

## Fast Fashion Retailing

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## Zara, a Urban Legend?

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- Barcelona, 9 June 2001. Madonna starts her Drowned World Tour in Barcelona. She is wearing a mini-skirt designed by Jean-Paul Gaultier.
- Berlin, 19 June 2001. In the first rows, some girls are wearing the same mini-skirt!!!



## Zara, a Urban Legend?

- The mini-skirts were bought at Zara. This time, it took them 10 days.

ZARA



Get "inspired"



Manufacture



Deliver to store



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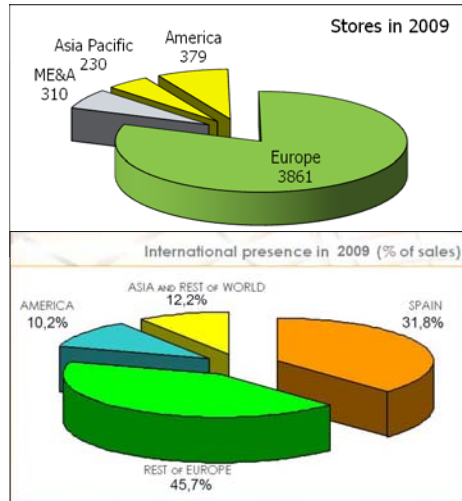
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## Based in A Coruña



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# Zara is no longer a Local Operation



Source: Company data, July 2010

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## Industry Leaders

	Zara (Spain)	H&M (Sweden)	The Gap (U.S.A.)
Vertical Integration (2007)	Fully integrated. Subcontracts cutting, sewing, and shipping	Controls every link in the chain but does not own factories	From design to store but outsources production
No. of stores worldwide (2007)	1,361	1,522	>1,572
No. of Countries (2007)	68	28	21
Distribution of Stores - Main Locations (2007)	13% Northern Europe 60% Southern Europe 8% Latin America	64% Northern Europe 19% Southern Europe 12% North America	9% United Kingdom 79% North America 7% Japan
Assortment Composition (2006)	40% Basic 60% Fashion	>70% Basic <30% Fashion	99% Basic
Sourcing - Main Suppliers (2006)	34% Asia 50% Spain & Prox. 14% Rest of Europe	>60% Asia <40% Europe	97% outside U.S.A.
Lead Times - Dual SC (2006)	Efficient SC: 6 Months Responsive SC: 2-5 Weeks	Efficient SC: 6 Months Responsive SC: 3-6 Weeks	Efficient SC: 9 Months
Refresh Fashion Items (2006)	Twice a week	Daily	Occasionally
Pricing (2002)	Overall, higher than H&M (especially out of Spain)	Lowest among Fast Fashion	Comparable to Zara, if not higher
Marketing Expenditure (2002)	0.3% of Revenues	3-4% of Revenues	Comparable to H&M

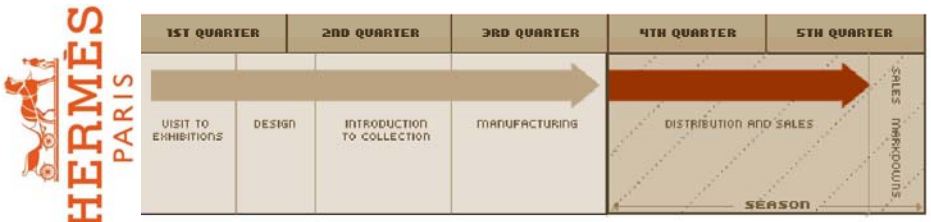
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# The Problem of Fashion Goods



## The Problem of Fashion Goods



- "However, the reality that is now gradually being accepted both by those who work in the industry and those who study it, is that the **demand for fashion products cannot be forecast.**"

