Hochschule Furtwangen University

Faculty: HFU Business School

Bachelor Thesis

The Revive Turbo Cleaner

Evaluating a product's position and planning its launch in Germany

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Abstract

The Revive Turbo Cleaner is a cleaning fluid which removes carbon deposits from inside petrol or diesel engine systems. It is distributed internationally through wholesalers and sales agents to workshops and private car owners. After the acquisition of Revive Automotive Solutions Ltd by Bartec Auto ID Ltd in summer 2016, the new owners decided to further develop the brand and to move into the promising German automotive aftermarket, as the Cleaner had shown good sales figures in the home market UK and in a number of international markets.

This paper examines environmental factors influencing the German marketplace, analyses Revive's actual customer segments including consumers and business clients, provides profiles of its competitors and substituting technologies, regards the characteristics of the specific industry and defines the product's qualities in order to draw a conclusion on the appropriate Marketing Mix to employ for the German market. In advance to the analytical work, the paper critically considers the range of theoretical frameworks used for the analysis, namely PESTEL, Porter's Five Forces Analysis, the SWOT Analysis and the Marketing Mix in order to define and update original concepts as wells as adapt them to the research requirements.

Statutory Declaration

I hereby certify this thesis is my own work and contains no material that has been submitted previously, in whole or in part, in respect of any other academic award or any other degree. To the best of my knowledge all used sources, information and quotations are referenced as such.

With the agreement of Mr. Colin Webb, Ms. Samantha Hardy and Mr. Andy Amor, I herewith declare that the paper neither shall disclose the chemical composition of the Revive fluid, nor any information in regards to the financials of the related companies Bartec Auto ID Ltd and Revive Automotive Solutions Ltd.

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Fabian Alvarado Stimmler

Balingen, the 23rd of February

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Table of Abbreviations

4P	Product, Price, Place, Promotion
AfD	Alternative für Deutschland

B2B	Business-to-Business
B2C	Business-to-Consumer
BMUB	Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit
CDU	Christlich Demokratische Union Deutschlands
CSU	Christlich-Soziale Union in Bayern e.V.
DACH	Germany, Austria and Switzerland
DPF	Diesel Particulate Filter
ECU	Electronic Control Unit
EGR	Exhaust Gas Recirculation
EU	European Union
FDP	Freie Demokratische Partei
GDP	Gross Domestic Product
GDI	Gasoline Direct Injection
HGV	Heavy Goods Vehicle
IAM	Independent Aftermarket
Km	Kilometre
Ml	Millilitre
OE	Original Equipment
OEM	Original Equipment Manufacturer
PEEST	Political/legal, Economic, Ecological, Social/cultural, Technological
PEST	Political/legal, Economic, Social, Technological
PESTEL	Political, Economic, Social/cultural, Technological, Ecological, Legal
PFI	Port Fuel Injection
SIVA	Solution, Information, Value, Access
SME	Small and medium-sized enterprise
SPD	Sozialdemokratische Partei Deutschlands
SWOT	Strengths, Weaknesses, Opportunities, Threats
TPMS	Tyre Pressure Monitoring System
UK	United Kingdom
VTG	Variable Turbine Geometry

1 Introduction

1.1 Background

In spring 2016, Bartec Auto ID Ltd acquired Revive Automotive Solutions Ltd and decided to develop the brand, extend its distribution network and sell the product to the promising markets in the US and Germany. The Revive Turbo Cleaner is a cleaning fluid which removes carbon deposits from inside petrol or diesel engine systems. It is distributed internationally through wholesalers and sales agents to workshops and private car owners.

The Turbo Cleaner had shown good sales figures in the United Kingdom despite of the limited marketing resources of the previous owners and the goal was now to find an appropriate communication and sales strategy for the new markets, as carbon deposits are a well-known and often experienced problem in several widely used engine types.[1]

Although Revive had already taken first steps into the German market, awareness for the product was still low, as was the confidence in it on the customer side. After the acquisition, increased resource levels enabled a planning and adaptation process and during a preparative phase the product packaging, the marketing literature and the homepage were re-designed for the German market. Additionally, Bartec's German office in Wölfersheim near Frankfurt was made available for distribution and support purposes. The next step is now to raise further awareness for the brand and convince potential customers of the product's benefits.

This paper investigates market conditions and product qualities and shall serve as a framework for future steps taken by the involved companies. A range of strategic options is presented resulting from the analysis which outlines relevant environmental influences, market characteristics and Revive's current position.

[1] Bob McDonald, "Direct Injection Gas and Diesel Technology," Engine Builder, 2015, http://www.enginebuildermag.com/2015/10/direct-injection-gas-and-diesel-technology/, accessed November 2016.

1.2 Research Questions

This paper examines the current position of the Revive Turbo Cleaner and develops an adequate Marketing Mix for the product in the German market. The established research questions are as follows:

- Which are the actual customer segments the Revive Turbo Cleaner tries to attract and how is the demand structured in Germany?
- Where is the product situated in comparison to its competitors and substituting services in Germany?
- Based on the product's qualities, the nature of its customers and considering other external factors, what is an appropriate Marketing Mix for the Revive Turbo Cleaner in Germany and how can the existing Mix be further enhanced?

At first, a selection of theoretical approaches is considered critically in order to identify the correct framework for the analysis which then provides relevant and authoritative insights. By giving an overview about structure and trends in the German automotive aftermarket, the theoretical foundations are set.

After an introductive part which deals with carbon deposits and presents the company Revive Automotive Solutions Ltd as well as the product Revive Turbo Cleaner, a detailed analysis of the German target market is carried out. Influences of the global environment are examined, the customer segments identified and the specific industry analysed, where Revive is operating. A description of Revive's actual position and current actions is provided, before the findings and recommended proceedings are presented in a concluding chapter.

1.3 Methodology

In order to investigate the chances and the position of Revive Automotive Solutions Ltd and provide suggestions for future strategies, the paper firstly outlines, updates and adapts theoretical frameworks employed in the analysis, considering academic articles and classic text books commenting on company and market evaluation. The insights of different authors are compared and combined to ensure the effective application of the frameworks. Market reports presented by market research institutions and insights provided by business consultancies support the examination of external factors which have an impact on the company's operations. The paper furthermore relies on secondary data collected in the target market comprising customer surveys, observation of customer behaviour and numerical data, while it also considers the web presentation of associated companies and comments of the brand owners.

The figures and tables created support the statements of the main text, present relevant insights visually and aim at providing easy access to the paper's results.

2 Theoretical Foundations

2.1 Consideration of Employed Models

The underlying framework for the analytical procedure of this paper roots in the structure of the analysis of a company's strategic starting position, as described by Homburg in "Marketingmanagement".[2]

The analysis of the global or macro environment is the first step, setting the framework for the formulation of the strategy and picking up relevant social, economic, political, legal and technological aspects, which have an influence on the company's operations.[3]

In a second consideration, the market or micro environment is investigated. This includes the identification of the customer segments and their respective needs, the analysis of the competition and description of general market characteristics.[4]

The concluding step contains the analysis of the company's own situation in regards to customers and the competition.[5]

In this chapter, the set of employed marketing theories and models (PESTEL, Segmentation, Porter's Five Forces, SWOT and the Marketing Mix) is presented. It incorporates recent findings and criticism the single tools provoked over the years and explaining the way of application in this paper. Additionally, underlying thoughts and structural frameworks are presented.

2.1.1 Global Environment

The analysis of the global environment, commonly known as PEST analysis, provides a framework for strategy formulation. Although, generally spoken, single companies are not able to change or influence this environment,[6] it is nonetheless crucial to monitor current and future developments in order to plan and adjust the company's actions.

[2] Christian Homburg, *Marketingmanagement: Strategie, Instrumente, Umsetzung, Unternehmensführung,* 5th ed. (Wiesbaden: Springer Gabler, 2015), pp. 464–495
[3] Ibid., p. 467.
[4] Ibid., p. 473.
[5] Ibid., p. 487.
[6] Ibid., p. 467.

Adding to Homburgs set of environmental forces (social, economic, political/legal and technological), Jobber includes the cultural facet in the social aspect and highlights the growing significance of ecological influences. He therefore renames the model to 'PEEST', including a second 'E' for ecological.[7] This paper will furthermore separate the political and legal force from one another. This leads to the abbreviation 'PESTEL', as Grünig and Kühn[8] deploy it, depicting political, economic, sociocultural, technological, ecological and legal aspects.

In the following, each force of the PESTEL analysis is defined according to its relevance for Revive based on Grünig and Kühn[9] with complementary statements of other authors if applicable. Characteristics of the greater industry, the German Automotive Aftermarket, are not included in the PESTEL analysis. They are covered in 2.2 The German Automotive Aftermarket.

- The political force incorporates political stability and the membership in trading associations and agreements, such as the European Union. Homburg adds environmental policies to this aspect.[10]
- The first 'E' stands for economic factors and the analysis of the infrastructure, as well as current and possible future interest rates, levels of inflation and employment, exchange rates and the gross domestic product.
- Considering sociocultural influences, demographics and lifestyle have to be investigated. Jobber suggests the additional consideration of cultural forces, i.e. "the combination of traditions, taboos, values and attitudes of the society in which an individual lives"[11] in order to get a comprehensive insight.
- The analysis of the technological environment comprises the level of interest and focus on technology, maturity of the technology, the status of intellectual

[7] David Jobber and Fiona Ellis-Chadwick, *Principles and practice of marketing,* 7th ed. (London: McGraw-Hill, 2013), p. 78.
[8] Rudolf Grünig and Richard Kühn, eds., *The strategy planning process: Analyses, options, projects* (Heidelberg, New York: Springer, 2015), pp. 89-90.
[9] Ibid., p. 91.
[10] Christian Homburg, *Marketingmanagement: Strategie, Instrumente, Umsetzung, Unternehmensführung,* 5th ed. (Wiesbaden: Springer Gabler, 2015), p. 468.
[11] David Jobber and Fiona Ellis-Chadwick, *Principles and practice of marketing,* 7th ed. (London: McGraw-Hill, 2013), p. 94.

property and the identification of threatening technologies. Especially in the fields of information management, communications and society, technological advances shape strategic decision, as Jobber points out.[12]

- The second 'E' refers to relevant ecological aspects. Grünig and Kühn recommend to monitor ecological or environmental issues affecting the industry, laws for environmental-protection as well as regulations for waste and energy. Jobber furthermore names a number of relevant criteria such as climate change, pollution, resource conservation and respective attitudes regarding ingredients, components and packaging of products.[13]
- The last force in the row depicts the legal environment. It considers legal protections for intellectual property, consumer laws as well as product-safety, and health laws.

Grünig and Kühn critically comment the PESTEL analysis and recommend three supporting criteria ensuring useful results; the statements included in the analysis should be of "significant influence on the development of the company", "[they] should not only refer to the past and the present" and "[should] not only be analyzed in parallel. They should be linked together."[14]

These recommendations support the analysis of the global environment carried out in 3.3.1 Global Environment Analysis - PESTEL.

2.1.2 Market Environment

The analysis of the market environment will be based on this set of questions compiled by Homburg[15]:

1) Consumers/customers in the market
    a. Who are the customers in the market?

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[12] Ibid., pp. 96–97.
[13] Ibid., pp. 88–92.
[14] Rudolf Grünig and Richard Kühn, eds., *The strategy planning process: Analyses, options, projects* (Heidelberg, New York: Springer, 2015), p. 90.
[15] Christian Homburg, *Marketingmanagement: Strategie, Instrumente, Umsetzung, Unternehmensführung,* 5th ed. (Wiesbaden: Springer Gabler, 2015), p. 474.

b. Which customer segments can be differentiated?
c. Which are the basic needs of the customers?
d. How will the basic needs of the customers change?
e. Which changes in customer behaviour can be expected?

2) Competitors in the market
    a. Who are relevant competitors in the market?
    b. To what extent can the market entry of new competitors or the exit of existing competitors be expected?
    c. How will the general competitive conduct change in the market?
    d. How are the respective competitors situated und which changes can be expected?
    e. Which special strengths and weaknesses distinguish the respective competitors?
    f. Which strategies do the respective competitors deploy?

3) General characteristics of the market
    a. What is the current market volume as well as the current and future market growth?
    b. How is the current profit situation of suppliers in the market and how will it develop in the future?
    c. To what extent can changes in regards to market participants (apart from consumers and competitors) be expected (e.g. regarding intermediaries)?

While the following points further define what will be done to respond to these questions, the respective answers are given in 3.3.2 Market Environment Analysis.

2.1.2.1 Customer Analysis

Segmentation splits a market into homogeneous segments, using certain characteristics of existing and potential customers. This enables the development of tailored marketing strategies which allow the appropriate handling of each segment.[16] The definition of relevant market segments in this paper will comprise several distinctive factors.

The first distinction is made between B2B and B2C segments in order to separate business from private customers. In general, B2B Marketing aims at a smaller target group which consists of a number of informed experts (Decision Making Unit), while the target group on the B2C side is far bigger and uninformed.[17] When dealing with Business customers, it is important to identify the Decision Making Unit, the person or group who in the end initiates the buying process. In this context, it is recommendable to identify the different roles in the Buying Centre (initiator, user, decider, gatekeeper, influencer and buyer)[18]; which roles are occupied and by whom. Additionally, the investigation of the Decision Forming Factors or choice criteria[19], i.e. the factors which shape the buying decision, is of importance. All these aspects have to be established for the different types of organisations the product tries to attract.

In order to identify customer groups in the B2B business, Großklaus suggests a segmentation according to a range of demographic, operational, supply-related and personal criteria,[20] from which an appropriate number will be applied in 3.3.2.1 Customers. The identification of relevant categories of private customers will also be based on a set of criteria (geographic, psychographic, demographic and behavioural criteria) but be more focused on a specialised range of aspects as the psychographic market segmentation suggests. This model relies on criteria such as life style, attitudes and the personality of the customers and is more effective in differentiating the buying behaviour as for example sociodemographic segmentation approaches.[21] A disadvantage of this segmentation method is the high level of difficulty to obtain

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[16] Ibid., p. 477.

[17] Rainer H. G. Großklaus, *Positionierung und USP: Wie Sie eine Alleinstellung für Ihre Produkte finden und umsetzen,* 2nd ed. (Wiesbaden: Springer Gabler, 2015), p. 78, http://dx.doi.org/10.1007/978-3-658-04588-3.

[18] Ibid., p. 81.

[19] David Jobber and Fiona Ellis-Chadwick, *Principles and practice of marketing,* 7th ed. (London: McGraw-Hill, 2013), pp. 279–280.

[20] Rainer H. G. Großklaus, *Positionierung und USP: Wie Sie eine Alleinstellung für Ihre Produkte finden und umsetzen,* 2nd ed. (Wiesbaden: Springer Gabler, 2015), p. 77, http://dx.doi.org/10.1007/978-3-658-04588-3.

[21] Christian Homburg, *Marketingmanagement: Strategie, Instrumente, Umsetzung, Unternehmensführung,* 5th ed. (Wiesbaden: Springer Gabler, 2015), p. 480.

respective qualitative data in comparison to the easy collection of demographic or geographic data. The paper will therefore employ both approaches according to the availability of sources.

2.1.2.2 Competitor Analysis

Unlike Homburg's suggested set of questions regarding the competition, the corresponding chapter 3.3.2.2 Competitors and Substitutes will only focus on existing competitors in the market and their respective position and strategy. The new entry of competitors and the development of the competitive conduct are covered by Porter's Five Forces model and are thereby investigated in the following chapter 3.3.2.3 Industry – Porter's Five Forces Analysis. Identified competitors are characterised in profiles, depicting their name, address of headquarter, company size, turnover, number of subsidies, product portfolio, strengths, weaknesses and a strategy assumption.[22] [23] Substitutes for the Revive Turbo Cleaner are presented by describing the respective technology with its advantages and disadvantages.

2.1.2.3 Industry Analysis

In order to analyse the competitive environment in which the Revive Turbo Cleaner is performing, the paper employs Michael E. Porter's Five Forces model presented in 1979.[24] This classic model for market analysis includes five influencing factors (threat of entry, supplier power, buyer power, threat of substitutes and the rivalry among competitors) which serve as a framework for strategic planning. Porter also offers a range of possible strategies to follow after the analysis, namely the positioning of the company according to its strengths and weaknesses, the shifting of the forces' balance to the company's favour or the prediction of future shifts and the appropriate reaction

[22] Ibid., p. 474.
[23] Ewald Lang, *Die Vertriebs-Offensive: Erfolgsstrategien für umkämpfte Märkte,* 3rd ed. (Wiesbaden: Springer Gabler, 2012), pp. 43f.
[24] Michael E. Porter, "How competitive forces shape strategy," *Harvard Business Review* 57, no. 2 (1979).

to them. In a follow-up article in 2008, which updates and expands his model, Porter states the following in regards to the application of the five forces:

> "Industry structure, as manifested in the strength of the five competitive forces, determines the industry's long-run profit potential because it determines how the economic value created by the industry is divided [...]. By considering all five forces, a strategist keeps overall structure in mind instead of gravitating to any one element." [25]

This affirms the need to consider all influential forces similarly and assures a comprehensive understanding of the specific industry.

Over the years, several authors and also Porter himself perceived a limited and partly false utilisation of the Five Forces model. Three main issues were identified: the lack of deep understanding of the tool, the missing of a structured proceeding during the analysis and the lack of strategic insight potentially provided by the tool.[26] To cope with this problem, Michael E. Dobbs elaborated a set of templates for the comprehensive and correct deployment of Porter's Five Forces, suggesting a number of supporting characteristics for each force which have to be estimated in order to measure the corresponding threat level.[27] This paper employs Dobbs' framework and provides a summary of the findings in 3.3.2.3 Industry – Porter's Five Forces Analysis. All filled templates for the considered industry can be found in Appendix Part B.

2.1.3 Company Analysis

The company analysis will consist of a supported SWOT analysis identifying the firms "Strengths" and "Weaknesses" and integrating the external factors "Opportunities" and "Threats". By comparing these four factors, the company is able to develop an

[25] Michael E. Porter, "THE FIVE COMPETITIVE FORCES THAT SHAPE STRATEGY," *Harvard Business Review* 86, no. 1 (2008): p. 86.

[26] Michael E. Dobbs, "Guidelines for applying Porter's five forces framework: A set of industry analysis templates," *Competitiveness Review* 24, no. 1 (2014): pp. 33f.

[27] Ibid., pp. 38–44.

appropriate marketing strategy, either matching strengths with opportunities or either neutralising or converting weaknesses and threats into positive factors.[28]

However, the SWOT analysis has its number of weak points as Coman and Ronen point out in 2009: No structured proceeding has been provided for the identification of strengths and weaknesses, the analysis tends to include too many aspects instead of focusing on the key points, the tool does not rank the identified strengths and weaknesses and it usually only depicts one single moment in time.[29]
Considering the criticism the SWOT analysis provoked in past decades, the paper applies the following frameworks to eliminate critical aspects:

- A list of terms compiled by Helms and Nixon[30] is incorporated, leading the way to relevant items and supporting the brainstorming process. This list includes image, structure, financials, trends, partners and new technology, amongst others.
- In order to evaluate strengths and weaknesses, Coman and Ronen suggest the application of a set of criteria to check conciseness, traceability, significance and authenticity of the identified aspects.[31] Furthermore, they provide a set of recommendations for the evaluation of weaknesses to eliminate sporadic or irrelevant items.[32] These models support this paper.
- Following the statements of Helms and Nixon,[33] complementary tools are deployed in advance and conjunction with the SWOT Analysis, e.g. Porter's Five

[28] Christian Homburg, *Marketingmanagement: Strategie, Instrumente, Umsetzung, Unternehmensführung,* 5th ed. (Wiesbaden: Springer Gabler, 2015), p. 494.
[29] Alex Coman and Boaz Ronen, "Focused SWOT: Diagnosing critical strengths and weaknesses," *International Journal of Production Research* 47, no. 20 (2009): p. 5677.
[30] Marilyn M. Helms and Judy Nixon, "Exploring SWOT analysis – where are we now?," *Journal of Strategy and Management* 3, no. 3 (2010): p. 216.
[31] Alex Coman and Boaz Ronen, "Focused SWOT: Diagnosing critical strengths and weaknesses," *International Journal of Production Research* 47, no. 20 (2009): p. 5679.
[32] Ibid., pp. 5682–5685.
[33] Marilyn M. Helms and Judy Nixon, "Exploring SWOT analysis – where are we now?," *Journal of Strategy and Management* 3, no. 3 (2010): p. 238.

Forces, as Dobbs confirms,[34] or the PESTEL analysis,[35] enabling the inclusion of solid external factors, opportunities and threats.

The SWOT analysis will be carried out in 3.3.3.1 Current Position – SWOT Analysis.

