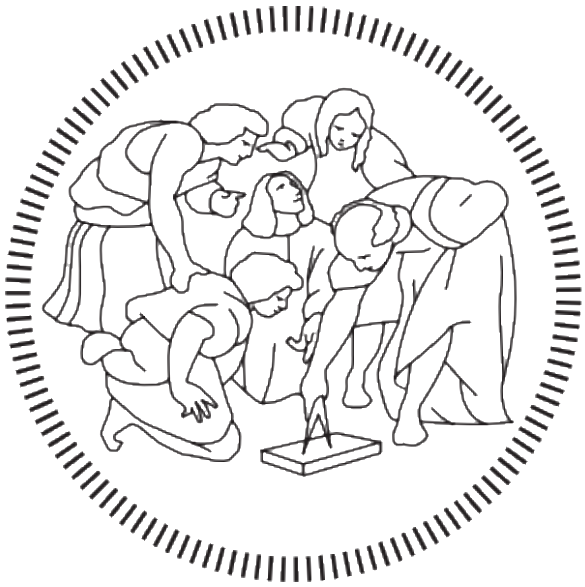

POLITECNICO
MILANO 1863

BUSINESS GAME

Report 1

BACHELOR'S DEGREE PROJECT IN MANAGEMENT ENGINEERING

Year 2019/2020

Team Name: "4ObladiEBITda" | Team ID: 1.6

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1. MARKET ANALYSIS

Our company operates in 2 different markets: the retail market and the wholesalers market.
These markets have a substantially different historical data and functioning: perfectly in line with this, our company has so far adopted a different approach in the supply of finished products, therefore in our analysis, we will treat them separately.

1.1 RETAIL

1.1.a Demand analysis

Image n.1

The demand analysis is the starting point that sets each business' function in motion: it is therefore important to understand, for each product line, the main components that compose the market demand. We have 2 years of historical data. Analyzing the time series, we noticed that each product line has well-defined demand peaks:

Fabrics: peaks in JUL-SEP *Fittings:* peaks in APR-JUN *Furniture:* peaks in OCT-DEC

Also, the series have a strong seasonality, and after a qualitative analysis of the curves we would say it is of 4 periods. By carrying out a more detailed correlation analysis for each product line, we can confirm the presence of seasonality:

Fabrics:

K	%
2	-10,26%
3	-37,00%
4	99,95%

Image n.2

Fittings:

K	%
2	51,93%
3	-82,11%
4	97,69%

Image n.3

Furniture:

K	%
2	-91,99%
3	-20,42%
4	99,54%

Image n.4

A correlation percentage very close to 100% assures us that we have a strong seasonality, and that its step is equal to 4 periods (annual seasonality), for each product line.
Proceeding with the analysis of the trend, we purify the time series from seasonality using the centered moving average, in which the seasonality value is the center: 4. Since it is an even value, we obtain N-4 values for the trend analysis, where N are the observed demand values (8).

By performing an analysis through linear regression, we can find the causal relationship that defines the trend line, estimating the parameters a and b. The values we get for each product are:

FABRICS:

Equation	Y = a + bT
a	418.524,00
b	13.474,89

Image n.5

Period	Purified series
Q3 - 2018	437.300,25
Q4 - 2018	438.418,13
Q1 - 2019	457.155,88
Q2 - 2019	475.970,63

Image n.6

As for the Fabrics line, we can see a relatively increasing trend (in blue: C.M.A. line).

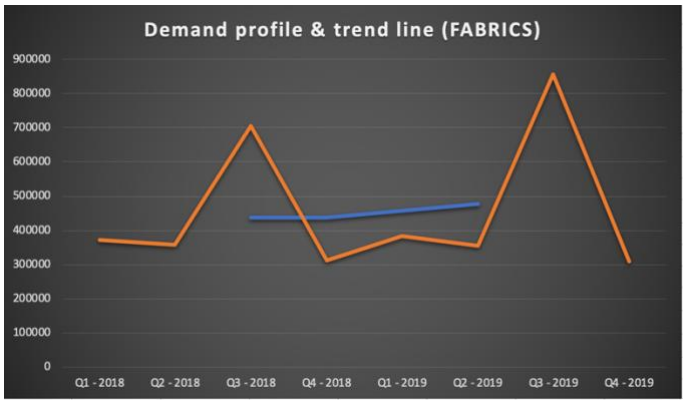


Image n.7

FITTINGS:

Equation	Y = a + bT
a	844.184,06
b	9.605,15

Image n.8

Period	Purified series
Q3 - 2018	847.245,13
Q4 - 2018	867.243,25
Q1 - 2019	884.934,00
Q2 - 2019	873.365,38

Image n.9

Also for the Fittings line, we can notice a growing trend, but proportionate to the demand values, we can only say that the trend is slightly increasing.

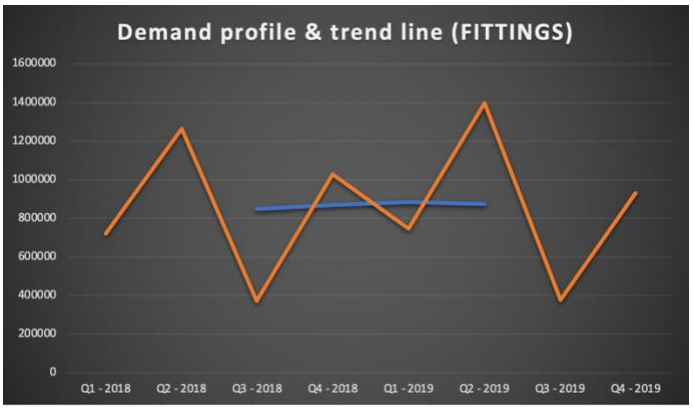


Image n.10

FURNITURE:

Equation	Y = a + bT
a	117.926,56
b	-1.063,44

Image n.11

Period	Purified series
Q3 - 2018	116.615,63
Q4 - 2018	116.044,00
Q1 - 2019	114.990,13
Q2 - 2019	113.422,13

Image n.12

As for the Furniture line, we can see a slight negative trend, as confirmed by the angular coefficient b of the straight line.

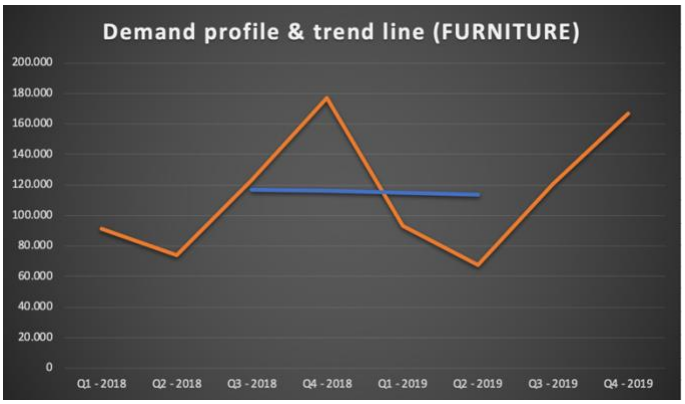


Image n.13

Since both trend and seasonality are present, the demand forecasting can be carried out using the Holt-Winters model, to which we refer our analysis in the paragraph n.4.1.b, talking about the developed Marketing strategy.

We can anticipate that this forecast will be taken into consideration only for the future demand study and never for the current period, as the demand for the current period is basically suggested by the platform, with the percentage variations in demand compared to the previous period. This indicator will also be analysed in the paragraph n.4.1.b, Marketing.

1.1.b Competitiveness factors analysis

We have the following data available with a trend of the importance that consumers give in each period, to competitiveness factors such as price, quality and brand:

Competitiveness factors	
Quality	80
Price	100
Brand	80

Image n.14: first period's values

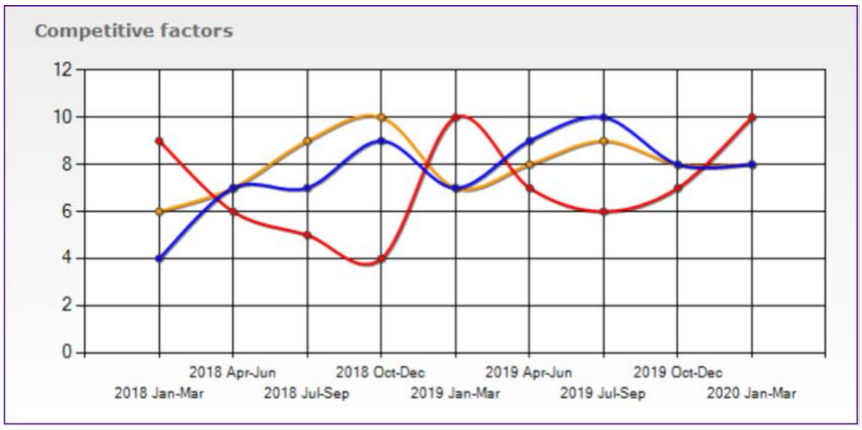


Image n.15

PRICE

From a first trend analysis, we can immediately notice a strong variability: in fact, there is a maximum value of 100 reached in JAN-MAR 2019 and JAN-MAR 2020 and a minimum value of 40 reached in OCT-DEC 2018. A strong variability is also confirmed by the sudden change even after a single period: in fact, we can see it between OCT-DEC 2018 and the following period, JAN-MAR 2019. This behaviour can at first sight seem unpredictable, however, it indicates, after a more detailed analysis, a strong seasonality equal to 4 periods (annual) and a slightly growing trend. However, due to these too large changes, pursuing a pricing strategy could be very risky, so much that it could make our future business result unpredictable.

