iCarbonari

"Embrace all of your sides, because these make you unique"

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Introduction

In this introduction, we’re going to explain all the models and formulas used to take the decisions for all the quarters. To manage all the aspects and effects of each value on the others, we have created an Excel file which is divided in sheets based on the sections.

The first section is the Operation one: in this section the main values that we keep an eye on are the market share and the machines’ saturation. Starting from our forecast for the global demand made with the Holt-Winters model, we determinate the demand for our company by setting the market share we want to achieve, and this will have effects on all the other decisions related to the production. Having our forecasted demand we can calculate the products needed considering our previous stock, and then we have to decide if and how many finished products we want to buy: after this, we will see how much we need to produce. So, for each product and for each market, we use a scheme like this:

Total demand	from the Holt-Winters model
Market share	*decision to make*
Our demand	Total demand * market share
Products needed	Our demand – Previous stock
Bought-in	*decision to make*
Production	Products needed – Bought-in
Hours needed	Production * Time per unit

Figure 1.1: Steps for the production planning.

The next step is to analyse if we have the production capacity we need: to do this, we must have under control the status of each of our bought or leased machines. A complete tab like the following one allows us to know the age of each of our machines, so that in case we want to sell some we can immediately see how much we will earn: also, we can always keep an eye on the contracts we have for the leasing machines, to see if we need to renovate some of them.

Machines						
			Q10			
Age (months)	Value/u (O)	Hours/u	Owned	Leased	Sold	tot Hours
3	240,000 €	1,500	0	0		0
6	220,000 €	1,375	0	40		55,000
9	200,000 €	1,250	0	0		0
(1 year) 12	180,000 €	1,125	100	0		112,500
15	160,000 €	1,000	0			0
18	140,000 €	875	0			0
21	120,000 €	750	0			0
(2 years) 24	100,000 €	625	0			0
27	80,000 €	500	80			40,000
30	60,000 €	375	0			0
33	40,000 €	250	0			0
(3 years) 36	20,000 €	125	0			0
Total			180	40	0	207,500
New machines owned			20			
New machines leased			0			
Machines value/cost			24,400,000 €	1,600,000 €	0 €	
Depreciation			3,600,000 €			

Figure 1.2: Example of the Machines section.

In each period, we do a check of our machines and calculate the saturation as hours needed divided hours available from our machines. We try to keep the saturation between 90% and 98%. For the raw materials, we use our personalized MRP that we already described in the first report: it perfectly fits our needs and is very well made.

The next section is the Marketing one: in this section we set our retail and wholesale prices. We have two different parts, one for each market, as they have different needs and features. For the retail part, we have the quantities available for each product, computed as (Production – Quantity produced for wholesalers + Bought-in + Previous stock) * 0.9, as we always have to maintain a 10% stock for each product. We insert the prices and calculate the estimated revenues: after, when we see our effective sales, we also calculate how much of the offered quantity has been sold, to immediately understand our performance.

For the wholesalers, things are simpler: the quantity offered is exactly what we have produced for them, as there is no stock and no bought-in. As we do for the retail, we insert the prices and calculate the estimated revenues, and then we see our effective revenues and calculate how much of the offered quantity has been sold. For this market, we do an additional analysis regarding the margins per unit: in fact, since we have a maximum price, we have to analyse if, with our costs, we can have some margins for these products, in order to decide if it’s convenient to sell them in this market or not. To do this, we use the following scheme.

Cost of production	from the Business News
Cost of Raw materials	Weighted average of local, imported, and stock of raw materials cost
Indirect costs of production	(Depreciation + Leasing of machines) * Hours per unit / tot Hours used
Total cost	Cost of production + Cost of Raw materials + Indirect cost of production
Price	*decision to make*
Margin	Price – Total cost

Figure 1.3: Calculation steps for margin per unit.

The next section we analyse is the Distribution one: in this section the main value that we keep under control is the shops' saturation, because it can have a huge impact on our effectiveness and customer service. This section is divided into two different parts; in the first part we manage the transports. We cannot sell our vehicles but only buy some new ones, so we keep a scheme similar to the machines' one. What we manage for the transport part is the capacity and the eventual external hire, with all the related costs. To do this, we use the scheme shown in Figure 1.4.

Transport	Q9
Fabrics	88,674
Fittings	0
Forniture	0
Space units available	347,500
Space units needed	443,369
% used	127.59%
Fixed charge	104,250.00 €
Emergency hire (units)	95,869
Emergency hire (value)	71,901.82 €
Tot	176,151.82 €

Figure 1.4: Example of the transport costs for Q9.

The other part of this section is the managing of the shops and the employees. We set the shops' configuration (number of shops) balancing central and out-of-town outlets and following our strategy. Basing on how many shops we own and their related capacity, we are able to calculate the units available in the shops. Then, knowing how much we transfer to the shops from the production site and the units already stocked there, we are also able to calculate the units we need. This allows us to see the shops' saturation as units needed divided units available. This value must be between 70% and 85%; a lower value means that our shops are quite empty, so we might sell some of them, while a higher value (over 90%) can cause a lack of effectiveness which would be a big problem for our company.

