منجز MONGEZ AI

من البيانات إلى القرار

Technical appendix

MONGEZ AI

Sales example – SYNTHETIC TEST DATA

Performance review and executive priorities

24 October 2026

Item	Details
Report subject	Sales example – SYNTHETIC TEST DATA
Source period	2026-01-05 – 2026-04-05
Issued	24 October 2026
Report reference	PUBLIC-DEMO-SYNTHETIC
Data version	PUBLIC-DEMO-SYNTHETIC
Source shape	Rows: 273 · Columns: 8
Data quality score	100 /100 – structure/value diagnostic, not source-accuracy certification; see appendix.; no fully empty columns.

TEST DATA – not actual customer results

Mongez AI · FROM DATA TO DECISIONS

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Source references

Item	Value
Source file	mongez-sales-check.csv

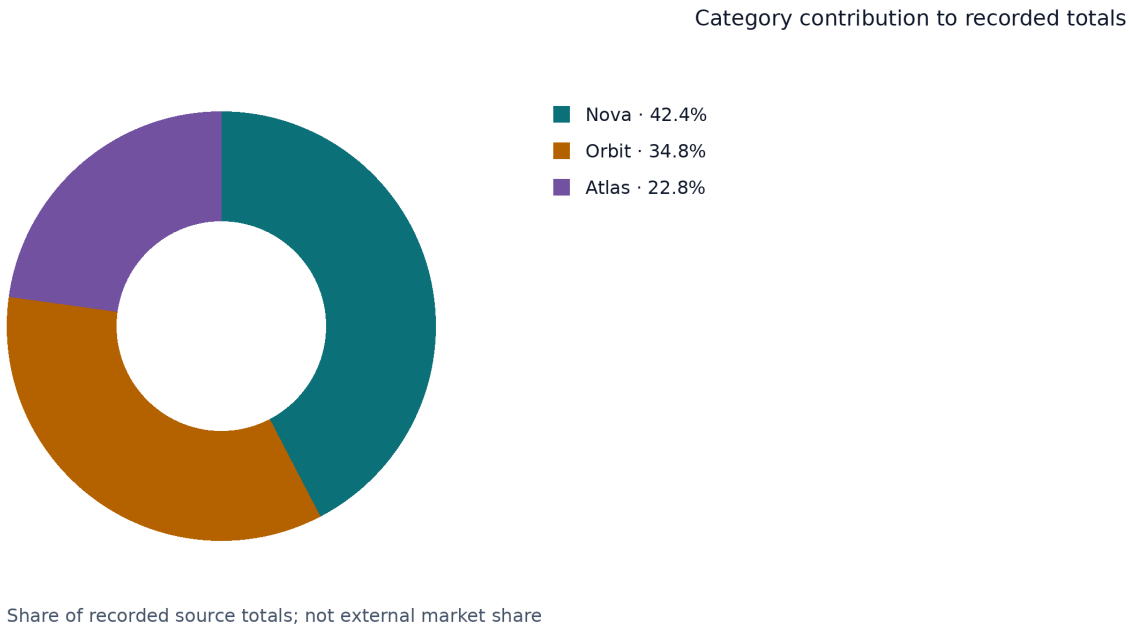
Analysis methodology and tools

Import, quality checks, descriptive statistics, period aggregation, IQR candidates and categorical comparisons use deterministic calculations. Z-Score is not used. Associations do not establish causes.

Tool	Role
Python / Decimal	Processing and exact arithmetic; this path does not use Pandas.
Pillow	Local chart rendering; this path does not use Matplotlib.
Mongez AI	Automation and evidence/version binding.
WeasyPrint / OOXML	Local PDF and Word export.

Contribution mix

Shares refer to groups within this dataset, not an external market.



Share of recorded source totals; not external market share

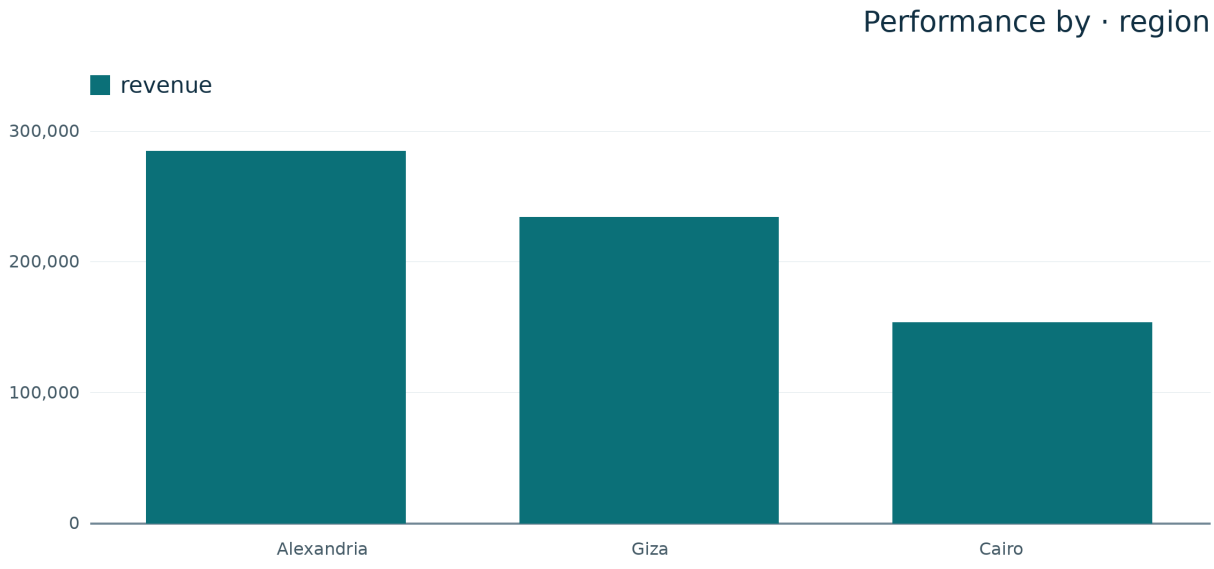
> Category contributions are recorded source amounts, not market shares.