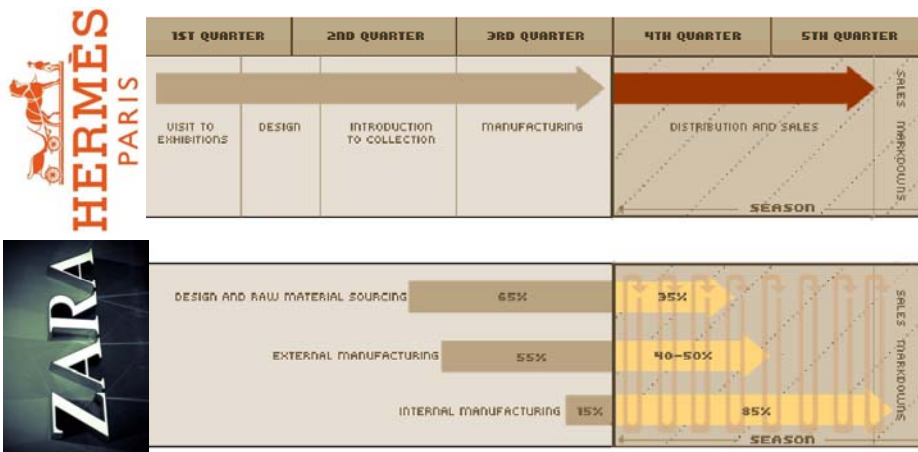
■ Christopher et al. (2004)

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## The Problem of Fashion Goods



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## Industry Benchmark

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### □ In 2001

	Time to market	Diff. products manufactured /year	After season sales	Average markdown	Net after tax margin (2000)
Traditional retailer	6-9 months	2,000-4,000	30-40%	30%	~ 6.4%
Zara	2-5 weeks	~11,000	15-20%	15%	10.0%

- In 2007, Inditex produced 30,000 different designs. Customers visited a store 17 times per year on average, compared to 3.5 times in the industry.

Source: El Pais "Zara conquista el mundo" 8 June 2008.

## How to be a Fast Retailer?

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- Time to market is 2-5 weeks!

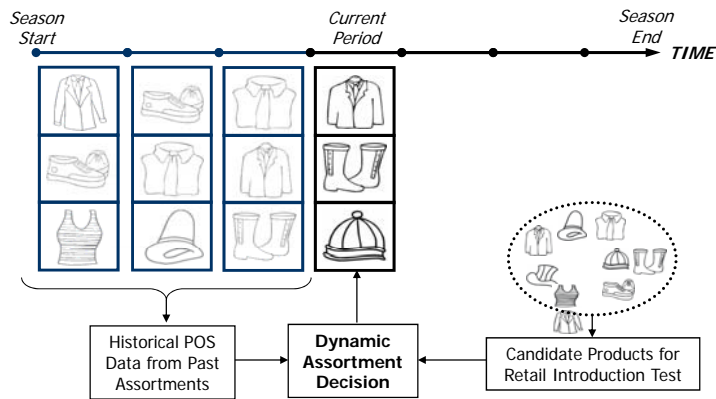
# Store Operations



- High traffic, high rent in premium location
- New product introductions weekly
- Two orders and deliveries per week
- Customers visit a store 17 times per year
  - "El miércoles llega el camión"

# A Typical Selling Season

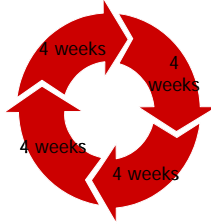
Objective: Maximize Total Season Profits



Source: Caro and Gallien, 2006.

# Duration of a Product in Store

New products are designed to last 4 weeks in the store, without replenishment



Increase traffic: visits/year ↑



Create feeling of scarcity: sales are realized earlier



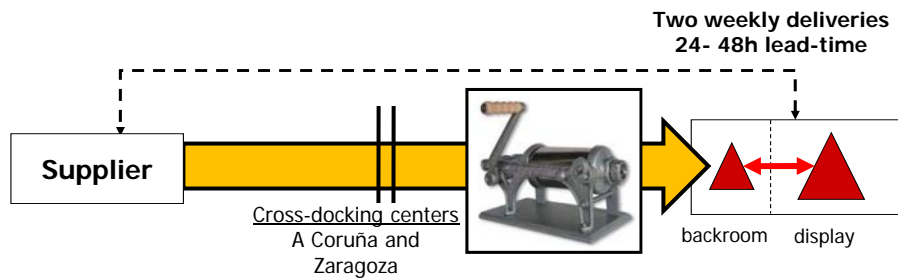
Reduce risk of "missing" customer tastes



