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GAME CHANGERS   Ipsos

Reputation, Resiliency, and Results:
Using Trust to Unlock
the Value of Reputation

BY | Ipsos

If you are building trust, you are building reputation

Why trust? In our view, if you are building trust you are building reputation. Trust is intuitively the ideal for which companies aim and is the foundation of our approach to reputation. Companies seek to build trust with their consumers, suppliers, employees and other stakeholders, just as individuals seek to build trust in their daily relationships with family, friends, and colleagues. Why? It's simple – when you trust someone you are more likely to believe what they say, you will seek out their advice, you will value their experience and judgment, and ultimately, you will give them your confidence and your business.

The Ipsos Global Reputation Centre recently undertook a massive online study2 of the reputation of more than 100 of the world's largest companies; to examine the factors that contribute to reputational success and resiliency in the face of crisis.

Companies included in the study span wide levels of familiarity (how well people claim to know a company) and trust (see graph). Generally, you must be known to be liked. While there are outliers, familiarity is actually the greatest single indicator of trust. That is not to say that familiarity is sufficient though, there are plenty of companies that people know well but do not trust. Familiarity is the initial hurdle that companies must pass in order to appear on consumer radar screens.

How did Ipsos select the companies included in this study?

Our choices were based on several published lists of the world's largest companies. The research team then made the final choices based on country of origin, industry, and consumer facing presence in order to achieve a good mix of companies.
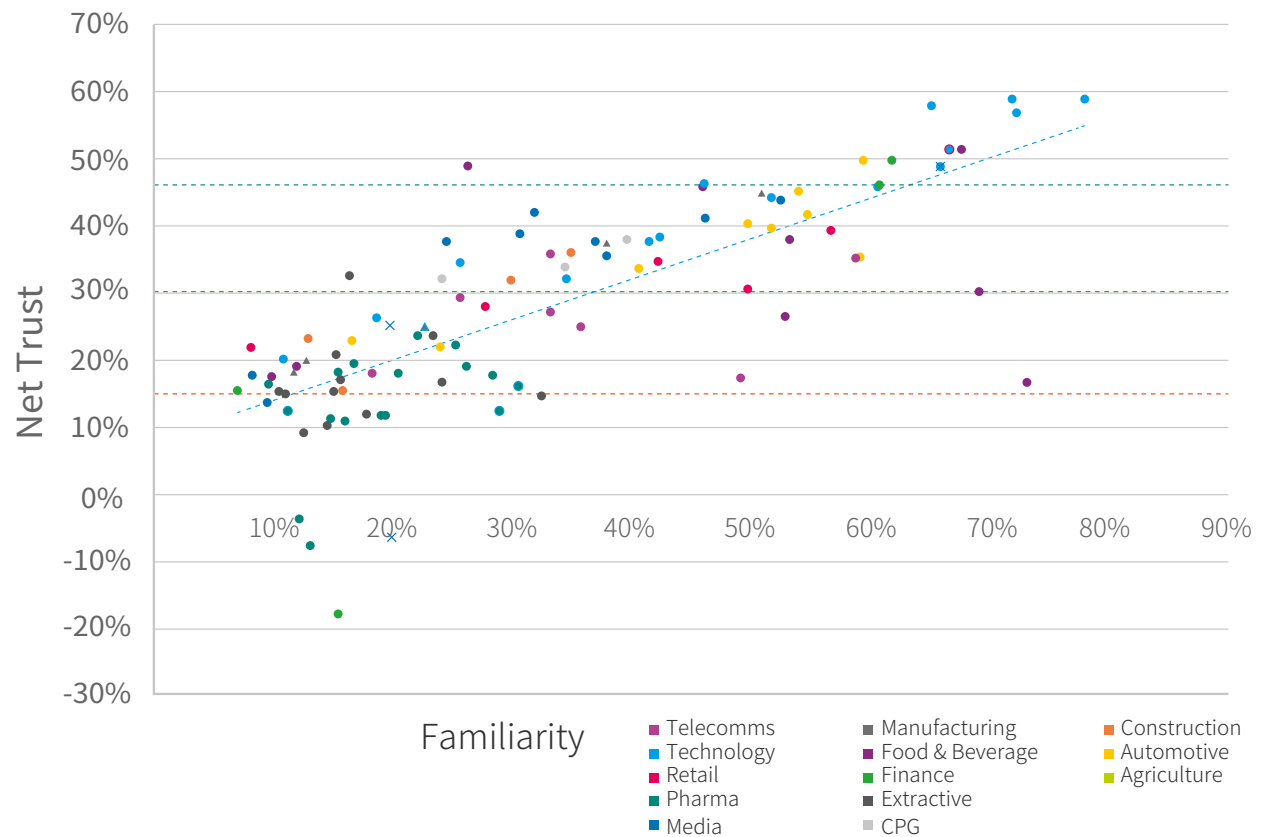
How We Ranked the Top Trusted Companies

We analysed the results of the survey by dividing companies into four basic trust tiers, ranked by their deviation from the average net trust score. Net trust scores for each company were calculated by subtracting the total distrust score from the total trust score.

Companies in the top trust tier scored a net trust score of 46 or greater (two standard deviations from the mean). While this tier is weighted toward technology companies (seven out of the 16), the remainder are a mix of retail, media, food and beverage, finance, and automotive. Companies in the top trust tier are headquartered in a variety of countries: eight in the USA, three in Japan, and one each in France, Switzerland, China, Sweden, and Korea.

Familiarity by Trust

Chart: Net Trust (y-axis, from -30% to 70%) by Familiarity (x-axis, from 10% to 90%)

Legend:
- Telecomms
- Technology
- Retail
- Pharma
- Media
- Manufacturing
- Food & Beverage
- Finance
- Extractive
- CPG
- Construction
- Automotive
- Agriculture

A Few Interesting Facts About Companies in the Top Trust Tier

The top trust tier companies are nearly all global household names, with the exception of Yili which is a food and beverage company with a strong presence in China.

Other food and beverage sector companies in the top trust tier include Danone and Nestlé, which have broad portfolios including items that are perceived as healthier choices. This may help them avoid some of the pitfalls of other food and beverage companies in the study which are primarily focused on alcoholic beverages or soft drinks.
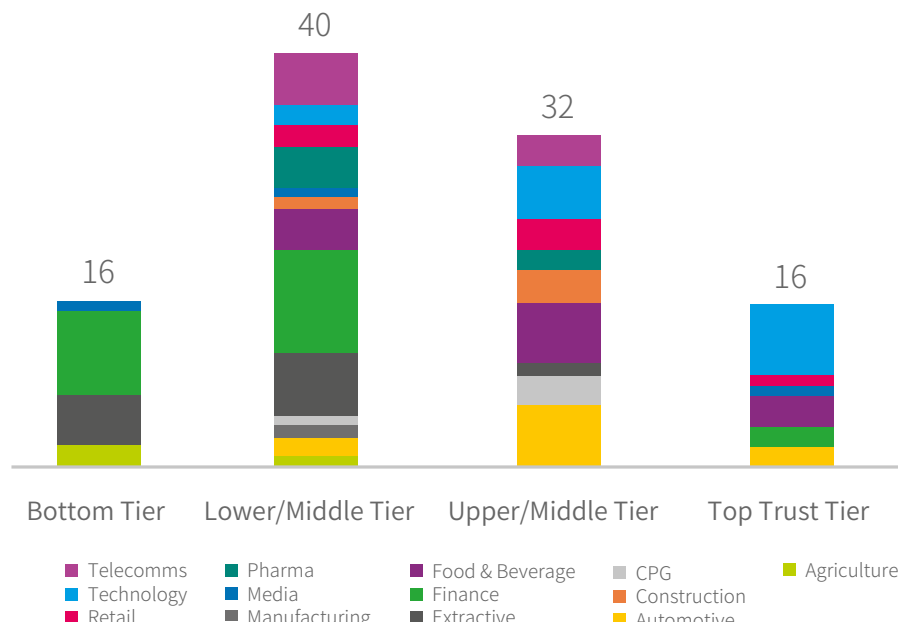
In the financial services sector, top trust tier companies include Visa and MasterCard. Earlier research we've conducted in this sector indicates that Visa and MasterCard are treated much more like consumer brands/ services than the banks which promote their cards.

