However, nationally representative evidence linking targets and target-based bonuses to firm-level employment growth remains limited.

The present study examines formal production or service targets, performance bonuses based on those targets and annualised growth in permanent full-time employment. The practices are measured directly rather than through a broad management index. Employment growth is constructed with the World Bank Enterprise Surveys formula, which expresses the symmetric change in current and earlier permanent employment as an annual percentage. This measure is bounded, reduces extreme ratios and permits growing and contracting firms to be compared consistently.

The study is closely related to influential research on strategic control. Simons (1994) argued that control systems can support strategic change when managers use them actively rather than as mechanical compliance devices. Otley (1999) placed objectives, targets, rewards and information flows within a single performance-management framework. Ferreira and Otley (2009) later emphasized that these elements must be understood as an interconnected system. Contingency research further shows that the effects of control systems depend on organizational conditions and design fit (Chenhall, 2003), while performance-measurement systems can produce both intended and unintended consequences (Franco-Santos et al., 2012; Ittner et al., 2003). The present analysis tests a specific part of that system: whether targets relate to employment growth and whether target-linked bonuses change that relationship.

The article also contributes to the incentive literature. Lazear (2000) found that performance pay can increase productivity, while later research showed that broad-based incentives can improve operating performance under some conditions (Hochberg & Lindsey, 2010). Incentive alignment is also contingent on organizational structure and the strategic investments being encouraged (Steinbach et al., 2017). However, employment growth is not identical to productivity. Incentive systems may help a firm grow, but rapid growth can also create promotion opportunities that strengthen incentives, making the direction of influence uncertain (Bennett, 2017).

Three features distinguish the study. First, it uses a current, nationally representative Ghanaian enterprise survey and applies its sampling weights. Second, it restricts inference to the survey's management-practices domain—establishments with at least 20 workers at screening, rather than generalising to every formal firm. Third, it treats functional form and response consistency as substantive issues. Initial size and firm age were allowed nonlinear relationships with growth, and a small group reporting bonuses without targets was examined separately in a sensitivity analysis.

The study asks two questions. Are formal production or service targets positively associated with annual employment growth? Do performance bonuses based on targets strengthen that association? The following

section develops the hypotheses. The Methods section explains the survey, measures and modelling choices. The Results section reports weighted patterns, adjusted estimates and robustness tests. The Discussion then interprets the findings and identifies implications for strategy, management practice and employment policy.

THEORETICAL BACKGROUND AND HYPOTHESES

Performance Targets, Attention, and Organizational Growth

Goal-setting theory proposes that specific and challenging goals improve performance by directing attention, mobilising effort, increasing persistence and stimulating the development of task strategies (Locke & Latham, 2002). Targets reduce ambiguity. Employees can compare actual results with expected results, while managers can identify performance gaps and direct resources toward them. Classic field and experimental studies generally found that goal setting outperformed vague instructions to “do one’s best” (Ivancevich, 1977; Latham & Yukl, 1975).

In strategic management, targets also support coordination. Growth requires different functions to align production, sales, finance, staffing and delivery. Explicit targets can convert a broad strategy into operational expectations. They may help managers forecast capacity requirements and determine when more employees are needed. A growing sales pipeline, for example, becomes easier to translate into recruitment when output and service targets are visible.

Targets are also a component of diagnostic control systems. Diagnostic systems compare outcomes with planned standards and permit correction when deviations occur. They can conserve senior-management attention by signalling which areas require intervention (Simons, 1994). In firms with limited managerial time, this may improve resource allocation and support expansion.

The management-practices literature provides related evidence. Better-managed firms tend to monitor operations, set targets and link personnel decisions to performance (Bloom & Van Reenen, 2007). Experimental improvements in management practices have raised productivity and quality in developing-country firms (Bloom et al., 2013). If target setting strengthens planning and execution, firms may become more capable of expanding output and employment.

The relationship may nevertheless be negative or endogenous. Firms may adopt targets because they are experiencing weak performance, declining growth or coordination problems. Targets may therefore signal organizational pressure rather than superior capability. Difficult targets can also create stress, short-termism and gaming, especially when employees lack resources or decision authority. Field evidence on target difficulty shows mixed performance consequences and highlights the importance of flexibility and purpose (Bol et al., 2015).

Employment growth adds another complication. Targets can improve output without increasing jobs if firms intensify work, automate tasks or reduce idle time. A productivity-enhancing control system may therefore support revenue growth while leaving employment unchanged. Even so, the conventional strategic-control argument expects better planning and execution to improve the firm’s capacity to expand. The first hypothesis follows this positive expectation.

Hypothesis 1: Establishments with formal production or service targets have higher annual employment growth than establishments without such targets.

Performance Bonuses as a Complementary Control Practice

Agency theory explains why targets may be insufficient on their own. Owners and managers cannot observe every action taken by employees, and employees may not receive the full organizational benefit created by extra effort. Rewards tied to measured outcomes can align individual interests with organizational priorities (Jensen & Meckling, 1976). When employees understand both the expected result and the reward for achieving it, goals may become more motivating.

Laboratory and field evidence shows that incentives and goals can interact, although the effects depend on design. Monetary incentives may increase effort directly, while goals can mediate the way incentives affect performance (Tolchinsky & King, 1980). London and Oldham (1976) found that goal type and incentive systems each affected performance. Lazear's (2000) study of performance pay showed large productivity gains, partly through increased worker effort and partly through worker sorting.

At the firm level, target-linked bonuses may support employment growth through several mechanisms. They can improve sales, delivery reliability and productivity, making expansion financially sustainable. They can encourage employees to identify process improvements or serve customers more effectively. Broadly distributed incentives may also promote mutual monitoring and cooperation when employees benefit from collective performance (Hochberg & Lindsey, 2010).

