

## **AN INTERROGATION TOOL FOR DATA FROM A SURVEY OF PHARMACEUTICAL AND HEALTHCARE SALES FORCES**

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*Pharmaceutical companies are constantly asked for information by government agencies, market research companies and often carry out their own investigations. However there has been no definitive independent source of information about field-based personnel in the pharmaceutical and healthcare industry. The authors report on the first ever survey of the UK medical sales field force and demonstrate the unique data interrogation tool developed to enable analysis of the data collected including the remuneration, values and perception of the sales force.*

### **BACKGROUND**

Pharmaceutical Field (Pf) is a monthly journal providing up-to-date news for sales people working in the pharmaceutical and healthcare industry. It is specifically aimed at management staff, key account holders, trainers and staff associated with sales in the following roles:

- Generic;
- Surgical;
- Healthcare;
- Wound Care;
- Medical Supplier representative.

Currently there are over 9000 subscribers to the journal who make up the majority of the sales field force for over 100 healthcare and pharmaceutical companies. Initial research, conducted by Pf, identified the following key points to investigate and provide benchmarks of:

- Actual salary, bonus and remuneration packages;
- Motivational values in working for an organisation;
- How companies fare in motivating their field force;
- The most desirable organisations to work for.

Pf were commissioned by a leading pharmaceutical company to undertake a detailed study to survey and develop a tool that would enable user interrogation of the data without any prior knowledge of specialised software packages. Rather than undertake the project alone they worked jointly with the first author to advise on survey design, data collection, data analysis, and the development of a data interrogation tool. Confidentiality was of paramount importance throughout the exercise so that anonymity of responders could be ensured. The enticement of a £20 gift voucher for the first two hundred returns may have influenced the better than expected response! (An overview of the survey results can be found in Merryfield, 2001).

### **THE SURVEY**

To ensure confidentiality, the pharmaceutical companies that participated in the survey are not referred to throughout the paper. In figures reported Company X and Company Y are substituted for the actual company names. In order to address the many areas of interest within the pharmaceutical sales force the survey was split into several sections.

#### *About You*

The questions of this section captured vital information regarding the profile of the individual. Which company they worked for, how old they were, how much experience and training they had, and the nature of their work. Although not expected to be an important factor the gender of the individual was also asked. In addition the individual was asked to describe their sales performance with respect to others in the individual's company.

### *Remuneration*

Due to the many performance-related incentives and allowances available in a sales-related profession, this section needed to capture all possible incentives and rewards. A pilot study revealed that not all sales staff are paid bonuses for the same period. Some are paid monthly, some quarterly, some bi-annually, some annually and others at non-regular intervals. In order to convert the bonus amount into a monthly average the individual had to indicate the period for which their last bonus amount was for.

### *Motivational Values*

This section was split into two, namely what work factors are important to the individual and how satisfied the individual is with their working environment. There are many work factors that are important to an individual, however not all individuals may attach the same level of importance to each factor. From an initial brainstorming session and a pilot study, fifteen work factors were identified including salary, bonus, share scheme, car policy, personal development, company culture, relationship with direct manager, company recognition of your success, job security. A sales individual would typically say that all the work factors were important, however to identify the most important factors the individual was asked to rank the five most important ones. The same fifteen factors were listed and the individual was asked to give a response for each factor according to how satisfied they were with their current employers. The categories available ranged from *very dissatisfied* to *very satisfied* with a neutral response of *no opinion*.

### *Company Perception*

Of particular interest by companies within the industry is how they are perceived as desirable employers. To cut down on survey completion time only a selection of the largest medical sales companies were listed for scoring. The desirability score ranged from 1, corresponding to very low desirability, to 5 corresponding to very high desirability. A score of 3 or a blank were assumed to be a neutral response.

### *Recruitment*

Career progression and recruitment services used by individuals were of particular interest. The questions were focused on determining intended career progression whether an external or internal move was the most likely, and which were the individuals preferred agencies and internet sites.

## THE INTERROGATION TOOL

The brainstorming session and pilot study also revealed the numerous questions of interest that would require answering using the collected data. The main criteria for selecting the data for comparative studies was based on information about the individual. For example, what is the average salary of a first line field sales manager, aged between 35-44 who has been in the medical sales industry for over 8 years and has a degree qualification? For this type of individual what motivates them in the workplace and how satisfied are they in their current company? How do they perceive other companies? What recruitment agencies are they likely to use? How many hours per week do they spend on administrative tasks?

For the profile categories used in the survey there are over 1.7 billion possible choices. In light of this an easy to use selection process was needed which extracted the data corresponding to the specified profile of interest from the complete database. This process was automated using visual basic code in the Microsoft package Excel. Excel was chosen because of its widespread use within the industry and that the nature of the analysis did not require specialist software. Security and anonymity were a priority and therefore the standard toolbars of Excel were disabled and worksheets secured with password protection.