Both of the automotive brands in the top trust tier (Honda and Toyota) are globally strong companies that have been touched by crisis recently (Toyota directly through unintended acceleration issues and Honda through the ongoing issues with Takata airbags), but appear to have weathered the storm quite well.

Retailer IKEA, and media company Walt Disney in the top trust tier are both companies with a strong home market identity that have been able to transfer the best aspects of their country brand into the global marketplace. Technology companies in the top trust tier are a mix of dynamic recent entrants (Amazon, Google) and established high-performance brands (Apple, Intel, Microsoft, Samsung, and Sony). Samsung in particularly should be watched closely given recent developments around product reliability and corporate governance.

Did you Know?

Ipsos Global Trust Cohorts

Bottom Tier 16
Lower/Middle Tier 40
Upper/Middle Tier 32
Top Trust Tier 16

- Telecomms
- Technology
- Retail
- Pharma
- Media
- Manufacturing
- Food & Beverage
- Finance
- Extractive
- CPG
- Construction
- Automotive
- Agriculture

At the opposite end of the spectrum are the bottom tier least trusted companies. This tier is dominated by the financial sector and extractive companies. Also in the bottom tier are a controversial media company, and two agricultural science companies (likely being impacted by controversy around GMOs).

The two middle trust tiers (lower and upper-middle) each have a high degree of industrial sector diversity. While finance companies tend to fall into the bottom and lower-middle tiers, automotive companies tend to fall into the upper-middle tier.

The strong mix of industries in the top trust tier is a good indication that all types of companies (except perhaps extractive companies) have the potential to become a top trust tier company, as long as they're willing to actively manage their reputation.

Financial Performance of the Top Trust Tier Companies

Companies who are most trusted also perform better financially. A simple stock index of companies (utilizing DJIA price quotes) by trust tier tells the story.

Top Trust Tier Companies Have a Financial Advantage

- Bottom Tier
- Lower/Middle Tier
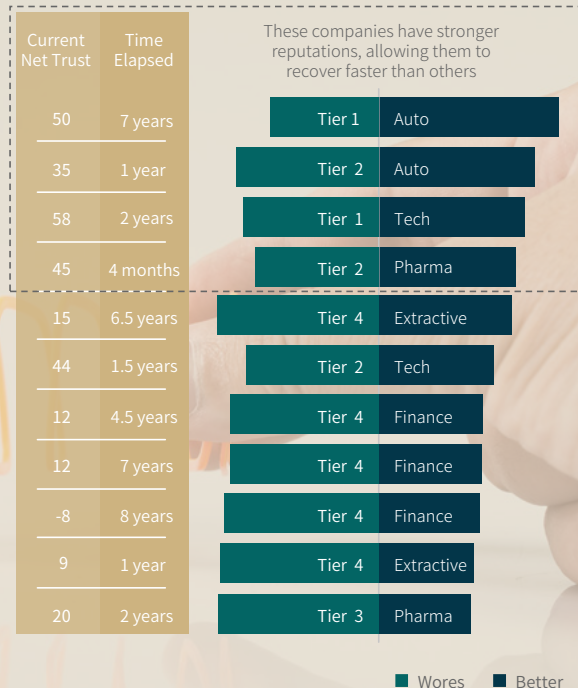- Upper/Middle Tier
- Top Trust Tier
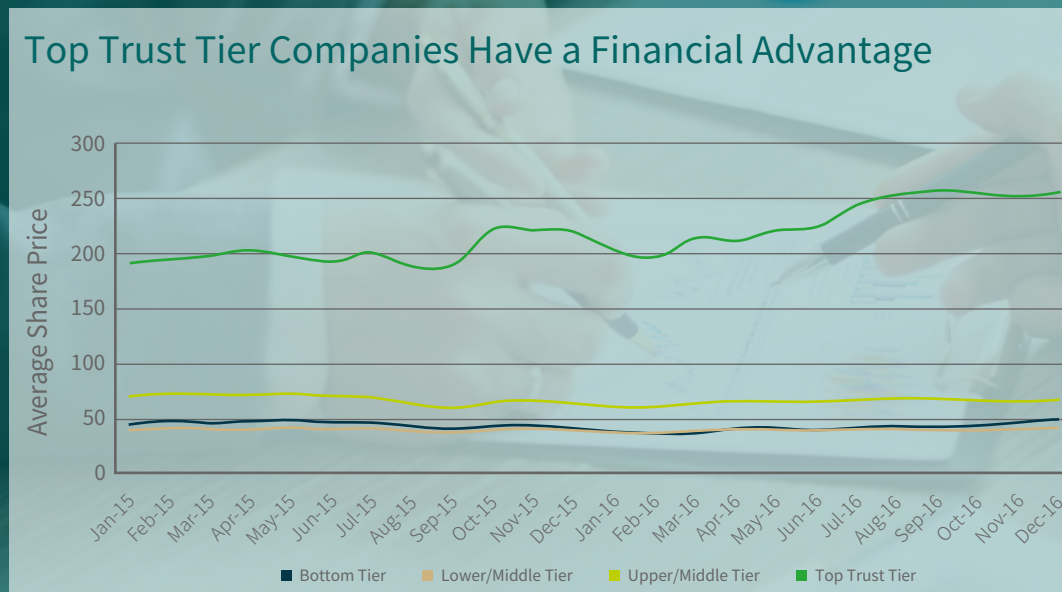
While the two middle and bottom tiers have remained essentially static from the beginning of 2015, the index price for the most trusted companies increased by 68-points, thus proving that being trusted benefits the bottom line! The relationship is not unidirectional though, as the strong performance of these companies also contributes to their strong reputation. The relationship can more correctly be seen as a positive feedback loop.

Underpinning the stock price-trust relationship are other financial statistics according to analysis of trust tiers by year-over-year changes in sales, assets, and market value. In each case, only the top trust tier companies saw positive year-over-year changes (sales +$1,196M, assets +$8.025M, and market value +$5,499M on average). All of the other trust tiers saw declines across the board for each measure.

Trust Improves Resiliency

Companies who are most trusted are more resilient in the face of crisis

In addition to greater financial performance, top trust tier companies are also more resilient in the face of crisis. Respondents were asked to rate 11 crises, and asked whether the company involved was actively making the impact of the crisis better or worse. Companies with stronger reputations (at the time of the study) were perceived to be recovering much more quickly than those with lower levels of trust.

Current Net Trust	Time Elapsed	These companies have stronger reputations, allowing them to recover faster than others	
50	7 years	Tier 1	Auto
35	1 year	Tier 2	Auto
58	2 years	Tier 1	Tech
45	4 months	Tier 2	Pharma
15	6.5 years	Tier 4	Extractive
44	1.5 years	Tier 2	Tech
12	4.5 years	Tier 4	Finance
12	7 years	Tier 4	Finance
-8	8 years	Tier 4	Finance
9	1 year	Tier 4	Extractive
20	2 years	Tier 3	Pharma

■ Wores ■ Better

What Makes Top Trust Tier Companies Different?

Providing high quality products is one of the strongest direct drivers of trust for all companies as well as the top trust tier companies

Each of the companies in the survey was tested across a broad range of image attributes which were then grouped into reputation pillars (see below). Top trust tier companies are stronger than their rivals across the full range of attributes. Determining what makes a company in the top trust tier strong is not just about overall performance, but also about how their strengths are connected to one another and used together.

The top trust tier companies are stronger in each pillar. In fact, the increase in pillar scores becomes more evident as you move up from the bottom tier companies, through the middle and into the top tier. However, even among the top trust tier companies there is a wide range of performance – especially when it comes to metrics associated with being commercially dynamic.

