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IDENTIFYING SURROGATION USING BUSINESS ANALYSIS

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Abstract

Surrogation is a term used to describe the human phenomenon of confusing or replacing what is being measured with the metric being used. It is very important for high and middle level management to be familiar with this definition. Best practices require surrogation to be avoided by properly choosing the necessary metric to measure the strategy goals. It is also impertinent to include the roles executing the strategy in defining the metrics. Trained Business Analyst are able to quickly identify if there is surrogation within the organization and quantify the impact. The current article will define surrogation, provide real life example of surrogation identification and calculate the impact of it.

Keywords: *surrogation; strategy goals; key performance indicators (KPI's); business analytics*
JEL Codes: *C55*

Introduction

The term surrogation was first used in the publication "Lost in translation: The effects of incentive compensation on strategy surrogation" by Jongwoon (Willie) Choi; Gary W. Hecht; William B. Tayler (2012). The experiment was designed to review the dynamics between strategic goals and any performance management system (PMS). The three factors needed to create PMS include: 1) translating strategy into a set of measures facilitates communication of strategy throughout the firm; 2) aligning strategy with performance measures enables evaluation of strategy; and 3) tying measures to strategy facilitates the development of new strategies. There are many benefits of linking strategy and measures; however, the processes involved can cause the people who are responsible for this metric to lose sight of the strategy involved.

Companies have strategies that are more visionary and the method to interpret the expectations is usually by using specific metrics. An example of this would-be Apple's

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"Think different" in which the Ford Motor Company "Quality is job 1" Harris and Tayler (2019) are comparing the strategy to the blueprint of the building, while the metric is the "concrete, wood, drywall, and bricks". They explain that it is easy for company to "lose sight of the strategy and instead focus strictly on metrics that are meant to represent it". Another, and perhaps the most famous, example is Wells Fargo. Their strategy was to grow business through cross-selling and the employees opened 3.5M accounts without consent.

As with any study, this study may have some limitations. The main limitation is the lack of sufficient information about the effect of changing the business models of existing companies, as this effect is observed years after the introduction of digital transformation, and currently this process is relatively new, so the topic requires further study over time.

How to avoid surrogation

There are three underling conditions that have to be met to create base for surrogation as defined by Nobel prize winner Daniel Kahneman and Yale professor Shane Frederick (Kahneman, D., Frederick, S. 2002).

First. The objective or strategy is fairly abstract

Second. The metric of the strategy is concrete and conspicuous

Third. The employee accepts, at least subconsciously, the substitution of the metric for the strategy

Eliminating one or more of those prerequisites will reduce the occurrence of surrogation. Most importantly. managers and analysts must be knowledgeable about this phenomenon. Furthermore, the must be able to recognize the prerequisites and the symptoms. The main technique to avoid surrogation is to include the "people responsible for implementing strategy to help formulate it". Another recommendation is to "loosen the link between metric and incentives". And the third method is to "use multiple metrics" (Harris, M., Taylor, B, 2019)

Identifying surrogation

Plato in his "Allegory of the Cave" argues that our perceptions are merely shadows, cast by a reality we can never see directly. Performance is what counts, but the measure of performance—a mere shadow of performance—is what gets counted (Plato, 520 a.)

Bloomfiled in his book "What counts and what gets counted" is defining the Management reporting system and one of the roles of such a system is the decision-influencing function: changing the behavior of a person who is attempting to garner rewards or avoid punishment. Explicit incentives include pay-for-performance contracts; implicit incentives include possibilities for promotion, raises and dismissal based on subjective evaluations (Bloomfield, R. 2014). Reviewing the numbers on regular basis and

making decisions based on them is possible to have not only positive, but sometimes negative impact on employee’s behavior.

The practical example which is presented in this paper is from one of the top 100 US companies.

The business case scenario is as follows:

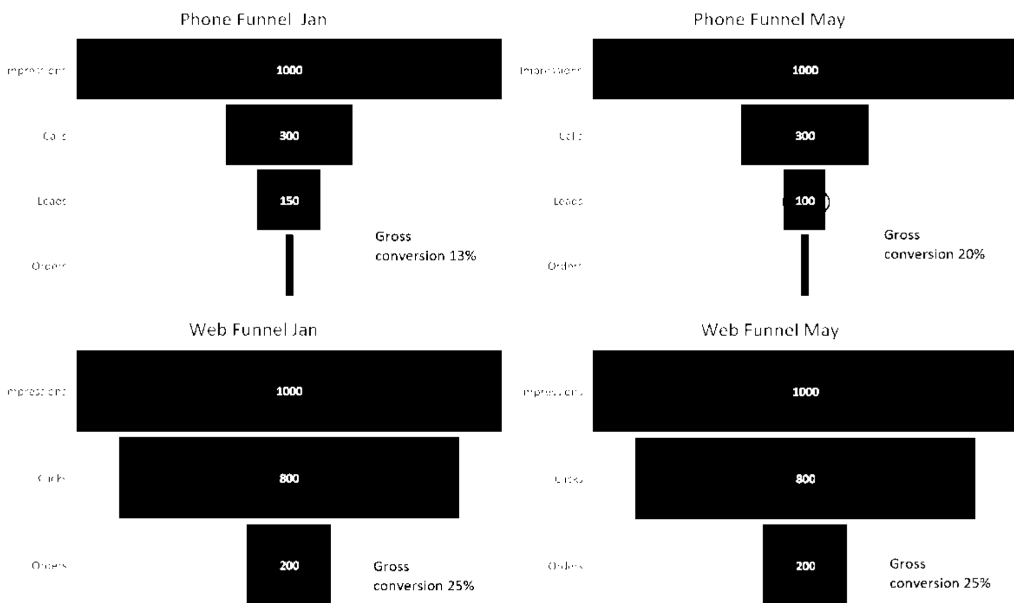
The company is selling services online and via phone. The sales are initiated by 90% digital advertisement. The company strategy is business growth.

