

LINKS Tutorial

Services Business Metrics

Financial and operating metrics are the language of all businesses. As you begin LINKS, it's useful to immerse yourself in the financial and operating reports that you'll be working with throughout your LINKS event.

Analyze the following set of abbreviated financial and operating reports for firm 2 in LINKS industry ASV.

You'll encounter eleven questions embedded in this LINKS Tutorial. For each question, formulate an answer before continuing on to the following page ... where you'll find some solution notes for the question(s) on the preceding page of this LINKS Tutorial.

It's assumed that you've already read the LINKS participant's manual before you begin your work on this tutorial.

	Firm 2	Industry Average
FINANCIAL		
Net Income to Revenues	11.3%	11.2%
Change in Net Income to Revenues	0.3%	2.9%
OPERATIONAL		
Fill Rate	100.0%	87.0%
Forecasting Accuracy	53.1%	56.5%
CSR Turnover	9.8%	10.0%
CSR Cost/Call	85.4	81.3
CUSTOMER		
Change in Market Share	-0.3%	0.0%
Customer Satisfaction	13.5%	19.2%

Question #1:
 Compared to all firms in support services industry ASV in Q#9, how is firm 2 performing on these financial, operational, and customer-facing KPIs (key performance indices)?

Question #2: How does the name of your LINKS firm (in this case, "ACT Consulting") influence your KPIs?

Question #1: *Compared to all firms in support services industry ASV in Q#9, how is firm 2 performing on these financial, operational, and customer-facing KPIs (key performance indices)?*

Firm ASV2 is very “average” on most of these KPIs, except:

- Fill Rate ... which is above the Q#9 industry average.
- Customer Satisfaction ... which is well below the Q#9 industry average.

While “average” isn’t “bad,” it certainly isn’t “superior” performance. How can firm 2 in industry ASV achieve superior performance?

Question #2: *How does the name of your LINKS firm (in this case, “ACT Consulting”) influence your KPIs?*

Firm name has no influence on any KPI in LINKS. There are no cost or operational implications of a firm’s name in LINKS.

The firm name is displayed in the first line of text on each page of LINKS output. So, it’s useful to have a “friendly/familiar” name on each output page.

Firm naming is an interesting team “storming, norming, and bonding” activity early in a LINKS event.

	All Services	Service 2-1	Service 2-2
	-----	-----	-----
Sales Volume	100,370	66,217	34,153
Unfilled Orders	0	0	0
Price	212	178	280
Revenues	21,372,451	11,809,611	9,562,840
- Variable Costs	3,383,440	1,009,808	2,373,632
- Order Processing	1,003,700	662,170	341,530
	-----	-----	-----
Gross Margin	16,985,311	10,137,633	6,847,678
Fixed & Other Costs:			
Administrative O/H	881,475	495,043	386,432
Consulting Fees	-300,000		
Corporate O/H	1,000,000		
Information Technology	18,000		
Introductions	0		
Marketing	2,050,000	1,150,000	900,000
Marketing Creative	0	0	0
Price Changes	144,028	72,122	71,906
Reconfiguration	70,000		
Research Studies	460,500		
Service Salaries	3,955,200	2,204,160	1,751,040
Service O/H	3,955,200	2,204,160	1,751,040
Service HFT	76,800	41,600	35,200
Unfilled Handling	0		
Total Fixed & Other	12,311,203	6,167,085	4,895,618
	-----	-----	-----
Operating Income	4,674,108	3,970,548	1,952,060
	-----	-----	-----
Non-Operating Income	150,336		
Taxes	-2,412,222		
	=====		
Net Income	2,412,222		
	=====		

Question #3: What is the purpose of a Corporate P&L Statement?

Question #4: What are “Unfilled Orders”?

Question #5: By definition, Net Income = Revenues – Costs, where “Costs” include all types of costs incurred by a firm in the relevant accounting reporting period. Why are some “Fixed & Other Costs” reported only as firm-wide totals, without specific division of these totals between service 2-1 and service 2-2 in this Corporate P&L Statement?