Reputation Pillars

Image Attributes

We work with our clients to determine a customized set of image attributes because we do not believe in a one-size-fits-all approach. However, for this study we needed to determine a set of image attributes that could apply to a wide variety of companies with various industrial and cultural backgrounds. These attributes were placed into pillars based on a driver analytics model. They are:

Commercially Dynamic

Provides high quality products or services

Is a growing and successful company

Is innovating to be successful in the future

Is able to attract top talent

Track Record

Has a strong corporate heritage

My experience of their past behavior means I expect them to do the right thing in the future

CSR

Genuinely tries to live up to the principles they communicate
Has a positive impact on society through their everyday business
Cares about the planet and our environment
Has a positive impact on the economy in the country
Has a purpose that goes beyond the normal ambitions of a company

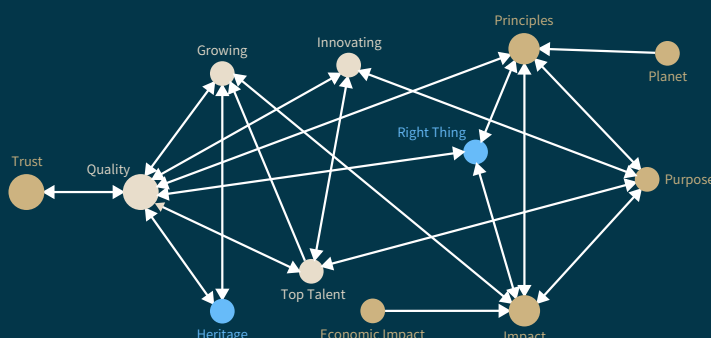# Image Pillar Range and Average by Trust Cohort
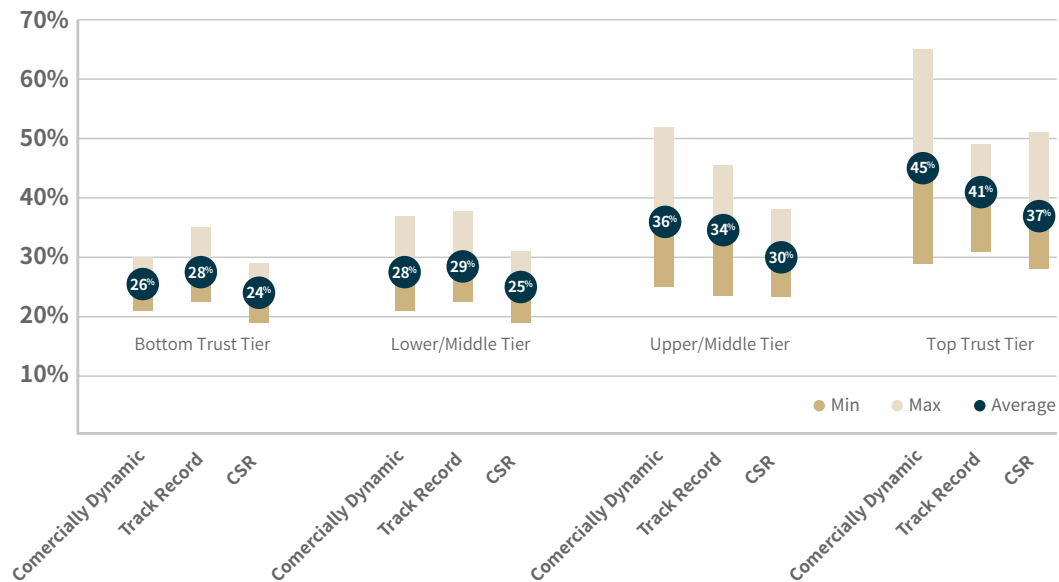
The attributes associated with being commercially dynamic (especially "high quality products"), are the strongest direct drivers of trust for all companies as well as the top trust tier companies. As Ford Motor Company used to say, "Quality is Job 1", so unsurprisingly among consumers, being good at your core business is the most direct driver of trust. Our experience shows that the importance of image metrics shift when you survey higher level audiences like government and media. Among those audiences, metrics around business management and sustainability tend to play a greater primary role.

Drivers for all Companies

Drivers for Top Trust Tier Companies
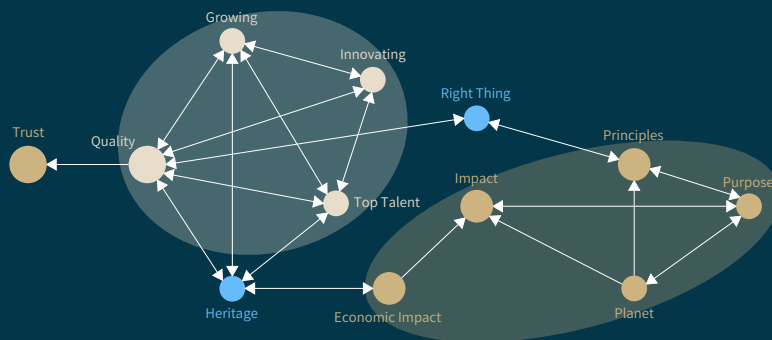
It's how the image attributes connect to one another (an analysis we conduct using Ipsos Bayes Net which is an analytical model for understanding drivers as well as interrelationships between image metrics), that show key differences for top trust tier companies versus everyone else. For companies in general, trust is primarily driven by quality and the other commercially dynamic metrics. The relationship between 'commercially dynamic' and CSR is moderated by the track record measure. In other words, for attitudes around corporate social responsibility measures like standing by their principles, economic impact, and caring about the planet to have an impact, companies must demonstrate a track record either through their history and heritage, or the perception that they can be counted on to do the right thing.

By contrast, this intervening relationship does not exist for companies in the top trust tier. Among the top trust tier companies, softer measures have a direct impact on commercially dynamic measures. This immediate pathway confers an advantage to the top trust tier companies. Coupled with stronger raw scores on the CSR pillar, top trust tier companies are able to make this advantage work harder because it is connected more solidly to their core business.

All types of companies have the potential to become a top trust tier company, as long as they're willing to put in a strong effort to manage their reputation

Average NET Trust in Companies

Global average = 31
- Less than 19 (2sd-)
- 19 to 30 (1sd-)
- 32 to 44 (1sd+)
- 45+ (2sd+)
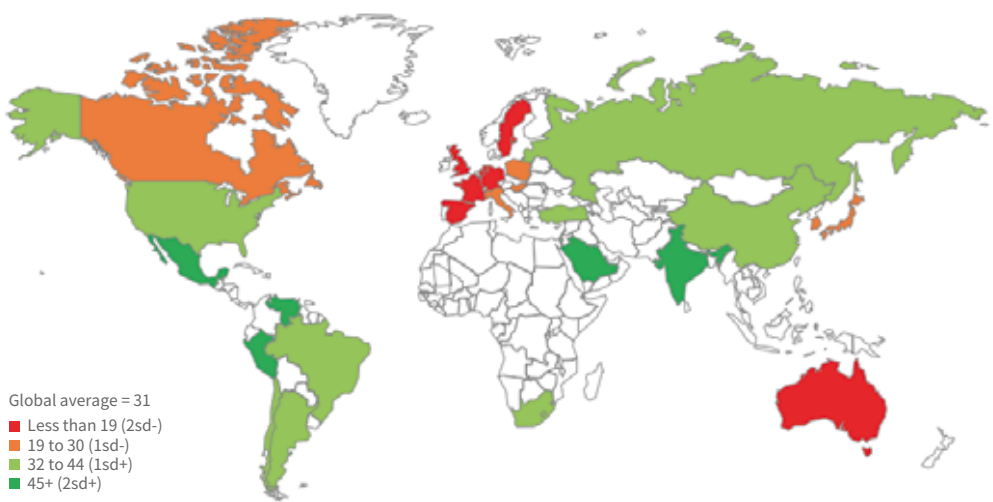
Trust Differences Around the World

Trust in companies in general varies greatly around the world, but some clear patterns are evident. Respondents in Western Europe and Australia are the least trusting of companies, followed by the rest of Europe, Canada, Korea and Japan. Developing countries, plus the United States are the most trusting of companies. Understanding the underlying levels of trust in each country can help companies to manage expectations as they seek to improve their reputation on a market-by-market basis. Engaging in programs that go beyond meeting core business objectives will be necessary in the more skeptical countries in order to differentiate oneself from the crowd.

