

sellforte

How to measure your marketing ROI when you have

BIG DATA

The ultimate
ROMI modeling
guide for data-
driven marketing
professionals



www.sellforte.com

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WHY WE'RE HERE...

If you're here it is probably because you are a marketing professional working for a large company with A LOT of data.

Marketing data, sales data and transaction data — all at your fingertips.

And you're excited, because data IS exciting and it could be the key to better performance for you, your department and your company as a whole.

Except for one problem... You haven't got a clue what to do with it. Not really.

Well, you're not alone.

Data, and specifically big data, is an amazing goldmine of information, a huge and wondrous opportunity to understand your company and your customers more, to make insightful decisions and, ultimately, improve your bottom line.

It's also a complete headache.

Yep, we said it.

While there is a whole load of insight locked up in it, getting it out, especially in data sets of these sizes is anything but simple.

In fact, if you're doing it in a truly worthwhile way, it's an extremely complicated thing to do. You have to take into account various media and sales channels, overlapping campaigns and external factors that are all affecting the outcome. And isolating each factor's impact requires world-class analytical expertise, as well as other migraine-inducing stuff (that's right, we've evolved from the simple headache now) such as Big Data, AI and Bayesian modelling.

And most marketers, quite rightly, just want to concentrate on marketing.

That said, the time is fast approaching where you or your company won't be able to afford to not be doing it, because the companies that are will be out-marketing and, ultimately, outselling you by reshaping the role of marketing from a support function into a strategic business driver.

And isn't that where every marketer wants to be?

But, don't fear, because in this guide we are going to look at the best method of ROMI analysis for big data sets, explaining what it is, how it works, the benefits, examples of it in action and some tips for getting started.

INTRODUCING MMM, THE BEST ROMI ANALYSIS METHOD FOR YOU

Ok, so there are multiple ways to do ROMI analysis – from the single (and simple) attribution method, which allows you to do basic analysis for basic insight, to test and control groups, in which you try things out on a subgroup of customers to create a base against which you can analyse.

These all have their pros and their place but none of these are powerful enough to tackle big data.

Well, not if you want to unlock it's true potential that is...

For this, you need Marketing Mix Modelling (also known as MMM).

What is it?

Before we go into that, just a quick reminder of what your marketing mix actually is...

Your marketing mix is the cross-section between product, place, price and promotion.

Product = What you're selling

Place = Where you are going to sell it

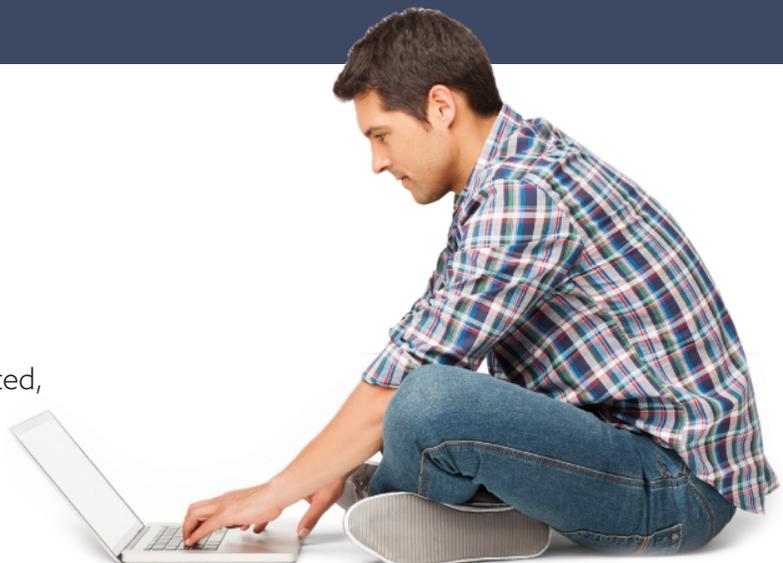
Price = The amount of money you can (and should) sell it for

