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Raw material cost control in a restaurant: A standard cost benchmark and price–quantity variance analysis of two menu items in Manado, Indonesia

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ABSTRACT

Raw materials are one of the largest cost items in food service, yet small restaurants seldom examine budget deviations at menu level. This exploratory single-case study builds a raw material standard cost benchmark from recipe standards and compares it with actual cost for two regional-cuisine menu items, Ragey (pork skewers) and Ba' Isi Bulu (pork grilled in bamboo), at one branch of the Pelmas Tanta Olla restaurant in Manado, Indonesia. Observation and three semi-structured interviews were combined with a budget–actual comparison and a price–quantity decomposition of material variances based on May 2026 purchase receipts. A 30-day standard cost budget of IDR 247.63 million was compared with actual cost of IDR 262.70 million, an unfavourable variance of IDR 15.07 million (6.09%). About IDR 15.0 million arises from a pork quantity variance in Ragey, consistent with a yield of 18 instead of 20 skewers per kilogram, while the Ba' Isi Bulu variance stems mainly from a chili price variance of IDR 2.36 million. Because actual sales volumes were unavailable, the budget covers 30 of 31 days, and no portion audit was performed, the overrun is uncertain (about 2.7% to 6.1%) and the results are indicative only. Portion control and price monitoring appear to be the most practical points of intervention.

Keywords: raw material cost control; budget variance; standard costing; food cost; restaurant
JEL Classification: M41; L83

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1. Introduction

Food and beverage provision is a large and growing segment of the Indonesian economy. Statistics Indonesia counted 4.85 million food and beverage provision businesses in 2023, 21.13% more than in 2016 (BPS, 2024), and 5.28 million in 2024 (BPS, 2025); restaurants and eating houses accounted for 24.75% of the businesses recorded in the 2023 survey (BPS, 2024). In such a crowded market, operators compete on quality and price at the same time, so cost discipline directly affects the margin they can earn. In food

service, the cost of food is typically one of the largest expense categories and one of the few that managers can influence daily through purchasing, preparation and portioning (Dopson & Hayes, 2019). Perishable inputs bought in traditional markets add price volatility to this exposure.

Budgeting and cost control are the standard management accounting responses. A budget translates plans into quantities and prices, and comparing it with actual results shows where spending departed from plan so that corrective action can follow (Anthony & Govindarajan, 2020; Garrison et al., 2021). Variance analysis separates a cost deviation into a price effect and a quantity effect, which tells the manager whether to look at purchasing or at use (Datar & Rajan, 2021). In restaurants, the quantity effect is closely tied to standard recipes, portion size and yield, which is why food-service texts treat these as the core cost control tools (Dopson & Hayes, 2019).

Empirical work on this topic has two strands. International food-service research shows that small restaurant owners and managers handle food, labour and rent costs mostly through experience-based problem solving rather than formal systems (Duarte Alonso & Krajsic, 2014), and that standard-versus-actual comparison in Indonesian resort kitchens routinely exposes food cost variances above tolerance, traced to portioning by estimate instead of weighing, non-adherence to standard recipes, storage errors and purchases above contract prices (Dewi et al., 2024). Indonesian studies of budgeting and cost control concentrate on manufacturing, project and operating-cost settings and generally report that budget–actual comparison supports control while unfavourable variances signal incomplete control (Latunggamu et al., 2021; Rindengan et al., 2022; Sasongko et al., 2023). To our knowledge, few published studies decompose raw material variances for individual menu items of an Indonesian regional-cuisine restaurant, which is the gap this article addresses.

This article therefore reports an exploratory single-case study of two signature menu items, Ragey and Ba' Isi Bulu, at the Sario branch of the Pelmas Tanta Olla restaurant in Manado. It is descriptive and does not test whether budgeting or control improves efficiency. It asks three questions:

RQ1. How is a 30-day raw material standard cost benchmark for the two menu items structured, and which of the restaurant's standards does it rest on?

RQ2**.** How large, and in which direction, are the differences between budgeted and actual raw material cost?

RQ3. Which price and quantity factors are associated with these differences, and which control practices are observed in the kitchen and purchasing?

The contribution is modest and specific: exploratory evidence on menu-level price–quantity variance decomposition in a regional-cuisine restaurant, a transparent reconciliation of the decomposition with the total variance, and a sensitivity analysis showing how much the conclusions depend on data limitations. The study also derives practical, costed pointers on portion control and procurement for similar restaurants.

2. Literature review

Budgeting and cost control as management control

Management control systems are the means by which organisations steer behaviour towards their goals; Merchant and Van der Stede (2017) distinguish results controls, which reward or evaluate outcomes such as budget attainment, from action controls, which prescribe or monitor how work is done, for instance through standard recipes and supervision. Budgets perform four functions: planning, coordination, control and performance

evaluation (Garrison et al., 2021). Anthony and Govindarajan (2020) describe cost control as a cycle of planning, measurement, variance analysis and corrective action. For a small restaurant, the planning step fixes the expected sales volume, the standard quantity of each material per portion and the expected price; the control step compares purchases and use with these standards and prompts action on deviations (Mulyadi, 2021).