The United States stands out as the developed market that is most trusting of companies.

Americans, according to this study, are much less skeptical of companies and their actions.

## Average Trust Ratings by Economic Confidence
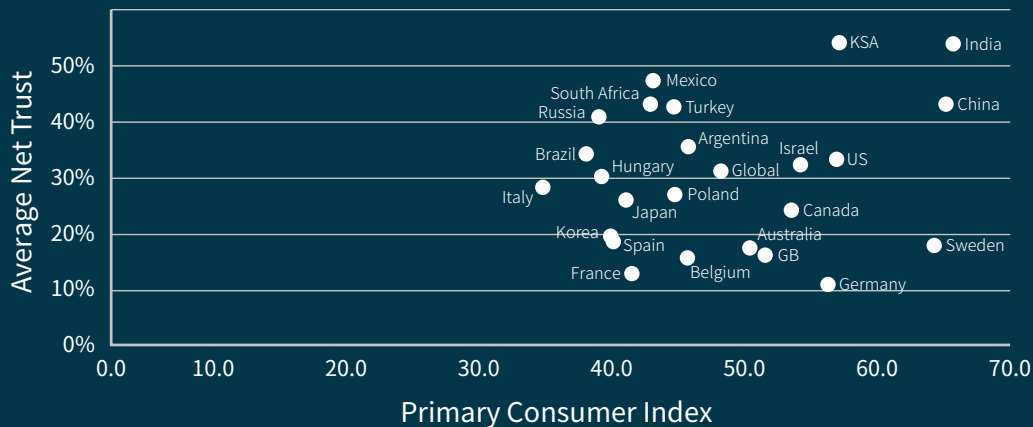
Perhaps surprisingly, trust in companies does not have a strong relationship with overall economic confidence. The graph below shows the relationship between average net trust in companies and our Primary Consumer Sentiment Index.

Companies can transcend poor trust scores even in skeptical markets

Saudi Arabia, India, and China all have very high average trust in companies and high economic confidence. However, economic confidence in Germany and Sweden is equally high but respondents in those countries give among the lowest trust scores to companies. By the same token, economic confidence in South Africa and France are very similar; but while South Africans tend to give companies the benefit of the doubt, the French are highly skeptical.

Average Net Trust Scores Among Companies in Each Tier
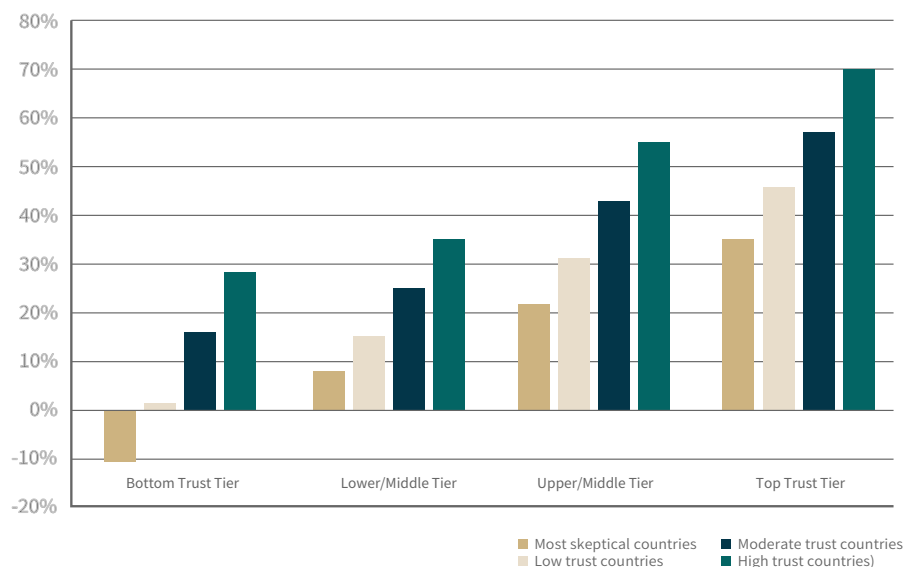
So is it possible for companies to transcend poor trust scores inherent in skeptical markets? Fortunately, the answer is yes. Top trust tier companies achieve higher scores on average in the most challenging markets, than the bottom tier can accomplish in even the most welcoming ones. And, the average difference in score between the top trust tier companies and the bottom tier is actually the greatest in the most challenging markets. Top trust tier companies are using their good reputation to unlock markets where others struggle.

	Bottom Trust Tier	Lower/Middle Tier	Upper/Middle Tier	Top Trust Tier
Most skeptical countries	-7%	8%	22%	35%
Low trust countries	2%	15%	31%	46%
Moderate trust countries	16%	25%	43%	57%
High trust countries	28%	35%	55%	70%

Legend: ■ Most skeptical countries ■ Moderate trust countries ■ Low trust countries ■ High trust countries)

The Final Word

Top trust tier companies are successfully able to unlock the value of their reputation, irrespective of economic conditions or consumer skepticism. Unlocking value allows the most trusted companies to develop and maintain a positive feedback loop to financial success. Trust enables companies to operate more efficiently and with fewer headwinds – thus increasing their likelihood of financial success. In addition, highly trusted companies are also more resilient in the face of crisis, which allows them to more quickly overcome crises and get back to running their business successfully.

The advantage of the top trust tier companies comes from their overall stronger performance across the board, as well as their ability to connect corporate social responsibility performance directly to the key driver of being commercially dynamic. Companies outside of the top trust tier can begin to unlock their reputational value by coupling strong business performance with a social conscience.

Why Does Reputation Matter?

The Ipsos Global Reputation Centre helps clients to unlock reputation value. Careful management of one's reputation is in fact a key generator of value for companies. Value is unlocked both as stored reputation equity in times of crisis as well as in creating greater business efficiency for the company through:

- REGULATORS: giving you a seat at the table when stakeholders are making decisions about your organization, legislators inclination to help or hinder you

- NGOs: propensity to work with or against you

- CONSUMERS: greater marketing efficiency, consumers' desire to buy your products and/ or services

- EMPLOYEES: the ability to attract the best employees, employee pride in working for you, employee likelihood to execute the mission and values of the company

- MEDIA: disposition to report positively or negatively about you, willingness to hear/present your side of the story

- INVESTORS: confidence to invest in you, willingness to ride out downturns

Reality check

Drive growth, by understanding the reality of how people choose brands

BY | Keith Glasspoole

The pace of technological and social change is bewilderingly fast. In the world of brand and communications, we feel this particularly keenly, with the digital revolution transforming the way that brands seek to connect with people.

At the age of 45, I am not particularly old – and yet when I embarked on my career in the mid- 1990s, "search engine optimisation" meant trying to work out why my car wouldn't start, and "social networks" meant the people I met in the pub.

So, when age-related depression threatens to set in, and I am tempted to write myself off as a dinosaur, it is comforting to remember that people and their behaviour don't change as fast as technology does.

Critically, in many categories, the role that brands play in people's lives doesn't change. For example, back in the mid-1990s, I would not have had e-commerce apps installed on my smartphone, allowing me to order my groceries at the touch of a button. Indeed, I wouldn't have known what you meant by "app" or "smartphone". However, when my groceries reached the kitchen, I was still cooking them and eating them the same way then as I do now. (A slightly better quality chef these days, perhaps).

So, whilst grocery brands have a lot of new ways in which to gain my attention, and influence my choice – the underlying factors driving my choice have not changed. I know that particular brand of brown sauce still tastes great on a bacon sandwich, and that experience will stay lodged in my mental network for that brand, regardless of the fact that I can order it online these days. As long as it remains easy for me to buy, by whatever means, then I will buy it again.

I don't necessarily "love" that brand of brown sauce, and I certainly don't want to "engage" with it on social media – but I do love the way it tastes on a bacon sandwich, so I will buy it again. To put that in more academic language – I will continue to make a habitual brand choice of brown sauce, based on my established mental network. I will do this to the extent that I will not give it a moment's thought - and other brands of brown sauce will have to work pretty hard to disrupt that process.

By basing your brand evaluation around people, and the reality of how they choose brands – which is still governed by "analogue" mental networks, even if those networks can be digitally disrupted these days – then you can find the best strategy for growth.

