

# MarkSimos

An HCD Global Simulation Game

Participants Manual

# Table of Contents

## Overview

4

### What is MarkSimos?

- Overview
- Your Mission & Roles
- Methodology

### Market & Industry

- Market Situation
- Consumer Segments

### 4 P's

- Product
  - Brands and SKUs
  - Production
- Price
- Promotion
- Place (distribution)

## Business Operation

10

### Brief Overview

## Order & Inventory Decisions

10

### Order Decisions

- Wholesalers' orders
- Retailers' orders

### Inventory Decisions

#### Obsolete Goods

## Financial Decisions

11

### Investment Budget and Funding Sources

## R&D Decisions

12

### Investment in Processing Technology

### Investment in Production Efficiency

<b>Sales Decisions</b>	<b>12</b>
<hr/>	
Sales Force Decisions	
 <b>Portfolio Decisions</b>	 <b>13</b>
<hr/>	
Launching a new Brand	
Modify an Existing Brand	
Discontinue?	
 <b>Production Volume Decisions</b>	 <b>14</b>
<hr/>	
Overview	
 <b>Pricing Decisions</b>	 <b>14</b>
<hr/>	
Manufacturer Price	
Apply New Manufacturer Price to Old Inventories at Factory	
 <b>Marketing Decisions</b>	 <b>14</b>
<hr/>	
Communication Decisions	
• Communication Overview	
• Target Consumer Segment	
 Promotion Decisions	
• Promotional Budget	
• Promotions Schedule	
 <b>Trade Decisions</b>	 <b>15</b>
<hr/>	
Trade Expenses	
Additional Trade Margin	
Wholesale Minimum Bonus Volume	
Wholesale Bonus Rate	
 <b>Final Remarks</b>	 <b>16</b>
<hr/>	

## Overview

---

### What is MarkSimos?

- **Overview**

MarkSimos is Business Simulation Game that allows you to run a company in a realistic, yet risk-free virtual environment with an intensive time frame.

Through stimulating team sharing and experiential learning encourages participants to create a CEO perspective and to get a well-rounded view of the firm and its functions.

- **Your Mission & Roles**

You and the other members of your team have just been recruited by a large corporation to replace the former management team to manage its business in an **emerging market**, marked by large populated cities with a healthy and stable growth.

You will compete with several other firms in an **Fast Moving Consumer Goods (FMCG)** industry (i.e. food & drinks, clothes, smart phones, luxury goods...) with the objective of attracting consumers to buy your products. During this exercise, you will be responsible for formulating and implementing the **long-term marketing strategy of your division**.

Your **objective** is to make sure that during your period of control the company has improved its relative standing versus other competitors in terms of:

- Incremental market share (in value)
- Cumulated profits

To succeed it is indispensable first to **understand the market**, second to **determine clear strategy for serving that market** and third to **implement the strategy consistently**. At the same time, a permanent and thorough analysis of the market evolution is required to properly adjust ways of using the available tools. All common marketing tools and concepts such as pricing, brand portfolio management, innovation, advertising, trade investment, segmentation and positioning are represented within the model.

- **Methodology**

The simulation takes place among 20-30 participants divided into 4 to 6 teams producing and selling similar products. Each team represents a company composed with 3 to 6 members each that will be assigned with different roles (CEO, CMO, COO...).

Before the interactive simulation each team analyzes the market information and industry dynamics. Then, the decision-making process starts and participants implement a business strategy being aware of the constantly changing environment.

The simulation lasts 4 to 5 rounds, each one representing a real life quarter. After each round the facilitator evaluates each of the teams' decisions and draws out lessons to learn. Moreover, the expert delivers lectures to distill important marketing frameworks and concepts. Finally, the team with the best profitability and market share is named the winner.

*Notice!!*

Initially, all teams will have access to the financial results of Period 0 and the market information of previous 4 periods. Then, they will be asked to make a set of decisions (i.e. decision 1) that will be submitted to the simulation administrator who will generate the results of the subsequent period (i.e. period 1). The whole process will be repeated several times. After the last round, the final evaluations will be performed to determine which team achieved the best results.

## Market & Industry

- **Market Situation**

The currency unit is \$. The **inflation** itself remains relatively stable at around **8.5% on a yearly basis**.

**Market growth** is quite significant, with a rate approaching **9% in average on a yearly basis (around 2% per quarter)**. At the same time, the market is very price sensitive and any price increases significantly exceeding inflation may result in volume growth stabilization, or even reduction. The fast pace of consumers' maturing is constantly forcing the manufacturers to improve their offer and/or increase efficiency.

