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# Demand planning in UK wine industry



# DEMAND PLANNING IN WINE INDUSTRY

International Agribusiness

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# Preface

This report is the result of 21 weeks of internship at Borough Wines and Beers Import in London and the final assessment of my Bachelor International AgriBusiness. I have been researching the demand planning in the wine industry in the United Kingdom. The primary goal of this study is to find some conclusion about how to manage the demand planning for an importing wine company in England.

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# Summary

With this report, the researcher has conducted some research and draw some conclusion about Demand Planning in a wine importing company, this report can help all the company in the wine industry how want to implement a Demand Planning strategy and want to know how it can improve logistics operations in the supply chain. The demand Planning development starts with a demand study; this first period helps considerate sales history and cleaning up company's dataset in order to have a better view on the transactions history and to plan a prediction depends on those results. To answer to this subject the researcher has decided to have a special focus on the Demand Planning in the wine supply chain and will answer to the question: How can demand planning effectively improve operations in UK wine importing companies?

To answer this main question, the researcher is defined some sub-question to influence some answer:

1. How to optimise Demand Forecasting in the wine Supply Chain?
2. How to include the E-commerce in the Demand Planning?
3. How can Demand Planning help to forecast customer's need?

To answer to the sub-question some desk research was conduct from 27<sup>th</sup> October to 12<sup>th</sup> November 2018. In the desk research the following was included, how to optimise Demand Planning, how to include E-commerce and how forecast customer's need. It was found that to optimise Demand Planning some software are able to help companies thanks to computational Intelligence methods (Michalewicz, Spitty, & Michalewicz, 2007). Moreover, the weighty trials in including e-commerce in the demand planning are the forecast of the shopper base, cyclical altering patterns, lack of historical data for new products, trouble in social and social norms, customer instable buying standards and disorder in demand patterns from contestants (Bejerano, 2015). Concerning to forecast customer's need businesses can use Demand Planning with SAP Forecasting & Replenishment method which help to have a detailed forecast and deliver information about customer wishes (retail solution, 2016)

It was concluded that companies need to use some software such as Computational Intelligence method and SAP F&R in their Demand Planning strategy.

# Chapter 1: Introduction

## **1. Context**

Organisational Planning is a process of finding an organisation's immediate and long-term purpose by developing and checking specific strategies to accomplish them. It also involves recruitment, and resource distribution and is one of the most central errands of the management team. A company can consider including the organisational planning in the analyse in the Demand Planning process (Hill, 2018). The Demand Planner can use the demand planning in different sectors in a company such as sales, marketing and management but also in production and logistics (Vickova & Patak, 2016). Demand Planning can be defined such as a multi-step efficient supply improve the accuracy of the revenue forecast, align inventory levels and augment profitability for a given channel or product (Sharma, 2015).

The demand Planning process starts with a demand analysis; this first step helps understanding sales history and cleaning up company's dataset in order to have a better outlook on the sales history and to plan a forecast depends on those results. It is also imperative to create a system for the predicting process to help to forecast revenue, sales and customer's needs. A company can do a customer-product segmentation previous to the demand planning implementation as it can help with the process of demand forecast. Furthermore, to the forecasting tool, in the process of demand planning a company can decide to estimate the recurrent items and promotional, project or delicate items. This choice can be useful to improve forecast implementation. Then, it will be necessary to create a quantitative baseline forecast for sales but also eliminate bias from the forecast. Statistics are essential in the demand planning process because it can help with the sales forecast and avoid over-forecast. However, the company should be critical with statistical forecasting because it can be difficult and misunderstood. With an active process and useful tool, statistical estimating can be 30-40% more efficient. The company needs to look for a well-informed partner who can help to select the right level of difficulty and guarantee benefit from enhanced performance. As a third step, a company needs to struggle for a co-

operative demand planning execution process. In this step the company must rely on the following elements; a collaborative process within and outside the company, crucial demand information about product introductions, replacements and end-of-life products. This contribution can apply to marketing, communication and sales field. Therefore, this step can help the company to set up a collaborative forecast approach to finding what is the most valuable requirements for the customer and also for other essential partners in the chain. The last step to implement demand planning is to invest in performance management. A company should be able to extend their progress and reducing forecast error to improve service while dropping cost and inventory. It means that the Supply Chain will generate the statistical estimate, marketing or product management will enhance information about promotional campaigns, new product introduction and end-of-life products. A company needs to ensure that their tools allow them to check the added value of each of the altered forecast versions and include a comment cycle (Desmet, 2016).