In addition to this, we calculate all the costs related to salaries, warehouse and rent of the shops, to insert these values in the Finance section.

In this last section, the Finance one, we calculate all the costs related to our borrowings. After this we take the costs calculated in all the other sections to do the Profit & Loss and the Cash flow. Since all the costs we have when we take the decisions are estimated, we will be able to see also an estimated profit after tax, to approximately see if our decisions might work well.

We worked hard to create this sort of "managing system" to have under control all the different areas of the company. We are now able to see what the effects are if we change one single number, and all the areas that it impacts. We believe that this will be a particularly useful tool to use in the next periods, as it gives us a complete view of our company.

First quarter (Jan-Mar 2020)

Analysis of the results

In this first period of managing the company we incurred in a lot of errors. First, our Marketing Director has communicated a wrong price for the furniture for the wholesalers' market (240€ instead of 640€): that caused us a big loss, because the margin of that product was a negative value. Obviously, for this reason, he was fired. Also, there was a misunderstanding with our Operation Director: he bought 40 leased machines instead of 40 new machines. Furthermore, we have made a bad prevision of shop saturation: it was higher than what we expected as it was more than 98% and this caused a considerable drop of customer service. Fortunately, we found the error and fixed it, so the next forecasts will be precise.

We have underestimated the amount of investment in high tech: we are under the market average. This caused a worse quality of production than our competitors' one, as shown in Figure 2.1: the result is that even if we had high quality raw materials, we ended with a product with a medium-high quality, not enough if compared with the quality of our competitors' products. The quality was so low that none of our Fabrics was sold to the wholesaler's market, as it didn't meet their quality requirements. This is unacceptable for our brand and for the image we have! We have to work hard on that.

Quality of production	
iCarbonari	58,8%
Mkt std trend	63,7%

Figure 2.1: Quality of production for Q9 (Jan-Mar 2020).

Apart from these errors, the main problem that has been identified is the low value of our index of competitiveness. We tried to do an analysis to find the possible causes.

First, we did not give the right importance to advertising investments. Due to the fact that the brand was already famous (the company did a successfully tv advertising campaign last year focused on our vision), our illusion was that we could benefit of this for at least a quarter, without investing on other advertisements. Seeing that this was not true, we understood that even if people know our vision, they don't know anything about the values of our company. By interviewing our customers, we found out that very few persons know about the company values and how much we are concerned with environmental issues: this tells us that continuous investments to maintain our brand image are one of the keys to bring us to the success.

Second, our Operation Director suggested that another cause has to be searched in the vertical integration of the company. In this quarter, it was very low because we decided to buy some finished products instead of producing them: we chose the outsourcing because the internal production quality was not high enough for our expectations.

In addition, due to our bad performance in this quarter, for the next one we won't be able to borrow money from banks, as we are over our borrowing limit.

Solutions for next quarter

For the next quarter, our aim is to improve our brand image. Since the customer is our priority, we will invest in some new shops: 3 central outlets and 2 out-of-town, to provide more coverage of the area. In addition, we will hire 35 members for the staff and 150 salespersons for our new shops, to guarantee that every customer can get the attentions needed. To ensure their effectiveness we will invest 600.000€ to provide them with training courses.

As said before, we decided to increase our investment in advertising (from 800.000€ to 3M€) to promote our brand and confirm our reputation, so that our customers can get to know us better. To balance this, we will lightly decrease our investment in environmental issues, setting it on 800.000€, and we will also give back 200.000€ of the borrowed money from the banks.

To plan the production for next quarter, we set a target market share of 18% for each product and for both retail market and wholesalers' one.

We will keep pushing with the high tech, because we need very high production quality to follow our strategy: we will raise our investment from 1M€ to 3,5M€. In the next quarter we will start producing instead of buying because we now have the quality we want for our raw materials (and the quality of bought-in finished goods is quite low as it is 64%): this will probably increase our competitiveness index. We will also buy 20 new machines, which will ensure our production for the next periods because the quantities will increase. Following our sourcing strategy, we won't buy our raw materials from importers, but from locals to guarantee the quality we need for our products: in fact, the gap between the quality of local raw materials and imported ones is quite large (77% for the locals versus 62% for the importers).

For the fact that we have a quality that is not very high (64.4%), we decided to make some promotions on the Fabrics. We want to lower the perceived price to align it to the quality of the product.

Regarding the fittings, we now need to set them definitely in the "premium price" box, since they were in the last quarter in an "Average quality" box. So, we decided to increase the price from 100€ to 115€.

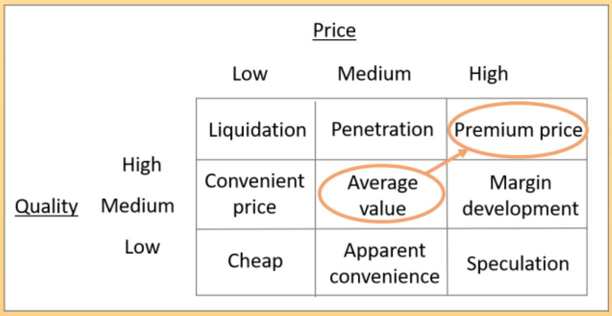

Figure 2.2: Quality-price matrix.

