
The importance of analysis and planning in customer relationship marketing: Verification of the need for customer intelligence and modelling

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Javier Gonzalez Alvarez

obtained his degree in econometrics from the University of Madrid and then completed an MBA at Napier University Business School. While producing this paper he was employed as a business research fellow.

Robert Raeside

is a lecturer in statistics at Napier University who has research interests in business statistics and forecasting.

Warwick Beresford Jones

is a consultant employed with Marketing Databasics and is one of the developers and users of the DATASTEPS evaluation tool.

Abstract Customer revenue management (CRM) is widely recognised as beneficial, yet many organisations who have used this approach have not found the results they had hoped for. This paper reports a survey of businesses using CRM to assess if activity in this area can be correlated with business success and to allow verification of the findings of Woodcock¹ who found a positive correlation. Interviews with managers responsible for CRM and scoring are reported and their effort in customer data collection, maintenance, segmentation and modelling are assessed. This analysis and planning is perceived to be the foundation of CRM. It is found that companies who scored well in analysis and planning also performed well in regard to business performance metrics.

INTRODUCTION

According to Yong *et al*² and Xu *et al*,³ increasingly competitive markets and developments in information technology have led to many marketing innovations which involve acquiring customer information and creating business models based on that information. From these pressures, customer centric approaches, such as customer relationship marketing (CRM), have become an essential part of twenty-first century business. According

to Bergeron⁴ and Crosby,⁵ CRM is a strategy for managing the relationships among people within the organisation and between customers and the organisation, cementing long-term, collaborative relationships which are based on mutual trust with those customers. From this, as stated by Ryals,⁶ strategies that increase customer value and customer satisfaction are developed. The most valuable customer segments are identified and retention strategies to

Javier Gonzalez Alvarez
Edinburgh University
Edinburgh, UK
Tel: +44 07800 582891;
e-mail:
Javi_ska29@hotmail.com

prevent these customers defecting to competitors can be formed.

Effective approaches to CRM are based on analysis and planning which involves collection and maintenance of data pertaining to customers and from this segmentation is performed. Models are developed to help understand how to set targets and to improve profitability. This forms the basis for account management. The whole approach is documented by Woodcock, who points out that CRM involves all parts of an organisation, illustrating its holistic nature.⁷

Woodcock⁸ advances the use of Customer Management Assessment Tool (CMAT) to measure and audit the CRM effort. The CMAT approach gives tools to measure and assess planning and analysis, customer proposition development, enabling of people in the organisation, measurement of outcomes, understanding of the customer experience and the utilisation of information and technology. CMAT assessment is a formal evidence-based assessment of how well an organisation manages its customers. It includes assessing current CRM activities, developing a vision for the future and deploying programmes of change. Woodcock⁹ and Woodcock and Starkey¹⁰ correlated judgmentally-derived scores in these categories with business performance and found high positive correlations. Planning and analysis was found to have a Pearson correlation coefficient of 0.6. Woodcock's work has been criticised because he is the chairman of the company which promotes CMAT, and thus there is a need for independent research.

Clarke,¹¹ meanwhile, draws attention to the high failure rate of CRM. McKim¹² has pointed out that CRM can fail to deliver its promise mainly as a result of failure to identify problems associated with organisational change, lack of a common definition of CRM and the lack

of measurement or metrics to assess the impact of CRM on business performance. To ensure CRM efforts will be successful, therefore, there is a need to implement CRM very carefully in an organisation and use appropriate metrics to assess its effectiveness. This, Croteau and Li argue, begins with the analysis and planning stage to ensure that customer information can be converted to knowledge.¹³ Having the right data for analysis is crucial for successful customer modelling,¹⁴ and the importance of customer information, and the management of that information, has also been stressed.¹⁵ Marsh¹⁶ outlined the need for effort to ensure the quality of customer data and Stone and colleagues¹⁷ argued that customer management needs a strong customer information infrastructure to support it. Thus, one of the most significant challenges faced by organisations is to ensure that data within customer management is available in sufficient quantities and in a suitable form for analysis. All this requires a substantial and consistent management effort and seamless integration with the company's data warehouse.¹⁸ A study carried out in 15 US companies demonstrated that in most of these companies the use of data was weak.¹⁹

This paper aims to verify Woodcock's work and to demonstrate the importance of applying effort to the collection and maintenance of data and its use in modelling. This involves reporting on a small survey which illustrates the link between business performance and analysis and planning. The effort applied in the analysis and planning section of Woodcock's schema will be assessed using a tool called DATASTEPS.