2.1.4 Marketing Mix

The classic composition of the Marketing Mix was defined by Jerome McCarthy in 1964 as the so-called “4Ps”. This popular model comprises four standard dimensions: product, promotion, price and place, which together build a framework for marketing decisions being easy to apply and remember.[36] Furthermore, the Mix implies an important statement regarding the full set of marketing activities; every single aspect is part of an integrated strategy and does not stand apart from the other three but interacts with them.[37] Besides being one of the most prominent marketing theories, the “4P-Marketing Mix” evoked criticism from a number of authors. Möller summarises them as follows:

"There seem to be 3-4 key criticisms against the Marketing Mix framework [...]:

- The Mix does not consider customer behaviour but is internally oriented.
- The Mix regards customers as passive; it does not allow interaction and cannot capture relationships.
- The Mix is void of theoretical content; it works primarily as a simplistic device focusing the attention of management.
- The Mix does not offer help for personification of marketing activities."[38]

Dev and Schultz formulate even harder criticism: "Using the four Ps, the marketing manager takes an 'inside-out' or 'here's-what-we-can-do' approach to marketplace

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[34] Michael E. Dobbs, “Guidelines for applying Porter's five forces framework: A set of industry analysis templates,” *Competitiveness Review* 24, no. 1 (2014): p. 37.
[35] Ravi Agarwal, Wolfgang Grassl, and Joy Pahl, “Meta-SWOT: Introducing a new strategic planning tool,” *Journal of Business Strategy* 33, no. 2 (2012): p. 15.
[36] E. Constantinides, “The Marketing Mix Revisited: Towards the 21st Century Marketing,” *Journal of Marketing Management* 22, 3-4 (2006): p. 408.
[37] Rudolf Grünig and Richard Kühn, eds., *The strategy planning process: Analyses, options, projects* (Heidelberg, New York: Springer, 2015), p. 177.
[38] Kristian Möller, “Marketing Mix Discussion - Is the Mix Misleading Us or are We Misreading the Mix?” *Journal of Marketing Management* 22, 3-4 (2006): pp. 441f.

entry and development."[39] They argue that the 4Ps do not consider customer needs being a mere optimisation tool for the more effective deployment of internal resources. Together, they present a new Marketing Mix including four new customer-oriented aspects, solution, information, value and access ("SIVA"), which replace the original framework.[40]

Not fully ignoring the original 4Ps due to their extensive coverage in text books (cf. Jobber[41], Homburg[42] and Grünig and Kühn[43]) and accepting the newer, explicitly customer-centric approach of Dev and Schultz, this paper employs both models by not replacing the classic Marketing Mix but rather adding the SIVA-dimensions[44] to it. In the following, the deployed framework is outlined by combining relevant findings of the previously cited authors:

- Product/Solution

  This aspect covers product design, brand management and portfolio decisions as well as the development of new products and decisions regarding accompanying services such as guarantee, customer service and support. The underlying motivation is to offer problem-solving goods and services to the customers which specifically target and fulfil their needs.

- Promotion/Information

  Deciding on the promotional mix of the marketing activity and the content transferred is crucial for managing the communication process with the customers. Apart from the selection of appropriate media channels like print advertising, trade fairs or social media, this also covers promotional activities such as sponsoring, online promotion or targeted direct marketing. The goal is

[39] Chekitan S. Dev and Don E. Schultz, "Simply SIVA," *Marketing Management* 14, no. 2 (2005): p. 38.
[40] Chekitan S. Dev and Don E. Schultz, "A customer-focused approach can bring the current marketing mix into the 21st century," *Marketing Management* 14, no. 1 (2005): pp. 18f.
[41] David Jobber and Fiona Ellis-Chadwick, *Principles and practice of marketing,* 7th ed. (London: McGraw-Hill, 2013), pp. 19f.
[42] Christian Homburg, *Marketingmanagement: Strategie, Instrumente, Umsetzung, Unternehmensführung,* 5th ed. (Wiesbaden: Springer Gabler, 2015), p. 524.
[43] Rudolf Grünig and Richard Kühn, eds., *The strategy planning process: Analyses, options, projects* (Heidelberg, New York: Springer, 2015), p. 178.
[44] Chekitan S. Dev and Don E. Schultz, "A customer-focused approach can bring the current marketing mix into the 21st century," *Marketing Management* 14, no. 1 (2005): pp. 20-22.

to provide valuable and specific information at the correct point in time, so as to not pressurise or annoy the customer but rather offering advice in the preferred media channel when it is needed.

- Price/Value

  Identifying customer value beyond the mere financial facet extends the P of price to a more open field of marketing practice. In "Revisiting the Marketing Mix" Dev and Schultz describe their understanding of customer value:

  > "The value could be monetary, mental, social, time-saving or any other return the customer might seek, enjoy or require. The other side of the value equation, of course, is what value the customer has to give up in order to acquire the marketer's solution. That could be time, money, or some other valuable resource required to obtain and use the solution."[45]

  This perspective enables the appropriate presentation of the product not only in terms of pricing but also in regards to attached characteristics. It is nonetheless important to consider the classic approach comprising price level and positioning, discounts and special offers.

- Place/Access

  Place not only incorporates decisions regarding the location of sale, it also looks at distribution and delivery procedures and partners. It is furthermore favourable to regard this aspect from a customer point of view. Simplifying the access for customers can create an advantage over competitors and thereby ensure success.

A consideration of the current Marketing Mix of Revive Automotive Solutions Ltd is to be found in 3.3.3.2 Current Actions – Marketing Mix.

[45] Don E. Schultz and Chekitan Dev, "Revisiting the Marketing Mix," *Marketing Management* 21, no. 2 (2012): p. 45.

2.2 The German Automotive Aftermarket

The analysis carried out in this paper takes place against the background of the German automotive aftermarket. It is therefore necessary to explain the structure of this rather complex industry, present the different players in the market and consider significant industry trends which shape future business in this segment.

Tennstedt, Elsässer, Betke and Gebauer define the automotive aftermarket as follows:

> "Aftermarket operations have a very broad scope and contain all activities related to maintaining a car after its initial sale and until the end of its lifecycle. The relevant activities are also referred to as aftermarket parts and services. The aftermarket encompasses all parts and services purchased for light- and heavy-duty vehicles after the original sale, including replacement parts, accessories, lubricants, appearance products and service repairs. This definition also includes any additional innovative services that help to optimize the use of the vehicle."[46]

Germany is the biggest submarket of the European automotive aftermarket being responsible for more than a quarter of the total sector value.[47]

[46] *The Aftermarket in the Automotive Industry: How to Optimize Aftermarket Performance in Established and Emerging Markets* (2010), p. 6.
[47] MarketLine, "Automotive Aftermarket Industry Profile: Germany," (2012): p. 11.

2.2.1 Structure of the German Automotive Aftermarket

The structure of the German automotive aftermarket is of considerable complexity. Different market players operate in an increasingly competitive environment offering spare parts and repair services through a number of distribution channels, each consisting of several levels. Figure 1 combines established structures by BCG[48] and wolk after sales experts GmbH, illustrates major categories of operating companies and highlights distribution channels.

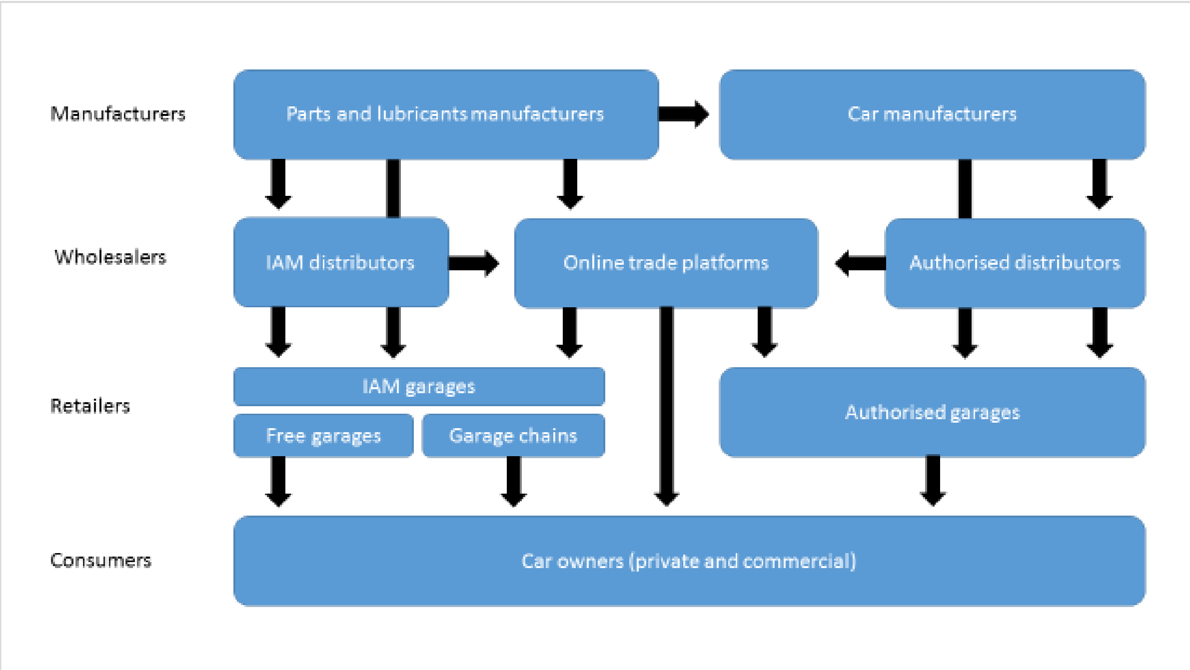

Figure 1: Simplified structure of the German Car Aftermarket (cf. BCG 2012 and wolk after sales experts 2016)

There are two major groups of players on the manufacturer level. Car manufacturers like VW, Daimler and BMW design, assemble and sell the key product of the market. They rely on the parts manufacturers, also known as OEM (Original Equipment Manufacturers)[49] such as Bosch, ZF and Federal-Mogul which supply them with specifically designed car parts for their production lines. To this second group also

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[48] "The European Automotive Aftermarket Landscape: Customer Perspective, Market Dynamics and the Outlook to 2020." BCG - The Boston Consulting Group, press release, July 2012, https://www.bcg.com/documents/file111373.pdf, accessed November 2016.

[49] The abbreviation OEM is sometimes also used for the car manufacturers. However, in the context of this paper, only suppliers of original car parts are meant.

belong manufacturers of lubricants (Castrol, LIQUI MOLY, MOTUL, etc.) and accessories (Atera, Thule, etc.) providing products to maintain and enhance vehicles.

Both car and parts manufacturers usually sell their products via distributors in order to benefit from already existing networks. Especially IAM distributors like Stahlgruber and WM hold a significant position within the market, as they are able to negotiate better prices with the manufacturers due to their large purchasing volumes.[50] These highly proficient organisations stand in constant competition with each other resulting in decreasing margins and customer prices and accelerating the concentration process in the industry.[51] Another distribution channel are online trade platforms such as kfzteile24, A.T.U, ebay and manufacturer online shops used by distributors, garages and consumers alike. While this channel is of lower importance in the B2C segment[52] due to scarce automotive knowledge and skill, some garages and knowledgeable car owners prefer online shops due to cost advantages.

On the retail level, authorised and independent garages compete for different customer segments. While authorised garages prevail in the repair business for younger vehicles up to 10 years, independent garages including free garages and service chains gain market share with rising vehicle age as figure 2 shows. Authorised garages provide quality, reliability and warranty attracting owners of new vehicles above all. With increasing vehicle age, the buying criterion “quality” loses importance and is gradually replaced by “price”, driving car owners of older vehicles to independent garages.[53] The

[50] Ibid.

[51] “Concentration process in the European automotive aftermarket distribution is growing.” wolk after sales experts GmbH, press release. Cologne, January 15, 2013, http://www.wolk-aftersales.com, accessed July 2016.

[52] Ibid.

[53] “The European Automotive Aftermarket Landscape: Customer Perspective, Market Dynamics and the Outlook to 2020.” BCG - The Boston Consulting Group, press release, July 2012, https://www.bcg.com/documents/file111373.pdf, accessed November 2016.

workshop preferences of consumers will be discussed in more detail in 3.3.2.1.1 Consumers.

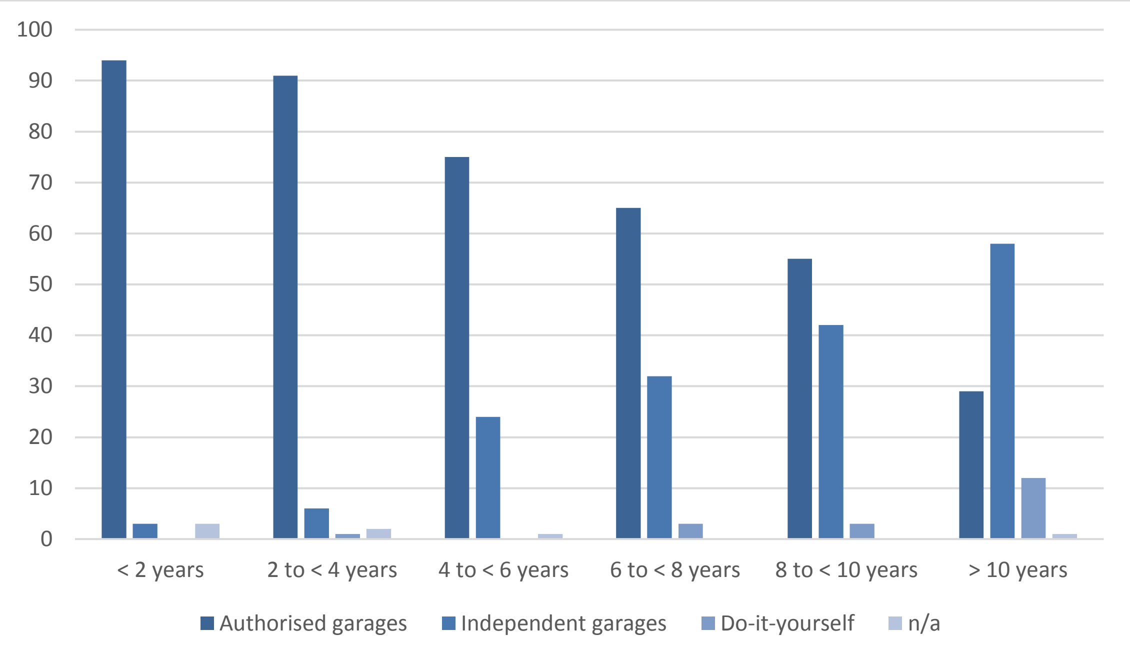

Figure 2: Passenger car repair services by location and vehicle age in Germany 2015 (in %) [54]

Despite of their relatively low market share and low shares in consumer preferences,[55] BCG sees three advantages of service centres and franchise garages like A.T.U, Carglass and Euromaster on European level:

> "The clear winners in the independent channel are big service chains. Franchise operations, fast fitters, and automotive centers have three major advantages: (1) Due to their size, they have accordingly larger purchasing volumes, which they are able to translate into cost advantages and pass on to customers as lower prices. (2) They also have the financial means to both train employees and acquire the diagnostic tools for standardized services, while (3) at the same time cultivating very close relations with suppliers and wholesalers, who are often involved in large chains' training offers for employees and quality improvements in services."[56]

[54] GfK, "Verteilung der Wartungsarbeiten an Pkw nach dem Ort für die Kfz-Wartung und dem Fahrzeugalter im Jahr 2015," DAT, 2016, https://de.statista.com/statistik/daten/studie/37158/umfrage/kfz-wartungsarbeiten-nach-ort-und-fahrzeugalter-in-deutschland/, accessed December 2016.
[55] Statista GmbH, "Kfz-Service: Statista-Dossier," 2016, p. 23, https://de.statista.com/statistik/studie/id/23744/dokument/kfz-service-statista-dossier/, accessed December 2016.
[56] "The European Automotive Aftermarket Landscape: Customer Perspective, Market Dynamics and the Outlook to 2020." BCG - The Boston Consulting Group, press release, July 2012, https://www.bcg.com/documents/file111373.pdf, accessed November 2016.

Concerning consumer behaviour in the German aftermarket, it is necessary to illustrate major characteristics. In Germany as a part of Western Europe, vehicle density is high, while emotional aspects of car ownership decrease and costs are at a high level. Currently, interest in both premium and low-price cars can be perceived, while loyalty regarding garages is decreasing.[57]

2.2.2 Trends in the German Automotive Aftermarket

The sector faces a number of substantial trends. The German automotive aftermarket is, generally spoken, a shrinking or at least a stagnating market.[58] Competition is high and players try to obtain business fields via acquisition, leading to an ongoing concentration process on the wholesale and garage level. Recent acquisitions, e.g. of the IAM distributor Trost SE by WM SE at the end of 2014 or of PV Automotive GmbH by Stahlgruber Holding GmbH in 2013,[59] and the decreasing number of workshops due to an over-supply of service providers[60] confirm this trend.

On the garage level, independent service chains like A.T.U and Carglass will benefit from this development as the Boston Consulting Group states in 2012:

> "We believe that the development of the competitive landscape will allow independent service providers to expand their market share, though slightly. Thanks to their cost advantages, they are in the best position to address customers' increasing price awareness. This applies primarily to large independent service chains. Small independent repair shops will be increasingly challenged by

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[57] "Concentration process in the European automotive aftermarket distribution is growing." wolk after sales experts GmbH, press release. Cologne, January 15, 2013, http://www.wolk-aftersales.com, accessed July 2016.

[58] MarketLine, "Automotive Aftermarket Industry Profile: Germany," (2012): p. 13.

[59] "Exciting developments in the Car Aftermarket in Europe 2015." wolk after sales experts GmbH, press release, October 27, 2016, http://www.wolk-aftersales.com/news-zu-wolk-after-sales-experts/exciting-developments-in-the-car-aftermarket-in-europe-2015.html, accessed November 2016.

[60] "Europa konzentriert sich weiter." wolk after sales experts GmbH, press release, April 30, 2015, http://www.wolk-aftersales.com/automotive-aftermarket-news/europa-konzentriert-sich-weiter.html#startOfPageId95, accessed November 2016.

know-how and investment barriers, so that we see a further decrease in outlet numbers until 2020."[61]

Resulting from this, the organisation forecasts an increase in market share of 5% for 2020 for independent operators in Germany.

An opportunity for wholesalers and other players in the market lies in the supply of garage concepts such as Bosch Car Service (Robert Bosch GmbH), AUTOEXCELLENT (Select AG) or AUTOteam (WM SE). These concepts offer support in marketing and sales as well as staff training[62] and strengthen the influence and importance of wholesalers and manufacturers on and for workshops.

On the customer side, there are two main aspects. One is the rising average vehicle age due to better quality of vehicles and parts.[63] According to KBA and Die Zeit,[64] average vehicle age rose from 8 years in 2008 to 9.2 years in 2016, as figure 3 shows:

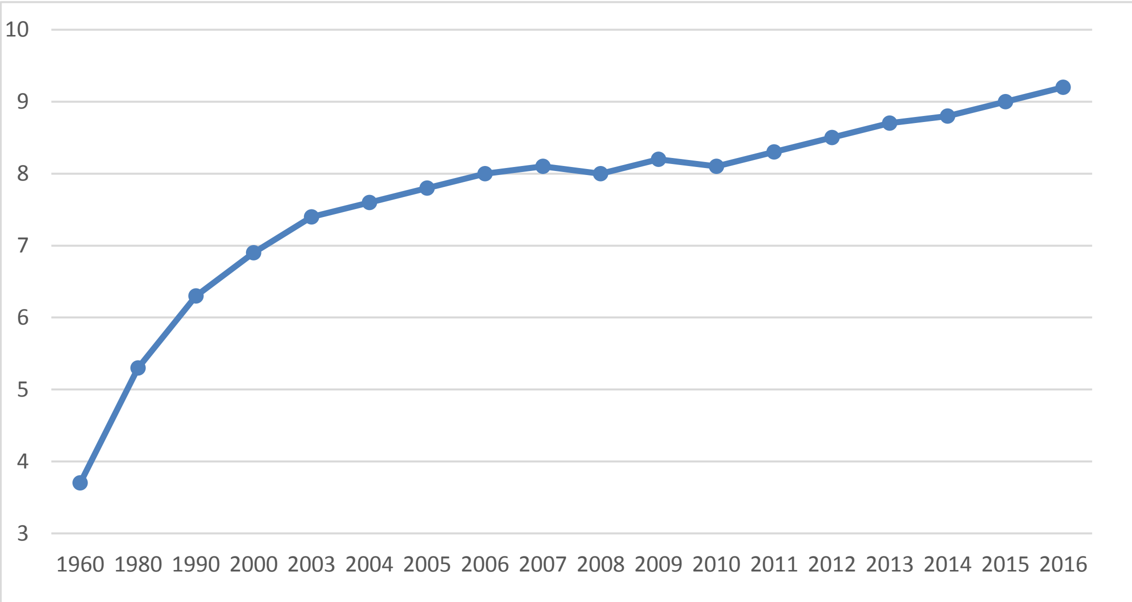

Figure 3: Average age of passenger cars in Germany 1960 - 2016

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[61] "The European Automotive Aftermarket Landscape: Customer Perspective, Market Dynamics and the Outlook to 2020." BCG - The Boston Consulting Group, press release, July 2012, https://www.bcg.com/documents/file111373.pdf, accessed November 2016.

[62] "Concentration process in the European automotive aftermarket distribution is growing." wolk after sales experts GmbH, press release. Cologne, January 15, 2013, http://www.wolk-aftersales.com, accessed July 2016.

[63] Falk Hecker, ed., *Aftersales in der Automobilwirtschaft: Konzepte für Ihren Erfolg,* 1st ed. (München: Autohaus Buch & Formular, 2010), p. 8.

[64] KBA and Die Zeit, "Durchschnittliches Alter von Pkw in Deutschland in den Jahren 1960 bis 2016," 2016, https://de.statista.com/statistik/daten/studie/154506/umfrage/durchschnittliches-alter-von-pkw-in-deutschland/, accessed December 2016.