The type of budget matters for interpretation. Because restaurant sales volumes vary, the usual benchmark for judging control is a flexible budget that restates standard cost at the actual volume (Datar & Rajan, 2021). A static budget, as used in this study, mixes volume effects with price and quantity effects unless actual volume equals planned volume; the implications are discussed in the subsection on data analysis and indicators and in the Discussion.

Standard costing and variance analysis in food service

Standard costing sets a standard quantity and price for each input; the material price variance is the price difference multiplied by actual quantity, and the material quantity variance is the quantity difference multiplied by standard price (Datar & Rajan, 2021; Hansen & Mowen, 2022). In food service, standard quantities rest on standardised recipes, portion sizes and yield tests, because the weight bought is not the weight served: trimming, cooking shrinkage and handling waste intervene (Dopson & Hayes, 2019). Without a yield test, a quantity variance therefore cannot be attributed to portioning alone. Menu-level analysis also links cost to revenue; contribution margin and food cost percentage by item are the basis of menu engineering (LeBruto et al., 1997).

Cost control in small restaurants

Duarte Alonso and Krajsic (2014) interviewed owners and managers of small restaurants and found that their cost management knowledge is closely tied to practical problem-solving strategies for food, labour, rent and other costs. In an Indonesian resort setting, Dewi et al. (2024) compared standard and actual food and beverage cost over July–December 2022: food cost averaged 40.40% against a 32% standard, a variance of 8.40 points against a company tolerance of 3%, and every food raw material variance in quantity (IDR 2,790,788 across 32 items) and price (IDR 1,108,995 across 28 items) was unfavourable. The authors link the quantity variances to staff estimating instead of weighing ingredients, standard recipes not being followed and storage errors, and the price variances to urgent purchases outside contract prices. Charlebois et al. (2015), studying two restaurants of a Canadian fine-dining chain, found that management and chefs identified waste reactively, about a week later, through inventory checks, and argued that proactive strategies applied before waste occurs are more effective; Christ and Burritt (2017) propose material flow cost accounting as a simple, low-cost tool for managing food waste in restaurants. These studies suggest that variances above tolerance are common in food service, that portioning, recipe adherence and purchasing are recurring drivers, and that detection is often delayed, which frames the expectations tested here.

Indonesian evidence on budgets and cost control

Indonesian studies that apply budget–actual comparison fall into three groups. Studies of production firms report that budgets support cost control when actual cost is at or below budget (Lestari & Irama, 2023; Sasongko et al., 2023), whereas overruns appear when actual cost exceeds standards (Damanik et al., 2020; Martin et al., 2020; Putri & Kusumastuti, 2022). Studies of project and operating costs find both favourable and

unfavourable variances and conclude that control is not yet fully effective (Latunggamu et al., 2021; Rindengan et al., 2022; Tahulending & Rondonuwu, 2022). A third group stresses budget design and process: limited participation of staff in budget preparation (Anwar et al., 2022; Humaera et al., 2023), the budget function as a planning and control tool (Sinuhaji & Nasution, 2023), planning of raw material requirements (Rajindra et al., 2022) and the role of management accounting in control (Murdianto et al., 2025; Putri et al., 2026; Rohimah & Purwanti, 2025). Almost all of these settings are manufacturers or projects with stable specifications; the restaurant differs in having perishable inputs bought daily, hand portioning and price-volatile ingredients, so their results are comparators rather than benchmarks.

Conceptual framework

Figure 1 organises the study. Budget preparation sets standards (sales targets, recipe conversion rates, prices) and identifies who prepares and approves them. Cost control compares purchases and use with these standards, through variance analysis and through action controls such as portion tools and supervision. Outcome indicators are the variance, a budget attainment ratio, food cost as a share of sales and cost per portion against standard. The variances feed back into revised standards and the next budget. The framework structures the Results and Discussion; it is descriptive and generates no hypotheses.

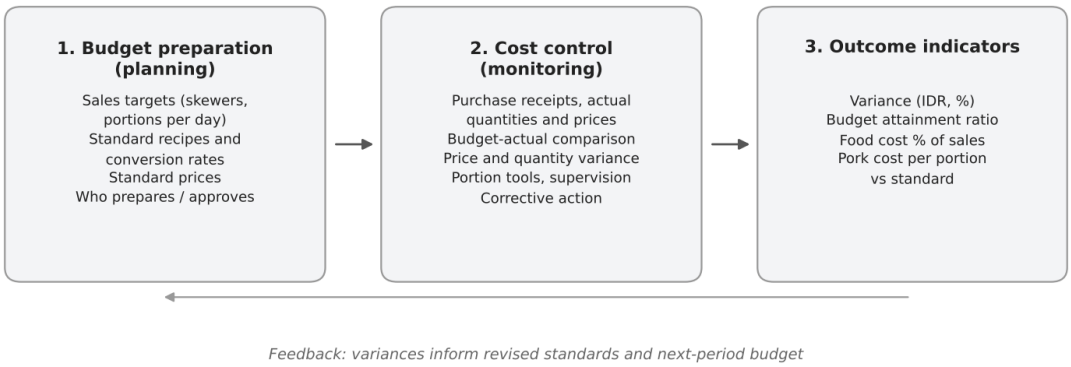


Figure 1. Conceptual framework: budget preparation, cost control and outcome indicators

3. Research method

Research design

The study is a descriptive single-case study that combines qualitative and quantitative evidence. A single case suits the aim of understanding management accounting practice in its operating context (Scapens, 1990; Yin, 2018), and qualitative field evidence is used to interpret numbers rather than to replace them (Ahrens & Chapman, 2006). Qualitative data (observation and interviews) describe budget preparation and control practice; quantitative data (budget, purchase receipts) are analysed through variance analysis. The two strands are compared at the interpretation stage (Creswell & Plano Clark, 2018). Because the design has no comparison group and covers one month, it describes and illustrates; it cannot establish causal effects.