## THE PROFILE SELECTOR

The profile selector (Figure 1) enables the user to create a profile which is used to *cut* matching data from the entire database. This enables a particular cross-section of the medical sales force data to be interrogated which in turn enables comparisons to be made. For example

responses of the individual age groups could be examined, or responses of people with different job roles compared. Questions of interest could be answered, such as are younger employees more satisfied with their current employer compared to older employees? What are important work factors to sales people performing a particular role? Are these work factors different for different roles?

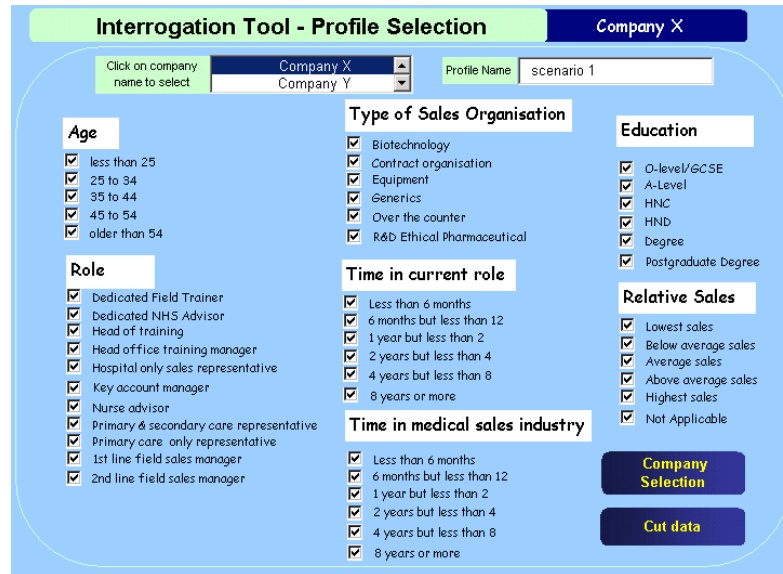


Figure 1. Profile Selection Screen of the Interrogation Tool.

Of interest to individual companies is how their company compares to the overall industry, and also where they are relative to their main competitors. It was essential to ensure the confidentiality of the selected companies. To achieve this the user of the interrogation tool has to select at least four other companies from the reduced list of 35 companies. Once a profile has been created and the companies of interest selected the data may be cut and the results examined using the analysis menu.

#### ANALYSIS OF THE CUT DATA

The cut data comprises of three different sets.

- Own company data matching the selected profile
- All companies matching the selected profile
- At least 4 other companies matching the selected profile

To facilitate the analysis of the cut data a menu-driven environment was developed. In addition, to ensure familiarity and ease of use the section headings of the survey are the control buttons which when selected display a drop-down list of related topics. For ease of interpretation most results are reported graphically with summary statistics reported for quantitative data. Extra features developed to aid interpretation and reporting include the option to name the profile selection which is then used in the title of the graphs. Another option is to copy the displayed graph for inclusion in Word reports or Powerpoint presentations.

#### AN EXAMPLE OF THE ANALYSIS SCREEN

Figure 2 is a snapshot of the analysis screen displaying the work factors ranked according to the satisfaction score of their own company data. For a given work factor the bars from left to right represent own data, profile data, and company selection data. From this there are many insights that may be revealed. For example, in the graph, each data group are most satisfied with their belief in the present pharmaceutical products and least satisfied with the bonus received. Closer examination of each work factor can also be made.

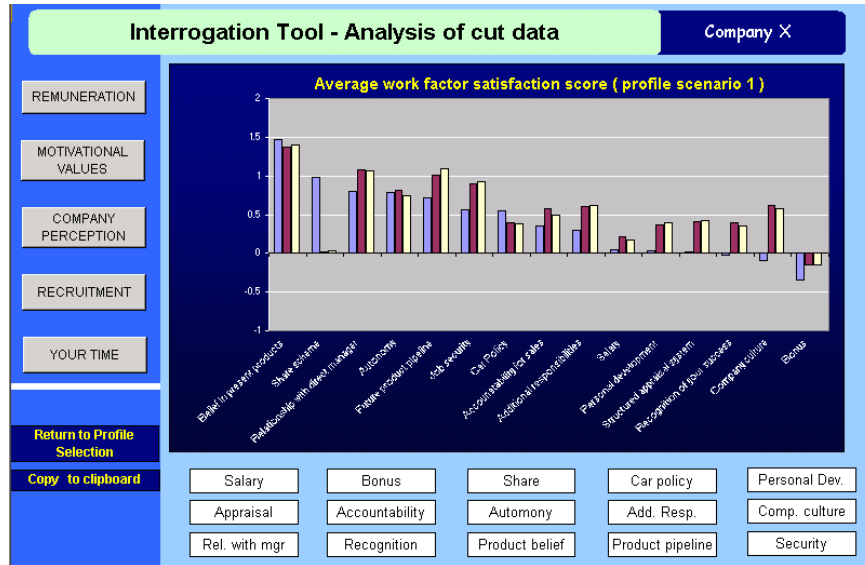


Figure 2. Menu-driven Analysis Screen with Graphical Output.