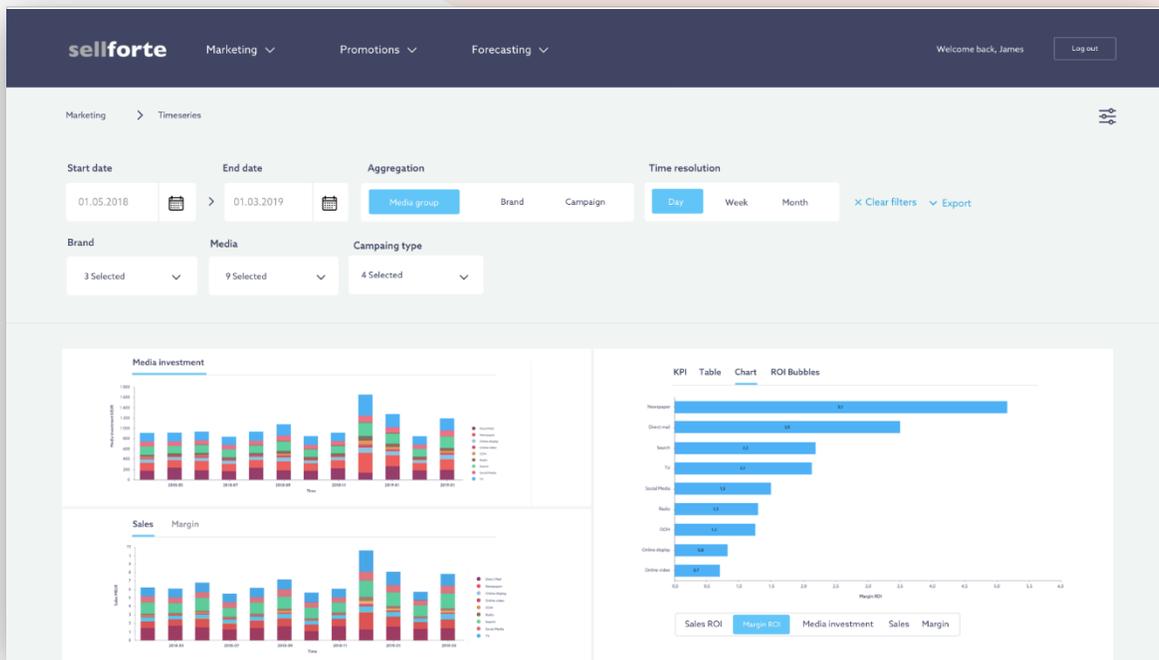
Promotion = How you are going to get the word out to potential customers

And getting it right is the key to being relevant.

Ok, so back to the Market Mix Modelling (MMM) method.

Now we're getting to the more complicated, but also more effective, stuff.





Marketing mix modelling relies on in-depth statistical analysis to provide a detailed breakdown of how each element in a company's marketing mix affects their bottom line. As a method its strength is really that it allows you to understand the success of multiple marketing channels simultaneously, as well as understanding the relationships between them and the factors that play into their success.

The most common method for doing this involves linear regression, although at Sellforte we utilise something bigger, bolder and more advanced: the Bayesian Model (which is also used by other trailblazers such as Google).

Whatever the methodology, the goal is to recognise how different activities have driven uplifts over time so that you can see bigger uplifts in the future.

For some companies, the drawback of this is that to enjoy the full benefits you need a lot of data, but, guess what, you already have reams of it! So, that shouldn't be a problem (in fact, it's one of the very reasons it's suitable).

One issue that it does raise, however, is that your data needs to be in good shape, and, as most of us know, that's often not the case. As a result getting started can require a bit of time and grunt-work in order to transform the messy data you probably have right now into a sight to behold (if, y'know, you really enjoy looking at nice tidy data).

As a method, it might not be exactly simple to get started but once you do it is super accurate and very insightful. Not only that, but it also takes into account factors external to your business (which, let's face it, makes sense — your business is not isolated from the outside world).

MMM IN ACTION

Let's say you were a household electronics provider and you were considering all of this in relation to a speaker system you had recently been marketing.

You have data that tells you the speaker's daily sales volume, the number of sales made and details as to the margin. On top of that you also have all the information as to when and where it has been advertised, at which price point and with what promotion mechanic (for example, % off, 3-for-2 or a loyalty deal).

