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Market and Sales Forecasting

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A Total Approach

THIRD EDITION

GORDON BOLT

KOGAN PAGE

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Preface
to the First Edition

'If you can look into the seeds of time, and say which grain will grow and which will not, speak then to me.'
Banquo to the three weird sisters in *Macbeth*

On occasions, when visiting a company either as a consultant or as an educationalist, I am astounded to find quite sizeable organizations that claim either that they do no forecasting or merely 'add 10 per cent to last year's sales figures' without reference to the market. I usually ask these executives, 'When are you leaving?' for the odds that they can go on obtaining effective forecasts using this 'head in the sand' approach with impunity are very much against them. If the market declines by 10 per cent the company will have heavily overproduced, and tied-up capital in the shape of stocks will fill the 20 per cent gap. Alternatively, if the market increases by 25 per cent, the company will have missed a marketing opportunity and lost part of its share of the market that may be hard to regain in a highly competitive field. In many cases very elementary prediction techniques will take a lot of the guesswork out of forecasting.

In other companies I find that naive extrapolation of historic sales data is used as a forecast without reference to the changing market or the environments in which the companies operate.

In the vast majority of companies I visit I find a range of forecasting methods being used that produce predictions varying in their effectiveness.

Most books on forecasting treat the subject from a narrow, specialized or partial-subject point of view. Some briefly examine forecasting as a part of overall marketing activity, others are collections of statistical tecniques that ignore subjective, non-statistical methods and the overall forecasting/marketing process. Some books ignore the environments in which companies operate and sales performance takes place, others examine the problems of forecasting the economy and certain markets but avoid the problems of company sales forecasting. Approaches are many: statistical, non-statistical, behavioural, subjective, objective, etc. This book seeks to bring together all of these approaches, examining the market environment and marketing influences, and suggests an effective plan of forecasting that can be used as a framework of operations.

The material in this book has emerged over a long period, with systems, methods and techniques obtained from many sources including simple experience. Their development and application comes from the sheer necessity of evolving tailor-made forecasting systems to operate in ever-changing market and company situations.

Whilst this book presents a total approach to marketing and sales forecasting in the sense that it suggests a complete philosophy and an effective overall framework, it would not be possible to list every forecasting technique. But it does suggest a range of methods that show the principles of most forecasting categories and examines a number in detail that have practical applications or implications for all engaged in market and sales prediction.

The book is intended for marketing and other company executives in small/medium sized companies, but also for marketing researchers, forecasters, and management trainees in large organizations. Academically it is aimed at management and business studies students at universities, business schools, polytechnics, and other colleges of further education. It is particularly applicable to CNAA and university degree courses in Business Studies, Advanced Marketing Diplomas, the Diploma in Management Studies, the Diploma in Marketing, and Higher National Diploma and Certificate courses in Business Studies.

Just as forecasts are affected by the environment in which a company operates, so the author has been influenced by the environment in which the book has been written. I would therefore like to thank the wide range of people who have helped me, some personally and some through their writings. Their names would be too many to list, ranging as they do from executives of client companies, other business acquaintances, fellow members of the Institute of Marketing, to colleagues.

However, I would particularly like to thank Richard Carless who reviewed the manuscript at the later stages of its development, making valuable suggestions with regard to sequence and layout. I would also like to thank Gordon Brand who reviewed Chapter 4 and made a number of useful observations as to content; also Arthur Mugridge who reviewed Chapter 5 and who made a number of suggestions including the multiple correlation example.

Preface
to the Second Edition

In this revised edition some earlier techniques have been further developed and 'new' ones have been added. The problem is what to leave out rather than what to put in. I have tried to continue the earlier practical approach to the subject and I would like to thank everyone who has helped me, especially colleagues at Bristol Polytechnic and numerous friends in industry and commerce. I would also like to thank my wife for her continued support and patience and for indulging me in one of my hobbies, this fascinating subject of forecasting.

In researching and/or applying these methods in company situations it is noticeable that many organizations rely on 'part-time' forecasters. It is significant that the approach in this book (and therefore appropriate techniques) is particularly of use to the 'part-time' forecaster.

Some companies appoint specialist forecasters or market analysts to make market and sales forecasts, but in many organizations the forecasting (particularly short term) task is treated as an adjunct to the main role of such personnel as salesmen, sales managers, management accountants, brand or product group managers, depot managers, etc. Some companies use these 'operations personnel' to develop a short term forecast (eg a six to 12 months ahead operations forecast) but use centralized marketing specialists or others to develop a forecast as the basis of a three to five years ahead corporate plan. Many of the former group of operations personnel have little experience of formal forecasting techniques or know how to develop a forecast objectively. Consequently in some cases highly suspect 'guesstimates' are added into the cumulative forecast.

Sometimes the forecasting function conflicts with the main role of a job/position, perhaps because of time constraints, the nature of the job, the nature of the person, etc.