Demand planning is an IT (information technology) supply chain management approach used to help IT administrators and managers to forecast what IT will meet the current demand (Cooper & Zmud, 2015). However, it can be used by the company to enhance inventory, cumulative turnover rates and investment costs. The businesses can also use it too offer an insight into future cash flow and be more precisely budget aspects such as paying suppliers and other operative prices. In order to plan future operations, companies can use three essential types of forecasts; the first one is "Economic Forecasts" this approach speech the business series by foreseeing inflation rates, money provisions, covering starts and other planning pointers. Another technique is "technological forecast" which concern rates of technological development, which can consequence in the delivery of new products, needful new plants and gear. The third type of forecast is "Demand forecast" which are estimates of demand for an organisation's product or services. In that case, managers need demand-driven-forecast where the emphasis is on rapidly classifying and following customer desires. With these projections, the company will use point-of-sale data, retailer-generated reports of customer favourites, and any other data that will aid for the forecast with the most existing data likely. This method drives a business' production, volume and preparation systems and attends as inputs to fiscal, marketing and personnel planning. Furthermore, the payoff in abridged inventory and obsolescence can be vast (Heizer, Render & Munson, 2017).

Furthermore, the challenge in Demand Planning starts to be more difficult. Firstly, the retail company need to forecast the new products introduction. However,

forecasting the new products introductions is becoming increasingly crucial as product life-cycle contracts and assortment turnover grows. Another challenge is how to tackle variance in sales volume. Indeed, coping with contests related to sales capacities is unavoidable in the modern retail situation. The idea of confronting these changing situations is to bring together statistical forecasting with human vision as people react too fast to change and give too much importance to recent actions.

Moreover, they are maybe well within the limits of normal statistical distribution and best interpreted. One of the last challenges can be how a company forecasts promotions and promotional lifts. This challenge is one of the big retail contests because of its growing importance in driving sales. However, is it entirely possible to use demand forecasts for calculating promotion, in using the past sales data with a considerable amount of accuracy (Kärkkäinen, 2015). Demand planning is also vital for a company about, deciding the number of salespeople required to attain the sales objective, for the determination of sales territories.

Furthermore, demand planning is necessary to define how much production capacity to be built up and determining the pricing plan. Demand forecasting can also be helpful in determining the channels of distribution, to enter in a new market, and to make standard against which measure performance. Demand planning is also used in Marketing strategic for instance to assess the effect of a future marketing programme, to choose the promotional mix and can be helpful in the product mix decisions connecting to width and length of the product line (Heizer, Render & Munson, 2017). All these examples show that Demand Planning is essential to improve operation in a company.

## **Existing Literature**

### **UK wine market and consumers.**

As the primary purpose of this study is about the Demand Planning in a UK wine company, the researcher will explain the UK wine market and consumers. First, new polling commissioned by the Wine and Spirit Trade Association (WSTA) displays that wine is now the preferred alcoholic drink for 60% of UK adults, amounting to over 30 million consistent wine consumers across the country. The UK wine industry is one of the most powerful and varied in the area. It is valued £17.3bn in economic activity to the British economy, cares



270,000 jobs and donates £8.6bn to the public finances annually. Though, tax paid on the wine sold in the UK is presently at a record high. UK consumers currently pay closely 60% tax on a customarily priced bottle of wine (WSTA, 2018).

Moreover, The UK is a crucial market for the worldwide wine trade, mainly regarding sales value. Retail outlets do the majority of UK wine sales. The residual sales take place in bars, restaurants, hotels and other foodservice venues. While the volume of UK still wine purchased from retail stores is decreasing, the value of the market remains approximately stable. Concerning UK consumers, they are more aware of wine varietals and know their favourite. Sauvignon Blanc and Pinot Gris remain to take market share from Chardonnay (WSTA, 2018).

Regarding red blend, Pinot Noir is growing in publicity and understanding from UK consumers. Red wine from lesser-known grapes and regions in Europe are also ahead in attractiveness. White wine is favoured vaguely over red wine drinking. Sparkling wine is the category showing the most growth, mainly from Italian Prosecco and Spanish Cava that are apparent to be better value for money than Champagne. UK consumers are also interesting by fruit flavoured wine and lower alcohol wine (Wilson, 2016).

