

⊗ “Instructing Through Price Wars” Updated	1
⊗ Where In The World Is LINKS Simulations?	5
⊗ LINKS Global SCM Competition	6
⊗ Game Run Schedules With Embargos	7
⊗ FAQ: Profitable Investments in Demand Drivers and Employee Satisfaction	8
⊗ LINKS Train-The-Trainer Seminars	9

“Instructing Through Price Wars” (White Paper #16) Updated

“A few things matter most. Find those things.” - Richard Koch

What’s wrong with this LINKS Marketing Strategy Simulation industry, based on these Quarter #10 top-line summary results?

Profitability in this LINKS industry is terrible! Six of the seven firms are losing money ... and, the only profitable firm (firm 2) is barely so. Massive unfilled orders exist, caused by a combination of industry-wide under-production (resulting in unfilled orders) and under-pricing.

	Mean	Firm1	Firm2	Firm3	Firm4	Firm5	Firm6	Firm7
NetIncome [\$MM]	-2.6	-0.6	0.4	-8.3	-5.3	-2.3	-1.8	-0.1
Unfilled [000s]	24.2	7.9	37.1	93.5	0.0	0.0	15.2	15.9
Market Shares [10]		9.4	11.0	16.7	14.6	16.0	16.5	15.8
Market Shares [9]		9.4	14.5	14.7	8.8	17.4	16.4	18.9

INDUSTRY DEMAND	Region 1	Region 2	Region 3
HYPERWARE			
Quarter 10	247,958	170,836	418,057
Quarter 9	235,072	175,025	374,929
METAWARE			
Quarter 10	286,615	231,433	249,713
Quarter 9	218,003	159,257	175,426

Why is this happening in this LINK’S industry? Total industry demand isn’t the culprit, since industry demand has increased in most regions and categories (hyperware and metaware) from Quarter #9 to Quarter #10, in spite of substantial industry-wide unfilled orders.

So, what’s left? It must be prices and an industry-wide price war ... and a failure of these student teams to manage their simulation firms for profitability.

Continued

Root Causes of Price Wars

The root cause of price wars in competitive business simulations is undisciplined student-teams who don't attend or give enough weight to the profitability consequences of their customer-facing programs ... especially with regard to pricing decisions, product|service configuration|design decisions, and associated variable costs and margins.



Low price is an easy and convenient competitive “weapon” that always attracts customers and increases sales volume and market share, at least in the short run. But, are low prices really profitable and sustainable ... and wise?

Excluding gross input errors by students, there are three principal paths that lead to price wars in competitive business simulations.

First, students mindlessly pursue volume and market share without sufficient regard for profitability, ultimately leading competitors to feel compelled to match low prices to maintain their own sales volumes and market shares. Perhaps it's the old business axiom at work: “Volume will save us.” To illustrate, a firm-7 team member in the LINKS industry above writes the following to teammates (received by LINKS Simulations as a “reply all” e-mail message sent to all firm-7 team members from an original e-mail message sent by LINKS Simulations to all firm-7 team members):

“At least we aren't losing as much money as the rest of the folks.”

True enough, but your firm is still unprofitable!

Second, product|service reconfigurations occur that dramatically increase variable costs and decrease margins without corresponding price increases. Margin reductions mean that profitability is difficult or impossible to achieve, even with “hoped-for” (fantasized?) large sales volume increases from the product|service reconfigurations. The graphic clip below from the LINKS Simulation Database illustrates this problem. With variable costs of \$449, a price of \$300 is untenable. How could a simulation team miss such an obvious thing?

[Current Configuration Status and Associated Estimated Future Per-Unit Product Costs Are Shown For Reference Purposes]

	Region 1 U.S.A. H378311 \$449.00/unit	Region 2 Europe H378311 \$449.00/unit	Region 3 Pacific H378311 \$449.00/unit
Active Product?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>	Yes <input checked="" type="radio"/> No <input type="radio"/>
Manufacturer Price	<input type="text" value="300"/>	<input type="text" value="300"/>	<input type="text" value="300"/>
Marketing Spending	<input type="text" value="400000"/>	<input type="text" value="0"/>	<input type="text" value="400000"/>