Performance by · region

Alexandria leads with 284,700 across 91 valid records.

recorded margin is 40% for Cairo versus 30% for Giza, a gap of 10 percentage points. Sales volume alone does not identify the most profitable category.

compare regions within the same product using comparable samples and periods. Review product mix before interpreting regional differences or reallocating operating budgets.

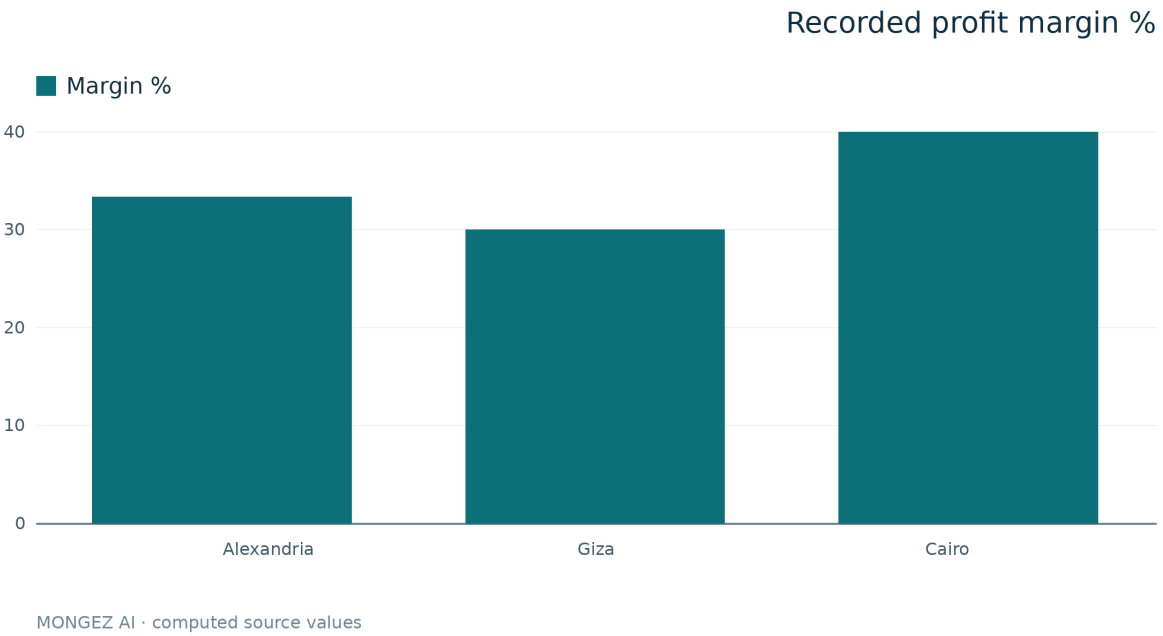


MONGEZ AI · computed source values

> Category contributions are recorded source amounts, not market shares.

Category	Total	Records	Margin %
Alexandria	284,700	91	33.33
Giza	234,000	91	30
Cairo	153,400	91	40

Margin comparison · region



MONGEZ AI · computed source values

> Margins compare profit with aligned revenue; sample sizes remain in the source tables.

product × region

The dimensions map one-to-one in current observations; their separate effects or market causes cannot be established from this file alone.

The comparison includes 273 valid rows; 0 are excluded for missing measures or categories.

product	region	Total	Margin %	Records
Nova	Alexandria	284,700	33.33	91
Orbit	Giza	234,000	30	91
Atlas	Cairo	153,400	40	91

Performance segments

Descriptive segments use tertiles of category totals; they are neither causal nor predictive.

Category	Segment	Total
Nova	High	284,700
Orbit	Medium	234,000
Atlas	Low	153,400

Associations between measures

Correlation does not establish causality; measures may share the same calculation. Undefined values are shown as a dash.

Associations between measures

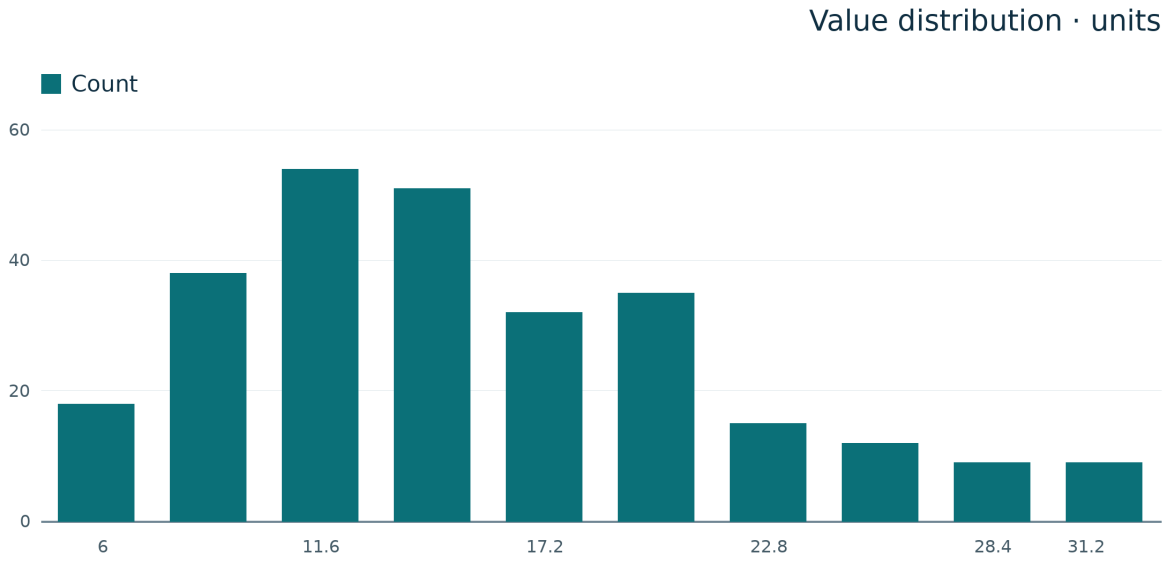


Pearson r · blue: positive · amber: negative · —: not computed

Measures	Pearson r	Sample	Interpretation caution
units / revenue	0.8	273	
units / cost	0.73	273	
units / profit	0.92	273	