THE DATASTEPS' PROCESS

DATASTEPS is an analytical CRM solution developed by Marketing DataBasics (MDB), a CRM company.

DATASTEPS fits into the analysis and planning stage of the CMAT process. DATASTEPS is a methodology that benchmarks companies' use of customer information and helps to optimise the use of analytic resources and to leverage CRM investment. The benefits offered by the DATASTEPS approach include:

- Benchmarking the use of customer information;
- Identifying areas of strength and weakness in the use of information;
- Determining where the biggest pay-offs lie in using information better;
- Optimising use of analytical resources; and
- Leveraging maximal CRM investment.

For the purposes of this paper, DATASTEPS gives access to an assessment method used in order to provide companies with effectiveness scores for how companies use customer information. The areas of CRM on which DATASTEPS operates are: data foundations (data collection, and storage); segmentation (clustering and profiling groups); modelling and selection; and evaluation and planning. Thus the assessment procedure addresses issues associated with the customer management activity, which is at the heart of the CRM model.

The methodology consists of an interview process which allows one to build a picture of effectiveness of the use of customer information in different areas of the business. A full DATASTEPS assessment consists of interviews with members of all the departments involved with customer analysis and requires evidence of progress to be presented about each aspect. The information gathered in the interviews is later inputted into the DATASTEPS program,

giving effectiveness scores for the way in which the company using customer information within different areas and sections of its business.

A research version of DATASTEPS methodology was used for this study. This version relies on a discussion with one interviewee involved in customer analysis. Consequently, it is possible that the scores gained with the research version are higher than those from the full assessment, given there was little cross validation.

RESEARCH METHOD

The methods used in this study are face-to-face interviews and an e-mail based questionnaire. The main research method uses semi-structured face-to-face interviews, in accordance with the requirements of the software package DATASTEPS used to score the different companies. The companies chosen were major companies, from different sectors in the economy, situated in Edinburgh, Scotland. A questionnaire was developed and used in order to extend the scope of organisations analysed and to provide an overview of organisations based outside Scotland.

Interviews with nine different organisations were conducted, lasting around one-and-a-half hours each. The questions asked, which were derived from the DATASTEPS' research version, varied a little depending on the structure of the organisation. The information gathered in both the interviews and from the questionnaires was inputted into the DATASTEPS package. DATASTEPS not only provides a total score for each company, it also can be divided into different sections and sub-sections giving a partial score for each of these sections. The sub-sections that will be used during the analysis in order to evaluate which area contributes in a more decisive way

to an effective use of customer data are:

- *Data foundations* — including aspects such as how the data is audited, customer information flows, staff skills and qualifications.
- *Strategic segmentation* — including different aspects of the segmentation process such as the segmentation itself, profitability calculations and campaign activity planning targeting of the segments.
- *Modelling and selection* — this aggregates the different uses of statistical models in tactical selections and customer lifecycle contact activities.
- *Evaluation and planning* — this section includes both tactical and strategic evaluation of the activities carried out in the previous sections.

To score each section, a structured interview was given to several of those employed in that area; evidence should be produced, or procedures demonstrated, to validate the interviews.

Nine companies were interviewed and a further three returned questionnaires. The companies came from a range of sectors varying from electronics manufacturers to financial services companies. A brief description of the characteristics of these organisations is displayed in Table 1.

DATA ANALYSIS AND RESULTS

The total scores produced by DATASTEPS from both the interviews and the questionnaires are displayed in Figure 1.

As can be observed, the scores are spread across a wide range of values, varying from the low 70s to nearly 90. The differences in the scores obtained can be explained by the companies' higher or lower effective use of customer

information. As companies come from different sectors, some of the differences may arise from the different needs for customer information of companies in different economic sectors. In order to evaluate this, the mean total scores obtained from companies in the various sectors were computed (see Figure 2).

It can be observed that the banking and brewing sectors are the two sectors which obtained higher scores; while manufacturing and not-for profit organisations scored lower. This shows that companies from different sectors have different needs for customer information. Manufacturing companies and not-for profit organisations may have had difficulties in getting customer information. As a consequence, it would not be fair to say that a company coming from the banking sector used customer information more effectively than a not-for profit organisation and this is a result of different needs and facilities between the organisations. Companies within the same sector can be compared, however, permitting analysis of which better uses its information and assessment of whether this has an impact on business performance.