Brand Value Creator (BVC), the Ipsos approach to measuring brand equity, is based on these principles. With calculations based around each individual respondent, it is rooted in reality for individual people at the moment of assessment. This is reflected in the market-leading validations it achieves – no competitor approach reflects market share, or potential for growth, better. So, harnessing the insight that comes from BVC will help drive brand growth.

BVC studies have been running for 10 years. This has yielded an extensive database from which we can mine learning to inform brand growth strategies. The database reflects the way that people make choices between brands, and how this has been evolving – gradually – over time.

> By basing your brand evaluation around people, and the reality of how they choose brands – which is still governed by "analogue" mental networks, even if those networks can be digitally disrupted these days – then you can find the best strategy for growth.
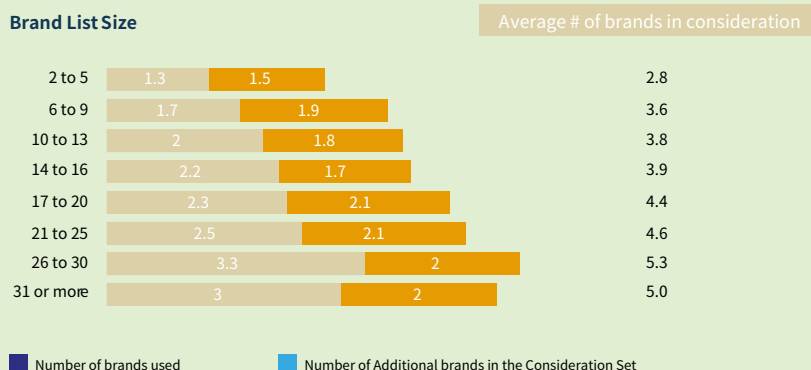
The first step towards brand growth is to be salient – to come readily to mind in the moments that matter, for more people, more often. Brands which are salient will make it into an individual person's consideration set. Naturally, the number of brands considered will be influenced by the number of brands available – on average, the busier and more cluttered the market, the larger the consideration set. Not that much larger, however. Where the number of brands in a category is less than 10, the average consideration set is around 3. When it is over 10, it goes up – but only to between 4.5 and 5 on average. (See Figure 1)

Brand List Size

Brand List Size			Average # of brands in consideration
2 to 5	1.3	1.5	2.8
6 to 9	1.7	1.9	3.6
10 to 13	2	1.8	3.8
14 to 16	2.2	1.7	3.9
17 to 20	2.3	2.1	4.4
21 to 25	2.5	2.1	4.6
26 to 30	3.3	2	5.3
31 or more	3	2	5.0

■ Number of brands used ■ Number of Additional brands in the Consideration Set

Figure 1

*Source: BVC Database 2017

The amount of stuff fighting for our attention increases fast – our capacity to retain that stuff in our heads does not.

How about our ever-increasing consumption of media, and the blurring of boundaries between categories? Both of these things could lead to more brands being salient in any given category context. There is some evidence for this – for example, if we look at all packaged goods brands, the size of the average consideration set has gone up – albeit, not by much – from around 5 a few years ago, to around 6 now.

So, the battle for saliency is hard fought, and not getting any easier. Brands are better equipped to win it when they have strong mental networks – the associations which will make the brand spring effortlessly and automatically to mind when someone is next making a purchase in the category. (Such as my bacon sandwich). Since our minds can't or won't work hard enough to maintain such associations for all the brands we could potentially choose, our consideration sets are remarkably restricted, even when the range of choice is wide and getting wider.

**Put simply – I don't feel close to that brand of brown sauce.
But I do feel closer to that brand than to any other.
This helps that brand to have a higher perceived value
for me at the moment of choice – it ranks first.**

BVC will help you understand where lack of saliency is the key challenge for your brand. Exploration of the mental networks around the category will help you identify opportunities for your brand to become more distinctive.

Once brands are salient, having successfully jostled for space within our limited mental networks, the next step is to be the **first choice** - to have the highest perceived value at the moment of choice, compared with alternatives (which might include those which have achieved attention saliency at the last moment, for example by having an eye catching promotion at point of sale).

BVC assesses a brand's ability to be first choice using two metrics – performance and closeness. "Performance", simply put, is whether a brand meets your needs – whether it does what you need it to do. Typically, performance ratings will link back to the functional purpose of the brand, or more likely the category: does it make your clothes clean, your breath fresh, etc. Such associations are often prices of entry – if you don't have them, you won't be considered – but genuine superiority in functional performance tends to be fleeting and quickly copied.

"Closeness" assesses the more emotional connection people have with brands. We must be realistic, and concede that, with a few famous exceptions, people generally don't have a strong emotional connection to brands.

I like brown sauce, but I don't feel the need to "engage" with the brand beyond putting it on my bacon sandwich. However, there is some kind of connection there – otherwise why will I automatically, and without thinking, buy that brand rather than any other, given that other brands will taste much the same?

Put simply – I don't feel close to that brand of brown sauce. But I do feel closer to that brand than to any other. This helps that brand to have a higher perceived value for me at the moment of choice – it ranks first.

Our database provides the evidence – closeness does discriminate between brands, and does so more than performance. The distribution of average performance scores is relatively small compared to closeness, and the average score higher. (See Figure 2)

Performance distribution

Closeness distribution

*Source: BVC Database 2017

Figure 2
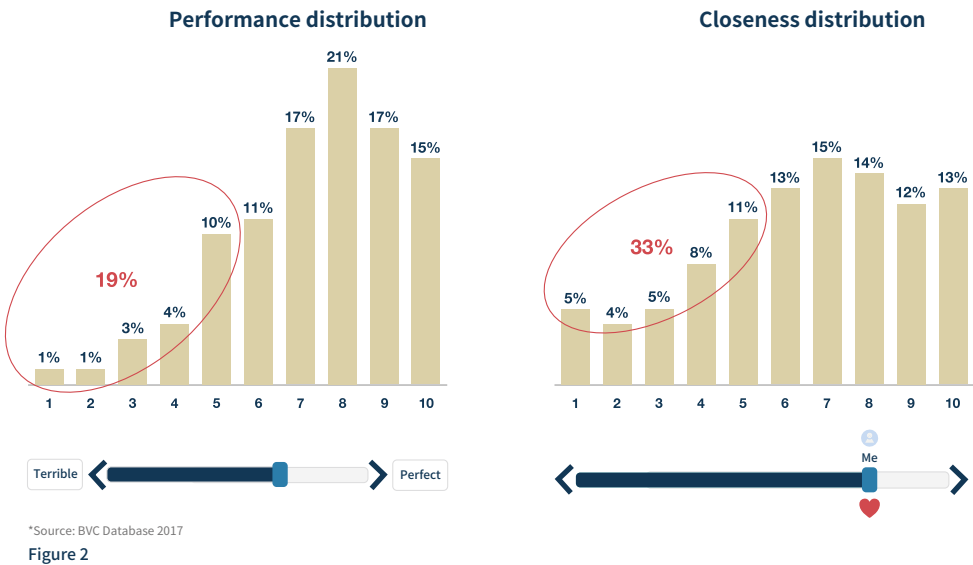
In addition, we can isolate the factors which help make brands the first choice – this is much more frequently driven by higher closeness, than by higher performance. So, it is hard to create an emotional connection – but the rewards for doing so are high. Both performance and closeness help you achieve a higher ranking, but closeness is more likely to push you into being **ranked first**.

Analysis of brand associations alongside BVC can help you identify what is most likely to drive stronger connections for your brand, as well as their potential to make your brand distinctive.