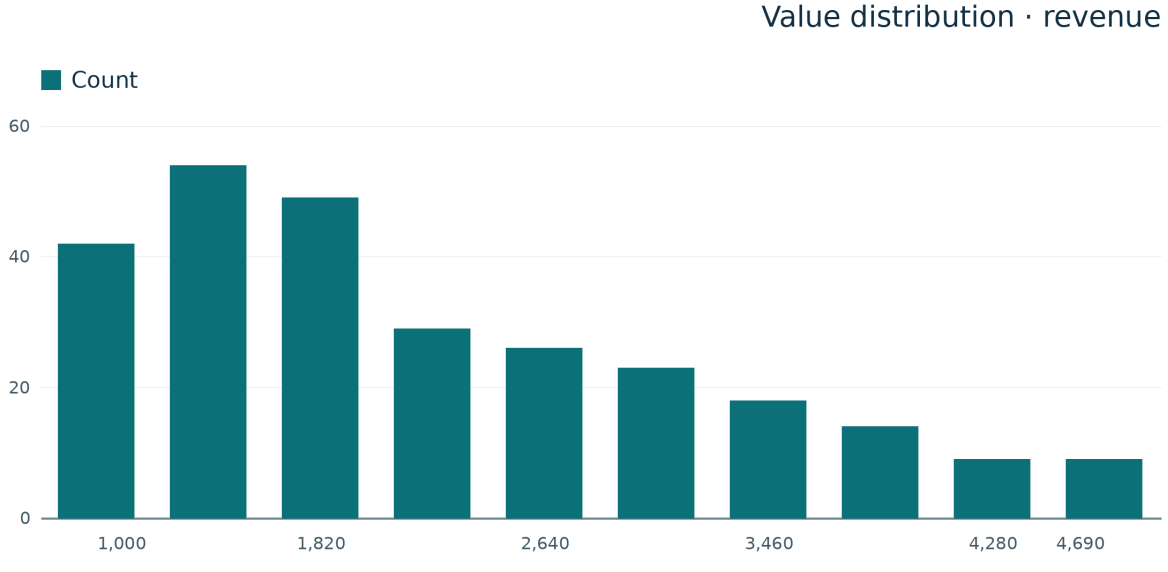
Value distribution · units

The chart shows the distribution of recorded values. Bin boundaries and counts are in the appendix.