QUALITY

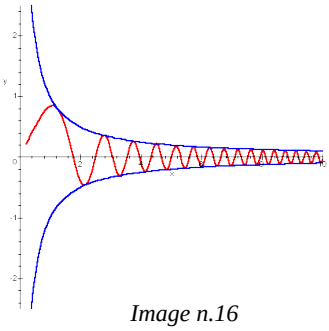


Image n.16

As for quality, the curve resembles a typical dynamic control systems curve (generic example in Image n.16 on the left), oscillating around an asymptote that seems qualitatively to be around the value 80. This type of curve is very predictable and it has very low fluctuations in the long term, which indicates a great predictability and, consequently, less risk.

Furthermore, the quality curve also appears to have a slight increasing trend and, as already mentioned, low variability. The minimum value is touched in JAN-MAR 2018, after which it has never gone below the value of 70: therefore, we can deduce a substantial importance. To give a realistic meaning to these results, we can reasonably think that consumers particularly appreciate high quality products, and that this appreciation is constant over time and even slightly growing. This is an aspect that we should not underestimate, as it could bring a positive competitive advantage to our company.

BRAND

The most important information we can obtain from the brand curve can be obtained by comparing it with the quality curve: the trend seems to be increasing / decreasing in the same periods, also they have peaks in the same positions. This suggests, as indeed can be seen in reality, that a company's brand is related to the company's quality itself. This information can be used to obtain an advantage, as a company that invests in its quality cannot certainly forget its own brand: having an important respectable corporate brand entails in the consumers' minds a perception of product quality still higher than that the real one. The key word is in fact the perception: if managed well, we can use it to build a structure in our consumers' minds, aiming an almost unconditional praise for the company and consequently for its products, as they will recognize themselves in the corporate's values and will feel part of the group. And just this unconditional praise that pushes our consumers to see all the positive characteristics of the product (among which stands above all an excellent quality), almost pretending to forget the negative parts (e.g. technical characteristics not at the top of the range, etc.).

An example from reality that fits perfectly with what we just said can be found in the famous motorcycle company "Harley Davidson", which thanks to the strength of its brand has created a sense of belonging "to the family" in consumers, completely loyal to the company; they often organize rallies and festivals, where they focus on all the positive characteristics of their motorbikes, sharing them with other people belonging to this extended family. Therefore, it becomes more important to be part of the "family" rather than the technical feature of the bike! Not all brands have such a strong identity. In the retail market it is in fact very important to associate emotional aspects to the brand, in order to elicit a positive response from the consumer to our offer, with the ultimate goal of attracting it and retaining it.

From this analysis, we understood that quality could play a very important role in the consumer's preferences, and certainly it could be a less risky strategy than pursuing a pricing strategy. To better analyze the validity of this hypothesis, we went into more detail extending the research and considering other factors.

1.1.c Trend of average quality

A very important indicator for an in-depth analysis of the quality required by the market is certainly the trend that the market's companies have followed.

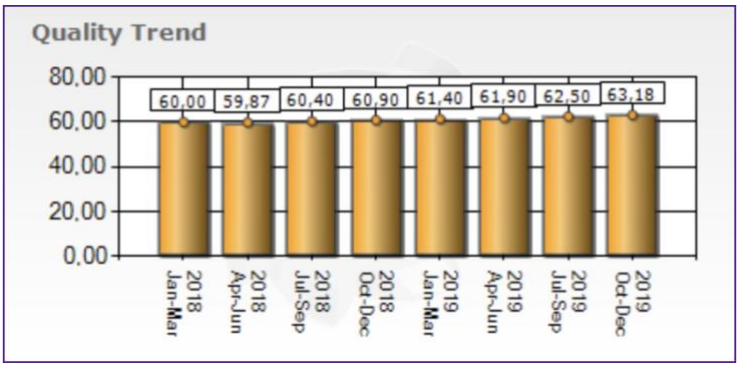


Image n.17

We have a very interesting chart which clearly shows us a rapidly crescent growing trend, especially in the latest periods. For us it is a fundamental clue: companies in the market have understood that, in the near future, quality will be a factor that will allow the company to differentiate itself from others more effectively.

1.1.d Prices

The price indicator on its own does not give us many additional information. Taking instead the trend over time of the average prices established by the market (which in this case corresponds to the price itself, since each company has the same history before starting the game) we noticed an increase compared to the initial prices: the trend is growing. The cause is clear: the increase in quality required by the market has a reflection on prices, which have also increased over time to meet the higher costs that must be incurred by pursuing a quality-based differentiation strategy.

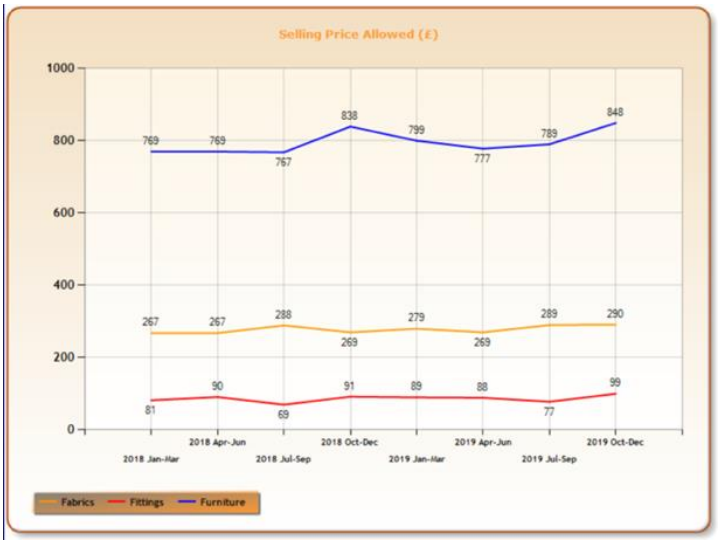


Image n.18

The hypothesis therefore seems to be correct: quality will play a primary role in the preferences of consumers in the future of this market.

1.2 WHOLESALE

The wholesale market has a very different characterization than the retail market. The first substantial difference is the way the demand for each individual product line is managed, for each period: in fact, for the current period, the quantity requested is visible. In addition, wholesalers require minimum quality and have a maximum accepted price, both to be guaranteed if you decide to sell to this market. This information makes an analysis, as the one we did for the retail market, substantially useless, as the demand does not present any particular problems. Our analysis approach is therefore qualitative, as we consider it sufficient to understand the market trend, in order to understand the applicable strategy.

1.2.a Demand analysis

Image n.19

As shown in the Image n.19, the wholesalers' demand profile does not show any particular deviations from what appears to be the trend for each line. In fact, there is a seasonal trend with annual step for each product line, where the quantities required do not differ much compared to the seasonally previous period. Therefore, we can deduce there is a relative safety in the volumes requested, in the future we do not expect any particular deviations from what has been the past demand.

