**Forecasting Applications: A Comparison**

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| **Application** | **Marketing Mix Modeling:**  Explanatory | **Sales Resource Optimizatio**n:  Explanatory | **Business Forecast:**  Extrapolative | **Business Forecast:**  **E**xplanatory |
| Planning Issue | Size and allocate all or a portion of planned marketing budget | Size and allocate all or a portion of planned sales force budget | Develop a product(s) forecast | Develop a product (s)  forecast |
| How forecast developed | Multiple time series | Multiple time series | One time series | Multiple time series |
| Marketing plans drive forecast (i.e., they are independent variables) | Yes | Yes | No | Yes |
| Marketing response functions required | Yes | Yes | No | Yes |
| Forecast’s use | Within marketing | Within sales | Within enterprise | Within enterprise |
| How forecast optimized | Prescriptively | Prescriptively | n/a | Descriptively (i.e., scenario analysis) |
| Objective function | Profit proxy: contribution margin by product | Profit proxy: contribution margin by product | n/a | Profit proxy: contribution margin by product |
| Best possible forecast, financially | No | No | n/a | No |
| Best possible forecast, operationally (e.g., observe constraints) | No | No | n/a | No |
| Reference Articles | Hanssens, Parsons, Schultz, *Market Response Models,* “Integrating Market response Models in Sales Forecasting at Polaroid,” pages 391-393 | Sinha and Zoltners,  “Sales-Force Models: insights from 25 Years of Implementation, *Interfaces31:3, Part 2 of 2,*  May-June 2001 | Morlidge and Player,  *Future Ready*, pages 110-112  Hanssens, Parsons, Schultz, ibid,pages 316-316, 377-378, 386-389 | D.M.Hanssens, ["Order Forecasts, Retail Sales and the Marketing Mix for Consumer Durables"](http://www.anderson.ucla.edu/faculty/dominique.hanssens/content/fulltext.pdf), *Journal of Forecasting*, June-July 1998. |

\*NOTE: “Extrapolative forecasts use only the time series of the dependent variable. Explanatory forecasts go beyond extrapolative by including causal factors thought to influence the dependent variable of interest.“ Hanssens, Parsons, Schultz ibid

\*\*NOTE: “Business forecasting takes place when it is possible to steer the business within the constraints of existing goals, scope and structure of the business.” Morlidge and Player, ibid