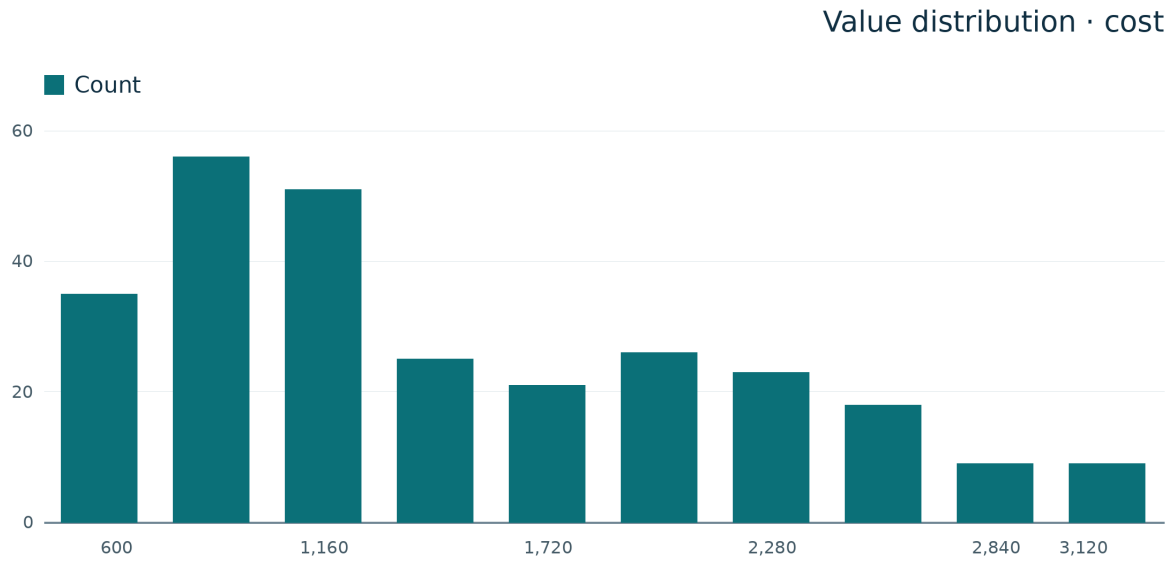
MONGEZ AI · computed source values

Value distribution · revenue



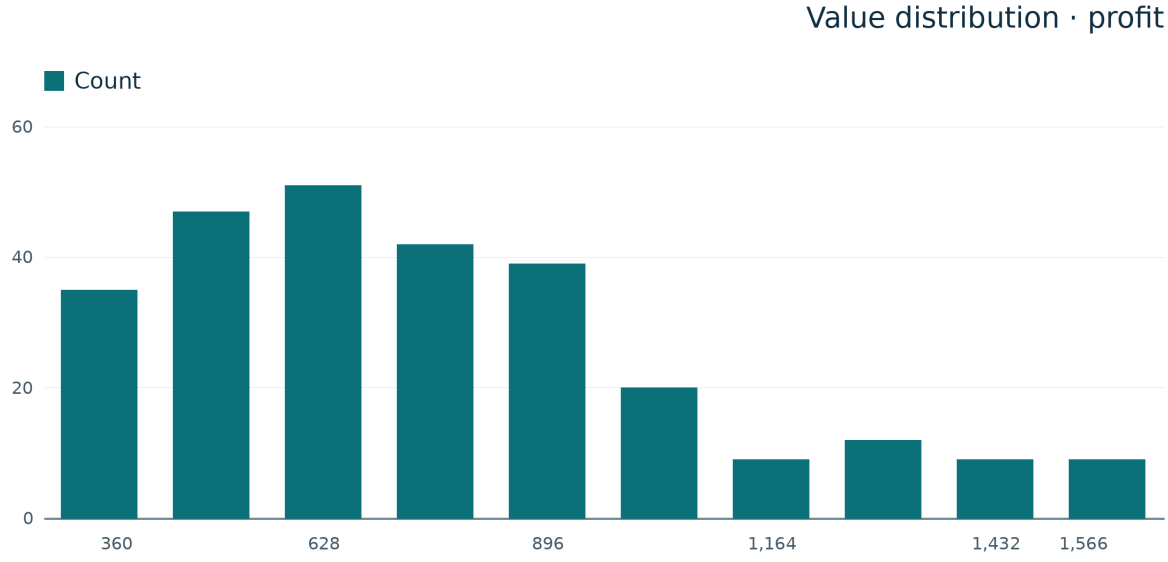
MONGEZ AI · computed source values

Value distribution · cost



MONGEZ AI · computed source values

Value distribution · profit



MONGEZ AI · computed source values

Findings and recommended actions

Nova has the highest aligned revenue but ranks 2 by recorded profit margin. Compare volume and margin together to avoid favoring high revenue with weak profitability. Compare revenue and margin together; review group sample sizes.

Observed growth rates decreased across three comparisons. Review comparison periods and category contributions before generalizing the trend. Monitor subsequent complete periods; observed patterns do not establish significance or predict future values.

Observed totals increased in three consecutive comparisons. Review comparison periods and category contributions before generalizing the trend. Monitor subsequent complete periods; observed patterns do not establish significance or predict future values.

Nova has the highest recorded revenue total: 284700 (91 valid records). A signal for prioritizing investigation, not proof of a performance cause. Review sample sizes and completeness before comparing performance.

units and profit have an observed Pearson correlation of 0.919 across 273 aligned values. Correlation does not imply causation. The association may share a calculation; it does not justify a causal intervention. Inspect the scatter sample and shared calculation warnings; do not infer causal effects.

Observed group totals form 1 low, 1 medium and 1 high quantile segments. A signal for prioritizing investigation, not proof of a performance cause. Review the transparent thresholds and record counts before choosing actions for each segment.

Limitations and calculation quality

Identifier fields are excluded from numeric comparisons. Review inferred column roles against your business context.

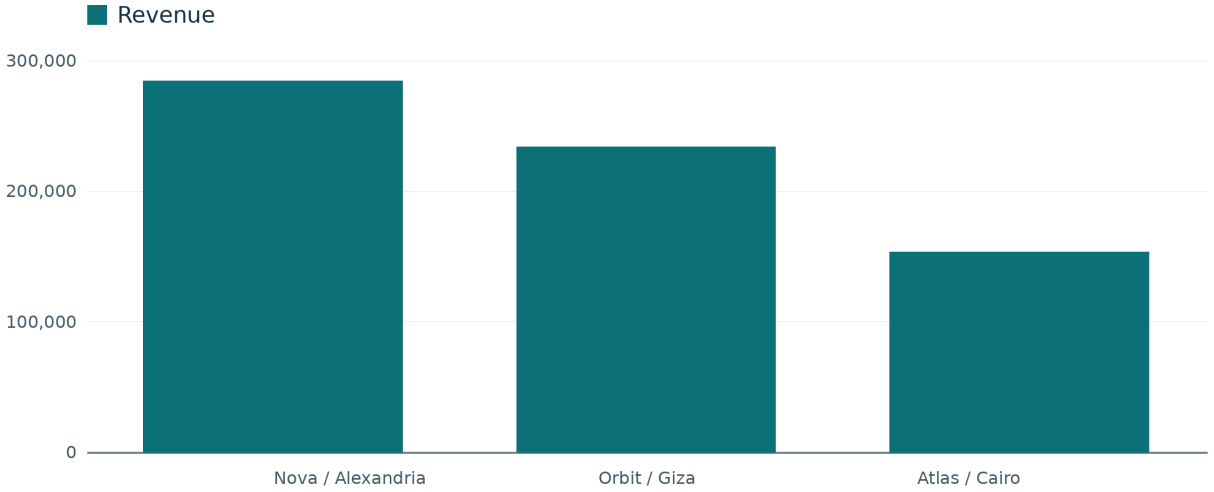
Identifier fields are excluded from quantitative comparisons.

Quantile segments are descriptive; few groups or small record counts make thresholds unstable.

Cross-tab by · Revenue

Observed cross-tab cells are compared; no causal attribution is implied.