- **Consumer Segments**

All products are perceived by the consumers in terms of:

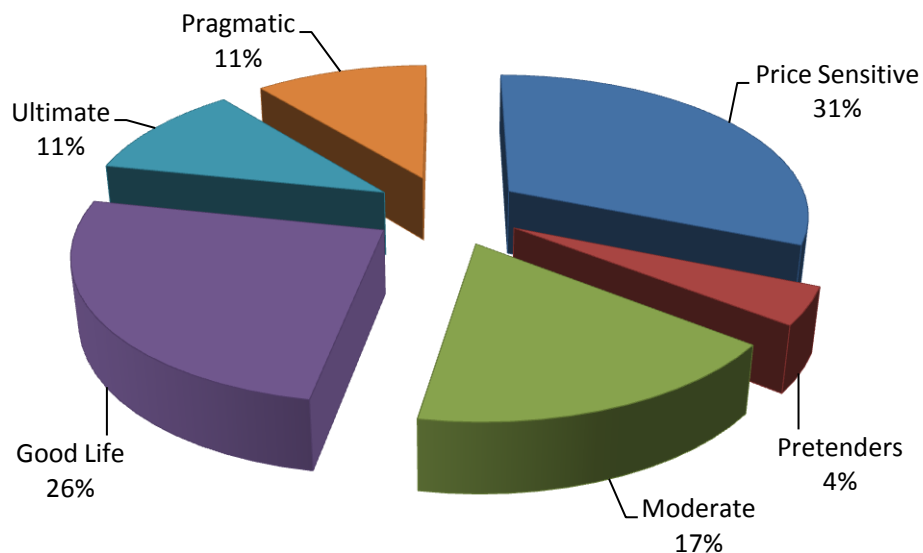
- a) **Value** → which reflects the trade-off between the final qualities of a product versus its market price.
- b) **Image** → which gauges acquired product equity, prestige, reliability and newness.

Six consumers segments with a different characterization have been identified in the market:

<b>1. Price Sensitive</b>	Consumers accept that they cannot be too demanding on Image perception, since they care so much about price and the Value for money.
<b>2. Pretenders</b>	Consumers are also very price sensitive but they want to show off; therefore they look for high Image perception.
<b>3. Moderate</b>	Consumers are slightly less price sensitive than Segment 1, hence their expectations are slightly higher on both dimensions.
<b>4. Good Life</b>	Consumers are even less price sensitive than Segment 3 and expect more on Value as well as on Image.
<b>5. Ultimate</b>	Consumers are not really price sensitive. They can afford higher prices, but in exchange they ask for very high quality, hence they have high expectations on Value dimension.
<b>6. Pragmatic</b>	Consumers are well-educated and practical people with their strong judgments. They don't follow fashion. They want very good Value offer, but Image aspect is for them a bit shallow and futile, which doesn't mean that they would be happy with entry level products. They look for something decent.

At the starting point, the total market represents in volume terms about 2,000 mln std packs. Its value attains almost 12,000 \$mln.

The chart below shows the segments classification and their initial market share (in volume) at the end of Period 0.



The table below shows indicates consumers' needs regarding products perceptions at the starting point:

SEGMENT NAME	EXPECTED VALUE PERCEPTION (0-100)	EXPECTED IMAGE PERCEPTION (0-100)
1. Price Sensitive	24	24
2. Pretenders	24	45
3. Moderate	32	30
4. Good Life	32	36
5. Ultimate	53	53
6. Pragmatic	52	53

As the simulation goes on, manufacturers launch new brands and their variants will influence consumers' preferences. As a result, segments' sizes will evolve.

#### 4P's

- **Product**

All companies manufacture products that are frequently bought by virtually every household, which are not presumed as food or non-food items. Important fact is that they usually **cannot be stored more than two periods** after their production period. Product production cost and quality is determined by two aspects:

**a) Applied Technology Level**

**b) Quality of raw materials.**

**Processing Technology** reflects a company's acquired know-how. It is an index ranging from 1 to 20, where 1 means "very primitive" and 20 refers to "ultimate state-of-art".

Initially all companies start with relatively low A.T.L., which equals to 7 the highest.

The acquired technology level (A.T.L.) determines the quality of raw materials that company can efficiently use to manufacture the final products. The metric used to identify the quality of raw materials is also an index ranging from 1 to 22, where 1 stands for "poorest possible quality", and 22 means "best possible quality".

The simulation imposes the following constraint: a company cannot practically use raw materials of quality index higher than its A.T.L. index plus 2. If the applied technology level is 7, the quality of raw materials will be no higher than 9.

There are three different kinds of products packaging sizes, which are STANDARD, SMALL and LARGE.