Research setting and case selection

Pelmas Tanta Olla is a restaurant specialising in North Sulawesi

(Minahasan) cuisine, established in 2003 and now operating several branches in Manado. The study was conducted at the Sario branch (Jl. Wolter Monginsidi, Sario Tumpaan). The branch was selected because it is typical of the chain, offers a high and steady volume of the two menu items so that variances are measurable, and granted access to purchase records. Menu prices start at IDR 15,000 per portion and customers may take rice and brenebon (kidney bean soup) without extra charge. The branch opens daily from 08.00 to 02.00 WITA (Central Indonesia Time, UTC+8) in two shifts with 13 employees; its organisation comprises the owner, an operations head, and kitchen, service and administration/cashier units. Raw materials are bought daily in traditional markets to preserve freshness, since most items are perishable.

Ragey is a Minahasan grilled pork skewer (three pieces of pork per skewer, cuts known locally as samcan or lulur) served with chili paste and sold at IDR 20,000 per skewer (IDR 45,000 per package). Ba' Isi Bulu is minced pork seasoned with chili and aromatics, packed into young bamboo and grilled, then cut into portions and sold at IDR 50,000 per portion; it is a customer favourite. Both are sold separately from rice, which allows standard cost per portion to be defined (Table 1). Fieldwork took place between June and August 2026; cost records refer to May 2026 and were collected retrospectively from the restaurant's receipts.

Table 1. Standards per unit for the two menu items

Menu	Selling price (IDR)	Standard main material	Standard yield	Pork cost per unit (IDR)	Pork cost, % of price
Ragey	20,000 per skewer	Pork, 50 g net per skewer	20 skewers per kg	4,500	22.50
Ba' Isi Bulu	50,000 per portion	Minced pork, 125 g per portion	8 portions per kg (2.5 kg per bamboo yields 20 portions)	11,250	22.50

Note. Standards were supplied by the restaurant (cook's standard recipe); pork price IDR 90,000 per kg. Standards are expressed per kilogram of purchased pork and do not separate trimming or cooking loss from net portion weight; see the subsection on data analysis and indicators.

Data and procedures

Qualitative data. Observation covered raw material handling, portioning, sales recording and daily purchasing. Interviews followed a guide of 15 questions in five areas: restaurant profile and operations, selling prices and sales volume, raw materials and standard recipes, purchasing, and budgeting and cost control. Three staff members were interviewed (Table 2). The informants are coded to protect confidentiality. Interview notes were coded by the guide's five areas, and statements were cross-checked against observation and purchase records where possible (triangulation).

Table 2. Informants

Code	Role	Relevance to the study	Limitation
A	Administration and cashier	Sales recording, receipts and purchase notes	Not the budget preparer or approver
B	Service staff	Customer demand, servings at the table	Limited knowledge of purchasing and kitchen standards
C	Cook	Standard recipe, portioning, measuring tools, use of materials	Not responsible for budget or purchasing decisions

Note. The owner, the operations head and the person who purchases materials were not interviewed; statements about budget preparation are therefore limited to what these staff reported and what the records show.

Quantitative data. The budget is a 30-day raw material and supplementary material budget for the two menus, compiled by the authors from the restaurant's standards: target sales of 1,000 Ragey skewers and 100 Ba' Isi Bulu portions per day (average daily sales, accumulated over 30 days), the conversion rates in Table 1, and reference market prices in Manado (pork IDR 90,000 per kg; bird's-eye chili IDR 50,000 per kg; other prices in Table 4). It is therefore a standard cost benchmark rather than a document that the restaurant itself approved and used; the subsection on budget preparation in the Results reports what the restaurant's staff said about its own planning. Actual cost was compiled by summing purchase receipts and kitchen purchase notes for May 2026.