The complementarity argument is central. Targets provide direction, while bonuses provide motivation. A target without a reward may be treated as an administrative instruction. A bonus without a coherent target may produce ambiguity or reward outcomes that employees cannot control. When combined, the practices can create a clearer line between strategy, expected behaviour and reward. Otley's (1999) framework and later performance-management models emphasize this connection among objectives, measures, targets and rewards. Evidence on strategic target setting and incentive compensation similarly indicates that their design and joint use depend on governance and organizational context (Speckbacher & Wentges, 2012).

However, target-linked pay can also create distortions. Employees may focus on measured quantities while neglecting quality, learning, safety or customer relationships. Strong incentives can be harmful when performance measures are incomplete (Baker, 1992; Holmström & Milgrom, 1991). Bonuses can also crowd out intrinsic motivation or create perceptions of unfairness when targets are unrealistic. These problems may be severe in resource-constrained firms where employees have limited control over electricity, finance, supplies or demand.

Employment growth is again not automatic. Bonuses may raise productivity so that the firm meets higher output without additional hiring. Firms may also use bonuses as a substitute for fixed payroll expansion, increasing variable compensation instead of permanent employment. The empirical test must therefore distinguish motivational complementarity from the assumption that every productivity gain creates jobs.

The proposed hypothesis adopts the complementarity perspective while recognising these alternatives. If bonuses make targets more credible and motivational, the relationship between target setting and employment growth should be stronger where bonuses are present.

Hypothesis 2: Performance bonuses based on production or service targets positively moderate the relationship between formal targets and annual employment growth.

METHODS

Data Source and Survey Design

The study used the Ghana World Bank Enterprise Survey 2023 (World Bank Group, 2025). The survey interviewed formal private establishments between February 2023 and February 2024. Eligible activities included manufacturing, construction, wholesale and retail, transport and storage, accommodation and food services, and selected other services. The establishment was the unit of analysis.

The survey used stratified random sampling based on firm size, industry, region and panel status. The full public-use file contained 713 establishments. Sampling weights account for unequal selection probabilities and eligibility assumptions. The median-eligibility weight was used in the primary analysis, while the weak-eligibility weight was used in sensitivity analysis. Regression weights were divided by their analytical-sample mean to retain relative design information without overstating precision.

The management-practices questions were administered only to establishments with at least 20 employees at screening. Data inspection confirmed an exact boundary: all 307 firms with screener employment of 20 or

more were routed to the module, and the maximum employment among non-routed firms was 19. The study therefore concerns medium and large establishments under the module's screening definition. It does not represent small formal firms.

The World Bank reported that 307 establishments were in the management domain. Of these, 298 gave valid yes or no answers to the target question and 301 gave valid answers to the bonus question. The two items were asked throughout the management module, which made it possible for a small number of responses to appear logically inconsistent. This issue was examined explicitly rather than silently recoded.

Data Inspection and Analytical Sample

Identifiers, labels, response ranges, skip patterns and negative codes were inspected before modelling. All 713 establishment identifiers were unique. Negative World Bank codes were treated as missing. For the historical employment variable, -7 indicated that the establishment was not in business three fiscal years earlier and -9 indicated "do not know." Neither code was treated as employment.

Current permanent full-time employment was valid when nonnegative, and earlier employment was valid when zero or positive. Zero earlier permanent employment was retained because an operating firm can have had no permanent full-time employee at that time. The symmetric growth formula remains defined as long as current and earlier employment do not both equal zero. Current employment was positive in the analytical data.

Of the full file, 589 establishments had valid current and historical employment for the growth calculation. Within the management domain, 252 had valid employment growth. The final model additionally required valid targets, bonuses, firm age, training, foreign ownership, realized industry, region, both weights and stratum. The complete analytical sample contained 244 establishments.

Fifteen analytical observations reported a target-based bonus while also reporting no formal production or service target. These answers may reflect respondent interpretation, timing differences or measurement error. They were retained in the primary two-by-two model because both questions were directly answered and because deleting a response category after inspecting the data can bias inference. A logically coherent three-category analysis excluded these observations and compared neither practice, targets only and targets plus bonuses.

Initial employment and firm age had nonlinear associations with the outcome. Models containing only linear logged controls produced a significant positive interaction, but residual and specification checks showed that squared logged initial employment and squared logged age were required. These terms were therefore included in the primary model. This decision was made to avoid attributing nonlinear size and age effects to the target–bonus interaction.

Measures

Annual employment growth. The dependent variable followed the World Bank Enterprise Surveys indicator (World Bank Group, 2026). It equalled $(1/3) \times [(11 - 12)/((11 + 12)/2)] \times 100$, where 11 is permanent full-time employment at the end of the last fiscal year, and 12 is permanent full-time employment three fiscal years earlier. The measure is symmetric around zero and bounded between approximately -66.7% and 66.7% per year. It reduces the extreme values produced by ordinary percentage growth when the initial workforce is small.

Formal targets. Variable r4 asked whether the establishment had production or service provision targets. Yes was coded one and no was coded zero. The item does not measure target difficulty, time horizon, employee participation, flexibility or the number of targets.

Target-based performance bonuses. Variable r8 asked whether performance bonuses were based on production or service provision targets. Yes was coded one and no was coded zero. The survey does not identify the amount of the bonus, employee coverage, individual versus group basis, frequency or actual payout.

Control variables. Initial permanent employment was transformed as $\ln(l2 + 1)$, centred and entered with a squared term. Firm age was calculated from the interview year and year operations began, transformed as $\ln(\text{age} + 1)$, centred and squared. Formal employee training and foreign ownership of at least 10% were binary controls. Realized industry was grouped into manufacturing, wholesale and retail, and other eligible sectors for the primary model. Four World Bank regions were included. A six-sector model was estimated as a sensitivity check.

