TV ADVERTISING ANALYSIS

THE EFFECTIVENESS OF TV ADVERTISING ON SALES AND TRAFFIC

Screenforce Finland

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DAGMAR*

OBJECTIVES OF THE ANALYSIS

The aim was to analyze the effectiveness of television advertising and its development from 2012 to 2016.

The effectiveness of television advertising is examined by analyzing its effects on sales, shop traffic and website traffic.

In addition, television advertising's effectiveness is compared to the effectiveness of other media to generate additional sales and traffic.

The data used in the analysis is gathered from the econometric modeling projects carried out by Dagmar during the years 2012 to 2016.

ECONOMETRIC MODELING

STATISTICAL MODELING OF MARKETING EFFECTIVENESS

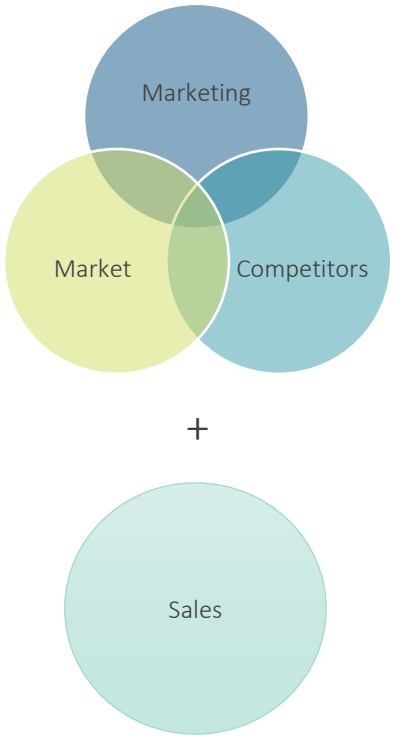
The aim of econometric modeling is to quantify the factors impacting **sales** and distinguish between different factors in order to **explain and predict** future sales with these factors.

In particular, we are interested in finding out how the actions carried out by companies, such as advertising in different channels, promotions and pricing, are able to generate additional sales on top of the so called baseline sales.

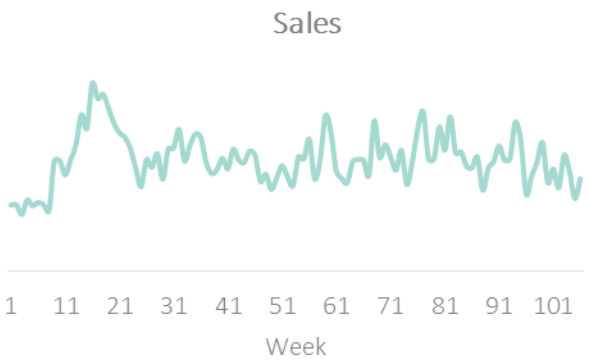
In order to understand this comprehensively **external factors** like seasonality, competitors actions, weather and a variety of macroeconomic factors are taken into account in the analysis.

ECONOMETRIC MODELING ENABLES THE QANTIFICATION OF FACTORS DRIVING SALES AND TRAFFIC

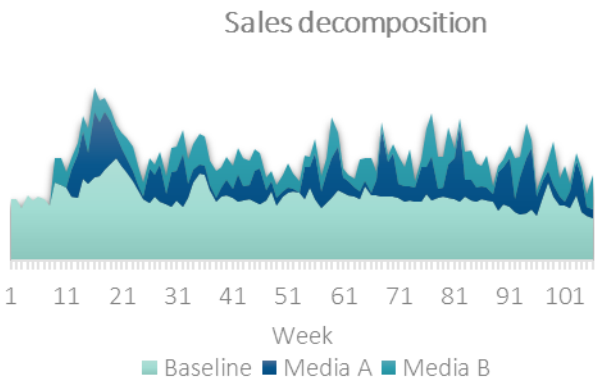
Hypotheses and data collection



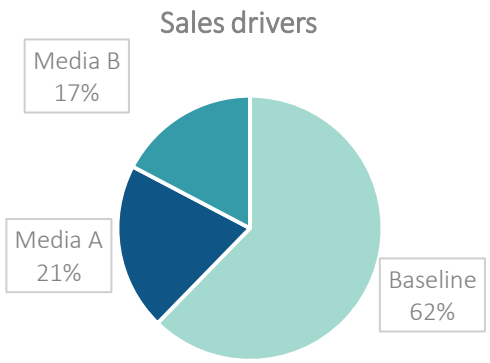
Statistical sales modeling

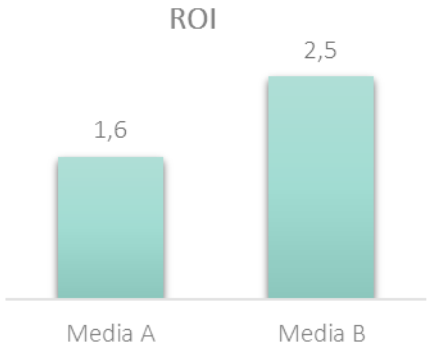


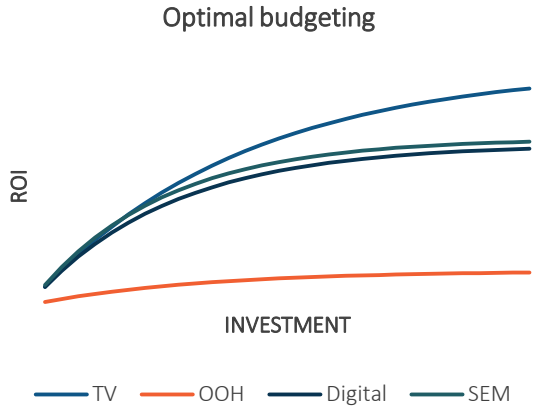
$$\text{Sales} = \beta X + \sum\sum \gamma_i X_i X_j + \varepsilon$$