Such analysis is not just an academic exercise. When we combine salience, performance and closeness, and factor in rankings at respondent level, we arrive at an overall measure of brand desire. Brand desire correlates strongly with share of wallet – i.e. the stronger your desire for a brand, the more often you say you buy it – an observation which holds true across a wide range of product and service categories, and results in the direct relationship we see between brand desire and market share. (See Figure 3)

Relationship: Brand Desire and % Share of Wallet

Low Brand Desire **4.15%**

Medium Brand Desire **28.85%**

High Brand Desire **56.85%**

People with high desire for a brand give more of their spend in that category to that brand

This is particularly the case in service industries, which benefit the most from strong brand relationships

Level of Brand Desire	FMCG	Alcoholic Beverages	Retail	Financial	Automotive	Restaurant	Services
	Share of Wallet (%)						
Low	4	3	4	4	4	4	4
Medium	28	30	31	29	29	29	30
High	57	58	54	57	53	62	70

Figure 3

*Source: BVC Database 2017

Market Effects by region

	Africa	Asia	Australia	Eastern Europe	Japan	Latin America	Middle East	North America	Western Europe
Accessibility	31%	26%	23%	27%	23%	29%	26%	26%	23%
Product Range	18%	24%	25%	24%	31%	24%	27%	25%	26%
Price	10%	12%	13%	12%	11%	12%	12%	11%	11%
Promotion	10%	12%	7%	12%	16%	12%	11%	12%	13%

Table 1

*Source BVC Database

Where brand desire outstrips share of wallet, share of wallet is likely to follow, and the brand will grow.

We also know that if a brand "punches above its weight" for brand desire – i.e. the desire is higher than its share of wallet would lead us to expect – such brands tend to grow more than others, and to be insulated against market effects e.g. people might be prepared to look somewhere else for that brand, if they can't find it in the first place where they shop.

Comparison within the BVC database helps you understand whether your brand has as much desire as it should, relative to its size. Analysis can lead you to the best ways to maximise the growth potential, or minimise losses.

Of course, even when a brand is salient, and has formed a strong connection through performance and closeness, it isn't going to be purchased every time.

Market effects can get in the way. These are the factors which make it easy for us to choose the brand we desire, or which might get in the way and push us to an alternative choice.

Again, our databases help us understand whether particular market effects are greater or smaller than we might expect for a brand of a particular size – and whether the barriers are what you think they are. For example, a knee-jerk reaction to falling sales volume might be a price cut or a sales promotion. However, if we look at our database as a whole, price, or lack of promotions, are not the most common barriers. You're more likely to have a problem with accessibility or range – people can't find your brand, or not in the format they want.

Successfully addressing a distribution, in-store visibility or range optimisation issue improves your chances of driving profitable growth – and this is true wherever you are in the world, not only in developing markets where distribution might be more of a practical challenge, but in more mature markets too. (See Table 1)
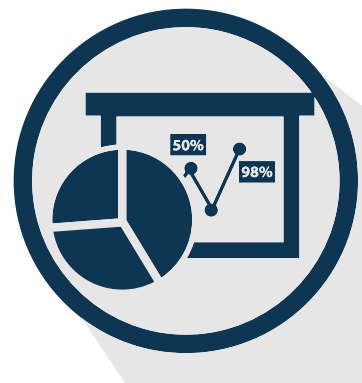
In conclusion – brand equity measurement through BVC is not just an academic exercise. When properly analysed, and acted upon, it will help you identify and pursue the best path to profitable growth – to be bought by more people, more often, more easily.

As an example – a confectionery brand in a developing market identified, via BVC, that it was losing market share because of price, range and distribution. It increased distribution of a smaller format at a lower price point – and sales grew by over 30%.

In conclusion – brand equity measurement through BVC is not just an academic exercise. When properly analysed, and acted upon, it will help you identify and pursue the best path to profitable growth – to be bought by more people, more often, more easily.

The Age of the Algorithm

BY | Andrew Green and Mario Paic

Introduction

An algorithm is a process or set of rules followed in calculations or other problem-solving operations, especially by a computer. They are all-pervasive in the digital world, determining, for example, whether banks will lend or employers will pick people for interview.

In the online world, Google 担 PageRank algorithm determines how websites in the company's search engine results are ranked. Meanwhile, Facebook's News Feed algorithm controls who sees what within the social network.

In the Audience Measurement area, algorithms are commonly used in schedule analysis software, employed by media planners, buyers and sellers to estimate the number of people likely to see or hear an advertising message.

They are also central to more advanced statistical techniques being used increasingly in audience measurement including data ascription, data fusion and audience modelling.

Survey data alone is no longer enough to capture the complexities of a fast-changing media environment, with more content choices and more distribution platforms from which to access them. We are demanding more and more from our respondents at a time when many are becoming less willing to participate in long or boring surveys. Employing statistical techniques allows us to collect less data from individuals and to tolerate less precision in their answers.

The design and execution of these statistical methods demands a high level of expertise and skill. For users of research data, they have become increasingly critical in the race to keep abreast of changing audience characteristics and habits.

" Statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write."

H.G. Wells

The Context

We don't need to extract all the blood from somebody in order to determine their blood type. In the same way, we can learn a lot from taking a sample of a population and questioning them or tracking their behaviour. Good market research practice demands that a sample should represent as much of the variability in the population being measured as possible to be effective.

In the audience measurement domain, we know that gender, age, education level, occupation, household size, income levels and the region where people live will all affect the probability that they read certain newspapers or magazines, watch given programmes or listen to the radio. So these characteristics must be faithfully reflected in the composition of any sample purporting to measure media usage.

Non-demographic factors can be important too. For example, when asking about digital behaviour, it is important to properly represent the number and range of media-receiving devices (PCs, tablets, Smartphones etc.) owned by households, which are likely to be associated with usage levels.

But while surveys have proven very valuable to companies and governments over the years, they have their limitations. One limitation is that they can never be perfectly representative of a population, unless we talk to everybody and unless they all answer with total honesty and perfect recall.

Statistical weighting is often used in market research to correct these sorts of imbalances.

The more important limitation for the purposes of this paper is how we extract as much information as possible from our respondents. There are natural limits to how much time people are prepared to spend answering questions. Given that few are blessed with perfect recall, we also have to be careful to word questions clearly and not to ask for information it is unreasonable to expect people to remember.

The challenge today is that clients want us to collect more information, not less.

Where Statistical Adjustment Can Help

Marketers want to know everything they can about their target consumer in order to maximise the return on their research investment:

- Who they are (demographics, geo-demographics, psychographics etc.)

- What they think about brands in the category they are asking about

- How they behave (purchasing levels, brand choice etc.)

- What they intend to purchase in the future

Those planning and buying advertising campaigns need to uncover the best ways of reaching and influencing their target audiences:

Which media do they come into contact with at different times of day (TV programmes, newspapers, magazines, radio stations, web sites, apps, poster panels···)?	Which media are they more or less attentive to or engaged with at different times of day?	When is the best time to reach people with an advertising message (message receptiveness, when are they in the market to buy···)?

But no individual respondent will agree to answer such a large number of questions. And many of the questions will be impossible to answer accurately. There are two closely related statistical techniques used to help address this: data ascription and data fusion.

" An algorithm must be seen to be believed."

Donald Ervin Knuth

Data Ascription

Where answers to a survey are missing or incomplete, it is possible to infer what those answers would be by looking at answers given by similar survey respondents. These responses may be missing by accident (people forgot or omitted to answer them) or by design (where we had too many questions to ask, so split the questionnaire between different sub-samples).

In this case, we design two (or more) questionnaires, each sharing certain core questions in common, but with separate sets of questions on other topics. These questionnaires can either be served simultaneously to separate but similar samples of people or they could be asked at different times (e.g. Questionnaire A can be asked for a month, then Questionnaire B for a month and so on).

The assumption is that we can then 'match' people answering the different questionnaires using the known demographic and other characteristics of each sample member, as well as the answers they give to other common questions.

We then take answers to the first set of questions and ascribe them to matching respondents who answered the second set of questions and vice versa. This gives us a larger database of answers than we could have had with a single sample of people.

Examples of Data Ascription

In **Brazil**, the Ipsos EGM survey has a lengthy questionnaire administered face-to-face in all the major regions of the country. There are two versions of the questionnaire, with media and demographic questions identical on both, but different questions asked about usage of various brands and products, as well as about attitudes. Each version of the questionnaire is served in alternate half years, allowing us to merge answers to all the questions into a single database for 12 month periods.

