

Supplier Selection Analysis Report

This report provides an overview of the top-ranking suppliers based on recent performance metrics and their resilience.

Overall Ranking Overview

Rank	Supplier	Score
1	Supplier_1	3.3750000000000004
2	Supplier_3	3.3750000000000001
3	Supplier_2	4.3750000000000001
4	Supplier_7	4.6250000000000001
5	Supplier_6	5.1250000000000001
6	Supplier_9	5.6250000000000001
7	Supplier_4	6.2500000000000001
8	Supplier_10	6.8750000000000001
9	Supplier_5	7.5000000000000001
10	Supplier_8	7.8750000000000001

Ranking Overview

Ranking by Annual Revenue (USD)

Top supplier by Annual Revenue (USD) is Supplier_1.

Rank	Supplier
1	Supplier_1
2	Supplier_2
3	Supplier_3
4	Supplier_9
5	Supplier_10
6	Supplier_7
7	Supplier_6
8	Supplier_8
9	Supplier_5
10	Supplier_4

Ranking by Debt-to-Equity Ratio

Top supplier by Debt-to-Equity Ratio is Supplier_6.

Rank	Supplier
1	Supplier_6
2	Supplier_9
3	Supplier_1
4	Supplier_5
5	Supplier_3
6	Supplier_2
7	Supplier_4
8	Supplier_10
9	Supplier_7
10	Supplier_8

Ranking by Quality

Top supplier by Quality is Supplier_3.

Rank	Supplier
1	Supplier_3
2	Supplier_7
3	Supplier_6
4	Supplier_1
5	Supplier_2
6	Supplier_4
7	Supplier_5
8	Supplier_8
9	Supplier_9
10	Supplier_10

Ranking by Cost

Top supplier by Cost is Supplier_2.

Rank	Supplier
1	Supplier_2
2	Supplier_6

3	Supplier_3
4	Supplier_1
5	Supplier_8
6	Supplier_4
7	Supplier_7
8	Supplier_5
9	Supplier_9
10	Supplier_10

Ranking by Production Capacity

Top supplier by Production Capacity is Supplier_10.

Rank	Supplier
1	Supplier_10
2	Supplier_7
3	Supplier_4
4	Supplier_1
5	Supplier_9
6	Supplier_2
7	Supplier_3
8	Supplier_8
9	Supplier_6
10	Supplier_5

Ranking by Delivery Time

Top supplier by Delivery Time is Supplier_7.

Rank	Supplier
1	Supplier_7
2	Supplier_1
3	Supplier_3
4	Supplier_4
5	Supplier_6
6	Supplier_9
7	Supplier_10
8	Supplier_5
9	Supplier_8

10	Supplier_2
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Ranking by Reliability

Top supplier by Reliability is Supplier_9.

Rank	Supplier
1	Supplier_9
2	Supplier_2
3	Supplier_3
4	Supplier_10
5	Supplier_1
6	Supplier_6
7	Supplier_5
8	Supplier_4
9	Supplier_7
10	Supplier_8

Ranking by Track Record in Labor Relations

Top supplier by Track Record in Labor Relations is Supplier_7.

Rank	Supplier
1	Supplier_7
2	Supplier_3
3	Supplier_2
4	Supplier_1
5	Supplier_8
6	Supplier_4
7	Supplier_5
8	Supplier_6
9	Supplier_9
10	Supplier_10

Perturbation Scenario generated by genAI

{ "Annual Revenue (USD)": 0.3, "Debt-to-Equity Ratio": 0.8, "Quality": 0.4, "Cost": 0.7, "Production Capacity": 0.6, "Delivery Time": 0.3, "Reliability": 0.5, "Track Record in Labor Relations": 0.2 }

Scenario Explanation: Major Labor Strike and Supply Chain Disruption A prolonged labor strike at the supplier's primary manufacturing facility, combined with key raw material shortages,

has created a cascading crisis. The strike (lasting 3+ weeks) has severely damaged labor relations and halted production, causing: **Revenue drop** (0.3): 70% decrease due to halted shipments and canceled orders **Debt surge** (0.8): 80% higher debt-to-equity ratio from emergency borrowing to cover fixed costs during shutdown **Quality decline** (0.4): 60% quality reduction as replacement workers lack training and rushed production resumes **Cost increase** (0.7): 70% higher costs due to premium wages for strike-breaking workers, air freight for urgent deliveries, and inflated material costs **Capacity reduction** (0.6): 40% lower production capacity from ongoing worker shortages and morale issues **Faster delivery** (0.3): Paradoxically, 70% faster delivery for remaining orders as the company prioritizes few available shipments to preserve key clients **Reliability drop** (0.5): 50% reliability reduction from inconsistent production and fulfillment **Labor relations damage** (0.2): 80% deterioration in track record from bitter strike, union disputes, and worker terminations This scenario tests resilience against simultaneous operational, financial, and human resource crises that realistically compound each other in manufacturing sectors.

Ranking After Perturbation

Rank	Supplier	FR
1	Supplier_7	0.48
2	Supplier_8	0.46
3	Supplier_5	0.41
4	Supplier_10	0.41
5	Supplier_1	0.36
6	Supplier_4	0.35
7	Supplier_2	0.3
8	Supplier_3	0.28
9	Supplier_9	0.27
10	Supplier_6	0.26