We now have all of our three products set in a Premium price strategy, aligned with our corporate strategy.

Second quarter (Apr-Jun 2020)

Analysis of the results

In this period things have been pretty good, but we are still under some of our benchmarks. We have improved our profit, as it is now 1.776.737€ (in the last quarter it was -143.767€), but we want to increase it more in order to improve our position in the market. We are proud of our prevision of shop's saturation as we became able to calculate it very precisely and can now keep it under our benchmark of 90%. This also gave us a great customer satisfaction, which was over 100% for fabrics and fittings.

Regarding the wholesalers' market, we are proud to say that we have established a strong relationship with wholesalers. Indeed, we sold almost all the product we had offered to them (we had only 200 Fittings unsold) and we have a good market share for each product. As a consequence of the mistake made by our former Marketing Director, we couldn't put the maximum price for furniture, which was our intention aligned with our strategy. We have also noticed that there is a quite large slice of this market that is not satisfied yet: for example, on 300.000 units requested of fabrics, only 137.000 were sold. This could be a huge opportunity for our company. Since prices cannot be higher than the maximum price established by the wholesalers (and we already set the maximum prices for our offer), our last lever to increase the profit is to raise the market shares.

Unfortunately, we are still under the average of investment in high technology, even if we had increased it from 1M€ to 3,5M€: for this reason, our products' quality is a little under the average. This reflected on our operating profit because we didn't sell what we had forecasted: we could sell all the products we offer if we have a better quality. Indeed, despite our effort in increasing the investment in Advertisement, we still have a very low share value, probably due to the low investment we did in the last period.

Contingency management

In this period, we have to face an emergency, which is the pandemic of Coronavirus. This virus will affect many aspects of our company and requires special measures.

The major impact will be on our Distribution function. In fact, this state of emergency forbids us to buy new shops, which was in our plans: we can only buy one out-of-town shop, so we'll increase our coverage but not as much as we wanted. In addition to this, due to the strict rules that the government has imposed to all companies, our shop capacity is reduced (as shown in Figure 3.1): for next period it will be 25.000 units (instead of 40.000) for central outlets and 35.000 units (instead of 55.000) for out-of-town ones. This will force us to reduce our offer to the retail market.

	Q10	Q11
Central outlets	11	11
Space available	440.000	275.000
Out-of-town outlets	15	16
Space available	825.000	560.000
Total space available	1.265.000	835.000

Figure 3.1: Comparison of the unit spaces available in the shops for Q10 and Q11.

We will certainly make a special tv advertisement for this period, to spread the rules given by our government and to help overcome boredom with entertainment: we will also invest in some promotions for Fabrics and Furniture. We will not invest in promotion for Fittings because the market average of this investment is quite high if compared with the margin per unit this product gives us.

The other function that will be affected is the Operations one. In fact, to respect the government directives, the time of production for each product will significantly increase, as shown below.

	Q10	Q11
Fabrics	1,06	2,06
Fittings	0,14	0,48
Furniture	2,83	5,55

Figure 3.2: Time of production (in hours) for each product in Q10 and Q11.

This can cause a further reduction in our offer for both retail and wholesale market.

Regarding the retail market, the main problem is the shop capacity, as it is the most restrictive constraint if compared with the production capacity. Based on this we have set the production for the retail market to have an expected shop saturation of 84%; we have left a margin of 6% (if we go over 90% of saturation we'll have a drop of effectiveness) to store any unsold product from the wholesale's market. This choice allows us to set an expected market share of 10,5% for Fabrics and Furniture. For the Fittings we already have a quite high quantity in the stock, so we will be able to satisfy an expected market share of 16,5% without producing.

For the wholesaler's market things are different: in fact, products offered to this market are not stored in the shops, so the only constraint we have is our production capacity. We will certainly increase our expected market shares for this market, but we have to consider that this same action could be implemented by many competitors, which have a production capacity that can be compared to ours and want to exploit the advantages of this market in this particular period. The other thing we have to consider is the good relationship between the wholesalers and us. Based on these two considerations we have decided an expected market share of 20% for each product to set our production levels. Compared to the previous period we have increased the market share by 2% as we don't want to risk too much, because the unsold on this market can have a big impact on the revenues of the retail market.

In addition, we have decided to increase the terms of payment from 2 to 3 months to facilitate the wholesalers' purchases in this period of emergency.

Solutions for next quarter

As said before, we will buy one out-of-town shop to increase the stock capacity for the retail market. To keep high the value of the effectiveness of our supervisors and salespersons, we have decided to raise our investment in training instead of hiring other people. One of the reasons of this choice is based on the fact that we don't know at the moment how this emergency will affect us (if it's going to put us in a crisis or not), so for now we're trying to guarantee the employments for our workers.