Statistical Analysis

Weighted descriptive statistics were calculated first. Mean employment growth was compared across the four target and bonus combinations. These group differences were descriptive because target and bonus adoption was not randomly assigned.

The main estimator was survey-weighted least squares with HC1 heteroskedasticity-consistent standard errors (White, 1980). Four hierarchical models were fitted. Model 1 contained the controls. Model 2 added targets. Model 3 added bonuses. Model 4 added the target-by-bonus interaction. The coefficient for targets in Model 4 represented the target relationship when bonuses were absent. The bonus coefficient represented the bonus relationship when targets were absent. The product term tested whether the target relationship differed across bonus status.

Average adjusted growth rates were calculated for the four practice combinations while averaging over the observed controls. Confidence intervals were based on 5,000 draws from the estimated coefficient covariance matrix. Linear contrasts estimated the target effect with and without bonuses, the bonus effect with and without targets, and the difference between firms with both practices and firms with neither. Robustness tests included the weak-eligibility weight, unweighted ordinary least squares, six realised sectors, omission of the initial-employment control, a linear-control model, annualised log employment change and geometric compound annual growth. The logically coherent three-category model excluded the bonus-without-target group. A separate model among target-setting firms tested the incremental bonus association.

Variance inflation factors assessed multicollinearity. Cook's distance identified influential observations, but valid observations were not automatically deleted. A 1,000-replication stratified bootstrap resampled firms within World Bank strata. Ten-fold cross-validation assessed predictive error. All tests were two-sided, and $p < .05$ was considered statistically significant. The analysis was conducted in Python using pandas, statsmodels, NumPy, patsy and scikit-learn.

Ethical Considerations

The study analysed anonymised secondary establishment data under the World Bank Enterprise Surveys Data Access Protocol. No respondent was contacted, and no attempt was made to identify an establishment. Only aggregated results are reported.

RESULTS

Sample Characteristics

The analytical sample contained 244 establishments. Weighted annual employment growth averaged 11.17%, with a standard deviation of 18.49 percentage points. The weighted median was 6.99%, and the interquartile range extended from 0% to 19.12%. The measure included both contractions and rapid expansions, ranging from -40.0% to the theoretical upper boundary of 66.67% in this sample.

Formal targets were reported by 176 establishments, representing 73.0% of the weighted population. 125 establishments, representing 57.1%, reported target-based bonuses. Formal employee training was reported by 63.8%, and 17.9% had foreign ownership of at least 10%. Weighted mean permanent employment rose from 49.22 three years earlier to 62.91 in the current period.

The four practice groups differed in size. Firms with both targets and bonuses represented 47.0% of the weighted sample. Targets without bonuses represented 26.0%, neither practice represented 16.9%, and bonuses without reported targets represented 10.0%. The last group contained only 15 sampled establishments and was interpreted cautiously.

Table 1 Weighted Characteristics of the Analytical Sample

Characteristic	Unweighted n	Weighted % or M	Weighted SD / IQR
Annual employment growth, percent	244	11.17	IQR 0.00–19.12
Formal production/service targets	176	73.0	
Performance bonuses based on targets	125	57.1	
Formal employee training	133	63.8	
Foreign ownership of at least 10%	44	17.9	
Permanent employees, current	244	62.91	81.85
Permanent employees, three years earlier	244	49.22	72.17
Firm age, years	244	15.44	11.57
Realised sector			
Manufacturing	79	19.6	
Construction	24	10.5	
Wholesale and retail	58	36.3	
Transport and storage	11	11.1	
Accommodation and food	55	15.6	
Other services	17	6.9	
Region			
Region 1	120	70.6	
Region 2	44	18.5	

Region 3	49	8.9	
Region 4	31	2.0	

Note. N = 244. Statistics use the World Bank median-eligibility weight. The management-practices domain contains establishments with at least 20 employees at screening.

Unadjusted Growth across Target and Bonus Groups

The unadjusted weighted pattern did not support a simple positive target relationship. Firms with neither targets nor bonuses had the highest mean annual employment growth, 18.57%. Firms reporting bonuses without targets averaged 13.57%, those with targets and bonuses averaged 10.47%, and those with targets but no bonuses averaged 6.68%.

These comparisons cannot establish whether targets reduced growth. Firms may adopt targets after growth slows or when coordination becomes difficult. The neither-practice group may also include younger or smaller firms that naturally grow faster. Adjusted models therefore controlled flexibly for initial size and age.

Table 2 Annual Employment Growth by Formal Targets and Target-Based Bonuses

Formal targets	Target-based bonus	n	Weighted sample %	Weighted mean growth %	Unweighted median %
No	No	53	16.9	18.57	11.76
No	Yes	15	10.0	13.57	11.11
Yes	No	66	26.0	6.68	3.84
Yes	Yes	110	47.0	10.47	5.34

Note. Growth follows the World Bank symmetric annualised formula. The table is descriptive and does not control for firm characteristics.

Hierarchical Weighted Regression

Model 1, containing the controls, explained 62.2% of the weighted variance in annual employment growth. Initial employment had a strong nonlinear relationship with growth. The linear logged-size coefficient was negative and the squared term positive, showing that growth declined sharply across the lower and middle parts of the initial-size distribution but the decline became less steep at high size. Firm age also had a nonlinear relationship. Foreign ownership was positively associated with growth, while training was not statistically significant.

Adding formal targets in Model 2 improved model fit and produced a negative coefficient. Adding bonuses in Model 3 made almost no additional improvement. Model 4 added the interaction and produced an adjusted R-squared of .617. The interaction improved in-sample fit only modestly and was not statistically significant in the correctly specified nonlinear-control model.