In order to conduct this evaluation, some measure of business performance was necessary. The FAME database (see www.bvdep.com/fame.html) was used to gather financial information from the different companies analysed. The two business measures chosen to test this correlation were the return on shareholders funds and the return on capital employed. As the companies scored with DATASTEPS come from different sectors, however, it was difficult to assess which gave the best or worst business performance. Consequently, to standardise these two ratios, another two ratios were constructed taking the variation of these ratios against the median value of the peer group of each

Table 1: Characteristics of the sample companies

Company	Sector	Description	Interviewee
A	Manufacturing	Electronic Manufacturing Services company offering a full range of supply chain solutions. Revenues in 2003 of US \$2.8 billion.	Director of Quality and Customer Relations
B	Manufacturing	Leading supplier of process control and yield management solutions for the semi-conductor and related microelectronics industries. In the 4th Quarter of 2003, it had revenues of \$308 million.	Product Manager
C	Publishing	It is one of the biggest publishing and media companies based in Scotland; specialising in newspaper publishing. At the end of 2001 it had a workforce of 869 employees.	Head of Marketing Research
D	Brewing	It is a beer brewery that forms part of a large multinational group. The company interviewed forms part of the UK Beer business, which had a turnover of £2,002 million in 2002.	Pricing Strategy Manager
E	Banking	New company specialising in on-line banking. It offers a range of banking services by phone, over the internet and with professional advisers. It has already over 20 million customers	Customer Analysis Manager
F	Banking	One of Europe's leading financial services groups. As at August 2003 it had a market capitalisation of £51 billion. It has more than 20 million UK personal customers and total assets at 31st December, 2002 of £412 billion.	Head of Customer Information
G	Non-for profit	Public organisation run by Scotland's National Tourism Board and in charge of promoting tourism in all its forms around Scotland.	Brand Manager
H	Non-for profit	It is a Higher Education institution based in Edinburgh. It has a total workforce of 1,500 employees including academic and non-academic staff. It had a turnover of £65.4 million in the year 2001/2	Head of Marketing
I	Banking	The interview was held within the business-banking sector of a banking group. In the first half of 2003 the business-banking division had a profit before tax and exceptional items of £177 million.	Senior Credit Analyst
J	Brewing	It is a brewer group based in Glasgow. It owns and operates five malt whisky distilleries. The group had a turnover of £200.8 million and an operating profit of £73 million in 2002. It had a total workforce of 774 employees at the end of 2001.	Questionnaire based
K	Marketing and media	It is a media company that offers IT services, campaign planning and provides local market intelligence. It had net sales of £8 million with a workforce of 15 employees in 2002	Questionnaire based
L	Publishing	It is an IT publishing house that forms part of a major international group. The company interviewed is integrated in the business information unit. This unit had total revenues of EUR 775 million, and an operating income of EUR 107 million.	Questionnaire based

company. These new ratios gave a more realistic idea about the business performance of each company by comparison with other companies from the same sector.

Two of the companies interviewed

were not private companies but a public organisation and a higher education institution. These latter two could not be included in the financial analysis, therefore, because there was no financial information available or, if there was,