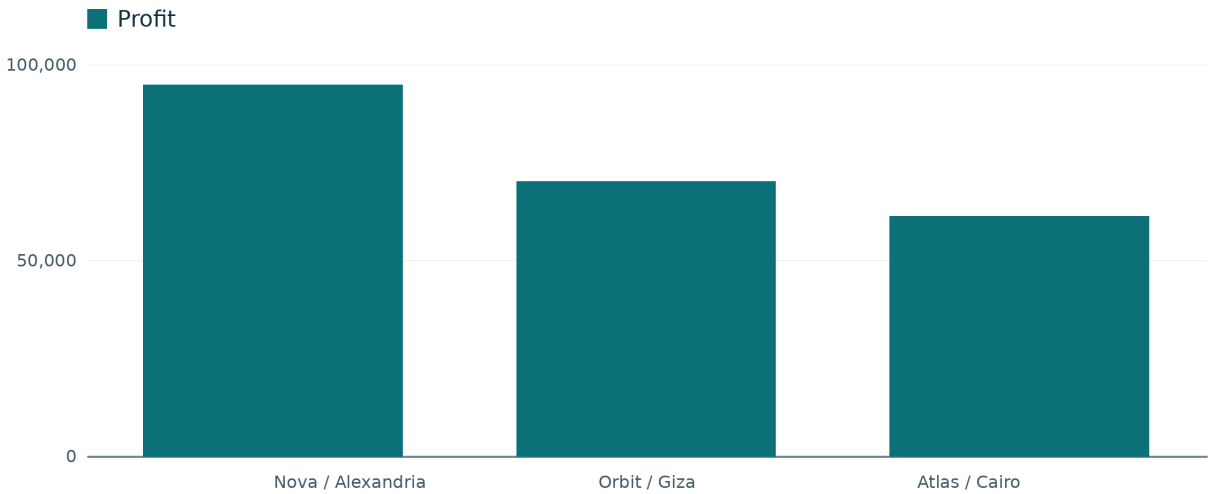
Cross-tab by · Revenue



MONGEZ AI · computed source values

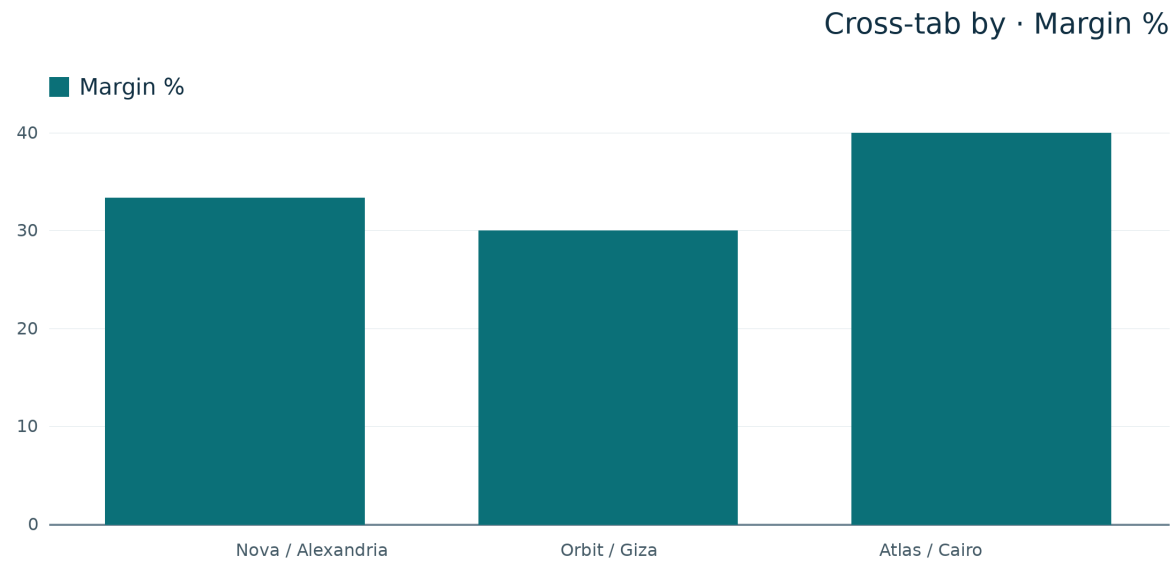
Cross-tab by · Profit

Cross-tab by · Profit



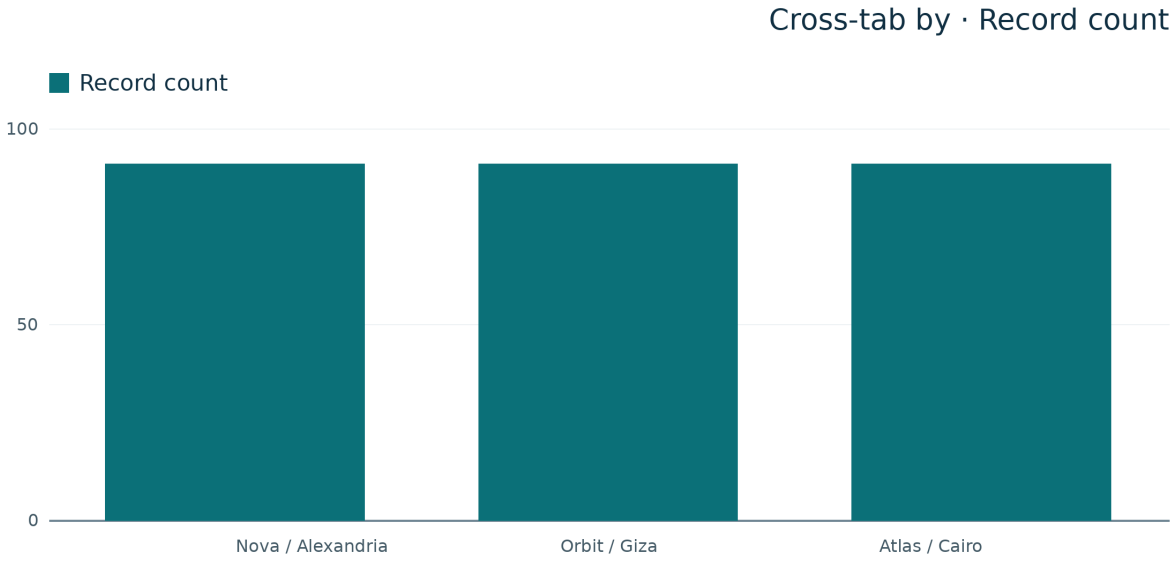
MONGEZ AI · computed source values

Cross-tab by · Margin %



MONGEZ AI · computed source values

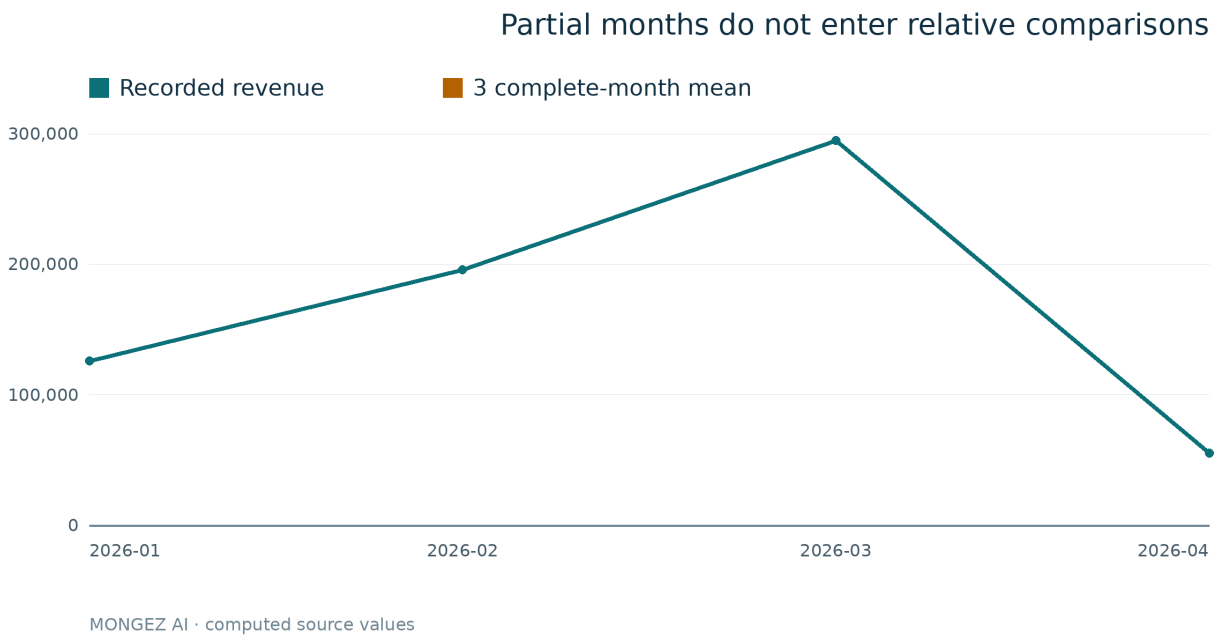
Cross-tab by · Record count



MONGEZ AI · computed source values

Partial months do not enter relative comparisons

Complete means every calendar day is observed in this source. Missing days may be inactivity or gaps and are not assumed zero sales. Partial months are not compared with full-month targets.



MONGEZ AI · computed source values

> The moving mean appears only for three consecutive complete months; partial values are never filled with zero.

Month	Recorded revenue	Observed / calendar days	Status	YoY growth %
2026-01	126,000	27 / 31	Partial or gaps	–
2026-02	196,000	28 / 28	Complete	–
2026-03	294,850	31 / 31	Complete	–
2026-04	55,250	5 / 30	Partial or gaps	–

Change decomposition describes volume, mix and realized value

Revenue changed by 98,850 between 2026-02 and 2026-03. This sequential arithmetic decomposition does not establish business causes; realized unit value is not a list price.

Factor	Arithmetic effect	% of baseline revenue
Volume	96,687.5	49.33

Factor	Arithmetic effect	% of baseline revenue
Mix	2,162.5	1.1
Realized unit revenue	0	0

Realized revenue per unit differs from list price

Unit value uses aligned revenue/positive-quantity pairs; margin uses aligned revenue/profit pairs. Unused rows are disclosed per calculation.

Product	Records	Quantity	Unit revenue	Margin %	Unused: unit / margin
Atlas	91	1,534	100	40	0 / 0
Nova	91	1,898	150	33.33	0 / 0
Orbit	91	1,170	200	30	0 / 0

Benchmarking: targets are never invented

Without a declared target, achievement cannot be calculated; observed categories and periods remain internal comparators only.

Period	Group	Actual	Target	Achievement %	Deviation
No eligible results in this section.					