In **Australia**, our emma (Enhanced Media Metrics Australia) study measures both media consumption and product usage. Because there are a large number of product categories covered, all participants in the study are asked about top line product category usage (e.g. do they drive a car? what kinds of food and beverages do they consume?).

Two matched samples are each then asked detailed brand questions about half of the product categories. The responses from each half of the sample are then ascribed back to the other half of the sample, producing a final integrated dataset where we have detailed brand information for the entire sample.
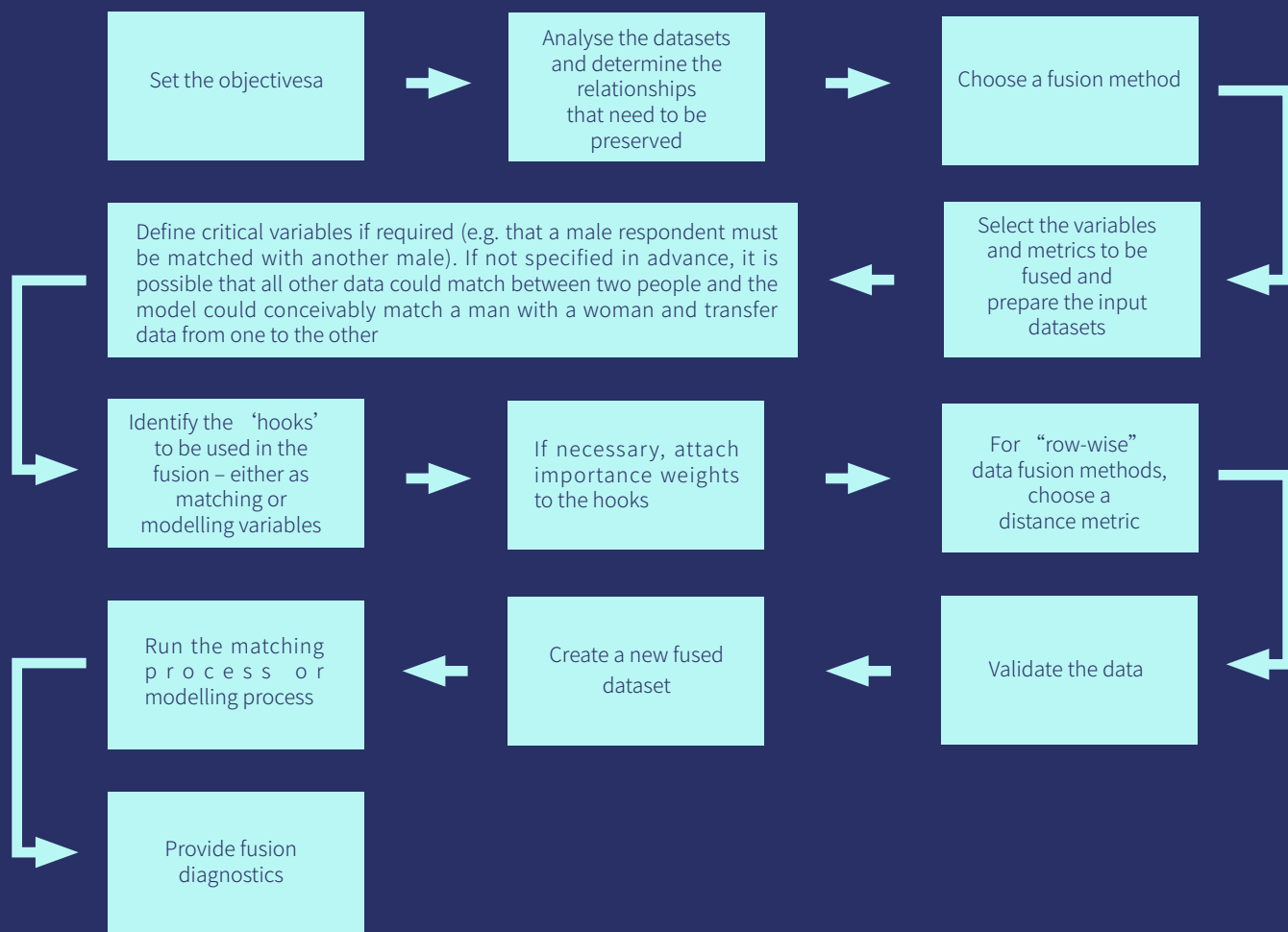
Data Fusion

A related technique is data fusion of two or more separate surveys. In this case, a survey designed for one purpose is joined with a survey carried out for a different purpose – as long as there is sufficient information common between both studies for survey participants to be matched. This generates what looks like a single-source database containing all the previously separate information.

Key to a fusion are the "hooks" common to the surveys being linked, designed to connect respondents in one survey with those from another (known as 'donor' and 'recipient' respondents, because data from one respondent will eventually be 'donated' to a matching respondent from another survey).

Obvious questions likely to be asked in both surveys include gender, age, education level and the region lived in. The fusion process seeks matches on these and other criteria – ideally we will then be able to match (for example) young, well-educated males living in the South-East on one survey to other young educated males in the same region on another survey.

Fusion is not a single technique – different approaches can be taken depending on the objectives. The principles for any approach are similar however and follow these general steps:

```
┌──────────────────┐     ┌──────────────────┐     ┌──────────────────┐
│ Set the          │ →   │ Analyse the      │ →   │ Choose a fusion  │
│ objectivesa      │     │ datasets and     │     │ method           │
│                  │     │ determine the    │     │                  │
│                  │     │ relationships    │     │                  │
│                  │     │ that need to be  │     │                  │
│                  │     │ preserved        │     │                  │
└──────────────────┘     └──────────────────┘     └──────────────────┘
```

Define critical variables if required (e.g. that a male respondent must be matched with another male). If not specified in advance, it is possible that all other data could match between two people and the model could conceivably match a man with a woman and transfer data from one to the other

Select the variables and metrics to be fused and prepare the input datasets

Identify the 'hooks' to be used in the fusion – either as matching or modelling variables

If necessary, attach importance weights to the hooks

For "row-wise" data fusion methods, choose a distance metric

Run the matching process or modelling process

Create a new fused dataset

Validate the data

Provide fusion diagnostics

Examples of Data Fusion

In **Great Britain**, Ipsos Connect has designed a method for combining two sets of audience data – AMP (which collects readership information for newspapers and magazines) and UKOM (which tracks audiences to websites and apps).

Adding to the complexity of the fusion design was a requirement that each of the separate studies 'preserved' their individual audience estimates. It also needed to bring in cross-platform behavioural insights gleaned from a sub-set of individuals from the AMP study who had installed passive data capture software on their digital devices (in order to accurately measure reading across all the platforms where newspaper and magazine content can be found).

In **Australia**, Ipsos Connect has similarly built a data fusion approach which integrates outputs from the emma survey (which surveys media usage) with online audience information from a separate panel to create total audience estimates by platform for individual newspapers and magazines.

The data integration process developed involves a constrained[1] fusion methodology between the two data sources. Information included on both sources includes demographic, geographic and internet activity variables to produce the optimum solution.

[1] A detailed description of the various fusion techniques is beyond the scope of this paper, but options include 'constrained' or 'unconstrained' fusion (taking decisions on any survey data which must be preserved in the final results) and whether we use a 'row-wise' or column-wise' approach (different methods of handling the datasets).

Audience Modelling

Audience modelling is another weapon in our armoury. The idea is to take known information which can help predict the behaviour we want to measure and to organise it into a process which delivers credible results.

There are at least three reasons why we might want to use it to enhance our survey data:

To increase the scope of our survey coverage. For example, on a readership survey, we can increase the number of titles covered by including those far too small to register on a sample-based survey alone.

To increase the granularity of our reporting. Reporting frequency can be increased, as it will no longer be constrained by the need to build a large enough sample for robust reporting – instead it is limited by the reporting frequency of the model input data (such as circulation or sales information).

To improve the speed of reporting. A model does not depend on waiting for survey data to be collected and processed, it can be published far more quickly.

