ESOMAR | Events

The Alchemical Marriage of Big Data and Qual

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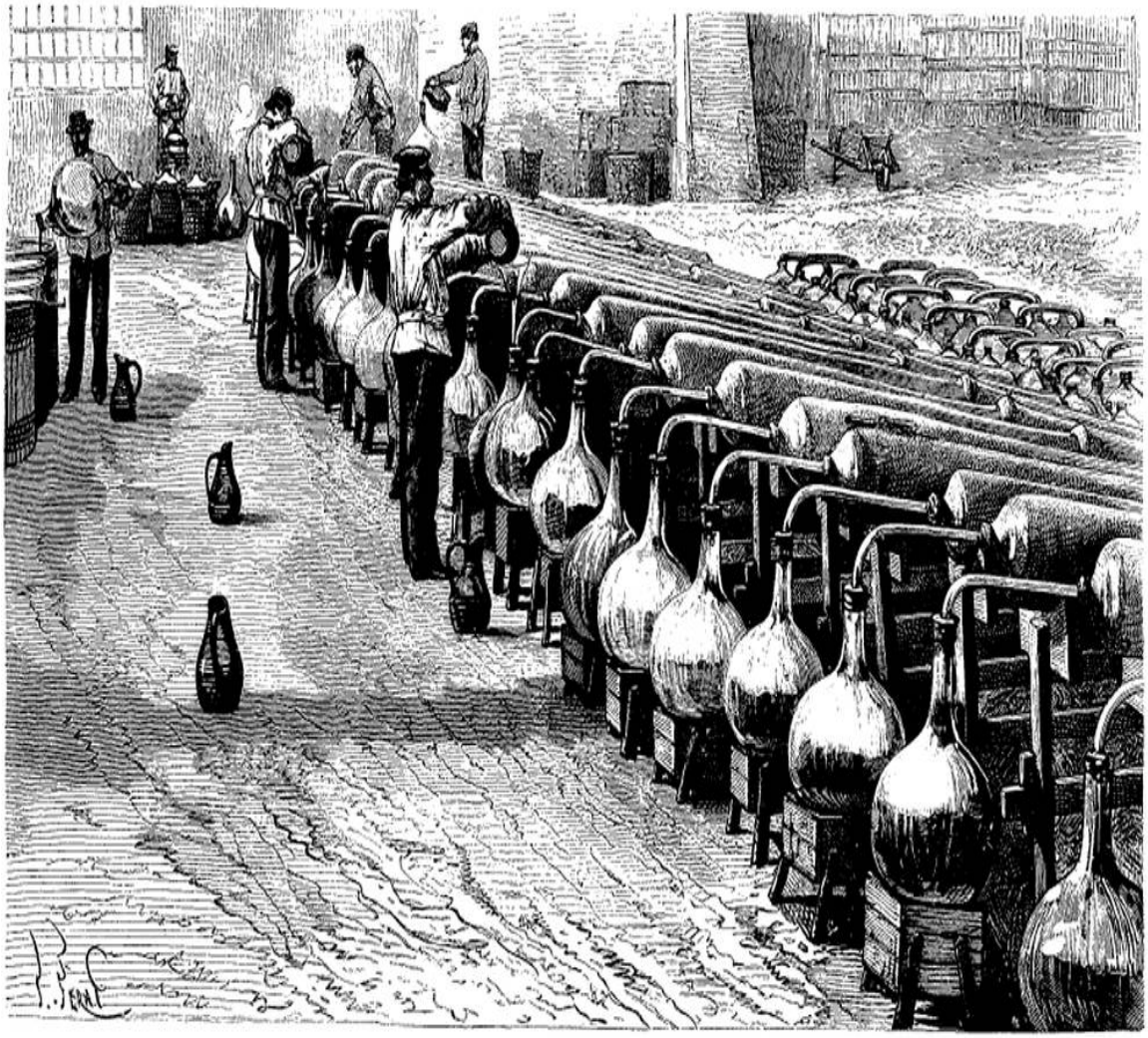

The argument between the big data professionals and the supporters of traditional research methods has reached an acute stage. The enthusiasts of big data and AI believe that algorithms can quickly and easily (at low cost) help us study all of the aspects of human behaviour. The traditionalists, on the contrary, state that these innovative methods cannot replace classic qual and quant surveys.