## **Demand Planning in the wine industry**

To better understand this report and its subject, the researcher will give more detail about demand planning in the wine industry. Firstly, a report about optimising the wine supply chain explain that like most production-based companies and especially wineries, have been under enormous difficulty to recover their top-line development and bottom-line investments during the last few years. Consequently, several businesses are rotating to systems and skills that can aid enhance supply chain doings and refining short and long-term demand predicting. This article clarifies that many innovative resolving methods have been presented into software requests to achieve and enhance this complexity to assume the inherent complexities of planning and forecast an agricultural supply chain. Those solving methods are for example ant system, evolutionary algorithms, fuzzy systems, genetic algorithms and are better known as “Computational Intelligence” approaches (Michalewicz, Spitty & Michalewicz; 2007)

Furthermore, another study about “logistics performance of Actors in the Wine Supply Chain” shows that in a situation marked by ever-greater global struggle, wine sector organisations have been extremely interrogative the structure of their whole logistics chain.

The interrogative is owing to the appearance of new actors; the divergence of service breadwinners' product offers; also, the several reunions between actors in this division. These are all signs that have produced businesses to query their logistics plans. This study displays that the wine area has not yet become conscious of how very significant Supply Chain Management remains to a division's general presentation. Always according to the same report, among the wine wholesales interviewed, some have already applied great implementation logistics rules and been very confident in this matter. While others have developed conscious of the practicality of logistics rational but in overall will only perform when a spare comes up (Chandes & Estampe, 2012).

## **Main question and sub question**

However, the demand planning implementation depends on the company sectors, size and management type. Most of the company try to use demand planning to improve their supply chain management. The actual studies explain who Demand Planning is used in theory and in general but doesn't explain who it can be useful in a wine importing company and even real example of wine company which have implemented correctly demand planning to improve supply chain management. This study tries to fill that knowledge gap by answering this primary question: How can demand planning effectively improve operations in UK wine importing companies?

1. How to optimise Demand Forecasting in the wine Supply Chain?
2. How to include the E-commerce in the Demand Planning?
3. How can Demand Planning help to forecast customer's need?

Within this research, the researcher will have to identify elements which can help companies to improve their demand planning. First, the central part will be to find how to optimise demand forecasting in the wine supply chain and how to include E-commerce on it. The last part will be to discover how to forecast the customers' need and integrate it on the demand planning. To answer those questions, scholars will be analysing resource from studies and articles dealing with the forecast, supply chain content and wine industry.

# Chapter 2: Materials and Methods

To find out some conclusion about the importance of using the demand planning to improve operation in a wine importing company, the researcher will conduct some subsequent researches as study reviews and interviews with professional, that can define as qualitative research. After having done the interview, the student will have to analyse the data with using qualitative data.

The researcher will do some secondary research to answer the different sub-questions:

## ***How to optimise Demand Forecasting in the wine Supply Chain?***

To learn about the optimisation of the Demand Forecasting in the wine supply chain. The research for this question took place between the 27<sup>th</sup> and 31<sup>st</sup> of October 2018 in London. To answer this question, the researcher analysed articles which were found on Direct Sciences, the researcher initiate these articles with using key words such as logistic, wine supply chain and Demand Forecast. The first one, “wine logistics review”, is a survey about the operational research assistance to the operation planned and strategic planning of the wine supply chain. An article about “optimising the wine supply chain” explained how system and technologies could help to optimise the various business process. The analyse of “Logistics performance of Actors in the Wine Supply Chain.” helped to answer this question, indeed this article talks about the structure’s change of the logistics chain in wine companies, due to an emergence of new actors, the diversification of service providers product offers and the various rapprochements between actors in this branch. The student has used a qualitative method by a descriptive analysis of the report. This question supported the main question to understand better demand planning in the wine supply chain.