Source: LINKS input web-screen clip of an actual LINKS firm's pricing inputs

Third, students apparently assume that competitors won't notice or won't respond to a firm's price decreases. Price decreases are visible, easy to detect, and easy to follow (at least in the short run). So, competitive advantage from lowering price is, at best, temporary ... and it's definitely dangerous, since a firm's price decrease might lead competitors to follow without regard for profitability. Even a thoughtful LINKS firm that orders relevant LINKS price sensitivity analysis research (Research Study #24) must remember the implicit assumptions associated with these volume, market share, and gross margin predictions:

- ✔ These price sensitivity analyses isolate the impact of price on market share, while holding other market share drivers constant (product quality, service quality, and availability perceptions in the LINKS products simulations and design quality, experience quality, and accessibility in the LINKS services simulations).
 - ✔ These market share predictions and subsequent estimates of gross margins are based on the assumption that competing products/services don't change their customer-facing programs (generate demand programs in the LINKS products simulations and marketing programs in the LINKS services simulations). Obviously, large price changes will tend to evoke competitive responses.
 - ✔ The reported market shares in Research Study #24 are long-run estimates of market shares if a firm continues with all current customer-facing initiatives (configurations, marketing spending, service levels, etc.) as they are now and so do competitors. Market infrastructure issues (like unfilled orders status) are not considered.
- Source: Research Study #24 descriptions in the LINKS participant manuals.

Good instructor practice in the face of price wars includes initiatives, efforts, and actions before- and after-the-fact.

Before-The-Fact Instructor Actions

1. Instructors should advise students (in the course syllabus) that profitability matters! Remember the Klingon proverb: "Volume without profit has no honor." For your within-simulation grading component (presumably based on the LINKS multi-factor performance evaluation system), it is recommended that instructors include the proviso that "consistent" lack of profitability will lead to a within-simulation grade no higher than "average" regardless of a firm's standing on any other performance metric (such as market share).

2. While not prohibiting price decreases, instructors are encouraged to adopt the protocol that students must seek instructor ("CEO") pre-approval before any price reduction can be implemented. The basis of this approval is a "modest" pro-forma financial analysis of predicted short- and long-run profitability after a proposed price decrease. Instructors should carefully review the industry demand and market share assumptions/forecasts included in such a pro-forma financial analysis and question students on the empirical basis for such industry demand and market share assumptions/forecasts (i.e., which LINKS

research studies were used to form such assumptions/forecasts?). And, instructors should query students about their assumptions regarding how competitors will react to a price reduction. Instructors might require such an analysis to be submitted several days before a LINKS input submission deadline, to permit suitable time for review and perhaps the scheduling of a meeting with the firm proposing a price reduction.

3. In LINKS game-run schedules, include the provision for activating at least one additional product (one additional service in the LINKS services simulations) fairly early in the schedule. This provides the opportunity for firms to customize offerings to particular regions, thus tending to lead to more niche offerings priced at higher levels.

4. In LINKS game-run schedules, include the provision for activating one or more additional regions as the LINKS event unfolds. Additional regions provide growth opportunities for everyone, even lagging firms. And, growth opportunities tend to discourage price wars.

And, of course, instructors should regularly remind their students about useful LINKS tools, like the Decision Inputs Audit and the Pro-Forma Financial Projections.



After-The-Fact Instructor Actions

1. During scheduled private “Presidential Review Meetings” throughout a LINKS event, emphasize profitability in instructor discussions with LINKS students, particularly for lagging firms. Instructors should quiz students regularly on their plans for improving long-run profitability.

2. Instructors should require unprofitable firms to immediately raise prices. For example, all firms losing money might be required to immediately raise their prices at least \$100 for every product in every channel and region (for every service in every region, in LINKS services simulations).

3. Require any unprofitable firm after any LINKS round to schedule an immediate private “Presidential Review Meeting” with the instructor to review the firm’s performance. Alternatively, instructors might require that any unprofitable firm must respond to the following memo from the “CEO”: “Profits are unacceptably low. Please provide a clear, fact-based plan for dramatically improving profitability very soon. Management teams of firms unable to generate profitability are subject to termination/firing. No one wins in business by being the last to go bankrupt!”



Postscript

Industry-wide price wars, with associated lack of profitability, in competitive business simulations can be stopped by vigilant instructors who just do not passively accept continuing industry-wide unprofitability and, generally, lack of reasonable profitability.