In our presentation, we would like to show how efficient the hybrid approach, which combines big data analytics and qualitative research, can be. We would like to demonstrate the power of the hybrid approach while using the case of the Kenyan company Safaricom. Africa is not usually associated with innovation, but this is completely wrong. Unlike the developed world, Africa does not experience the strong pressures of traditional research approaches. Many innovative products and technologies that are struggling to find their way in Europe or the Americas are easily adopted in African countries.

Being founded as a classic telecommunication company, Safaricom has managed to expand into many other product categories, such as finance (mobile money Mpesa and mobile credit Mshawari), transportation (Little Cab), e-commerce (market place Masoko), education (Safaricom academy) and many others. Safaricom is the flagship of the Kenyan economy. It accounts for a significant proportion of the national GDP - circa 26% – which is a very big amount of money, even for the developed markets.

Safaricom's case is also interesting because the company, a telco, holds a huge amount of data about its customers and has proven willing to use them for research purposes. Apart from big data analytics, Safaricom has been undertaking many traditional research projects; its combined research budget is in the range of 5 to 6 million USD per year.

Bringing customer segments to life

Many large businesses need to segment their customers; it is a classic practice in marketing. Ten years ago, it required a complex and expensive segmentation study. Now, with the advent of big data, it looks like the situation has become much simpler. Many tech companies started segmenting their customers on their own. At first it looked like a big success story, but after some time it became obvious that segmentation models that are based just on internal data are either not working properly, or are not working at all.

In the beginning, Safaricom also decided to follow the big data route. The advantages that allowed Safaricom to be confident of their data is a large market share, which is approximately 70% of the total Kenyan market. The company had plenty of information about its 30 million customer-base:

- Daily and monthly spend on voice and SMS;
- Daily and monthly spend on data;
- Mpesa (mobile money) account information, such as number of transactions, average transaction value, etc.;
- Personal networks (e.g. if someone calls 20 people on average, or 100 people).

Moreover, there was some data available about the users of Little Cab (the Kenyan counterpart of Uber), and users of online market place Masoko. Safaricom used big data to develop customer segments; the theory behind big data is that a segment of one can be created. While models to create these are possible, the jump to such a regiment is not easy. Safaricom created 16 segments - these were too many to begin the segmentation journey. Creating a strategy, or new products, or even advertising targeting each of these 16 segments did not seem to be possible. Besides, it turned out that representatives of completely different segments demonstrated very similar behaviours, while the same individuals could belong to several segments at the same time.

Safaricom improved the algorithm by introducing several more variables such as gender, age, location, etc. Because of these improvements, some segments were clubbed together, and the total number of segments was reduced. However, a new problem arose: there were several customer segments - their existence was established mathematically. Nevertheless, it was still not clear what these segments were all about and what Safaricom should do with them.

Algorithms gave a very laconic description of the segments. A typical description looked like this: "Safaricom users, 18-25 y. o. predominantly urban dwellers, spend 15 to 20 USD per month on mobile services (80% of this amount is spent on data). They use mobile money one to two times a day and their average transaction is 5 USD". Clearly, it was very difficult to imagine a living person, based on such a dry description.

Additionally, that is where the old, good qualitative research came to help. Kantar and Safaricom have conducted a thorough ethnographic exploration of every segment. We have conducted a combination of focus group discussions and ethnographic observations to understand people's lifestyles and values, as well as establish their unmet needs and aspirations. What was missing from the big data picture was the "human aspect". Qualitative research helped to bring these segments to life. Moreover, the qual research helped to present the segments in such a way that the story has become crystal clear for all the people in the company.