Rising vehicle age leads to an increased demand for spare parts and repair services and will ensure stable demand,[65] especially for independent workshops as their market share grows in segments with older vehicles. The second point is the growing importance of the internet in this field. While the market share of online shops for spare parts is still marginal, the strength lies in catching the customer's awareness and direct him towards a service centre where the problem can be solved.[66]

Another major trend has its source on the manufacturer level. Driven by environmental needs and political programs, electric vehicles and hybrids slowly start to replace vehicles driven by diesel and gasoline combustion engines. Although it will not harm the business in the short term, this will nonetheless change the automotive aftermarket considerably in the next decade.

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[65] "New Vehicles in Eastern Europe and Aging Fleets in Western Europe Drive Automotive Aftermarket Growth." Frost & Sullivan, press release, June 22, 2015, http://ww2.frost.com/news/press-releases/new-vehicles-eastern-europe-and-aging-fleets-western-europe-drive-automotive-aftermarket-growth/, accessed November 2016.

[66] "Concentration process in the European automotive aftermarket distribution is growing." wolk after sales experts GmbH, press release. Cologne, January 15, 2013, http://www.wolk-aftersales.com, accessed July 2016.

3 Practical Consideration

3.1 Carbon Deposits

Carbon deposits tend to build up with advanced vehicle mileage and can cause severe problems especially in direct injection gasoline or turbo-charged diesel engines. Both engine types contain sensitive parts, as for example the injection valve in GDI[67] engines and the VTG[68] mechanism in turbo-charged engines, which are easily restricted in their functionality by carbon deposits building up.

Gasoline engines accumulate deposits on the back of the intake valves over time, because the valve moves into the combustion chamber for a short moment during the combustion cycle. In this short period, remainders of the combustion process can settle on the back of the valve.[69] Additional deposits can build up if an Exhaust Gas Recirculation (EGR) system is fitted, which recirculates remains of the combustion process a second time through the engine system. This also can affect diesel engines. Carbon deposits are usually carried away in Port Fuel Injection (PFI) engines by the fuel washing over them. This is due to the fact that the fuel in PFI engines is injected outside of the combustion chamber and to the back of the intake valve before it reaches the combustion chamber.[70] In GDI engines on the other hand, fuel is injected directly into the combustion chamber, so the fuel never touches the back of the valve and is not able to clean it. Over time, air flow is restricted resulting in a decreased engine efficiency. This is intensified, as deposits also build up inside the combustion chamber on the fuel injection valves changing the spray pattern of incoming fuel. Trade magazines confirm the trend in the industry towards GDI engines[71] due to the high level of control over the

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[67] Abbreviation for Gasoline Direct Injection

[68] Abbreviation for Variable Turbine Geometry

[69] Andrew Markel, "Direct Injection Engines and Carbon Deposits," Engine Builder, 2015, http://www.enginebuildermag.com/2015/01/direct-injection-engines-carbon-deposits/, accessed November 2016.

[70] Changhoon Oh, "Considerations on Influencing Factors of Carbon Deposit in Gasoline Direct Injection Engine," in *Proceedings of the FISITA 2012 World Automotive Congress: Volume 2: Advanced Internal Combustion Engines (II)* (Berlin, Heidelberg: Springer, 2013), p. 1370.

[71] Bob McDonald, "Direct Injection Gas and Diesel Technology," Engine Builder, 2015, http://www.enginebuildermag.com/2015/10/direct-injection-gas-and-diesel-technology/, accessed November 2016.

amount of injected fuel, its enhanced efficiency and lower emissions.[72] Recent studies show that especially VW, Audi and BMW can be affected of the carbon problem,[73] but other influences such as poor fuel quality, the rise of alternative, ethanol-containing fuels,[74] a driving style demanding low engine load[75] and vehicle age among others, increase the amount of carbon in the engine. Car owners can experience decreasing fuel economy and power, difficulties when starting the car,[76] engine warning lights, frequent activation of the limp mode and diagnostic trouble codes around the engine system, if their vehicles are affected. However, a distinct diagnosis and assessment of the problem can only be made by disassembling and inspecting respective engine parts.

There are several options for solving the carbon deposit issue. The online magazine "Engine Builder" recommends preventative maintenance, oil changes on a regular basis, the replacement of affected parts and updating the engine's software. If the problem already is present, the application of chemical cleaners or the partial dismantling of the engine with subsequent manual or mechanical cleaning are named.[77] "Autoguide.com" also mentions software updates, manual cleaning, a chemical solution or a treatment with media-blasting.[78] Many manufacturers of oil and lubricants present so-called "additives" which are directly applied to the fuel tank (e.g. LIQUI MOLY, Voltronic, Wynn's, BG, etc.), while the German petrol filling station chain Aral further develops its fuel formula to prevent and wash away carbon deposits.[79] Although very prominent in

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[72] Craig Cole, "Is Carbon Buildup a Problem With Direct-Injection Engines?," Autoguide.com, 2015, http://www.autoguide.com/auto-news/2015/01/is-carbon-buildup-a-problem-with-direct-injection-engines-.html, accessed November 2016.

[73] Ibid.

[74] Paul Dobbyn, "Are new EU initiatives storing up problems for car owners?," Professional Motor Mechanic, 2014, http://pmmonline.co.uk/article/are-new-eu-initiatives-storing-up-problems-for-car-owners/, accessed November 2016.

[75] Changhoon Oh, "Considerations on Influencing Factors of Carbon Deposit in Gasoline Direct Injection Engine," in *Proceedings of the FISITA 2012 World Automotive Congress: Volume 2: Advanced Internal Combustion Engines (II)* (Berlin, Heidelberg: Springer, 2013), p. 1377.

[76] Andrew Markel, "Direct Injection Engines and Carbon Deposits," Engine Builder, 2015, http://www.enginebuildermag.com/2015/01/direct-injection-engines-carbon-deposits/, accessed November 2016.

[77] Ibid.

[78] Craig Cole, "Is Carbon Buildup a Problem With Direct-Injection Engines?," Autoguide.com, 2015, http://www.autoguide.com/auto-news/2015/01/is-carbon-buildup-a-problem-with-direct-injection-engines-.html, accessed November 2016.

[79] Gundel Jacobi, "Schmutz hat hier keine Chance," *amz,* Juni 2016, http://www.amz.de/download/archiv/2016/amz_2016_06/index.html#/0, accessed November 2016.

the market, the effectiveness of additives is questionable, especially in direct injection engines, as the fuel will not have contact with all affected car parts.[80]

[80] Changhoon Oh, "Considerations on Influencing Factors of Carbon Deposit in Gasoline Direct Injection Engine," in *Proceedings of the FISITA 2012 World Automotive Congress: Volume 2: Advanced Internal Combustion Engines (II)* (Berlin, Heidelberg: Springer, 2013), p. 1370.

3.2 The Company and Product

Revive Automotive Solutions Ltd is a small enterprise based in Atworth, Wiltshire in the UK and was founded in 2014 to create a foundation for the manufacturing and distribution of the Revive Turbo Cleaner.[81] Starting in 2011, both was previously carried out as a part of SP Diagnostics' business, a company based in the same location and founded in 1990 as a developer of diagnostic and scan tools for the automotive aftermarket.[82] According to sales director Andy Amor, Revive was in the first years sold directly to garages, as a distribution network was not set up yet. Later on and as Revive became known internationally, this changed wholly to indirect sale. In spring 2016, SP Diagnostics was acquired by Bartec Auto ID Ltd, based in Barnsley, UK, what added the Revive Turbo Cleaner to the Bartec business range of emissions testing, waste management systems, Tyre Pressure Monitoring System (TPMS) tools and TPMS factory systems.[83] Bartec Auto ID could add parts of its existing distribution network which was mainly obtained through the TPMS business to Revive's contacts and also agreed on further supporting the brand with its own marketing and sales team. Both teams are now looking for appropriate channels to communicate and distribute the product.

In the following, the product is described as presented on Revive's English homepage https://reviveturbocleaner.com/ and its recently set up German equivalent http://www.turboreiniger.de/. The Revive Turbo Cleaner is a water based fluid which removes carbon and oily deposits from the interior of automotive engine systems. The Revive fluid is based on a formula employed in aviation maintenance and is sold in 750 ml units, the so called "Starter Kit"[84], for usage in automotive systems. After the application through the air intake of the engine, its active parts connect to the carbon molecules and carry them away gradually, so as to not loosen bigger parts which then could damage components of the engine such as catalysts or diesel particulate filters (DPF). The active ingredient survives the combustion process attached to the accruing steam and is thereby able to clean air intake and fuel injection valves alike. The Revive

[81] https://reviveturbocleaner.com/index.php/contactus (accessed 17.11.16)
[82] http://www.spdiagnostics.com/ (accessed 17.11.16)
[83] http://www.bartecautoid.com/ (accessed 17.11.16)
[84] German product name: "Komplettpaket" (complete package)

fluid carries the removed carbon further down the air path of the engine system. In diesel engines it will add to the soot load of the diesel particulate filter, generally resulting in a regeneration process triggered by the engine's Electronic Control Unit (ECU) depending on the actual amount of removed carbon. The smaller 300 ml "Service Shot" is designed for preventative treatment after oil services and was developed to reduce the risk of carbon related issues before they can build up.

Concerning the cleaning of bigger vehicles such as HGVs and busses, the required amount of Revive fluid for a "full treatment" has to be adapted to the engine size in order to achieve comparable results. Revive Automotive Solutions Ltd recommends applying 750 ml of the fluid for an engine size of up to 5 litre.[85] The recommended amount of fluid increases as shown in table 1, i.e. a full treatment for a 13l-HGV-engine equals three passenger car treatments for instance.

Engine size	Recommended amount of Revive
< 5.0 l	750 ml
5.0 – 9.9 l	1500 ml
10.0 – 14.9 l	2250 ml
> 15.0 l	3000 ml

Table 1: Recommended amount of Revive Turbo Cleaner by engine size

[85] Cf. the Treatment Calculator provided on https://reviveturbocleaner.com/index.php/how-to-use (accessed 18.12.16)

3.3 Analysis

Before the actual analysis can start, it is inevitable to define the industry in which the Revive Turbo Cleaner is competing. As declared above, the paper only regards the German marketplace.

The German automotive aftermarket was described in 2.2 The German Automotive Aftermarket as the background of Revive's market segment. In that respect, the aftermarket features the same or at least a very similar structure as Revive's concrete market segment; the company offers products which extend the working life of automotive engines to distributors, garages and car owners in the aftermarket. Characteristics and developments of this market clearly affect the operations of Revive Automotive Solutions Ltd. However, the aftermarket comprises industries in which Revive does not compete, such as the tyre industry, the growing segment of electric cars, the market for OE and replacement car parts or the segment of cleaning products for exterior or superficial car components.

These considerations lead to the following industry definition which is employed in the subsequent analysis: The Revive Turbo Cleaner competes in the German market for products cleaning the internals of automotive combustion engines. This definition is in line with requirements for a market definition suggested by Grünig and Kühn; it defines "a specific category of offer within a defined market" and it "includes the principal competing offers".[86]

3.3.1 Global Environment Analysis - PESTEL

The PESTEL analysis considers political, economic, socio-cultural, technological, ecological and legal environmental conditions and the influences these are having on the company's operations. The theoretical framework is provided in 2.1.1 Global Environment.

[86] Rudolf Grünig and Richard Kühn, eds., *The strategy planning process: Analyses, options, projects* (Heidelberg, New York: Springer, 2015), pp. 55–57.

Political aspects

Recent developments in Europe and Germany result in an environment hard to predict for companies. In June 2016, a slim majority of the British population voted for the exit of the United Kingdom from the European Union. Political consequences of this event are still unknown making it difficult for exporting firms to foresee the effects on their operations. Trade agreements between the UK and the EU will be reconsidered and probably renegotiated in the coming years and British firms might meet rising trade barriers when exporting into the EU along with other changes such as new legal requirements.

In fall 2017, the German population will vote on a new composition of its Bundestag, the German parliament, and thereby indirectly on a new government. Recent surveys confirm the continuous trend towards smaller parties. While traditionally strong parties as the conservative CDU/CSU and the social democratic SPD are projected to lose shares, traditionally smaller parties such as the Greens, the left-wing party Die Linke and the liberal FDP can slightly increase their number of seats. The rising right-wing party AfD has failed to enter the parliament in 2013 but will most likely enter in 2017 with a strong presence. Figure 4 shows the projected results for the German parliamentary elections in 2017.[87]

[87] https://bundestagswahl-2017.com/prognose/ (18.01.2016)

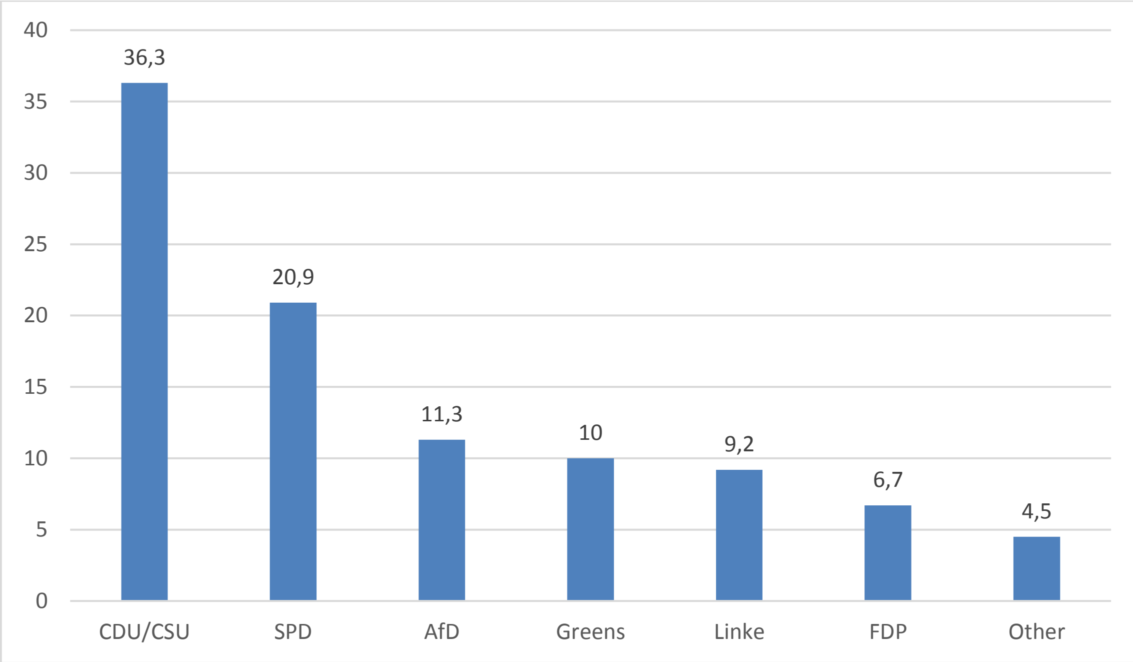

Figure 4: Projected results for the composition of the German Bundestag 2017 in %

The results of the election and the formation of the new government will influence the negotiation process with the British government and thereby the actual outcome of the Brexit referendum. Current Federal Chancellor Angela Merkel (CDU) announced to run again for chancellor. She stands for a pro-European policy and will thereby probably impede a "soft" exit of the United Kingdom meaning no major disadvantages for the leaving nation.

According to Stephen Spivey of Frost & Sullivan, inspection standards and environmental regulations across Europe are rising.[88] This will drive car owners towards workshops searching for systems which improve emission values, fuel efficiency and driver safety, being an opportunity for engine cleaning products integrated in standard servicing offers of garages.

Regarding a more technical aspect, the German government proclaimed under the National Development Plan for Electric Mobility to further support the launch of electric

[88] "New Vehicles in Eastern Europe and Aging Fleets in Western Europe Drive Automotive Aftermarket Growth." Frost & Sullivan, press release, June 22, 2015, http://ww2.frost.com/news/press-releases/new-vehicles-eastern-europe-and-aging-fleets-western-europe-drive-automotive-aftermarket-growth/, accessed November 2016.

vehicles and plans to bring 6 million on the streets by 2030.[89] Furthermore, owners of electric vehicles and the construction of additional infrastructure will benefit from extended subsidy programs.[90] This development will decrease market potential for carbon-removing engine cleaners and other products related to combustion engines.[91]

Economic aspects

With a population of 82.2 million[92] and a GDP of 3,859,547 million US$[93], the Federal Republic of Germany forms the biggest national economy in Europe and is responsible for more than 25% of the Eurozone's gross domestic product.[94] Similar to the most industrialised countries, Germany exhibits low growth rates, currently a real GDP growth rate of 1.7%. Inflation and long-term interest rate are kept low (0.2 and 0.5%) by the European Central Bank and the Deutsche Bundesbank in order to prevent negative economic development and stimulate investment. The unemployment rate lies currently below 5%.[95] All these figures present a stable economic situation which on the one hand favours investing and expanding companies. On the other hand, it may result in difficulties to recruit adequately trained employees and realise a satisfying return on investment in this widely saturated and developed national market without a clear differentiation of the company regarding product and employer performance.

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89 MarketLine, a Progressive Digital Media business, "Germany: In-depth PESTLE insights," *Country Profile Series (*2014): p. 6.

90 "Weitere Steuervorteile für Elektroautos." Bundesregierung, press release, November 21, 2016, https://www.bundesregierung.de/Content/DE/Artikel/2016/05/2016-05-18-elektromobilitaet.html?nn=1384552, accessed November 2016.

91 "The European Automotive Aftermarket Landscape: Customer Perspective, Market Dynamics and the Outlook to 2020." BCG - The Boston Consulting Group, press release, July 2012, https://www.bcg.com/documents/file111373.pdf, accessed November 2016.

92 https://www.destatis.de/DE/Startseite.html (08.11.2016)

93 Statistisches Bundesamt, "Deutschland: Statistische Länderprofile G20 Industrie- und Schwellenländer," Statistisches Bundesamt, 2015, p. 2, https://www.destatis.de/DE/Publikationen/Thematisch/Internationales/Laenderprofile/Laenderprofile.html.

94 MarketLine, a Progressive Digital Media business, "Germany: In-depth PESTLE insights," *Country Profile Series (*2014): p. 51.

95 OECD, *Country statistical profile: Germany 2016/2* (2016), p. 2.

An aspect possibly threatening Revive's distribution operations in the long term is Germany's progressively ageing Infrastructure,[96] endangering delivery times and reliability and thereby customer satisfaction.

Last but not least, the exchange rate between the British Pound and the Euro decreased considerably from 1.43 in November 2015 to currently 1.15 EUR/GBP[97] following the Brexit referendum in June 2016. This results in cheaper import costs for German companies purchasing in the UK. As Revive is distributed by the parent enterprise Bartec Auto ID Ltd and its German subsidiary Bartec Auto ID GmbH in Wölfersheim near Frankfurt, these fluctuations can easily be translated into price advantages by choosing the respective distributing organisation.

Social and cultural aspects

A major trend in the social dimension is the demographic change, meaning the ageing German population with smaller succeeding generations. In 2060, the share of people older than 65 in German population is projected to surpass 30% in comparison with around 20% in 2013.[98] This has massive implications on the communication strategy of companies, as this age segment will increasingly gain importance.

Caused amongst others by the growing number of immigrants in Germany, right-wing and populist movements gain ground. This development is also reflected in the projected results of the coming elections in 2017 after which the right-wing party AfD very probably will enter the German parliament. A market observation study carried out by MarketLine affirms this trend and warns of growing right-wing extremism threatening the social stability in Germany.[99]

Regarding the development since 2010, Statista confirms the constant interest in car-related topics, although the total number of highly interested and interested people

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[96] MarketLine, a Progressive Digital Media business, "Germany: In-depth PESTLE insights," *Country Profile Series (*2014): p. 15.

[97] http://www.finanzen.net/devisen/britische_pfund-euro-kurs (18.01.2016)

[98] MarketLine, a Progressive Digital Media business, "Germany: In-depth PESTLE insights," *Country Profile Series (*2014): p. 3.

[99] Ibid., p. 15.

decreased marginally from around 33 million in 2010 to just below 32 million in 2015.[100] Passenger vehicles thereby still play the major role when it comes to the mobility of the German population and related products benefit from a certain level of interest.
From the cultural point of view, people in Germany tend to be very punctual and formal for business meetings and are usually prepared and informed enough to ask specific and detailed questions concerning the product.[101] Sales agents need to show their own expertise in the field and prove it, if possible, in order to build new business relationships.
A positive aspect of the geographical and cultural circumstances of Germany is that the German language enables companies with respective resources and distribution networks to additionally cover Austria and major parts of Switzerland with communication, sales and support activities without having to adapt much in terms of culture or language.[102] This could be an opportunity for Revive Automotive Solutions Ltd when moving into these regions relying on communication support provided by Bartec Auto ID GmbH.

Technological aspects

The Revive Turbo Cleaner is technically not very complex but it requires a certain level of technical understanding to diagnose the problem of the vehicle and then correctly apply the fluid into the engine system. In order to communicate this knowledge, convince new customers, especially workshops, and provide technical support for different types of combustion engines and engine states, sales and support staff should ideally be able to explain relevant aspects. The chemical formula is matured and has

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[100] VuMA, "Bevölkerung in Deutschland nach Interesse an Informationen über Autos von 2010 bis 2016 (Personen in Millionen)," Statista, 2016, https://de.statista.com/statistik/daten/studie/171977/umfrage/interesse-an-informationen-ueber-autos/, accessed December 2016.
[101] Department for International Trade, "Exporting to Germany: A guide for UK businesses interested in selling goods and services in Germany.," 2016, p. 9, https://www.gov.uk/guidance/exporting-to-germany, accessed November 2016.
[102] Department for International Trade, "Doing business in Germany: Germany trade and export guide," Updated 25 February 2016, p. 5, https://www.gov.uk/government/publications/exporting-to-germany/doing-business-in-germany-germany-trade-and-export-guide, accessed November 2016.

been applied on different engine types of power stations, aircraft and vehicles especially in the UK. The fluid is considered as safe and its chance of causing engine damage is believed to be very low when applied correctly.[103]

The study "Social Trends – Automobil und Mobilität der Zukunft" published by Tomorrow Focus Media in 2015 focused on identifying opinions in the German population regarding passenger vehicles and mobility and current developments in this field.[104] According to Tomorrow Focus Media, more than 80% of the German population own a vehicle and 60% inform themselves frequently (14.1%) or from time to time (45.9%) about cars. They state that this usually takes place in the internet (search engines, forums and specialised vehicle websites) or via car magazines, car dealers or friends.