Data analysis and indicators

Table 3 operationalises the three constructs. For quantitative analysis, the cost variance is the difference between actual and budgeted cost (Datar & Rajan, 2021):

$$CV = \text{Actual cost} - \text{Budgeted cost}$$

A positive value is unfavourable. The budget attainment ratio is defined here as an actual-to-budget ratio; it is the authors' own descriptive construct, not a standard measure of efficiency, and it depends on how realistic the budget is:

$$BAR = (\text{Actual cost} \div \text{Budgeted cost}) \times 100\%$$

Values above 100% mean that actual cost exceeded the budget. Because small deviations in perishable inputs are normal, a ±5% tolerance band around 100% is applied as an explicit analytical convention rather than a normative standard, and results are reported against both the 100% line and the band. To trace the variance of the main inputs, price and quantity effects are separated:

$$MPV = (\text{Actual price} - \text{Standard price}) \times \text{Actual quantity}$$

$$MQV = (\text{Actual quantity} - \text{Standard quantity}) \times \text{Standard price}$$

Positive values are unfavourable. Three assumptions apply and are repeated in the table notes. First, actual sales volume is assumed to equal the target volume (30,000 skewers and 3,000 portions), so the static budget equals the flexed budget and no volume variance arises; actual sales data were not available. Second, the actual pork quantity for Ragey (1,666.67 kg) is derived from the yield reported by the kitchen (18 skewers per kg) and was not weighed from stock records. Third, the standard treats purchased pork weight as net weight, so the MQV combines over-portioning with any trimming, cooking or handling loss that the standard does not model. Food cost percentage is computed at target sales and is illustrative. A sensitivity analysis (see the subsection on sensitivity to the budget period) tests the effect of the 30-day budget versus a 31-day month.

Table 3. Constructs, indicators and evidence

Construct	Indicator	Evidence	Reporting
Budget preparation	Basis of the budget (sales target, recipe standards, prices); who prepares and approves; written standards available	Interviews, observation, budget workings	Described under budget preparation
Cost control	Measuring tools used in portioning; supervision of purchasing and use; frequency of budget–actual review; corrective action on deviations	Observation, interviews	Present / absent by menu, under price and quantity variances
Cost performance	Variance (IDR, %); BAR; MPV and MQV; food cost % of sales; pork cost per portion against standard	Budget, purchase receipts, standards	Tables 5–7; ±5% band

Note. Prepared by the authors.

4. Result and discussion

Budget preparation

Budget structure. The 30-day budget totals IDR 247.63 million (Table 4). Of this, IDR 205.83 million (83.1%) is for food materials (pork, chili, shallots, garlic, ginger, herbs and seasonings) and IDR 41.80 million (16.9%) is for supplementary items (skewers, cooking oil and margarine, charcoal, bamboo and banana leaves). Pork alone is IDR 168.75 million, 68.1% of the budget. Charcoal is a fuel and the other supplementary items are packaging or cooking media, so they are shown separately from food materials.

Table 4. Budget for 30 operating days

Menu	Cost line	Quantity	Unit	Budget (IDR)
Ragey	Pork (samcan/lulur), standard price IDR 90,000/kg	1,500	kg	135,000,000
	Chili paste: bird's-eye chili 300 kg (15,000,000), curly chili 75 kg (3,375,000), shallots 75 kg (3,000,000)	450	kg	21,375,000
	Marinade: garlic 60 kg (2,400,000), ginger 23 kg (805,000)	83	kg	3,205,000
	Aromatics (lemongrass, kaffir lime leaves) and seasoning (salt, sugar, stock)	90 bundles; as needed		3,000,000
	Food materials, Ragey			**162,580,000**
	Supplementary: skewers 30,000 pcs (6,000,000), cooking oil and margarine (2,000,000), charcoal 160 sacks (32,000,000)			40,000,000
	Subtotal Ragey			**202,580,000**
Ba' Isi Bulu	Minced pork, standard price IDR 90,000/kg	375	kg	33,750,000
	Spices: bird's-eye chili 120 kg at IDR 50,000 (6,000,000) and other ground spices 40 kg at IDR 50,000 (2,000,000)	160	kg	8,000,000
	Spring onion and basil	200	bundles	1,500,000
	Food materials, Ba' Isi Bulu			**43,250,000**
	Supplementary: young bamboo 150 pcs (1,500,000), banana leaves and salt (300,000)			1,800,000
	Subtotal Ba' Isi Bulu			**45,050,000**
	Total budget			**247,630,000**

Note. Prepared by the authors from the restaurant's standards and reference market prices (2026). Combined lines show their components in the description. The budget covers 30 days; May 2026 has 31.

What staff reported. Staff reported that planning of raw material needs is based on average daily sales accumulated over a 30-day operating period, that the cook's standard recipe fixes the pork quantity per skewer at 50 g (three pieces) and per Ba'

Isi Bulu bamboo at 2.5 kg of minced pork, and that materials are bought daily from traditional markets at the prevailing price. Observation showed that Ragey pork is cut by hand without a portion scale, whereas the Ba' Isi Bulu mixture is measured with a standard bowl.

Budget versus actual cost

Actual cost exceeded the budget for both menus (Table 5). The combined overrun is IDR 15.07 million (6.09%); Ragey accounts for IDR 11.92 million and Ba' Isi Bulu for IDR 3.15 million. All three BARs lie above 100% and above the +5% tolerance band, Ragey only marginally.

Table 5. Budget, actual cost, variance and budget attainment ratio, May 2026

Menu	Budget (IDR)	Actual (IDR)	Variance (IDR)	Variance (%)	BAR (%)	Against ±5% band
Ragey	202,580,000	214,500,000	+11,920,000	+5.88	105.88	Above
Ba' Isi Bulu	45,050,000	48,200,000	+3,150,000	+6.99	106.99	Above
Total	**247,630,000**	**262,700,000**	**+15,070,000**	**+6.09**	**106.09**	**Above**

Note. Source: purchase receipts and purchase notes, May 2026; budget from Table 4. Positive variance means actual cost exceeds budget. The 30-day budget is compared with May (31 days); see Table 7.