### ***How include the E-commerce in the demand planning?***

This subject has been replied to know about E-commerce in general and how a company can integrate the online purchasing system in the demand forecast. The investigation happened from 5<sup>th</sup> till 8<sup>th</sup> November 2018 in London. First, the definition of E-commerce can be the buying and selling of goods and services, or the conveying funds of data, over an electronic network, primarily the internet. These business transactions befall either as business-to-business, business-to-consumer, consumer-to-consumer or consumer-to-business (Berners-Lee, 2018). The used a literature review from Google and looked at some key word such as E-commerce, demand Planning and forecasting "The challenge of Forecasting Demand for E-commerce." Which explain that the E-commerce industry is growing considerably, the company needs to take in consideration new challenge to forecast the demand. This question has assisted in drawing some conclusion about the importance of E-commerce in logistics operation in an importing wine company.

### ***How can Demand Planning help to forecast customer's need?***

This question has been answered to find out how the company can forecast customers' needs and understand their expectation about wine in the UK. This researcher occurred from 9<sup>th</sup> until 12<sup>th</sup> November 2018 in London. First, the student used quantitative techniques with the interview of Yvonnick Bernard who is the operation director at Formplast France, specialist in thermoforming of trays for dairy food. This interview is relevant because the professional can give an outlook of Demand Planning strategy in a production company. The second interview will be with Emma Sellors who is Assistant Buyer & Products Manager at Borough Wines. This interview can give an view about how work the Demand Planning in a small importing company and will allow to have an outlook about how to forecast customers' expectation and with which tools and methods. However, to analyse the result of these interviews, the academic has used the descriptive qualitative approach. Moreover, the student also used the quantitative approach with the analyse of some report about customers' need as "Demand Planning needs customer profitability." This article explains how a company can forecast customer profitability experience. The WSTA annual Wine report is used to have a comprehensive outlook about UK wine consumer's needs. To support the reviews and interview, the student has also analysed

with SPSS method some sales report by product to understand UK customer buying behaviour. This question supported the main question to understand the aim of implement Demand Planning in the wine industry.

# Chapter 3: Results

## **1. How to Optimise Demand Forecasting in the Wine Supply Shain?**

To optimises Demand Planning in the wine supply chain software can be used such as Computational Intelligence methods. Indeed, most production-based companies in general and wineries specifically have been under tremendous pressure to improve the top-line development and bottom-line investments during the last few years. As a result, numerous businesses are rotating to schemes and technologies that can aid enhance supply chain actions and improving short and long-term demand planning (Michalewicz, Spitty, & Michalewicz, 2007).

Furthermore, software is used by businesses worldwide to exploit service levels, spread customer loyalty and keep margins. This is done by aligning demand and supply procedures and building, handling and performing a dynamic demand plan. The software also necessary to formalise the demand and inventory organisation processes includes outlining KPIs and alerts for “up-to-the-moment visibility” (Llamasoft, 2018).

Moreover, companies can also optimise demand planning process using three key steps such as recognise key market trends and their influence on the quality of demand planning, understand what conducts leading-practice demand planning implementation and Benchmark against key performance indicators of demand planning excellence (Hackett Group, 2015).

Plus, Demand Planning can be optimised with tools and methods such as the historical relationship with the customer, another solution is to forecast the customers' needed for 3 to 5 months and at the end the company must put on the production's schedule all the order which can be sell in time when the supplier request (Bernard, 2018).

Besides, information sharing can be very valuable in sales and operations planning but as well the operations and supply chain management recognizes that achieving the benefits may be challenging. Moreover, using S&OP is it skill for formal planning and data management to improve both intra and inter organisational

integration. In that case, demand planning in overall and precise forecasting is essential of allowing combined planning (Kaipa, Holmström, Smaros & Rajala, 2017).

The interview with Emma Sellors Assistant Buyer at Borough Wines, explain that Demand Planning need to be optimised in the small importing company to forecast customers need, particularly during Christmas time, as Demand Forecasting is almost inexistent. Furthermore, the only forecast which is used is the sales history by the wholesale to know which quantity is necessary to order but most of the time customers submit their anticipated sales to the company (Sellors, 2018).

## **2. How to include E-Commerce in Demand Planning?**

The e-commerce industry is growing as Bejerano, 2015 explains that the BtoC sales are expected to grow 15,6% worldwide in 2018. However, one aspect of concern throughout the entire e-commerce industry are the challenges posed by uncertainty in demand planning and inventory management. The significant challenges in including e-commerce in the demand planning are the forecast of the customer base, seasonal changing patterns, lack of historical data for new products, disruption in social and behavioural norms, customer shifting buying criteria and disruptions in demand patterns from competitors. Concerning the forecast, the most challenging are demand planning and inventory levels accurately. An article called "Challenges of Forecasting Demand for E-Commerce" said that measures of forecast accuracy are as essential and as useful as the very forecast (Bejerano, 2015).