The increasing importance of online-based research and phenomena such as social media and dedicated forums are crucial for Revive's further promotion campaign as these types of media are the setting where recent developments are discussed by end-users. The so-called social web provides communication platforms for consumers in dedicated web communities. Information in this type of media is believed to be trustworthy by the users and is preferred to organisational sources.[105] Progress in internet technology furthermore enables the employment of useful tools such as an embedded interactive map on the homepage allowing the customer to identify point of sales nearby.[106]

Revive faces a number of threatening technological developments. On the one hand, non-chemical substitutes such as ultrasonic cleaning and different blasting treatments using walnut shell or plastic granulate add to the already existing competitive pressure caused by several chemical solutions for the carbon deposit issue (LIQUI MOLY, Berner, Innotec, etc.). On the other hand, the development in engine technology will further

[103] https://reviveturbocleaner.com/index.php/questions (24.11.2016)

[104] Sonja Knab, "Social Trends: Automobil und Mobilität der Zukunft," Tomorrow Focus Media, 2015, https://de.statista.com/statistik/studie/id/26230/dokument/studie-zur-mobilitaet-der-zukunft-in-deutschland-2015/, accessed November 2016.

[105] Francisco J. Martínez-López, Rafael Anaya-Sánchez, and Rocio Aguilar-Illescas, *Online Brand Communities: Using the Social Web for Branding and Marketing,* 1st ed. (2016), p. 20, http://dx.doi.org/10.1007/978-3-319-24826-4.

[106] https://reviveturbocleaner.com/index.php/where-to-buy (accessed 29.11.2016)

advance. As mentioned in 3.1 Carbon Deposits, improved engine software has the possibility to cope with carbon deposits, although many older vehicles will remain on the streets. Additionally, driven by political and social demand and diminishing fossil fuel reserves, modern engine technology increasingly goes towards electrical vehicles and hybrids, which will require less maintenance than combustion engines.[107]

Ecological aspects

With increasing ecological issues worldwide and on national level (e.g. high concentration of particulates in cities[108]), awareness for ecological problems and environmental protection is rising on both public and political level. The public's consciousness about ecological topics is growing; according to a study carried out in 2014 by the German ministry of the environment (BMUB), 19% of the population regard environmental aspects as one of the most important problems for Germany and 30% see nature and environment as crucial parts of a good life.[109] A clear majority of 82% considers replacing conventional vehicle traffic by cycling and public traffic as a positive development.[110] Nonetheless, passenger cars still form the most important means of transportation for most of the people as discussed above. German politics react with subsidiaries for new mobility concepts such as electric vehicles[111] and stricter waste regulations[112]. Especially the Green Party defines itself with a program considering

[107] "The European Automotive Aftermarket Landscape: Customer Perspective, Market Dynamics and the Outlook to 2020." BCG - The Boston Consulting Group, press release, July 2012, https://www.bcg.com/documents/file111373.pdf, accessed November 2016.
[108] MarketLine, a Progressive Digital Media business, "Germany: In-depth PESTLE insights," *Country Profile Series (*2014): p. 40.
[109] Korinna Schack, "Umweltbewusstsein in Deutschland 2014: Ergebnisse einer repräsentativen Bevölkerungsumfrage," Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit (BMUB); Umweltbundesamt (UBA), 2015, p. 11, accessed November 2016.
[110] Ibid.
[111] "Weitere Steuervorteile für Elektroautos." Bundesregierung, press release, November 21, 2016, https://www.bundesregierung.de/Content/DE/Artikel/2016/05/2016-05-18-elektromobilitaet.html?nn=1384552, accessed November 2016.
[112] "Weniger Abfall, noch mehr Recycling." Bundesregierung, press release, February 10, 2012, https://www.bundesregierung.de/ContentArchiv/DE/Archiv17/Artikel/2011/03/2011-03-30-wertstofftonne-elektroschrott.html, accessed November 2016.

environmental protection and could gain ground in several federal states (e.g. Baden-Württemberg, Rhineland-Palatinate), benefiting from ecological topics.

Concluding from these observations, it may result positively if the brand Revive is further built on its environmentally-friendly characteristics and if also the packaging and product reflect this company value, preserving natural resources.

Legal aspects

The chemical formula of the Revive Turbo Cleaner is protected by European patent law for 20 years since the application of the patent. Before expiration, this legal protection can be extended.[113]

As product standards are widely the same in EU member states[114] and Revive has already been sold for several years in the UK, product safety and related regulations should not cause issues when the product is launched on continental Europe. However, this status quo may change due to the upcoming negotiations related to the exit of the United Kingdom from the European Union.

3.3.2 Market Environment Analysis

In order to develop and implement an adequate marketing strategy, it is necessary to analyse the market environment of Revive Automotive Solutions Ltd in the German market for products cleaning the internals of automotive combustion engines. This comprises the identification and characterisation of customer segments, current competitors and substitutes and the assessment of the whole industry.

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[113] *European Patent Convention: EPC* (2016), p. 120, https://www.epo.org/law-practice/legal-texts/epc.html, accessed November 2016.

[114] Department for International Trade, "Exporting to Germany: A guide for UK businesses interested in selling goods and services in Germany.," 2016, p. 5, https://www.gov.uk/guidance/exporting-to-germany, accessed November 2016.

3.3.2.1 Customers

3.3.2.1.1 Consumers

At first glance, the Revive Turbo Cleaner appears to be a product targeting business customers only and designed for the application in a professional workshop context. However, as turned out after the first launch of the fluid in the UK, many private car owners purchased the product directly in store and for themselves. A reflection of this development can be observed on SP Diagnostics' YouTube channel, as numerous individuals contacted the sales team via the comment feature under an explaining application video in order to inform themselves about the applicability of the fluid on their own vehicles.[115] Taking this into consideration, targeting private car owners could result useful to attract notice to the carbon deposit problem and to cause a pull-effect, as people might ask their local workshops and retailers for a solution. The basic customer need in this segment is the fast and reliable repair of perceived engine problems at reasonable cost either by visiting a workshop or applying related products personally.

40.38 million[116] of all in all 45.05 million[117] passenger cars in Germany in 2016 are owned by private persons. These thereby provide the biggest pool of potential customers for the Revive Turbo Cleaner. Figure 5 provides a first overview of potential sales areas by segmenting the amount of passenger cars including business cars and cars with an alternative drive system according to its distribution across federal states in Germany.[118]

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[115] https://www.youtube.com/watch?v=pAJSOsIbqyc (accessed 07.12.2016)

[116] KBA, LBA, and VDR, "Fahrzeugbestand Deutschland: Statista-Dossier," Statista GmbH, 2016, p. 13, https://de.statista.com/statistik/studie/id/11436/dokument/fahrzeugbestand-deutschland-statista-dossier/, accessed December 2016.

[117] Ibid. p.7.

[118] Ibid. p.9.

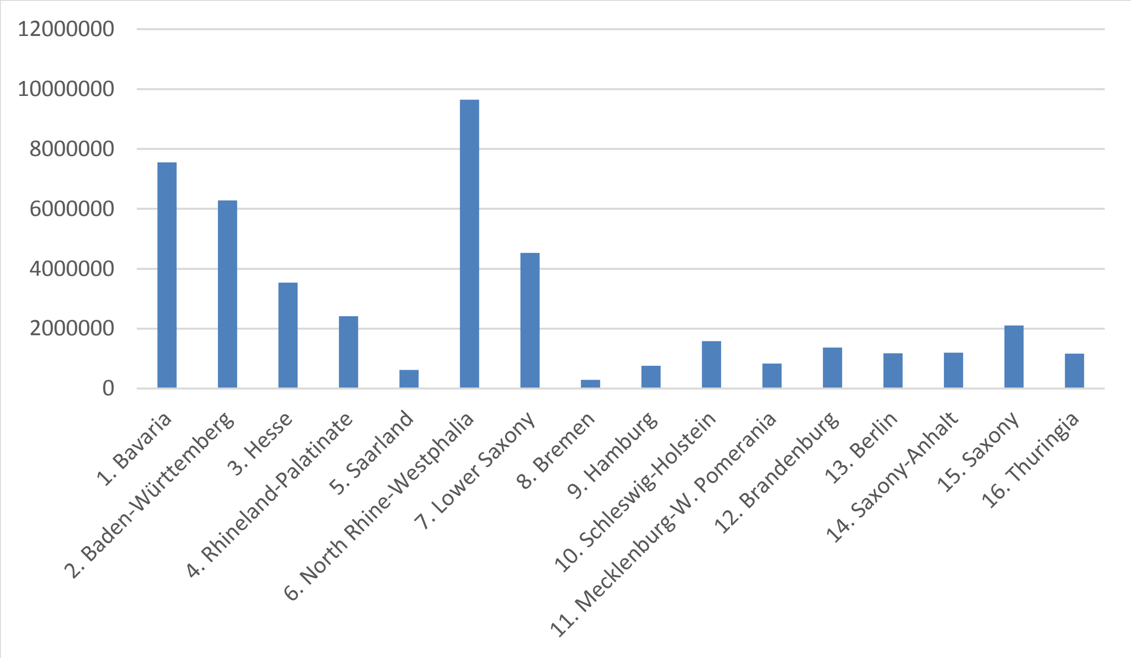

Figure 5: Number of passenger cars in Germany by federal state

By splitting up Germany into regions, one obtains similar shares of the total quantity of passenger cars. A possible layout might be as follows, corresponding federal states are given in brackets relating to the numeration in table 2.

Sales region	Number of passenger cars
South (1+2)	13,832,900
West (3-6)	16,205,500
North-East (7-16)	15,008,200
North (7-11)	7,991,400
East (12-16)	7,016,800

Table 2: Potential sales regions in Germany by number of passenger cars

Considering the regions South and West, more than two thirds of total passenger cars can be served, while the region North-East provides half of this amount.

The number of vehicles with an alternative drive system such as liquid petrol gas, natural gas or hybrid and electrical systems, are by their nature not affected by the carbon deposit problem, is still low at around 711,000 vehicles in early 2016[119]. Although this is likely to change in near future due to environmental, social, technical and political developments,[120] the current quantity of passenger cars including business cars relying

[119] Ibid. p.11.

[120] Cf. pp. 19f. (2.2.2 Trends) & pp. 27f. (3.3.1 Global Environment – PESTEL)

on a combustion engine holds high levels of 29.83 million cars fitted with petrol engines and 14.53 million cars running with a diesel engine as figure 6 shows.

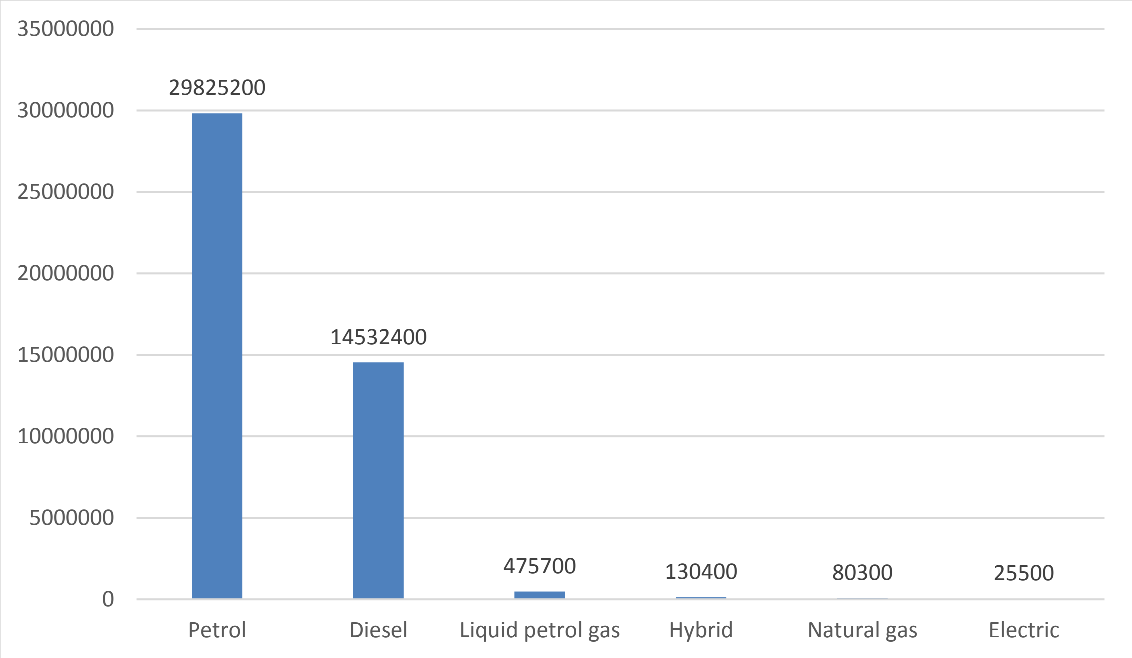

Figure 6: Quantities of passenger cars in Germany by drive system

Considering potential market volumes and the characteristics of consumer segments from a technical perspective and under the assumption that a high mileage of cars increases the amount of carbon related issues, the observation of annual kilometres travelled by car in combination with the age of the car owner and regional differences delivers the following insights:

Based on data collected in 2014, car owners aged 29 years and below travel an annual distance of 10,930 km on average. This distance rises with advancing age and reaches 12,250 km for car owners between 30 and 59 years and then falls again for the demographic group of people older than 59 years travelling 10,200 km per year by car.[121] Following this logic, it is more likely that the vehicles of people aged 30 to 59 years are affected by carbon related issues and their owners thereby demand respective solutions. On the other hand, as outlined in 3.1 Carbon Deposits, many other factors

[121] CHECK24, "Durchschnittliche Fahrleistung der Pkw-Halter in Deutschland in den Jahren 2013 und 2014 nach Altersgruppen (in Kilometern)," 2016, https://de.statista.com/statistik/daten/studie/413306/umfrage/fahrleistung-von-pkw-nach-altersgruppen/, accessed December 2016.

such as driving style, engine type or fuel quality have an impact and are not measurable or the data is of limited availability.

Regarding regional differences, it is possible to use the definition of sales regions carried out above and thereby separating Germany into the regions South (Bavaria and Baden-Württemberg), West (Hesse, Rhineland-Palatinate, Saarland and North Rhine-Westphalia) and North-East (Lower-Saxony, Bremen, Hamburg, Schleswig-Holstein, Mecklenburg West Pomerania, Brandenburg, Berlin, Saxony-Anhalt, Saxony and Thuringia). A weighted average of the annual mileage for each region can be compiled by linking the average annual mileage in each federal state of the respective region[122] to the number of vehicles in the respective federal state[123]. A detailed calculation for all regions can be found in the Appendix Part A. The weighted average of the annual mileage in region South thereby is 11,872 km and region West delivers a similar kilometre reading of 11,885 km per year. Region North-East however, shows a weighted average of 12,146 km per year resulting from high regional values in Schleswig-Holstein, Mecklenburg West Pomerania and Lower Saxony. According to these calculations, vehicle mileage in region North-East is slightly higher on average, especially in rural areas such as the federal states mentioned previously, resulting in a potentially higher and more frequent demand for carbon cleaning products.

On national level and under the assumption that a higher vehicle age favours the build-up of carbon deposits, the investigation of different age segments shown in figure 7 results beneficial.[124]

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[122] CHECK24, "Durchschnittliche Fahrleistung der Personenkraftwagen in Deutschland in den Jahren 2013 und 2014 nach Bundesländern (in Kilometern)," 2015, https://de.statista.com/statistik/daten/studie/259416/umfrage/fahrleistung-von-pkw-nach-bundeslaendern/, accessed December 2016.

[123] The values are presented in *Figure 5: Number of passenger cars in Germany by federal state*

[124] KBA, "Verteilung des Pkw-Bestandes in Deutschland nach Alter der Fahrzeuge (Stand 1. Januar 2016)," Statista, 2016, https://de.statista.com/statistik/daten/studie/3438/umfrage/pkw-bestand-nach-alter-der-fahrzeuge/, accessed December 2016.

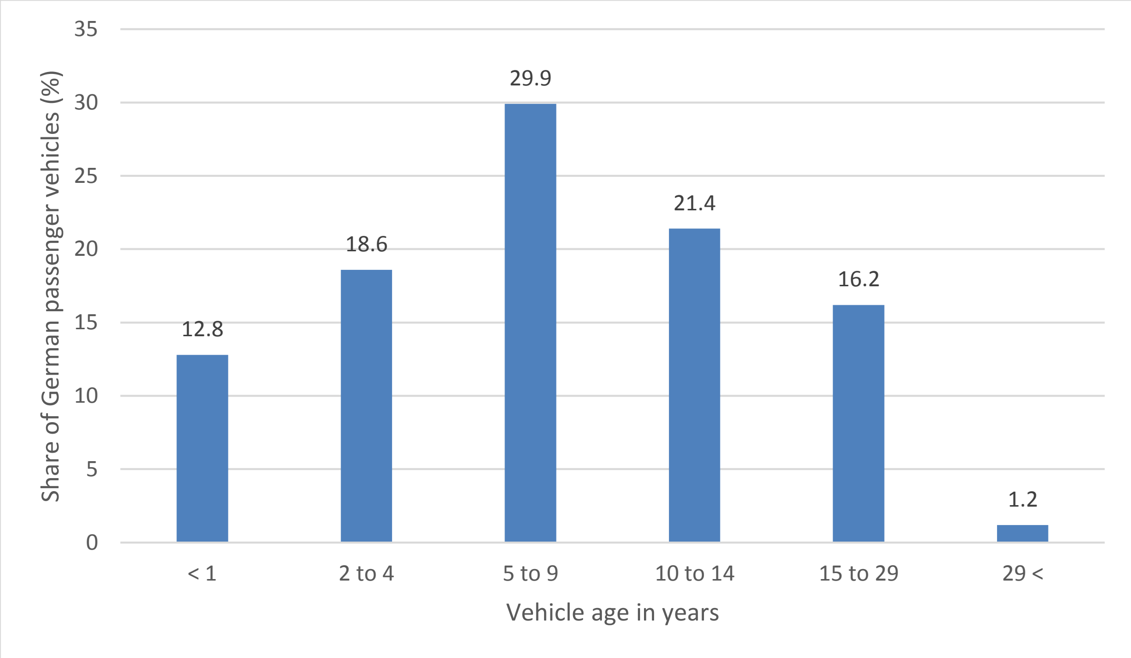

Figure 7: Shares of the total number of German passenger vehicles by age

The diagram shows that 38.8% of all passenger cars in Germany, circa 17.5 million, are aged 10 years or older and are therefor more likely to be affected by carbon related issues.

According to the psychographic segmentation approach considering life style and attitudes,[125] it is furthermore beneficial to investigate levels of interest concerning a specific product family, in this case cars. VuMA states that between 8 and 11 million Germans are highly interested in car-related information, while additional 16 to 20 million are somewhat interested.[126] [127] The number of users of respective media channels such as automotive print magazines or specialised online platforms also confirms this level of interest. The magazine "ADAC motorwelt" of the influential German automobile association ADAC for instance, is published ten times a year. While

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[125] Christian Homburg, *Marketingmanagement: Strategie, Instrumente, Umsetzung, Unternehmensführung,* 5th ed. (Wiesbaden: Springer Gabler, 2015), p. 480.

[126] VuMA, "Bevölkerung in Deutschland nach Interesse an Informationen über Autos von 2010 bis 2016 (Personen in Millionen)," Statista, 2016, https://de.statista.com/statistik/daten/studie/171977/umfrage/interesse-an-informationen-ueber-autos/, accessed December 2016.