In Model 4, target setting was associated with 7.68 percentage points lower annual employment growth when bonuses were absent, 95% CI [-14.34, -1.02], $p = .024$. The bonus coefficient when targets were absent was -4.19 percentage points, 95% CI [-13.27, 4.89], $p = .365$. The interaction was 6.22 percentage points, 95% CI [-4.05, 16.49], $p = .235$. Hypothesis 1 was not supported because the target coefficient was negative rather

than positive. Hypothesis 2 was not supported because the positive interaction was imprecise and nonsignificant.

Table 3 Hierarchical Survey-Weighted Models Predicting Annual Employment Growth

Predictor	Model 1 b (SE)	Model 2 b (SE)	Model 3 b (SE)	Model 4 b (SE)
Formal targets		-4.80 (2.63)	-4.89* (2.44)	-7.68* (3.40)
Target-based bonus			0.39 (2.28)	-4.19 (4.63)
Targets × bonus				6.22 (5.24)
Logged initial employment	-9.23*** (0.86)	-9.05*** (0.85)	-9.04*** (0.86)	-9.32*** (0.91)
Logged initial employment squared	2.94*** (0.50)	2.93*** (0.48)	2.94*** (0.49)	2.79*** (0.57)
Logged firm age	-1.26 (1.98)	-1.33 (1.92)	-1.33 (1.92)	-1.27 (1.96)
Logged firm age squared	-4.72** (1.69)	-4.71** (1.54)	-4.69** (1.60)	-4.50** (1.63)
Formal training	1.75 (1.95)	1.98 (1.96)	1.86 (2.14)	1.92 (2.10)
Foreign ownership ≥10%	8.12*** (2.34)	8.81*** (2.52)	8.75*** (2.56)	9.12*** (2.50)
Adjusted R ²	0.604	0.616	0.614	0.617
Weighted RMSE	11.37	11.18	11.18	11.10

Note. N = 244. HC1 robust standard errors are in parentheses. All models include three realized-industry groups and four regions. Continuous size and age terms are centred. *p < .05. **p < .01. ***p < .001. RMSE = root mean square error.

Full Interaction Model and Conditional Effects

The full coefficient table is presented in Table 4. Region 4 had lower adjusted growth than Region 1. Foreign ownership of at least 10% was associated with 9.12 percentage points higher growth, p < .001. Training, industry and the remaining region coefficients were not statistically significant. The focal estimates should not be read as causal effects because current targets and bonuses may have been adopted after part of the three-year employment change occurred.

Table 4 Full Survey-Weighted Employment-Growth Model

Predictor	b	SE	95% CI	p
-----------	---	----	--------	---

Formal targets	-7.680	3.397	[-14.337, -1.023]	.024
Target-based bonus	-4.192	4.632	[-13.269, 4.886]	.365
Targets × bonus	6.220	5.241	[-4.053, 16.492]	.235
Logged initial employment	-9.315	0.905	[-11.089, -7.541]	< .001
Logged initial employment squared	2.790	0.566	[1.680, 3.900]	< .001
Logged firm age	-1.273	1.957	[-5.109, 2.564]	.516
Logged firm age squared	-4.503	1.625	[-7.688, -1.318]	.006
Formal training	1.925	2.099	[-2.189, 6.038]	.359
Foreign ownership ≥10%	9.121	2.497	[4.226, 14.015]	< .001
Other sectors	3.073	2.096	[-1.035, 7.181]	.143
Wholesale and retail	0.188	2.845	[-5.388, 5.765]	.947
Region 2	-8.158	5.277	[-18.500, 2.185]	.122
Region 3	-2.306	2.105	[-6.431, 1.818]	.273
Region 4	-8.202	1.966	[-12.056, -4.348]	< .001
Intercept	11.998	3.553	[5.034, 18.961]	< .001

Note. Manufacturing and Region 1 are reference categories. Coefficients are percentage-point differences in annual employment growth.

Adjusted Growth and Practice Combinations

Adjusted annual growth was 16.24% for firms with neither practice, 12.05% for the small bonus-without-target group, 8.56% for targets without bonuses and 10.59% for firms with both practices. Thus, adding a bonus to a target-setting firm was associated with an estimated 2.03-percentage-point increase, but the difference was not significant ($p = .412$).

Among firms without bonuses, targets were associated with 7.68 percentage points lower growth. Among firms with bonuses, the target difference was -1.46 percentage points and nonsignificant. The positive product term therefore reflected partial statistical offset: bonuses reduced the size of the negative target association. It did not show that the combined practice produced higher growth than neither practice.

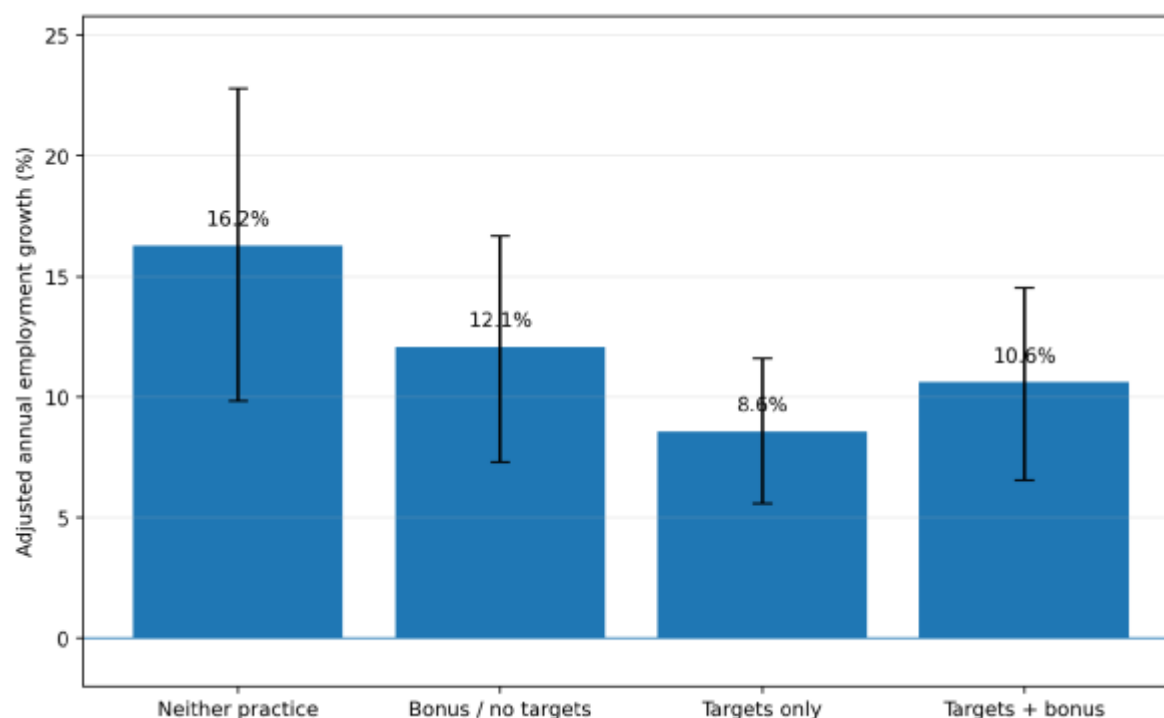
The combined-practice group was estimated to grow 5.65 percentage points less than the neither-practice group, 95% CI [-13.27, 1.96], $p = .146$. This distinction is central. A positive interaction coefficient can coexist with a combined outcome below the baseline when both conditional main effects are negative.