MMM take all of this data and analyses it in relation to:

- ✓ A similar time period in which the item had not been promoted.
- ✓ A similar time period when it had been promoted, but without being actively pushed to outside channels.
- ✓ A similar time period when it was both discounted and advertised to one or more channels.

When done correctly this reveals the base sales, promotion impact and media uplift for the speaker system.

But keep in mind that nothing exists in a vacuum, especially in marketing, which in this example means that you would also have to also look at how your other products' sales were affected by your speaker-marketing activities. Promotions might superficially drive a lot of new sales and traffic, but they can do so by cannibalising sales from other normal-priced products, as well as the speaker's standard-priced sales for the following weeks and even months.

There's more.

You (or your Marketing Mix Modelling software) would also need to consider the fact that the media uplift could include more than just the speaker system sales spike...

Let's say that a customer came to the store to buy the speaker because he saw it advertised on television, but he also purchases a blender and an alarm clock, both of which weren't advertised or discounted. Those items also have to be included when calculating the benefit of the TV ad (and added to TV's overall ROI).

Basically, MMM can be used to help you decide which products are performing best (and where), what price point they should be sold at and what discount percentage should be given (if any).



Marketing Mix Modelling also takes into account the difference between markets as, let's face it, each one has its unique opportunities and challenges.

This translates into insights such as:

- ✓ What your star promotions are—those deals that drive customers to the store without sacrificing net profit (bonus points for customers who buy large, high-profit baskets).
- ✓ How each media channel performs within different customer segments
- ✓ Your most-loved products based on each segment's preferences
- ✓ How much €1 in direct mail/print/TV/digital advertising brings in incremental sales and profit margin
- ✓ Which campaigns and media channels (offline and online) are delivering the best bottom-line impact
- ✓ Which products should/shouldn't be promoted in each campaign (and why)

Of course, if this sounds more like a headache than actionable insight at this point, remember there is technology out there that does it all for you!

So, there we have it — all of the options available to get your marketing analysis stronger, faster and generally in better shape.

A CASE STUDY

Take, for example, our client Gigantti — they were receiving a lot of traffic and sales from search engines. It would be quite natural to deem this to be thanks to their SEO efforts or paid search marketing, through MMM, however, it was possible to see (primarily from the timing) that the surges in traffic from search engines were actually originally the result of their TV adverts.

See, by employing MMM they were able to understand the relationship between these two channels rather than viewing them as standalone efforts. If these two channels hadn't been analysed together then it is possible they would have attributed too much of their success to search and overspent on that channel, rather than putting more time and effort into TV.



THE DIFFERENT LEVELS OF MMM MODELLING:

Before we go on, it's worth noting that not all MMM modelling is created equal and how effective your analysis is, depends on the features that your model employs.

In the same way that a mobile phone will help you communicate, but the latest smartphone with lots of fancy features will let you do so in a superior way (whatsapp, video calling, etc).

For example, some basic modelling will not let you analyse to a product, media or store level. Advanced modelling, however, will. You can find a table below that details some of the most notable differences.

The rest of the guide will be written on the basis that we are talking about advanced ROMI modelling.

Sellforte enables both strategic budget allocation & day-to-day operational optimization