[127] VuMA, "Bevölkerung in Deutschland nach Interesse an Informationen über Autozubehör von 2010 bis 2016 (Personen in Millionen)," Statista, 2016, https://de.statista.com/statistik/daten/studie/171979/umfrage/interesse-an-informationen-ueber-autozubehoer/, accessed December 2016.

the association has over 19 million members,[128] the magazine is believed to have a readership of currently 12.8 million people. "AUTO BILD" with around 395,000 sold units weekly[129] states a range of all in all 2.1 million readers, while "auto motor und sport" sells 348,000 twice a month and reaches 2.8 million.[130] An important online platform in this field is YouTube with several specialised German channels for car repair such as "Auto Reparatur Tutorial" or "83metoo" and general car channels such as "Abenteuer Auto" and "JP Performance". Table 3 shows a range of relevant YouTube channels specialised on car-related content also including the channels of the print magazines previously mentioned and depicting channel name, subscribers and views as of the 13th of December 2016.[131]

Channel name	Subscribers	Views
ADAC	17,700	17,161,500
83metoo	35,300	18,851,300
Auto Reparatur Tutorial	94,600	19,998,000
auto motor und sport	55,300	34,875,800
Abenteuer Auto	70,000	41,740,400
AUTO BILD	181,900	153,184,800
JP Performance	683,700	221,536,900

Table 3: Selection of YouTube channels specialising on car-related content

In addition to that, the German online forum MOTOR-TALK provides a platform for discussion, information and advice to 2,769,100 registered users.[132] Several considerably smaller communities like Auto-treff.com, PFF.de and Golfv.de exist but none of these exceeds MOTOR-TALK in size and coverage. It is nonetheless difficult to interpret these numbers, as the amount of registrations on online platforms and forums might contain a considerable share of passive users and not include the amount of sporadic visitors. As mentioned previously in 3.3.1 Global Environment Analysis - PESTEL under technological aspects,[133] specialised online platforms and communities are an

[128] https://www.adac.de/wir-ueber-uns/default.aspx?ComponentId=73372&SourcePageId=182053 (accessed 13.12.16)
[129] https://www.mediaimpact.de/portrait/AUTO-BILD-AUTO-BILD_670874.html (accessed 13.12.16)
[130] http://www.ifd-allensbach.de/awa/medien/printmedien.html#c1572 (accessed 13.12.16)
[131] Numbers were taken from https://www.youtube.com/ and the respective channel page (accessed 13.12.16)
[132] http://www.motor-talk.de/statistik.html (accessed 13.12.16)
[133] Cf. pp. 32f.

important media type for interested individuals and should be taken into consideration for the planning of the mix of employed media.

Concluding from these observations, one can state that the topic “car” is quite present in the German population and that at least several million people inform themselves on a regular basis about recent developments and content and thereby could be made aware of the carbon deposit problem relying on the mentioned media channels. Purchase decisions can then be made on online platforms and shops or in retail locations such as workshop or DIY-stores. The customer might then decide to apply the fluid personally or ask a workshop for the service.[134]

The main purchase and application occasion of the Revive Turbo Cleaner and the Service Shot occurs during the regular oil service or in general during workshop visits, where customers can be counselled by mechanics to book a Revive treatment in order to solve carbon related engine malfunctions and to prevent the build-up of deposits. In 2015, 37% of German car owners let their oil change every two years while another 53% demand this service annually.[135] 54% of oil changes are carried out in authorised garages, 34% in independent garages and 12% independently from any workshop.[136] The number of people preferring authorised garages decreased in the last years but is still high in comparison with other workshop types as figure 8 shows.[137]

[134] “Returning to Growth: A Look at the European Automotive Aftermarket.” BCG - The Boston Consulting Group, press release, July 2014, https://www.bcgperspectives.com/content/articles/automotive_service_operations_returning_growth_look_european_automotive_aftermarket/#chapter1, accessed November 2016.

[135] DAT, “Wie häufig lassen Sie einen Ölwechsel an ihrem Pkw durchführen?,” Statista, 2016, https://de.statista.com/statistik/daten/studie/37153/umfrage/haeufigkeit-eines-oelwechsel-bei-pkw-in-deutschland/, accessed December 2016.

[136] DAT, “Wo wurde Ihr letzter Ölwechsel durchgeführt?,” Statista, 2016, https://de.statista.com/statistik/daten/studie/37163/umfrage/durchfuehrende-staette-beim-oelwechsel-in-deutschland/, accessed December 2016.

[137] Statista GmbH, “Kfz-Service: Statista-Dossier,” 2016, p. 23, https://de.statista.com/statistik/studie/id/23744/dokument/kfz-service-statista-dossier/, accessed December 2016.

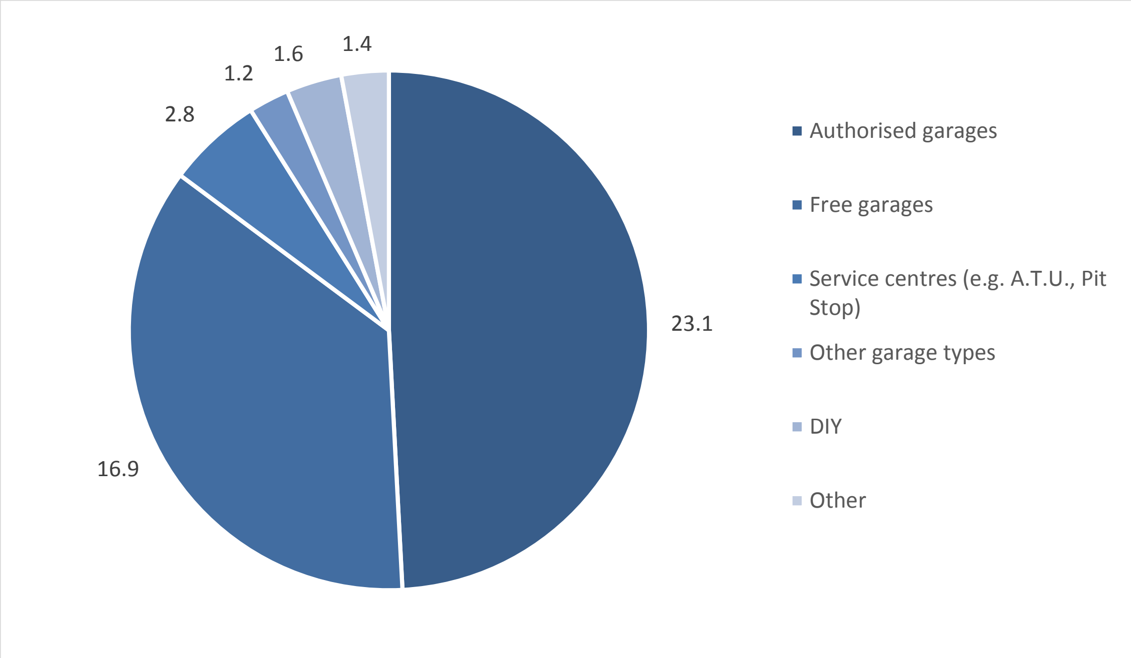

Figure 8: German car drivers by primarily used workshop type for repair services (in million people)

As mentioned in 2.2.1 Structure of the German Automotive Aftermarket, car owners tend to prefer independent over authorised garages with rising vehicle age due to price advantages. According to a study presented by AutoScout24, a European online platform for vehicle trade, consumers furthermore highly rely on recommendations by family and friends when it comes to the choosing of workshops.[138]

3.3.2.1.2 Business Customers

Potential markets for the Revive Turbo Cleaner in the B2B segment can be distinguished into business fleets, workshops, retailers and wholesalers.

[138] AutoScout24 GmbH, "Marktpotenziale im Werkstattmarkt," 2012, p. 15, https://de.statista.com/statistik/studie/id/12824/dokument/marktpotenziale-im-werkstattmarkt/, accessed December 2016.

Business fleets

The number of business vehicles, comprising 4,672,400 passenger cars,[139] 2,801,000 HGVs[140] and 78,300 busses[141], is considerably smaller than the amount of cars in private hands. Nonetheless, this market provides the advantage of a more concentrated and limited number of decision makers, who can be reached via sales agents building personal contact. This is valid especially for companies with bigger fleets consisting of eleven up to several hundred vehicles. Figure 9 shows the results of a study carried out in 2014 by the Corporate Vehicle Observatory measuring the number of vehicles in company fleets by company size.[142]

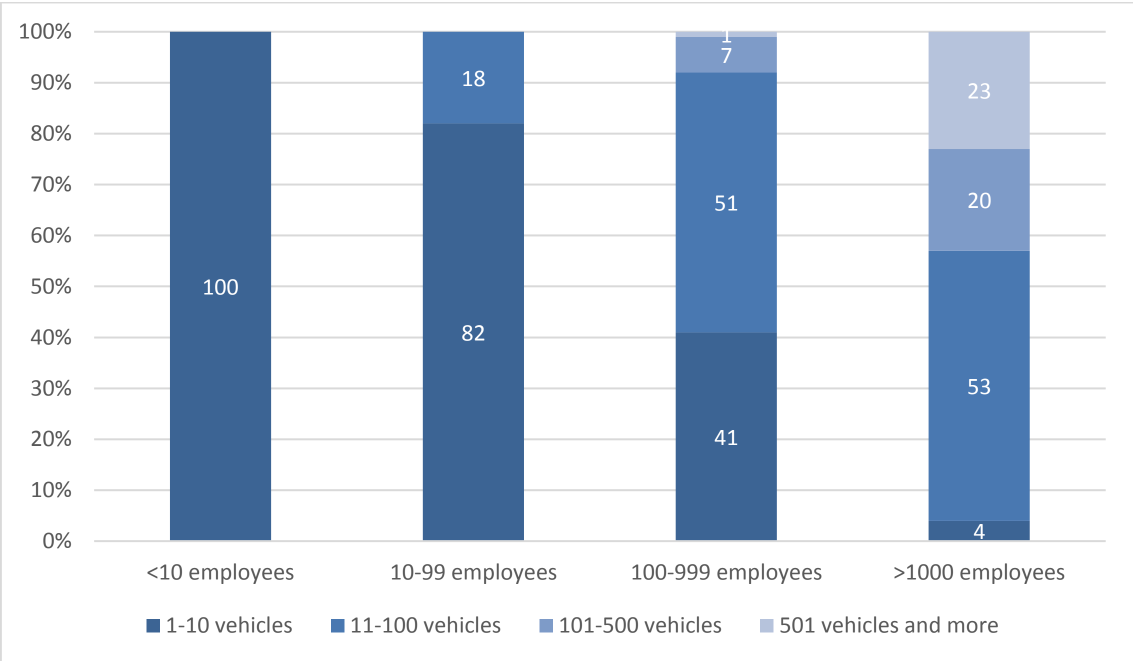

Figure 9: Number of vehicles in German business fleets by company size (CVO 2014)

[139] KBA, "Anzahl der vorhandenen Personenkraftwagen bei gewerblichen Haltern in Deutschland in den Jahren von 2012 bis 2016," Statista, 2016, https://de.statista.com/statistik/daten/studie/485947/umfrage/pkw-bestand-im-gewerbe-in-deutschland/, accessed December 2016.

[140] KBA, "Anzahl der gemeldeten Lkw in Deutschland in den Jahren 1960 bis 2016 (Bestand in 1.000)," Statista, 2016, https://de.statista.com/statistik/daten/studie/6961/umfrage/anzahl-der-lkw-in-deutschland/, accessed December 2016.

[141] KBA, "Anzahl der Kraftomnibusse in Deutschland von 1970 bis 2016," Statista, 2016, https://de.statista.com/statistik/daten/studie/155554/umfrage/anzahl-der-busse-in-deutschland/, accessed December 2016.

[142] "CVO Fuhrpark-Barometer Deutschland 2014," 2014, p. 10, https://de.statista.com/statistik/studie/id/30913/dokument/studie-zu-fuhrparks-in-unternehmen/, accessed December 2016.

Figure 9 states that 51% of German companies with 100 to 999 employees and 53% of firms with more than 1000 employees own fleets comprising 11 to 100 vehicles. The most concentrated number of cars can be found in companies with more than 1000 employees, 23% of them owning a fleet consisting of more than 500 vehicles. For instance, a company such as the German logistics group Deutsche Post DHL Group disposes of nearly 92,000 vehicles worldwide in 2015,[143] mainly relying on Diesel engines[144].

Focusing the sales force on bigger organisations can thereby ensure stable unit sales obtained by the contact with the respective Decision Forming Units, i.e. the groups of people deciding on the employed products. Most likely, these groups are formed by fleet managers, internal technicians, external advisors and the car users, e.g. truckers, sales people and members of the technical support or the logistics division. As previously outlined in 2.1.2.1 Customer Analysis, a Decision Making Unit is usually a group of experts far more informed than private car owners and having a strong position in bargaining power due to bigger purchase quantities. On the other hand, acquiring a known organisation with publicly operating fleets such as police divisions, parcel/mail services, taxi or bus companies as a customer would increase brand awareness and reputation also and above all among private car owners. The vehicles employed by these organisations are furthermore likely to be affected by carbon related issues due to the special driving pattern demanded from them consisting of slow movement in urban traffic combined with frequent interruptions. Customer needs in this segment are similar to the private segment; vehicle maintenance at low cost and without massively restricting vehicle usage.

[143] Deutsche Post, “Anzahl der Fahrzeuge von Deutsche Post DHL weltweit nach Fahrzeugart (Stand: 2015*),” Statista, 2016, https://de.statista.com/statistik/daten/studie/591677/umfrage/anzahl-der-fahrzeuge-von-deutsche-post-dhl-weltweit-nach-fahrzeugart/, accessed December 2016.

[144] Deutsche Post AG, “Bericht zur Unternehmensverantwortung 2015,” Deutsche Post DHL Group, 2015, p. 119, http://www.dpdhl.com/de/investoren/finanzberichte/bericht_zur_unternehmensverantwortung.html, accessed December 2016.

Workshops

Workshops are a key segment in the B2B business for two reasons. Firstly, they possess the expertise and equipment to identify engine related problems and are thereby frequented by private car owners and companies alike which perceive respective issues. Secondly, they are in a position to instantly recommend, assess and apply products and treatments which solve the problem. As outlined in 2.2.1 Structure of the German Automotive Aftermarket, different garage types in this segment compete for the customers. In 2015, there were 17,450 authorised workshops and 20,950 independent service providers such as service chains and free workshops.[145] The market preferences are clearly distributed as shown in figure 8 on page 43. Authorised workshops dominate the market followed by free workshops which gain market shares with rising vehicle age due to their lower prices. Furthermore and according to a market report by the Boston Consulting Group, service chains are on the rise due to cost advantages, financial strength and the contact to suppliers.[146]

The composition of the Buying Centre differs between each garage type. While authorised workshops are probably asked to use certain product groups by the car manufacturers and their respective purchase divisions, the owners of free garages are completely unrestricted in the choice of the products they employ. Potentially, they are thereby more open towards new solutions and easier to win for a trial, although it is more difficult to communicate with them or provide a bigger number with the product, as they do not rely on bigger and centralised organisations. On the other hand however, basic needs of garages targeted by Revive are similar: a profitable repair meaning low time and part consumption and a higher profit margin, satisfied and loyal customers as well as safe and reliable products which are easy to integrate into the workshop concept.

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[145] ZDK, "Anzahl der Kfz-Werkstätten in Deutschland von 2001 bis 2015," 2016, https://de.statista.com/statistik/daten/studie/168124/umfrage/anzahl-der-betriebe-im-kfz-handwerk-in-deutschland/, accessed December 2016.

[146] "The European Automotive Aftermarket Landscape: Customer Perspective, Market Dynamics and the Outlook to 2020." BCG - The Boston Consulting Group, press release, July 2012, https://www.bcg.com/documents/file111373.pdf, accessed November 2016.

Retailers

Under the assumption that the product is suitable for the application by private car owners, specialised retailers in the field such as shops of service chains like A.T.U, DIY stores like Bauhaus, OBI and Hornbach or petrol stations like Aral, Shell and Total could provide potential point of sales for the Revive Turbo Cleaner. Additionally, by adequately presenting the product in frequented retailers and applying a push-strategy, the awareness for the product is raised in all segments including workshops and business fleets. It is obviously difficult to find a way into a retailer's assortment, as the product will be assessed in a number of criteria such as its contribution to the attractiveness of the assortment and the expected margins which should exceed the profits obtained by trade and competitor brands.[147] The purchasing divisions in these organisations are usually highly professional and used to compare several competing products. A more effective strategy would thereby be to put retailers under pressure by primarily establishing the product in the consumer segment and taking advantage of pull-effects.

Wholesalers

Wholesalers are the key players when it comes to the distribution of the product. Revive Automotive Solutions Ltd builds and maintains a global distribution network present in North America, South Africa, Southeast Asia and numerous European markets. Contracted distributors either adopt and develop the Revive branding themes and focus on Revive products only (e.g. in Belgium, Norway, the US, South Africa and Hong Kong) or integrate the fluid into their existing product range of workshop supplies (e.g. Auswuchtwelt Ltd. & Co.KG in Germany, Diag Auto - Frades Technologies in France and Bestsynthetics in Greece).[148] In Germany, Revive is distributed by Bartec Auto ID GmbH near Frankfurt, Turboworld24 near Mannheim and Karlsruhe and Auswuchtwelt Ltd. & Co.KG south of Stuttgart. Thereby, the southern and western part of Germany can be considered as sufficiently covered for the moment but other regions such as Bavaria,

[147] Franz-Rudolf Esch, *Strategie und Technik der Markenführung,* 8th ed. (München: Vahlen, 2014), p. 609.
[148] http://www.turboreiniger.de/vertriebspartner.html (accessed 01.12.2016)

the Ruhr Area and the northern part of Germany lack distributors. Potential partners are Werkstatt-Produkte GmbH & Co. KG, the Kusmierz International Trading Group or EFA Autoteilewelt GmbH all offering appropriate assortments for the Revive Turbo Cleaner and targeting the workshop segment. Additional important players are online trade platforms such as ebay and kfzteile24 for professional and private customers alike.

3.3.2.2 Competitors and Substitutes

The following range of competitors and substitutes was selected due to their operations in the German market for products cleaning the internals of automotive combustion engines, being Revive’s target industry. Listed alternative treatments are described and their advantages and disadvantages depicted. Competitor profiles include company size, turnover, subsidies, the product portfolio competing with the Revive Turbo Cleaner, strengths and weaknesses and an assumption of the respective strategy. Consumer prices for the products were either taken from the respective homepage or from common online stores like ebay.de or amazon.de.

Dismantling and cleaning manually or using ultrasonic baths

Dismantling affected engine parts and scrubbing or employing ultrasonic baths for the removal of carbon deposits has a number of advantages. By dismantling the engine, the actual problem can be made visible. It is thereby possible to identify worn parts which have to be replaced because cleaning them would not resolve engine malfunctions. Furthermore, this method ensures comprehensive removal of the issue by either replacing or cleaning affected car parts. On the other hand, this treatment requires a high level of technical knowledge as the engine system has to be disassembled correctly making the procedure inapplicable for the average car owner. Knowledgeable car owners and mechanics alike will still need a considerable amount of time for the treatment and additional equipment if an ultrasonic bath is employed. On professional level, this translates to high cost and time consumption for the consumer if the service is booked in a workshop.

Walnut- or Media-Blasting

Another alternative treatment employs walnut shell, plastic or wood particles which are blasted into the unfolded fuel intake valves in order to remove carbon deposits. After laying open the target areas of the engine, the employed particles are filled into a special blasting machine and applied into the engine system. This method is documented and discussed on several online car forums and blogs such as e90post.com[149], car-maniac.de[150] and x3-treff.de[151] which are given here for reference. Similar to the manual treatment mentioned above, walnut- or media-blasting enables inspecting the problem visually and is reported to have good results. Again, this method requires respective skills as partly dismantling the engine is necessary for application. The time effort together with the cost for the machinery and material are additional disadvantages.

LIQUI MOLY GmbH [152]

LIQUI MOLY GmbH based in Ulm in the south of Germany is a manufacturer of additives, lubricants, cleaning and service products for automotive engines in private and professional context. The concern employs 800 employees in its subsidies in Germany, the USA, Portugal and South Africa and realised a turnover of 255.5 million € in 2014, of which 111 million € were made in Germany. The corresponding net income was 27.8 million €.[153] LIQUI MOLY's competing product portfolio consists of a range of fuel and oil additives for different application areas as shown in table 4.[154]

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149 http://www.e90post.com/forums/showthread.php?t=682116 (accessed 25.12.16)
150 http://car-maniac.de/verkokung-der-einlassventile-durch-walnut-blasting-entfernen-tsi-tfsi-fsi/ (accessed 25.12.16)
151 http://www.x3-treff.de/archive/index.php/t-12039.html (accessed 25.12.16)
152 www.liqui-moly.de (accessed 25.12.16)
153 Koch and Lebherz, "Liqui-Moly GmbH: Konzernabschluss zum Geschäftsjahr vom 01.01.2014 bis zum 31.12.2014," Ernst & Young GmbH, 2015, https://www.bundesanzeiger.de/ebanzwww/wexsservlet, accessed December 2016.
154 https://shop.liqui-moly.de/additive.html?cat=525&limit=36&p=1 (accessed 25.12.16)

Product name	English translation	Type	Price (€)
Injection-Reiniger	Injection Cleaner	Petrol additive	13.40
Benzin-Systempflege	Petrol System Care	Petrol additive	11.05
MTX Vergaser-Reiniger	MTX Carbureter Cleaner	Petrol additive	8.55
Ventil Sauber	Valve Clean	Petrol additive	6.10
Diesel-Spülung	Diesel Flush	Diesel additive	13.20
Diesel Partikelfilter Schutz	DPF Protection	Diesel additive	10.30
Super Diesel Additiv	Super Diesel Additive	Diesel additive	9.05
Bio Diesel Additiv	Bio Diesel Additive	Diesel additive	7.30
Diesel-Systempflege	Diesel System Care	Diesel additive	7.30
Motor Clean / Motor-Spülung	Motor Clean / Engine Flush	Oil additive, diesel and petrol	21.05

Table 4: Range of LIQUI MOLY additives for carbon deposit removal and prevention

The products are for direct application into the fuel or oil tank, the petrol additives for example are to be added to 70 – 75 litre of petrol and their effect is cited to last for up to 2000 km.