For each work factor the proportion of responses that indicated dissatisfaction, satisfaction and no opinion are displayed for the own company, the profile selection and the selected companies. For example the graph in Figure 3 indicates that, compared to the profile and company selection, Company X has a greater proportion of the respondents that are satisfied with the company share scheme.

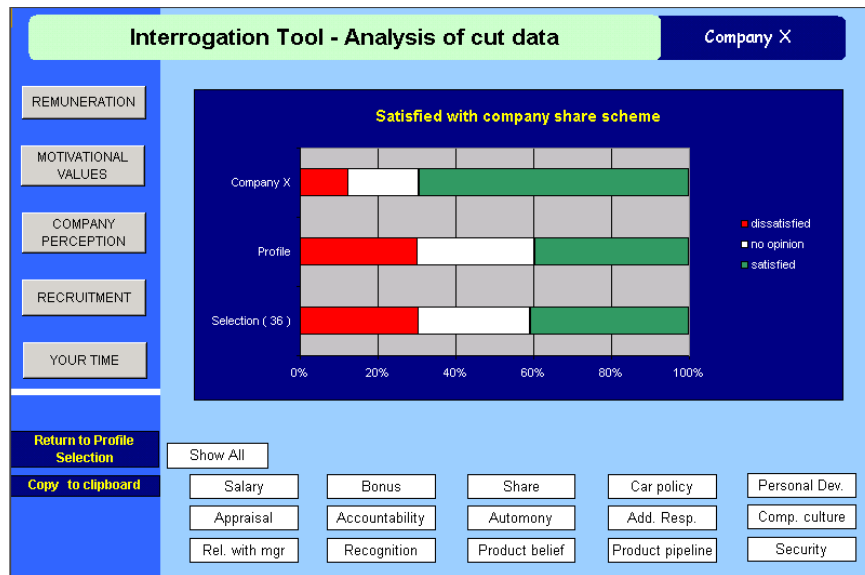


Figure 3. Example Graphical Output.

Where appropriate summary statistics are displayed for quantitative data. For example the number of days off are reported by summary statistics and the average value reported graphically (Figure 4).

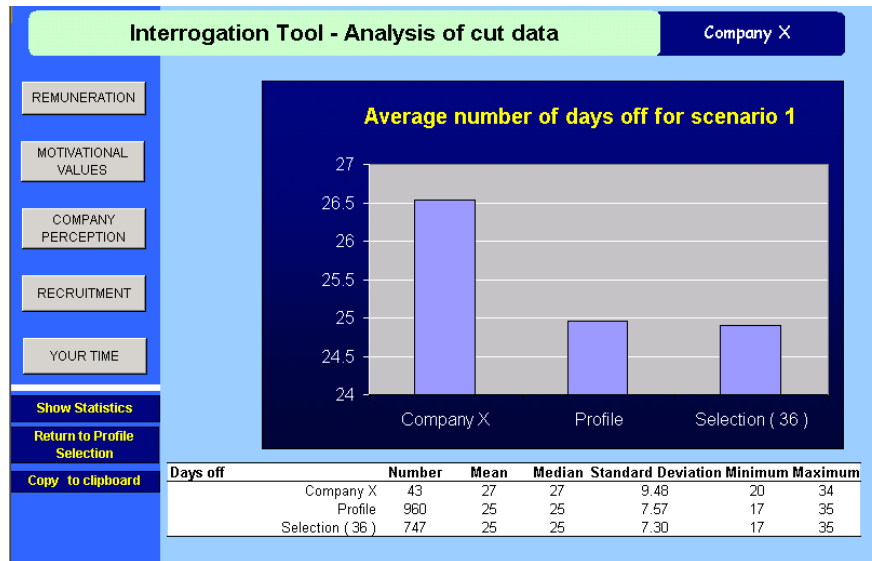


Figure 4. Example Graphical Output and Summary Statistics.

#### DISCUSSION OF THE INTERROGATION TOOL

The Interrogation tool provides the ability of a non-data management specialist to add value to a data set that conventionally would be limited in usefulness. The power of the tool is the data selection flexibility together with the ability to generate readable results that may be transferred to Microsoft applications. An improvement currently being developed is to incorporate statistical tests for significant differences between the three different sets of own company data, profile data and selected companies. This together with the graphical output will aid correct interpretation. Furthermore we anticipate that a data interrogation tool can be developed to support most databases. At present the tool is written in Visual Basic using the Excel environment. Developments into creating a web-based data interrogation tool are also being investigated.

#### REFERENCES

Merryfield, N. (2001). The first ever survey of medical sales professionals. *Pharmaceutical Field*, 23.