Moreover, a good E-commerce strategy can help a company to identify the concerns of the different departments. As well as information needs in relation to the objectives of the business, but also analyse to what extent the existing systems serve these objectives, specify the improvements to be made, develop stages of project development and achieve concrete and measurable results quickly (Interactif, 2018). Furthermore, Demand Planning can help companies anticipate sales on E-Commerce. The first step to forecast demand is using past sales data which are essential as it is the best way to predict what the future might hold. The next one is to look at industry trends and seasonal increases in demand, but it is also necessary to prepare the stock in advance for sales periods like Christmas, companies must make sure that their stock up ahead of time for these periods. In order to forecast, the analysis of competitors' stock supplies it is also required. In addition to, businesses have to plan in line with their marketing strategy. Finally, one of the most critical steps is to anticipate demand for E-Commerce shop to ensure to have the stock available at all times and a flexible inventory (Freel, 2018).

Likewise, logistics processes in e-commerce need warehousing and transport resources to be associated with trades. Customer commands must be fulfilled with short lead times to guarantee high purchaser approval, and the expensive under-utilisation of labours must be evaded. To succeed that, predicting order amounts with high exactness is necessary. Many drivers of online sales, counting seasonality,



special raises and public holidays are well known, and they have to be combined into forecasting methods (Steinker, Hoberg & Thonemann, 2017).

Moreover, the researcher found some information about the bullwhip effect which is “a phenomenon of information distortion as ordering information moves upstream. It occurs when a downstream demand fluctuation leads to larger fluctuations in the variance of upstream ordering”. This result can have some consequence in the online supply chain and can differ from traditional supply chain. Gao, 2017 establish a demand model be contingent on price discount with orientation cost model. The researcher found that price discount in the E-commerce amplify the bullwhip effect in the supply chain this issue can have an effect on the price transparency and the demand volatility (Gao, Wang, He & Jia, 2017)

### 3. How can Demand Planning help to forecast customer's need?

To forecast customer's needs, companies can use Demand Planning with SAP Forecasting & Replenishment solution which help to have a precise forecast and provide information about customer wishes (retail solutions,2018). Besides, predicting customer needs is one of the most significant tests in the trade industry and at the same time in several respects vital for the success of a company. To provide the required amount of the right products is a measurable competitive advantage. In opposition, out-of-shelf situations lead to sales losses and irritated customers. High inventories involve expensive and needless capital lockup. In an already strong competitive environment, improper order quantities have undesirable consequences for the company in the long term. In that case, SAP Forecasting & Replenishment (SAP F&R) is a solution for forecast-based automated replenishment. The forecast uses adjusted historical sales data to calculate future requirements on the individual product levels automatically. Demand influencing also considered factors such as campaigns, weather, calendar effects or seasonal trends in the calculation (Retail solutions, 2018). Moreover, SAP Forecasting & Replenishment is an important explanation which drives well-organised lists in stores and DC retailers. This software lets planning and executing record plans on a global basis. Indeed, with SAP F&R companies can have an outlook about demand forecast, replenishment calculation, inventory optimization, order proposal management and business analysis (figure 1) (wiki, 2017)