Diagnostics and forecast: available-history limits

Use the saved forecasting workflow; at least 12 complete periods and backtesting are required. No scenario or future number is invented.

No two complete annual cycles are available for a seasonal profile; missing deductions, returns and fixed costs are not invented.

Month	Years	Mean revenue	Mean daily revenue
No eligible results in this section.			

Key performance indicators

Values are displayed to two decimal places; exact values and source columns are retained in the appendix.

Indicator	Value	Calculation	Valid	Excluded
Record count	273	Record count	273	0
Total recorded quantity	4,602	Sum	273	0
units: mean	16.86	Mean	273	0
units: median	16	Median	273	0
Total recorded revenue	672,100	Sum	273	0
revenue: mean	2,461.9	Mean	273	0
revenue: median	2,200	Median	273	0
Total recorded cost	445,640	Sum	273	0
cost: mean	1,632.38	Mean	273	0
cost: median	1,400	Median	273	0
Total recorded profit	226,460	Sum	273	0
profit: mean	829.52	Mean	273	0
profit: median	780	Median	273	0
Unique recorded product identifiers	3	Distinct nonmissing values	273	0
Average recorded order value	2,461.9	Calculation documented in evidence appendix	273	0
Recorded profit margin	33.69	Calculation documented in evidence appendix	273	0
Observed comparable-period growth	5.78	Calculation documented in evidence appendix	273	0

Category ranking

Dimension: product

Category	Total	Share %	Records
Nova	284,700	42.36	91
Orbit	234,000	34.82	91
Atlas	153,400	22.82	91

Recorded profitability

Aligned recorded profit margin: 33.69%

The margin expresses recorded profit as a share of aligned positive revenue. Calculation details are retained in the evidence appendix; differences are not labeled profit without eligible source fields.

Category	Revenue	Profit	Margin %	Records
Nova	284,700	94,900	33.33	91
Orbit	234,000	70,200	30	91
Atlas	153,400	61,360	40	91

Value distribution · units

Equal-width bins: lower bound included, upper bound excluded except the final bin. Bar height is the value count.