Due to the constraints imposed from the ordinance, in the next quarter we cannot exploit the full production capacity we own and the forecasted demands of the following quarters are not that high, so we decided to sell 80 machines to liquidate 2,4M€ of fixed capital which can be useful for investments.

Following our quality-price strategy and considering that the price sensitivity will be low in the next quarter (as shown in Figure 3.3), we decided to raise the prices: this will be a lever to increase our profits.

Competitiveness factors	
Quality	50
Price	50
Brand	100

Figure 3.3: Competitiveness factors for Jul-Sep 2020.

As can be seen, the quality sensitivity will be low, but we decided to keep going with our idea of high-quality standard and for this reason, considering our low quality of production, we decided to boost our hi-tech investment spending 5M€ on it.

Third quarter (Jul-Sep 2020)

Analysis of the results

Due to the coronavirus emergency, this has been the worst period so far for our company, with a profit of -3.517.266€. The emergency has conditioned the demand so, if we compare our forecasts with what actually happened, we'll see that the periodicity hasn't been respected. This caused some issues: for example, a big part of the fittings' demand has not been satisfied (the actual demand was 751.120 units while the forecasted one was 398.501 units, almost twice as expected), which caused a significant drop of the customers' satisfaction. Instead, the demand of fabrics and furniture has been satisfied, because the actual was way less than what we had forecasted.

The emergency has not caused problems in the shops' saturation since we perfectly followed our planning and none of the wholesalers' products was unsold. Also, the effectiveness of our staff has been 100% and we are proud of it.

The reason of our negative profit is attributable to a wrong pricing strategy for the retail market: we have invested a lot in our quality, but the price of our products does not reflect it. Following our strategy, we should be the company with the highest price (which reflects the highest quality), but as we can see from Figure 4.1 lately we have lost this objective, so we need to bring it back.

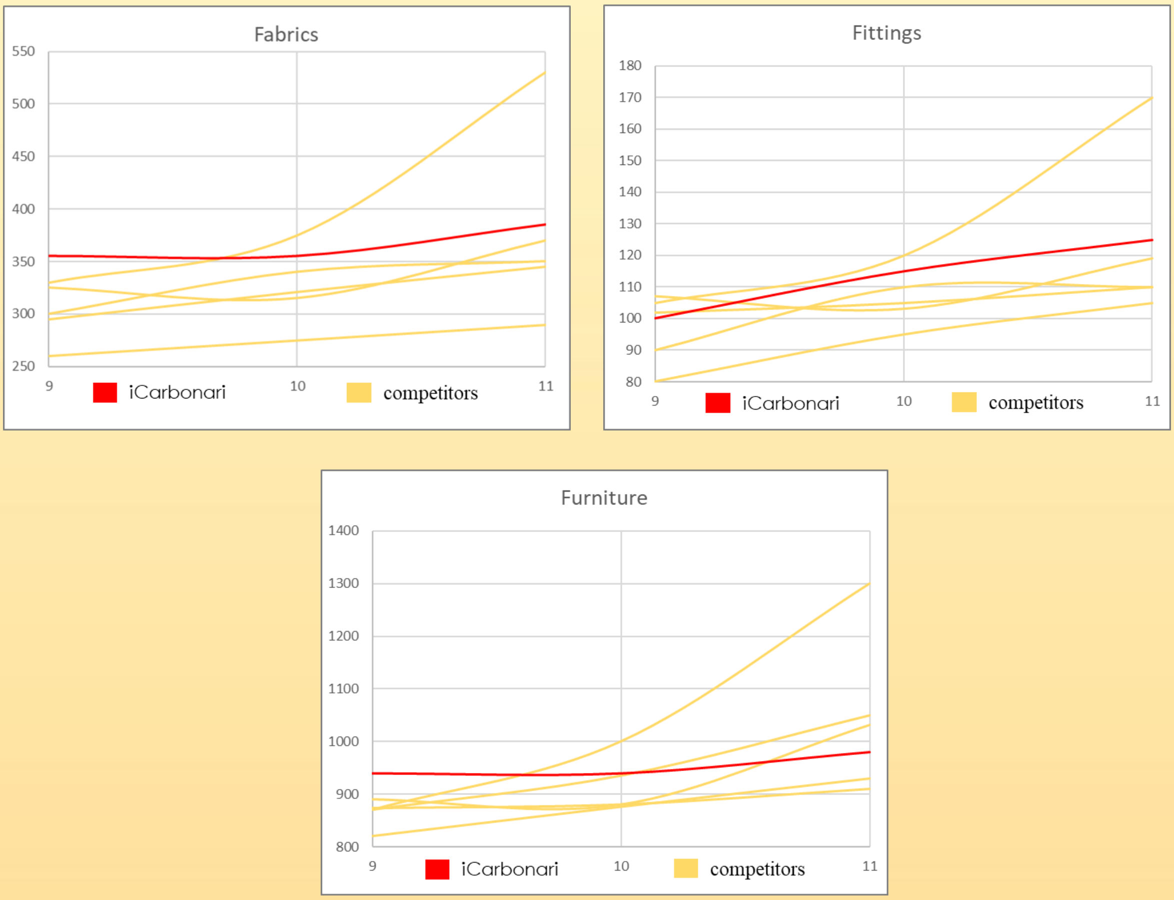

Figure 4.1: Prices for Q9, Q10 and Q11.