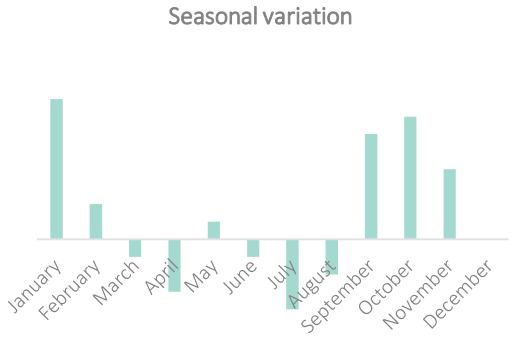


ROI and other findings









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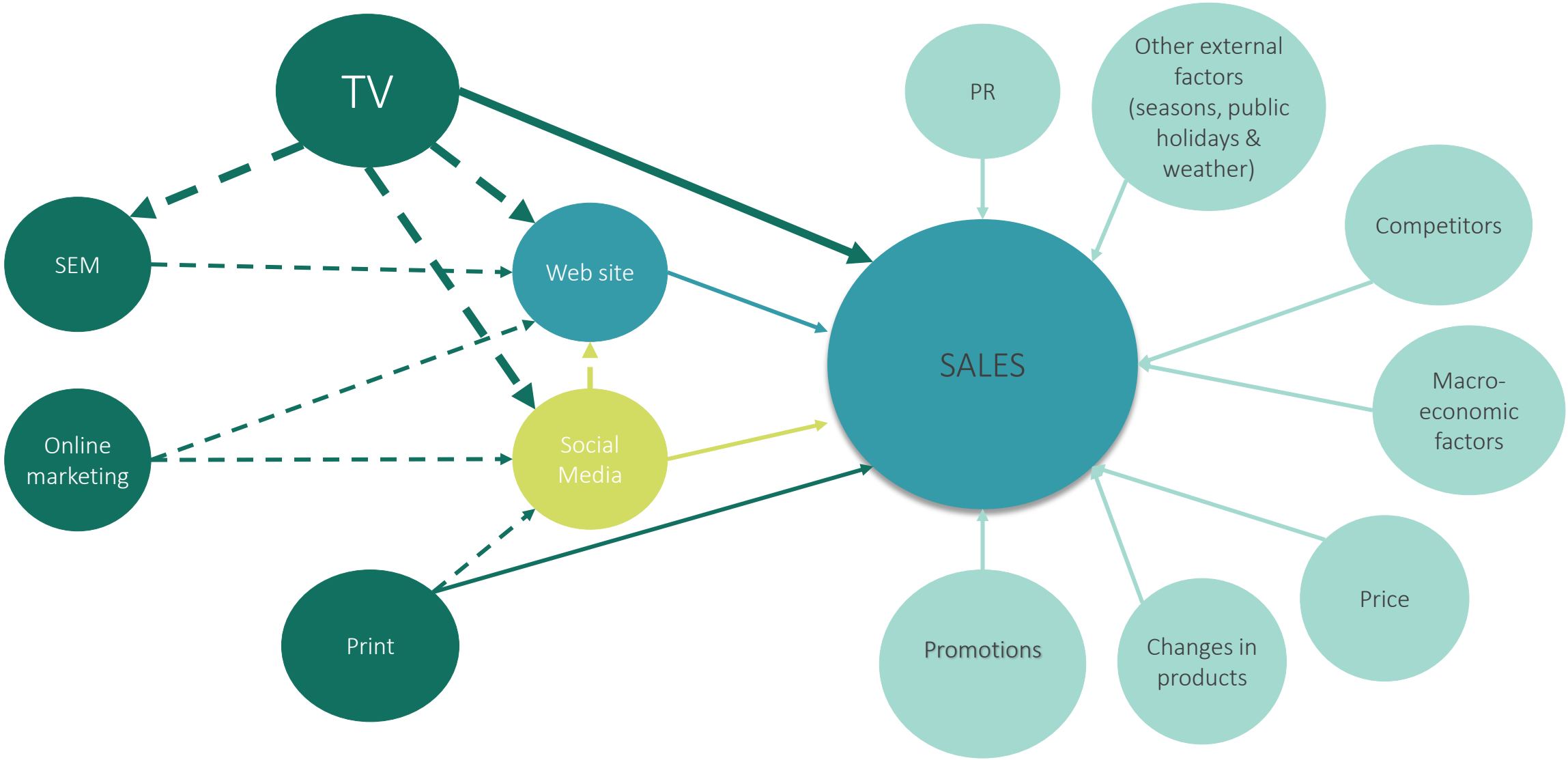
THE RELATIONS BETWEEN SALES AND MARKETING



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RETURN ON MARKETING INVESTMENTS (ROMI)

Additional sales

The part of the sales that is explained by marketing activities. We analyse the impact of each marketing activity on sales.

Media investments

Media investments consist of all the net prices of bought visibility in media. Media investmetnts do not include costs of design and production.

ROMI

The model explains how much different marketing activities generate additional sales. ROMI is calculated by dividing the additional sales by the media investments.

$$ROMI = \frac{Additional\ sales\ generated\ by\ media\ activities}{Media\ investments}$$

In this analysis the emphasis is on the comparing of the return on investments of bought media. The effectiveness (in terms of financial investments) of other marketing activities is not taken into account.

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DATA

DATA

- The data used in the analysis is gathered from 100 econometric modeling projects carried out by Dagmar during the years 2012 to 2016. The impact of television is taken into account in 97 cases.

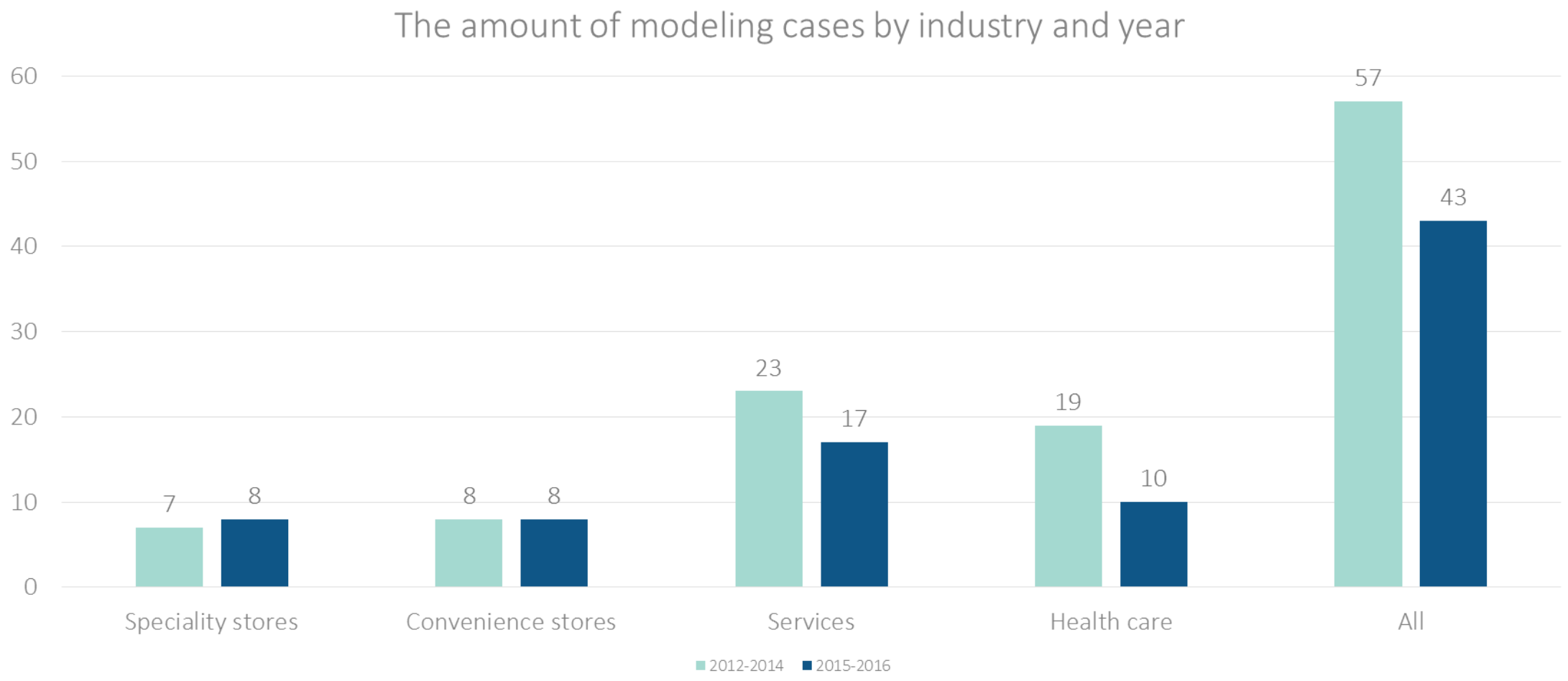
- The cases used in these projects consist of Finnish companies from different industries. The industries are divided into four categories: FMCG(16 cases), durable goods (15 cases), health care (29 cases) and services (40 cases).

