Abstract

Apart from unforeseeable market movements the reliability of the sales planning depends on the information available about the customer relations and the response time of the market to increased sales activities. Preliminary research work of the control loop characteristics applicable in the automotive industry has shown that suppliers of the car producers can rely on carefully gathered car sales volumes. For the large group of subsuppliers to this first group this information is not available. It is proposed that they may use a sales loss figure, which takes into account the average life time of their business contracts. Future research work will be carried out to confirm this theses.

Key words: sales control, automotive industry, sales management, market response time, control loop
**Introduction**

Today’s sharp movements of the markets create great difficulties for the companies. Unplanned loss of turnover endangers their survival on the market. The opposite experience is only slightly better: If there is a sudden rise in turnover, production capacities can be too small, resulting in customer’s frustration and loss. It is one of the most important tasks of every sales manager to carefully plan the future business. Once the planning is established he should invest all his efforts into putting this plan into reality and fulfilling the plans (Wallace, Stahl 2002).

A couple of authors describe the sales activities of a company as a sales system (Cravens et al., 1993, Kraft, 1999). Accordingly sales activities can be described in form of a control loop, see fig.1: It starts with the sales planning, which is turned into the sales execution and leads to sales results. This is the forward branch of the control loop. Sales control is the backwards branch of the loop which checks the sales results, compares them with the planned targets and shows possible deviations (Kilian 2005, Franklin 2002). Sales management is the overall process of planning, executing and correcting the execution (Wilkinson, 2009). It needs to initiate corrective actions when deviations between plan and reality reach intolerable levels in order to try to get the sales figures back to plan, (Keuper und Hogenschurz, 2007, Backhaus, Voeth 2007). If the sales volume deviations cannot be corrected, sales planning needs to be revised (dotted line in fig. 1). This can put the whole company into trouble, as most likely the financial targets cannot be met. It should be the target of every sales manager to avoid correcting the sales plan.

![Fig 1. Sales Controlling is one part of Sales Management](image)

Obviously the reliability of the sales plan depends on two main parameters: 1) the precision of prediction of customer relations and 2) the precision of prediction of the market movements. This paper concentrates upon the first issue and tries to explain the supplier-customer-relationship. No solution can be offered for the second parameter.

In modeling the customer relations as a control loop, one very important factor to describe the loop behavior is the time lag between any sales action and market response. The shorter the reaction time of the sales system is, the more immediately deviations can be eliminated by additional efforts (Hinrichsen and Pritchard 2005), like motivation of the sales force, adding sales force or opening up new sales channels. Based upon preliminary research work we believe that the market response time of the sales system depends to a large extent upon the market segment. Future research work has to confirm this thesis.
Target of this paper is the automotive market as one of the biggest B2B markets. It has the advantage of being well structured and comparable throughout Europe and it has an important size: in Europe this industry has about 2 million employees working directly in it and it is believed that up to 5 million jobs depend indirectly on this industry (VDA 2007).

Fig. 2 describes the structure of the automotive market. The car producer, called OEM (original equipment manufacturer) is supplied by the so called Tier1s, which are usually big companies and develop and supply complete systems, such as injections system, axles or the complete interiors. As there are less than 20 important car manufacturers in Europe, Tier1s have a small number of customers, a relatively small number of active parts which have a relatively high value per part.

Tier2s are companies, who supply parts to the Tier1s. These parts are needed to produce the abovementioned systems, like forgings for axles, aluminum die castings for injection pumps or stampings for the car seats. Tier2s typically have a much larger customer base than Tier1s, as there are a lot of Tier1s in Europe. Tier2s are usually SME’s, technology orientated and often sell into several industries, not only into automotive.

A typical example for a Tier3 company is a material manufacturer, who supplies the raw material to the Tier2. Tier3 companies again are big companies and have a very big customer base. In this paper we concentrate upon Tier1 and Tier2.

![Supply Chain in automotive and other markets](image)

**Fig 2. Supply Chain in automotive and other markets**

- **Sales Planning in Tier1 Companies** -

In checking the time dependency between sales effort and order intake in the automotive sector for Tier1s the results of interviews up to now have shown that the time lag is usually between 2 and 4 years. This reflects the development time of a car. Due to simultaneous engineering techniques almost all companies are involved in the development work from the very beginning of the car concept. The order is given to the suppliers (Tier1s) in an early stage, as it would be too difficult and costly to ask several companies to develop in parallel. In normal market situations no business can be achieved without participating in the development process. Exchanging suppliers is excluded due to costly homologation processes.
This means for the sales management of Tier1 companies, that additional sales efforts will show their results earliest after 3-5 years, not counting the introduction time at the potential customers. Since this is the case, Tier1s need early indicators which predict the development of business several years in advance.