LIQUI MOLY's advantage is the big assortment which communicates customisation to consumers and enables cross- and up-selling, i.e. the selling of several different or higher-priced products. From the point of view of trade companies, a broad assortment has the advantage to provide a comprehensive product range, simplifying the assembling of attractive product portfolios. Additionally, LIQUI MOLY offers comprehensive support for business clients such as workshops to ensure the appropriate integration of the product assortment.[155] This results in a very dense distribution network comprising numerous workshops, fuel stations and other retailers. Another essential strength of LIQUI MOLY are the high awareness and reputation rates for its brand. Among readers of the German newspaper Auto Bild, LIQUI MOLY was elected to have the most convincing products in 2014.[156] The company is active as a sponsor in motor, winter and team sports amongst others and focuses on premium advertising positions at the point of sale, on trade fairs and in magazines. In parallel, Managing Director Ernst Prost is engaged in several charity projects. However, LIQUI

[155] https://www.liqui-moly.biz/ (accessed 26.12.16)

[156] Auto Bild, "Welcher Hersteller von Auto-Schmierstoffen überzeugt Sie?," 2014, https://de.statista.com/statistik/daten/studie/38758/umfrage/beliebteste-schmierstoffe-in-deutschland/, accessed December 2016.

MOLY's strongest point is also a potential weak point as low brand performance could weaken the customers' perception of the products' quality and effectiveness. A PLAYBOY-branded additive[157] for instance could be regarded as dubious and damage brand reputation. Similar developments could result from inappropriate sponsoring activities.

It is not very likely that the company will abandon its branding strategy in near future. The concern will further develop its strong market position by adding new product ranges, opening new subsidies internationally and maintaining the brand. On both international and national level, the company benefits from its German manufacturer label. As internationally operating and successful company, LIQUI MOLY disposes of considerable financial means for future projects.

MOTUL Deutschland GmbH [158]

The internationally operating manufacturer of lubricates MOTUL has its headquarters in Paris, France and maintains subsidies in Russia, Italy, Spain, Singapore, the USA and Cologne, Germany. In 2014, the MOTUL Deutschland GmbH had 91 employees which were responsible for a turnover of 22.4 million € and a net income of 53,500 €.[159] The company offers a range of different additives for carbon deposit removal, namely Fuel System Clean Auto, Engine Clean Auto, Diesel System Clean and Transmission Clean.[160] Prices in online shops are set between 9 and 24 € per unit. Similar to LIQUI MOLY, the company disposes of numerous German distributors and partners such as car dealers, garage service chains or specialised accessories retailers and sponsors motorbike and car racing events to enhance brand popularity.

All in all, MOTUL's strategy is comparable to most of the big oil manufacturers. By sponsoring big racing sport events and maintaining high product presence throughout

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157 https://shop.liqui-moly.de/additive/playboy-speed-additiv-benzin.html (accessed 26.12.16)
158 https://www.motul.com/de/de (accessed 27.12.16)
159 Hölscher and Liesbrock, "MOTUL Deutschland GmbH: Jahresabschluss zum Geschäftsjahr vom 01.01.2014 bis zum 31.12.2014," Deloitte & Touche GmbH, 2015, https://www.bundesanzeiger.de/ebanzwww/wexsservlet, accessed December 2016.
160 https://www.motul.com/de/de/products/oils-lubricants?f%5Bapplication%5D=143&f%5Brange%5D=25 (accessed 27.12.16)

point of sales, the brand stays in the mind of workshop owners and consumers but presents itself above all as an international brand with comparatively low local or national relevance reflected in the low number of employees and turnover in Germany.

Westfalia Werkzeugcompany GmbH & Co KG [161]

Based in Hagen in the western part of Germany, Westfalia supplies a broad assortment of products for professional and private workshops, electronic equipment, home and gardening products, as well as car-related and farming products. The company covers the DACH region and the UK with its online store and maintains two physical stores in Germany. In 2015, the online store westfalia.de realised a turnover of 145.3 million € including the whole product portfolio.[162] Regarding cleaning products for automotive engine system, Westfalia offers different products covering diesel and petrol engines as table 5 shows.

Product name	English translation	Type	Price (€)
Systemreiniger für Benzinmotoren	System Cleaner for Petrol Engines	Petrol additive	6.99
Systemreiniger für Dieselmotoren	System Cleaner for Diesel Engines	Diesel additive	5.99
Schnell – Motorreiniger	Fast Engine Cleaner	Fuel additive	14.99

Table 5: Range of Westfalia products for carbon deposit removal and prevention

The units contain smaller amounts of liquid, 100 to 200 ml and are therefore low-priced in comparison to other suppliers. For full treatments, other complementary additives are recommended and offered alongside respective cleaners in value packs.

Due to the very diverse and generalised product portfolio of Westfalia, marketing efforts for special offers such as engine cleaners are low. The company's strengths lie in its broad assortment and the satisfaction of several different customer needs including low

[161] https://www.westfalia.de/ (accessed 29.12.16)

[162] EHI Retail Institute and Statista, "B2C-E-Commerce: Ranking der Top100 größten Online-Shops nach Umsatz in Deutschland im Jahr 2015 (in Millionen Euro)," Statista, 2016, https://de.statista.com/statistik/daten/studie/170530/umfrage/umsatz-der-groessten-online-shops-in-deutschland/, accessed December 2016.

prices, while on the other hand, advantages due to product and industry specialisation are low.

Albert Berner Deutschland GmbH [163]

The specialised German wholesaler Berner in Künzelsau focuses on the supply of tools, consumables, accessories and services for professional application in a workshop, construction or industrial context. The Albert Berner Deutschland GmbH is a subsidy of the internationally operating concern Berner SE maintaining numerous sites all over Europe as well as strategic partners and producing sites in Asia. The 8500 employees of the company realised a turnover of 1054 million € on international level in 2015/16, of which 350 million € were made in the automotive sector and 320 million € in Germany in all covered industries.[164] Apart from the online store, the company maintains 7 physical stores in Germany, so-called "Profi Points", providing advice and service to business customers. Berner offers a range of cleaning additives for diesel engines, petrol engines and injection valves priced between 7 and 9 € per unit.[165] Additionally, the "Ansaugsystemreiniger" or Fuel Injection Cleaner is sold for 14 € per unit and is designed for direct application into the air intake.[166] The application process is similar to a Revive treatment.

Berner's specialisation on the B2B business, its dedicated physical stores and its size and price advantages constitute the major strengths of the company in the German market. A possible weakness of Berner is the low engagement in the consumer segment compared to LIQUI MOLY for instance. No sponsoring activities are published on the website, leaving a sterile but very serious and professional impression.

[163] http://shop.berner.eu/de-de/ (accessed 29.12.16)
[164] Andreas Müller and Boris Weber, "Berner SE: Konzernabschluss zum Geschäftsjahr vom 01.04.2015 bis zum 31.03.2016," BDO AG, 2016, https://www.bundesanzeiger.de/ebanzwww/wexsservlet, accessed December 2016.
[165] http://shop.berner.eu/de-de/dsc/30577852-additive/ (accessed 29.12.16)
[166] http://shop.berner.eu/de-de/p/51601-ansaugsystemreiniger-400-ml-spraydose.html?article_id=51649 (accessed 29.12.16)

Wynn's [167]

Wynn's Europe, based in Sint-Niklaas, Belgium, offers an assortment of automotive chemicals and systems specialised on the repair and protection of combustion engines on international level but mainly in the Netherlands, Belgium and Germany. Data regarding company size and financial performance could not be identified. Nonetheless, Wynn's is included as a competitor as its products are featured in the assortments of German wholesalers and retailers such as Stahlgruber, A.T.U and WM which are specialised on workshop equipment. Through this channel, Wynn's is distributed to car repair shops. The company's range of solutions for the carbon deposit problem consists of two product groups. The consumer group comprises fluids for diesel engines (Diesel Turbo Cleaner, 3xA Diesel, Formula Gold Diesel System Treatment and Diesel Particulate Filter Cleaner) and petrol engines (Injector +Plus+ Cleaner, Petrol Treatment and Formula Gold Petrol System Treatment) which are recommended for use every 2000 to 4000 km and priced between 8 and 16 €.[168] The portfolio for professionals includes as well a range of additives alongside with cleaning sprays (Diesel EGR, Petrol EGR, Turbo Cleaner and Air Intake Carburettor Cleaner) and fluids requiring additional machinery for application (Injection System Purge and Diesel System Purge) which is recommended every 20,000 to 30,000 km.[169]

Wynn's strength is its specialisation on restoring and maintaining engine performance and the comprehensive assortment offering different applications for professionals and private car owners alike. The company highlights its experience and expert knowledge and renounces communicating sponsoring activities or any other publicity. The brand is present at important industry distributors and thereby maintains a solid network in Germany. On the other hand, Wynn's has no subsidy in Germany unlike most of its competitors. Furthermore, market specialisation is low as the product packaging is standardised for English-speaking clients.

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[167] https://www.wynns.de/ (accessed 30.12.16)
[168] https://www.wynns.de/category/konsument/ (accessed 30.12.16)
[169] https://www.wynns.de/category/profi/ (accessed 30.12.16)

Innotec GmbH & Co. KG [170]

The trading firm Innotec, based in Moers in the western part of Germany, belongs to the Innotec concern with headquarter in Dessel, Belgium and a distribution network all over Europe[171] and focusing on chemical and cleaning products for the industrial and automotive context. The relevant product portfolio of Innotec in Germany consists of a range of fuel additives (Diesel Plus, Fuel Plus, Injection Clean and Valve Clean) available for 12 to 17 €, cleaning sprays priced between 19 and 29 € (DPF Doctor and Fuel System Cleaner) and a specialised Turbo Clean Set including two different sprays and a fuel additive which is available for around 80 €.[172] Especially the last item identifies Innotec as a direct competitor to the Revive Turbo Cleaner on European level, as the company offers a system dedicated to the repair and cleaning of turbochargers.

An advantage of Innotec is the specialised but nonetheless broad assortment of automotive and industrial supplies, as well as its own distribution network in Europe.

In comparison to other companies in the field, Innotec's product pricing is of a higher level and advertising activity is low. Similar to Wynn's, the company is focusing on its expertise and professional product assortment.

3.3.2.3 Industry – Porter's Five Forces Analysis

The results of Porter's Five Forces analysis of the German market for products cleaning the internals of automotive combustion engines are presented in the following. The analysis is supported by Michael Dobbs' framework for the application of Porter's model.[173] Employed templates are included in Appendix Part B while the analysis results are summarised in figure 10 on page 60.

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[170] http://www.innotec-online.de/ (accessed 30.12.16)
[171] http://www.innotec.at/ueber-innotec/die-marke-innotec.html (accessed 31.12.16)
[172] http://www.innotec-online.de/index.php?ID=4&section_id=18 (accessed 31.12.16)
[173] Michael E. Dobbs, "Guidelines for applying Porter's five forces framework: A set of industry analysis templates," *Competitiveness Review* 24, no. 1 (2014).

Threat of New Entrants

Efforts to avoid the entrance of new market participants drives up investment required for the construction of entry barriers. At the same time, new entrants drive down prices as they increase the competition level. In the analysed industry, the overall threat of new entrants is low due to the advantages of high sales volumes resulting in decreasing supplier power, higher brand awareness and trust. Other entry barriers are high capital requirements for development and testing and governmental regulations for waste disposal and labelling of chemicals. Established companies dispose of the price lever or influential positions in professional media channels to limit success of new entrants.

Chances for new market participants lie in the low switching costs for customers as no special equipment or knowledge is needed to apply engine cleaning products such as additives or sprays, in general. Furthermore, suppliers with new effective cleaning technologies have a real chance to compete with established additive manufacturers if the effectiveness can be communicated to the consumers.

Concerning opportunities and threats for Revive, entering the German market is hard but not impossible if product benefits can be communicated effectively and partnerships with existing market players are built in order to extend the product portfolio, awareness rates and market coverage.

Threat of Suppliers

High supplier power results in additional cost for the industry participants as they are able to increase prices for their supplies. The threat of suppliers in the considered industry is low due to numerous suppliers of standardised resources such as fluid containers, marketing material and staff (sales, administration, mechanics, chemists…). Additionally, it is almost impossible for suppliers to integrate the development of cleaning fluids into their operations due to a lack of equipment and expertise in the field. On the other hand, suppliers do not rely on the sales to this particular industry as they form but a small volume in comparison to their orders from other industries such as hygiene or beverage products for consumer markets. This may result in higher prices for small purchased quantities.

While sales volumes for the Revive Turbo Cleaner are still low, supplier power will stay high but will diminish with rising sales. An advantage for Revive over its competitors is the independence of the oil price as mineral oil is not required for the production of the fluid. While it is easy to switch suppliers for marketing material or packaging, this can have major impacts on product marketing and perception in the market if frequent changes are occurring.

Threat of Buyers

Powerful buyers pressurise price levels and increase rivalry among competing companies. In the market for engine cleaning products, the power of buying groups such as distributors, retailers and workshops is relatively high due to the high levels of market and consumer knowledge accumulated at these organisations. Furthermore, the switching of products for buyers is easy as most industry products, e.g. fuel additives, are similar and of low complexity in application. As industry concentration is proceeding, market participants are forced to evaluate their supply chain and increase pressure on suppliers.[174]

While these factors indicate an overall high level of buyer power, it is on the other hand not very likely that buyers adopt the development of cleaning fluids due to lacking installations and knowledge. Additionally, engine cleaning products occupy only a small part in the assortments of automotive trading organisations and workshops.[175] These companies furthermore are dependent of the performance of purchased products, as consumers trust in their ability to choose effective products for their portfolios. Failed

[174] "The European Automotive Aftermarket Landscape: Customer Perspective, Market Dynamics and the Outlook to 2020." BCG - The Boston Consulting Group, press release, July 2012, https://www.bcg.com/documents/file111373.pdf, accessed November 2016.
[175] Cf. http://www.stahlgruber.de/Kataloge/, https://www.wm.de/de/produktbereiche/fahrzeugchemie.html and http://www.bmw.de/de/topics/service-zubehoer/bmw-service/serviceamfahrzeug/werkstattleistungen.html for instance (all accessed 02.01.17)

cleaning will thereby not only damage the manufacturer's reputation but also the distributors' and workshops'.

Threat of Substitutes

Substitutes represent a threat to industry products as they are in direct competition on the consumer level. Successfully performing substitutes provide the maximum price for the respective good or service and increase the needed product marketing and performance efforts. Alternative treatments in the German market for products cleaning the internals of automotive combustion engines are manual and mechanical cleaning or media-blasting for example, both described in 3.3.2.2 Competitors and Substitutes. These substitutes cause a moderate threat in the industry due to low switching costs for end consumers which benefit from numerous service providers and the choice to apply products themselves. Additionally, substituting technologies are developed and improved constantly resulting in decreasing prices at simultaneously increasing performance.

Then again, price sensitivity of consumers is high and rising with vehicle age.[176] Most alternative treatments are relatively expensive and time-consuming for consumers and workshops alike and require special equipment and technical knowledge. Industry products thereby have a clear advantage over substitutes in terms of customer's monetary and temporal sacrifice. However, both rely on consumer behaviour and workshop attitude towards them. Currently, mechanical treatments have a trust advantage at garages while chemical products such as additives or sprays are considered ineffective. This tendency has been established during various talks with mechanics on trade fairs and in workshops and is supported additionally by comments on respective forums.[177]

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176 Ibid.

177 Cf. 3.3.2.1.1 Consumers for relevant forums

Threat of Competitive Rivalry

A high level of industry competition results in price pressure and increased expenditure on advertising, efficiency and product development. In the analysed industry, overall competition is high as growth rates are low or negative[178] due to advancing engine technology and alternative drive systems not affected by the carbon deposit problem.[179] Product differentiation is difficult to achieve as especially fuel additives are similar across suppliers and fluid storage as well as the bottling plants increase the amount of fixed costs. As previously mentioned, switching costs are low because no special equipment or knowledge is needed for product application in many cases. Additionally, exit barriers are in place as knowledge and development efforts of market players are specialised.

Opportunities for small suppliers such as Revive Automotive Solutions Ltd lie in the low switching costs for consumers and product differentiation by product application and improved effectiveness in comparison to standardised exchangeable products of bigger companies. Generally spoken, few big manufacturers such as MOTUL Deutschland, Wynn's and LIQUI MOLY dominate the market with high product presence as well as advertising and sponsoring expenditures, facing specialised trading organisations like Albert Berner Deutschland and small suppliers such as Revive and Innotec which focus more on their expertise in the aftermarket industry and related application areas.

[178] MarketLine, "Automotive Aftermarket Industry Profile: Germany," (2012): p. 13.
[179] "The European Automotive Aftermarket Landscape: Customer Perspective, Market Dynamics and the Outlook to 2020." BCG - The Boston Consulting Group, press release, July 2012, https://www.bcg.com/documents/file111373.pdf, accessed November 2016.

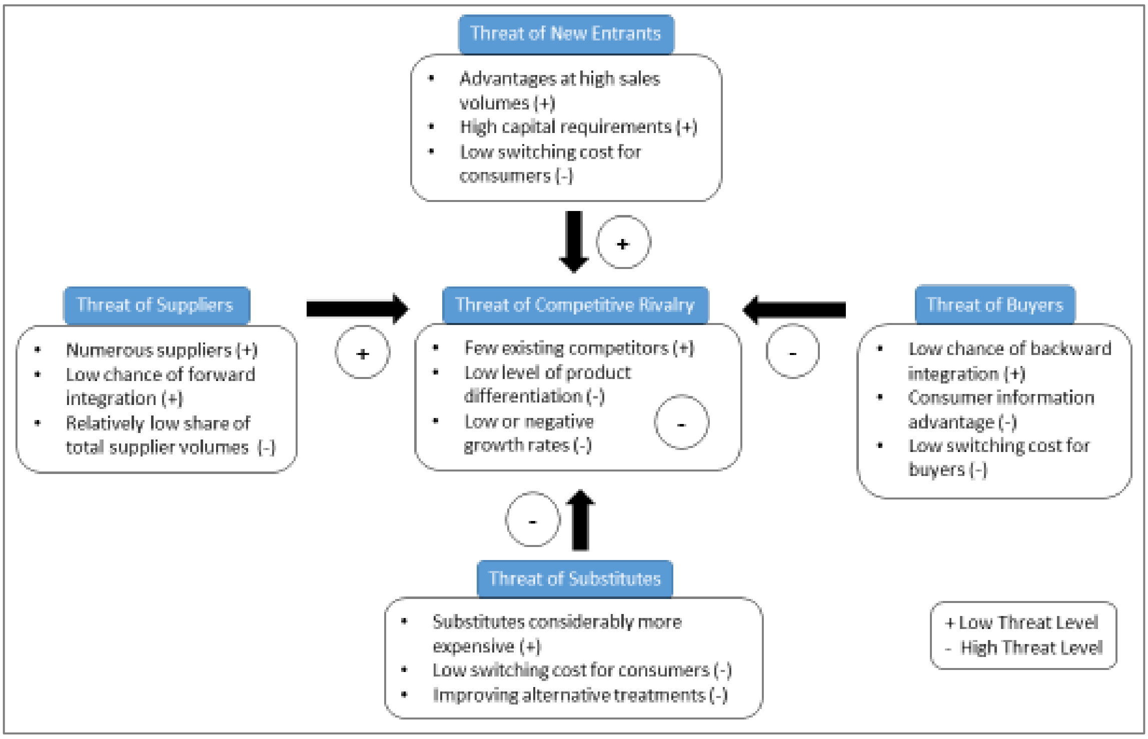

Figure 10: Summarised results of Porter's Five Forces analysis applied on the German market for products cleaning the internals of automotive combustion engines

Key industry factors can thereby be characterised as follows:

- Slow or stagnating industry growth due to advancing technology improvements and technology change in the automotive sector
- High economies of scale as high sales volumes result in an improved profitability of installations, better coverage of development and marketing cost and positive brand reputation and awareness
- Low switching cost on buyer and consumer level due to low product complexity and no requirement of additional equipment
- Weak supplier power apart from oil supply
- Strong buyer position as distributors and workshops have a big influence on the consumer's product choice
- Costly but improving substitutes
- High price sensitivity of consumers

3.3.3 Revive's Situation

3.3.3.1 Current Position – SWOT Analysis

The application of the SWOT analysis enables the identification of current strengths and weaknesses of Revive Automotive Solutions Ltd and points out future opportunities and threats. As described in 2.1.3 Company Analysis, a set of supporting criteria recommended by the authors Helms, Nixon, Coman and Ronen enhance the following lists of items.

Strengths

The company's main strengths can be distinguished into two groups: organisational strengths and product strengths.

Being rooted in the automotive service tool manufacturer SP Diagnostics and now owned by Bartec Auto ID Ltd which is active in the TPMS and emissions business, Revive Automotive Solutions Ltd combines the industry experience and knowledge of both companies. Especially Bartec Auto ID's position in the German workshop landscape and the respective contact data as well as customer support experience results beneficial for the company. The second organisational strength is Revive's international distribution network covering Europe, North America, Australia, South East Asia and South Africa. This network spreads the company's risk and creates mutual learning effects. Although both strengths are not enough to compete with strong established firms such as LIQUI MOLY or Berner, they provide a foundation for the unfolding and communication of the product benefits which form the second group of strengths.

The chemical formula of the Revive Turbo Cleaner has been tested and has proven its effectiveness in power stations, aircraft engines and in the automotive home market in the UK and is protected by the European Patent Convention ensuring the prevention of illegal misuse. The product's main advantage over its competitors is its environmentally-friendly composition based on water. This prevents the dependency of diminishing oil resources and volatile resource prices and provides a high level of safety during application and handling of the product, a feature which competing products have to ensure with special packaging systems and warning labels.