- a) STANDARD PACKAGING
- b) SMALL PACKAGING (=1/2 Standard Packaging)
- c) LARGE PACKAGING (=2 Standard Packaging)

## Brands and SKUs

Each firm can have up to five different brands. Each brand can be marketed in five different variants, called stock-keeping-unit (SKU). SKUs sold under same brand name may differ considerably in terms of:

- a. Quality of used ingredients
- b. Processing technology
- c. Packaging size
- d. Price
- e. Positioning

These factors may significantly influence consumers' perception of a specific SKU, as well as the perception of the entire brand.

Brands produced by a given manufacturer can be recognized by their names and the letter at the beginning of the name. Correspondingly, brands produced by Firm 1 start with "A", those of Firm 2 start with "B", and so on. SKUs of a specific brand are identified by a number suffix; for instance SKUs of the brand BOBOB (produced by Firm 2) will be known as: "BOBOB\_1", "BOBOB\_2", etc.

## Production

The average production cost is a function of the following three factors:

- 1. Applied processing technology**
- 2. Ingredients quality**
- 3. Production efficiency**

Generally, production cost raises correspondingly along with the high values of both applied technology level and ingredients quality.

A decision to invest in improving production efficiency results in reduction in reduced average unit production cost. Substantial economies of scale can be achieved with big production volumes using the same technology level. In other words, if several SKUs are produced with the same technology, the savings will be spread across all those items up to 25%.

All firms start with similar production capacities that are utilized on average at 90%. As the simulation goes on, for firms exceeding the capacity utilization rate of 90% for consecutive 2 periods, the capacity will be automatically increased in the next period. Similarly, if the total output represents less than 60% of production capacity, it is automatically reduced in the next period. Increasing production capacity will not be deducted from T.I.B.



Overtime shifts allow extending production ability by at most 30%. The incremental volume is associated with additional costs, which represent about 27% increase, as compared with the regular production cost.

Acquired production Volumes Flexibility refers to the percentage by which the company can adjust its initially planned production volumes upwards or downwards.

- **Place (Distribution)**

Manufacturers do not sell directly to retailers; their products are first shipped to wholesalers, and then delivered to retailers. All associated costs are implicitly included in the production costs.

Wholesalers' and retailers' margins are practically fixed. All trade channels react in a similar way to stimulations from manufacturers. Some of manufacturers' actions, like field force budget and investments in points of sales, tend to have continuous character. Some other ones, like increases in wholesalers' or retailers' margins, occur only during certain periods.

Wholesalers and retailers are very careful with their ordering policies; besides financial repercussions, they avoid stocking goods that risk becoming less attractive or simply out-of-date, as the category is very heavily innovation driven.

Products tend to be constantly changed and improved. As a result, consumers have a strong preference to renew their purchases instead of forward buying for a long period. If an item is discontinued, it continues to be sold till the end of this period. If there is any stock left in the channel at the period end, all remaining inventories at manufacturer, wholesalers and retailers are sold off at 25% of the purchase cost respectively. The corresponding 75% charge is considered as a material cost and decreases manufacturer gross profit.

- **Price**

Manufacturers enjoy relative flexibility in setting prices between **50% to 300% of product manufacturing cost price**.

Once the list price is decided it determines the purchase price for retailers as all wholesalers apply fixed margin of 6%. Given that average retailers' margin is also fixed at 25%, the price paid by consumers is de facto also determined at that moment.

Retailers do not entirely respect the price recommendations. Some deviations between + 5% are commonly observed, and in some extreme situation +15 is also possible. They may decide in some cases to reduce or to augment their margin by altering consumer price. On less performing items retailers tend to reduce prices. At the same time, they are inclined to raise prices on SKU demonstrating upwards sales trend.

- **Promotion**

Consistently, consumer promotions should be unambiguously considered as price promotions. During price promotions retailers respect accurately producers' plans. The actual consumer prices will be reduced proportionally to the decided promotional budget.

## **Business Operation**

---

### **Brief Overview**

Before making decisions, you should understand the market evolution by analyzing the market and competition information provided in the reports.

In each period, you'll make a set of decisions. With the exception of investment in processing technology and production efficiency, which are decided at the corporate level, and Sales Force budget, which is decided by brand, all items are decided at the SKU level.

- **General Decisions:** Processing Technology
- **General decisions:** Production Efficiency
- **Sale force** (by brand)
- **Product Portfolio**
- **Production Volume**
- **Pricing**
- **Communication**
- **Trade**

## **Order & Inventory Decisions**

---

### **Order Decisions**

- **Wholesalers' Orders**

Current period orders are determined by the following factors:

- Market sales and sales trend over previous periods
- Corrected for out-of-stock volume at retailers
- Inventories at retailers' and at wholesalers' (wholesalers' inventories are no bigger than 8 weeks)
- Importance of manufacturers' investments, (mainly sales force budget).