Society is constantly changing, thus the segmentation model cannot remain static. New segments are coming up while old ones are transforming. Every time the algorithm picks up any changes in customer behaviour, we do a qualitative research to understand what these changes mean. Usually, we use traditional focus group discussion but also in-depth interviews, ethnography and even WhatsApp interviews. The exact method is not so important and depends on the specifics of the target audience. What is really important, is to understand consumers beyond their behaviour in the telecom category: to understand them as human beings.

One could argue that for a telco like Safaricom, the following options are available for segmentation:

1. A classic needs-based segmentation;
2. An occasion based segmentation;
3. A behaviour-based segmentation, as has been described above;
4. A psychographic segmentation.

To come to any form of agreement, a large telco like Safaricom must have a feel for all these directions in order to conclude on a specific segment direction. All directions strongly involve qualitative research. Safaricom has explored occasion-based needs, and is currently piloting an evolution of communication with sales outlets in a rural location in Kenya, with Kantar.

Making sense of NPS score

In the modern world practically, all big companies conduct customer satisfaction studies. There are many ways to do this. Some companies outsource these projects to the research agencies, while others, especially in the last three to four years, conduct customer satisfaction studies on their own. Safaricom combines both approaches; its main tool for measuring customer satisfaction is Net Promoter Score (NPS). Respondents answer questions about their attitude toward the company in general, and to its various services. The key question is if a respondent would recommend Safaricom to his/her friends or not. For Safaricom, NPS plays a very important role. All the bonuses of Safaricom employees - including that of the CEO - depend on this indicator.

The good thing about NPS is that it shows the general trend very well. The NPS chart clearly shows if customer satisfaction with a Safaricom service grows or declines. The problem is that it is very difficult to understand the reasons behind the graph's fluctuations. NPS result presentations often turned into an argument between different departments, who blamed each other if the NPS score was not growing fast enough or, even worse, going down. Although the solution to this problem was seemingly on a surface, it took some time to realise it. An opportunity came to our aid.

One of a few results, which had been interpreted unambiguously, was NPS across different regions of the country. For example, if NPS in the coastal regions of Kenya was significantly lower than that in the rest of the country, it meant that Safaricom, indeed, had problems in this region.

Two years ago, Safaricom decided to find out why NPS in Mombasa, and several other Kenyan regions, is lower than the country's average. It was decided to conduct a small qualitative study. The methodology was very simple, just several focus group discussions with the customers of Safaricom and competitors. The results of the qual study proved to be so useful that Safaricom decided to make qual follow up a permanent element of the customer satisfaction measurement program. From that time on, if NPS graph demonstrates some incomprehensible fluctuations, we do a qual study to understand the reasons. The opposite is also true. If focus group discussions show some interesting behaviour, we can always check NPS data and see how significant this phenomenon is.

In 2017 Kenya, had presidential elections. Safaricom had the misfortune of participating in the electoral campaign and actively supporting the incumbent president. This resulted in a boycott of Safaricom by many supporters of the opposition candidate. At first, Safaricom did not take this threat seriously; the common belief was that a boycott could not harm the company's position much. However, focus groups almost immediately showed some warning signs. Two weeks later, big data confirmed that Safaricom was at risk of losing a considerable number of its customers. The company embarked on a major exercise to re-build trust and it helped to save the situation. Safaricom nevertheless lost a small percentage of the market share.

Cracking the user experience dilemma

Safaricom is increasingly moving towards the digital space and understanding the usability of its various digital products is becoming more and more important. Like in the case of segmentation and customer satisfaction, a combination of big data and qual proved to be the most efficient solution for UX studies too. The way we approach UX studies is outlined below.