1.2.b Prices analysis

It's useful to divide the trend of the maximum accepted price by product line, as they present different trends:

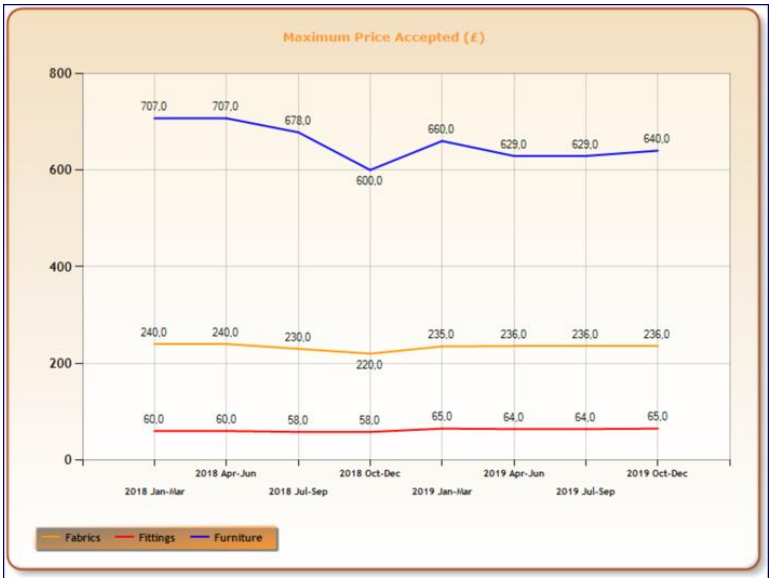


Image n.20

FABRICS & FITTINGS

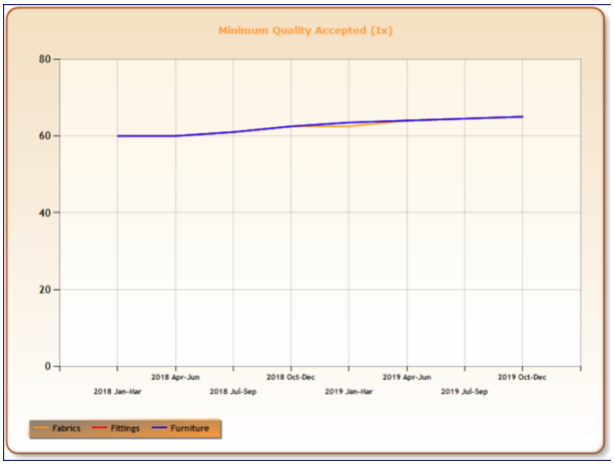
As for the Fabrics and Fittings lines, there is a substantially constant trend, for the Fabrics it has a slight decrease while for the Fittings a slight growth.

FURNITURE

The Furniture line shows a different trend from the other two: the maximum accepted prices are in decline. In the development of the corporate strategy we need to consider this factor, as deciding to invest by producing specifically to sell Furniture to the wholesalers can be dangerous due to the negative trend, increasingly eroding the unit margin earned by the company, thus risking to not saturate the production in an optimal way.

Image n.21

1.2.c Quality analysis



The graph shows the trend over time of the minimum quality level to be guaranteed to the wholesale market to sell them products. We can easily see what has been said for the retail market: even in this market, the trend of the minimum accepted quality is a constant inexorable growth, proving that this market is changing his needs.
Since wholesalers, who are intermediaries, will sell to the final customer, if they are asking for even higher quality, it can only mean one thing: a further confirmation that the final consumer is always searching for product quality.

We can therefore deduce that what is happening in the two markets is a demand pull changing: the market demand is changing the game's rules, focusing attention on quality. We will take this analysis into account in the paragraph n.3, dedicated to the development of corporate strategy.

2. OUR COMPANY'S RESPONSE SO FAR

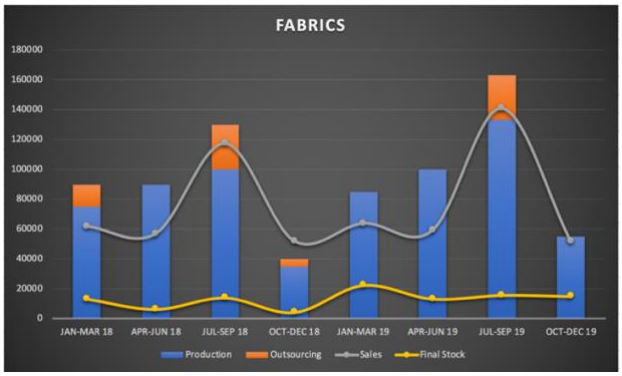
Let's proceed with an analysis of how our company has responded to the market conditions just analyzed.

2.1 RETAIL

It is useful and effective to make a first analysis considering the three product lines separately.

2.1.a Fabrics

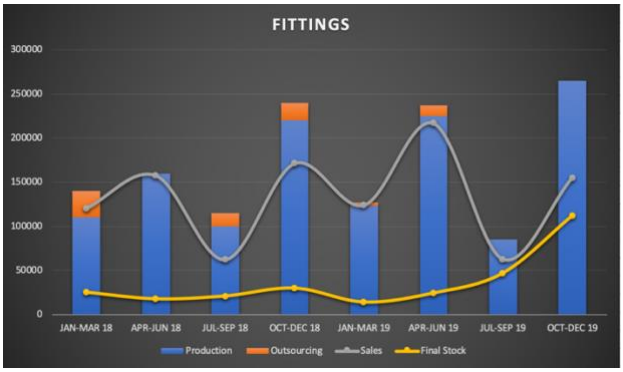
Image n.22



In this graph, we put together the trend over time of production, outsourcing, sales and stocks at the end of each period. The situation that emerges does not seem to highlight particular patterns, but a chase production approach: the production follows the trend of demand (which means company sales, as each company satisfies 16.7% of the market demand constantly for the 2 years we analyzed). This approach is particularly suitable for articles with low production times, too high stock maintenance costs or low required volumes, in general when there are no particular production capacity problems, so to be able to afford a chase production. Perhaps considering the annual peak of JUL-SEP and the production time (in JAN-MAR 20) of 1.06 hours/unit is not a very effective approach, but certainly there is a trade-off between the cost of stock maintenance and the cost for outsourced goods. We also noticed occasional purchase of outsourced goods, mainly to satisfy the peak already identified. The outsourced purchase, however, decreased between the first and second year, in fact it was made only to completely satisfy the demand during the peak. From the final stock graph, we can see an increase in stocks at the beginning of the second year, then decreasing during the year: this choice is probably due to the resolution of the trade-off mentioned above in favor of maintaining the stock, unlike the first year of analysis, when they chose an outsourcing purchase.

2.1.b Fittings

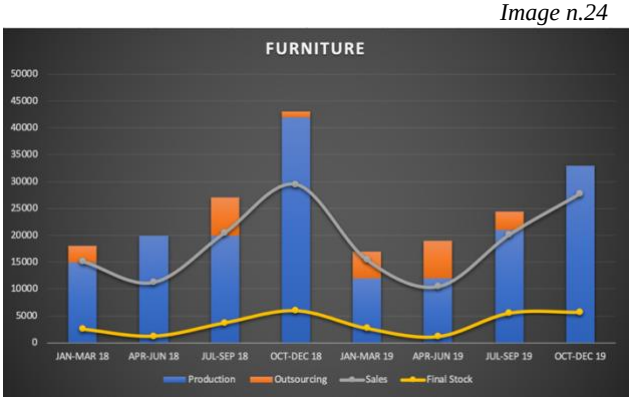
Image n.23



Here the chase production approach is even more evident, in fact we can see in the periods of APR-JUN 18, JAN-MAR 19 and JUL-SEP 19 that the production level has come very close to the sales level. In Fittings it makes sense to pursue such a strategy, as the production time is really low (in JAN-MAR 20 equal to 0.14 hours/unit). The purchase of outsourcing goods also seems to have decreased slightly in Fittings compared to the first year, preferring to produce internally. There are no other particular patterns, except for a considerable increase in closing stocks starting from the quarter of APR-JUN 19.

2.1.c Furniture

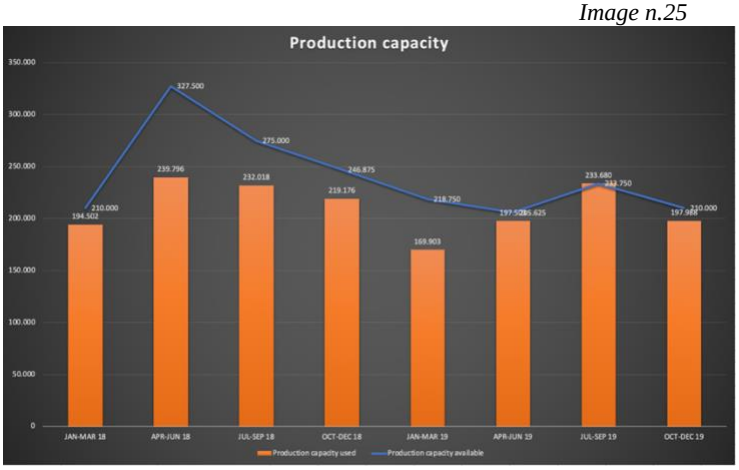
Image n.24



We can still see the chase production strategy for the Furniture line, since they have very low required volumes, even with a production time (in JAN-MAR 20 of 2.83 hours/unit), however this is not sufficient to conclude a chase production in ineffective. Unlike the other product lines, the purchase of outsourcing goods seems not to have decreased in the second year of analysis, while the stock level seems to be substantially constant, remaining at a minimum of about 1,000 pieces and a maximum of about 5,000 pieces.

2.1.d Production capacity analysis

Image n.25



From the production capacity analysis, we can notice a huge increase due to the fact the company purchased machines in the quarter APR-JUN 18, which unfortunately did not allow to saturate in that period, which led to a decrease due to the sale of some machines and loss due to the depreciation of production capacity.