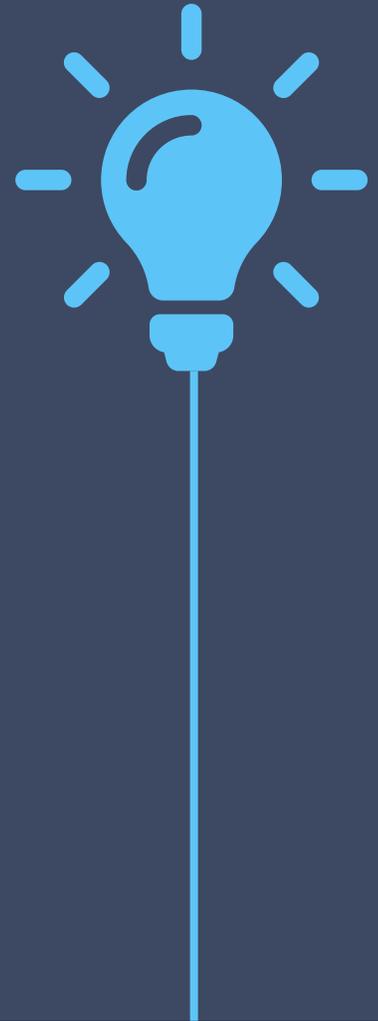
	Traditional MMM	Sellforte MMM
Frequency	Annual/Quarterly updates	Continuous
Lead Time	4-8 weeks	Up to daily updates
Timeliness	Post-campaign reports	In-campaign progress updates
Data Size	Small data (hundreds of rows)	Big data (hundreds of millions of rows)
Granularity	Media group & brand level	Up to customer, item & media channel level
Modelling	Sales	Sales and Margin
Format	Pptx-report	Web-UI & Pptx-report
Access	Power users & top management	All marketing, sales & merchandizing staff & top management
Application:	Strategic budget allocation	Strategic budget allocation & Day-to-day operational optimization

THE SOLUTION(S):

Ok, so now onto the good stuff.

The solution, in short, is to commit some time and budget towards resources that will help you with this very complicated, but very worthwhile, task. This help can come in a number of forms; a dedicated in-house team, an agency, or software. We'll run through the advantages and disadvantages of each of these at the end.

In this section we will go through, in more detail, the specific challenges that marketers wanting to conduct a full ROMI analysis will find themselves up against and how ROMI modelling — be it through the aforementioned team, agency or software — can tackle each one (because there is nothing more satisfying than watching your problems disappear, right?). We've split these into broader, higher-level issues and more specific, shorter-term tactical one so that you can understand the full range of issues-turned-benefits.



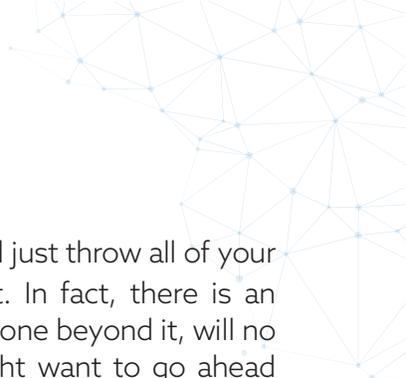
WHAT ROMI MODELLING CAN DO FOR YOU:

PROBLEM: Finding out which channel (truly) works best for your business

As marketers, you are spoiled for choice nowadays when it comes to where you can reach your target market (or at least try to). TV, direct mail, print, outdoor advertising, social media, online video, the list goes on! This is great news, of course, but it can also be daunting. With all of these choices, how do you know which one to focus on?

ROMI MODELLING SOLUTION:

Advanced ROMI modelling will take all that gorgeous sales and marketing data from the campaign in question (which is of utmost importance for reliable results) and compare it with similar periods, campaign types and media mixes to find the true correlation between your marketing activity and your sales. So, not only do you get a clear picture of which channel is performing, you get an accurate one.



PROBLEM: Knowing how much to spend on each media type

You might think that when you have found a media type that works that you should just throw all of your money in that direction, but hold your horses! It doesn't actually work like that. In fact, there is an optimum level of spend for all media types—a tipping point, which, once you have gone beyond it, will no longer deliver the same level of return (although there are times when you might want to go ahead anyway, we'll get to that).

ROMI MODELLING SOLUTION:

By using ROMI modelling techniques to analyse big data sets it is possible to plot the anticipated sales and margin trajectory of a product across different media types on a curve—finding the optimum amount of spend for each one.

Or, in simpler terms, the software will do a lot of extremely complicated mathematical wizardry and then tell you how much of your budget you should spend on each media type to maximise profit and prevent overspending.

As we mentioned previously, however, there might be times that you want to take a hit in terms of return percentage of over-investing in a specific media group. This is when you want to dominate a certain channel for a “blanket” approach to your marketing that offers multiple, repeating touch-points with the customer (and therefore become more familiar). The good news is that with ROMI modelling there to give you all the info, you can make an informed decision on which approach to take.