We need our actions to be stronger and with a significative impact in the market, to spread the image of a fearless company that is above the other ones. We need to raise the prices not only for image reasons, but also because with the prices we have it is impossible to sustain production costs (for the Furnitures they are so high that caused us negative margins).

Regarding the wholesaler's market, we noticed that it is not yet satisfied: once again, we can raise our forecasted market share to increase the quantities sold, and this will also reduce the production cost per unit. The big investment in high-tech (5M€) has paid us back a little, but since the average expenditure for it is 4.5M€, to have a significant result we have to keep pushing with it.

Solutions for next quarter

As said before, we will raise the prices, because our brand must be associated to luxury products and we need to detach our competitors. Obviously, this strategy must be supported by a high investment in advertising, and for this reason we will maintain the last quarter investment and hire a communication designer that can support our company in improving the effectiveness of the advertisements. The decision of increasing the prices is also supported by the fact that the related sensitivity in this quarter will be quite low (60 instead of the 80 of quality and brand). We also know other aspects about customer perception related to the features of the brands, which are shown below.

Brand factors	
Location	70
Advertising	60
Customer service	90
Company image	70

Figure 4.2: Customer perception for brand factors in Q12.

Since customer service will be the most rewarded aspect for a brand, we have decided to double up our investment in it from 1.5M€ to 3M€, to ensure the best service. Following our strategy and exploiting the customers perception for this quarter, we have also decided to do some changes in our Distribution section. In fact, our marketing director has suggested to replace five out-of-town shops with the same number of central shops, to support our will to be an exclusive brand.

Regarding the operation’s section, we have noticed that for the next two quarters we will have an oversaturated production capacity. To avoid this, we can operate in two ways: buy some new machines (or lease some) or buy products in outsourcing. We noticed that the quality of bought-in products will be quite high (68% for Fabrics, 69% for Fittings and 70% for Furniture): however, we must be careful with the outsourcing, because it can negatively impact our competitiveness index. So, we decided to make a combination of the two solutions: buy a small amount of bought-in goods (1/3 of what we need more or less) and take 20 leased machines to increase the production capacity.

The action of buying in outsourcing will also decrease our raw materials and production costs, which is something important: in fact, we have analysed that the price of the bought-in is lower than what we spend for raw materials and production.

For the production planning of this period, we will set a 16% market share for the retail market (instead of the initial 18%): since we will raise the prices, we expect our market share to decrease, as not everyone can buy luxury products. Regarding the wholesalers' market, we will set a market share of 25% for Fabrics and Fittings and sell them at the highest price possible, as usual. For the Furnitures, we decided for a 35% market share, because we need to produce a lot to decrease the production cost per unit (which now is higher than the highest price possible), as it would give us negative margins.

We also have to deal with our demand forecast system, since it needs to be reconsidered knowing the impacts of this pandemic. We are persuaded that the effect of the pandemic on the demand will continue, so we have decided to increase the update coefficients of the forecasts formulas from 0,5 to 0,6, in order to give more importance at the recent trends of the demand flow and make our model more responsive to changes.

As usual, we will keep pushing with the 5M€ investment in high tech, believing that this will increase our quality of production by 5% in this period.

To ensure that this investment and all the other decisions are economically sustainable, we need to exploit the helicopter money, borrowing 7M€. This decision has come from the fact that we have only 27M€ of cash available, and the cash needed for the decisions is about 32M€: with this borrowing we will satisfy our decisions with a security margin of 2M€.

The helicopter money, that is the possibility to borrow a consistent amount of money, has been implemented by the government after the pandemic to help companies with their few cash available due to the low incomes of the previous period. This is a huge opportunity for us because we need money to keep following our strategy.

Fourth quarter (Oct-Dec 2020)

Analysis of the results

Good news! October-December 2020 has been such a great period for us. We have increased a lot our profit, reaching 22.862.180€ with a ROE of 15,44%. Our clients have reacted well to our new prices, and this shows us that they understand and appreciate our efforts in quality, customer service and brand image. As a matter of fact, we had a good customer satisfaction and a great quality for our finished goods.

This has led us to an increase of our share value, from 10 to 27,3: this is a clear signal that we did a good performance in this period and it is also the result of our investments, especially in advertisement.

Another good announcement is that we maintain our good relationship with the wholesalers: we have sold all the goods we offered, and we are pretty proud of it, as it has become one of our main point of strength.

But it's not all puppy dogs and rainbows: of course, we can still improve by working on the mistakes we made during this period. The main problem is that our demand forecast was completely wrong. We thought that the coronavirus emergency would also affect this period: we changed our model's coefficients basing on that, but we were wrong and this made us not prepared as we wanted to be to face this period's sales. For example, our fittings' demand forecast was twice what it has been, and we now have a stock of 220.233 fittings. Instead, we have underestimated fabrics' and furniture's demand. This has been a real problem because with a better forecast for the demand we could have sold more products, increasing even more our profit.