Table 5 Adjusted Employment Growth and Conditional Contrasts

Formal targets	Bonus	Adjusted growth %	95% CI
No	No	16.24	[9.83, 22.79]
No	Yes	12.05	[7.29, 16.68]
Yes	No	8.56	[5.58, 11.59]
Yes	Yes	10.59	[6.55, 14.51]
Conditional contrast		Difference, pp	p
Targets effect when no bonus		-7.68 [-14.34, -1.02]	.024
Targets effect when bonus present		-1.46 [-8.49, 5.57]	.684
Bonus effect when no targets		-4.19 [-13.27, 4.89]	.365
Bonus effect when targets present		2.03 [-2.81, 6.87]	.412
Targets and bonus together versus neither		-5.65 [-13.27, 1.96]	.146
Interaction (difference in differences)		6.22 [-4.05, 16.49]	.235

Note. Predictions average over observed control values. pp = percentage points. Confidence intervals for predictions are based on 5,000 coefficient simulations.

Figure 1 Adjusted Annual Employment Growth by Targets and Target-Based Bonuses



Note. Error bars show simulated 95% confidence intervals from the primary weighted model.

Diagnostics and Robustness

Variance inflation factors were generally low. The bonus and interaction terms had values of 5.82 and 7.41 because the product term was highly related to its binary components. These values did not indicate severe instability, and the focal confidence intervals remained interpretable.

The nonlinear controls were substantively important. The squared logged-initial-employment term was significant, $p < .001$, and the squared logged-age term was significant, $p = .006$. A linear-control model produced a much larger and statistically significant interaction of 14.49 percentage points. Because that specification failed the functional-form checks, it was not selected as the primary model. This comparison demonstrates how an apparently supportive moderation result can arise from misspecified controls.

The weak-eligibility weight, unweighted model and six-sector model all retained a negative target coefficient and a nonsignificant interaction. Models without initial employment and with annualised log change also failed to support moderation. The geometric compound-growth model produced a larger interaction, but its confidence interval included zero and $p = .078$.

The logically coherent three-category sample excluded the 15 bonus-without-target observations. Targets without bonuses were associated with 7.67 percentage points lower growth than neither practice, $p = .018$. Targets plus bonuses were associated with 6.10 percentage points lower growth, $p = .113$. Among target-setting firms only, the incremental bonus estimate was 1.87 percentage points, $p = .408$. These results support the conclusion that bonuses did not significantly raise employment growth.

The stratified bootstrap completed all 1,000 replications. Its 95% interval for the target coefficient was $[-12.65, -1.20]$, while the interaction interval was $[-3.85, 15.76]$. The interaction remained nonsignificant. Cook's distance identified 10 observations above the $4/N$ heuristic, with a maximum of .087. Removing all flagged observations did not make the interaction significant, although removal of the single most influential observation did. Because the observation was valid and other sensitivity results remained null, the complete sample was retained.

Ten-fold cross-validation produced a mean weighted RMSE of 11.59 percentage points and a mean absolute error of 8.73 percentage points. Employment growth remained difficult to predict at the establishment level. The model is therefore most useful for explanatory comparison rather than individual forecasting.

Table 6 Sensitivity Analyses for Targets, Bonuses, and Their Interaction

Specification	Target b	p	Bonus b	P	Interaction b	p
Primary median weight	-7.68	.024	-4.19	.365	6.22	.235
Weak eligibility weight	-8.25	.023	-4.46	.375	6.11	.280
Unweighted OLS	-4.65	.031	-0.69	.802	3.70	.268
Six realised sectors	-7.93	.022	-4.68	.315	6.90	.184
Without initial employment control	-10.84	.017	-4.45	.474	7.27	.315
Linear controls only	-11.41	< .001	-10.51	.005	14.49	.002
Annualised log employment change	-9.59	.020	-6.24	.270	8.48	.183
Geometric employment CAGR	-12.32	.014	-9.98	.145	13.32	.078

Note. The linear-control specification is reported to show the importance of functional-form correction; it is not preferred. Alternative log and CAGR outcomes exclude establishments with zero earlier permanent employment.

DISCUSSION

Interpretation of the Main Findings

This study examined whether formal production or service targets were positively associated with annual employment growth and whether target-based performance bonuses strengthened that relationship. Neither hypothesis was supported. Targets were negatively associated with growth when bonuses were absent, and the interaction was positive but statistically uncertain after nonlinear size and age relationships were modelled correctly.