- The selection of the modeled variable varies depending on the case. In most cases the modeled variable is turnover, the number of sold items or customer traffic.

- Return on investments was calculated in 87 cases. In the rest of the cases customer and website traffic was used as the dependent variable since data regarding turnover was not available.

- In additon, the effect of television advertising on website traffic is examined in 55 cases.

THERE IS SMALL VARIATION IN THE AMOUNT OF MODELING CASES DURING THE YEARS 2012-2014 AND 2015-2016



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RESULTS

THE EFFECTIVENESS OF TELEVISION ADVERTISING

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THERE IS A POSITIVE RELATION BETWEEN TELEVISION ADVERTISING AND SALES OR SHOP TRAFFIC

In 99 % of the cases a positive relation was found between television advertising and sales or traffic, which is notably more than for other medias.

Television	Online	Newspapers	SEM	Radio	Magazines	Outdoor	Cinema
99 %	89 %	81 %	75 %	58 %	56 %	35 %	0 %

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EFFECTIVENESS OF TELEVISION HAS INCREASED IN RELATION TO OTHER MEDIAS

Television ROMI is 2,4

The total effectiveness of marketing has decreased over the last two years when comparing the years 2012-2014 to 2015-2016.

The effectiveness of TV as a marketing channel has decreased less than the effectiveness of other media groups.

Period	TV ROMI	Total ROMI
2012-2014	2,5	2,6
2015-2016	2,2	2,1
2012-2016	**2,4**	**2,5**

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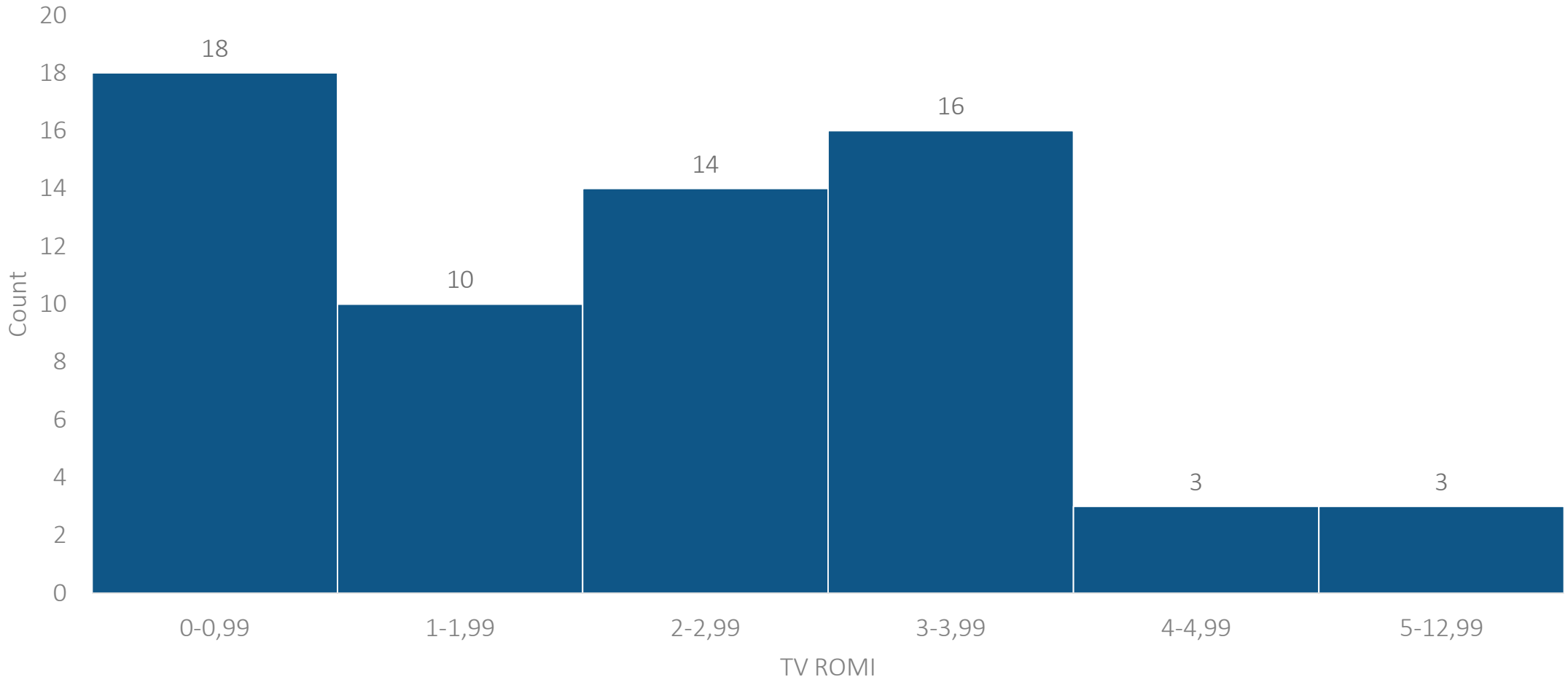
ROMI VARIES FROM 0 TO 12 IN THE MODELING CASES