Our interviews have shown that the sales planning activities of Tier1s can be based upon information received from their customers, the OEMs. Car manufacturers usually have a large marketing department, which continuously investigates the possible car sales for the next years. These sales figures are shared with the important suppliers. If the Tier1 multiplies his delivery value per car with the planned car sales for the next years, he has a good approach of his future sales, see fig 3.

<table>
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<tr>
<th>Sales Forecast TIER 1</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
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</thead>
<tbody>
<tr>
<td><strong>Product</strong></td>
<td><strong>Customer</strong></td>
<td>Sales</td>
<td>Car Sales</td>
<td>Predicted</td>
</tr>
<tr>
<td>Diesel Pump</td>
<td>OEM 1</td>
<td>250</td>
<td>1.000</td>
<td>250.000</td>
</tr>
<tr>
<td></td>
<td>OEM 2</td>
<td>220</td>
<td>30.000</td>
<td>6.600.000</td>
</tr>
</tbody>
</table>

**Fig 3: Sales planning of a Tier1 based upon information received from the OEM**

A similar planning can be made, if instead of “turnover”, “contribution” is used. The contribution is much closer to the financial success of the supplier and it can give a realistic picture of the incoming money in the coming years. Planning wise, Tier1s are in a lucky position due to easily available information, but they need to work on a very long term basis.

- **Sales Planning in Tier2 Companies** –

As said initially, Tier2 companies have a much wider customer base with a much greater number of parts than Tier1. It is virtually impossible for them to know the sales volume development of each and every part of their portfolio. The information about the expected sales of their parts cannot be obtained from their customers in real life, as this information is not readily available and would mean a lot of work on the customer side. So the sales planning process of the Tier2 cannot be based upon the same firm information like the Tier1s.

The information gathered up to now shows that in Tier2 companies the time lag between sales effort and related order income is shorter than in Tier1s. Apparently the orders are given to the Tier2s as late as possible. Market response time for Tier2s seems to be about 1-2 years (needs confirmation).

This response time is significantly shorter than the one applicable for Tier1s, but still Tier2 sales managers cannot rely on fulfilling the sales planning by compensating a decline of sales by increased sales efforts. So how can a Tier2 sales manager predict the business for 1 or 2 years in advance?
Several interviews have shown that Tier2s have a rather good knowledge of the average life time of their contracts. Supplier of parts for passenger cars usually count 5 years of contract life with decreasing tendency, suppliers for the truck business count 7 years. This means, that in case the Tier2 stopped completely all sales activities, the turnover would go down more or less linearly and reach zero after an amount of time corresponding to the average life time of the parts, see fig. 4.

**Fig 4: Turnover decreases linearly when a Tier2 supplier does not take any new order in**

Thus, without any sales effort, every year the Tier2 loses the percentage of sales which corresponds to the average life time of the parts (ALT). The sales loss per year (SL) can be calculated as a portion of the total sales (TS) per year as follows:

\[
SL = \frac{TS}{ALT}
\]

If a company is able to achieve an acquisition volume of new business that is greater than the sales loss SL the company will grow, otherwise the sales of the company will decline in the mid and long term. The consideration shows that the company has to carefully record its acquisition volume. Interviewed companies executed this exercise monthly.

The size of the newly acquired business for Tier2s is estimated from the information given with the request for quotations or the orders. Orders to Tier2 suppliers are normally based upon a future production volume per year, because the price depends on the expected production volume. The supplier knows the agreed sales price, production volume and hence the sales volume. Fig. 5 gives a good example how order intake can be illustrated, one graph showing the future business gained in every month of the year, the other showing the accumulation over the year.
Fig. 5: The Acquisition Volume exceeds the Acquisition Target

Some companies report that they investigate as well the size of the business currently negotiated, weighing the potential contracts with the probability of success. This is another indicator, which is even more future orientated, as it is showing the potential of future business contracts. This indicator still needs closer investigation.

- Summary -

It is no longer the only challenge for sales managers to deliver good sales figures but it is increasingly important to establish reliable sales plans. The market response time in B2B business is often very long and can be expressed in terms of several years. If the planning process is supposed to be reliable, the sales managers need to look into the future minimum as long as the market response time. Preliminary research work shows that the market response time depends on the markets. Investigations have been done in the B2B markets of Tier1 and Tier2 of the automotive industry. Tier1 suppliers who deliver directly to the car manufacturers can base their sales planning on information attainable from their customers. Tier2 suppliers cannot do the same since this information is not available from their customers. A model is proposed to describe the yearly loss of turnover, based upon the average contract life. If these companies show an acquisition power exceeding the loss, they will grow, otherwise the sales will decline.
References


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