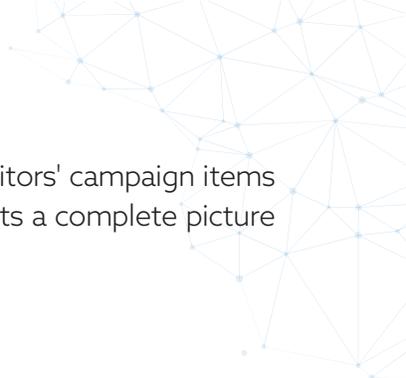
PROBLEM: Understanding how your competition is affecting your sales

Sometimes in life, it can be easy to place ourselves at the centre of the universe. We are so caught up in our own thoughts and actions that we don't notice what is going on around us and, ultimately, miss the bigger picture. Funnily enough, the same can happen in advertising (bet you weren't expecting your ROMI content to come with a side of psychological analysis, huh?). While your marketing efforts are going to have a big effect on the returns you see, some results—be them bad or good—may, in part, be attributable to the advertising behaviour of your marketing rivals. Working out where your efforts end and theirs begin, however, is easier said than done.

ROMI MODELLING SOLUTION:

But, it can be done—with the inclusion of your competitors' media investment information into your modelling. This allows you to retrospectively analyse the relationship between your successes and their failures (and vice versa).

For example, your Black Friday campaigns don't deliver the results you expected and the poor results are incongruous when set side by side with the investments and activities of comparable periods. You could, of course, put it down failures on your part but, especially in such a competitive sale period, there may be other factors at play—your competitors choosing to dominate one media channel, offering substantially or much larger discounts. Your campaign can be a work of art, but if it is on the same channel as a competitor aggressively advertising cut-throat sale prices, you're bound to lose sales.



As technology develops it becomes easier to scrape the web and find your competitors' campaign items and discount prices which, when combined with their media investment data, paints a complete picture of what's happening around you so that you can come out on top next time.

PROBLEM: Identifying trends within your most loyal customer sets

Having customers that are so engaged with your brand that they opt-in to a loyalty program—well, it doesn't get much better than that. But don't make the mistake of thinking that because a customer is displaying high levels of engagement that they will look after themselves and need no further investigating.

ROMI MODELLING SOLUTION: By using ROMI modelling to analyse a data set that includes customer loyalty data, you can not only see the sale and profit margin difference between standard and loyalty customers but also between the different tiers of loyalty customers also. Not only that, but you can track how each segment's consumption behaviours develop over time.

All of this information can be used to show you which media mix, product selection, promotion type and message resonates with who better, helping you to market to your most profitable segments in the most effective way.

PROBLEM: Understanding the Impact of selection and price on sales

It probably goes without saying that price can affect sales but it can also be a more complicated relationship than you think....

ROMI MODELLING SOLUTION: By analysing sales receipt data, you can see how discounting and marketing interplay for specific products, categories and brands. This, in turn, implies customers' price sensitivity, brand loyalty and overall consumption preferences, helping you to predict how a new pricing strategy would play out or whether there is the room or need for new products within your range.

For example (because who doesn't love an example?!), let's look at the possibility of a new product to your range. If you were selling microwaves and a discount campaign attracted a substantial audience (without cannibalising your full-priced products) and this was repeated in your analytics over time—well, it could imply that there's a considerable market for lower-priced ovens. A data-driven marketing executive would then propose launching a new microwave to the market with weaker specs and a lower price point.

This is similar to getting customers to try out new products with promotions to see what demand there is at different price points.

If you do decide to expand the range, then you are also better able to decide how to launch (for example, through which channels) and whether a promotion should be applied. On top of that — yep, there's more — you can get a better idea of the expected time in which products might reach the demand maturity tipping point with the aid of planned marketing activities.

AND FINALLY, ONE WIDER BENEFITS...

- ▶ Showing what you can do to the world (or at least the rest of the business)

Marketing directors have long been challenged with an uphill battle it comes to proving their success to top-tier management counterparts. This is largely to do with the communication mindset that each department in the commercial process has. Sales, for example, report with cold hard financial figures. Whereas marketing often delivers their results in what is sometimes seen as “wooly” metrics (such as the much maligned “engagement”).