Although all budgets in an organization are ultimately dependent upon forecasts of how many products and/or services an organization should or could sell or provide, in various companies the forecasting activity is given different degrees of priority depending on how its importance is perceived by an individual, his or her manager, and management generally.

The result is often an effort by the 'operations personnel' to 'make the forecast happen' rather than to take advantage of changing market conditions and do what is best for an organization 'in the market place'. For example, if during the forecasting period sales are down, pressure is put on the sales force to increase sales. The sales force tends to sell what is easiest to sell, which may not be what is in stock, or which causes problems of an unanticipated 'stock out' situation on some lines. In industries with relatively fast changing technology some not-so-easy-to-sell lines may be left in stock and they may have to be heavily price discounted or risk becoming obsolete. This in turn may affect the profit forecast. In some cases, to ensure that forecasts happen, over-ordering takes place, resulting in a disproportionate amount of capital being tied up in stock at the year end, cash flow problems and, possibly, price discounting.

It would appear that if organizations are to depend particularly in the short term on 'part-time' forecasters, some training in elementary forecasting is necessary to obtain more meaningful forecasts in the first place.

Very rarely does one see sessions on forecasting in a training programme for salesmen, sales managers or brand or product group managers. Sometimes this is because it is not the prime part of the job (eg a salesman must be able to sell or he will not have anything to forecast) or because it is considered that one has to have an advanced qualification in mathematics to do 'formal' forecasting. It is possible, however, by using appropriate examples, to develop so called non-numerate operations personnel into more credible forecasters. Also it is possible to show methods which develop a rolling forecast that is easily updated so that the forecast for the next period is not such a formidable task to obtain.

The fact that these 'operations personnel' are closer to the customer/market place than others within an organization means that they already have, to some degree, one of the essential forecasting abilities, ie 'understanding the forces at work in the market place'. Giving them guidance in forecasting methods may mean that they can produce more viable forecasts.

Conclusion

Somewhere, sometime, the author read:

> Market and sales forecasting is too crucial to an organization to be reduced to simple guesswork, prayer, or the toss of a coin. The

'inspired amateur' is still with us and the question is how much longer can organizations afford him; on the other hand his activities should not be confused with real subjective forecasting, or the application of human experience and judgment to 'mechanical' forecasting methods.

Forecasting has many skeletons in organizational cupboards and these need to be brought out into the open because forecasting accuracy has a direct effect on an organization's strategy, tactics and performance. A poor forecast today can haunt a company tomorrow in the form of insufficient or excessive capacity and/or inventory, the cost of which will eventually be reflected on the profit line of the balance sheet.

This must be more true today than the day it was written.

Preface
to the third edition

For many years the major problem in making considered market and sales forecasts was the 'number-crunching', ie the handling and processing of large amounts of data, the comprehension and application of statistical and mathematical methods and formulae. But with the wider availability, the declining price, and the increased power of personal computers, forecasters are able to carry out a broader range of complex forecasting tasks, formerly too complicated and/or too time consuming to be done routinely.

While still continuing to cover basic statistical and elementary mathematical methods and formulae, this new, revised edition, examines the various aspects of computers and computing that are of direct relevance to market and sales forecasting and the work of the forecaster. It examines computer types and their role in forecasting, relevant peripheral equipment, the various categories of software (giving examples of forecasting-specific packages), and provides information sources for all other software packages that are currently available. Such software packages cover the mathematical/statistical methods shown in the book and many others.

Associated with this increased application of information technology to forecasting, sources of information have been updated and increased in Chapter 3, 'Collection of data for forecasting', and a specific section covering on-line Databases has been added.

While the 'number-crunching' aspect (especially of historic sales data) may have declined as a forecaster's problem, the identification, weighting and prediction of key market-related factors that affect the level of sales, has become more problematic as, in many cases, markets have become more erratic.

The ability to identify direct and indirect market-related factors that affect an organization's sales performance in a particular market segment, measure, interpret and predict their future direction, intensity and velocity, and integrate their combined effects with the right amount of weighting, is crucial to effective forecasting. A new chapter (Chapter 4) has been introduced to cover this specific area.

Since the last edition of this book, the need for effective forecasting has increased, not diminished, as international and national markets have become more competitive for a variety of reasons.

The controversy continues as to which is more effective, objective/quantitative forecasting techniques or subjective/judgemental forecasting techniques, and this edition continues to cover basic techniques of both types. A multi-technique approach of the two types appears to be the most effective compromise, with the emphasis changing according to the economic/market/company situation, and the final forecast is validated by a mixture of relevant experience, intelligence and informed judgement.

Forecasts should rely more heavily on the predictions provided by objective/quantitative methods, as long as there are no fundamental changes in the various environments in which the organization operates. However, when and if such changes do take place, subjective/judgemental techniques should be given more weight. But leaning solely on either polarized position may lead either to 'paralysis by analysis' or 'extinction by instinct'.