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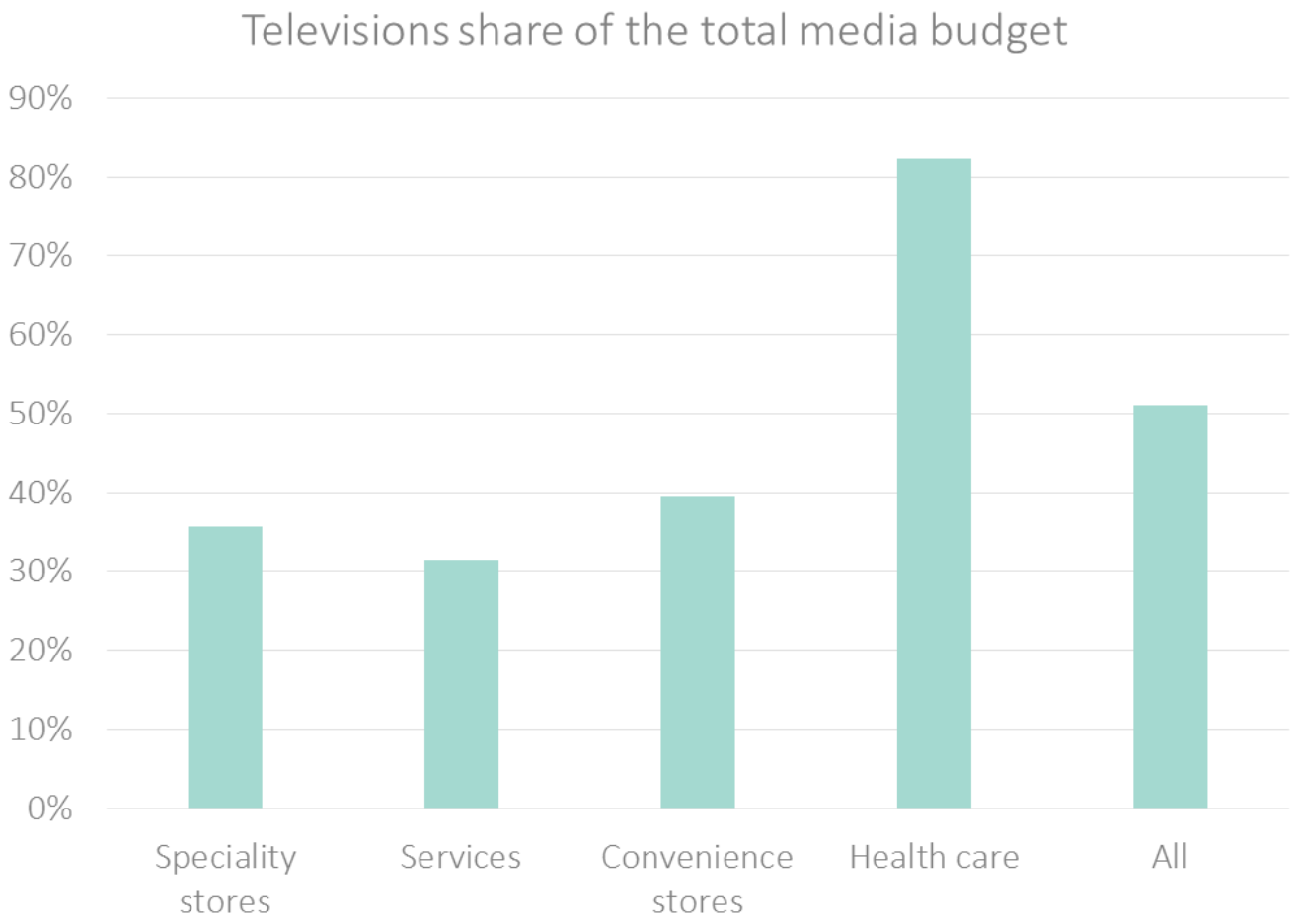
MEDIA INVESTMENTS IN TELEVISION

THE SHARE OF TELEVISION IN THE TOTAL MEDIA BUDGET IS 51% ON AVERAGE

Health care services	82 %
Convenience stores	39 %
Speciality stores	36 %
Services	
	31 %



The numbers are based on the marketing mix modeling cases done by Dagmar

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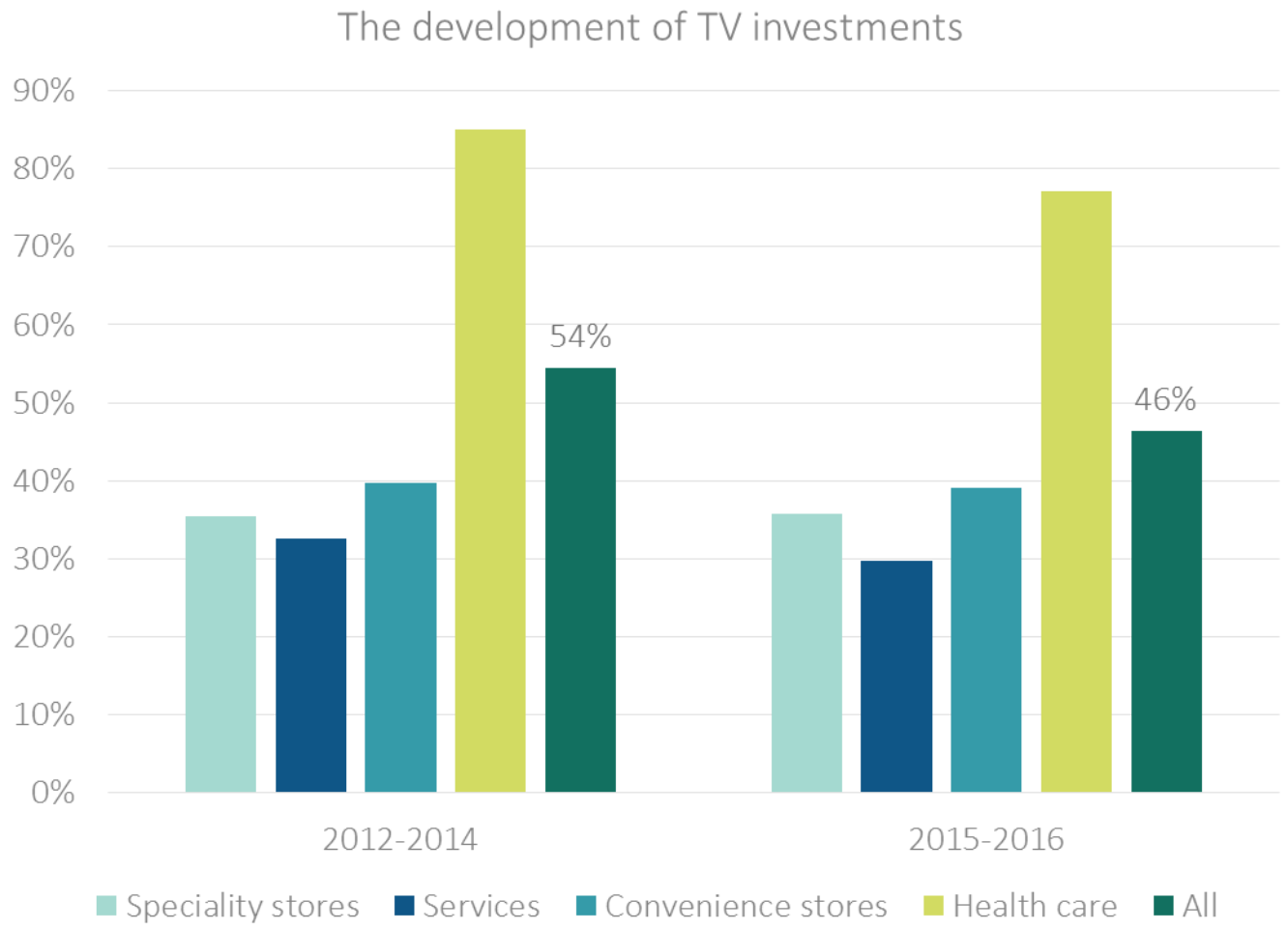
SHARE OF MEDIA BUDGET OF TELEVISION ADVERTISING HAS DECREASED

The most notable decrease of TV advertising investments was on the health care industry.