Manufacturers may influence wholesalers' behavior by offering additional financial incentives.

- **Retailers' Orders**

In a normal situation, the same factors, as those mentioned above, influence retailers' orders. In addition, retailers take into account planned price promotions. Retailers tend to have smaller stocks cover; usually it is no bigger than 4 weeks.

Investment in Sales Force, Trade Expense and Additional Trade Margin will encourage higher retailers' orders.

## Inventory Decisions

The F.I.F.O. rule is universally applied at manufacturers, wholesalers and retailers. For simplicity reasons the I.H.C. is calculated by applying 2% rate to the period ending inventory value.

If a manufacturer is selling batches of different age, the final C.O.G.S. will actually be a sum of production costs linked to volumes coming from different batches.

## Obsolete Goods

Goods produced with technology level lower than 11 have two-quarter validity time. Those manufactured with higher technology – and correspondingly higher quality of ingredients - can be stored for three quarters.

Inventories that reached its expiry date will be destroyed at the end of period. Manufacturers will compensate wholesalers and retailers by paying them back 60% of their respective purchase cost. Manufacturers also get 60% charge on factory stocks, i.e. they sell them off at a price equal to 40% of production cost.

## Financial Decisions

---

### Investment Budget and Funding Sources

Each company is assigned a total investment budget (T.I.B.) that can be spent in a discretionary way. Each team may choose its own investment strategy.

If needed, additional investment budget can be applied from the administrator by paying high interests. The maximum amount equals to A.I.B. You can apply for additional investment for up to 2 times during your period of control. The interest rates are 31% on yearly basis and 7% on quarterly basis.

If a company generates operational profits, it can earn Interests on deposits at 12.5% but will not increase T.I.B. In the opposite case, it has to borrow funds and as a result it pays Interests at 17.0%. On quarterly basis the respective values are 3% and 4%.

**Notice!!**

By clicking “Spending versus Budget”, you will see the information about Total Investment, Average Budget per Period, current investment, Acquired Technology Level, Acquired Production Volume Flexibility and etc.

## R & D Decisions

---

### Investment in Processing Technology

Improved technology allows:

- a) Utilization of better ingredients
- b) Production of high quality and image goods
- c) Extending inventory storage duration,

Technology enhancements take non-negligible part of T.I.B. Obtaining more significant improvements will require disproportionally higher investments as improving A.T.L. is substantially cheaper at the initial stages.

### Investment in Production Efficiency

R&D Dept. will suggest the estimated investment budget to increase production efficiency or production volume flexibility.

Increasing production efficiency will also have impact on reduction of production cost and increase in production volume flexibility as well. If you would only improve production volume flexibility, please refer to the estimated budget correspondingly. Investment is limited by A.I.B.

**Notice!!**

By clicking “more information” on the interface of R&D decisions, you will the information needed for your investment decisions.

## Sales Decisions

---

### Sales Force Decisions

The sales force budget expressed in \$mIn determines the number of field representatives in charge of the entire brand. An acceptable range of values is from 0 to A.I.B.

Changes in the distribution resulting from the modifications of sales force budget have direct impact on the following variables:

- Brand and SKUs visibility in the Point of Sales measured with total shelf space allocated to a specific item.
- Retailers’ volume orders. Retailers tend to “forget” ordering sufficient volumes of brands or SKUs if they are not constantly “reminded” by sales representatives. Trade expenses without substantial field force have limited impact.

## Portfolio Decisions

---

### Launching a new Brand

Each company can have up to five brands with five SKU"s within each brand.

Following dimensions need to be decided when launching a new brand:

- a) **Processing Technology:** which directly impacts product quality and production cost
- b) **Quality of Ingredients:** no higher than Processing Technology index plus 2, which affects the same variables as processing technology.
- c) **Packaging Size:** STANDARD, SMALL ( $=\frac{1}{2}$  of STANDARD) or LARGE (double of STANDARD). Selected pack size directly impacts Production cost and brand image.

#### *Notice!!*

To launch a completely new brand, select the decision menu and then by clicking "Launch new brand" you will be then prompted to enter new brand name as well as the name of its first SKU.

### Modify an Existing Brand

An existing brand can be modified by adjusting applied Processing Technology or Quality of Ingredients. The pack size for a specific SKU can only be set at the launch moment.

A new SKU needs to be launched if a company wishes to offer an alternative or additional item with a different pack size.