Question #3: *What is the purpose of a Corporate P&L Statement?*

The "Corporate P&L Statement" aggregates all of the service-specific profit-and-loss statements into an overall corporate profit-and-loss statement.

It's a top-line snapshot of the firm's overall current-quarter financial performance.

It's a "backward look" at the firm's performance ... rather than a forward-looking forecast of future performance.

Question #4: *What are "Unfilled Orders"?*

Unfilled orders occur when customer demand for any service in any market region exceeds the available CSR capacity for that service in that market region.

In LINKS, the difference between potential customer sales (orders) and actual customer sales due to insufficient CSR capacity is "unfilled orders."

Unfilled orders are not backlogged orders. Unfilled orders are not guaranteed (i.e., contracted, pre-paid) future sales.

Question #5: *By definition, $Net\ Income = Revenues - Costs$, where "Costs" includes all costs incurred by a firm in the relevant accounting reporting period. Why are some "Fixed & Other Costs" reported only as firm-wide totals, without specific division of these totals between the services in this Corporate P&L Statement?*

A variety of the "Fixed & Other Costs" appear on the "Corporate P&L Statement" only, because it is not possible to unambiguously allocate those costs to specific services in specific regions.

You could, of course, use your own arbitrary cost allocation rules to allocate those fixed costs to services 1 and 2. Sample allocation rules include equal allocation to each service and allocation proportional to sales volume or sales revenue.

Of course, such arbitrary allocation rules could distort the relative profitability of the services.

	Previous (Quarter 8)		Current (Quarter 9)	
Sales Volume	88,254		100,370	
Unfilled Orders	669		0	
Price	302		212	
Revenues	26,698,474	100.0%	21,372,451	100.0%
- Variable Costs	4,604,468	17.2%	3,383,440	15.8%
- Order Processing	882,540	3.3%	1,003,700	4.7%
Gross Margin	21,211,466	79.4%	16,985,311	79.5%
Fixed & Other Costs:				
Administrative O/H	1,209,017	4.5%	881,475	4.1%
Consulting Fees	-300,000	-1.1%	-300,000	-1.4%
Corporate O/H	1,500,000	5.6%	1,000,000	4.7%
Information Technology	30,000	0.1%	18,000	0.1%
Introductions	0	0.0%	0	0.0%
Marketing	2,600,000	9.7%	2,050,000	9.6%
Marketing Creative	520,000	1.9%	0	0.0%
Price Changes	144,999	0.5%	144,028	0.7%
Reconfiguration	110,000	0.4%	70,000	0.3%
Research Studies	197,500	0.7%	460,500	2.2%
Service Salaries	4,300,800	16.1%	3,955,200	18.5%
Service O/H	4,300,800	16.1%	3,955,200	18.5%
Service HFT	844,800	3.2%	76,800	0.4%
Unfilled Handling	13,380	0.1%	0	0.0%
Total Fixed & Other	15,471,296	57.9%	12,311,203	57.6%
Operating Income	5,740,170	21.5%	4,674,108	21.9%
Non-Operating Income	130,187	0.5%	150,336	0.7%
Taxes	-2,935,178	-11.0%	-2,412,222	-11.3%
Net Income	2,935,179	11.0%	2,412,222	11.3%

Question #6: What noteworthy changes in financial performance occurred between Q#8 and Q#9 for firm ASV2?

Question #6: *What noteworthy changes in financial performance occurred between Q#8 and Q#9 for firm 2 in firm ASV2?*

Between Q#8 and Q#9, these noteworthy changes in financial performance occurred:

- Large increase in sales volume ... from 88K to 100K.
- Dramatic decrease in average price per unit of sales volume ... major price reduction from Q#8 to Q#9?
- Revenue and Gross Margin decreased substantially ... and Net Profits decreased from \$2.9M to \$2.4M,

Conclusion: apparently, a substantial repositioning of the firm's business mode occurred in Q#9.