The decrease can partly be explained by the decrease of TV advertising prices.



The numbers are based on the marketing mix modeling cases done by Dagmar

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THE RELATION BETWEEN TV ADVERTISING AND SALES

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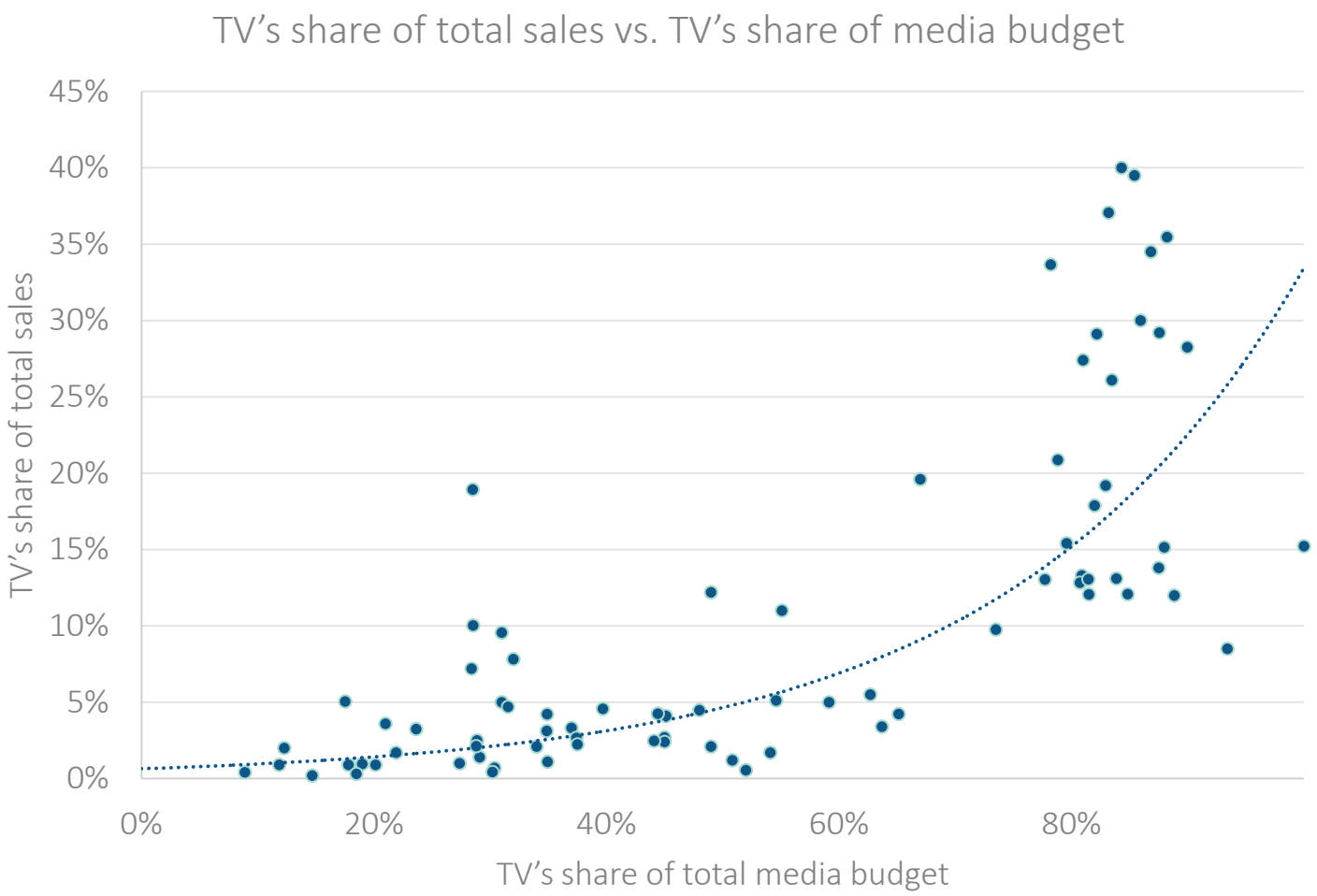
ROLE OF TV AS A DRIVER OF SALES IS GREATER WHEN TV'S SHARE OF MEDIA BUDGET IS BIGGER

TV's share of effect on additional sales increases when the share of TV advertising increases.

TV's role as a main media for advertising is justified.



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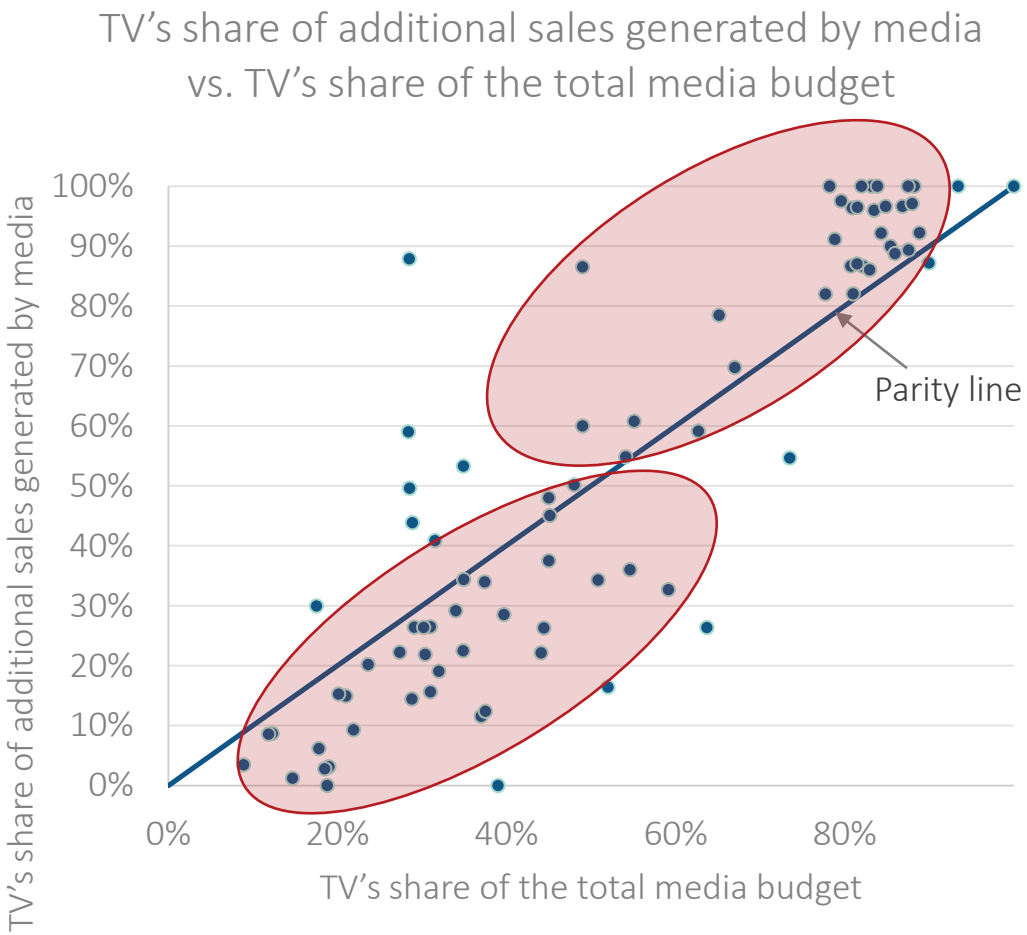
TV'S EFFECTIVENESS IS GREATER WHEN TV IS USED AS THE MAIN MEDIA FOR ADVERTISING

TV's share of additional sales is 50 % on average.