But by communicating in a common, financially-focused language with shared metrics and KPIs, there is a shift in the value marketing is thought to bring. This means the powers above start to think of marketing budgets less as marketing costs and more as marketing investments.

HOW TO GET STARTED:

Because what is the point of telling you all this cool stuff that you could possibly do with your marketing data and then not helping you to do it?!

First of all, get stakeholder buy-in! As with any big (but worthwhile) project, you need everyone on board. And when you really think about it, it only makes sense — this ROMI modelling, done right has benefits that stretch beyond the marketing department (oh hey Sales and Finance, we’re talking about you) so they should be involved from the start. By talking to other areas of the business about their needs and wishes you can better decide what the outputs of your ROMI modelling should be in order to have multiple use cases.

Speak to IT

As a general, day-to-day rule, we always recommend having IT on side. Those guys hold a lot of office power — such as the ability to keep you at the bottom of a waitlist when your computer crashes. But, if you have a ROMI modelling project coming up, then being in their favour is even more important. Start talking early on to your IT department and analysts early so you can reserve their time before things get started.

Get your data in order

As we mentioned earlier, there are different breeds of ROMI modelling that achieve different depths of analysis. Before you proceed with the exciting world of ROMI modelling you have to decide what you want and need in terms of insights and select standard or advanced as a result. Once you have decided this you can how to go about it. In terms of this you have three options:

In-house data analytics

This is ROMI calculations at a basic to intermediate level (depending on how many resources you are able to put behind it) and can range from a Marketing Manager looking at the correlation between sales data and different marketing activities, to an inhouse data science team building models that will more accurately attribute sales uplifts to the relevant marketing activities.

This approach can work for both small to large companies depending where on the resources scale you choose to land.

Of course, having your own in-house team means your resource is focused (no vendor dependency) but it is also a big investment in terms of both time and finances. A whole Data Scientist team doesn't come cheap.

Agency

Hiring an agency can be an alternative to building your own inhouse team. Not only do they tend to have specialists with years of experience but it also cuts down the lead time for the project since they have the resources in place ready to go.

However, it also decreases the transparency of the modelling since some data may be restricted when shared without outsider parties. For example, margin data may be held back for security issues. The result? A less accurate picture.

ROMI modelling software

As the name implies this is software developed solely with ROMI modelling in mind and it continues to develop constantly, with machine learning models providing exponentially more power and more insight, trumping the human-driven inhouse teams and external agencies in both lead time and cost-effectiveness.

These often AI-powered software are able to analyse millions of rows of data (a task that has been previously possible for only the top tier consulting agencies) by implementing advanced modelling techniques such as Bayesian modelling.

However, technology of this power is best suited to large companies (€10 - 100M yearly turnover) since they are the ones likely to have the amount of data to really make use of it and deliver the results needed to justify the monthly fee.

CONCLUSION:

Hopefully, the conclusion for anyone reading this is that Marketing Mix Modelling is an exciting and useful tool, as well as the right tool for any companies dealing with the potential headache / treasure trove that is Big Data.

We also hope that you understand, in a little more detail, not only what it is but the different levels available and how they can help you (as well as some of the things you need to think about before you jump in).

Because we really believe that understanding your work, its successes and failures and the reasons behind them... Well, we think it is the future of marketing.

ABOUT SELLFORTE

Sellforte premium ROMI modeling shows precisely how marketing campaigns and promotions are performing, providing the accurate, continuous updated insights needed to adjust, improve and forecast market strategy in near real-time.

Analyzing tens of millions of rows of receipt and media spend data, Sellforte AI-powered software quantifies online and offline sales and margin outcomes. Results are exceptionally granular and readily accessible through a unique interactive web-UI.

And because the software is fully automated and works fast, its in-depth analytics are delivered more affordably than outsourcing to consultancies or using in-house resources – for every size and type of organisation. Helping to make every marketing campaign a profitable, margin-building investment.