Reduce probability of unsold inventory

Maximize expected sales

# Continuous Flows



## Supporting Logistics

- Centralized distribution so as to accelerate decision-making

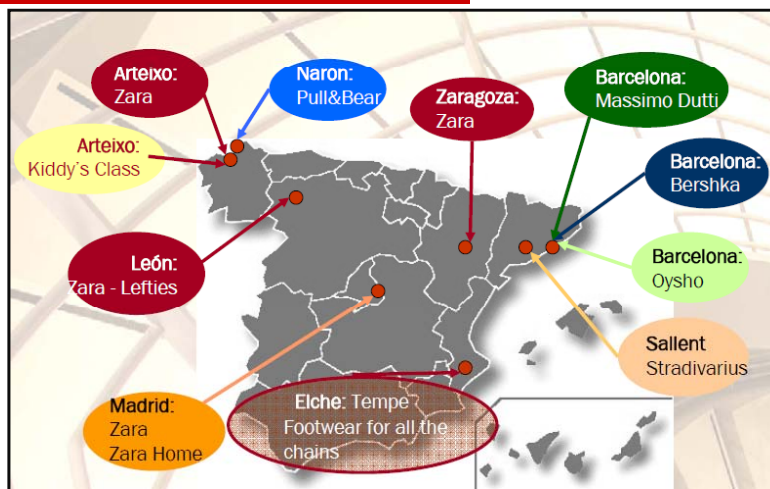


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## Supporting Logistics



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## Supporting Logistics

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## Shipment Decisions

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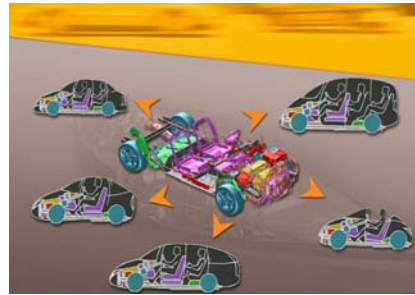
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# Postponement and Delayed Differentiation



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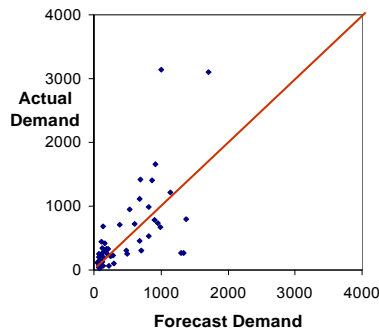
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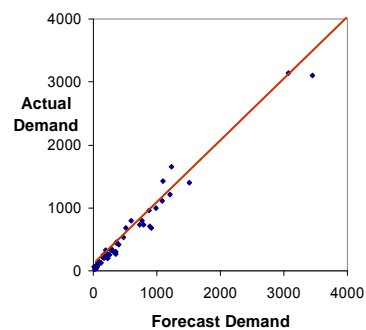
# Using Real-Time Data

## Data from a fashion catalog: early sales are highly predictive

Expert forecast by a committee of 4 merchandisers



Forecast obtained by extrapolating the first 2 weeks (11%) of orders



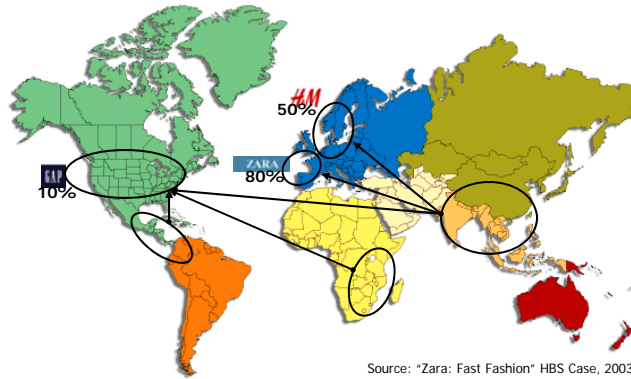
Source: Marshall Fisher, Rocket-Science Retailing