The marketing team has weekly reports to monitor marketing performance and sales. The reports follow the customer journey from the first interaction until the completion of the service order.

Unexpectedly starting in May, the gross conversion for phone services have increased, while the web conversion remains the same.

The example of the metrics results can be seen on Figure 1.

Figure no. 1 Marketing Funnel Report



Source: Author

The marketing spend is the same and nothing has changed from campaign or content perspective.

A good practice for the analyst is to know that consumers do not suddenly change behavior, and if something like this happens, there are a few things need to be further evaluated.

The first step is to check the accuracy of the data. Once that is ruled out the next thing to consider is a change in the behavior of the employees. The described situation is complicated, because the servicing team is outsourced which means there is limited communication and lack of control in their processes.

The gross conversion has increased because the leads count has declined, while the service orders are similar to previous counts. Such a number change prompted the marketing team to investigate the decline. Since the marketing spend is the same and content of the advertisement is the same, the subsequent step is to understand what is the reason for the decline.

The thought process is as follows - the gross conversion is a formula calculated by diving sales and leads. Sales is a number that is clearly identified, so the problem must be in the leads count. Additional research indicated that leads are marked as “leads” based on the judgement of the phone sales agent. The sales agent must physically check a box if a call is a lead or regular service call. The hypothesis suggested by the analyst is that the phone agents might be untruthful when they mark the calls. Therefore, evidence is necessary to prove the null hypothesis.

The following methodology was suggested to prove or disprove the null hypothesis. For the purpose of this analytical project two weeks of all recorded calls starting in May when the data has changed will be required.

Then the voice recordings are transcribed to text. Once transcribed n-grams is used to identify calls that are sales vs service conversation. To convert voice recordings to text, Google cloud speech API can be used. There are also other tools that have the same feature. These various tools can be evaluated by a quality and cost to help in the selection of the proper tool. For the n-grams analysis, vocabulary is created with the help of the business to identify which words are associated with sales call, and which words are associated with service calls. Sales wwords are price, zip code, time available, etc, service calls are change time, cancel, etc. There are also some negative words in both cases that have to be considered while building the algorithm.

The lexical engine build using those words can mark each call as either service or lead. Then the calls reported by the servicing organization are compared to the calls that are marked by the lexical engine. The variance count will prove or disprove the hypothesis.

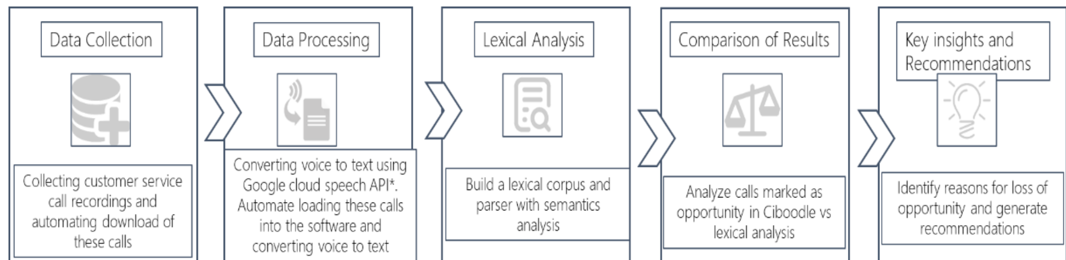
The results from the actual project estimated that 17% of the calls were wrongfully marked as service calls. Therefore, that was the reason behind the reduced leads count and improved gross conversion.

This project helped the servicing organization understand the challenges of selecting gross conversionas metrics as performance indicator used to pay commissions.

The compensation structure was changed and reverted back to using the absolute numbers of repairs sold.

The process is graphically described on Figure 2.

Figure no. 2 Solution Approach



Source: Author

The process is very complex as it requires the data transition from one type of data substance (voice) to another (text), and in those transitions there is continuously a concern that the quality of the data can be reduced as the machine learning models have some percent of error. The same concern is valid for n-grams modeling technique used in the lexical analysis step.

Conclusion

While it is impossible to manage a business without measuring it, there must be extreme caution when selecting metrics. Close attention must be paid to any changes in data patterns and trends. Human tendency to lean towards increased benefits can lead to very creative ways of receiving said reward without doing the required effort. One of the biggest surrogation was the Wells Fargo case in which thousands of new accounts were opened without customer consent. This occurred because the bank employees were compensated based on the metric: number of new accounts opened. This metric was meant to support business growth strategy.

In order to avoid surrogation, each metric has to be evaluated as if it is already prone to surrogation. It should be checked against the "guardians against surrogation" proposed by Kahneman, D., Frederick, S. (2002). the objective or strategy is fairly abstract; the metric of the strategy is concrete and conspicuous, and the employees accept at least subconsciously the substitution of the metrics for the strategy.

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