

# Making a Difference at Chrysler

By W. V. Bussmann\*

*The most important lesson we have learned to maintain our effectiveness is to keep developing customers throughout the company. We focus on issues relevant to the company or our industry by building credibility for our work (not necessarily by providing the most accurate or precise forecasts, though accuracy is not to be shunned, but through simple, understandable, and story-backed presentations), and by maintaining our neutrality on intracompany issues and our business perspective on extracompany issues. As a result, people throughout the company tend to think of us as useful contributors to relevant projects, and demand for our services remains solid.*

**F**OR THE PAST five to ten years, decisionmaking at Chrysler has become more and more decentralized. This change has coincided with a fundamental reorganization of the company's vehicle-making process. The old way of bringing new vehicles to market relied on individual functions, such as design, engineering, procurement and supply, suppliers, and manufacturing, to perform their individual tasks. Each function handed the results of its work to the next function in essentially a sequential process that was time-consuming, costly, and prone to errors. As a result, the quality of the vehicles brought to market was low, with an average of more than five defects per vehicle.

The current method, adapted from Japanese manufacturers and since imitated by others, is to assemble representatives from each of the key functions into platform teams. (A platform is a basic chassis from

which several vehicles may be made.) Team members from the different functions work simultaneously and communicate frequently to assure, for instance, that the shape of a particular body part will accommodate adjacent components. In addition, a manufacturing representative may suggest that a minor change in the design of a component will facilitate more error-free assembly, or a supplier may suggest that a change will not only increase the reliability of a component but also save cost. Under the old, chimney-style way of producing vehicles, most of these suggestions would have virtually no chance of being adopted. With platform teams, most of them become reality. The result is a reduction of the time it takes to bring a new vehicle to market from about five years to less than half that in many instances. Commensurate savings are achieved in costs, and defects average about one per vehicle currently.

These changes have, fortuitously, enhanced the impact that the economics function has on decisionmaking at Chrysler by pushing decisionmaking down to the lowest appropriate level. Although no system is perfect, the effect on the economics function has been to increase the demand for economic analysis throughout the company.

## WHAT WE DO

### Forecasts

The economics function provides many services to various parts of the corporation. We provide the usual array of economic forecasts and analysis for economies throughout the world, with an emphasis on the United States. More importantly, we also have the responsibility for forecasting sales of new vehicles for the countries in which we do business. More than 90 percent of Chrysler's sales occurs in North America, although that percentage continues to drop as we expand more rapidly overseas than domestically. As a result, our forecasts of the North American market are more detailed and are made more frequently (monthly) than are our forecasts of overseas markets (twice a year or more often if needed). The short-term

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(two-year) forecasts are the starting point for the scheduling of production at plants, and the longer-term (five- and ten-year) forecasts form the basis of the product and business plans. Because our forecasts of the industry include a breakdown to seventeen segments and include estimates of the country of origin of sales, we are forced to understand the details of the market in ways similar to those who work in sales and marketing, product planning, design, and pricing.

#### Analysis

We also undertake in-depth analyses of various topics of importance, either to the industry or to Chrysler. For example, in the past few years we have studied the affordability of new vehicles, including the effects of changes in real incomes and the distribution of incomes. We also keep track of the manufacturing capacity of vehicles, both in total and by type of vehicle, as well as estimates of elasticities of demand and the determinants of residual (used-vehicle) values.

#### Other

Finally, we are part of a team that hedges our exposure to foreign currencies; we are members of the Investment Strategy Group, which manages asset allocations for the pension fund; and we participate in the analysis of public policy issues, mostly regulatory and environmental.

#### HOW WE DO IT

Economists at automobile companies are fortunate in that part of their job has already been done for them. No one has to convince anyone who works for an auto company of the importance of or linkages of the company to the overall market for new vehicles. This situation is in marked contrast to that of most companies for which explicit market data, i.e., data for sales of virtually the same products from competing companies, are not available. For instance, what is the market for consumer credit reports? What about the market for industrial fasteners? Yes, executives in the fastener industry know that they sell to, say, the auto industry, the machine tool industry, the medical equipment industry, and the industrial equipment industry. But suppose some of their customers' industries are expanding and others are contracting. How are they to estimate the effects on their own business? Economists can make a distinct and valuable contribution to companies with vaguely measured customer markets through judicious use of their statistical training. This, perhaps, is the subject of another article.

However, market forecasts of auto sales are available from outside vendors, and other functions within the company are also capable of providing forecasts. Why is the economics function at Chrysler responsible for this task?

One important reason is that we have worked very hard over the years at playing the role of honest broker. Market forecasts from the sales and marketing function might be perceived as containing either a sandbag bias so that their volume targets are easier to achieve or an inflation bias that would make their share targets more attainable. (These would presumably occur at different times, depending on which target was more binding at the time.) Forecasts from the platform teams or from the product planning function might be thought to reflect a desire to justify new product programs or higher program spending, while forecasts from the finance function might be viewed merely as justifying spending reductions. Exchange rate forecasts or forecasts of inflation from the procurement and supply function would be similarly tainted.