Lower	Upper	Count
6	8.8	18
8.8	11.6	38
11.6	14.4	54
14.4	17.2	51
17.2	20	32

Lower	Upper	Count
20	22.8	35
22.8	25.6	15
25.6	28.4	12
28.4	31.2	9
31.2	34	9

Value distribution · revenue

Lower	Upper	Count
1,000	1,410	42
1,410	1,820	54
1,820	2,230	49
2,230	2,640	29
2,640	3,050	26
3,050	3,460	23
3,460	3,870	18
3,870	4,280	14
4,280	4,690	9
4,690	5,100	9

Value distribution · cost

Lower	Upper	Count
600	880	35

Lower	Upper	Count
880	1,160	56
1,160	1,440	51
1,440	1,720	25
1,720	2,000	21
2,000	2,280	26
2,280	2,560	23
2,560	2,840	18
2,840	3,120	9
3,120	3,400	9

Value distribution · profit

Lower	Upper	Count
360	494	35
494	628	47
628	762	51
762	896	42
896	1,030	39
1,030	1,164	20
1,164	1,298	9
1,298	1,432	12
1,432	1,566	9
1,566	1,700	9

KPI reference appendix

Indicator	Exact value	Source columns
Record count	273	–
Total recorded quantity	4,602	Quantity
units: mean	16.86	Quantity
units: median	16	Quantity
Total recorded revenue	672,100	Recorded revenue
revenue: mean	2,461.9	Recorded revenue
revenue: median	2,200	Recorded revenue
Total recorded cost	445,640	Recorded cost
cost: mean	1,632.38	Recorded cost
cost: median	1,400	Recorded cost
Total recorded profit	226,460	Recorded profit
profit: mean	829.52	Recorded profit
profit: median	780	Recorded profit
Unique recorded product identifiers	3	Product
Average recorded order value	2,461.9	revenue, order_id
Recorded profit margin	33.69	revenue, profit
Observed comparable-period growth	5.78	revenue, date

Calculation source and traceability

Match the version reference and checksum against saved evidence; a reference is not a digital signature or independent certification.

Reference	Value
dataset_version	PUBLIC-DEMO-SYNTHETIC
row_count	273
checksum	b74983d574a206bfad128747a1e856890b4e26c8a24331dd3aba2f25bf451717

Column coverage and exploration limits

Aggregations use all valid rows, not a sample. Reports cover up to 8 eligible dimensions, 6 cross-tabs and 50 cells per cross-tab; they do not claim unbounded exploration.

Column	Role	Usage
Date	Date column	Available date, not the selected time axis
Order identifier	Identifier excluded from numeric calculations	Not used as a measure or category
Product	Category dimension	Category breakdown
Region	Category dimension	Category breakdown
Quantity	Numeric measure	Numeric statistics, with chart limits
Recorded revenue	Numeric measure	Numeric statistics, with chart limits
Recorded cost	Numeric measure	Numeric statistics, with chart limits
Recorded profit	Numeric measure	Numeric statistics, with chart limits

Boxplot statistics and IQR fences

Quartiles use linear interpolation; review fences are Q1 – 1.5×IQR and Q3 + 1.5×IQR. Original values are retained without automatic filtering.

Measure	Statistic	Exact value
Quantity	minimum	6
Quantity	q1	12.0

Measure	Statistic	Exact value
Quantity	median	16.0
Quantity	q3	20.0
Quantity	maximum	34
Quantity	lower_fence	0.00
Quantity	upper_fence	32.00
Recorded revenue	minimum	1000
Recorded revenue	q1	1650.0
Recorded revenue	median	2200.0
Recorded revenue	q3	3200.0
Recorded revenue	maximum	5100
Recorded revenue	lower_fence	-675.00
Recorded revenue	upper_fence	5525.00
Recorded cost	minimum	600
Recorded cost	q1	1080.0
Recorded cost	median	1400.0
Recorded cost	q3	2200.0
Recorded cost	maximum	3400
Recorded cost	lower_fence	-600.00
Recorded cost	upper_fence	3880.00
Recorded profit	minimum	360
Recorded profit	q1	600.0
Recorded profit	median	780.0
Recorded profit	q3	1000.0

Measure	Statistic	Exact value
Recorded profit	maximum	1700
Recorded profit	lower_fence	0.00
Recorded profit	upper_fence	1600.00

Automated validation is not human approval

Available checks passed; unavailable checks are explicitly disclosed. This does not establish absence of all data or interpretation errors.

Check	Status	Recorded result
Completeness: date	Passed	Missing values: 0: Total rows: 273: Missing share: 0
Completeness: order_id	Passed	Missing values: 0: Total rows: 273: Missing share: 0
Completeness: product	Passed	Missing values: 0: Total rows: 273: Missing share: 0
Completeness: region	Passed	Missing values: 0: Total rows: 273: Missing share: 0
Completeness: units	Passed	Missing values: 0: Total rows: 273: Missing share: 0
Completeness: revenue	Passed	Missing values: 0: Total rows: 273: Missing share: 0
Completeness: cost	Passed	Missing values: 0: Total rows: 273: Missing share: 0
Completeness: profit	Passed	Missing values: 0: Total rows: 273: Missing share: 0
Numeric validity: revenue	Passed	Invalid nonblank values: 0: Valid count: 273: Sample source row numbers: –
Numeric validity: cost	Passed	Invalid nonblank values: 0: Valid count: 273: Sample source row numbers: –
Numeric validity: profit	Passed	Invalid nonblank values: 0: Valid count: 273: Sample source row numbers: –
Numeric validity: quantity	Passed	Invalid nonblank values: 0: Valid count: 273: Sample source row numbers: –
Date validity	Passed	Invalid nonblank values: 0: Values outside calculation: 0

Check	Status	Recorded result
Recorded revenue – cost = profit	Passed	Checked rows: 273: Arithmetically different rows: 0: Maximum absolute difference: 0: Sample source row numbers: –
Quantity × recorded unit price = revenue	Unavailable	Checked rows: 0: Arithmetically different rows: 0: Maximum absolute difference: –
Nonpositive quantity	Passed	Count: 0: Sample source row numbers: –
Nonpositive unit_price	Unavailable	Count: 0: Sample source row numbers: –
Currency definition	Unavailable	Column: –: Currency codes: –
Declared order identifiers	Unavailable	repeated_keys: 0: repeated_rows: 0: unique_nonmissing: 0
Target scope and coverage	Unavailable	comparison_count: 0: withheld_count: 0
Fixed-cost scope and coverage	Unavailable	scope_result: not_selected

Engine capabilities and report limits

Method	Status
Targets and achievement	Not computed: needs data, configuration or an independent module
Discounts and returns	Not computed: needs data, configuration or an independent module
Declared operating costs	Not computed: needs data, configuration or an independent module
Same-month annual comparison	Not computed: needs data, configuration or an independent module
Seasonality inference	Not computed: needs data, configuration or an independent module
Causal explanation	Not computed: needs data, configuration or an independent module
Medical/scientific/inferential models	Not computed: needs data, configuration or an independent module
Joining independent files	Not computed: needs data, configuration or an independent module

Analysis capability status and requirements

Status concerns this version and configuration only; executing a calculation does not certify source data or causality.