	All Regions (TOTAL)	Region 1 (Central)	Region 2 (North)	Region 3 (East)	
Active?		Yes	Yes	Yes	}
Sales Volume	66,217	15,771	19,852	30,594	
Unfilled Orders	0	0	0	0	
Price	178	175	180	179	
Revenues	11,809,611	2,759,925	3,573,360	5,476,326	
- Variable Costs	1,009,808	240,507	302,743	466,558	
- Order Processing	662,170	157,710	198,520	305,940	
Gross Margin	10,137,633	2,361,708	3,072,097	4,703,828	
Fixed Costs:					
Administrative O/H	495,043	168,029	159,701	167,313	
Marketing	1,150,000	450,000	450,000	250,000	
Marketing Creative	0	0	0	0	
Price Changes	72,122	21,699	22,733	27,690	
Service Salaries	2,204,160	864,000	547,200	792,960	
Service O/H	2,204,160	864,000	547,200	792,960	
Service HFT	41,600	25,600	4,800	11,200	
Total Fixed Costs	6,167,085	2,393,328	1,731,634	2,042,123	
Operating Income	3,970,548	-31,620	1,340,463	2,661,705	
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Sales Volume Forecast		26,500	8,000	10,000	}
Service: CSR Salary \$/Month		3,200	3,200	3,200	
Service: CSR Hiring&Firing		8	0	0	
Service: CSR Experienced Hiring		0	0	0	
Service: CSR Transfer From Region 1		0	3	5	
Service: CSR Transfer From Region 2		0	0	0	
Service: CSR Transfer From Region 3		0	0	0	
Service: CSR Maximum Capacity Limit		85	85	90	
Service: CSR Time Allocation		50	50	70	
Marketing Mix Allocation		601030	601030	601030	
Marketing Positioning		72	72	72	
Service 2-1 Configuration:	H627410				

In LINKS, service design (configuration) is a seven-character code with these elements/definitions:

- (1) Service Category: "H" for Household, "M" for Major Accounts
- (2) CSR Technical Training: 0-9 (hours per month)
- (3) CSR Service Skills Training: 0-9 (hours per month)
- (4) Service Appointment Scheduling: 1-7 (days)
- (5) Scheduling Style: 0-4 (appointment scheduling "window" in hours)
- (6) Service Call Duration: 1-3 (1="minimum", 2="more than minimum", 3="maximum")
- (7) Service Call Format: 0 or 1 (0="telephone service", 1="on-site visit").

ASSETS

Cash	2,137,245
Marketable Securities	12,243,567
Facilities and Equipment Investment	50,000,000
Total Assets	64,380,812

LIABILITIES AND EQUITIES

Corporate Capitalization	50,000,000
Dividends, Current Quarter	-723,666
Dividends, Cumulative Prior To This Quarter	-5,439,532
Loans	0
Retained Earnings, Current Quarter	2,412,222
Retained Earnings, Cumulative Prior To This Quarter	18,131,788
Total Liabilities and Equities	64,380,812

	Service 2-1	Service 2-2
Support Service Category	0.00	0.00
CSR Technical Training	0.00	0.00
CSR Service Skills Training	0.00	0.00
Service Appointment Scheduling	0.25	12.50
Scheduling Style	0.00	12.00
Service Call Duration	5.00	25.00
Service Call Format	10.00	20.00
	15.25	69.50

Question #7: Why are the service variable costs different for services 2-1 and 2-2?

Question #8: Why are the costs of CSRs not included in these service variable costs?

Question #7: *Why are the service variable costs different for services 2-1 and 2-2?*

Services 2-1 and 2-2 have different configurations, and thus different variable costs.

Question #8: *Why are the costs of CSRs not included in these service variable costs?*

These are service variable costs and CSR costs are fixed in the current quarter ... regardless of the level of sales volume or the level of CSR usage.

- Whether sales volume is 0, 1,000, 10,000, or 100,000 units, CSR costs will be the same in the current quarter.
- Cost-per-call will, of course, vary through time depending on CSR capacity usage.