It is interesting to notice that the greatest use of production capacity is in the quarter JUL-SEP (leaving out APR-JUN 18 as in the second year it has an average value, thus proving to probably be an outlier), as to suggest that the worst peak to face among the 3 identified, from the production capacity point of view, is precisely the one of Fabrics line. Considering this, the current chase strategy for Fabrics should be reviewed, gradually adopting a level strategy for the future.

2.2 WHOLESALE

In the wholesale market, the company's choice has always been to offer the necessary quantity to reach 16.7% market share, so it could be equal to the other 5 companies in our group, thus nothing very interesting.

Image n.26

Demand wholesales	JAN-MAR 18	APR-JUN 18	JUL-SEP 18	OCT-DEC 18	JAN-MAR 19	APR-JUN 19	JUL-SEP 19	OCT-DEC 19
Fabrics	180000	240.000	90.000	18.000	240.000	300.000	120.000	24.000
Fittings	90000	60.000	300.000	360.000	120.000	60.000	270.000	280.000
Furniture	12000	60.000	24.000	36.000	12.000	60.000	18.000	30.000
Sales to wholesales	JAN-MAR 18	APR-JUN 18	JUL-SEP 18	OCT-DEC 18	JAN-MAR 19	APR-JUN 19	JUL-SEP 19	OCT-DEC 19
Fabrics	30000	40.000	5.000	3.000	5.000	50.000	20.000	4.000
Fittings	15000	10.000	50.000	60.000	20.000	10.000	0	45.000
Furniture	2000	10.000	4.000	6.000	2.000	10.000	0	4.000

The extremely important figure is detectable in the quarter of JUL-SEP: in both years, the company had problems with meeting the classic 1/6 of the wholesalers' request.

We can notice that:

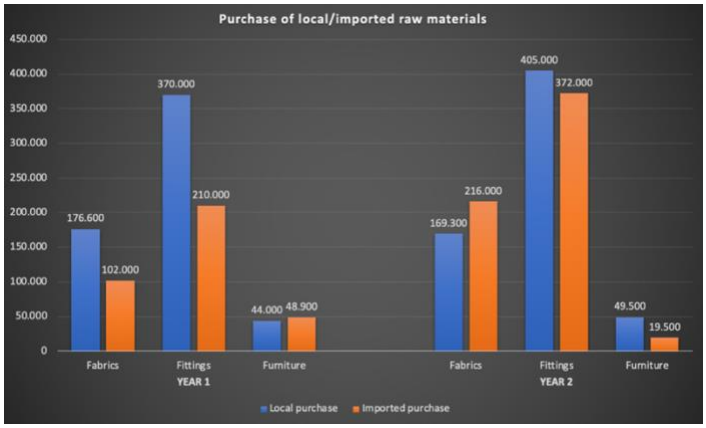
JUL-SEP 18: While the offer was regular for Fittings and Furniture lines, in the Fabrics line we should have offered 15,000 units instead of 5,000.

JUL-SEP 19: Fabrics is regular, while no quantities were offered for Fittings and Furniture lines. By crossing it with the production graphs seen before (Image n.23 and Image n.24), we can notice the production for these two lines was almost equal to the occurred demand, thus leaving no room for sale for the wholesale market.

First of all, there is a preferable information in the markets: the retail market was preferred to the wholesale market, precisely because in the presence of limited resources it was decided to sell to the retail market. We also find another confirmation to what has already been said before: the quarter JUL-SEP is the most dangerous one from the peak point of view, which, as we know, will be of the Fabrics line, otherwise it could not explaine the difference from the sales pattern to maintain 16.7% of the share, a pattern which instead was maintained in the peak periods of the other 2 product lines.

2.3 Raw materials

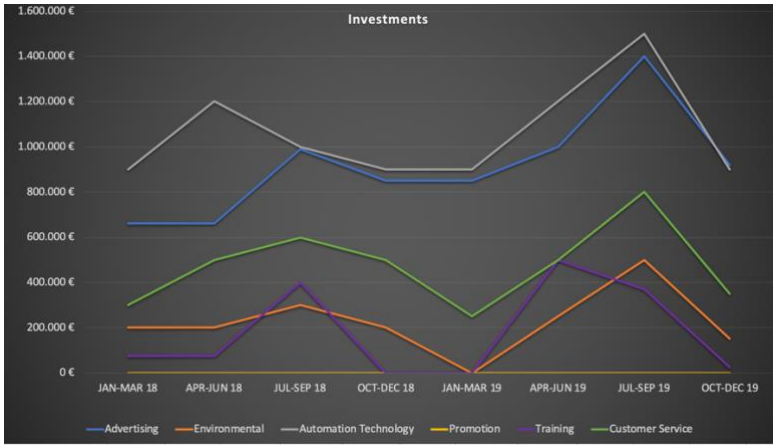
Image n.27



From this graph (Image n.27) we can see an important information: the previous management had not fully understood the final consumers' request of higher quality which, as we saw in the paragraph n.1 (market analysis), was already there. From the quality of raw materials purchased in the previous 2 years we would expect at least a drop in imported raw materials (as they have a relative low quality) and an increase in local raw materials (with better quality), from year to year; instead, we notice an average increase in the imported raw materials quantity and a very slight increase in local ones. In proportion, there has therefore been an increase in imported ones much more important than local ones.

2.4 Investments

Image n.28



Looking at the investments made so far by the company, we notice a certain order of priority, based on the amount invested:

1) Automation Technology
2) Advertising
3) Customer Service
4) Environmental / Training
5) Promotion

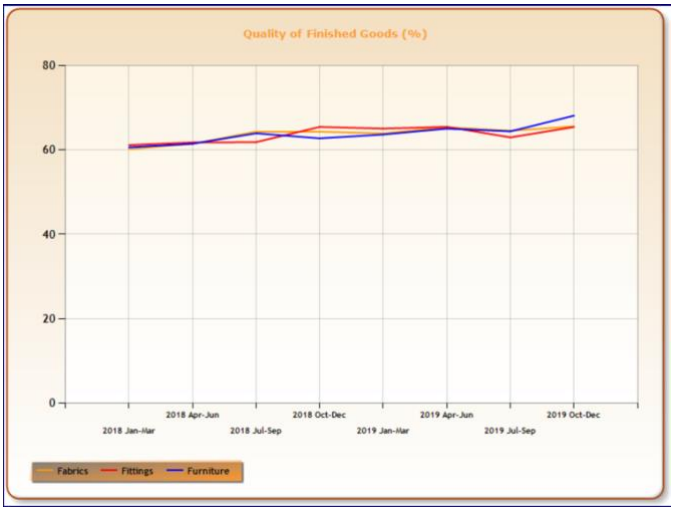


Image n.29

The entity invested in automation technology and advertising is much greater than the amount invested in the other options. The very high investment in Automation Technology justifies the trend of increasing quality in production and finished goods, which can also be seen in the Image n.29, despite an increasing use of imported raw materials. There is obviously a trade-off between the use of imported raw materials and the investment in Automation Technology, and the company so far had to balance these two choices in order to guarantee a gradually higher quality without spending too much on raw materials.

Therefore, we see such an ambiguity in the corporate strategy, which has not focused decisively on a particular choice. Particular strategies such as survival, skimming, loyalty or positioning do not seem to be evident, indeed it seems to be in the middle of a cost leadership strategy (purchasing low quality raw materials at low prices and buying outsourced finished goods) and a differentiation on quality (investing heavily in Automation Technology and Customer Service, gradually increasing prices). Our response to the market trend therefore seems not to be guided by a particularly coherent and well-defined strategy. This approach is not particularly effective, in our opinion we need a more decisive line, because is the only way that we can obtain a competitive advantage over other companies, in these market conditions.

2.5 Financial analysis: index analysis

Image n.30

	2018	2019
ROE	0,09	0,17
ROI	0,11	0,22
ROS	0,05	0,10
ROT	2,33	2,25
r	0,07	0,11
s	0,50	0,50
D/E	1,43	1,15
ACID TEST	2,17	2,71

To understand the company's financial situation, we calculated the main indexes for the two years prior to our entry.

- ROE (Return on Equity) has almost doubled, which means the company's overall performance has improved.
- ROI (Return on Investments) has doubled, as the company has improved its ability to generate profits from one year to the next.

  Analyzing the level of the $ROI = ROS \times ROT$ indicator, we can understand the reason of this increase: we notice that ROS (Return on Sales) has also doubled, because the operating costs efficiency was better in 2019 than in 2018; ROT (Return on Tournaments), on the other hand, has slightly decreased, a sign that there has been a change in inventory management: in fact, we saw the increase in Fittings' stocks in recent periods.
- D/E (debt ratio, also provides a risk level for our organization) has decreased because the company is less indebted in 2019 than in 2018; in fact, it can be noted in the section on bank loans how the company repaid many of its debts in 2019.