Weaknesses

As mentioned previously, Revive faces low levels of customer trust meaning low confidence in the effectiveness of the cleaner on the workshop level. This is rooted in the strong position of mechanical and manual cleaning treatments and the existence of numerous other cleaning fluids supplied by strong brands. The Revive brand has a lack of this brand awareness and currently lacks sales volume and media coverage in the target market. Furthermore, the company made little experiences on the German consumer market so far and relies on intermediary selling organisations which hold a powerful position within the industry, as established during the industry analysis[180]. An additional weakness is the limited product range of Revive Automotive Solutions Ltd. Most competitors offer a broad range of cleaning products for different applications and are present at respective industry distributors with their complete or parts of their portfolio. This makes it difficult for Revive to sell-in into trade assortments with its two products, the Revive Turbo Cleaner and the Service Shot, as this would mean the replacing of single competitor products without being able to supply a broader assortment of related fluids which would satisfy several consumer needs.

Opportunities

Ecological consciousness is rising on the political level and in the German society.[181] This development translates into an increased demand for environmentally-friendly products and stricter environmental laws and regulations also affecting passenger vehicles. The Revive Turbo Cleaner can benefit of this trend with an ecological positioning highlighting its non-hazardous ingredients and characteristics for safe handling.

In order to overcome low brand awareness, trust and market share as well as the limited product range, a partnership with the following organisation types could enhance the company's position:

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[180] Cf. p. 57.

[181] Cf. 3.3.1 Global Environment Analysis - PESTEL

- Joining forces with another manufacturer of engine cleaning products adds to Revive's market coverage, extends the existing assortment and thereby increases bargaining power when approaching distributors.
- A partnership with independent workshops, i.e. garage chains and free garage associations, improves market proximity and attention on the relevant market segment of older vehicles, delivers additional industry insights and enables the company to develop a tailored service concept for workshops.

Additionally, an expansion into the neighbour countries Austria and Switzerland is possible due to Bartec Auto ID's existing contacts, its multilingual sales and support team and the cultural and linguistical proximity of the target countries to the German market.

Threats

As established during the PESTEL analysis, the automotive industry faces considerable technological changes; combustion engine technology and software improves and prevents the appearance of carbon deposits in the engine system on its own. Furthermore, alternative drive systems are slowly occupying market share and are additionally decreasing market potential of engine cleaning products for combustion engines in the long run. In the short run, the political, economic and legal insecurity after the EU exit of the United Kingdom impedes decision-making and business development for British firms operating on the European continent.

Considering developments in the industry, the rising intensity in competition and advancing industry concentration result in a tough environment for small operators. Aggressive reactions of established dominating companies resulting in price wars or damaging marketing communications are possible.

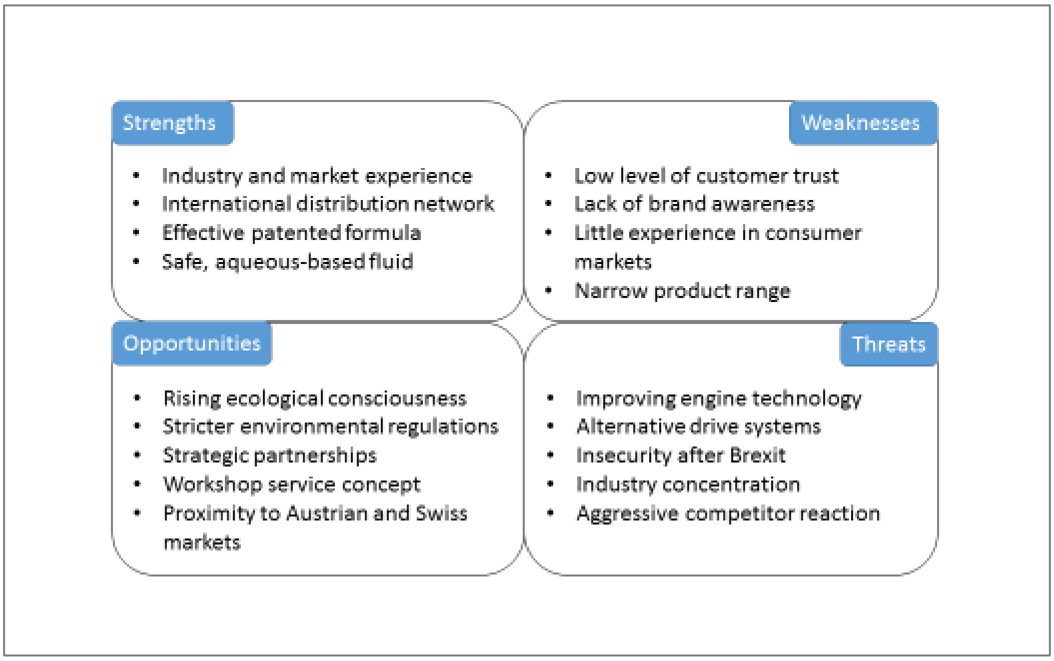

Figure 11: Summarised results of the SWOT analysis applied on Revive Automotive Solutions Ltd

3.3.3.2 Current Actions – Marketing Mix

In order to comprehensively understand, present and evaluate Revive's current strategy, the company's operations are depicted along the extended Marketing Mix concept defined in 2.1.4 Marketing Mix.

Product/Solution

The current product portfolio of Revive Automotive Solutions Ltd comprises two products; the 750 ml Revive Turbo Cleaner and the 300 ml Revive Service Shot. Both products target the owners of vehicles with combustion engines and their need to restore and maintain engine and driving performance at low cost and low time-consumption compared to mechanical cleaning technologies or substitution of the engine system. For workshops, the products allow effective, fast and profitable engine repair services resulting in satisfied customers and requiring low degrees of manpower. By including products with these benefits in their assortments, distributing organisations such as wholesalers and retailers increase portfolio value and provide new solutions to customers.

The Revive fluid has an orange-brown colour and is clear. The full treatment is presented in a 1 litre see-through plastic bottle with a peelable label depicting the instructions for use on the inside. The bottle is sold in a box of solid cardboard together with the spray nozzle and hose. Both label and packaging are dominated by dark blue and green colour and communicate the product's benefits, the procedure of application and the package content in German. The preventative Service Shot is filled into a smaller, silver-grey plastic bottle in the shape of a turbocharger and sold in a smaller box accordingly, with added orange elements. The Service Shot has not yet been adapted to the German market, the packaging is therefore multilingual.

The brand name "Revive" is presented in a blue-green-white colour scheme and goes with a silver-grey turbocharger icon, highlighting the fluids ability to clean complex surfaces. Revive's ecological aspect is expressed in the green colour and the leaf-shaped Vs in the brand logo. Due to the acquisition of Revive Automotive Solutions Ltd and the ongoing integration process of the business, the brand has been developed consistently for the German market but slightly different compared to the original appearance of Revive in the UK and other markets. Especially the packaging and bottle have been altered several times in the brand's history resulting in outdated marketing content and material which is updated step-by-step.[182]

Customers can make use of the support hotlines +49 (0) 6036 989 5057 and +44 (0)1225 701920 covering the DACH region, France, Belgium, the Netherlands and English-speaking clients. If detailed advice is required or a customer is interested in the application process, the German- and English-speaking sales team offers personal product demonstrations.

Promotion/Information

Apart from the German homepage, Revive employs advertisement in specialised tuning magazines such as Maximum Tuner and BMW Power[183] and trade show appearances

[182] Cf. product video "Vorführung des Produktes" on the German homepage. http://www.turboreiniger.de/produktvideos.html (accessed 09.01.17)
[183] Both W.P. Europresse Verlag GmbH http://x-media-group.de/index.php/impressum-bottom (accessed 17.01.17)

like on the Automechanika 2016 in Frankfurt for promotion and information purposes. Social media is another important channel for low cost advertising. While the British Facebook account[184] is used for promotional activities such as small competitions and as the main news channel in addition to the English homepage, the German equivalents "Revive Turbo Reiniger"[185] and "turboreiniger.de" are mostly used as mere informational platforms communicating the product's benefits, application procedures and product tests amongst others. On YouTube, Revive is present with own informational videos and product review videos published by specialised YouTube channels which were asked to do a product test by the company. All this content is also shared on the homepages and the Facebook pages. Revive's activities on YouTube are currently dominated by German content, as they have been supported by Bartec Auto ID Ltd and its German subsidy.

The target group on the trade show appearances and of trade magazines consists of potential customers in the wholesale and retail segment as well as interested mechanics and their workshops. The social media activities also aim at raising awareness and interest at mechanics but additionally serves for the education of private car owners and a first establishment of the brand in the consumer segment. Interested clients have the possibility to contact Bartec Auto ID GmbH via email or phone for further information, as the company is responsible for the German-speaking support.

Price/Value

The current consumer price of the 750 ml Revive Turbo Cleaner lies at 69.95 € and thereby has a cost advantage over mechanical treatments but a disadvantage in comparison with competing products which are priced considerably lower at around 10 to 20 € for cleaning additives or sprays. These are more comparable to the 300 ml Revive Service Shot sold for 29.95 €. On the other hand, most of the competitor treatments are recommended for use on a regular basis and in short intervals of several thousand kilometres, as described in 3.3.2.2 Competitors and Substitutes, resulting in a difficult

[184] https://de-de.facebook.com/ReviveTurboCleaner/ (accessed 10.01.17)
[185] https://www.facebook.com/turboreiniger/ (accessed 10.01.17)

product comparison. Only the Turbo Clean Set by Innotec is of a similar price. Resulting from this comparison, Revive is located above the average price level of engine cleaning products from the consumer’s perspective. It is therefore crucial to communicate the product’s benefits, namely the effective removal of carbon deposits at low cost and with a single and quick treatment, meeting the customer’s need of low time-consumption. Discounts and special offers for larger quantities are employed when selling to distributors and workshops, e.g. the reduced price of 299.95 € for the value pack comprising one full treatment and five refill bottles with an actual value of 369.70 €.

Place/Access

The Revive fluid is shipped to the premises of Bartec Auto ID GmbH near Frankfurt, Germany and is then sent on to distributing partners such as Auswuchtwelt Ltd. & Co.KG and Turboworld24. These sell the cleaner through their online stores and other online trade platforms to workshops and consumers. The company is constantly striving to win new business partners for the distribution of its products. Interested customers directly contacting Revive or Bartec are referred to the distributors or a member of the sales team. Consumers entering a garage with an engine problem or for an oil service can get a Revive treatment recommended by the workshop staff or otherwise ask for a Revive treatment. The other possibility is the direct purchase via online trade platforms and the independent application in a private context.

4 Conclusion

In the following, the results of the analysis are resumed and the research questions established at the beginning of the paper are answered.

Which are the actual customer segments the Revive Turbo Cleaner tries to attract and how is the demand structured in Germany?

The customer base for Revive was distinguished in two groups, private and professional customers. Further distinctions were made in the professional segment, namely into business fleets, workshops, retailers and wholesalers. A detailed and clear segmentation of the customer segments could not be carried out due to the difficult identification of carbon related issues and their occurrence. However, a set of statements could be compiled outlining possible target groups and strategies.

- Two thirds of the 45 million German passenger cars are located in the southern and western part of Germany. Northern and eastern federal states together represent one third.
- While the share of alternative drive systems is insignificant for now, petrol combustion engines represent 66% and diesel engines 32% of all German passenger cars.
- Car owners aged between 30 and 59 years drive 2000 km and inhabitants of rural northern federal states 500 km more on average in comparison to other demographic groups and regions. Based on the assumption that vehicle mileage favours the build-up of carbon deposits, these segments are of strategic relevance.
- 39% of German passenger cars, i.e. 17.5 million, are older than 10 years. Based on the assumption that vehicle age favours the build-up of carbon deposits, this segment is of strategic relevance and can be reached relying on independent workshops which are dominant in the segment of older cars.
- The level of interest concerning car-related topics is high in German population and customers can easily be informed relying on specialised magazines, forums and social media channels.

- The 17,450 authorised garages in Germany dominate consumer preferences with a share of around 50% in the automotive service sector followed by the 20,950 free workshops and service centres with around 42%.
- The 4.6 million passenger cars, 2.8 million HGVs and 78,300 busses operated by German businesses provide a concentrated and prestigious target group and sales market.

Where is the product situated in comparison to its competitors and substituting services in Germany?

A range of relevant substituting technologies and competitors were depicted in profiles in order to provide an overview of the competitive environment. The following statements could be derived.

- Substituting treatments have a disadvantage in price and time-consumption but are effective in identification and assessment of engine problems.
- The segment of fuel additives has a strong presence and a price advantage over Revive's assortment.
- Competing companies do not offer products with similar characteristics to the Revive Turbo Cleaner, but provide broader assortments consisting of cheaper solutions.
- Revive competes with prominent and actively marketed manufacturer brands such as LIQUI MOLY, MOTUL and Wynn's.

Based on the product's qualities, the nature of its customers and considering other external factors, what is an appropriate Marketing Mix for the Revive Turbo Cleaner in Germany and how can the existing mix be further enhanced?

The subsequent presentation of the Marketing Mix is based on the current composition of the Mix depicted in 3.3.3.2 Current Actions – Marketing Mix and gives propositions for future actions by taking the analysis results into consideration and resuming them.

- Product/Solution

  Additional steps in the dimension product/solution result from the comparison with competitor assortments. While most competitors offer different products for different combustion engines and drive systems, Revive is suggestive of being developed exclusively for the cleaning of turbochargers. The fluid however, is able to remove carbon deposits from any combustion system including petrol and diesel engines or systems without turbocharges. On the product packaging and on the homepage, this versatile application is communicated but possibly overlooked by potential customers, as the product name “Turbo Cleaner/Turboreiniger” and images of turbochargers dominate Revive’s appearance. By differentiating between various applications, the customer’s expectations towards the fluid get in line with its abilities. Developing the colour-scheme employed already on the homepage in this context and employing it additionally on the product packaging is a way to achieve this differentiation and to make it easier for customers to identify solutions to their engine problems.

  As mentioned previously, Revive’s product range can additionally be broadened by teaming up with another manufacturer providing a complementary assortment. This increases the portfolio value and enables an easier sell-in of the products into distributing organisations. A second option is to join forces with the customer and to develop a service concept for independent workshops featuring the application of the fluid, product presentation in the shop, information for the consumer and sharing of market insights.

  In the long run, decreasing market volume caused by technological advances have to be taken into consideration. The inspection of new engine technologies and their weaknesses may result in future product development projects.

- Promotion/Information

  Relying on one of Revive’s main strengths, its ecological characteristics, the promotional mix should further support the positioning of the products as safe, environmentally-friendly and aqueous-based alternative to conventional fuel additives and hazardous cleaners.

Furthermore, promotional activities employed on the English social media appearance should be extended to the German side of the business and link to content on the homepage in order to increase brand awareness and interaction with customers. New additional promotional partners and testers such as the ADAC or AUTO BILD enhance the media coverage and improve credibility rates. New potential target groups are companies with big vehicle fleets including HGVs and busses in their role as prominent operators also influencing brand reputation in the consumer segment and specialised retailers in their function as additional distribution channel to consumers and workshops. The customer group of independent workshops should gain in promotional importance as they occupy an influential position within the market and especially in the segment of older vehicles.

- Price/Value

  Several adaptations of the Marketing Mix in terms of price or customer value of the Revive Turbo Cleaner result from actions in other dimensions. In comparison with its competitors, Revive Automotive Solutions Ltd follows a high-price strategy which can be supported by additional services and activities reducing customer sacrifice. In this context, the development of tailored service concepts for workshops offers the opportunity to increase customer value. From a trade perspective, the enlargement of Revive's product portfolio also improves the assortments of distributing organisations by covering additional customer needs with one partner enterprise.

  Another mean aiming at influencing the customer's decision process would be to communicate recommended time/mileage intervals for the application of the cleaning fluid. This enables the customer to put product prices into proportion with prices of competing products, especially in the additive segment, and makes the reasons behind charged prices visible to the buyer.

- Place/Access

  Regarding place/access, the German market is still in development. Building a workshop network comparable to the UK market[186] with service providers offering Revive treatments to consumers simplifies customer access.

  Specialised retailers have been identified as additional point of sales for the Revive Turbo Cleaner. However, due to the high level of expertise in corresponding purchasing departments and sales risks due to currently low consumer demand, these organisations are to be won relying on pull-effects caused by convincing workshops and consumers first.

To summarise, the future of the Revive Turbo Cleaner in the German market looks promising, although additional steps have to be made to reach satisfying awareness and sales levels and overcome threating external factors as well as industry characteristics. To face these challenges, Revive Automotive Solutions Ltd benefits of additional resources provided by the parent company Bartec Auto ID Ltd and its German subsidy Bartec Auto ID GmbH which push promotional activities in the target market and strengthen the brand's position. The recommendations presented above outline possible approaches to further accelerate the company's development.

[186] Cf. reference no. 106 on p.33.

5 Bibliography

Agarwal, Ravi, Grassl, Wolfgang, and Pahl, Joy. “Meta-SWOT: Introducing a new strategic planning tool.” *Journal of Business Strategy* 33, no. 2 (2012): 12–21.

Auto Bild. “Welcher Hersteller von Auto-Schmierstoffen überzeugt Sie?”, 2014. https://de.statista.com/statistik/daten/studie/38758/umfrage/beliebteste-schmierstoffe-in-deutschland/, accessed December 2016.

AutoScout24 GmbH. “Marktpotenziale im Werkstattmarkt.” 2012. https://de.statista.com/statistik/studie/id/12824/dokument/marktpotenziale-im-werkstattmarkt/, accessed December 2016.

“The European Automotive Aftermarket Landscape: Customer Perspective, Market Dynamics and the Outlook to 2020.” BCG - The Boston Consulting Group press release, July 2012. https://www.bcg.com/documents/file111373.pdf, accessed November 2016.

“Returning to Growth: A Look at the European Automotive Aftermarket.” BCG - The Boston Consulting Group, press release, July 2014. https://www.bcgperspectives.com/content/articles/automotive_service_operations_returning_growth_look_european_automotive_aftermarket/#chapter1, accessed November 2016.

“Weniger Abfall, noch mehr Recycling.” Bundesregierung press release, February 10, 2012. https://www.bundesregierung.de/ContentArchiv/DE/Archiv17/Artikel/2011/03/2011-03-30-wertstofftonne-elektroschrott.html, accessed November 2016.

“Weitere Steuervorteile für Elektroautos.” Bundesregierung press release, November 21, 2016. https://www.bundesregierung.de/Content/DE/Artikel/2016/05/2016-05-18-elektromobilitaet.html?nn=1384552, accessed November 2016.

CHECK24. “Durchschnittliche Fahrleistung der Personenkraftwagen in Deutschland in den Jahren 2013 und 2014 nach Bundesländern (in Kilometern).” 2015.

https://de.statista.com/statistik/daten/studie/259416/umfrage/fahrleistung-von-pkw-nach-bundeslaendern/, accessed December 2016.

CHECK24. "Durchschnittliche Fahrleistung der Pkw-Halter in Deutschland in den Jahren 2013 und 2014 nach Altersgruppen (in Kilometern)." 2016. https://de.statista.com/statistik/daten/studie/413306/umfrage/fahrleistung-von-pkw-nach-altersgruppen/, accessed December 2016.

Cole, Craig. "Is Carbon Buildup a Problem With Direct-Injection Engines?", Autoguide.com, 2015. http://www.autoguide.com/auto-news/2015/01/is-carbon-buildup-a-problem-with-direct-injection-engines-.html, accessed November 2016.

Coman, Alex, and Ronen, Boaz. "Focused SWOT: Diagnosing critical strengths and weaknesses." *International Journal of Production Research* 47, no. 20 (2009): 5677–5689.

Constantinides, E. "The Marketing Mix Revisited: Towards the 21st Century Marketing." *Journal of Marketing Management* 22, 3-4 (2006): 407–438.

"CVO Fuhrpark-Barometer Deutschland 2014." 2014. https://de.statista.com/statistik/studie/id/30913/dokument/studie-zu-fuhrparks-in-unternehmen/, accessed December 2016.

DAT. "Wie häufig lassen Sie einen Ölwechsel an ihrem Pkw durchführen?", Statista, 2016. https://de.statista.com/statistik/daten/studie/37153/umfrage/haeufigkeit-eines-oelwechsel-bei-pkw-in-deutschland/, accessed December 2016.

DAT. "Wo wurde Ihr letzter Ölwechsel durchgeführt?", Statista, 2016. https://de.statista.com/statistik/daten/studie/37163/umfrage/durchfuehrende-staette-beim-oelwechsel-in-deutschland/, accessed December 2016.

Department for International Trade. "Doing business in Germany: Germany trade and export guide." Updated 25 February 2016, 2016. https://www.gov.uk/government/publications/exporting-to-germany/doing-business-in-germany-germany-trade-and-export-guide, accessed November 2016.

Department for International Trade. “Exporting to Germany: A guide for UK businesses interested in selling goods and services in Germany.” 2016. https://www.gov.uk/guidance/exporting-to-germany, accessed November 2016.

Deutsche Post. “Anzahl der Fahrzeuge von Deutsche Post DHL weltweit nach Fahrzeugart (Stand: 2015*).” Statista, 2016. https://de.statista.com/statistik/daten/studie/591677/umfrage/anzahl-der-fahrzeuge-von-deutsche-post-dhl-weltweit-nach-fahrzeugart/, accessed December 2016.

Deutsche Post AG. “Bericht zur Unternehmensverantwortung 2015.” Deutsche Post DHL Group, 2015. http://www.dpdhl.com/de/investoren/finanzberichte/bericht_zur_unternehmensverantwortung.html, accessed December 2016.