Relative to sales, the picture is more modest. At target volumes, sales would be IDR 750 million (30,000 × IDR 20,000 plus 3,000 × IDR 50,000), so budgeted cost equals 33.0% of sales and actual cost 35.0%, a difference of 2.0 percentage points of sales. Pork alone is budgeted at 22.5% of the selling price for both menus; for Ragey, actual pork cost (IDR 150.0 million) equals 25.0% of Ragey sales at target volume. These shares are illustrative because actual sales were not available.

Price and quantity variances

Table 6 decomposes the variance for the main inputs and reconciles it with Table 5; Figure 2 shows the same bridge from budget to actual. The pork quantity variance in Ragey is the largest single item.

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Table 6. Decomposition and reconciliation of the variance by cost line (IDR)

Cost line	Standard	Actual	MPV	MQV	Not decomposed	Total variance
Ragey: pork	135,000,000	150,000,000	0	+15,000,000		+15,000,000
Ragey: all other lines	67,580,000	64,500,000			−3,080,000	−3,080,000
Ragey subtotal	**202,580,000**	**214,500,000**	**0**	**+15,000,000**	**−3,080,000**	**+11,920,000**
Ba' Isi Bulu: pork	33,750,000	33,750,000	0	0		0
Ba' Isi Bulu: bird's-eye chili (120 kg)	6,000,000	8,362,500	+2,362,500	0		+2,362,500
Ba' Isi Bulu: all other lines	5,300,000	6,087,500			+787,500	+787,500
Ba' Isi Bulu subtotal	**45,050,000**	**48,200,000**	**+2,362,500**	**0**	**+787,500**	**+3,150,000**
Total	**247,630,000**	**262,700,000**	**+2,362,500**	**+15,000,000**	**−2,292,500**	**+15,070,000**

Note. Ragey pork actual = 1,666.67 kg × IDR 90,000, derived from a reported yield of 18 skewers per kg and not weighed from stock records; actual price assumed equal to standard. Actual volume is assumed equal to target volume, so no volume variance arises. Chili: standard 120 kg × IDR 50,000; actual average IDR 69,687.50 per kg × 120 kg. "All other lines" are obtained by difference from the actual totals and are not itemised in the receipt's summary, so no price or quantity split is possible.

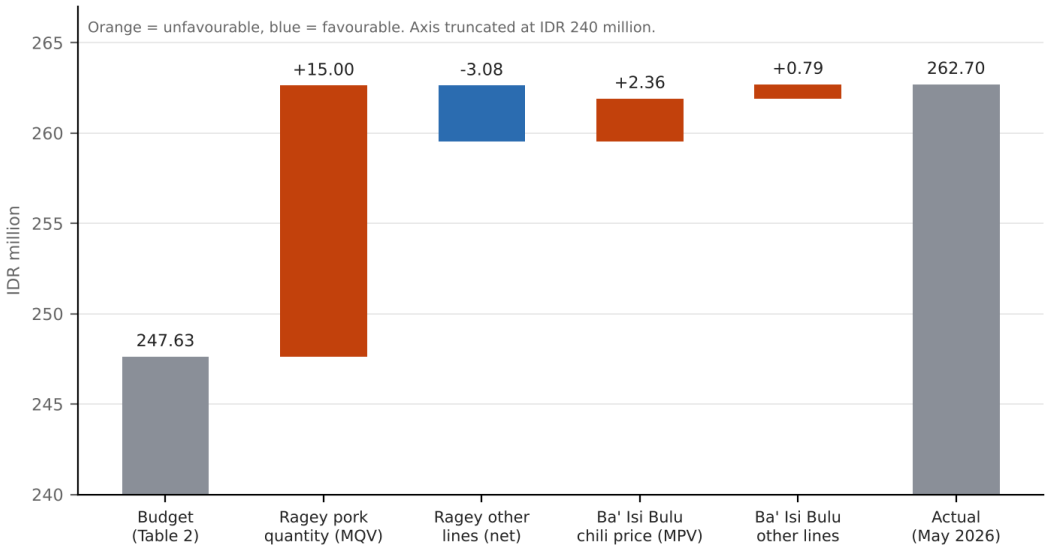


Figure 2. Bridge from budget to actual raw material cost, May 2026 (IDR million)

Ragey. The reported yield of 18 skewers per kg implies an average of 55.6 g of pork per skewer, 11.1% above the 50 g standard. Pork cost per skewer is then IDR 5,000 instead of IDR 4,500, so the quantity variance is 30,000 × IDR 500 = IDR 15.0 million. If the average were exactly 55 g, 30,000 skewers would need 1,650 kg and the variance would be IDR 13.5 million, so the range is IDR 13.5–15.0 million. The pork price is assumed to equal the standard. All other Ragey lines together were IDR 3.08 million below budget; the receipts do not show which lines account for this saving.