The negative target coefficient should not be interpreted as proof that targets destroy jobs. The cross-sectional practices were observed after employment changed over a three-year period. Firms may introduce targets when growth slows, costs rise, or coordination becomes difficult. In that case, targets are partly a response to performance pressure. This reverse sequence is plausible because structured controls often become more necessary as organizations encounter complexity or problems.

A second explanation is that targets may improve efficiency rather than employment. A firm can meet higher production or service goals by reducing idle time, reorganising work or adopting technology. Such improvement may raise output per worker without increasing the number of permanent employees. The outcome studied here is job growth, not productivity or profitability. A practice can be valuable while showing no positive employment association.

A third explanation concerns target design. The survey records whether targets exist but not whether they are specific, challenging, attainable, participative or connected to strategy. Goal-setting theory does not predict that every target improves performance. Commitment, feedback, task complexity and resources influence results (Locke & Latham, 2002). Targets imposed without employee understanding or operational support may have limited value.

The moderation result also requires careful interpretation. Bonuses appeared to reduce the negative difference associated with targets, but the offset was not statistically reliable. Among target-setting firms, bonuses were associated with only 1.87 to 2.03 percentage points higher adjusted growth, depending on the specification. The confidence intervals included both a modest negative and a positive effect.

This finding is consistent with incomplete incentive alignment. The survey does not show who received bonuses, how large they were or whether rewards depended on individual, team or firm performance. A small discretionary bonus may not change behaviour. A narrowly designed bonus may motivate measured output while discouraging cooperation or long-term capability building. Multitask incentive theory predicts these risks when measures capture only part of the job (Holmström & Milgrom, 1991).

The result differs from evidence that performance pay can raise worker productivity (Lazear, 2000). The difference is not necessarily contradictory. Productivity and employment growth are different outcomes. Higher effort can allow a firm to produce more with the existing workforce. Incentive pay may also substitute variable compensation for permanent hiring. Thus, a positive productivity effect does not imply job expansion.

The strong nonlinear size relationship agrees with research showing that firm growth depends greatly on initial size and age (Aterido et al., 2011; Haltiwanger et al., 2013). Smaller and younger establishments often grow faster in percentage terms, while mature firms have more stable employment. Failure to model this pattern can generate misleading associations between formal management practices—more common in larger firms—and growth.

Theoretical Implications

The study contributes to management-control theory by distinguishing the presence of controls from their strategic use. Simons's (1994) framework suggests that controls can be diagnostic or interactive. The survey items identify formal targets and rewards but not whether managers use them to stimulate dialogue, learning and strategic adaptation. The null moderation result may therefore reflect variation in use rather than failure of the broader control-system logic.

The findings also qualify simple complementarity arguments. Targets and bonuses are theoretically compatible, but compatibility does not guarantee a positive interaction. Complementarity requires alignment in metric, timing, employee control, perceived fairness and strategic purpose. Researchers should measure these design features directly rather than infer a high-performance bundle from two binary indicators.

For goal-setting theory, the study demonstrates the value of moving beyond immediate task performance to organizational outcomes. Employment growth is influenced by demand, productivity, technology, finance and

strategic choice. Even a well-designed goal system operates within these conditions. Organizational-level tests should therefore expect smaller and more context-dependent relationships than controlled task studies.

For agency theory, the results highlight measurement limits. Incentives align behaviour only when the performance measure is informative about desired actions. Production or service targets may not capture innovation, quality, safety or workforce development. If managers want job-generating growth, the reward system may need to include capacity building, customer development and sustainable financial performance rather than only operational output.

The functional-form finding is itself a methodological contribution. The linear-control model appeared to support strong positive moderation, but the effect disappeared when nonlinear size and age relationships were included. Strategic-management moderation studies using growth outcomes should test control-variable functional form before interpreting interaction coefficients.

Managerial Implications

Managers should begin with the strategic purpose of a target. A target intended to improve current efficiency differs from one intended to expand capacity or employment. The metric, time horizon, and resource plan should match the purpose. Employment growth should not be expected when the target is designed only to increase output per existing worker.

Targets should be challenging but achievable. Managers need to consider demand, equipment, supplies, skills and working capital before setting them. Unrealistic targets can produce stress, gaming or declining quality. Periodic review is important when external conditions change. Flexibility should not mean arbitrary revision; it should mean transparent adjustment based on evidence.

Employees should understand how their actions affect the target. Participation can improve information quality and commitment, especially where frontline employees know operational constraints. Target discussions should include the process required to achieve the result, not only the numerical outcome.

Bonuses should reward dimensions that employees can influence and should not encourage one measured result at the expense of others. A balanced design can include quality, customer service, safety, teamwork and improvement alongside quantity. Group rewards may be appropriate where performance depends on coordinated work, but individual accountability should remain clear.

Firms seeking employment expansion should connect targets to workforce planning. Managers need forecasts showing when expected sales or output require additional permanent staff. Without this link, employees may simply work harder to achieve the target, and the firm may postpone recruitment. A job-creation strategy requires deliberate capacity decisions, not only performance pressure.

The small inconsistent response group also carries a practical lesson. Organizations sometimes describe bonuses as target-based even when formal targets are unclear. This ambiguity weakens accountability. Written definitions, measurement rules and payout conditions should be communicated before the performance period begins.

Policy Implications

Enterprise-development programmes should not promote target setting as a stand-alone solution. Training in performance management should cover goal quality, measurement, feedback, employee participation and reward design. Firms need help building an integrated system rather than receiving a target template.

Public and private business-support institutions can provide practical diagnostic tools. These tools can help firms identify whether growth constraints arise from weak demand, finance, skills, technology, infrastructure or internal management. Targets are most useful when they address a clearly diagnosed constraint.