Once a certain app is almost ready, it is launched on the market. Despite a pre-launch evaluation, there is always a probability that some features (or, in the worst-case scenario, the product as a whole) will not work as planned, or will not be relevant to the users. This happens because the real user experience is, after all, is quite different from the "sterile" lab experience. Besides, there is something about Africa that makes pre-launch evaluations very difficult. This "something" is the extreme cultural and linguistic diversity of the continent. African countries are very diverse; for example, in Kenya alone there are 42 tribes that are as different in terms of their language, culture and mentality. There are as different to one another as the Spanish and British. That, of course, affects the usage patterns and attitudes to new products in general.

Ideally, we would need to do a UX evaluation across all the regions and cultures in order to understand the potential usage behaviour. However, that would take too much time and cost too much money. In reality, new apps are being created only based on rather limited UX insights. That is why some refinement is required after the products has already been launched. It is crucially important to make these refinements very quickly, before users develop a negative image of a new product. Here, big data comes in to help.

Two weeks after the release of a new product, Safaricom actively surveys (with Kantar) the number of:

1. Users who downloaded the new app and actively use it;
2. Users who downloaded the new app and stopped using it;
3. Users aware of a new app, but never used it.

We recruit these three groups of users for focus group discussions (or IDIs, depending on the complexity of the target audience), and explore the reasons for their different usage behaviour.

At the end of 2018, Safaricom launched a new product in Ethiopia – mobile internet on credit (Okoa). The product is a simple one: if one ran out of data, he or she can use the new app and buy more data on credit. (It is necessary to say that in Ethiopia, the overwhelming majority of users still buy airtime and data using scratch cards). Several weeks after the launch, we conducted the research, which helped to optimise the products, and the way Safaricom positioned it on the market. For example, our research helped us to understand users' motivations better. It turned out that users buy data on credit not because they have run out of money, but because it is simply more convenient. People feel too lazy to leave the house just to buy a scratch-card. Although these cards are being sold practically everywhere, getting them is still a micro hassle.

In the Muslim regions of Ethiopia, users developed an interesting barrier. Since the name of the new app used the word "credit", Muslim respondents considered it as "haram" (forbidden). Such a barrier was, however, very easy to remove by changing the name of the app. Apart from that, our research has identified several small problems with interface navigation. Since we always work closely with developers, those issues were resolved over the next few days following the research project.

Way forward

Safaricom and Kantar's joint experience of combining big data and qual has led to a couple of fundamental learnings that, we believe, will be shaping the entire market research industry in the nearest future.

We believe that the argument between big data analytics and traditional research does not make much sense. Both approaches have the right to exist. It is unlikely that one of them could completely replace the other. Moreover, we believe that synchronising big data analysis and qual exploratory research will be the approach of the future.

The future of segmentation

Developing psychographic segmentation for use in big data is not easy. It is possible to, in a rudimentary way, have online segments such as sports lovers, entertainment junkies, religious fanatics, business leaders or politics lovers. From these, it is possible to have sub-segments like local sports champions, international sports lovers, etc. From big data, it is possible to even go further and categorise customers into a lifestyle theme, like fashionistas, food and nutrition, self-biographers and creatives, or into an entertainment theme like travellers, thrill seekers, music loves, etc.

These categories lack real depth that qualitative data would provide. For instance, the *Needscope* work done by Kantar evokes a lot more detail that big data, on its own, would struggle to match. Deciding whether someone is an *individualist* or a *collectivist* may require algorithms to be trained in more detail, towards highlighting human emotions.

New products and services

Safaricom owns a hugely popular platform in the mobile money transfer sector called Mpesa. Mpesa offers credit to Safaricom customers through their mobile phones. To develop good credit scoring models, there has to be a strong collaboration between qualitative and big data analytics. Big data has data that has been created in a "limited" kind of way. The customer lives in a large society, with many variables that are outside of the banking or mobile telephony world. Qualitative helps set the context of the data, which exists within the big data ecosystem, and further enriches it.

About the authors

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