Ba' Isi Bulu. Pork use equals the standard of 375 kg (3,000 portions ÷ 8 portions per kg), so there is no pork

variance. The bird's-eye chili line in Table 4 combines 120 kg of chili and 40 kg of other ground spices, both at IDR 50,000 per kg. The actual average chili price of IDR 69,687.50 per kg is 39.4% above the standard, giving a price variance of IDR 2,362,500, which is 75% of the menu's variance. The remaining IDR 787,500 falls on other lines (other spices, vegetables, bamboo and banana leaves) that cannot be split further and is therefore not labelled as a price variance.

Qualitative evidence. Observation and the cook's account indicate that Ragey pork is portioned by visual estimate without a digital scale, which fits the yield shortfall, while the Ba' Isi Bulu mixture is measured with a standard bowl, which fits the absence of a pork quantity variance. Informants described chili prices in the daily market as volatile. No portion audit or yield test was carried out, and no independent price series was consulted; these explanations are therefore hypotheses supported by the staff's account, not tested causes.

Sensitivity to the budget period

The budget covers 30 days, while May has 31. If the receipts cover all 31 days at the same daily volume, the comparable budget is 31/30 of the reported one (Table 7). The overrun then falls from 6.09% to 2.66%, inside the ±5% band for every menu. The direction of the variance is unfavourable in both cases, but its size is sensitive to this point.

Table 7. Sensitivity of the budget attainment ratio to the length of the budget period

Scenario	Budget (IDR)	Actual (IDR)	Variance (IDR)	BAR (%)
A. As reported (30-day budget): total	247,630,000	262,700,000	+15,070,000	106.09
B. Budget pro-rated to 31 days: Ragey	209,332,667	214,500,000	+5,167,333	102.47
B. Budget pro-rated to 31 days: Ba' Isi Bulu	46,551,667	48,200,000	+1,648,333	103.54
B. Budget pro-rated to 31 days: total	**255,884,333**	**262,700,000**	**+6,815,667**	**102.66**

Note. Authors' calculation. Pro-rating assumes the same daily sales volume in all 31 days.

Discussion

Budget preparation

The budget analysed here is a standard cost benchmark built on the restaurant's own recipe conversion rates and reference prices, with target volumes taken from average daily sales. This matches the planning function of a budget in the management control literature (Anthony & Govindarajan, 2020; Garrison et al., 2021) and gives the kitchen a clear link between pork purchased and portions produced. It is also a static budget with no tolerance threshold and no yield test behind its standards. Under a static budget the variance is interpretable as price and quantity effects only if actual volume equals target volume; this was assumed, not verified. The evidence collected does not show whether the restaurant itself prepares a written budget or reviews it against receipts, so no claim is made about its budgeting practice beyond what staff reported (see budget preparation in the Results).

Variances and cost control

Whatever the exact size, actual cost was above the benchmark. Measured as Dewi et al. (2024) report it, the gap between actual and standard cost as a percentage of sales, the overrun here is 2.0 points (35.0% against 33.0% at target volume), well below the 8.40-point average gap (40.40% against a 32% standard) that they report for a resort over July–December 2022. Because sales here are target rather than actual volumes and the two settings differ, the comparison is indicative only. Indonesian studies of production firms that report actual cost at or below budget (Lestari & Irama, 2023;

Sasongko et al., 2023) concern stable manufacturing specifications and are not directly comparable with a kitchen that portions by hand. The results are closer to Rindengan et al. (2022), who read variances as a sign of incomplete control.

The decomposition indicates where to look. About IDR 15.0 million of Ragey cost is associated with a pork yield of 18 instead of 20 skewers per kg. Over-portioning is the explanation staff gave and fits the absence of a scale, but trimming and cooking loss, spoilage, a different cut, or a sales mix different from target could produce the same figure, and the standard itself may be optimistic if it ignores loss. In Ba' Isi Bulu, chili price accounts for IDR 2.36 million; without an independent price series and with a budget price set in the same period, it is not possible to say whether the price rose or the reference price was low. Because the study cannot separate these explanations, it describes association between control conditions and variances and does not show that better control would remove them.

Managerial implications

The most concrete pointer is portion control. If the May pattern persisted, excess Ragey pork would cost IDR 13.5–15.0 million per month, about 2.0% of target sales for the two menus, or IDR 162–180 million over a year. A digital portion scale and a measured portion tool, which the Ba' Isi Bulu kitchen already uses in the form of a bowl, cost a small fraction of this, and a one-off yield test would show how much of the gap is loss rather than portioning. Alternatively, a price increase of IDR 500 per Ragey skewer would offset the pork variance at target volume, which indicates the order of magnitude of the menu price review that is the other option. For price variance, long-term fixed-price contracts are unrealistic for perishables bought daily in traditional markets. More feasible measures are recording purchase prices by supplier and date, using two or more suppliers, setting substitution rules (for example curly for bird's-eye chili in the chili paste), buffer purchases of storable spices when prices are low, and a periodic review of reference prices in the budget. A flexible budget with weekly comparison would also separate volume from price and quantity effects and give earlier warning than a monthly static comparison. This is consistent with the proactive, rather than reactive, monitoring that Charlebois et al. (2015) recommend after finding that waste in the restaurants they studied was identified about a week late through inventory checks.