Employment-support policies should recognize that productivity-oriented management practices may not immediately create jobs. Productivity can improve competitiveness and support future expansion, but the transition depends on market opportunities and investment. Policy evaluation should therefore track productivity, sales, job quality and employment over time.

Because the management module represents establishments with at least 20 employees, smaller firms require separate evidence. Micro and small enterprises may use informal goals and non-monetary rewards. Interventions designed for medium-sized firms should not be transferred automatically to businesses with fewer workers.

Limitations and Future Research

First, the design is cross-sectional. Targets and bonuses were measured at the survey date, while employment growth covered the preceding three years. The analysis cannot determine whether the practices preceded growth. Panel surveys or field experiments are required for causal inference.

Second, the focal variables are binary. The dataset does not identify target difficulty, flexibility, number, time horizon, employee awareness, participation or actual achievement. It also lacks bonus size, coverage, payout frequency and individual-versus-group design. These omitted features may explain substantial variation in effects.

Third, 15 firms reported bonuses without formal targets. Retaining them preserved direct responses, but the group may reflect measurement inconsistency. The coherent-category and target-only analyses reached the same broad conclusion, which reduces but does not remove the concern.

Fourth, respondents recalled their employment histories. Earlier employment may contain memory error, and the survey does not observe firms that closed during the period. Survivorship can make average growth appear stronger because failed firms are absent.

Fifth, the management module applies to establishments with at least 20 employees at screening. Findings do not represent smaller formal firms or informal businesses. The relationship may differ where management is less formal, and rewards are primarily non-monetary.

Sixth, employment growth does not measure job quality. A firm may add low-paid or insecure positions, while another improves wages and stability without increasing headcount. Future research should combine employment quantity with compensation, gender, skills and contract quality.

Seventh, unobserved factors may influence both management practices and growth. Leadership quality, demand expectations, access to finance, technology and organizational culture were not fully captured. Larger panel datasets could use firm fixed effects or quasi-experimental designs.

Future research should collect detailed management-system configurations and follow firms over time. A particularly useful design would compare targets alone, bonuses alone, integrated targets and bonuses, and participative target systems. Outcomes should include productivity, sales, employment, quality and employee wellbeing. Qualitative studies can also show how Ghanaian managers and employees interpret targets and rewards in practice.

CONCLUSION

This study used the Ghana World Bank Enterprise Survey 2023 to examine formal targets, target-based bonuses and annual employment growth among establishments in the management-practices domain. Formal targets were common, and more than half of firms reported target-based bonuses. Yet the evidence did not show that these practices created faster employment growth.

Target setting was negatively associated with growth when bonuses were absent. Bonuses modestly reduced that negative difference, but the interaction was not statistically significant after nonlinear initial-size and age

effects were modelled. Firms combining targets and bonuses did not grow significantly faster than firms with neither practice.

The findings do not imply that targets and incentives are useless. They indicate that their value depends on design, strategic purpose and organizational context, and that productivity gains do not automatically become job growth. Ghanaian firms seeking expansion should connect targets and rewards to realistic demand, capacity, skills and workforce plans. Management controls can support growth, but they cannot substitute for a viable growth strategy.

REFERENCES

1. Acquah, M. (2013). Management control systems, business strategy and performance: A comparative analysis of family and non-family businesses in a transition economy in sub-Saharan Africa. *Journal of Family Business Strategy*, 4(2), 131–146. <https://doi.org/10.1016/j.jfbs.2013.03.002>
2. Aterido, R., Hallward-Driemeier, M., & Pagés, C. (2011). Big constraints to small firms' growth? Business environment and employment growth across firms. *Economic Development and Cultural Change*, 59(3), 609–647. <https://doi.org/10.1086/658349>
3. Baker, G. P. (1992). Incentive contracts and performance measurement. *Journal of Political Economy*, 100(3), 598–614. <https://doi.org/10.1086/261831>
4. Bennett, V. M. (2017). Firm lifecycles: Linking employee incentives and firm growth dynamics. *Strategic Management Journal*, 38(10), 2005–2018. <https://doi.org/10.1002/smj.2644>
5. Bloom, N., Eifert, B., Mahajan, A., McKenzie, D., & Roberts, J. (2013). Does management matter? Evidence from India. *Quarterly Journal of Economics*, 128(1), 1–51. <https://doi.org/10.1093/qje/qjs044>
6. Bloom, N., Sadun, R., & Van Reenen, J. (2019). What drives differences in management practices? *American Economic Review*, 109(5), 1648–1683. <https://doi.org/10.1257/aer.20170491>
7. Bloom, N., & Van Reenen, J. (2007). Measuring and explaining management practices across firms and countries. *Quarterly Journal of Economics*, 122(4), 1351–1408. <https://doi.org/10.1162/qjec.2007.122.4.1351>
8. Bol, J. C., Keune, T. M., Matsumura, E. M., & Shin, J. Y. (2015). Target difficulty, target flexibility, and firm performance: Evidence from business units' targets. *Accounting, Organizations and Society*, 40, 61–77. <https://doi.org/10.1016/j.aos.2014.12.002>
9. Bonner, S. E., & Sprinkle, G. B. (2002). The effects of monetary incentives on effort and task performance: Theories, evidence, and a framework for research. *Accounting, Organizations and Society*, 27(4–5), 303–345. [https://doi.org/10.1016/S0361-3682\(01\)00052-6](https://doi.org/10.1016/S0361-3682(01)00052-6)
10. Chenhall, R. H. (2003). Management control systems design within its organizational context: Findings from contingency-based research and directions for the future. *Accounting, Organizations and Society*, 28(2–3), 127–168. [https://doi.org/10.1016/S0361-3682\(01\)00027-7](https://doi.org/10.1016/S0361-3682(01)00027-7)
11. Cirera, X., Marin, A., & Markwald, R. (2019). Innovation and employment growth: Evidence from manufacturing firms in Africa. *Journal of Innovation and Entrepreneurship*, 8, Article 7. <https://doi.org/10.1186/s13731-019-0102-2>
12. Ferreira, A., & Otley, D. (2009). The design and use of performance management systems: An extended framework for analysis. *Management Accounting Research*, 20(4), 263–282. <https://doi.org/10.1016/j.mar.2008.12.001>
13. Franco-Santos, M., Lucianetti, L., & Bourne, M. (2012). Contemporary performance measurement systems: A review of their consequences and a framework for research. *Management Accounting Research*, 23(2), 79–119. <https://doi.org/10.1016/j.mar.2012.04.001>
14. Haltiwanger, J., Jarmin, R. S., & Miranda, J. (2013). Who creates jobs? Small versus large versus young. *Review of Economics and Statistics*, 95(2), 347–361. https://doi.org/10.1162/REST_a_00288
15. Hochberg, Y. V., & Lindsey, L. (2010). Incentives, targeting, and firm performance: An analysis of non-executive stock options. *Review of Financial Studies*, 23(11), 4148–4186. <https://doi.org/10.1093/rfs/hhq093>