All Regions	Region 1	Region 2	Region 3
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 STAFFING REPORT
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Beginning CSRs	448	198	124	126
- CSR Resignations	-44	-18	-13	-13
- CSR Firing	0	0		
+ Experienced Hires	0	0	0	0
+ CSR Hiring	8	8		
+ CSR Transfer From R1		0	3	5
+ CSR Transfer From R2		0	0	0
+ CSR Transfer From R3		0	0	0
- CSR Transfer To R1		0	0	0
- CSR Transfer To R2		-3	0	0
- CSR Transfer To R3		-5	0	0
= Available CSRs	412	180	114	118

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 PRODUCTIVITY REPORT
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SERVICE 2-1 [H627410]				
Gross CSR Productivity	528.0	528.0	528.0	
- Technical Training	-18.0	-18.0	-18.0	
- Service Skills Training	-6.0	-6.0	-6.0	
- Service Appoint Scheduling	0.0	0.0	0.0	
- Duration and Format	0.0	0.0	0.0	
Net CSR Productivity	504.0	504.0	504.0	
CSRs	172	111	113	
Hires Productivity	336.0			
Hires	8			
Transfer Productivity	420.0	420.0	420.0	
Transfers To This Region	0	3	5	
Time Allocation	50%	50%	70%	
Potential CSR Capacity	44,687	28,601	41,335	
CSR Maximum Capacity Limit	85%	85%	90%	
Actual CSR Capacity	37,983	24,310	37,201	

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 ACTIVITY REPORT
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SERVICE 2-1				
Service Calls	66,217	15,771	19,852	30,594
CSR Capacity	114,623	44,687	28,601	41,335
CSR Utilization [Q# 9]		35%	69%	74%
CSR Utilization [Q# 8]		73%	36%	42%
CSR Cost/Call	67.20	111.19	55.37	52.20
CSR Turnover		8%	8%	9%

Question #9:
 Why is the CSR Cost/Call so much higher in Region 1 compared to Regions 2 and 3?

Question #9: *Why is the CSR Cost/Call so much higher
In Region 1 compared to Regions 2 and 3?*

Current-quarter CSR capacity utilization is much lower in Region 1 (35%) compared to Regions 2 and 3 (69% and 74%, respectively).

With lower CSR capacity utilization, cost-per-call is much higher since there's a lot of unused CSR capacity.

	Region	Forecast	Actual	Accuracy
Service 2-1	1	26,500	15,771	32.0%
Service 2-1	2	8,000	19,852	40.3%
Service 2-1	3	10,000	30,594	32.7%
Service 2-2	1	13,500	10,535	71.9%
Service 2-2	2	7,500	14,845	50.5%
Service 2-2	3	8,000	8,773	91.2%

Question #10:
What can be done to improve sales volume forecasting accuracy?

SUMMARY: For 6 forecasts, average forecasting accuracy is 53.1%

Note: Forecasts count within the calculation of forecasting accuracy only if the "actual" value being forecast is greater than 100 for sales volumes (to not penalize you for "small" forecasts). Otherwise, the relevant values of "forecast" and "actual" are only reported for reference purposes, but such forecasts are not counted for forecasting accuracy scoring. This is the reason why the number of forecasts referenced in "SUMMARY" may be less than the detailed line-by-line reporting of forecasts.

SALES HISTORY	Quarter 4	Quarter 5	Quarter 6	Quarter 7	Quarter 8	Quarter 9
REGION 1						
Service 2-1H	19,945	5,989	12,907	9,352	24,306	15,771
Service 2-2M	11,280	11,122	7,737	7,699	12,245	10,535
REGION 2						
Service 2-1H	11,663	6,087	8,572	7,560	6,744	19,852
Service 2-2M	13,224	3,260	4,827	5,391	6,444	14,845
REGION 3						
Service 2-1H	22,799	6,843	12,013	8,409	9,356	30,594
Service 2-2M	8,066	11,102	4,541	6,288	7,303	8,773

Welcome to the quarter 9 issue of the Support Services Industry Bulletin. Notable industry developments are highlighted in the Bulletin.

INDUSTRY NEWS HEADLINES

Total industry ASV profits were 12,209,552 this quarter.
 Firm 4 leads industry ASV in market share (32.5%).
 Firm 1 has the second-highest market share in industry ASV (24.8%).

Total industry ASV research study spending was 884,500 this quarter.