- r (percentage financial charge compared to stakeholders' money) increased, a sign that on average it has cost us more to use stakeholders' money in 2019 compared to 2018.
- s (tax effect) has remained the same, because taxes have remained constant over the years, with a value equal to 50% of the profit.
- ACID TEST increased in 2019, indicating a worse ability to liquidate inventories.

From the leverage formula: $ROE = [ROI + D/E \times (ROI - r)] \times s$, we noticed that if we had balanced ROT better, ROI would have increased even more, bringing a consequent benefit on the ROE. Furthermore, the increase in r was also not positive for ROE: this means the company has probably paid too high interests. In our strategy, we could expect to reduce them by investing in Environment, so as to benefit ROE.
The comparison through the indexes should be made not only between different years of the same company but also with competitors, but since up to and including the OCT-DEC 19 quarter all companies are in the same economic and financial situation, the indexes will be the same. At the end of the fourth period, the new indexes could be calculated on the balance sheet and then it will be interesting to compare them with our competitors' ones.

3. CORPORATE STRATEGY: FUTURE RESPONSES

Considering the market trend, a first idea would be to focus our efforts on a strategy aimed at differentiation through better quality.
However, a problem arises: as we see the market trend, the other companies on the market also see it, and they could think of implementing a strategy aimed at quality. This would bring us various problems, first of all a classic dilemma: if everyone raises their quality level, on average, it is as if nobody is doing it, because nobody is really differentiating.

3.1 Game theory

We can analyze this problem through the game theory. We model all the other 5 companies on the market as if they were a single decision maker, who must choose which strategy to focus on among the 2 main ones: Price and Quality. Then we model our company as a second decision maker, with the same choices. Let's define an order of preferences: obviously the best would be to play on quality, considering the market trend, and it would be best for us as for the other companies. For the second preference, we must consider the previous discussion on minimum differentiation if everyone chooses quality: we understand that if other companies, on average, will play quality, our preference is to compete on price, while vice versa if on average the other companies will play price, we would prefer to compete on quality. By modeling what has been said voting the alternatives from 1 (worst vote) to 4 (best vote) and structuring the votes as: (Our vote; Other companies vote) we obtain the payoff matrix displayed in Image n.31.

Image n.31

		Other Companies	
		Quality	Price
Our Company	Quality	2 ; 2	4 ; 3
	Price	3 ; 4	1 ; 1

At first sight, we immediately realize that this structure is identical to a famous game in the literature of game theory: the game known as "Battle of sexes".

In fact, it has two Nash equilibria which are, moreover, the two Pareto-efficient solutions: scenario (3; 4) and scenario (4; 3).

As there are no automatic decision mechanisms (there are no dominant alternatives), in perfect line with the solution of "Battle of sexes", we will use the uncertainty criteria. In fact, we will use the optimistic strategy (MAXImax) and pessimistic strategy (MAXImin). We obtain:

Optimistic strategy

Us: $MAX[(\max(2;4);\max(3;1)] = MAX(4;3) = 4$ → We would choose the quality strategy.

Other companies: $MAX[(\max(2;4);\max(3;1)] = MAX(4;3) = 4$ → The other companies would also choose, according to this strategy, the quality strategy.

Therefore, the game solution would be to choose both the quality strategy.

Pessimistic strategy

Us: $MAX[(\min(2;4);\min(3;1)] = MAX(2;1) = 2$ → This criterion would also lead us to choose the quality strategy.

Other companies: $MAX[(\min(2;4);\min(3;1)] = MAX(2;1) = 2$ → As before, the other companies would also choose quality, according to this strategy.

We would inevitably still end up choosing both the quality strategy.

Considering the rational decision-makers, it would seem that a good average of them will choose to pursue the quality strategy, as we will choose it.

Therefore, there is only one way, given this condition, to further differentiate ourselves and obtain a greater competitive advantage: to increase the amount of initial investments. In fact, by investing more than the other companies at least initially, we will obtain in the medium/long term a significant competitive advantage.

If, on the other hand, our competitors did not understand the market trend, or in any case they think they can respond better by using another strategy (e.g. lower price), we would still be fine: we would find ourselves in the scenario (4; 3), the most favorable. Anyway, having invested a lot in quality, it will give us an advantage since the initial quarters. The only protection we have to ensure us a slice of the market by pursuing the quality strategy are very high investments from the beginning, however aware we will have initially a negative profit, but which will yield in the long term, allowing us to reach better positions.

Investments will be high especially in the initial periods because (as in reality) quality is typically a minimum requirement to be guaranteed at the market, beyond which the attractiveness of our product no longer grows linearly or exponentially to the money invested, but grows less than linearly, as the delta quality from the consumer's eyes is no longer that evident or at least differential. After having reached that

minimum requirement (which cannot be estimated from the data available on the platform), which in our opinion, given the size of the initial investments we intend to make, will be achieved within the third period, the consistency of our investments will be reduced. In fact, it is not true that the more we unconditionally increase product quality the more profits we will make in the medium/long term.
Thus we made a corporate decision: our focus will be on effectiveness, both in quality and service level because, as we already noticed, investing in our brand will benefit the quality differentiation strategy.

3.2 Targets

The step we want to take will be important: our decisions will all be guided according to a spirit of constant growth and continuous improvement, especially considering aspects such as our company's perception towards the outside and customer satisfaction.

Internally, we will pursue the following targets:
1) Increase in market share calculated as (our revenues / total revenues).
For a company that focuses on quality, it is not proper to calculate the market share as (satisfied demand / total demand), because typically, by pursuing this strategy, sales volumes are lower due to a higher unit price.
2) Make profits in the medium term and achieve financial sustainability.
3) Increase the share value.
4) Search for an exclusive positioning for our products.
5) Customer loyalty, focusing on image, brand, products' availability, timeliness and a relationship with customers through our sellers.
6) Reduce, in the long term, the debt level with banks, saturating the cash available of each period (when possible and when convenient) with the repayment of part of the debt.

3.3 SWOT Analysis

Strengths	**Weaknesses**
-Product quality much higher than the market average -Strong Brand, better quality perception than the objective one -Very high initial investments -Image of a company that buys local raw materials, bringing work on its territory -Attitude of constant growth and improvement	-High prices and therefore lower sales volumes -Low elasticity in production, given the impossibility of outsourcing it due to too low quality of outsourced products -More costs on raw materials, given the inability to buy imported raw materials always because they have poor quality
Opportunities	**Threats**
-Attention to environmental policies (advantages on banks' interest rates) -Increasingly high quality required -Possibility of customer fidelization in the retail market -Opportunity to make many profits in the quarter of July-September 20 due to the peak of the Fabric line	-Companies with a price so low as to be too competitive even in the presence of excellent quality -Positive change in price in the competitiveness factors perceived by customers -Too many companies that focus on quality

Image n.32

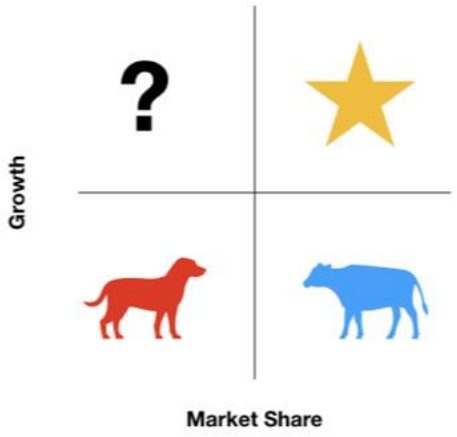
To understand how to achieve these targets, it is interesting to carry out a SWOT analysis, a tool we use to support decisions.
The analysis consists in identifying the company's strengths, on which to focus to seize opportunities, and to understand the company's weaknesses, to protect itself from threats: there are therefore two degrees of analysis, one within the company and the other outside. It is useful to clarify the feasibility of some of the targets described above.

From the analysis, we notice that we could seize all the market opportunities (and therefore meet the set targets) by leveraging what will be our strengths. As for weaknesses, the problem of elasticity in production

can be eliminated by slowly reducing the number of machines owned and instead purchasing leased capacity when necessary: the contract lasts 1 year instead of the classic 3-year duration of a purchased machine. Obviously, when there will be many machines going into disuse, it will be up to the Operation to understand if it is necessary to purchase new ones. However, the trend will continue to gradually reduce the number of owned machines. This solution is obviously not the best (which would be to exploit outsourcing) but allows us to be slightly more flexible in sizing production capacity.
This SWOT analysis will also be recalled in the second report, at the end of the entire game: it will be interesting to see what opportunities we have actually managed to seize and what threats we have avoided.