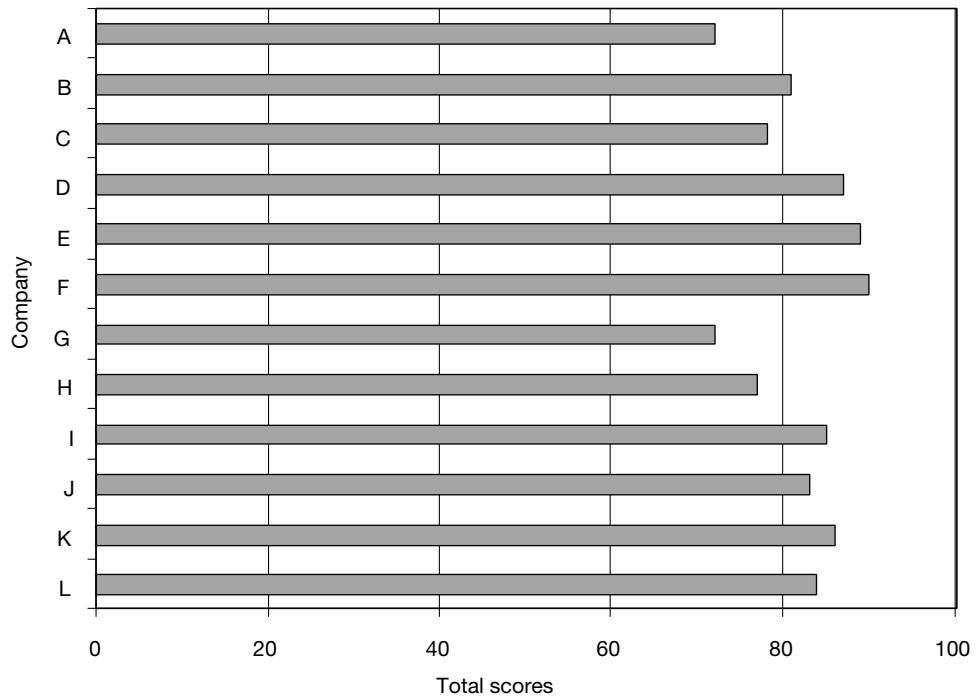


Figure 1: Total scores

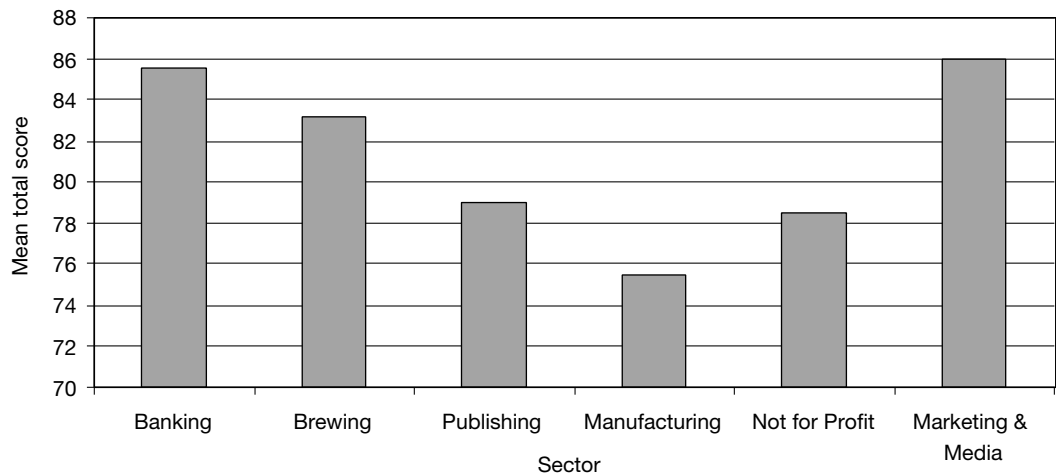


Figure 2: Total scores depending on the company's economic sector

financial ratios were not a sensible measure of their business performance. Table 2 shows the scores and the different ratios for each of the companies.

In order to test the relation between the effective use of customer information and business performance, the Pearson correlation coefficients of the total scores

against business performance were computed. The results are presented in Table 3.

The results indicate a positive correlation between the total scores and both ratios. This correlation is particularly strong between total scores and the variation of the return on

Table 2: Total scores and business performance measures

Variables/Companies	A	B	C	D	E	F	I	J	K	L
Total scores	72.4	81.1	78.4	87	88.5	89.8	84.6	83.2	85.9	83.8
Return shareholders funds	-50.12	47.23	1.61	7.14	707.99	15.48	52.44	22.05	124.63	34.4
Median of the peer group (SHF)	11.74	37.81	22.03	20.21	107.33	12.65	38.43	11.22	24.31	10.71
Variation against median (SHF)	-526.92%	24.91%	-92.69%	-64.67%	559.64%	22.37%	36.46%	96.52%	412.67%	221.20%
Return on capital employed	-26.59	38.55	0.45	6.77	07.99	8.23	52.42	14.25	124.63	6.58
Median of the peer group (ROCE)	8.6	219.58	15.61	6.01	91.86	6.49	26.41	9.41	14.06	7.27
Variation against median (ROCE)	-408.47%	96.88%	-97.12%	-58.15%	670.73%	26.81%	98.49%	51.43%	786.42%	-9.49%

Table 3: Correlation of total scores against business performance ratios

	Correlation	P values
Variation on return on shareholders funds	0.733	0.016
Variation on return on capital employed	0.614	0.059

shareholders funds compared to the median values of the peer group. It is important to highlight that the P values show a significant correlation in the first case at a 5 per cent level. Although in the second case these estimates show no significant correlation at the 5 per cent level, they are not too poor, taking into account the small number of cases used.

So far the analysis has been done using the total scores, but as has been stated previously, once the information is gathered through interviews and questionnaires and input into DATASTEPS it is divided into different sub-sections. The average scores obtained in each subsection are presented in Figure 3:

Generally the organisations interviewed obtained higher scores for data foundations. This includes aspects such as the quality and reliability of data audits, the customer information flows and the staff skills. This was followed by strategic segmentation, modelling and selection and, finally, evaluation and planning. It can be concluded that if companies have large amounts of customer information and their staff are skilled enough to

process such information this results in an effective strategic segmentation, which can be used to create models and select targets. It appears that, in general, organisations lack solid evaluation and planning methods. Addressing this weakness could significantly boost the return on their investment and efforts in CRM.