Economists are human beings, of course, subject to the same biases as other people. However, the economics function should have no business purpose in shading a forecast one way or the other. If a company's economics function is perceived as allowing political or other influences to affect its forecasts or analyses, then its effectiveness to the company is likely to be diminished. This is not to say that in all discussions with other employees or executives, we economists do not make our views known. However, we take great pains to make it clear that our judgments on matters that affect the company are free from such biases.

#### Communication

One way of doing this is to make forecasts convincing by backing them up with clear, simple stories. The most accurate forecast is worthless unless it is understood and believed and thus can be acted upon. Simple, clearly articulated, nontheoretical (i.e., lacking technical jargon) reasons or thought processes that underlie a forecast are what give the forecast life and meaning to other executives who are not economists.

An implication of the need to make a forecast convincing is to keep explanations nontechnical and to the point. I cannot remember the last time I uttered such terms as "rational expectations," "monetarist," "Keynesian," "general equilibrium," "stochastic," or "heteroscedastic" unless prompted or for effect, usually with technical folks outside the company. Of course, even the most convincing forecasts, if wrong too often, will soon cease to be convincing. But credibility is enhanced if the users of forecasts can understand the reasoning behind them. Ideally, the forecasts become theirs in the sense that they take ownership of them by acting upon them from a belief that they are the most logical and useful forecasts available.

One way of keeping messages simple and understandable is to use well-executed graphs or charts, often with a line or two of explanation on each to illustrate points. The key phrase is "well-executed."

Charts that have too many lines or bars or that are not clearly labeled or titled or that have too many numbers, lines, or columns on them or that try to make more than one point per chart may confuse more than clarify. My own brilliant failures in communication have stemmed more from violating the “kiss” (keep it simple, stupid) principle than from anything else. Top executives, in my experience, are easily as smart as any of us. Given the time and inclination, they could readily understand any concept we cared to throw at them. But they have many other uses of their time. We do ourselves a favor by forcing our explanations and language to meet their needs rather than unrealistically expecting them to adapt to our frame of reference.

#### Customer Development

Communication with top executives is important to the success of an economics function within a company. However, communication with many others throughout the company is at least as important, if not more so. All members of the economics department at Chrysler have worked hard to build relationships throughout the company. This work ranges from providing the appropriate data in response to often vague requests to offering to help with projects in which it was not at first clear that we had something to contribute. Again, we are fortunate in not having to convince anyone of the importance of understanding our well-defined industry or the economy at large. Consequently, we respond to virtually every request to discuss with or present to groups that are interested in our work. Such groups range from the staffs of line officers to town halls of entire departments; from car dealers to summer interns; from factory workers, through a monthly broadcast over the internal TV network, to platform teams. Our interactions also include many informal meetings with *ad hoc* teams in which economic counsel is needed.

One reason that we are invited to such functions is that our reputation for unbiased analysis pervades the company. In addition, people generally understand that we have a strong desire to communicate on their terms and for their purposes. In addition, we try to avoid dogmatism in the sense of avoiding the attitude or the perception of having the attitude that if a particular group does not make the most economically rational decision, then they are simple troglodytes.

This last point also has public policy implications. We are, of course, members of the economics profession. But we are also employees of our companies. Sometimes, these two roles come into conflict. As economists, we are responsible for providing our companies with the best economic analysis and applying it in the most useful ways. As employees, we should try to serve the best interests of the company.

For example, general equilibrium models predicate efficient labor markets so that the economy is always at full employment. How should an economist respond to the request for analysis of the effects of companies from another country persistently selling their competing goods in this country at below “cost,” while at the same time restricting U.S. companies from exporting to that country? Simply saying that the other country hurts its citizens by denying them the benefits of free trade and that employment in the United States will be unaffected because markets will adjust is not satisfying. Similar responses to many such questions would soon earn us the reputation of “too theoretical” or, worse, “irrelevant.”

On the other hand (ah, finally, the beloved phrase), not pointing out those economic conclusions would be to deny our roles as professionals. However, pointing out also that while markets adjust, they often adjust slowly, so that the adjustment may impose great cost on imperfectly mobile workers or prematurely obsolete immovable capital remains true not only to our professional training but also to the realities of business. There are, of course, many other economic, political, and negotiating-type issues with this highly charged and politicized example. I use it as an example only to illustrate that purely theoretical economic answers to real-world issues are likely to be insufficient to make full use of economists’ talents in many companies.

#### Macro vs. Micro

This last, macroeconomic, issue illustrates another difficulty faced by many company economists. Restricting or focusing one’s scope on macroeconomic issues is fraught with difficulty. But if the economist can demonstrate that the fortunes (sales, assets, profits) of the company or part of the company have been closely associated with particular measures of industrial production or interest rates or retail sales (recall the consumer credit reports business) or some other broader measures of economic activity, then the executive is much more likely to believe in the relevance of macroeconomics to the company. Or suppose that the economist can provide an estimate of the magnitude of price decrease necessary to reduce inventories to a particular level? In that example, it is not the economist who will be asking for future meetings.

The vast majority of issues that executives at all levels of companies care about are those that have a direct impact on the business. These are predominantly microeconomic issues dealing with prices, markets, competition, and technology. Generally, we have found that top executives are more willing to listen to macro discussions if they first believe that an economist contributes to the microeconomic well being of the firm.