3.4 BCG Analysis

Image n.33



We made the hypothesis that, with our organization operating in a single business area, it is located in the QUESTION MARK quadrant as we have a low market share, and the market is constantly growing. Companies in this category usually do big investments in order to increase their market share. According to the strategy we set up, we plan to support large initial investments to be able to strongly differentiate ourselves from our competitors and to be able to increase our market share. In terms of the matrix just described, the final challenge is therefore to move towards the STAR quadrant, then in the long term go to the COW quadrant, where we will be leaders in a market that is no longer growing, in which we can therefore reduce investments.

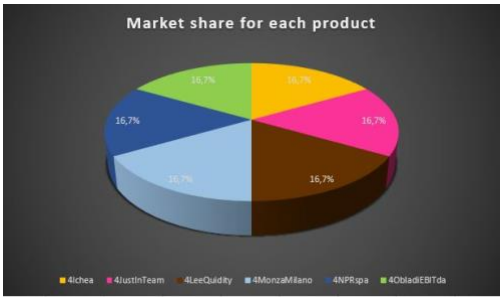
4. MARKETING

4.1 RETAIL

The targets we want to reach through our Marketing strategy are: the increase of our market share calculated as $\frac{Organization\ revenues}{Market\ revenues}$ and the positioning for reaching the exclusivity and upgrading the customer loyalty and our brand.

4.1.a Market share

Image n.34



At the beginning of the game, all the companies have the same market share of 16.7% (estimated on the volume) in each product. As we said before, we are interested in the market share calculated on revenues: referring to the share of sold quantities makes no sense for us because having rather high prices we know that our sales will concern a reduced market share compared to companies that chose a price strategy, while referring to revenues we think it could be a more universal judgement to compare our share with the competitors' one. The idea is to use market share in order to estimate the production volume for each period: we will send all

the information about the demand forecast and the market share to the Operation department. The problem of using the market share based on revenues method is that is impossible to estimate the total market revenue (which is the denominator): we can't know the volumes that everyone will sell and which prices they will set.

Therefore we will use a qualitative approach to obtain quantitative information: we will estimate our market share (estimated on the volumes) and we will use it to calculate our production, as the denominator is predictable (it is the total market share), as we will see in the paragraph n.4.1.b "Demand forecasting".

We set some market share values to reach at the end of each period, which are important to Operation to estimate the production of each quarter:

	JAN-MAR 20	APR-JUN 20	JUL-SEP 20	OCT-DEC 20	JAN-MAR 21
Fabrics	16,00%	19,00%	21,20%	23,00%	25,00%
Fittings	14,50%	14,40%	15,80%	17,00%	19,00%
Furniture	15,30%	15,20%	16,80%	18,00%	20,00%

Image n.35

It is important to know that all the values above are qualitative and very dynamic, in fact we will update them in each period using the information about the market share reached in the previous period. They are useful only for the production estimation: in our opinion they are realistic estimates of what we can achieve in the following periods, aware of the fact that like any forecast, the more you look into the time, the more inaccurate it becomes.

We imagine that at the beginning our share will decrease due to our quality strategy which will lead us to have lower sales volumes, at least until we see the medium-long-term effects of the investments made. For the Fabrics line we have estimated an increase in share higher than the other two lines because we feel confident that our change of strategy compared to the past, that is to start producing in a way that recalls a level approach, thus increasing effectiveness in the availability of the product as explained in the Operation paragraph, in addition to the increase in quality, it will arouse interest in customers. In addition, we aim to meet the peak of the quarter JUL-SEP 20 because, being the most important and challenging peak, we expect that without adequate production and planning our competitors will not be able to fully satisfy their part of demand.

Image n.36

Forecasted variation in Demand (%)	
	Previous quarter
Fabrics	31,25
Fittings	-20,00
Furniture	-41,18

4.1.b Demand forecasting

Having done the analysis of market demand, we have already obtained a lot of interesting information, which will allow us to deduce its future trend. The precise forecast for the current period is suggested by the platform, which gives us information on the percentage change in demand compared to the last period, as shown in Image n.36, so we will use that. Thus, the demand values for the quarter of JAN-MAR 20 are:

Fabrics: 406,826 pcs *Fittings:* 743,746 pcs *Furniture:* 98,194 pcs

However, this forecast stops only for the current period: to get information on future periods, it is necessary to implement the Holt-Winters' model (applicable because the time series has both trend and seasonality). We will not use Holt-Winters for the calculation of the current demand because to calculate a fairly precise forecast, this model requires at least three years of the historical series: respectively two years to be able to initialize it and one year of adaptation, to estimate the optimal values of α, β, γ. Instead, we only have 2 years: we have therefore adapted the model to work only with the 2 years available, however losing the precision of the forecasts. What we get for the next periods is summarized in Image n.37.

	APR-JUN 20	JUL-SEP 20	OCT-DEC 20	JAN-MAR 20
Fabrics	422.922	856.655	389.066	473.961
Fittings	878.931	220.048	501.599	277.088
Furniture	66.583	108.084	151.321	75.876

Image n.37

However, we can see that the previously identified peaks of the product lines are in the right periods. Operation also know that future forecasts made in this way are not entirely reliable, but it will be interesting for them to see the order of magnitude of the quantity requested and prepare for the following periods. The model will obviously be updated after each quarter.

4.1.c Prices

The calculation of price must necessarily take into consideration two factors: highlight the exclusivity of the product and have positive profit margins, at least considering the direct costs. For the first period, due to the high investments, it will be difficult to have too positive margins considering also the indirect costs, but in the medium term, when the investments will decrease, we will certainly have a very positive margin also considering the cost computed through the full costing method. In addition, through prices we can also affirm our quality: think of wine sale, the common thought that is associated with the goodness of the bottle is: it costs a lot then it must be good. This association (not always true) is however set in the normal everyday life of consumers, and we will try to exploit it by positioning ourselves with prices above the average. We understood the lower margin (don't sell below the direct cost of each line) but how to understand the upper margin? The ideal would be the calculation of the price elasticity of demand, not possible in the platform. We therefore decide to proceed by entering prices that do not make the margins calculated using the full costing method too negative. Remember, however, that since we cannot initially see the prices our competitors set, we do not know if our positioning will be immediately correct. After the results of the first quarter will come out, we will be able to make the comparison and therefore adjust our prices in relation to those of the market, always keeping in mind our strategic targets. It will be in fact from the second quarter onwards, with adjusted prices, that we will implement our strategy: we will start initially with prices above the market average, in order to attract consumers to our stores and, through targeted advertising operations, to retain them. The goal of exclusivity does not preclude attracting customers, but rather, the best would be to play precisely on the idea of exclusivity that we want to give to our product lines as a sales engine. After our costumers are retained (therefore starting from the third / fourth period), they will be inclined to spend more on our brand, so we will raise our prices further, so as to actually earn how

much customers are willing to spend.

An example from reality is Netflix's marketing strategy: home-streaming service of undisputed quality, it has presented itself in Italy with relatively low prices. Once he retained the costumer through appropriate marketing campaigns (excellent, in our opinion) then it gradually raised the prices of its offer, also to protect itself from other competitors' threats.

For the first period we decide to position ourselves with the following prices:

Fabrics: 302 €/u. Fittings: 104 €/u. Furniture: 930 €/u

4.1.d Advertising

To attract and retain customers, we will invest heavily in advertising especially in the early periods: this investment will yield in the long term, therefore it does not make sense to always invest the same amount of money, but it will follow the trend of other business investments: high in the early periods, decreasing over time.

Advertising will increase our attractiveness index over time, which in turn will increase the customer's level and therefore the quantities of products sold.

4.2 WHOLESALE

As for wholesalers, we consider the market as a sort of buffer, as our main goal is to sell in the retail market, but in situations where we have more products in stock than we expected, mainly when we produce to saturate the plant or when the market share reached is less than what we expected, to optimize the warehouse we will also sell to them.

When we sell to wholesalers we have decided that we will always ask for the maximum price accepted by them because, since for us they are very low prices compared to what we will do in the retail market, at least we avoid cutting the profit margin further by keeping goods immobilized in the warehouse or not exploiting scale economies (through unsaturated production).

About payment terms: initially we will make 2 months and we will move in the 3rd/4th period towards asking for 1 month, because since in the last periods we will be stronger in the retail market, we will not need particular volumes to sell to wholesalers.

5. DISTRIBUTION

5.1 Shops

To maintain an elevated image, we think it is appropriate to move the shops gradually towards the city center, closing the out-of-town ones, moving towards a general expansion. Shops located in the city center give the idea of exclusivity that we want to arouse, as they are less accessible and allow customers who come from outside to live the experience of spending a day dedicated to visiting our shops, with family or friends. The idea is therefore that consumers are actively inclined to search for our shops, attracted by our products.