### Discontinue?

If "YES" is entered, the corresponding SKU is discontinued at the end of period. All remaining inventories at manufacturer, wholesalers and retailers are sold off at 25% of the purchase or production cost respectively.

The corresponding 75% charge is considered as a material cost and decreases manufacturer gross profit. The entire brand is removed from the market if "YES" is entered for all existing SKUs.

#### *Notice!!*

By clicking on "more information" icon next to the SKU name at all stages, an on-hand information window may be displayed, which provides basic information on SKU costs, prices, previous investments and performances.

## Production Volume Decisions

---

### Overview

It defines the planned production (in mln packs) for the entire period. It is subject to certain adjustments (increase or reduction). The scale of adjustments depends on previous investments in production and logistics efficiency.

Possible input values vary from 0 to maximum available capacity, which represents the actual physical capacity increased by 30% due to overtime.

You can ask for overtime shifts, which will increase the production cost by 27%.

## Pricing Decisions

---

### Manufacturer Price

It is expressed in \$ per actual pack size. For SMALL or LARGE packs, it is converted to the price per STANDARD pack in market studies reports.

Authorized input for Manufacturer Price values vary from 50% to 300% of manufacturer production cost.

### Apply New Manufacturer Price to Old Inventories at Factory

In case there are some previously produced inventories, and their prices were different from the currently decided.

## Marketing Decisions

---

### Communication Decisions

- **Communication Overview**

It is an advertising budget expressed in \$mln. Possible range of input values varies from 0 to A.I.B. The consumer communication decided at SKU levels has significant spill-over effects.

- **Target Consumer Segment**

If target segment is specified, the advertising budget is used to reposition SKU towards the indicated segment expectations. The specified value influences Value and Image Perceptions of an SKU. It may also affect perceptions of other SKUs marketed under the same brand name.

It may also be left without specifying any segment, in this case advertising budget “works” only to improve awareness.

## Promotion Decisions

- **Promotional Budget**

It is a budget expressed in \$mln for consumer promotions in stores. Possible input values range from 0 to A.I.B. The list of variables directly influenced by promotional budget contains:

- Display price
- Price Ranking Index
- Value perception
- Retailers orders
- Shelf space
- Awareness

- **Promotions Schedule**

Defines weeks when promotions occur. At least one week needs to be selected. In extreme case all 13 weeks can be selected.

The total promotional budget is actually divided by the number of promotional weeks. If retailers still have inventory with reduced price, a residual effect may last longer than selected week(s).

## Trade Decisions

---

### Trade Expenses

The budget expressed in \$mln encompasses all investments to improve merchandising and to stimulate retailers. Possible input values range from 0 to A.I.B. It does not increase retailers’ margin, but covers costs of better display, in-store communication, product sampling, tasting, information booths, etc.

Trade investments influence Volume weighted distribution and shelf space mainly. Effectiveness depends on sales force employed.

Significant spill-over effects can be observed across other SKUs of the same brand.

## Additional Trade Margin

Margin decided here is added on top of the regular one. Possible input range is from 0% to 25%. The actual maximal percentage is limited by A.I.B. (Average Investment Budget).

Retailers' inventory plus expected retailers purchases multiplied by absolute value of additional margin cannot exceed A.I.B.

### *Notice!!*

- Additional trade margin is limited by A.I.B.
- It does not influence consumer price but makes given SKU more profitable for retailers and therefore incentivizes them not only to allocate larger shelf space but also to increase volume orders.

## Wholesale Minimum Bonus Volume

You can set purchase volume (in mln packs) threshold for wholesalers based on production volume and inventory. If their orders reach or exceed the required minimum, they will qualify for discount increasing their regular margin of 6%. Allowed input range varies from 0 to the volume of inventory at manufacturer increased by the current production.

When the bonus program is proposed, wholesalers' purchases will be modified upwards if the difference between regular volume and the one qualifying for bonus is smaller than 15%. Direct result of bonus program is increase of wholesalers' purchases. It may prove important to avoid out-of-stock situation in the marketplace.

## Wholesale Bonus Rate

Percentage specified here represents additional profit margin for wholesalers provided that their purchases reach or exceed defined above volume. Allowed range is from 0% to 6%, but absolute maximal percentage is limited by A.I.B.

Wholesale Bonus = Order Quantity x Manufacturer Price x Wholesale Bonus Rate.

## Final Remarks

---

Although this manual tends to give a lot of information, for clarity and readability reasons, it does not cover all details. If you have any questions make a note of them so that you can ask the administrator during the introductory sessions at the beginning of your exercise. Hopefully, you have now some idea of how MarkSimos simulation works, and that you are ready to face its challenges.

Good luck!