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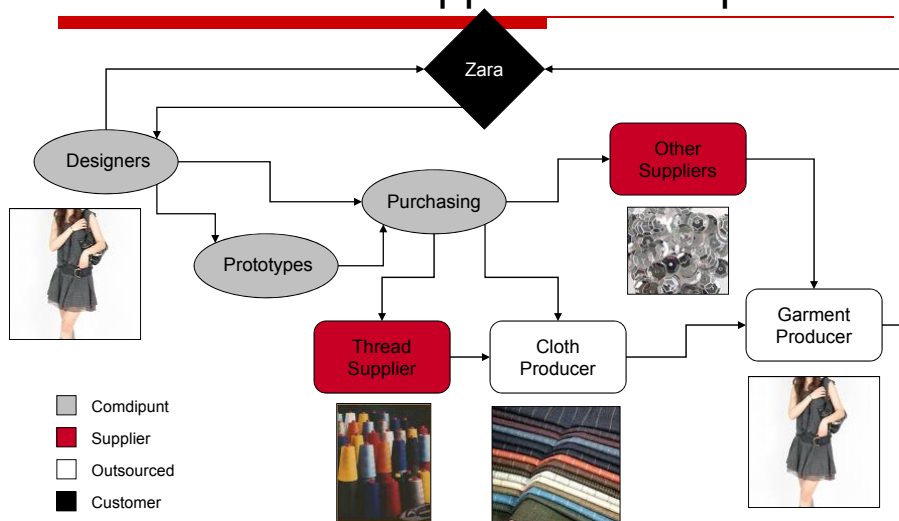
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# Sourcing Practices

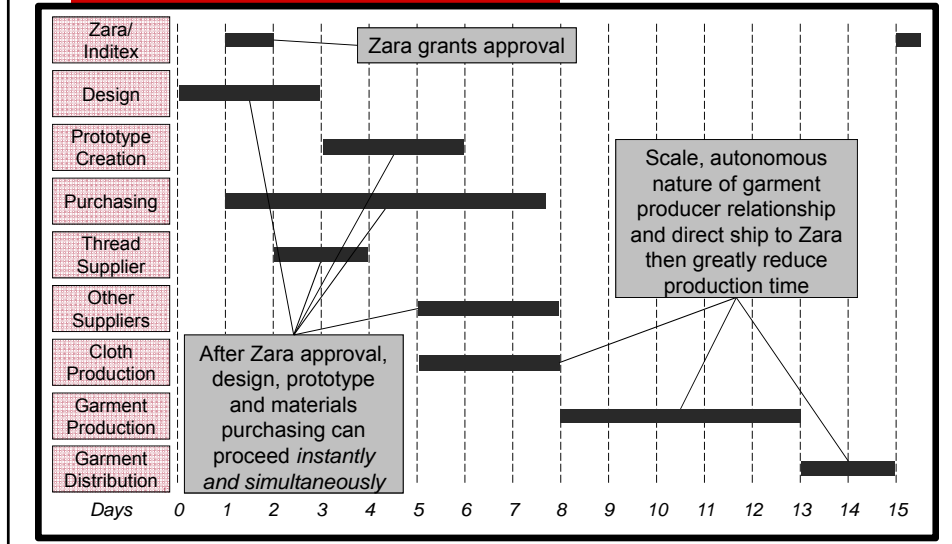


Source: "Zara: Fast Fashion" HBS Case, 2003

# Process with a Supplier: Comdipunt



## Process with a Supplier: Comdipunt



## The Right People

**Good people: never surprised, no egos, team players, creative**



**Effective: quick and agile**



## The Right People

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No bureaucracy, no stupid rules: find the best way