RECONFIGURATIONS

Service 1-1 has been reconfigured this quarter.
 Service 2-1 has been reconfigured this quarter.
 Service 3-1 has been reconfigured this quarter.

Question #11: Do these competitors' reconfigurations have any notable implications for firm 2 in industry ASV?

Question #10: *What can be done to improve sales volume forecasting accuracy?*

Make more accurate sales volume forecasts!

Diagnosis: look carefully at occasions with very high and very low sales forecasting accuracy ... what distinguishes these extremes in sales forecasting accuracy?

How to improve sales forecasting?

- Use more, better, and different data
- Combine the (historical) data in different ways
- Better anticipate future market and competitive developments ... and their impact on "own" sales volume

Question #11: Do these competitors' reconfigurations have any notable implications for firm 2 in Industry ASV?

Noteworthy points:

- Firm ASV2 reconfigured a service in each of the last two quarters (see the Historical Corporate P&L Statement).
- Other firms are reconfiguring too (see Support Services Industry Bulletin).

So, these questions arise:

- How are the reconfigured services of competitors doing?
- Are the reconfigured services minor changes or major repositionings?
- What is the competitive value proposition of firm 2 in industry ASV?
- Is reconfiguration a way out of this firm's "averageness"?
- What research studies will provide useful data in answering these questions?
{Answer: RS#3, RS#14, and RS#23}

Postscript

There's lots more interesting information in the LINKS participant's manual about the financial and operating statements included in your routine LINKS output provided after each LINKS quarter. You may wish to review the relevant chapters in the LINKS participant's manual.

And, there are a large number of FAQs ("Frequently-Asked Questions") accessible on the LINKS website:

<http://www.LINKS-simulations.com>

Please do access the LINKS FAQs as questions arise during your LINKS event. For your reference, two sample FAQs may be found on the following page.

Sample FAQ #1: Unfilled Orders

“Can unfilled orders exist?”

Yes. Note that these are unfilled orders not backlogged orders. There's no requirement that customers wait to purchase your support service when it becomes available in the future. For those customers facing unfilled orders, some presumably shift to other firms' available support services immediately while some wait to purchase their preferred support service when it becomes available in the future. Of course, all sales and customer choices in the future are governed by the prevailing conditions (e.g., taking into account your price and the prices of competitors) in the future.

Sample FAQ #2: Excel Spreadsheet Results File

“Where can I find our past decision inputs? It's inconvenient to look back through our printouts to find the status of our decisions in the past.”

An Excel spreadsheet results file for each LINKS firm supplements the standard LINKS Word doc results file. After each LINKS round, you'll routinely access a printed copy of your firm's Word doc results file for review and analysis. The Excel spreadsheet results file doesn't replace the Word doc results file. Rather, the Excel spreadsheet results file is a supplementary reporting mechanism for your firm's financial and operating results.

The Excel supplementary results spreadsheet consists of five worksheets with supplementary data beyond that provided in each round's Word doc results file.

- The **Results** worksheet includes most of the data reported in the Word doc results file, so you don't have to manually re-input data from the Word doc results file into an Excel spreadsheet. This supplemental Excel spreadsheet isn't designed to be particularly “pretty” ... it's strictly designed with functional considerations in mind. You'll need to reformat this Excel spreadsheet as you see fit by, for example, cutting-and-pasting data rows/columns into your own Excel spreadsheet.
- The **Dashboard** worksheet contains a single-screen top-line summary of your firm's key results for the most-recent LINKS round.
- The **Decision History** worksheet documents the last six rounds of inputs for each LINKS decision variable for your firm. This worksheet provides a convenient archival resource to access past LINKS decision inputs.
- The **Forecasts** worksheet contains two extrapolative|quantitative forecasts of the next round's sales volume. Be sure to review the details and background assumptions of these forecasts, as reported in this worksheet.
- The **KPIcharts** worksheet contains charts of each LINKS KPI vs. the corresponding industry KPI best, industry KPI average, and industry KPI worst for each of the last six LINKS rounds. These KPI charts provide an appealing graphic rendition of the LINKS performance evaluation dimensions displayed in tabular form on the first page of each firm's Word doc financial and operating reports results file.