When TV's share of media budget is increased to a certain level the share of additional sales it brings is greater than its share of the media budget.

As a supportive media TV's share of additional sales is less.



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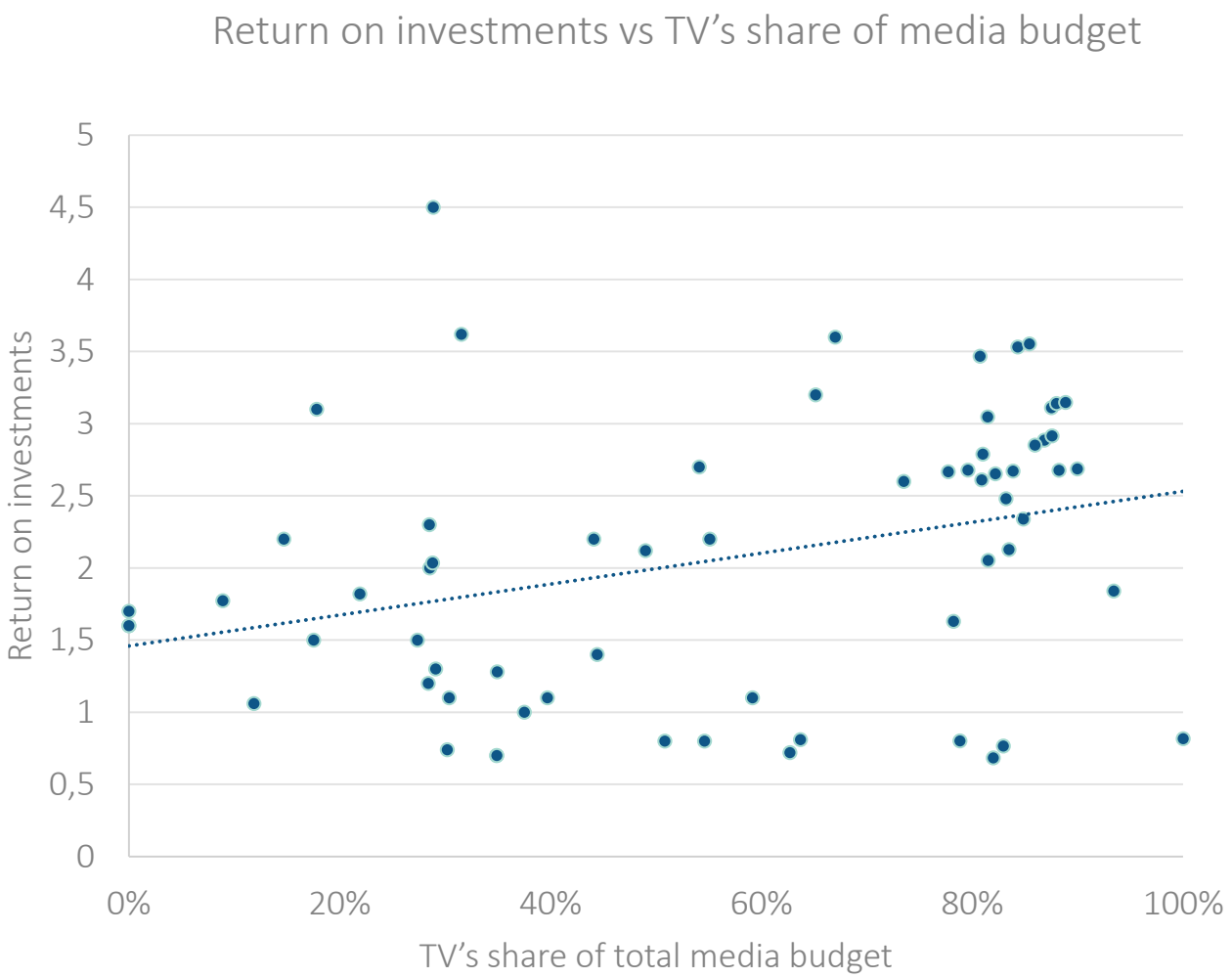
ROMI INCREASES WHEN TV IS THE MAIN MEDIA

Increasing TV´s share of media budget increases the total return on investments.



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THE SHARE OF ADDITIONAL SALES GENERATED BY TV HAS DECREASED

The share of total sales that is generated by media advertising has increased, but TV's share has decreased.

This is possibly due to the decrease of TV advertising investments during the last two years.

At the same time online and search engine marketing's share of media investments has increased significantly.

Period	Share of paid media of total sales	TV's share of total sales
2012-2014	17 %	11 %
2015-2016	18 %	8 %
Total	17 %	9 %

Period	TV's share of budget	Online's share of budget	SEM's share of budget
2012-2014	55 %	12 %	3 %
2015-2016	46 %	16 %	5 %
Total	51 %	14 %	4 %

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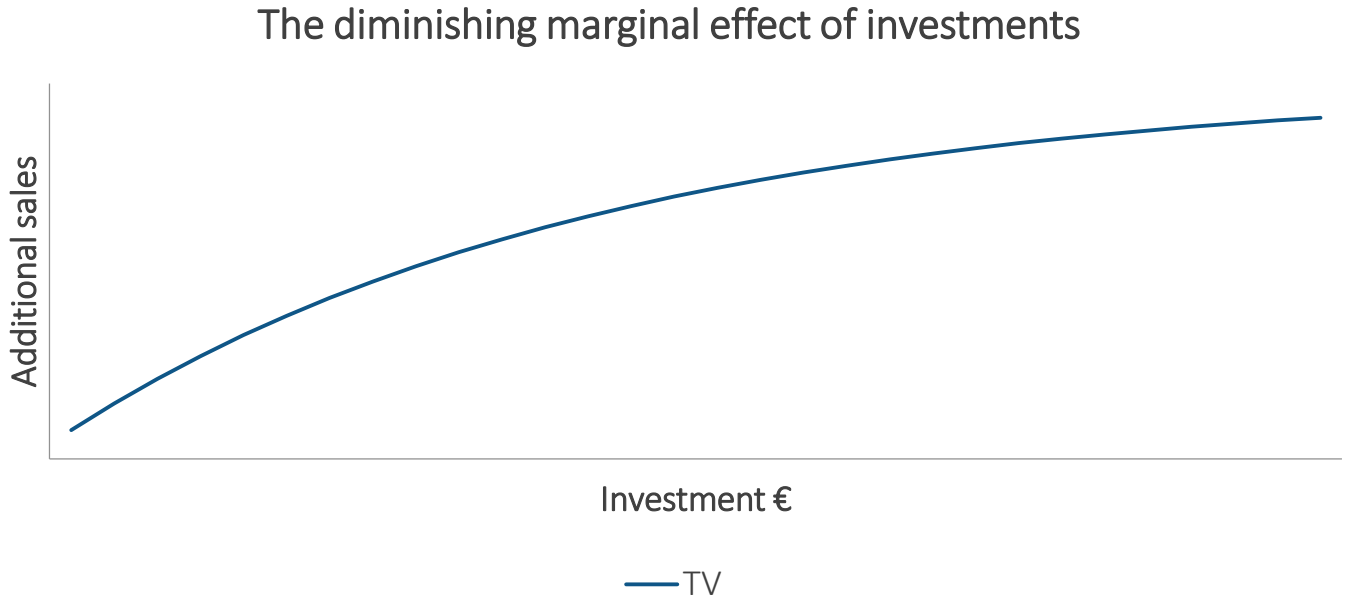
SATURATION AND CARRY OVER

SATURATION, THE DIMINISHING MARGINAL BENEFIT

The diminishing marginal benefit, also called as saturation, can be figured out with modeling. Increasing investments doesn't necessarily drive additional sales in the same proportion.

Saturation describes how many percent of the investments have not generated any additional sales.



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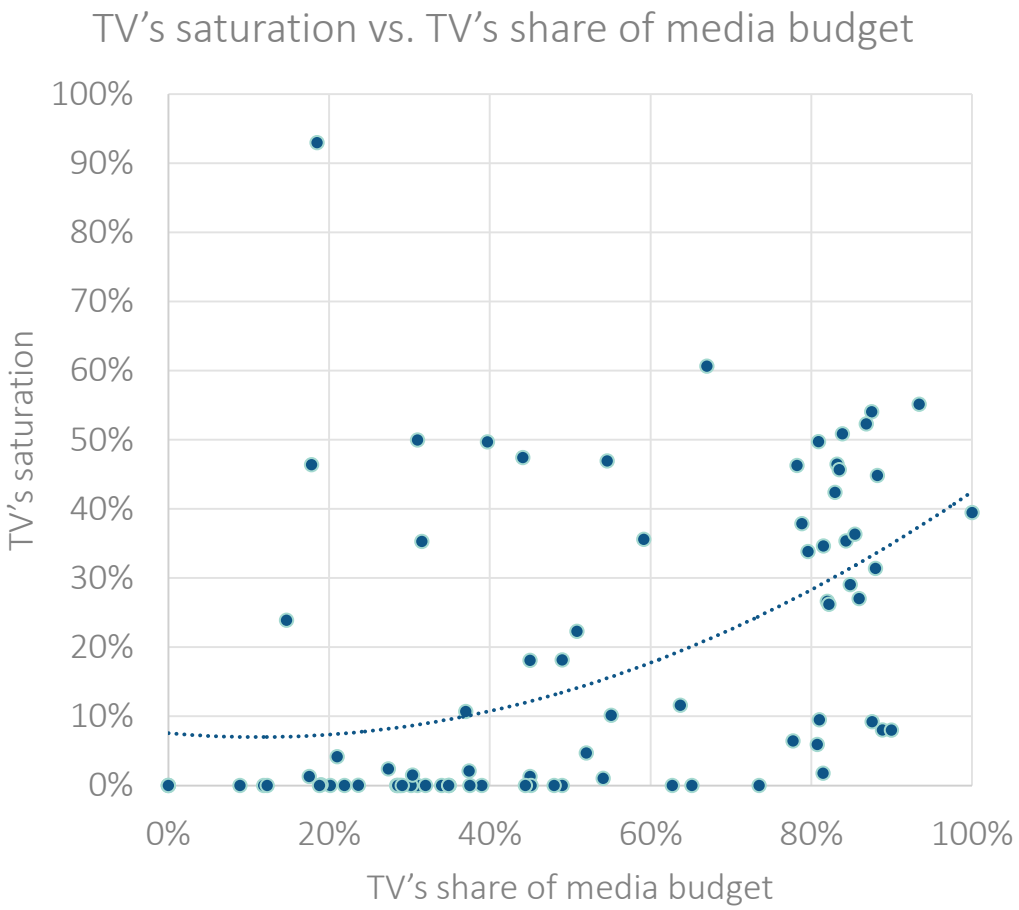
TV'S SATURATION INCREASES WHE TV'S SHARE OF MEDIA BUDGET INCREASES

Saturation describes the portion of the investments that have not generated any additional sales.

TV advertising's saturation grows when the investments on TV advertising increase.

By optimizing TV advertising's budget shares we have been able to decrease TV's saturation.

Period	TV's saturation
2012-2014	22 %
2015-2016	11 %
2012-2016	**17 %**



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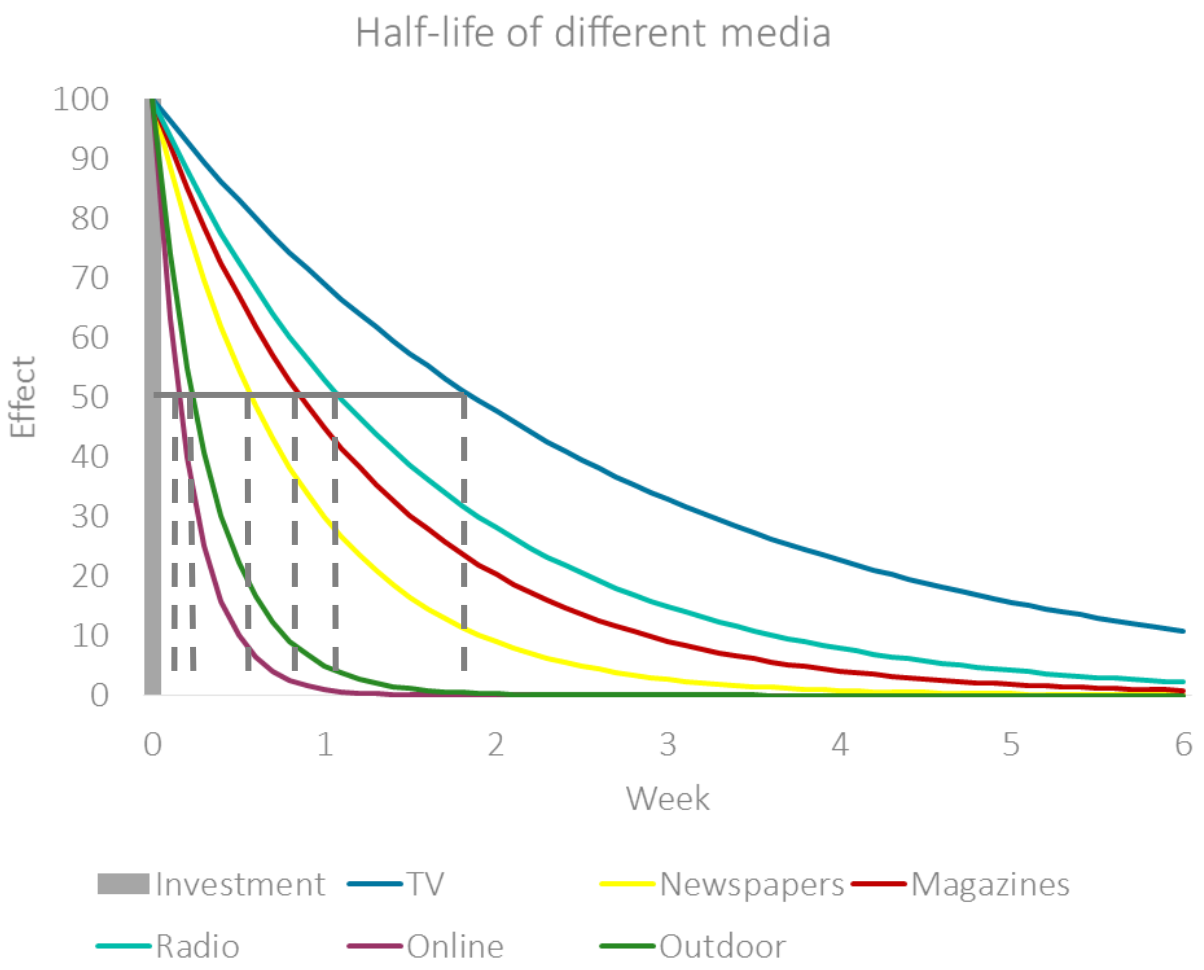
TV HAS THE LONGEST HALF-LIFE OF ALL MEDIA GROUPS

TV advertising's half-life is the time after which half of TV advertising's effect on sales is still left.

TV advertising's half-life is two weeks on average and it varies from one to three.

Online marketing includes all digital marketing except for search engine marketing, which does not have any effect on sales after the week it has been done.



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THE RELATION BETWEEN TV ADVERTISING AND WEBSITE TRAFFIC

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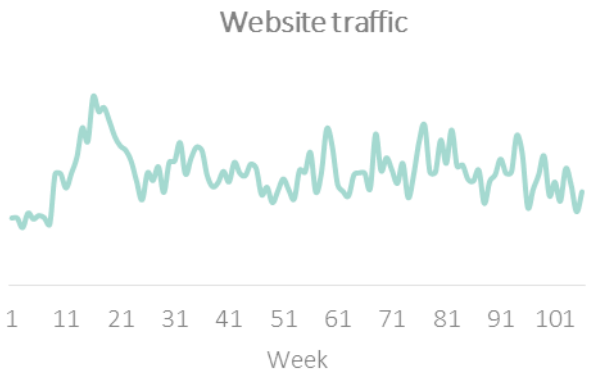
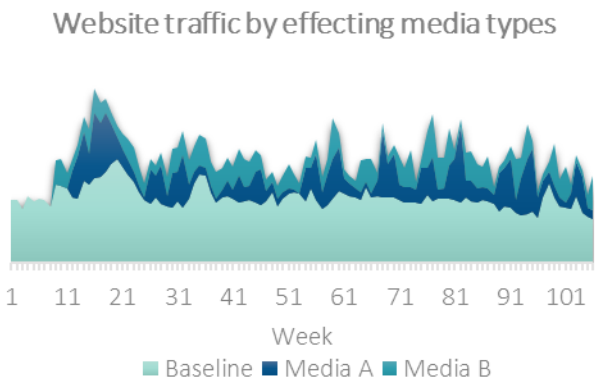
THE EFFECT OF TV ADVERTISING ON OTHER VARIABLES IS DONE IN A SIMILAR WAY





We explore the effects of each marketing activity on website traffic, search engine marketing and social media activity.

For example:

$$Website\ traffic = \beta X + \sum$$

TV TRP grows X units → Website traffic grows Y units

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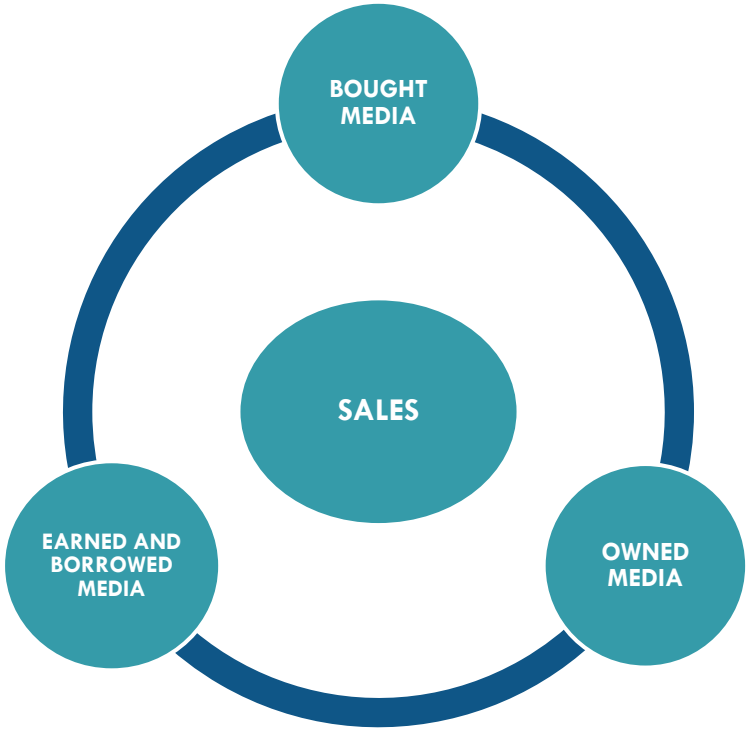
TV ADVERTISING DIRECTS PEOPLE TO SEARCH ENGINES AND SOCIAL MEDIA

The modeling cases have shown that television directs people also to search engines and social media.

Because of this TV also has an indirect effect on sales and store or website traffic through search engines and social media.

In the cases where TV has had an effect on social media and search engine traffic:

- 7 % of search engine traffic is generated by TV advertising.
- 5 % of social media (Facebook) traffic is due to TV advertising.



THERE IS A POSITIVE RELATIONSHIP BETWEEN TV ADVERTISING AND WEBSITE TRAFFIC

In 93 % of the modeling cases TV was found to have a positive relation to website traffic. This is more often than in most of the other medias.

Only online and search engine marketing had a positive relation in more cases to website traffic than TV.

Television	Online	SEM	SoMe	Newspapers	Radio	Magazines	Outdoor	Cinema
93 %	100 %	98 %	88 %	75 %	73 %	69 %	50 %	0 %

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THE RELATION OF TV ADVERTISING TO WEBSITE TRAFFIC

TV's share of website traffic generated by media increases when TV's share of media budget increases.

TV's share of website traffic generated by media has decreased during the last two years.

This is partly explained by the increase of online marketing.

Period	TV's share of website traffic generated by media	Online share	SEM share	Social medias share
2012-2014	19 %	32 %	44 %	0 %
2015-2016	7 %	23 %	54 %	11 %
	11 %	**27 %**	**50 %**	**10 %**