Hard work: the survival of the fittest



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## Design and Planning in Real Time

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- ❑ Design, prototyping, sourcing and production planning **in one room!**
- ❑ Continuous communication between all members of the team (every 3 days)



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## The Result: Speed from Idea to Store

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## An Empirical Study: Connecting Lead Time and Sales in Fast Fashion

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- ❑ Academic research indicates that quick response (QR) should allow firms to reduce demand uncertainty
- ❑ Retailers also claim that QR allows them to design better products that match market trends better
- ❑ Empirical evidence? We work with one retailer in Spain to establish the **impact of lead time on sales**

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## The Company

- ❑ Operates in seven European countries: Spain, France, Portugal, Italy, Greece, Romania and Russia
- ❑ 140+ points of sale



- ❑ Started in 2000 as a multi-brand store selling international brands
- ❑ Today, the company focuses on its own five brands

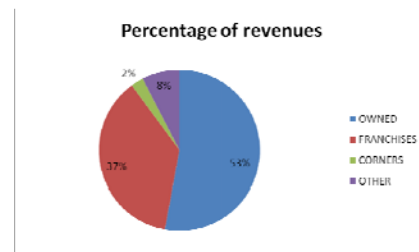
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## Stores

- ❑ 141 stores within 7 countries
- ❑ Average revenue per store is 99,250€ per season (6 months), although owned stores and franchises are usually above with 152,500€ of revenue per season



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## Data

### □ SKUs

- Bar code
- Model ID
- Model-Color ID (2200+)
- Season (Winter'08 and Summer'09)
- Size
- Color
- Description
- Brand
- "Made in" country

### □ Sales info

- Date (from May 2008 to April 2009)
- Bar code
- Store ID
- Number of items

### □ Production delivery

- **Date of arrival**
- Provider ID
- Barcode
- **Number of items**

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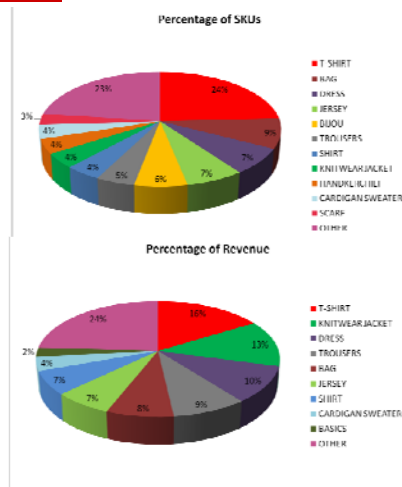
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## Products and Revenue

### □ For the Winter 08 season

- 15,653,961€ revenue
- 2,714 products
- 985,261 units sold
- Average price of 15.9€
- 16% of revenue and 24% of SKUs were T-shirts



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## Indicator of Sales: Sell-Through

- Sell-through as the indicator for sales performance
- We first define the sell-through for each SKU. For each time  $t$  and for SKU  $i$ , we have

$$\text{Sell-through}_i(t) = \frac{\text{CumSales}_i(t)}{\text{PurchaseVolume}_i}$$

- Sell-through time is defined relative to each product first launch date
- We can also define sell-through for a set  $I$  of SKUs.

$$\text{Sell-through}_I(t) = \frac{\sum_{i \in I} \text{Sell-through}_i(t) \cdot \text{PurchaseVolume}_i}{\sum_{i \in I} \text{PurchaseVolume}_i} = \frac{\sum_{i \in I} \text{CumSales}_i(t)}{\sum_{i \in I} \text{PurchaseVolume}_i}$$