Dev, Chekitan S., and Schultz, Don E. “A customer-focused approach can bring the current marketing mix into the 21st century.” *Marketing Management* 14, no. 1 (2005): 16–22.

Dev, Chekitan S., and Schultz, Don E. “Simply SIVA.” *Marketing Management* 14, no. 2 (2005): 36–41.

Dobbyn, Paul. “Are new EU initiatives storing up problems for car owners?”, Professional Motor Mechanic, 2014. http://pmmonline.co.uk/article/are-new-eu-initiatives-storing-up-problems-for-car-owners/, accessed November 2016.

E. Dobbs, Michael. “Guidelines for applying Porter's five forces framework: A set of industry analysis templates.” *Competitiveness Review* 24, no. 1 (2014): 32–45.

EHI Retail Institute, and Statista. “B2C-E-Commerce: Ranking der Top100 größten Online-Shops nach Umsatz in Deutschland im Jahr 2015 (in Millionen Euro).” Statista, 2016. https://de.statista.com/statistik/daten/studie/170530/umfrage/umsatz-der-groessten-online-shops-in-deutschland/, accessed December 2016.

Esch, Franz-Rudolf. *Strategie und Technik der Markenführung*. 8th ed. München: Vahlen, 2014.

European Patent Convention: EPC, 2016. https://www.epo.org/law-practice/legal-texts/epc.html, accessed November 2016.

"New Vehicles in Eastern Europe and Aging Fleets in Western Europe Drive Automotive Aftermarket Growth." Frost & Sullivan, press release, June 22, 2015. http://ww2.frost.com/news/press-releases/new-vehicles-eastern-europe-and-aging-fleets-western-europe-drive-automotive-aftermarket-growth/, accessed November 2016.

GfK. "Verteilung der Wartungsarbeiten an Pkw nach dem Ort für die Kfz-Wartung und dem Fahrzeugalter im Jahr 2015." DAT, 2016. https://de.statista.com/statistik/daten/studie/37158/umfrage/kfz-wartungsarbeiten-nach-ort-und-fahrzeugalter-in-deutschland/, accessed December 2016.

Großklaus, Rainer H. G. *Positionierung und USP: Wie Sie eine Alleinstellung für Ihre Produkte finden und umsetzen*. 2nd ed. Wiesbaden: Springer Gabler, 2015. http://dx.doi.org/10.1007/978-3-658-04588-3.

Grünig, Rudolf, and Richard Kühn, eds. *The strategy planning process: Analyses, options, projects*. Heidelberg, New York: Springer, 2015.

Hecker, Falk, ed. *Aftersales in der Automobilwirtschaft: Konzepte für Ihren Erfolg*. 1st ed. München: Autohaus Buch & Formular, 2010.

Helms, Marilyn M., and Nixon, Judy. "Exploring SWOT analysis – where are we now?" *Journal of Strategy and Management* 3, no. 3 (2010): 215–251.

Hölscher, and Liesbrock. "MOTUL Deutschland GmbH: Jahresabschluss zum Geschäftsjahr vom 01.01.2014 bis zum 31.12.2014." Deloitte & Touche GmbH, 2015. https://www.bundesanzeiger.de/ebanzwww/wexsservlet, accessed December 2016.

Homburg, Christian. *Marketingmanagement: Strategie, Instrumente, Umsetzung, Unternehmensführung*. 5th ed. Wiesbaden: Springer Gabler, 2015.

Jacobi, Gundel. "Schmutz hat hier keine Chance." *amz,* Juni 2016, p. 10. http://www.amz.de/download/archiv/2016/amz_2016_06/index.html#/0, accessed November 2016.

Jobber, David, and Ellis-Chadwick, Fiona. *Principles and practice of marketing*. 7th ed. London: McGraw-Hill, 2013.

KBA. "Anzahl der gemeldeten Lkw in Deutschland in den Jahren 1960 bis 2016 (Bestand in 1.000)." Statista, 2016. https://de.statista.com/statistik/daten/studie/6961/umfrage/anzahl-der-lkw-in-deutschland/, accessed December 2016.

KBA. "Anzahl der Kraftomnibusse in Deutschland von 1970 bis 2016." Statista, 2016. https://de.statista.com/statistik/daten/studie/155554/umfrage/anzahl-der-busse-in-deutschland/, accessed December 2016.

KBA. "Anzahl der vorhandenen Personenkraftwagen bei gewerblichen Haltern in Deutschland in den Jahren von 2012 bis 2016." Statista, 2016. https://de.statista.com/statistik/daten/studie/485947/umfrage/pkw-bestand-im-gewerbe-in-deutschland/, accessed December 2016.

KBA. "Verteilung des Pkw-Bestandes in Deutschland nach Alter der Fahrzeuge (Stand 1. Januar 2016)." Statista, 2016. https://de.statista.com/statistik/daten/studie/3438/umfrage/pkw-bestand-nach-alter-der-fahrzeuge/, accessed December 2016.

KBA, Die Zeit. "Durchschnittliches Alter von Pkw in Deutschland in den Jahren 1960 bis 2016." 2016. https://de.statista.com/statistik/daten/studie/154506/umfrage/durchschnittliches-alter-von-pkw-in-deutschland/, accessed December 2016.

KBA, LBA, VDR. "Fahrzeugbestand Deutschland: Statista-Dossier." Statista GmbH, 2016. https://de.statista.com/statistik/studie/id/11436/dokument/fahrzeugbestand-deutschland-statista-dossier/, accessed December 2016.

Knab, Sonja. “Social Trends: Automobil und Mobilität der Zukunft.” Tomorrow Focus Media, 2015. https://de.statista.com/statistik/studie/id/26230/dokument/studie-zur-mobilitaet-der-zukunft-in-deutschland-2015/, accessed November 2016.

Koch, Lebherz. “Liqui-Moly GmbH: Konzernabschluss zum Geschäftsjahr vom 01.01.2014 bis zum 31.12.2014.” Ernst & Young GmbH, 2015. https://www.bundesanzeiger.de/ebanzwww/wexsservlet, accessed December 2016.

Lang, Ewald. *Die Vertriebs-Offensive: Erfolgsstrategien für umkämpfte Märkte*. 3rd ed. Wiesbaden: Springer Gabler, 2012.

Markel, Andrew. “Direct Injection Engines and Carbon Deposits.” Engine Builder, 2015. http://www.enginebuildermag.com/2015/01/direct-injection-engines-carbon-deposits/, accessed November 2016.

MarketLine. “Automotive Aftermarket Industry Profile: Germany.” (2012).

MarketLine, a Progressive Digital Media business. “Germany: In-depth PESTLE insights.” *Country Profile Series (*2014).

Martínez-López, Francisco J., Anaya-Sánchez, Rafael, and Aguilar-Illescas, Rocio. *Online Brand Communities: Using the Social Web for Branding and Marketing*. 1st ed., 2016. http://dx.doi.org/10.1007/978-3-319-24826-4.

McDonald, Bob. “Direct Injection Gas and Diesel Technology.” Engine Builder, 2015. http://www.enginebuildermag.com/2015/10/direct-injection-gas-and-diesel-technology/, accessed November 2016.

Möller, Kristian. “Marketing Mix Discussion - Is the Mix Misleading Us or are We Misreading the Mix?” *Journal of Marketing Management* 22, 3-4 (2006): 439–450.

Müller, Andreas, Weber, Boris. “Berner SE: Konzernabschluss zum Geschäftsjahr vom 01.04.2015 bis zum 31.03.2016.” BDO AG, 2016. https://www.bundesanzeiger.de/ebanzwww/wexsservlet, accessed December 2016.

OECD. *Country statistical profile: Germany 2016/2,* 2016.

Oh, Changhoon. "Considerations on Influencing Factors of Carbon Deposit in Gasoline Direct Injection Engine." In *Proceedings of the FISITA 2012 World Automotive Congress: Volume 2: Advanced Internal Combustion Engines (II).* Berlin, Heidelberg: Springer, 2013.

Porter, Michael E. "How competitive forces shape strategy." *Harvard Business Review* 57, no. 2 (1979): 137–145.

Porter, Michael E. "THE FIVE COMPETITIVE FORCES THAT SHAPE STRATEGY." *Harvard Business Review* 86, no. 1 (2008): 78–93.

Schack, Korinna. "Umweltbewusstsein in Deutschland 2014: Ergebnisse einer repräsentativen Bevölkerungsumfrage." Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit (BMUB); Umweltbundesamt (UBA), 2015, accessed November 2016.

Schultz, Don E., Dev, Chekitan. "Revisiting the Marketing Mix." *Marketing Management* 21, no. 2 (2012): 45–47.

Statista GmbH. "Kfz-Service: Statista-Dossier." 2016. https://de.statista.com/statistik/studie/id/23744/dokument/kfz-service-statista-dossier/, accessed December 2016.

Statistisches Bundesamt. "Deutschland: Statistische Länderprofile G20 Industrie- und Schwellenländer." Statistisches Bundesamt, 2015. https://www.destatis.de/DE/Publikationen/Thematisch/Internationales/Laenderprofile/Laenderprofile.html.

The Aftermarket in the Automotive Industry: How to Optimize Aftermarket Performance in Established and Emerging Markets, 2010.

VuMA. "Bevölkerung in Deutschland nach Interesse an Informationen über Autos von 2010 bis 2016 (Personen in Millionen)." Statista, 2016. https://de.statista.com/statistik/daten/studie/171977/umfrage/interesse-an-informationen-ueber-autos/, accessed December 2016.

VuMA. "Bevölkerung in Deutschland nach Interesse an Informationen über Autozubehör von 2010 bis 2016 (Personen in Millionen)." Statista, 2016.

https://de.statista.com/statistik/daten/studie/171979/umfrage/interesse-an-informationen-ueber-autozubehoer/, accessed December 2016.

“Concentration process in the European automotive aftermarket distribution is growing.” wolk after sales experts GmbH
press release. Cologne, January 15, 2013. http://www.wolk-aftersales.com, accessed July 2016.

“Europa konzentriert sich weiter.” wolk after sales experts GmbH
press release, April 30, 2015. http://www.wolk-aftersales.com/automotive-aftermarket-news/europa-konzentriert-sich-weiter.html#startOfPageId95, accessed November 2016.

“Exciting developments in the Car Aftermarket in Europe 2015.” wolk after sales experts GmbH, press release, October 27, 2016. http://www.wolk-aftersales.com/news-zu-wolk-after-sales-experts/exciting-developments-in-the-car-aftermarket-in-europe-2015.html, accessed November 2016.

ZDK. “Anzahl der Kfz-Werkstätten in Deutschland von 2001 bis 2015.” 2016. https://de.statista.com/statistik/daten/studie/168124/umfrage/anzahl-der-betriebe-im-kfz-handwerk-in-deutschland/, accessed December 2016.

Appendix

Part A:

I: Calculation of the weighted average annual mileage of passenger cars for the fictive German sales regions South, West and North-East.

II: Calculation of the weighted average annual mileage of passenger cars for the fictive German sales regions North and East.

Both based on

- CHECK24. “Durchschnittliche Fahrleistung der Pkw-Halter in Deutschland in den Jahren 2013 und 2014 nach Altersgruppen (in Kilometern).” 2016. https://de.statista.com/statistik/daten/studie/413306/umfrage/fahrleistung-von-pkw-nach-altersgruppen/, and
- KBA, LBA, VDR. “Fahrzeugbestand Deutschland: Statista-Dossier.” Statista GmbH, 2016. https://de.statista.com/statistik/studie/id/11436/dokument/fahrzeugbestand-deutschland-statista-dossier/, p.9

Part B:

Filled templates for Porter’s Five Forces applied on the German market for products cleaning the internals of automotive combustion engines. Templates elaborated and published by Michael Dobbs in “Guidelines for applying Porter's five forces framework: A set of industry analysis templates.” *Competitiveness Review* 24, no. 1 (2014): 32–45.

I: Threat of New Entrants

II: Threat of Suppliers

III: Threat of Buyers

IV: Threat of Substitutes

V: Threat of Competitive Rivalry

Part A - I

Federal State/Region	Number of cars	Share of total number of cars in the region (%)	Average annual mileage in the Federal States (km)	Weighted average annual mileage (km)
1. Bavaria	7,550,300	54.6	12014	6560
2. Baden-Württemberg	6,282,600	45.4	11701	5312
South (sum of 1+2)	**13,832,900**	**100**	**-**	**11872**
3. Hesse	3,539,400	21.8	12020	2620
4. Rhineland-Palatinate	2,410,800	14.9	12602	1878
5. Saarland	615,600	3.8	11839	450
6. North Rine-Westphalia	9,639,700	59.5	11659	6937
West (sum of 3-6)	**16,205,500**	**100**	**-**	**11885**
7. Lower Saxony	4,528,700	30.2	12462	3760
8. Bremen	284,500	1.9	11091	210
9. Hamburg	761,700	5.1	10906	554
10. Schleswig-Holstein	1,583,800	10.6	12932	1365
11. Mecklenburg West-Pomerania	832,700	5.5	12932	718
12. Brandenburg	1,369,700	9.1	12565	1147
13. Berlin	1,178,400	7.9	9947	781
14. Saxony-Anhalt	1,193,900	8.0	12499	994
15. Saxony	2,107,100	14.0	11876	1667
16. Thuringia	1,167,700	7.8	12208	950
North-East (sum of 7-16)	**15,008,200**	**100**	**-**	**12146**

Part A - II

Federal State/Region	Number of cars	Share of total number of cars in the region (%)	Average annual mileage in the Federal States (km)	Weighted average annual mileage (km)
7. Lower Saxony	4,528,700	56.7	12462	7062
8. Bremen	284,500	3.6	11091	395
9. Hamburg	761,700	9.5	10906	1040
10. Schleswig-Holstein	1,583,800	19.8	12932	2563
11. Mecklenburg West-Pomerania	832,700	10.4	12932	1348
North (sum of 7-11)	**7,991,400**	**100**	**-**	**12407**
12. Brandenburg	1,369,700	19.5	12565	2453
13. Berlin	1,178,400	16.8	9947	1670
14. Saxony-Anhalt	1,193,900	17.0	12499	2127
15. Saxony	2,107,100	30.0	11876	3566
16. Thuringia	1,167,700	16.6	12208	2032
East (sum of 12-16)	**7016800**	**100**	**-**	**11848**

Part B - I

Threat of New Entrants*

Low	THREAT LEVELS	*High*

DF†

☑ *High* — Supply-Side Economies of Scale — *Low*
High sales volumes result in lower supplier power, better prices and higher brand awareness

☑ *High Network Effects* — Demand-Side Benefits of Scale — *Low Network Effects*
Perceived risk is low when buying from big and prominent suppliers such as Liqui Moly or Wynn's

☑ *High* — Switching Costs — *Low*
No special equipment or knowledge needed for product application

☑ *High* — Capital Requirements — *Low*
Development and testing of chemicals

☐ *First Mover Benefits* — Incumbency — *Late Mover Benefits*
Established firms have brand and awareness advantages while late movers can score with effective products and new technologies

☐ *Limited Access* — Distribution Channels — *Easy Access*
Many smaller distributors available, but difficult access to big distributing organisations and retailers

☐ *Regulations* — Government Policy — *Subsidies*
Several regulations concerning waste and environmental policies

☐ *Retaliatory* — Anticipated Incumbent Response — *Welcoming*
Incumbents are able to exercise their power by cutting prices or commenting in relevant media channels, partnerships with new entrants

THREATS
1. Additional market players with new cleaning technologies
2. Aggressive reactions of established brands towards small competitors
OPPORTUNITIES
1. Profitable partnership with established companies or other market players
2. Market chances for new technologies

(continued)

Notes: *The threat of new entry puts downward pressure on prices, and upward pressure on costs/rate of investment necessary to keep new entrants out of the industry; †DF – driving factors of industry dynamics to be indicated with check marks

Part B - II

Threat of Suppliers/Supplier Groups* (Packaging, resources, labour)

Low	THREAT LEVELS	*High*

DF†

☑ Many Organizations | Supplier Concentration | Few Organization

Numerous providers of fluid containers, marketing material and labour (sales staff, administrative staff, mechanics, chemists)

☑ High % | Supplier Volume/Profit | Low %

Suppliers do not rely on sales to this particular industry as they have numerous other customers (consumer beverages and hygiene)

☐ Not Feasible | Supplier Forward Integration | Credible Threat

Suppliers lack equipment and expertise for product development

☐ Standardized | Supplier Products | Highly Differentiated

Different container shapes and mouths, standardised volumes

☑ Low | Industry Switching Costs | High

Numerous other packaging companies, impact on product presentation and marketing activities

☐ Many Viable Options | Supplier Substitutes | No Viable Options

See "Spplier Concentration"

THREATS	
1. High supplier prices due to low quantities	3. Diminishing oil resources
2. Frequent supplier changes influence product marketing	
OPPORTUNITIES	
1. Supplier power decreases with rising sales volumes	
2. Easy to switch supplier	

(*continued*)

Notes: *Powerful suppliers charge higher prices, limit product/service feathers/quality, and/or shift costs to other industry players; †DF – driving factors of industry dynamics to be indicated with check marks

Part B - III

Threat of Buyers/Buying Groups* *(Distributors, retailers, workshops)*

Low	THREAT LEVELS	High

DF†

☐ Single/Few — Buyer Orders — Large Volumes

Few large wholesalers (WM, Stahlgruber), but numerous small distributors

☑ Low — Buyer Information — High

High level of market and consumer knowledge at distributors and workshops

☐ Not Feasible — Buyer Backward Integration — Credible Threat

Distributors and workshops lack equipment and expertise for product development

☑ Highly Differentiated — Industry Products — Standardized

Fuel additives are all very similar, potential differentiation by other technologies

☐ High — Buyer Switching Costs — Low

Products are similar and of low complexity in application

☐ Low % — Overall Buyer Costs — High %

Engine cleaning products form a small part of automotive trade and workshop assortments

☐ High Profits — Buyer Profitability — Operating Losses

Decreasing margins and on-going industry concentration

☑ High Impact — Buyer Product/Service — Low Impact

Choice of supplier of cleaning fluids communicates trustworthiness to consumers, failed clean may result in switching workshops and distributors

THREATS
1. High buyer power through information advantage and numerous manufacturers
2. Low product differentiation

OPPORTUNITIES
1. Market entry using small distributors
2. Effective high-quality products provide benefits for buying organisations

(continued)

Notes: *Powerful buyers (the first five) and/or price sensitive buyers (the last three) force down prices, demand better quality/service, and play competitors off one another; †DF – driving factors of industry dynamics to be indicated with check marks

Part B – IV

Threat of Substitutes* (Mechanical removal)

Low	THREAT LEVELS	*High*

DF†

☑ More Expensive — Price/Indirect Costs — Less Expensive

Alternative treatments such as manual cleaning and walnut blasting are costly and time-consuming or require special equipment

☐ Low — Buyer Price Sensitivity — High

Cheaper solutions are demanded when confronted with expensive treatments

☑ Lower — Performance — Higher

Low price performance but high effectiveness of substitutes, dominating position at workshops

☐ High — Buyer Switching Costs — Low

Buyers can easily switch products and treatments by visiting different workshops or online stores, workshops require additional equipment

☑ Risk Avoidance — Buyer Profile — Risk Seeking

Risk avoidance decreases with vehicle age, workshops tend to recommend expensive treatments as well as fast and cheap solutions

☐ ↓ Cost, ↑Performance — Substitute Industry Price/Performance Trends — ↓ Cost, ↑Performance

Alternative treatments are constantly developed

THREATS
1. Volatile consumer behaviour and workshop attitudes
2. Strong position of substitutes at workshops

OPPORTUNITIES
1. Price advantage over substitutes
2. Rising price sensitivity of buyers

(continued)

Notes: *Substitutes perform the same/similar function as products of the industry but by different means. Viable substitutes place a ceiling on prices and drive up costs related to product performance, marketing, service, and R&D; †DF – driving factors of industry dynamics to be indicated with check marks

Part B - V

Threat of Competitive Rivalry*

Low	THREAT LEVELS	*High*

DF†

☐ *Few/Leader* — Existing Competitors — *Numerous/Balanced*

Few big manufacturers (Motul, Liqui Moly, Wynn's) face specialised trading organisations (Berner, Westfalia) and small suppliers (Innotec, Revive)

☑ *High* — Industry Growth — *Slow/Negative*

Advancing engine technology and alternative drive systems cause low / stagnating growth rates

☐ *Low* — Fixed and/or Storage Costs — *High*

Fluid storage and bottling plants cause high costs, but products are durable

☐ *High* — Product Differentiation — *Low*

Many similar additives, differentiation by application and ingredients possible

☑ *High* — Switching Costs — *Low*

In general, no special equipment is needed for the application of cleaning fluids

☐ *Low* — Strategic Stakes — *High*

Brand awareness and trust among customers

☐ *Small Increments* — Capacity Expansion — *Large Increments*

Capacity expansion is flexible

☐ *Low* — Exit Barriers — *High*

Knowledge and development is specialised

THREATS
1. Technological changes limit industry growth   3. Present products lack differentiation
2. Brand domination of big suppliers
OPPORTUNITIES
1. Low switching costs favour small suppliers
2. Differentiation by product application and effectiveness

(*continued*)

Notes: *Rivalry necessitates price cuts, new product development, advertising campaigns, service improvements depending on the intensity and basis of competition between rival organizations; †DF – driving factors of industry dynamics to be indicated with check marks