5. Conclusion

RQ1. The raw material budget for the two menus is a 30-day standard cost benchmark of IDR 247.63 million, built from target daily sales, the cook's standard conversion rates (20 skewers or 8 portions per kg of pork) and reference market prices; pork is 68% of it. RQ2. Actual cost in May 2026 was IDR 262.70 million, IDR 15.07 million (6.09%) above the budget, 5.88% for Ragey and 6.99% for Ba' Isi Bulu; the overrun falls to about 2.7% if the budget is pro-rated to 31 days, so the direction is robust but the size is not. RQ3. The Ragey variance is associated with a pork yield of 18 instead of 20 skewers per kg (IDR 13.5–15.0 million), in a kitchen without a portion scale, and the Ba' Isi Bulu variance with a chili price variance of IDR 2.36 million, in a kitchen that measures its mixture with a standard bowl.

For theory, the study illustrates how a price–quantity decomposition that is reconciled line by line with the total variance can locate the source of an overrun in a small restaurant, and how sensitive the reading is to budget design. For practice, it points to portion control with a yield test, and price monitoring with feasible procurement measures, as the first actions.

The study has limitations that qualify every result: one branch and one month; a static budget compiled from standards and compared without actual sales volumes; a 30-day budget against a 31-day month; an actual pork quantity derived from a reported yield rather than measured; standards that do not separate trimming and cooking loss; actual cost lines outside pork and chili that are not itemised; three informants, none of whom prepares the budget or buys the materials; and no portion audit or independent price data. Future research could use several branches and periods, flexible budgets with actual sales from the point-of-sale system, yield tests and sampled portion weighing, interviews with owners and purchasers, and extend the analysis to labour and overhead.

References

Ahrens, T., & Chapman, C. S. (2006). Doing qualitative field research in management accounting: Positioning data to contribute to theory. *Accounting, Organizations and Society, 31*(8), 819–841. https://doi.org/10.1016/j.aos.2006.03.007

Anthony, R. N., & Govindarajan, V. (2020). *Management control systems* (14th ed.). McGraw-Hill.

Anwar, R., Yuniarsih, Y., Depeda, A. P., Tambunan, E. C., & Rosa, T. (2022). Penggunaan analisis anggaran sebagai alat perencanaan dan pengendalian keuangan dalam perusahaan. *Journal of Educational and Language Research, 1*(8), 1083–1096. https://doi.org/10.53625/joel.v1i8.1724

BPS. (2024). *Statistik penyediaan makanan dan minuman 2023*. Badan Pusat Statistik. https://www.bps.go.id/id/publication/2024/12/23/f2c7743c4712aaeaa4abf694/statistik-penyediaan-makanan-dan-minuman-2023

BPS. (2025). *Statistik penyediaan makanan minuman 2024*. Badan Pusat Statistik. https://www.bps.go.id/id/publication/2025/12/31/e46a55af756331ede8016b91/statistik-penyediaan-makanan-minuman-2024.html

Charlebois, S., Creedy, A., & von Massow, M. (2015). "Back of house"–focused study on food waste in fine dining: The case of Delish restaurants. *International Journal of Culture, Tourism and Hospitality Research, 9*(3), 278–291. https://doi.org/10.1108/IJCTHR-12-2014-0100

Christ, K. L., & Burritt, R. (2017). Material flow cost accounting for food waste in the restaurant industry. *British Food Journal, 119*(3), 600–612. https://doi.org/10.1108/BFJ-07-2016-0318

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE.

Damanik, N., Yulis, Y. E., & Irwan, M. (2020). Analisis pengendalian biaya produksi sebagai suatu usaha untuk meningkatkan efisiensi biaya produksi pada PT. Dutapalma Nusantara-PKS Sei. Kuko. *Jurnal Ekonomi AlKhitmah, 2*(2), 1-17. https://doi.org/10.36378/khitmah.v2i2.997

Datar, S. M., & Rajan, M. V. (2021). *Horngren's cost accounting: A managerial emphasis* (17th ed.). Pearson.

Dewi, N. K. M. D. A., Karmana, I. W., & Jaya, I. M. S. A. (2024). Variance analysis as a tool of controlling food and beverage costs at Masmara Resort Canggu. *Journal of Applied Sciences in Accounting,*

Finance, and Tax, 7(1), 1–14. https://ojs2.pnb.ac.id/index.php/JASAFINT/article/view/1879

Dopson, L. R., & Hayes, D. K. (2019). *Food and beverage cost control* (7th ed.). Wiley.

Duarte Alonso, A., & Krajsic, V. (2014). Small restaurant businesses and the importance of knowledge of cost management: An exploratory study. *International Journal of Leisure and Tourism Marketing, 4*(1), 31–49. https://ro.ecu.edu.au/ecuworkspost2013/875/

Garrison, R. H., Noreen, E. W., & Brewer, P. C. (2021). *Managerial accounting* (17th ed.). McGraw-Hill Education.

Hansen, D. R., & Mowen, M. M. (2022). *Managerial accounting* (11th ed.). Cengage Learning.