In addition, since customer satisfaction is our main goal, we want to improve our customer service and staff's effectiveness in order to reach the perfection: we are now slightly under the average of investment in customer service and have a staff effectiveness of 96%.

Solutions for next quarter

To decide what to do in the next quarter, as always, we will analyse the customer perception, as it is one important aspect for us.

Competitiveness factors	
Quality	70
Price	100
Brand	100

Figure 5.1: Customer perception for competitiveness factors.

In this first analysis we will talk about what influences our competitiveness: quality, price and brand. As we can see from Figure 5.1, in this quarter customers will not give much importance to the quality, but despite that we will keep our strategy and continue to invest 5M€ in hi-tech to have the best quality in the market. As it can be seen from the graph, price and brand will have the major impact on our customers. Since our prices are at the moment the highest on the market, we will invest in some promotions (300.000€ for each product) in order to decrease the perceived price of our products: we believe that this, united with our quality, will make us very competitive. To support price and quality we also need to be strong as a brand, which will have a huge impact on our customers. To do this, we analyse the customer perception for brand factors, shown below.

Brand factors	
Location	90
Advertising	50
Customer service	70
Company image	90

Figure 5.2: Customer perception for brand factors.

As we can see, location and company image will have the major impact on our brand perception. To keep high the quality of our shops' location, we will open two more central shops and dismiss two out-of-town ones. This action is aligned with our strategy that focuses on the central areas which are seen as more valuable and attract more customers.

In addition, we will assume 10 more supervisory staff and 25 more salespersons, to ensure the best service for each customer. As always, we will maintain our 800.000€ investment in training, to train the new employees and make sure that they are always the best. For the company image, we will keep our 1M€ investment in environmental issues, which has always characterized us.

Regarding our customer service, we will always work to improve it, because we think it's one of the keys for our success: for this reason, we have decided to raise our investment from 3M€ to 4,5M€, because our objective is to have the best customer service ever seen.

As shown on Figure 5.2, the less important aspect for our customers will be the Advertising one. For this reason, we will not increase our investment, but since advertising level impacts also our company image, we will maintain our 4M€ investment which allows us to produce some new spots for the new year in order to renovate our image and brand communication.

To set a good planning for our next quarter's production, our main focus is to fix the demand's forecast, as it impacts all the aspects of our company, from Production to Distribution. As said before, we noticed that for what concerns the forecast we misunderstood the impact of the emergency: in fact, the demand after the emergency has been quite normal. For this reason, after hours of brainstorming, we have decided to "reset" our model, by adjusting the coefficients from 0.6 back to 0.5 and by replacing the effective value of the demand for Q11 with the forecasted one. Acting this way, our model will not consider the outliers of the emergency, and we believe that this will give us quite accurate forecasts. Talking about the prices, we have achieved our objective of a premium price strategy: our prices are the highest on the market and our product's quality is very high. We decided to maintain the same prices for this period.

We will set the market shares for the retail production planning on 16% for Fabrics and Furnitures. For the Fittings we must make a different decision due to the high stock we have, which allows us to set a forecasted 23% market share without producing.

Regarding the wholesalers, we have decided to stop offering Furnitures: it keeps giving us negative margins due to its high costs of production and saturates our production capacity very fast (it has the highest time of production, as shown in Figure 5.3), obliging us to maintain the other forecasted market shares a bit low.

Time of production (hours)	
Fabrics	0,88 h
Fittings	0,12 h
Furniture	2,36 h

Figure 5.3: Time of production for Q13 for each product.

This decision allows us to increase our offer of Fabrics and Fittings, with an expected market share of 38% (Fabrics, which has the highest margin of this market) and 35% (Fittings). We know that this decision could affect our share value because we do not satisfy all the demand, but we have decided that it is worth the risk.

To make possible all the production planned we need a consistent amount of additional hours of production, so we have decided to buy 32 new leased machines and some bought-in products for Fabrics and Furnitures, as their quality is quite good (71%).

Fifth quarter (Jan-Mar 2021)

Analysis of the results

What a nightmare has been for us this period… We didn't give the right importance to the customer perception: indeed, their sensitivity to price was very high. We thought that doing a big investment in promotions would have been enough so we didn't lower our prices, also considering that our competitors had high prices too. But what happened is that all of our competitors significantly lowered their prices so, even if we did lower our perceived price, we ended up being out of the market and totally non-competitive. For this reason, a large part of our products (especially Fabrics and Fittings) was unsold. This chain reaction of problems explains our negative profit of -6.868.472€ and the drop of the share value from 27,3 to 9,8.

Let's talk now about something positive: our investments have been all over the average, as a continuous reminder of our effort in quality and brand image. Only the expenditure for customer service was a little under the average, but still very good due to the constancy of our high value investments through the periods.

Another constant for us remain the wholesalers: thanks to our strong relationship they continue to choose us and the profit from this market is almost certain. As for the other periods, we sold almost all the products we offered to them.