16. Holmström, B., & Milgrom, P. (1991). Multitask principal-agent analyses: Incentive contracts, asset ownership, and job design. *Journal of Law, Economics, & Organization*, 7, 24–52. https://doi.org/10.1093/jleo/7.special_issue.24
17. Ittner, C. D., Larcker, D. F., & Randall, T. (2003). Performance implications of strategic performance measurement in financial services firms. *Accounting Review*, 78(3), 715–741. <https://doi.org/10.2308/accr.2003.78.3.715>
18. Ivancevich, J. M. (1977). Different goal setting treatments and their effects on performance and job satisfaction. *Academy of Management Journal*, 20(3), 406–419. <https://doi.org/10.5465/255414>
19. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
20. Latham, G. P., & Steele, T. P. (1983). The motivational effects of participation versus goal setting on performance. *Academy of Management Journal*, 26(3), 406–417. <https://doi.org/10.5465/256253>
21. Latham, G. P., & Yukl, G. A. (1975). A review of research on the application of goal setting in organizations. *Academy of Management Journal*, 18(4), 824–845. <https://doi.org/10.5465/255381>
22. Lazear, E. P. (2000). Performance pay and productivity. *American Economic Review*, 90(5), 1346–1361. <https://doi.org/10.1257/aer.90.5.1346>
23. Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist*, 57(9), 705–717. <https://doi.org/10.1037/0003-066X.57.9.705>
24. London, M., & Oldham, G. R. (1976). Effects of varying goal types and incentive systems on performance and satisfaction. *Academy of Management Journal*, 19(4), 537–546. <https://doi.org/10.5465/255789>
25. McKenzie, D., & Woodruff, C. (2017). Business practices in small firms in developing countries. *Management Science*, 63(9), 2967–2981. <https://doi.org/10.1287/mnsc.2016.2492>
26. Otley, D. (1999). Performance management: A framework for management control systems research. *Management Accounting Research*, 10(4), 363–382. <https://doi.org/10.1006/mare.1999.0115>
27. Simons, R. (1994). How new top managers use control systems as levers of strategic renewal. *Strategic Management Journal*, 15(3), 169–189. <https://doi.org/10.1002/smj.4250150301>
28. Speckbacher, G., & Wentges, P. (2012). The impact of family control on the use of performance measures in strategic target setting and incentive compensation: A research note. *Management Accounting Research*, 23(1), 34–46. <https://doi.org/10.1016/j.mar.2011.06.002>
29. Steinbach, A. L., Holcomb, T. R., Holmes, R. M., Jr., Devers, C. E., & Cannella, A. A., Jr. (2017). Top management team incentive heterogeneity, strategic investment behavior, and performance: A contingency theory of incentive alignment. *Strategic Management Journal*, 38(8), 1701–1720. <https://doi.org/10.1002/smj.2628>
30. Tolchinsky, P. D., & King, D. C. (1980). Do goals mediate the effects of incentives on performance? *Academy of Management Review*, 5(3), 455–467. <https://doi.org/10.5465/amr.1980.4288880>
31. White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica*, 48(4), 817–838. <https://doi.org/10.2307/1912934>
32. World Bank Group. (2025). Ghana World Bank Enterprise Survey 2023: Study description and data documentation. <https://microdata.worldbank.org/catalog/6444/study-description>
33. World Bank Group. (2026). Enterprise Surveys indicator descriptions. <https://www.enterprisesurveys.org/content/dam/enterprisesurveys/documents/methodology/Indicator>

Appendix A

Variable Coding and Reproducibility Summary

Construct	WBES variable	Coding or formula
Annual employment growth	I1 and I2	$(1/3) \times [(I1 - I2)/((I1 + I2)/2)] \times 100$

Formal targets	r4	1 = yes; 0 = no; negative codes missing
Target-based bonuses	r8	1 = yes; 0 = no; negative codes missing
Management-module domain	a6c	At least 20 employees at screening
Initial employment	l2	$\ln(l2 + 1)$, centred, plus squared term
Firm age	a14y and b5	$\ln(\text{interview year} - \text{start year} + 1)$, centred, plus squared term
Formal training	l10	1 = yes; 0 = no
Foreign ownership	b2b	1 = at least 10%; 0 = below 10%
Realised industry	d1a2_v4	Three groups in primary model; six in sensitivity
Region	a2	Four World Bank survey regions
Primary weight	wmedian	Normalised to analytical-sample mean
Alternative weight	wweak	Sensitivity analysis
Stratum	strata	Within-stratum bootstrap resampling

Note. Negative response codes and establishments not operating three fiscal years earlier were treated as missing. The primary sample contained 244 establishments.