The approaches detailed in this LINKS White Paper provide practical advice to instructors for coping with price wars when teaching with competitive business simulations such as the LINKS Simulations.



Where In The World Is LINKS Simulations?

LINKS Simulations exhibits at 10-12 conferences annually to reach out to prospective LINKS instructors and to interact with existing LINKS users.

We'll be exhibiting at these conferences in the near future:

July 10-12 August 14-16 September 16-18 September 26-27	Frontiers in Service Conference @ San Jose AMA Summer Educators' Conference @ Chicago MMA Fall Educators' Conference @ San Juan SCMEC @ San Diego
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If you're attending any of these conferences, please do stop by our exhibit to chat.

LINKS Global SCM Competition

The 2015 LINKS Global SCM Competition is scheduled for October-November 2015.

The LINKS Supply Chain Management Simulation is used in the LINKS Global SCM Competition.



Highlights of the LINKS Global SCM Competition:

- Cross-Institution 8-Round Supply Chain Management Simulation Competition
- Your Student Teams Compete Against Student Teams From Other Institutions
- Challenges Students in an Intense Team-Based Cross-Institution Competition
- For Students in Academic Degree-Granting Programs Worldwide
- Targeted at Upper-Level Undergraduates and All MBAs

Further details about the October-November 2015 LINKS Global SCM Competition (scheduling, student eligibility, costs, and registration procedure) are accessible via the LINKS Global Competition link on the LINKS website.

Registration signup and payment deadline for the 2015 LINKS Global SCM Competition is September 25, 2015.

Participating in a LINKS Global SCM Competition is an alternative instructional/learning opportunity to the traditional usage of LINKS within a single instructor's course (i.e., an event with students from a single course conducted according to the course instructor's preferred scheduling).

Faculty members with questions about the LINKS Global SCM Competition are invited to contact Randy Chapman, the LINKS author (Chapman@LINKS-simulations.com).

Reminder: Game Run Schedules With Embargos

In processing LINKS game runs, our normal administrative protocol is that the results are “publicized” immediately after the game run is executed. “Publicized” includes uploading the new results to the LINKS web-server and sending e-mail to everyone in a LINKS industry (students and the instructor) to announce the availability of the new game run results. For most LINKS instructors, immediate game run processing and turnaround after the input submission deadline is desirable.

It is possible to “embargo” the availability of LINKS results until an instructor-specified time after the input submission deadline and subsequent game run. With an embargo, LINKS is run in the normal fashion (normally within two hours of the input submission deadline) and the LINKS results are uploaded to the web server so that the LINKS instructor has immediate access to the results. However, embargoed results are not available to students until the instructor-specified embargo time.

Embargoing is useful for instructors who wish to release results only after a class has concluded (for example, to retain students’ undivided attention throughout the class) or for instructors wishing to have early access to the results, before their students can access the results.

To embargo results, encode your embargo schedule within the game run schedule that you submit before your LINKS event begins. Here’s an example entry on a game run schedule for an embargoed game run:

November 7 @ 200pm: Round #7; results embargoed until 900pm.

Everyone in a LINKS industry always receives an e-mail announcement of the availability of new results immediately after a game run has been executed, regardless of whether embargoed results exist. And, embargoed results are “immediately” uploaded to the LINKS Simulation Database after a game run. However, students can’t access embargoed results until the specified embargo time limit has passed because the results’ links are inactive until that time.



New FAQ: Profitable Investments in Demand Drivers and Employee Satisfaction

“What is the value of higher levels of service outsourcing? There’s nothing in the LINKS manual about customer impact, cost savings, or other tangible benefits of higher service quality.”

This question about the benefits of higher quality service raises the more general question of effect sizes ... the relative impacts (i.e., none, small, medium, or large) that programs, initiatives, and spending might potentially have on customers, demand levels, and/or employee satisfaction.

- Similarly, for those LINKS variants that include CSR salary: How do higher CSR salary levels translate into higher employee satisfaction, lower employee turnover, and higher service quality that CSRs deliver to customers?
- Similarly, from the **LINKS Services Management Simulation** manual: *If engaged, telecommunications systems support applies to all CSRs assigned to all support services in a region. Telecommunications systems support has the potential to improve employee satisfaction, service quality perception, and customer satisfaction, although the precise magnitude of these improvements is unknown.*
- And, in the LINKS set-top box industry (LINKS products variants), price, perceived quality, perceived service, and perceived availability are the known demand drivers. But, how important are each of these demand drivers? And, how does this importance vary across markets (channels and regions)?