The last thing that has to be highlighted is that this time our forecasts for the demand were quite good, but we still need to improve it. We noticed once again some oddities in the values, but maybe the reason behind this is also that the demand is affected yet by the emergency and needs some more time to get back to normal.

Conclusions

As we have now managed iCarbonari for a year, it will be useful to analyse what were the main errors we made, which can teach us how to modify our actions in the future.

The most important thing we understood is that in the first periods we followed our strategy in a very light way, setting our average expenditures quite under the market's average. The expenditure that gave us the biggest problem is the hi-tech investment: in fact, in the first two periods we invested not too much in it, and even if in the other periods we always invested a lot, we never fixed the gap between our production quality and the market's average, as shown below.

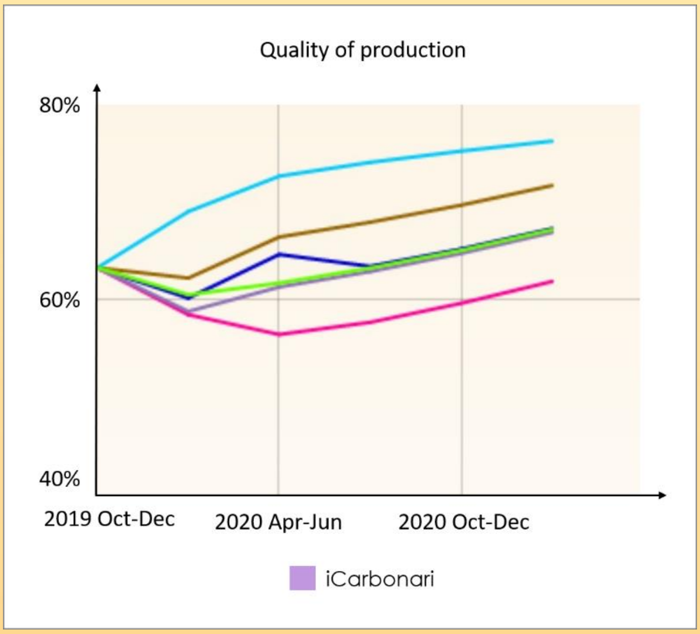

Figure 7.1: Quality of production.

This caused us the impossibility to follow our premium quality strategy, because even if we always bought local raw materials which had a very high quality, we had this not very high production quality: the result is that our finished products have never been " the best on the market" (as we can see from Figure 7.2).

Anyway, we didn't change our strategy because we firmly believed that by investing 5M€ each period, there would have been a time in which we would reach the high points of the market's quality. This has not happened.

Figure 7.2: Quality of fabrics, Fittings and Furniture.

Thinking now about it, we believe that the best way to act would have been to notice that even with 5M€ investment the gap was still the same and consequently change our strategy, maybe doing a medium quality product with an average price. This change would have allowed us to lower our costs and gain some more profit.

Instead of this, we tried to balance this gap with high investments in other aspects like Customer service: the aim was to balance the missing quality of the product with an excellent service. We achieved one of the best services on the market and we are still proud of it, but this wasn’t enough to become one of the best companies of the market.

The second problem is that to follow our premium price strategy we had very high production and commercial costs, but these were not balanced by high sales and revenues. This has led us to a situation in which we spent like a luxury company but without being it.

We think that what we missed is elasticity: we started with the strategy in our minds and blindly followed it, without considering the fact that even little changes could have led us to a way better result at the end.

An example of this lack of elasticity has to be searched in our sales to the wholesalers’ market: we decided to compete in this market, even if our ideal strategy didn’t fit very well with this market’s characteristics (with our high costs of production, having a fixed maximum price was not the best). However, for Fabrics and Fittings this never caused any issues.

The Furniture instead gave us some problems: due to its high time of production and high occupation of space for transport and stock, this was the item with the highest costs per unit. This, mixed with a maximum price that was not that high, gave us negative margins from the beginning: despite this, we kept selling it. Only in the last period we decided to stop offering Furniture to the wholesalers, but due to all the other problems we faced, we couldn’t really see the results of this decision.

Another problem we had was with the stock of finished goods. The cause of this problem is that, as shown in Figure 7.3, our predicted market share for the retail market was always higher than our real one (except for Q11, due to the Coronavirus emergency that caused outliers) and this made us collect a lot of unsold stock. This has led us to a completely inconsistent stock plan if compared with the predicted stock plan explained at the beginning of our adventure.