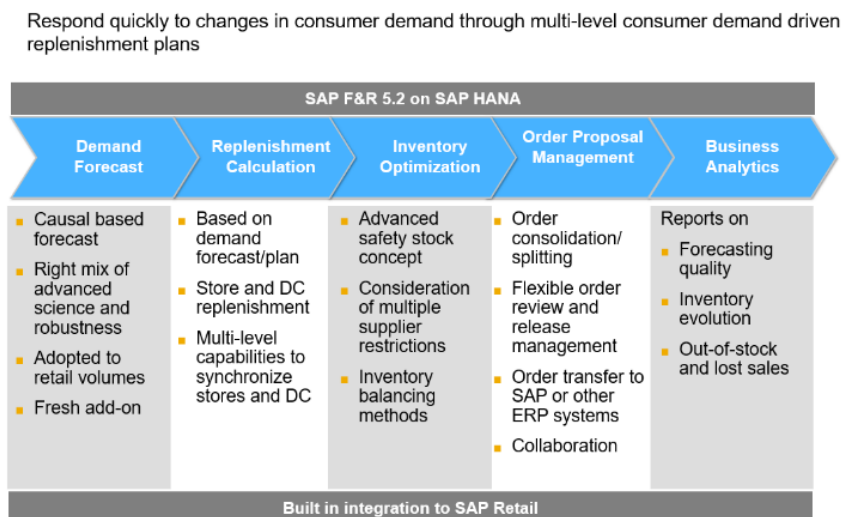


Figure 1: SAP F&R plan

Besides, the interview with Yvonnick Bernard, Operation Director of Formplast Company, producer of thermoforming trays for dairy food, explain that to forecast customer's need the company used to types of the forecast which are Statistic and Holistic methods (Bernard, 2018).

Statistical predicting suggests the use of statistics based on past data to project what could occur out in the future (Singh, 2018).

While Heuristic techniques are any tactic to problem-solving, learning, or discovery that retains a practical method, not guaranteed to be optimal, perfect, coherent or rational but instead sufficient for reaching an immediate aim, moreover, where finding an optimal solution is impossible or unreasonable, heuristic methods can be used to accelerate the process of discovery a satisfactory solution. Heuristics can be mental shortcuts that ease the reasoning load of making a decision (Pearl, 1983).

Overwise, the interview with Emma Sellors, shows that some company do not have a specific tools or methods to forecast, most of them like Borough Wines Company only use the sales history database to forecast past sales in order to order what is necessary to meet the demand of customers (Sellors, 2018).

Moreover, Supply Chain Forecasting (SCF) goes yonder the operational task of inferring demand supplies at one echelon. It includes complex problem such as supply chain organisation and distribution information between multiple stakeholders. Syntetos, Babai & Boylan, 2015 defined four supply chain dimensions : echelon dimension which means "leading to certain properties of the demand as it is propagated through the various supply chain levels", location dimension "leading to issues of how to cluster locations at different echelons", product dimension "leading to issues of addressing cross-sectional product hierarchies" and time dimension "related issues that form a different type of a hierarchy" (Syntetos, Babai, Boylan & Kolassa, 2015).

Additionally, to have a better understanding of how the demand planning can help to forecast customers' expectation, it is essential to have an outlook of UK customer's need. The WSTA annual report gives a perfect explanation of wine consumption in the UK. First of all, the survey shows that at home British consumer prefers to drink red wine (34%) against 29% for white wine, while a friend's house white wine is the drunkest (28%). Concerning consumption at a restaurant and a bar white wine is also the most popular (35%) alongside 31% for red wine regarding, the types of wine the most popular in the UK, the review displays that for red grapes Merlot

(49%), Cabernet Sauvignon (35%), Syrah (33%) are the drunkest by British customer in 2016. Relating to white blend Sauvignon Blanc, Pinot Gris (47%) and Chardonnay (32%) are the most well-liked by UK buyer (WSTA, 2016).

# Chapter 4: Discussion of the result

In relation to the first question, “how to optimise the demand planning in the wine supply chain”, one of the method is to use software such as Computational Intelligence. Indeed, this technique can be used by all companies in the wine industry from the vineyard until the importers. Furthermore, Computational Intelligence methods can be implemented in all companies, can help to improve the supply chain and demand planning, and is very well suited for powering software applications for addressing operational issues. For a small importing company which need to introduce a demand planning method, the software can be used to implement a demand forecasting system and also to resolve some operational problem such as delayed transport, demand spikes (Michalewicz, Spitty, & Michalewicz, 2007) (Interview, appendix 3).

Furthermore, during the research, the researcher found that it important for businesses to use S&OP strategy because this can help to forecast sales and demand management. With using this tools manager can improve the supply chain logistic and their management strategy (Kaipa, Holmström, Smaros & Rajala, 2017).

For this result, the researcher has used the desk research but also, the answers from the interview with Emma Sellers and Yvonnick Bernard according to the methodology but the research was limited by the number of sources to answer the question.

Regarding the sub-question about how includes the E-commerce in the Demand Planning, the research found that to determine e-commerce’s future request companies should not trust exclusively historical data. Indeed, companies need also to take in count actual information such as purchasing power and event which can influence customer buying behaviour for example terrorism attack. E-commerce can be included in Demand Planning because it is essential to know the previous sales and conversion to expect the sales for this year. However, it is also necessary to implement

a demand planning for E-commerce strategy as well this can be helpful to forecast buying behaviour (Bejerano, 2016).

Furthermore, the researcher found that it is crucial to plan a marketing strategy because if companies plan a marketing push at any periods or if they are taking publicity for one or two months, the stock levels will need to reflect this, (Freel, 2018).

One of the most significant issues the researcher has met during the researches on this part was to find information about the implementation of E-commerce strategy in the Demand Planning; the articles were more about forecast E-commerce and not precise enough about including E-commerce.

When researching about how demand planning can help to forecast customer's needs, the researcher found that companies can use a software to forecasting & replenishment which can help companies determine which products are the best seller and need to always be in stock to meet customers expectation. During this research, it was also shown that software could be used to keep an eye on competitors' stocks that can permit companies to get extra sales if they can keep those products on stock (retail solution, 2018).

Furthermore, to determine customers' needs, companies can use Statistic, or Heuristic methods both tools can be complementary since one is based on past data with analytical data while the second is not guaranteed to be rational but more optimal to find a solution. It necessary for companies to not focus only on past data but to have a look on the buying behaviour and evolution for example with the introduction of new wine on the market which can interest British customer; as studies show that they adore tasting new things (Bernard, 2018) (Appendix 2).

Additionally, the researcher establishes that for companies who do not have any specific tools or methods, it is possible to use the software as SAP Forecasting and Replenishment and be more precise in analysing past data and found information current stock levels to meet customers requirement. The software is essential for small companies as Borough Wines who cannot hire someone to implement Demand Planning strategy (Sellors, 2018) (Appendix 3).

The analysis of British wine consumption explain that it is vital for a wine importing company to always have in stock white wine like Sauvignon Blanc, Pinot Gris and Chardonnay which are the drunkest blend by British consumer at home but also at the restaurant (WSTA, 2016).

### **Limitations to Research**

During this study, the researcher faced some difficulty to answer to the main question because after having contacted 15 companies for an interview. Only two professionals took the time to answer the question, but this is not even relevant to show a perfect outlook of the Demand Planning strategy in a company. As well, the researcher found some difficulties in accessing information about wine demand planning in data bases.

### **Managerial Implications**

This study can be used by managers in wine companies because it shows how Demand Planning strategy can be relevant to improve the forecast of sales and orders but also can help in the understanding of customers need. This research has been done by using desk research and analyse literature about wine supply chain, Demand Planning and Forecasting and about E-commerce in online supply chain. For this study, the researcher has conducted two interviews with one professional in production industry and another with a professional in the wine industry. Both interview give explanation for two different industries and can be relevant for all type of business.

# Chapter 5: Conclusion

With this study, the researcher has conducted some researches to understand how wine importing companies in the UK can implement Demand Planning strategy. To answer this question, the researcher analysed some sub-questions to find some solution.

The researcher found out that companies can use some software to help them to optimise Demand Planning. Computational Intelligence methods can help small or large importing companies to improve their supply chain's development at the short and long term. It was also shown that companies could create a historical relationship with the customer which gives the company their needs to 3 to 5 months after that the companies can place an order or add on the production schedule to meet customers needs at the right period.

Futhermore, to include the E-commerce in the Demand Planning, the companies need to forecast customer bases and seasonal changing patterns to have a better outlook of the customers' needs. Moreover, to implement the E-commerce strategy, companies need to follow different steps as analysis of past data and to expect demand for E-Commerce shop to guarantee to have the stock accessible at all periods and a bendable stock.

Besides, to forecast customers' needs, the companies can choose some software which helps the forecasting and replenishment which have for aim to provide precise information about customers desires. Some tools as Statistic or Heuristics methods can be used to having an investigation of past data but also a more precise solution for an issue with stock level.

Therefore, the researcher can conclude that demand planning effectively improves operations in UK wine importing companies if the manager of the wine company chooses to use software such as Computational Intelligence which help to optimise the supply chain management. The different result shows that software and tools such as S&OP and SAP are necessary to improve Demand Planning strategy.



## **Recommendations**

Following the previous research study, the researcher has defined some recommendations for a wine importing company in the UK.

First of all, it is necessary for the company to include some computational intelligence software in their supply chain, that kind of software as for aim to help wineries and importing companies with technologies issues but also to improving short and long-term supply chain development. Companies can use software from SolveIT Software which is a provider of advanced planning and scheduling enterprise software for supply and demand optimisation and predictive modelling.

Secondly, including an E-commerce strategy in the Demand planning of the company can help to forecast customers' needs and inventory levels. For that, it is necessary to follow some crucial steps which can help to anticipate sales. The article "How to Anticipate Demand in Your E-commerce Store" can give some awareness to what is crucial to follow when implementing an E-commerce strategy.

Lastly, to forecast customer's need, it is vital for wine importing company to introduce a software such as SAP Forecasting & Replenishment which help businesses to understand in detail, prediction and uphold a complex balance amongst the stock level and the excellence of customer service.

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# Chapter 7: Appendices

## *Appendice 1:*

Question about Demand Planning in a company:

- 1) To start, can you present your job and your company? (Number of the employee, the business organisation, the steps to import wine from your supplier to your company?)
- 2) How is Demand Planning used in your company? What kind of forecast do you use? Why? Which tools and method do you use?
- 3) Do you use Demand Planning to forecast customers' needs? If yes, how do you do? Which tools and methods are necessary?
- 4) What do you think are the benefits of Demand Planning?
- 5) In which field of the company do you use Demand Planning? (Sales, Marketing, Supply Chain, Financial)
- 6) How has Demand Planning helped the company about meeting market demand?
- 7) Do you use E-Commerce in your company? If Yes, which business transaction do you use the most: B2C / B2B or B2D? Did you integrate the E-commerce in your demand forecast? If yes, which tools and methods are necessary?

## ***Appendices 2:***

Interview with Yvonnick Bernard, professional, conducted by Lucie Bellanger

1) To start, can you present your job and company?

I'm Yvonick BERNARD - Operation Director of Formplast Company.  
I manage 2 facilities, one at Beaucouzé and the other at Chantrans.  
We are specialist in thermofforming, specially of trays for dairy food.

2) How is the Demand Planning used in your company? What kind of forecast do you use? Why? Which tools and method do you use?

We use different options concerning Demand Planning ;

1<sup>st</sup> : We are based on Historic of customer request. Unfortunately all of our customer don't give us their future volumes.

2<sup>nd</sup> : We prepare with customers analyse of needed for 3 to 6 months

3<sup>rd</sup> : at the end, we put on our schedule Production Order to solve, at time, request of our supplier

3) Do you use Demand Planning to forecast customers' needs? If yes, how do you do? Which tools and methods are necessary?

Statistic and Heuristic

4) What do you think are the benefits of the demand planning?

Be sure to have enough component to positively answer of customer request.

5) In which field of the company do you use Demand Planning? (Sales, Marketing, Supply Chain, Financial)

Sales and Supply Chain

6) How has Demand Planning helped the company about meeting market demand?

By increasing our ROS (Rate of Service) which is for me the leading indicator for each industrial company.

### ***Appendices 3***

Interview with Emma Sellors, professional, conducted by Lucie Bellanger

1) To start, can you present your job and your company? (Number of the employee, the business organisation, the steps to import wine from your supplier to your company?)

- Emma Sellors. Assistant Buyer & Products Manager, Borough Wines

2) How is Demand Planning used in your company? What kind of forecast do you use? Why? Which tools and method do you use?

- Sales history is looked at to determine quantities we should order.

- Currently, the only forecast used is in wholesale. Customers submit their anticipated sales to us.

3) Do you use Demand Planning to forecast customers' needs? If yes, how do you do? Which tools and methods are necessary?

- Not currently.

- I guess that's really what demand planning is – you forecast based on sales, then order what is necessary to meet the demand of customers.

4) What do you think are the benefits of Demand Planning?

- Not running out of stock

- Meeting the needs of customers

- By only ordering what is needed you can increase cashflow for the business (money not tied up in stock that isn't selling)

- It can reduce wastage – some stock has a best-before. By not ordering too much, you reduce the risk of needing to throw stock away

5) In which field of the company do you use Demand Planning? (Sales, Marketing, Supply Chain, Financial)

- Purchasing

6) How has Demand Planning helped the company about meeting market demand?

- You can identify the SKU that have higher demands and order stock accordingly.

Identifying sales patterns and demand, you can increase portfolio for c