Just as in real business life, there are no simple answers in LINKS.

The costs of

- excess service capacity (LINKS services variants) or excess inventory (LINKS products variants)
- Information technology investments ... for example, from the LINKS services simulations:
 - o Billing System Technology
 - o Industry-Wide CSR Employee Satisfaction Survey Participation
 - o Internal CSR Employee Satisfaction Survey
 - o Internet-Delivered Ancillary Service
 - o Telecommunications Systems Support
- recycling programs and, more generally, sustainability initiatives
- product-specific research and development spending (LINKS products variants)
- service quality

are relatively easy to see, but the demand-side and employee satisfaction benefits are uncertain and difficult to quantify.

So, it's back to general analysis approaches for assessing effect sizes: combining managerial judgment, analysis of historical data (perhaps via multiple regression models to account for the multiplicity of factors influencing demand or employee satisfaction), competitive benchmarking (especially comparisons across similar competitive offerings that differ on only one demand driver level), and in-market experimentation.



LINKS Train-The-Trainer Seminars

August 3-7 and October 5-9, 2015

LINKS Simulations Immersion Experience

Five Teleconferences and a Four-Round LINKS Simulation Event

Registration is available for the next five-day, intensive-mode Train-The-Trainer distance-learning seminars for the LINKS simulations. Randy Chapman, the LINKS author, leads these distance-learning events for academic faculty interested in learning more about teaching with LINKS. These intensive-mode seminar formats includes 2-3 hours of work per day during each of the five days of the distance-learning seminars.

LINKS Train-The-Trainer Seminars are offered for the enterprise management, marketing, services, and supply chain management LINKS variants.

Current LINKS instructors are invited to pass along this announcement to faculty colleagues and

advanced doctoral students who might be interested in learning more about teaching with LINKS.

Experienced LINKS instructors sometimes participate in a LINKS Train-The-Trainer Seminar to refresh their memories of LINKS details just prior to teaching with LINKS or to explore another LINKS simulation variant for a future teaching activity. Such experienced LINKS instructors may elect just to participate in the TTT's four-round simulation event, ignoring the public teleconferences included in the LINKS TTT program. (PowerPoint decks are available to all LINKS TTT participants before each teleconference, so such experienced LINKS instructors may freely choose to participate in all, some, or none of the teleconferences as per their availability and interest.)

Reminders

LINKS Passcode Retrieval: LINKS passcode retrieval for a LINKS participant (student or instructor) is possible via the “Retrieve LINKS Passcode” link on the main LINKS webpage (<http://www.LINKS-simulations.com>). Executing the “Retrieve LINKS Passcode” operation e-mails the firm’s passcode to the participant’s official e-mail address as recorded in the LINKS Simulation Database.

Student Payment Timing: Student payment with a personal credit card is via the “Pay For LINKS” link on the LINKS webpage.

The published LINKS price (the discounted price) is in effect until the first round of LINKS is complete. Then, the price is increased 25%. This means that we can initialize a LINKS event (and advance LINKS through to its normal starting point) and students can continue to pay at the discounted price until the first scheduled round.

It is not necessary for your students to pay before LINKS begins to have access to the discounted LINKS price. Students must only pay before the first official game run on your game-run schedule to receive the discounted price. Thus, student payments can occur simultaneously with the beginning of a LINKS simulation event. As a practical matter, a final warning/reminder is e-mailed to those students who haven’t paid by the first game run, before implementing the non-discounted price.

E-Mail Address Management: Using their LINKS firm’s passcode, LINKS students may change their official LINKS e-mail address via the “E-Mail Address Management” button in the LINKS Simulation Database. Confirmations of e-mail address changes are e-mailed to the old and new e-mail addresses.

LINKS Instructor Resources: Instructors access LINKS Instructor Resources via the LINKS webpage. Contact Randy Chapman (Chapman@LINKS-simulations.com), the LINKS author, to obtain the username and passcode.



The LINKS Newsletter is a bi-monthly newsletter for current and prospective LINKS instructors and for LINKS friends. Please e-mail comments, suggestions, and other contributions (e.g., LINKS teaching tips) to CWinkler@LINKS-simulations.com



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