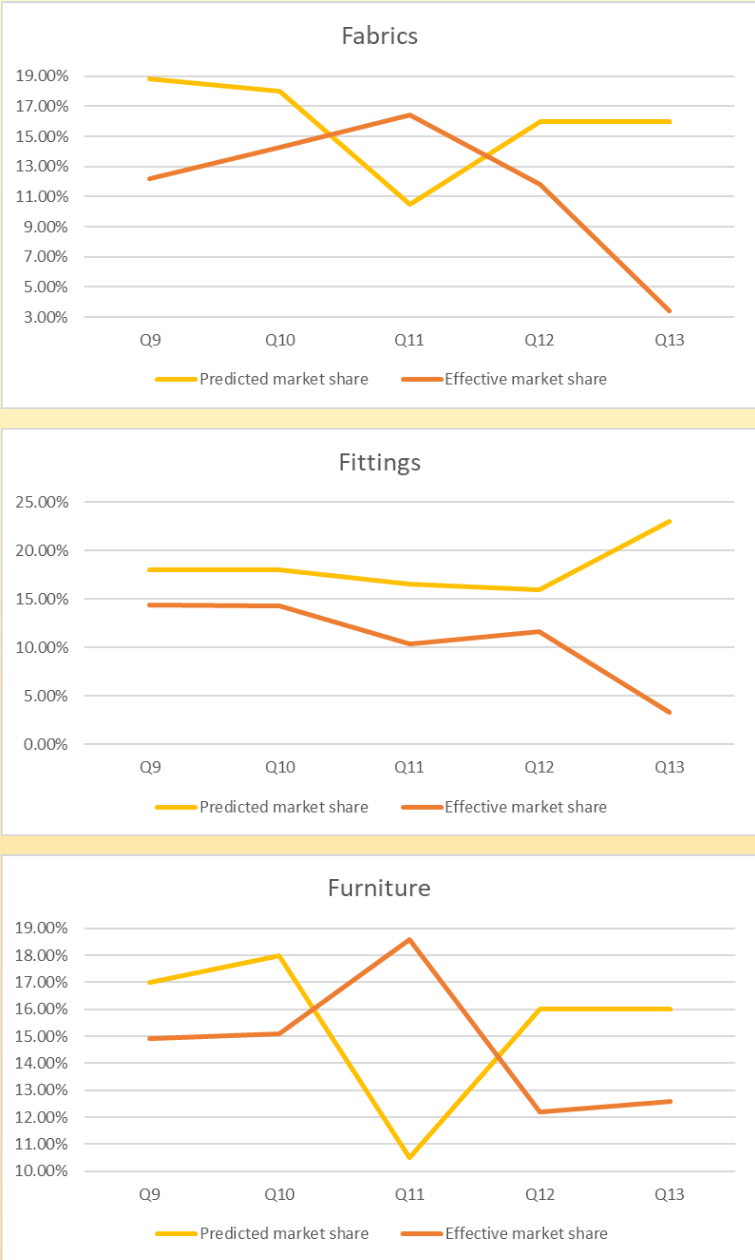

Figure 7.3: Analysis of the market share for each product.

This gap between the forecasted market share and the effective one needs some more analysis. In fact, our market share in these five periods has been very fluctuating. This means that we were not able to create loyalty with the customer base. To adjust this, we might create a customer survey to understand the lack of stickiness to the brand in terms of alignment between brand proposition and customer expectations.

But problems never end! Another issue that needs for sure to be fixed is our forecast demand system. In fact, we noticed that in the pandemic period it was not effective, and this drove us in a very bad performance, having a lot of stock-out orders (thing that we absolutely want to avoid).

We want to fix this by integrating the extrapolative techniques of forecasting with some qualitative methods based on subjective basis, with the objective to increase the capacity of our system to consider particular situations never happened before (for which we have no historical data). To implement this, we have to assemble a panel of experts whose task will be to analyse the output of the Holt-Winters' forecast and, if necessary, modify it by taking into account the contingency factors.

Anyway, we didn't have only bad results. For example, we managed very well the Distribution section. Our customer satisfaction has always been around 100%, and we can say the same about the shop effectiveness.

This has highlighted that our strategy to maintain an adequate level of shop saturation (between 60% and 90%), put attention at the number of shops owned and always provide training to our staff (in order to have sales specialists and not simple salespersons) has worked!

Last, we discovered a remarkable interesting fact: analysing the demand of the fittings in these periods, we realized that there is a consistent amount of unsatisfied demand in each of these. This means that nobody in the market understood the desires of the customers for this product, or maybe that this desire has changed. For this reason, we are persuaded that understanding the new desires of the customers can be a huge opportunity for our company: once we know what are customers' new interests, we can start an innovation project of this product, releasing by the end of 2021 a new product that matches better the needs of our customers. This project can give us the slice of the market that is now unsatisfied, but also improve our image as a company that renovates itself to always accompany its customers through the changes of their needs.

Bibliography

- Caron F., Marchet G., Wegner R. (1997), Impianti di movimentazione e stoccaggio dei materiali, Hoepli
- Sianesi A. (2011), La gestione del sistema di produzione, ETAS
- Stock J.R., Lambert D.M. (1987), Strategic logistics management, Irwin
- Chase R.B., Jacobs F.R., Aquilano N.J., Grando A., Sianesi A. (2004), Operations management nella produzione e nei servizi, McGraw-Hill
- Vercellis C. (1997) Modelli e decisioni: strumenti e metodi per le decisioni aziendali, Società Editrice Esculapio
- Giovanni Azzone, Umberto Bertelè, L'impresa, Sistemi di governo, valutazione e controllo, Rizzoli ETAS
- G. Spina, La gestione dell’impresa, ETAS, terza edizione 2012