Humaera, B. N. H., Effendy, L., & Nurabiah, N. (2023). Analisis anggaran sebagai upaya dalam perencanaan dan pengendalian biaya proyek pada PT. Dabakir Putra Mandiri. *Jurnal Riset Mahasiswa Akuntansi, 3*(1), 11–20. https://doi.org/10.29303/risma.v3i1.382

Latunggamu, O. B., Karamoy, H., & Kalalo, M. (2021). Analisis anggaran proyek sebagai alat pengendalian biaya pada PT. Esta Group Jaya Manado. *Jurnal EMBA, 9*(2), 876–882. https://doi.org/10.35794/emba.v9i2.33843

LeBruto, S. M., Ashley, R. A., & Quain, W. (1997). Using the contribution margin aspect of menu engineering to enhance financial results. *International Journal of Contemporary Hospitality Management, 9*(4), 161–167. https://doi.org/10.1108/09596119710185846

Lestari, I. A., & Irama, O. N. (2023). Peranan anggaran biaya produksi sebagai alat bantu pengendalian dalam upaya pencapaian efektifitas pada PT Perkebunan Nusantara III Medan. *Al-Buhuts, 19*(1), 628–640. https://journal.iaingorontalo.ac.id/index.php/ab/article/view/3768

Martin, A. D. J., Rahayuningsih, S., & Saff'i, I. (2020). Perencanaan anggaran dan pengendalian biaya produksi untuk meningkatkan efisiensi biaya produksi. *Jurmatis: Jurnal Ilmiah Mahasiswa Teknik Industri, 2*(1), 54–63. https://doi.org/10.30737/jurmatis.v2i1.864

Merchant, K. A., & Van der Stede, W. A. (2017). *Management control systems: Performance measurement, evaluation and incentives* (4th ed.). Pearson.

Mulyadi. (2021). *Akuntansi biaya*. UPP STIM YKPN.

Murdianto, G. T., Mubaroq, K. I., Simangunsong, C. N. B., & Syahwildan, M. (2025). Analisis efektivitas anggaran dan pengendalian biaya pada PT Indofood Sukses Makmur Tbk. *Jurnal Ilmiah Ekonomi dan Manajemen, 3*(7), 401–405. https://ejurnal.kampusakademik.co.id/index.php/jiem/article/view/6040

Putri, A. A., Lestari, S. R. D., Harahap, S. A., & Vientiany, D. (2026). Analisis keselarasan anggaran dan realisasi produksi dalam meningkatkan efisiensi serta pengendalian biaya. *Jurnal Multidisiplin Ilmu Akademik, 3*(1), 1310–1318. https://ejurnal.kampusakademik.co.id/index.php/jmia/article/view/8479

Putri, A. G., & Kusumastuti, E. D. (2022). Analisis penerapan biaya standar terhadap pengendalian biaya

produksi pada Javasublim. *Indonesian Accounting Literacy Journal, 2*(2), 337–346. https://doi.org/10.35313/ialj.v2i2.3162

Rajindra, R., Umar, U., & Nurpadia, J. (2022). Perencanaan kebutuhan bahan baku guna meningkatkan efisiensi biaya produksi pada CV. Solo Indah Kota Palu. *Jurnal Sinar Manajemen, 9*(2), 335–341. https://jurnal.unismuhpalu.ac.id/index.php/JSM/article/view/2688

Rindengan, M., Manossoh, H., & Wokas, H. R. (2022). Analisis varians biaya operasional dalam mengukur pengendalian biaya operasional PT. Hasjrat Abadi Manado. *Jurnal LPPM Bidang EkoSosBudKum, 5*(2), 887–896. https://ejournal.unsrat.ac.id/index.php/lppmekososbudkum/article/view/39625

Rohimah, A. N., & Purwanti. (2025). Analisis peran akuntansi manajemen dalam pengendalian biaya. *Jurnal Akuntansi Keuangan dan Perpajakan, 1*(3), 174–180. https://doi.org/10.62379/jakp.v1i3.160

Sasongko, D. J., Kalangi, L., & Mintalangi, S. S. (2023). Analisis anggaran biaya produksi sebagai alat untuk meningkatkan efektivitas pengendalian biaya produksi pada PT Sari Tuna Makmur. *Jurnal LPPM Bidang EkoSosBudKum, 6*(2), 1297–1310. https://ejournal.unsrat.ac.id/index.php/lppmekososbudkum/article/view/45446

Scapens, R. W. (1990). Researching management accounting practice: The role of case study methods. *The British Accounting Review, 22*(3), 259–281. https://www.sciencedirect.com/science/article/abs/pii/0890838990900086

Sinuhaji, T. N. R. S., & Nasution, M. T. P. (2023). Fungsi anggaran sebagai alat perencanaan dan pengendalian pada Birorena Polda Sumut. *Digital Jurnal Publikasi Ilmu Manajemen dan E-Commerce, 2*(4), 275–282. https://doi.org/10.30640/digital.v2i4.1791

Tahulending, M., & Rondonuwu, S. (2022). Analisis pengendalian biaya operasional terhadap peningkatan laba pada CV. Kombos Tendean Manado. *Jurnal LPPM Bidang EkoSosBudKum, 6*(1), 543–554. https://ejournal.unsrat.ac.id/index.php/lppmekososbudkum/article/view/43380

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE.