RESULTS FROM AN AUDIT IN THE SALES FORECASTING & DEMAND PLANNING PROCESS

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Abstract

Effective sales forecasting and demand planning (SF&DP) across the supply chain can bring a host of benefits. Specifically, it can help reduce inventories, speed up product flows, increase revenues and profits. Having the goal of highlighting the critical issues in the management of the SF&DP process along with the best practices found in world-class organizations, this paper reports the results of a two-phases research performed on over 100 companies in Italy. Results show which departments are mainly involved the SF&DP process and how different managerial approaches can influence the effectiveness of the forecast performance. The cross industry analysis, carried out in the Beverage, Grocery non-food and Pharmaceutical industries, can help supply chain managers to better understand their own "as-is" status and how the same issue has been approached and solved in a different business environment.

Keywords: Sales forecasting; Demand planning; Supply Chain Management; Benchmarking.

1. Introduction

Sales Forecasting and Demand Planning (SF&DP) is a critical consideration for all the players in a supply chain and is a central activity for many executives who manage their companies' supply chain activities as well as those specialists responsible for developing and monitoring sales to forecasts, schedules, and budgets. For sales, the forecast will be used as a way to increase customer-service levels; for marketing, to measure the effectiveness of trade and advertising programs; for finance, to project and track returns to financial plans; and for the supply chain, to drive efficiently production scheduling, inventory deployment, and capacity planning (Marien, 1999).

Indeed, forecasting future demand is essential for a company's tactical, operational, and strategic planning needs, but it is an extremely complex process, especially in recent years, when mass customizations and short product life cycles have replaced steady demand situations and factory push models.

Although every business function needs accurate sales forecasts, very little attention has been devoted to examine how the sales forecasting & demand planning processes should be managed.

Existing literature on sales forecasting has largely concentrated on the techniques or on the systems used, rather careless on the forecasting managerial philosophy which considers the organizational, procedural, motivational and personnel aspects of the forecasting process and its integration into other business functions (Drury, 1990).

The interest on SF&DP process began in the '90s, particularly with the researches carried out by Mentzer and Moon (2005), covering more than 400 US-based companies which has been interviewed on their forecasting process, being made of 3 interdependent elements:

- *Models and techniques:* which can be divided in open model time-series techniques (e.g. Box Jenkins), fixed model time-series techniques (e.g. exponential smoothing), regression analysis and qualitative techniques (e.g. Delphi method);
- *IT systems and applications:* which include computer and electronic communications used to develop, analyze and distribute cross-functionally forecast data;
- *Managerial approaches:* that is how the sales forecasting and demand planning process of is organized, managed and controlled, along with who has the ownership of each sub-phase.

Although both models and IT systems are the basis for the forecasting process, the third element (i.e. the organization) is the most important one: Mentzer and Schroeter (1994) assert that the improvement in this area has a greater impact on the formal forecasting accuracy than improvements in the other elements.

The "managerial approaches" dimension includes the identification of the individuals involved in the SF&DP process and their corresponding roles and responsibilities, along with deciding which department will have the ownership of the SF&DP process (i.e. Sales, Marketing, Logistics, Production), how many planners will be needed and what kind of reward policy to apply with respect to accuracy performance measures.

Yet, despite the importance of demand planning and sales forecasting, a lack of communication within the company's functional areas and across trading partners often leads to separate and disjointed forecasts, instead of a "consensus forecast". Following this process, the forecasts for the next planning horizon are achieved through discussions among the participants at the forecast meeting and should represent the input for the supply planning process, in which the forecasts are deployed in the most proper way (i.e. at SKU level and on a weekly basis), to generate the material requirement planning and the distribution planning.

The present paper focuses on both sales forecasting and demand planning processes, as they are strictly linked and their boundaries are often not clearly defined.

Namely, we can define *sales forecasting* as the process to estimate the future sales volume over a specified period of time (forecasting horizon), starting from a time series of past sales data. Strongly statistically based, this process yields, through a computerized system, the baseline of the forecast for a given "time bucket" (e.g. weekly). This baseline is the projection of the demand into the future not considering the effects of external inputs, such as promotional activities or other causal effects.

Demand planning is the process that combines the statistical forecast with all internal and external market and customer information coming from the departments involved in the process (either qualitative or quantitative). In this case the human impact is higher than in the previous one and it is accomplished during one or more forecast meetings. Starting from the baseline, the players of the DP process evaluate how much of the external inputs is included in the base forecast and, at the same time, they take in the information or input of their own competence. Demand planning objective is therefore to achieve a consensus forecast plan.

In order to point out the critical issues and the best practices in the SF&DP process together with the goal of defining an industry-specific "reference model" for its management, an extensive research was performed as described in the following sections.

2. Research framework

The research was carried out during 24 months, involving more than 100 companies from different industries and consisted of two separate phases.

In the first phase, from April 2004 to March 2005, the research focused on the forecasting process following the methodological framework proposed by Mentzer (2003), in which the collected information was analyzed in order to assess the current ("as-is") status of a company forecasting practice, using a 1 to 4 scale. An overall performance grid was developed for each company, with respect to four dimensions of analysis: functional integration, forecasting approach, IT systems and applications, performance measurement.

In order to collect both qualitative and quantitative results, two different surveys were conducted in this first phase: 20 in-depth interviews and over 60 telephone interviews. The former were the basis for a benchmarking analysis to compare different forecasting processes. The latter resulted in a large data set of multiple answers for each of the four dimensions.

In the second phase, from April 2005 to March 2006, about 25 leading companies operating in Italy across three industries, namely Beverage, Grocery non-food and Pharmaceutics, were deeply analyzed in conjunction with Ailog (the Italian association for Logistics and Supply Chain Management). The previous investigation model was replaced with a less unyielding questionnaire, in order to deeply assess the organization, the governance and the "modus operandi" of a company's SF&DP process. Results of this second phase were studied separately for the three industries and were discussed during several industry-specific focus groups with supply chain managers of each company.

3. Phase one: the forecasting process

3.1. Objective and methodology

In order to adequately understand the main features of the sales forecasting process for a given company, in this first phase a sales forecasting audit protocol was developed, based on a former model originally proposed by Mentzer (1997), consisting in four dimensions:

1. *functional integration*, concerned with the role of collaboration, communication and coordination of forecasting management with the other business functions such as marketing, sales, finance, production and logistics. The focus is on the communication, coordination and collaboration levels into the forecasting group and within functional areas; position of the forecasting team within the organization; existence, frequency and governance of forecasting meetings; awareness of different forecasting needs throughout the company; short description of the SF&DP process;

2. *approach*, concerned with "what, when and how" to forecast with respect to different aggregation levels and in relation with the downstream operations planning process. The focus is on the relationship between forecasts and plans (i.e. budget); strategy of the forecasting approach (top-down or bottom-up); historical data managing; forecasting segmentation of products by importance; use of quantitative and qualitative forecasting techniques.

3. *IT Systems and Applications*, addressing the evaluation and selection of both ERP (Enterprise Resource Planning) and Demand Planning software combination to support the sales forecasting function as well as the integration of forecasting systems with other planning and management system in the organization (e.g. CRM). The focus is on forecasting tools, data mining, EDI capabilities, availability of external information (e.g. weather conditions);

4. *performance measurement*. The focus is on measurement and use of accuracy; detection of external factors and their impact on forecast accuracy, hierarchy of forecast performance measures for different aggregation levels (e.g. item, brand or family); impact on business operations such as stock-out costs or customer service level.

Figure 1 shows the two separate investigations conducted in the first phase: an in-depth analysis and a survey through telephone interviews.

The first analysis involved 20 Italian companies operating in different industries and was carried out through direct interviews, preceded by an analysis off-site on the business environment. Each answer was converted in a score from 1 (low) to 4 (high) in order to derive a quantitative evaluation of the forecasting process for all the four dimensions of analysis (Dallari et al., 2005).

The telephone interview survey was performed by means of a multi-choice questionnaire consisting of 15 different questions, to properly understand how a well-matched forecasting process could generate efficient and effective results. The focus was more on methods, IT systems and performance measurements rather than on the managerial approaches, since it could not be attained from a remote interview. The sample consists of over 60 companies, operating in several industries: mechanical (24%), chemical and pharmaceuticals (14%), textile and apparel (10%), grocery and others.
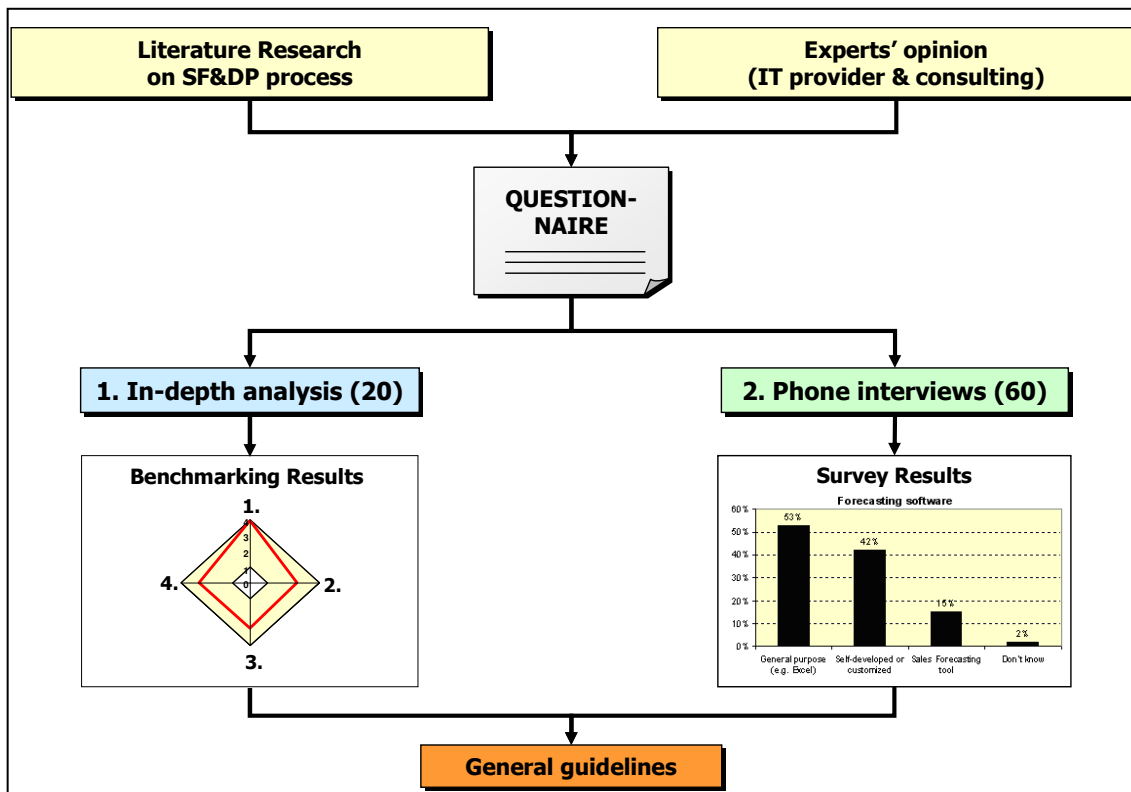

Figure 1 – Phase one: conceptual framework

3.2. General results

According to Mentzer (2004), from an in-depth analysis it should be found how companies organize their sales forecasting function, following one of those 4 managerial approaches:

- *independent*, where each functional department involved in the sales forecasting process develops its own forecasts for its own internal uses, independent of all other functions. The lack of common objectives could cause inefficiencies, in conjunction with little (if any) communication and no coordination among the functional areas;

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- *concentrated*, where one function is assigned the responsibility for developing the sales forecasts (e.g. logistics or marketing) and all other functions receive the resulting forecasts. This approach addresses the communication and coordination aspects, of functional integration, more effectively than the independent approach. However, it does not address the collaboration aspect. This is proved by the fact that the forecast, developed by the responsible departments, is heavily biased by that department's forecasting and planning requirements;

- *negotiated*, where each department makes its own independent forecasts, but representatives from each functional area get together each forecast to reach negotiated final number. This approach encourages communication, and particularly coordination, among functions. However, each department initially develops its own sales forecast based on its own goals and boundaries;

- *consensus*, where a definite committee consisting of representatives from each functional area is responsible for developing sales forecasts using input from each department. This approach incorporates high levels communication, coordination and collaboration among business functions by asking the forecasting committee to develop a real consensus forecast. On the other hand, this approach is resource intensive in terms of both time and human resources.

In figure 2 is represented the different importance in the four managerial approaches of the so-called "3C": communication, coordination, collaboration. Communication encompasses all forms of written, verbal and electronic communication among these functional areas. Coordination is the formal structure and requires meetings among these functional areas. Collaboration is an orientation between the sales forecasting function and the other functional areas of the company that use the forecast towards common goal setting and working together (Mentzer, 2005).

In order to compare different forecasting processes, figure 3 shows the results of the in-depth analysis concerning four companies operating in the Consumer Packaged Goods (CPG) industry.

	COMMUNICATION	COORDINATION	COLLABORATION	
INDEPENDENT	○	○	○	Each function develops its own sales forecasts
CONCENTRATED	○	◐	○	It assigns forecasting responsibility to one department
NEGOTIATED	◕	◕	◐	Political pressures among departments can bias negotiated forecast
CONSENSUS	●	●	●	Best approach even if resource intensive
○ low ● high	Information and data exchange	Formal team and scheduled meetings	Forecasting and objective sharing	

Figure 2 – Impact of the four managerial approaches on communication, coordination and collaboration

The first company (CPG1) was the best performer in the functional integration dimension (score 3.96 out of 4), since it is adopted a consensual approach, supported by an effective forecasting process. The inter-functional team (even if composed only by personnel from marketing, sales and supply chain) demonstrated a high level in collecting and elaborating data. A little fault could be found in the reward policy, defined at function level rather than at individual level.

The second company (CPG2) showed an incorrect approach to the forecasting activity (score 1.57 out of 4): in fact it did not use disaggregated sales data to forecast and it had only a top–down approach. A positive mark could be highlighted in the top management awareness of the need of improving the process through new investments on both human and technological sides.

The third company (CPG3) had a bad performance on IT systems and applications (score 1.75 out of 4); in fact a central database was missing as well as an integrated system for data sharing. Fortunately, the adoption of a concentrated approach reduced the risk of incoherent data influencing the forecasting process.

The last company (CPG4) was the best in class in the performance measurement dimension (score 3.2 out of 4). Forecasting accuracy, measured with several statistical indicators and on different aggregation levels, was related to all the company's performance indicators.

The results of the in-depth direct analysis showed how companies spend time and resources to solve organizational problems, on all the dimensions investigated. For functional integration, only few companies still have a concentrated approach, but they can feel the need for more collaboration with their customers (i.e. retailers) to improve their forecasting process (moving to a negotiated or a consensus approach). However to fulfil these objectives, improving quality and quantity of data is necessary. Finally, an accurate and constant performance measurement activity was found in almost every company.
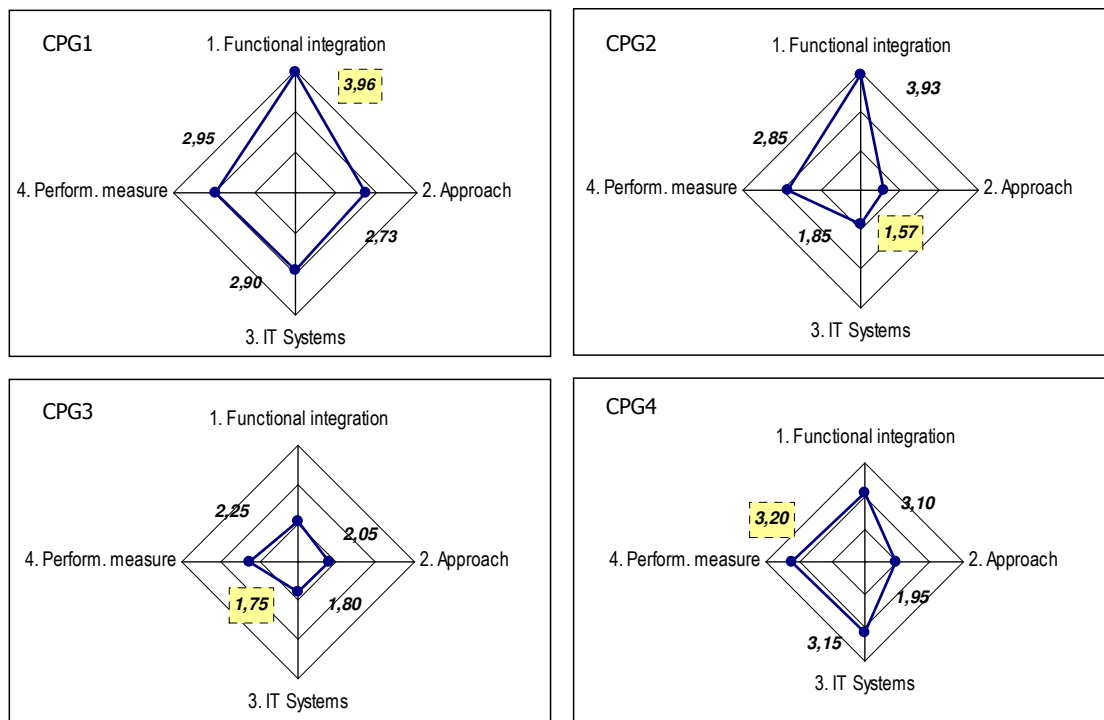

Figure 3 - Results of the in-depth analysis of 4 CPG companies

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The same four dimensions were further investigated on a broader base, although from a more quantitative standpoint, during phone interviews. Figure 4 shows the percentage of answers to four key questions, one for each dimension.

As far as functional integration is concerned (figure 4a) business functions mainly involved in the forecasting process are Sales (86% of times) and Marketing (73%). Production and The logistics function rarely is in charge for the forecasting process, and is generally involved when capacity constraints must be taken into account.

Figure 4b shows that forecasting models and criteria are not always known by all players (64% of the interviews). This means that forecasting managers miss a holistic view of the whole business or, alternatively, they strongly rely on software results disregarding the logic of the model (considered as a "black box") along with the opportunity to exploit all its optimizing features (e.g. setting the most proper parameters in order to best-fit the forecasts to the baseline).

Taking into account IT Systems and forecasting software, a considerable number of interviewed companies still employ a home-made spreadsheet (e.g. Excel) or a customized forecasting tool integrated with their ERP system, rather than an *ad hoc* demand planning software (only 15% of the respondents). The best-of-breed solution is therefore quite far from the rule, mainly due to the considerable statistical expertise required by those systems.

Finally, considering performance measurement to access forecast accuracy although several companies keep track of forecast errors by means of simple statistical indexes (such as BIAS and MAPE), managers' ability to evaluate accuracy impacts on supply chain performance (such as service level, inventory holding cost and stock-out costs), derived more from judgmental insights rather than from a more precise cause-effect analysis (figure 4d). As a final remark, it could be pointed out that a large number of the interviewed companies had some dissatisfaction with their sales forecasting process, particularly when dealing with new product forecasting, low volume and sporadic-demand products and event-driven forecast.
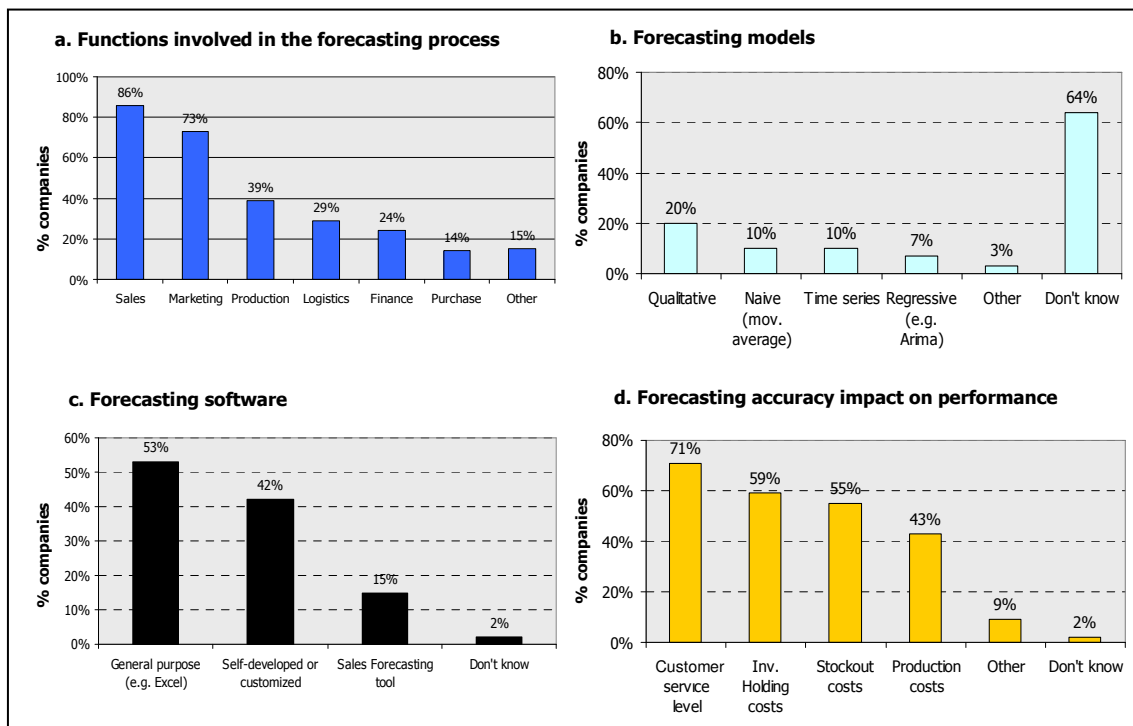

Figure 4 - Results from the telephone interviews

4. Phase two: the demand planning process

4.1 Objective and methodology

The second phase of the research, carried out in collaboration with Ailog (Italian Logistics and Supply Chain Management Association), was focused on the overall SF&DP with the aim to analyse the link between business plans, operation planning and sales forecasts both horizontally and vertically within the organization and among the supply chain partners. In accordance with Ailog needs, the scope of the research was on three given industries: Beverage (waters, soft drinks, spirits and beer), Grocery non-food (beauty & health care, home cleaning products) and Pharmaceuticals. Therefore in this second phase of the research, we meant to investigate the drivers that make the SF&DP process different or equal across industries and, on the other hand, to summarize general figures allowing a rough cut benchmarking across companies (see figure 5).

Since the goal was not to identify the best practices for each of the four dimensions, as in the first phase, the investigation protocol adapted from Mentzer for the first phase, was refocused for the new objective, considering two main issues: primarily, that the second phase of the research should have been dealt more on the organizational and managerial aspects rather than embracing all the four dimensions of the first phase; secondly, that such analysis should have been customized for each industry taken into account. Undoubtedly, the new questionnaire should also consider all the typical features of an Italy based company, in terms of size, organization and management approach.

To accomplish the above-mentioned requirements, second phase questionnaire was made of three sections, in order to understand:

– *section a) company and industry features:* in order to better recognise the features of the demand, it is necessary understanding the environment in which the company competes: size and complexity, in terms of income, number of employees, production plants and distribution sites, items number and volume, customer's number and market channels. It also evaluates the impact of seasonality, promotional events, competitors' actions and new products launches on demand;
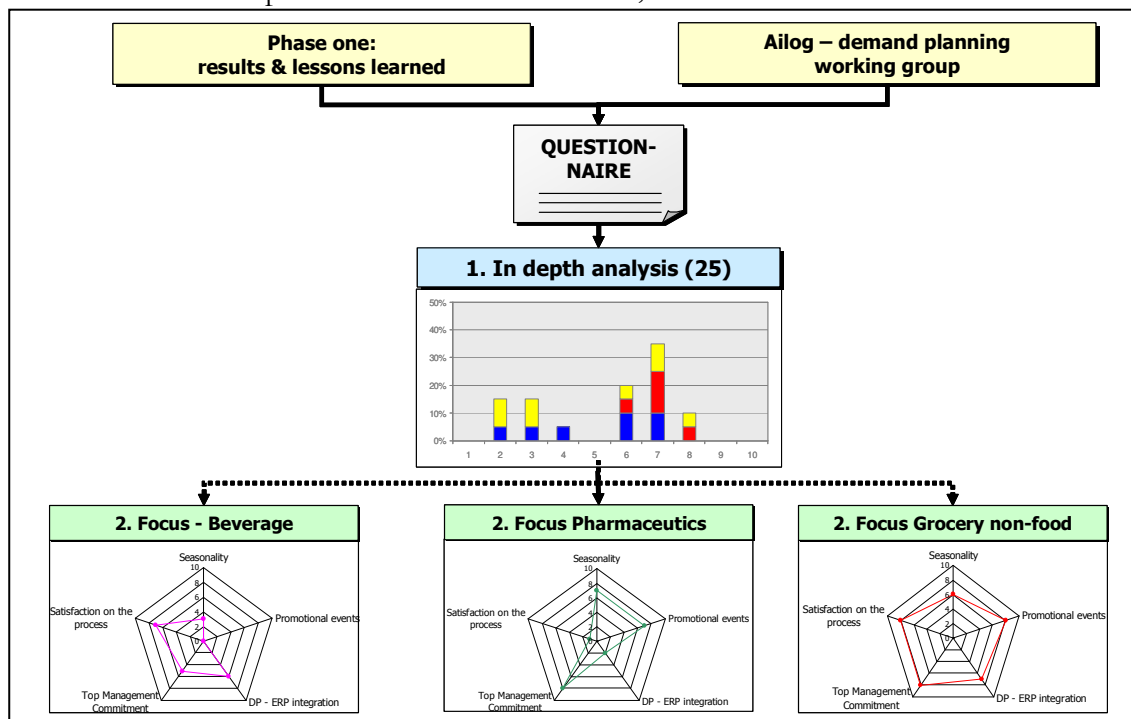

Figure 5 – Phase two: conceptual framework

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- *section b) organization of the demand planning process:* evaluating all the contributions coming from the functions involved, the purpose was to draw the flow chart of the demand planning process, and to understand how the functional areas communicate and collaborate. The focus is on positioning the forecasting team within the organization, assessing the existence of formal forecast meetings, their frequency and who has the governance;
- *section c) approach, IT system and performance measurement:* this section comprises a selection of a few points already investigated in dimensions 2, 3 and 4 of the first phase.

The new questionnaire was the basis of the direct interviews and it was meant to guide the audit team through the entire data collection process. The audit team, composed by both academic researchers and professionals from Ailog (i.e. forecasters, demand planners, supply chain managers), interviewed 30 leading companies, mainly based in Northern Italy. In order to better understand the management, the ownership of the SF&DP process, a few days were spent on site. Sometimes the audit team participated also to the forecast meeting, in order to meet all the people involved in the demand planning process and to understand how the definitive forecast was generated.

4.2 Cross-industry results

The answers were analysed and organised into groups, following the afore-mentioned three sections. As far as demand patterns are concerned (*section a*), supply chain and demand planning managers were asked to assess from 1 to 10 the incidence on sales of seasonality, promotional activities, new products launches and competitors' action (see figure 6).
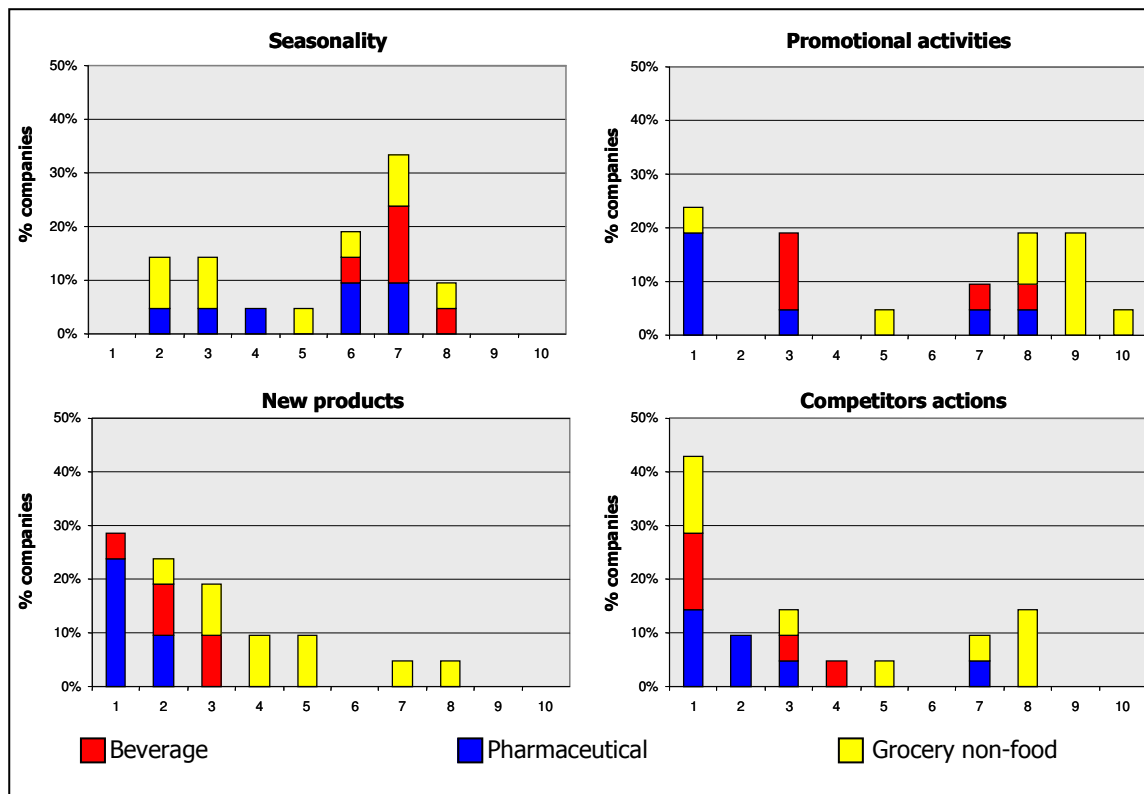

Figure 6 – Section a: demand patterns for the three industries investigated

Seasonality is very relevant only for the beverage industry, where about 80% of the companies results in a score from 7 to 10, mainly due to climatic conditions. Almost all the companies of the panel declared to be affected by some form of seasonal cycle in sales time series, even if very low, especially as a consequence of incentives at fixed interval for sales people. In Grocery non-food, which encompasses a great variety of products, the seasonality depends on product category: the demand of personal care products, in fact, presents a higher seasonality (from 6 to 8 out of 10) than the home care's one (from 2 to 3 out of 10).

Promotional activities, in which manufacturers and retailers define terms and conditions for a particular supply in a promotional period (in terms of reduction of the selling price, estimate of the volume to be supplied and the sell-in period) are very high only for Grocery non-food industry: 60% of the companies assign a score from 8 to 10. Conversely, in the pharmaceutical companies there is no apparent impact of promotions on sales, since these are prohibited by law (except for over-the-counter drugs), while there is high correlation with unexpected epidemic events or regulatory policies undertaken by Governments.

Similarly, pharmaceutical industry presents also very low score as far as new products launches are concerned. Generally few or very few in number, but still considered very important in demand planning process, since no historical data are available, new products affects moderately only the Grocery non-food industry (up to 5 out of 10), where the pace of innovation and the number of variants per products is quite high.

Finally, competitors' actions are not usually brought into account in the SF&DP process, although there is nowadays an impressive amount of external information and analysis on sell-out data, consumer purchase behaviour and market shares provided by worldwide market research organizations (i.e. IRI, Nielsen, GfK). Only a few leading multinational organization in the Grocery non-food industry (about 40% of the sample) include competitors' policies in their SF&DP process.

In order to find out new explanatory variables for the organization of the SF&DP process (*section b*), the new audit protocol started with the identification of the Demand Planning process owner, which in 71% of cases was in the logistics or supply chain department, while in the other 29% was the marketing and selling area. The 88% of the interviewed companies across all industries declared that Demand Planning is generated by a forecast meeting in which several functions participate: supply chain and logistics (in 75% of the companies), marketing (71%), sales (67%), finance (29%) and customer service (13%). This forecast meeting is generally held on a monthly basis (64%), sometimes on a weekly basis (29%) especially in the Beverage industry, while only a small number of companies (7%) have forecast meetings quarterly.

Considering the number of products (or SKU) managed per single planner as a proxy of the individual forecasting effort (to be correlated with both accuracy and IT resources), we found out it ranges from a minimum of 25 to a maximum of 800.

The final section of the second phase of the research (*section c)* was useful to compare the general results with those derived from the first phase, even if from a different point of view.

As shown on figure 7, almost all the interviewed companies make use of qualitative techniques, while regression models are used only by some companies in the Beverage industry, to include the causal effect of temperature on sales. Time series techniques are used by those companies employing a forecasting tool in order to extrapolate the baseline.

Demand plans are generally made at SKU level, aggregated per channel or sales area, and on a monthly basis.
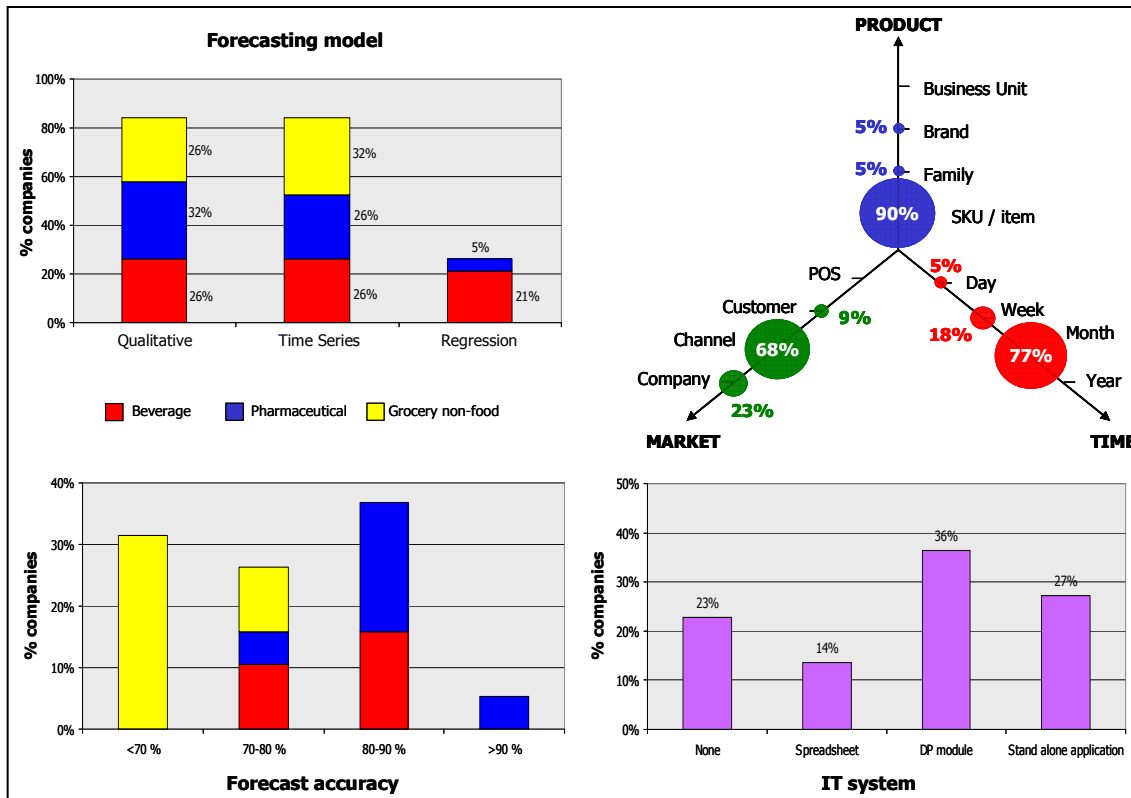
Figure 7 – Section c results

More than 60% of the companies adopt a forecasting tool, 23% generate forecasts without any software and the remaining use spreadsheets (e.g. Excel) for forecasting purposes. Although forecast accuracy level is quite high (58% of the companies has a forecast accuracy higher than 80% and only 26% lower than 70%), only few companies are capable of relating the forecast accuracy to the impact on supply chain process efficiency (e.g. extra inventory costs) and effectiveness (e.g. item fill rate). The lowest forecasting performances, in terms of overall accuracy, are in CPG non-food industry, mainly due to the growing relevance of promotional events on the baseline in conjunction with a very large product range.

Even if companies identify the collaboration between suppliers and retailers as an important key to improve forecasting, more than half of the interviewed companies don't share objectives and information with their customers. The average level of collaboration is very low for all the companies across the analysed industries (about 2.2 out of 10), due to the high fragmentation of the Italian market.

4.3 Results of the focus group on Pharma industry

In this final section, we report the results of an in-depth analysis for the Pharmaceuticals industry. The audit team and the supply chain manager met in two focus groups to validate the outcomes of the interviews, to present and discuss the main findings, anonymously. A focus group is a data collection method that utilizes the face-to-face interaction among the participants (known as "group dynamics") to explore an issue, and importantly, to allow the participants in the session to discuss the topic among themselves, which normally will result in a much more in-depth exploration of the topic (Kreuger and Casey, 2000). So far, through the focus groups it was possible to achieve a better level of knowledge for each

industry investigated, bringing together comments and remarks by the demand planners. In the focus group on Pharmaceutical industry, participants gave different perspectives on the same topic and provided a better understanding of a common approach or methodology employed by companies belonging to the same industry.

The companies involved are: AstraZeneca, Bayer, Glaxo SmithKline, Pfizer, Sanofi Aventis, Novartis and Therabel.

The pharmaceutical industry is strictly regulated by law, logistical costs impact is very low in percentage (from 1 to 3% of income), stock out consequences can be very important, both under the economical and legal/ethical point of view.

Seasonality and promotions exist only for a few over-the-counter products, while competitors' actions are not considered at all. The number of new products launches is very low, but they generate the highest profit, assuming a very strategic role for the business.

An existing correlation between IT system, forecast accuracy and number of SKU per planner was found out during the focus groups. In fact the better the system follows the sales and the demand planning process, the higher is the forecast accuracy and the higher is the number of SKU a planner can manage (figure 8). The survey showed that without any DP tool, a planner can manage only 50 SKUs with a forecast accuracy of less than 75%; adopting a spreadsheet the forecast accuracy increases, while the number of SKUs that a planner can manage is the same; finally companies adopting a DP tool can reach a level of forecast accuracy near to 90% and each of their planner can manage more than 200 SKUs.
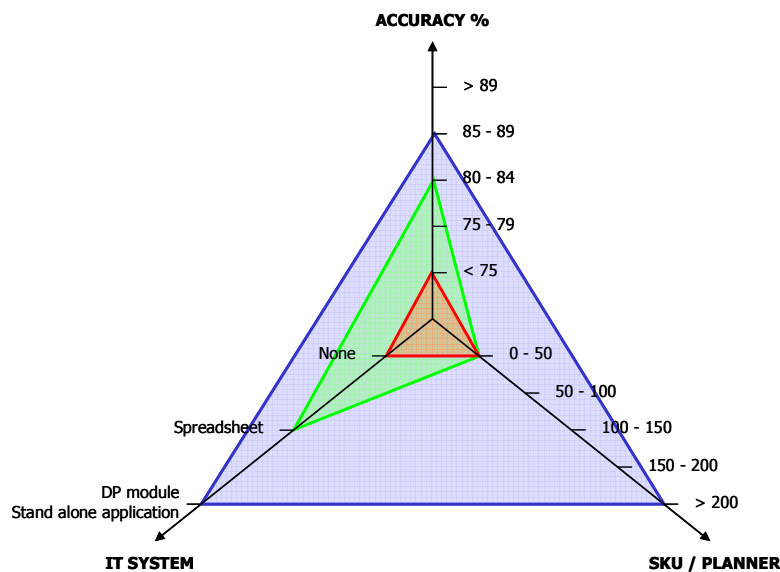

Figure 8 – Accuracy, IT systems and resources relationship in the pharmaceutical industry.

From the focus groups emerged also a reference model to run monthly the demand planning process in the pharmaceutical industry, which is made of the following activities:
- *Clean and comment historical data:* the first activity of the demand planner is to clean the historical data to obtain the past baseline.
- *Generate statistical forecast:* through forecasting software, to generate automatically the forecast starting from the time series.
- *Review and update the forecast:* managing exceptions with human experience.

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- *Identify gaps between DP and yearly target:* budget is a component that must be always taken into consideration.
- *Obtain and estimate information on events and new laws:* departments involved in the process have to collect information to evaluate the up-lift and eventual regulatory policies.
- *Prepare for the forecast meeting:* collected information have to be organized to serve at best the forecast meeting.
- *Run the forecast meeting:* formal information sharing meeting, in which the consensus forecast is issued.
- *Upload forecasts on the system:* consensus forecast is stored in the ERP and in the forecast database.
- *Evaluate and monitor DP performance:* as the new actual value is available, forecast accuracy is measured to identify weaknesses of the process and concentrate future efforts on them.

This rough-cut procedure should be customized with respect to the business organization, with a few general recommendations such as to clearly identify the process owner assuring him the highest commitment from the top management, establish cross-functional approach to forecasting, get the people committed to the SF&DP process and provide training for both users and developers of forecasts.

5. Final remarks and future development

This paper reports on a two-year research carried out on over 100 Italian companies in relation to the Sales Forecasting and Demand Planning (SF&DP) process.

Through in-depth interviews we first evaluated the current status of forecasting practices as far as functional integration, forecasting approach, IT systems and accuracy measurement were concerned. Overall results show an existing misunderstanding of what is forecasting and faded distinction between forecasting, demand planning and goals and their respective boundaries. Times series techniques should be a common practice in leading companies, but our survey shows that not all of them rely thoroughly on statistical tools. The so called 3C ("communication, collaboration & coordination") influencing how the SF&DP process should be organised, managed and controlled are far from being completely accomplished. Real "consensus forecasting" is still more an appealing idiom than a common practice among departments involved in the SF&DP process, while very few collaboration projects in the extended supply chain (i.e. CPFR, VMI concepts) could be mentioned.

Finally, performance measures are quite far from being effectively addressed: many different accuracy statistical indexes came to light, not allowing a benchmarking study. Furthermore, very few companies are capable to relate it to overall performance measures (such as service level, inventory holding or stock-out cost) or to perform an ex post gap analysis in order to ascribe a bad forecast accuracy to a set of causal events.

The three industries investigated in the second phase (Beverage, Grocery non-food and Pharmaceutical) by means of specific focus groups, while having different supply chain models, share common issues and symptoms such as increasing promotional activities, mistrust of statistical forecast and lack of performance measurement, evaluation, and rewards.

The present research is supposed to be continued, by investigating the DP&SF planning process in other specific industries, namely CPG dry and food, Automotive and Fashion.

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