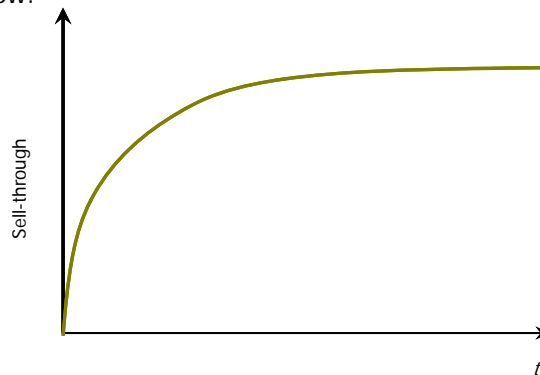
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## Indicator of Sales: Sell-Through

- In a retail context, specially when dealing with fast fashion, one would expect the sell-through to behave similarly to the diagram below.



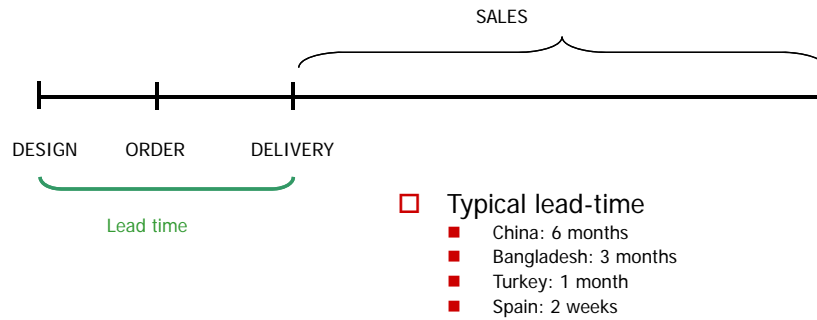
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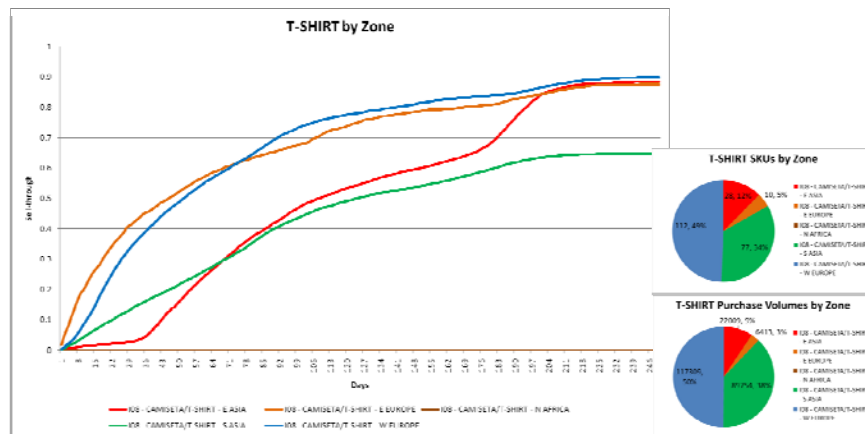
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# Lead Time

□ Lead times vary with the producer's country/region



# Sell-Through for T-shirts



## Model I. Regression

- We try to explain the sell-through for times  $t=30, 60, 90$  and  $120$  days, as a function of ZONE (as a proxy for lead time) and PRODUCTION VOLUME (20 levels: 1-500, 501-1000, etc.)
- We control by BRAND, COLOR and FAMILY to capture the effect of seasonal preferences over color or type of product

$$ST(t) = \beta_{0,t} + \beta_{ZONE(Z),t} \cdot X_{ZONE(Z)} + \beta_{VOLUME,t} \cdot X_{VOLUME} + \beta_{BRAND,t} \cdot Z_{BRAND} + \beta_{COLOR,t} \cdot Z_{COLOR} + \beta_{FAMILY,t} \cdot Z_{FAMILY} + \varepsilon_t$$

## Model I. Regression

- There is a significant positive effect of short LT zones in SELL-THROUGH
- We take ASIA E taken as the reference zone