Such a strategy is pursued by exclusive brands such as Louis Vuitton or Gucci.

The increase in the number of shops, however, is proportional to the product quantities that we expect to sell in the future: increasing the number of shops increases the total available capacity and offers us the opportunity to sell more.
We are preparing for the Fabrics peak by buying more in the center, keeping the external ones for space reasons, but which we will then reduce starting from the fourth period, mainly for two reasons: it goes well with our strategy of moving in the center and we don't want to keep unused space which increases rental costs unnecessarily.

In particular, our decision for the first period is to close two shops out-of-town and open one in the center; this decision will temporarily lead us to have a lower overall capacity in the shops, since by closing two external shops we lose 2 x 55,000 units of space and with the acquisition of a shop in the city center we increase by 40,000 units of space, losing overall 70,000 units of space, but since it was in excess compared to what was necessary for the period, it is the correct strategy. We will begin to expand the shops in the center starting from the second period.

5.2 Human resources

Before our entry into the company, the number of supervisory staff and sales people were managed in such a way as to have a control span [(Number of sales people)/(Number of supervisory staff)] just over 4; as the choice appears functional for the company, in line with the effectiveness strategy we are pursuing, we have decided that, if we will hire new human resources, we will make sure to keep the span and indeed reduce it bringing it as close as possible to 4. Our idea is to hire more resources following the Apple employee management model, in which a lot of them work in a controlled and autonomous way in each shop, thus offering the possibility of potentially following each customer within the shop, who since does not have to queue will have a better perception of quality. This is possible only by investing heavily in training, especially when we will hire new human resources, to make new sales people more responsible and effective during the sale. Together with this discussion, we also consider very important to invest in customer service, which should increase our attractiveness index and attract a greater number of customers, in addition to giving an effective performance to the final customer: it can therefore contribute to the pursuit of the target of retain.
In particular, for the first period we decided to hire 6 supervisory staff and 24 sales people. Having assumed a ratio of 4, we observe that the span remains constant.
First period: we invest 2,000,000 € in training and 3,000,000 € in customer service.

5.3 Transport

Having own vehicles is essential for the company to reduce the costs of purchasing external capacity. We must often check the residual capacity of our vehicles, as after three years from the purchase they go out of use and we can no longer use them. Our strategy is to purchase new vehicles in the initial periods, so that in the medium term we can see this investment paid off which will save us on external capacity, in fact the cost of transporting a unit of space with own vehicles is 0.3 €, while with external capacity it rises to 0.75 €.

Buying vehicles in the first periods, considering the volumes to be transported, and considering we will sell mainly to the retail market, will allow us to obtain an advantage starting from the intermediate quarters.
In particular, as a first decision we buy 12 vehicles to make up for the 5 that will be out of use from the next period, in this way we will have from the next period an available capacity of 660,000 units of space, having to buy much less external capacity.

5.4 Promotions

We'll not do promotions because they don't adapt to the concept of exclusivity that we want to express with our products. It would go to the opposite direction with the corporate strategy.

6. OPERATION

The activity Operation have in input from Marketing the demand forecasting in the retail market (with the related analysis), the qualitative market shares that we want to reach in that market and the quantity that we want to offer to the wholesale market. Based on this information, the Operation phase becomes aware of the demand for the current period, but also the estimated demand for future periods, aware of the fact that the more we look it over time, the more the forecasts are inaccurate. However, what is interesting is the order of magnitude of the required volumes.
In accordance with the corporate strategy, we made the following decisions. First of all, if we want to ensure an high quality, we will have to avoid the purchase of imported raw materials and finished goods in outsourcing, as both solutions would have a too negative impact on the quality level.
This necessarily involves careful production capacity sizing, as the risk is to lose elasticity and flexibility given the constraint of not buying in outsourcing, of not exploiting the scale economies of saturating the plant (if the capacity is overestimated) and that it does not have sufficient production capacity to meet the demand during the peaks (if the capacity is underestimated).
Paragraph 6.4, "Machines" is dedicated to this.

6.1 ABC Analysis

To better understand the strategies to be used for each product line, we carried out an ABC inventory/turnover analysis on the last year available (2019), obtaining the following results.

	Total revenues				
	JAN-MAR 19	APR-JUN 19	JUL-SEP 19	OCT-DIC 19	Class
Fabrics	17.772.300,00	15.878.801,00	40.720.100,00	14.981.400,00	A
Furniture	12.383.701,00	8.177.148,00	15.898.350,00	23.593.904,00	B
Fittings	11.019.090,00	19.074.352,00	4.810.344,00	15.339.753,00	C
MEAN 1	66.549.747,67				
MEAN 2	55.148.321,00				

Image n.38

	Total stock				
	JAN-MAR 19	APR-JUN 19	JUL-SEP 19	OCT-DIC 19	Class
Fabrics	3.514.344,50	2.098.424,80	2.567.584,00	2.484.837,20	A
Fittings	700.202,80	1.223.467,20	2.419.162,80	5.594.416,50	A
Furniture	1.447.486,20	630.864,00	3.124.872,00	3.207.411,00	C
MEAN 1	9.671.024,33				
MEAN 2	9.173.941,25				

Image n.39

		Total revenues		
		A	B	C
Total stock	A	Fabrics		Fittings
	B			
	C		Furniture	

Image n.40

Therefore, building the matrix, we notice how we can already identify some strategies: the ideal is to have the products along the main diagonal, but we notice that only Fabrics line is in the correct position: high stocks for items that generate high revenues. As for the Fittings line, we are in an inefficiency area: we are

having a lot of stock for a C class product in terms of revenues. This is the case, in future production, we need to reduce the number of pieces in stock, using a chase production approach. For the Furniture line, we have relatively few pieces in stock for a B class product in terms of revenues: the explanation is that this line has a very low demanded volume, therefore the reason why they are B class in revenues is a high sale price. Therefore, we feel confident in using a chase approach also in this case.

6.2 Production

At this point, the volumes to be produced for each product are calculated using the formula:

$$P_i(t) = Q_{i,r}(t) + Q_{i,w}(t) + PS_i(t) - S_i(t)$$

where:

$\boldsymbol{P_i(t)}$ = level of production of product *i* in period *t*

$\boldsymbol{Q_{i,r}(t)}$ = quantity offered to the retail market of product *i* during period *t* equal to:

$$(\%_{share_{required}}(t) \times Demand_{i,retail}(t) \div 0.9)$$

$\boldsymbol{Q_{i,w}(t)}$ = quantity offered to the wholesale market of product *i* in period *t*, information that comes from Marketing

$\boldsymbol{PS_i(t)}$ = pieces produced on purpose to be put in stock of product *i* in period *t*

$\boldsymbol{S_i(t)}$ = stock of product *i* at the beginning of period *t*, equal to:

$$\left[P_i(t-1) + S_i(t-1) - Sales_{i,retail}(t-1) - Sales_{i,wholesale}(t-1)\right]$$

$P_i(t)$ will be rounded up to the nearest hundred, according to the game's rule.

Finally, for the calculation of $PS_i(t)$ there is a distinction to be made on the product lines: for the Fabrics line, this value will be calculated in such a way as to satisfy the peak of the third period, in a perspective which takes a level approach. Unfortunately, to implement correctly this approach, we had to start with the level strategy from the period OCT-DEC 19, the period after the peak, so we find ourselves in this case having to apply an adapted level approach, having one quarter less to move forward with production: we are therefore forced to produce more than the average annual demand divided over the quarters, also taking into account the production capacity and the peak periods of the other two product lines, it will therefore be a semi-level strategy.

For the other two product lines, following as much as possible a chase line, the $PS_i(t)$ are calculated by repeating the first formula, but moving forward a period:

$$P_i(t+1) = Q_{i,r}(t+1) + Q_{i,w}(t+1) + PS_i(t+1) - S_i(t+1)$$

In this version of the formula, $PS_i(t+1) = 0$, because with the chase strategy we definitely look at the current demand (period t) and eventually the demand of a period ahead. The next step is to look at the saturation percentage of the plant at period $t+1$: if the saturation is close to 100% then we will have $PS_i(t) = 0$.

In fact, our goal will be to saturate the production capacity as much as possible at any time, as we will aim to

exploit the advantages achieved through scale economies.

Otherwise, in case we exceed the production capacity of period $t+1$, it will be necessary to look in which period we are, and which product line is expected to have a peak in that period: of that product, the difference between the production to be achieved in period $t+1$ to satisfy the demand and what is actually achievable in period $t+1$ will be exactly the quantity $PS_i(t)$ seen:

$$PS_i(t) = P_{i,to\ be\ achieved}(t+1) - P_{i,achievable}(t+1)$$

In case the addition of $PS_i(t)$ to $P_i(t)$ exceeds the maximum production capacity during period t, it will then be necessary to interfere with the machines.