Capability	Status	Reason	Next step
Source quality and validation	Calculated	Calculated for this saved source and selected settings; inspect the method and source limitations.	–
Descriptive statistics	Calculated	Calculated for this saved source and selected settings; inspect the method and source limitations.	–
Category comparisons	Calculated	Calculated for this saved source and selected settings; inspect the method and source limitations.	–
Performance segments	Calculated	Calculated for this saved source and selected settings; inspect the method and source limitations.	–
Recorded profitability	Calculated	Calculated for this saved source and selected settings; inspect the method and source limitations.	–
Unusual values	Calculated	Calculated for this saved source and selected settings; inspect the method and source limitations.	–
Time periods and trends	Calculated	Calculated for this saved source and selected settings; inspect the method and source limitations.	–
ABC and Pareto	Insufficient data	ABC requires at least five eligible categories; use a direct comparison for a smaller set.	Review the listed source fields and analysis settings; no missing value is assumed.
Weekday profile	Calculated	Calculated for this saved source and selected settings; inspect the method and source limitations.	–
Order sources and campaigns	Insufficient data	No valid campaign labels within the category limit were available; campaign amounts also need unique declared order rows and compatible revenue.	Review the listed source fields and analysis settings; no missing value is assumed.

Capability	Status	Reason	Next step
Delivery and returns	Insufficient data	Requires status and order ID columns; rates additionally need declared order grain and complete unique IDs.	Review the listed source fields and analysis settings; no missing value is assumed.
Note topics	Needs setup or separate workflow	Explicitly select notes; this is local keyword grouping, not complete semantic interpretation.	Review the listed source fields and analysis settings; no missing value is assumed.
Customers, repeat activity and RFM	Needs setup or separate workflow	Select a stable customer identifier; it will not appear in results.	Review the listed source fields and analysis settings; no missing value is assumed.
Campaign return and recorded contribution	Needs setup or separate workflow	Select per-order allocated ad spend and actually collected amount; UTM alone cannot establish ad profitability.	Review the listed source fields and analysis settings; no missing value is assumed.
Order timing	Insufficient data	Select a column containing actual ISO date and time, not a date-only field.	Review the listed source fields and analysis settings; no missing value is assumed.
Customer RFM segments	Needs setup or separate workflow	Requires at least five customers, complete recorded amounts and one verified currency. These are within-sample segments, not predicted lifetime value.	Review the listed source fields and analysis settings; no missing value is assumed.
Observed customer cohort return	Needs setup or separate workflow	Requires complete subsequent observation months to describe cohort return; a partial month is not treated as complete retention.	Review the listed source fields and analysis settings; no missing value is assumed.
Average order value	Calculated	Calculated for this saved source and selected settings; inspect the method and source limitations.	–
Targets and achievement	Needs setup or separate workflow	Select target and whether it is row-level or period/category-level; repeated targets are not blindly summed.	Review the listed source fields and analysis settings; no missing value is assumed.

Capability	Status	Reason	Next step
Price, volume and mix decomposition	Calculated	Calculated for this saved source and selected settings; inspect the method and source limitations.	–
Financial discounts and returns	Insufficient data	Declare whether revenue is before or after discounts/returns to avoid deducting the same amount twice.	Review the listed source fields and analysis settings; no missing value is assumed.
Balance after declared costs	Needs setup or separate workflow	Declare fixed costs, their allocation grain, and whether recorded cost already includes them; the result is not net profit.	Review the listed source fields and analysis settings; no missing value is assumed.
Same-month annual comparison	Insufficient data	Requires matching complete calendar months from two years, a positive baseline and compatible financial meaning.	Review the listed source fields and analysis settings; no missing value is assumed.
Descriptive seasonal profile	Insufficient data	Requires at least two complete calendar years; seasonal descriptions do not prove a cause of change.	Review the listed source fields and analysis settings; no missing value is assumed.
Descriptive linear regression	Needs setup or separate workflow	Select compatible columns in specialized statistics; constant values or insufficient observations prevent calculation.	Review the listed source fields and analysis settings; no missing value is assumed.
Categorical association	Needs setup or separate workflow	Select compatible columns in specialized statistics; constant values or insufficient observations prevent calculation.	Review the listed source fields and analysis settings; no missing value is assumed.
Numeric correlations	Calculated	Calculated for this saved source and selected settings; inspect the method and source limitations.	–
Price comparison and DiD	Needs setup or separate workflow	Automatic screening found no eligible comparison or observations were insufficient; review manual settings, trends and coverage. No result does not establish no price effect.	Review the listed source fields and analysis settings; no missing value is assumed.

Capability	Status	Reason	Next step
Saved forecasts	Needs setup or separate workflow	Ordinary analysis does not run forecasts; open Forecasting to validate coverage, evaluate historical errors and save a separate result.	Open Forecasting for this version.
Two-file comparison and reconciliation	Needs setup or separate workflow	Other files are not joined automatically; use comparison/reconciliation to preview scope and matches, then confirm a separate version.	Open the file comparison/ reconciliation tool.

Category and dimension-overlap limits

Dimension overlap warning — product × region: observed values map one-to-one; separate effects cannot be established from this file alone.

Report reference and generation status

Automatically generated by MONGEZ AI. No human review is recorded; this report carries no personal signature or independent certification.

Item	Value
Report reference	PUBLIC-DEMO-SYNTHETIC
Data version	PUBLIC-DEMO-SYNTHETIC
SHA-256 — source file	b74983d574a206bfad128747a1e856890b4e26c8a24331dd3aba2f25bf451717

MONGEZ AI