Examples of Audience Modelling

In **Australia**, we were faced with the challenge of providing robust readership estimates for more than 400 regional, local and community titles, including many selling fewer than 5,000 copies per issue. To obtain statistically valid readership estimates from a sample would have required unfeasibly large numbers of respondents to be polled.

Having noted previous work demonstrating the close correlation between newspaper sales (circulation) and readership levels, we built a model incorporating circulation and circulation splits across newspaper distribution areas, combined with the demographic profiles of the same distribution areas and information about the titles themselves.

In **Belgium**, new modelling techniques developed by Ipsos are helping measurement body CIM (Centre d'Information sur les Médias) to create the world's first daily audience data for newspapers. The model is fed by a readership survey, alongside a daily SMS panel and daily sales data from publishers, which are then tied together to create dayby- day readership information for newspapers and specific issue readership for magazines.

In the **UK**, "multi-sensor" tracking devices are used on our Route Out-of-Home study to track the travel behaviour and movements of a large sample of people over two-week periods. These data are combined with information on traffic and pedestrian flows taken from local authorities, as well as detailed location information for every advertising panel in the country. From all this, we are able to generate estimates of the number and profile of people passing by any of these panels which is used to plan and buy space in the medium.

" An algorithm is like a recipe."

Waseem Latif

Conclusion

The digital revolution means advertisers and media companies need more information than ever before on media usage.

Yet people are less willing than they have been in the past to participate in surveys and, even when they can be persuaded to do so, want to be engaged rather than bored.

This conundrum of needing more information while finding it harder to collect from surveys alone is likely to get harder rather than easier as time passes.

In the audience measurement domain…

Techniques like data ascription, data fusion and audience modelling are allowing us to collect and report more and better data, enabling us to keep pace with increasingly complex client needs.

The practical application of data science demands a high level of skill and expertise, as well as experience – many of the decisions and choices made in building fusions and ascriptions, for example, are not black and white, demanding judgement and a deep knowledge of the context.

We believe it will play a growing role in the processing of audience measurement data.

" Statistics is, or should be, about scientific investigation and how to do it better.."

George EP Box

調查 Survey

觀点 POV

新聞 News

Ipsos Shenzhen Office Set up

June 8, 2017, Ipsos Shenzhen Office was set up!

Ipsos Shenzhen Office held an inauguration ceremony at 9:28 am. The opening party was launched at 5 pm, during which Mr. Lifeng Liu, Chairman and CEO of Ipsos China and Mr. Kelvin Chen, head of the Shenzhen Office, delivered a speech and exchanged with the audience in pleasant atmosphere.

Lifeng stated: Over the past ten years, Ipsos has provided services to more and more Chinese enterprises that accounted for an increasingly high share in the business. Among these enterprises, many are renowned ones from Shenzhen. To better serve domestic customers and help Chinese brands go global, Ipsos set up its Shenzhen Office.

Kelvin Chen, head of Shenzhen Office, briefed the participants on the business segments and important products of Ipsos in Shenzhen. In Shenzhen, Ipsos will focus on providing services to five sectors: technology, pan-entertainment, big health, new finance, and new retail. In addition to previous services, Ipsos will focus on promoting customer experience research (ExLab) and customer voice management platform (EFM). At the same time, based on existing big data products, it provides customers with business district scanning, big data survey platform, Internet advertising monitoring, e-commerce decision-making platform and other services.

Then, Senior Research Director, Brand and Media Research expert Mr. Tonnies Feng announced the opening of the party. All the guests and media on site toasted Ipsos and celebrated Shenzhen Office to embark on a new journey.

Despite the extensive market in Shenzhen, and the numerous well-known and emerging enterprises, there are few internationally specialized research institutions. For those emerging and fast-growing enterprises, how to accurately grasp the trend of the market and understand the consumer psychology has become a required course for them to cope with the enormous competitive pressure.

Entering Shenzhen, Ipsos will help these companies collect information, get insight into market potential, predict market trends, understand consumers, enhance their user experience, and build a healthy brand image. We will carry forward our innovative spirit, give full play to our expertise in our sincere service to and progress with our customers!

Jingping Zheng and Zhicai Ye from National Bureau of Statistics and Industry Association Visited Ipsos
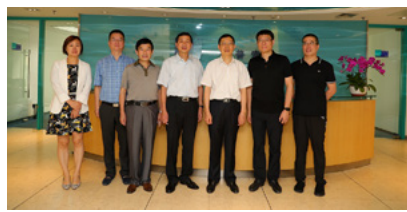
On the morning of June 21, Jingping Zheng, Deputy Director of the National Bureau of Statistics and President of Chinese Association of Market Information and Research, and Zhicai Ye, President of China Statistics Press, Vice President and Secretary General of Industry Association, visited Ipsos. Chairman and CEO of Ipsos China Lifeng Liu, Vice President Wenhua Wang, and head of Data Collection Division Junping Lu received the leaders and exchanged views with them.

President Jingping Zheng congratulated Ipsos on growing up into one of China's largest research companies in just 15 years, and wished Ipsos even greater achievements in finance, IT, healthcare, FMCG, automotive, real estate, pan-entertainment, etc. Zheng pointed out that China's social development and economic operation posed high demand for market research companies, and that as China was also vigorously promoting the application of data, there were considerable opportunities for the development of research companies. Then Mr. Zheng expressed his hope for Ipsos and all other market research companies to adhere to national policies when seeking for their own growth, to make social development and political stability as an important guiding principle, and to maintain a sound brand image. All these companies should closely follow the trend of big data, seek positive and healthy development, and help more Chinese enterprises to tell good stories, be at home or abroad.

At the seminar, Mr. Ye said that through the visit and exchanges, he learned about the development and operation of member enterprises, and was excited to see the passion and confidence in this sector. He was convinced that market research could be applied to more and more Chinese enterprises to boost their development.

At the meeting, Lifeng also suggested that Chinese Association of Market Information and Research could be the bridge between market research companies and more enterprises, encourage the adoption of market research, especially by those going global, in decision making, and enable greater role of market research in national economy and the "One Belt and One Road".

The seminar focused on industry development and the discussion went on in a harmonious atmosphere. Laicheng Zhang from Secretariat of Chinese Association of Market Information and Research, and Lu Peng, Ipsos Marketing Director also attended the seminar.

Last but not least, Lifeng said that under the leadership of industry associations, Ipsos would continue to work hard, support the work of industry associations, carry on its effort of innovation, and optimize its insight and decision-making advisory services to more and more Chinese and foreign enterprises.

Ipsos and Rehau-Blum Working Together to Carry out Survey among China's Middle Class and Explore the Development Trend of Household Consumption Concept

On June 1, 2017, Blum together with Rehau commissioned Ipsos to launch the China Dream Home 2025 Middle Class Survey. Mr. Alick Zhou, President of Ipsos China, and Mr. Duncan Fan, Research Director, attended the signing ceremony and gave a detailed presentation on how to carry out the Survey.

As the position in the world economic system continues to rise, China has become an important market in the global sales strategy. At the same time, China's market potential is huge and distinctive. The rapid development of the Internet has given rise to China's unique Internet economy. The new generation of consumers has increased access to information, and the importance of social media marketing has become increasingly prominent. With the maturing of the middle-class consumer groups, China's kitchen and furniture markets will shift from industrial product-driven to consumer-driven. This means that brands and furniture makers must accurately understand customers' needs and habits to keep pace with them.

Therefore, Blum as a world-famous kitchen and furniture fittings supplier together with Rehau, the world's leading innovative technology developer and manufacturer of polymer products, commissioned Ipsos to carry out a survey among china's middle class and explore the development trend of household consumption concept.

This research will be focused on the "sustainable development". With a deep understanding of Chinese consumers in change, Rehau-Blum will publish data to scientific research institutions after completion of the research, and give back some value to the society and related fields.

The research content involves both macroscopic and microscopic aspects to investigate consumers' attitudes towards life and consumption, including consumers' view of social hot spots and the economy, lifestyle, family life, cooking and kitchen, etc.

The research, which began in June, continues for 12 months, aiming to better understand Chinese consumers and their living environment, and to create a friendly and safe environment for Chinese people to make their home life better and healthier, so that the sustainable home life concept will get a long-term development.

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