Applying all, we get these values for the first period:

$Q_{fabrics,r}(1) = 73{,}081$ pcs $\quad Q_{fabrics,w}(1) = 30{,}000$ pcs $\quad S_{fabrics}(1) = 14{,}996$ pcs

$Q_{fittings,r}(1) = 114{,}476$ pcs $\quad Q_{fittings,w}(1) = 80{,}000$ pcs $\quad S_{fittings}(1) = 111{,}665$ pcs

$Q_{furniture,r}(1) = 16{,}229$ pcs $\quad Q_{furniture,w}(1) = 2{,}500$ pcs $\quad S_{furniture}(1) = 5{,}697$ pcs

The only production value missing from the calculation is $PS_i(t)$.

We notice that in the second period there will be the Fittings peak and in the third period the Fabrics peak. Considering that in the second period a big part of the production capacity will be dedicated for the Fabrics' production (counting the production of semi-level approach), it turns out that we will produce:

$PS_{fabrics}(1) = 18{,}000$ pcs

$PS_{fittings}(1) = 51{,}500$ pcs *Thus obtaining:*

$PS_{furniture}(1) = 5{,}800$ pcs

$P_{fabrics}(1) = 106{,}100$ pcs

$P_{fittings}(1) = 134{,}400$ pcs

$P_{furniture}(1) = 18{,}900$ pcs

Saturation percentage achieved through this production mix: **99,2%**

Therefore, for the following periods we will follow the guidelines just described for calculating the production in each quarter.

6.3 Raw materials

The calculation of raw materials quantity to be ordered is much easier, as the business choice was to use only local raw materials. This choice is also useful to the company's image: a company that brings work to its territory is certainly seen in a positive way by consumers and banks.

For the calculation, we use the following formula, for each product:

$$RW_i(t) = P_i(t) + RWS_i(t) - RW_{i,s}(t)$$

Where:

$\boldsymbol{RW_i(t)}$ = raw materials purchased of product *i* during period *t*

$\boldsymbol{RWS_i(t)}$ = raw materials purchased on purpose to be put in stock of product *i* in period *t*

$\boldsymbol{RW_{i,s}(t)}$ = stock of the raw materials of product *i* at the beginning of period *t*

The only unknown value would be $RWS_i(t)$. This value will often be = 0, except when we think that the cost of raw materials will be very high in the following period and we have no other choices to take for the current period, still having cash available. Only in this situation we will decide to stock up on raw materials thinking of saving the delta price between one period and another. Considering that in this game there are no

inventory costs for raw materials, it is a good choice to stock up when the conditions mentioned above occur.

Therefore, for the first period we will have:

$P_{fabrics}(1) = 106{,}100$ pcs. $RWS_{fabrics}(1) = 21{,}000$ pcs $RW_{fabrics,s}(1) = 1{,}000$ pcs

$P_{fittings}(1) = 134{,}400$ pcs. $RWS_{fittings}(1) = 0$ pcs $RW_{fittings,s}(1) = 81{,}000$ pcs

$P_{furniture}(1) = 18{,}900$ pcs. $RWS_{furniture}(1) = 0$ pcs $RW_{furniture,s}(1) = 0$ pcs

$Thus\ obtaining$: $RW_{fabrics}(1) = 126{,}100$ pcs

$RW_{fittings}(1) = 53{,}400$ pcs

$RW_{furniture}(1) = 18{,}900$ pcs

6.4 Machines

The strategy for machines is articulated in a more dynamic way: the goal is to always ensure the production capacity needed to meet the demand in each period, in order to ensure the availability of the products (in line with the corporate strategy) and avoid the stock-out. The problem instead is the non-flexibility of the productive system, since we are not able to buy in outsourcing. Therefore, the solution is to exploit as much as possible leased contract machines, reducing little at a time the machines purchased. However, we notice that at our entry into the company we have 80 machines with 1 year and 3 months left before going in disuse: it means that the last possible use period is the quarter JAN-MAR 21. Therefore, we decide, since in the first period we make greater investments, to buy 20 new owned machines (calculated in order to saturate the production of the next period). Of the 80 machines, a part will be sold in the quarter OCT-DEC 20, according to the machines reduction strategy. In fact, the goal is not to possess 0 (also because it would be reflected in a negative way on the balance sheet assets), but rather a smaller number that makes the production department more flexible. In the meantime, over the periods we will open new contracts for leased machines: starting from the second period we plan to purchase 20 new leased machines, and in the third period we will add more.

This strategy will allow us, in addition to satisfy the productive capacities even in the peak periods, to increase the flexibility of our productive system, and to almost always reach the maximum saturation of the systems, exploiting the scale economies as an advantage.

6.5 Automation Technology

Our most important investment item. In addition to reducing production times for each product, this investment is what allows us to differentiate ourselves on our corporate goal: quality. By investing in Automation Technology, we will increase the platform's index of variancy, which is how much gap we have gained, compared to the market average, on product quality: in a nutshell, how good we have been in differentiating ourselves. Seeing high investments, as the corporate strategy provides, we decided to invest the maximum allowed for this period: 5,000,000 €, hoping that our competitors who chose to pursue our same strategy have invested less. Over time, this investment will also be gradually reduced, the goal is in

fact to reach the quality required by the market (approximately in the third period), as exceeding it much would not bring us obvious advantages, it would only be a bad use of the financial resources. The amount of money to invest will be decided period by period, based on the result obtained in the previous period regarding how much we managed to differentiate ourselves from the market average.

7. FINANCE

7.1 Bank loans

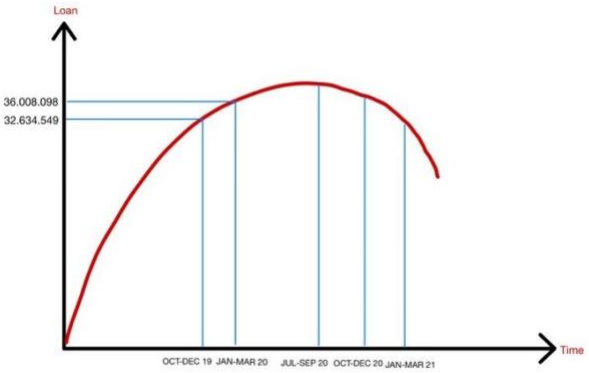


Image n.41

In order to be able to make the expected investments, we must initially request a loan from the banks equal to the maximum amount that they are willing to offer us up to and including the third period, immediately aware that our idea is not to increase the total debt at the end of the game, compared to what it was when we joined the company. We have represented a qualitative curve in our debt strategy (Image n.41). We can notice the initial loan which was 32,634,549 € and the loan we will have at the end of the first period as we intend to request everything possible at least until the third period. In particular, for the first period, the maximum amount the banks will ensure will be 3,373,549 €: an amount that we will require in full, in order to be able to sustain the expected high investments. Then we represent the levels we estimate at the end of the following periods, which at the end of the third period reach a peak and then begin to decrease because we intend to pay back.

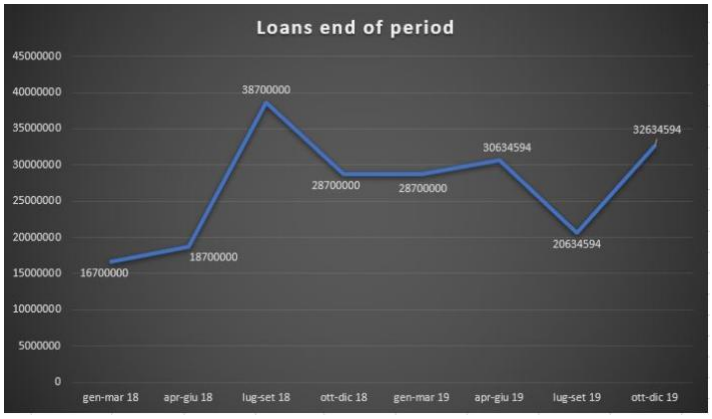


Image n.42

Looking at the trend over time, the company has always demanded money from banks, as seen from Image n.42, that shows the total debt in each period. It reached its peak in JUL-SEP 18, probably to afford the production to satisfy the Fabrics' peak.

The part of Finance will monitor the situation on the balance sheet and the profits. To do it better, we have completely reconstructed, using Excel, the page of the Profit&Loss: we can therefore preview the order of size of our profit for the current period, based on the decisions taken in all the business functions.

7.2 Environmental

As regards environmental investment, for the first period we'll invest 1,000,000 € in environmental conservation. This investment should increase our image in customers' eyes and also contributes to decrease the interest rate required by banks in the proportion of: -0.2% on the usual 2% increase every quarter, for every 100,000 € invested in Environmental (with a maximum of 500,000 € invested). By investing 1,000,000€ we get a decrease of 1%. This investment will also decrease over time.