It is also important to evaluate how the different components or sections within the use of customer data influence business performance. In order to do so, Pearson correlations between the two business performance ratios and the four sub-sections of analysis and planning are calculated. Table 4 shows the results from this study.

The results in Table 4 illustrate that there is a positive correlation between all the different sections and the business performance. There is a strong correlation for most of the sections, however. For strategic segmentation, the correlations are insignificant; this can be explained by the fact that the companies used for the analysis come from various sectors and within some of those sectors it is not appropriate to segment

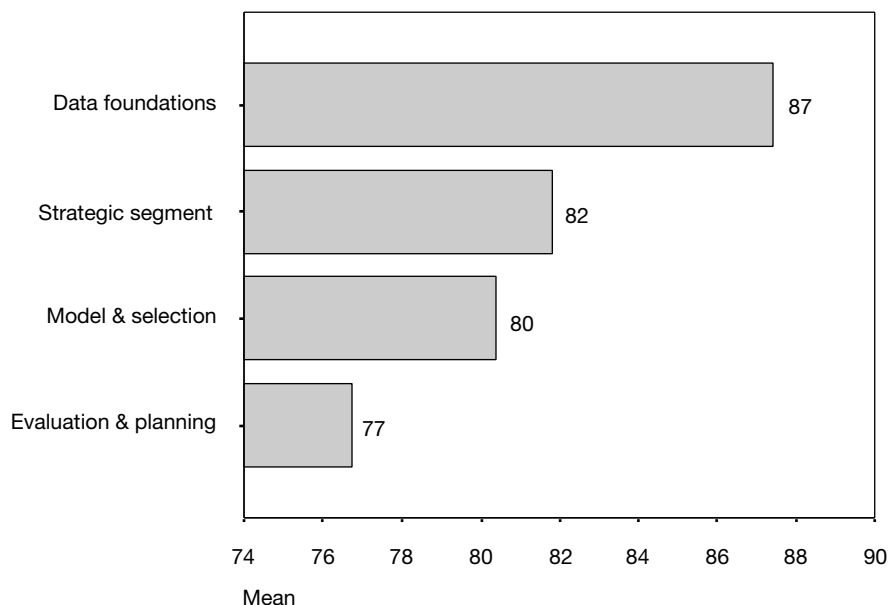


Figure 3: Average sub-section scores

Table 4: Correlation of sub-section scores against business performance ratios

	Variation against return on shareholder funds	Variation against return on capital employed
Data foundations	0.700 (0.024)	0.579 (0.080)
Strategic segmentation	0.267 (0.457)	0.307 (0.388)
Modelling and selection	0.608 (0.062)	0.454 (0.188)
Evaluation and planning	0.649 (0.042)	0.562 (0.091)

customers. In those companies, a sound segmentation scheme is not a prerequisite to good business performance. The values in brackets are the P value for these estimates; although most of them are not significant at the 5 per cent level they are at the 10 per cent level. This is not surprising taking into account the small number of cases analysed.

Modelling and selection is found not to be correlated with variation against return on capital employed (ROCE), however.

CONCLUSIONS

To conclude, it would seem that the effective use of customer data within CRM leads to an increase in business

performance and enhances the competitive position of the company. Consequently, many companies have focused on technology applications while implementing CRM solutions, investing large amounts of money in software. In order to get the return on investment expected, the companies should focus on dealing effectively with customer information — especially the flow of information; having the right skills within the staff to manage information; making sure that all departments have a good understanding of the statistical models used in tactical selections; and having a consistent way of measuring the effect that such procedures have on profitability.

There is a strong positive correlation between the use of customer information

and business performance. Hence, a company can increase its competitive position by making good use of customer information. This study suggests that data foundations is the most important aspect of customer information, as it is the one that has the highest correlation with business performance. The results confirm the findings of many authors that staff skills in dealing with customer information are very important for success with CRM.^{20,21,22} Strategic segmentation is only slightly correlated with business performance and therefore may not be as important a factor for successful CRM implementation, at least in some economic sectors. Most of the companies analysed do not have a sound understanding of the use of statistical models for tactical selection and this is an area where improvements could be made. Evaluation and planning was highly correlated with business performance, therefore it is important not only to make good use of customer information, but also to measure the effect that this has on processes and profitability. This supports and verifies the work of Woodward²³ and McKim.²⁴ In addition to these findings, it was found that DATASTEPS is a good, efficient and reliable mechanism for auditing the constituent parts of the analysis and planning stage of CRM.

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