$t$ (days)	$ST_{ASIA E}$	Differential impact $(\beta_{ZONE} - \beta_{ASIA E})$			
	ASIA E	ASIA S	AFRICA N	E EUROPE	W EUROPE
30	0.229	0.039*	0.112*	0.151***	0.158***
60	0.423	0.009	0.133***	0.075***	0.148***
90	0.575	-0.006	0.241***	0.171***	0.156***
120	0.682	-0.031	0.208***	0.155***	0.093***

- \* Significant at the 0.05 level
- \*\* Significant at the 0.01 level
- \*\*\* Significant at the 0.001 level

## Model II. Regression

- Volume is a quantitative variable

$$ST(t) = \beta_{0,t} + \beta_{ZONE(Z),t} \cdot X_{ZONE(Z)} + \beta_{VOLUME,t} \cdot X_{VOLUME} + \beta_{BRAND,t} \cdot Z_{BRAND} + \beta_{COLOR,t} \cdot Z_{COLOR} + \beta_{FAMILY,t} \cdot Z_{FAMILY} + \varepsilon_t$$

- $\beta_{0,t}$  is the predicted value for the first level for each factor

$t$ (days)	$\overline{ST}_{ASIAE}$	Differential impact ( $\beta_{ZONE} - \beta_{ASIAE}$ )				$\beta_{VOLUME}$
	ASIA E	ASIA S	AFRICA N	E EUROPE	W EUROPE	
30	0.229	0.030	0.095	0.157***	0.192***	-0.027***
60	0.423	0.014	0.201***	0.218***	0.267***	-0.031***
90	0.575	-0.022	0.190**	0.163***	0.182***	-0.022***
120	0.682	-0.196*	0.148**	0.148***	0.11***	-0.013*

\* Significant at the 0.05 level    \*\* Significant at the 0.01 level    \*\*\* Significant at the 0.001 level

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## Some Conclusions from the Study

- Lead time (production zone) has great impact on sell-through, the key indicator of sales performance.
- We provide a **quantitative measure** for the lead-time advantage of different regions: can be used to decide where to source from

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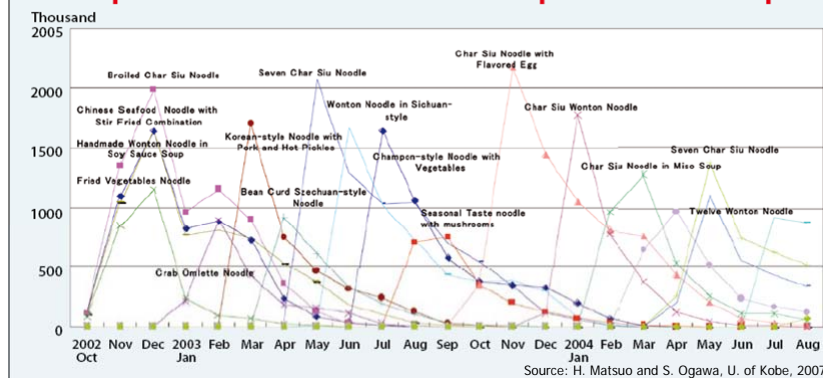
## Opportunities

- ❑ The fast fashion business model is built around the premise that quicker execution leads to higher sales and higher margins
- ❑ It capitalizes on a smart use of sales data to determine
  - Shipments from distribution center to store
  - Production orders to suppliers
  - New designs
- ❑ The same ideas can be used in other industries

## Opportunities



### Lifespan of new instant noodle products in Japan



# Fast Fashion Retailing

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University of Navarra



Santiago de Chile, 6 enero 2011

## Some References

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- With Felipe Caro (UCLA)
  - "The Impact of Quick Response in Inventory-Based Competition" (M&SOM 2010)
  - "The Effect of Assortment Rotation on Consumer Choice, and its Impact on Competition" (Operations Management Models with Consumer-Driven Demand 2009)
  - "Product and Price Competition with Satiation Effects" (working paper 2010)
- With Alejandro Lago and Philip Moscoso (IESE)
  - "Connecting Lead-Time and Sales in Fast Fashion" (working paper 2011)