Success Factors of Automobile After-Sales Service in China

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1 INTRODUCTION

Automobile premium brands operate globally, which is undoubtedly required, because, for the most part, domestic markets are either decreasing or stagnating. China has become today the most important and biggest car market. Recently selling has become challenging because urban areas are well penetrated, and in poorly penetrated rural areas, incomes are low. This is particularly alarming for German brands, because of their premium orientation. Simultaneously, the after-sales market in China has been growing continuously. As a result, this market has a huge potential, which is likewise attractive because it has been scientifically proven across industries that after-sales services are high-margin profit drivers. Despite its great significance, the Chinese automobile after-sales market remains insufficiently researched, especially in terms of critical success factors and cultural influences, which therefore was the starting point for a study. The results will presented and interpreted now in this new working-paper.

2 METHODOLOGY

Initially an exploratory expert survey was conducted, in order to specify, and to challenge the given problem statement. On this basis, and especially due to an assessment of the state of research on automotive marketing, after-sales services and Chinese consumer behaviour, the objective was formulated to investigate theoretically and to verify empirically what determines the automobile manufacturer’s success in the Chinese after-sales market, while considering especially cultural influences.

In order to elaborate relevant context information, German car manufacturers were presented and discussed as the object of research. A China-specific market overview was provided to illustrate the local consumer landscape and important challenges with regard to after-sales services. Based on that, the three brands, Audi, BMW and Mercedes-Benz are defined as the manufacturer group of interest. Due to their market penetration, the empirical research is focussed on service customers living in urban areas.

In a next step the following research model was developed.
Next the overview of all established hypotheses is given. In addition, the most important contributions from the literature review are shown, because hypotheses are deducted from them. In order to present a clear table, only major contributions are listed, which directly have
integrated the mentioned constructs or in the culture section familiar constructs, with empirically testable relationships.

<table>
<thead>
<tr>
<th>No.</th>
<th>Hypothesis</th>
<th>Supporting Theories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The higher the after-sales service satisfaction, the higher the workshop loyalty.</td>
<td>Risk Theory, Dissonance Theory, Learning Theory</td>
</tr>
<tr>
<td>H2</td>
<td>The higher the workshop loyalty, the higher the brand loyalty.</td>
<td>Risk Theory, Dissonance Theory, Learning Theory</td>
</tr>
<tr>
<td>H3</td>
<td>The higher the perceived service quality, the higher the after-sales service satisfaction.</td>
<td>C/D-paradigm, Kano Model, Attribution Theory</td>
</tr>
<tr>
<td>H4</td>
<td>The higher the perceived workshop switching costs, the higher the workshop loyalty.</td>
<td>Transaction Cost Theory, Prospect Theory, Transaction Cost Utility Concept</td>
</tr>
<tr>
<td>H5</td>
<td>The higher the perceived workshop switching costs, the higher the brand loyalty.</td>
<td>Transaction Cost Theory, Prospect Theory, Transaction Cost Utility Concept</td>
</tr>
<tr>
<td>H6</td>
<td>There is a relationship between acceptable workshop distance and after-sales service satisfaction or workshop loyalty.</td>
<td>Transaction Cost Theory</td>
</tr>
<tr>
<td>H6a</td>
<td>The shorter the acceptable workshop distance (AWD), the higher the after-sales service satisfaction.</td>
<td></td>
</tr>
<tr>
<td>H6b</td>
<td>The shorter the AWD, the higher the workshop loyalty.</td>
<td></td>
</tr>
<tr>
<td>H7</td>
<td>The higher the brand image, the higher the after-sales service satisfaction.</td>
<td>Assimilation Theory</td>
</tr>
</tbody>
</table>

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### Success Factors of Automobile After-Sales Service in China

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Supporting Literature</th>
<th>Theories</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H8</strong> The higher the brand image, the higher the workshop loyalty.</td>
<td>TU ET AL. (2014), p. 23 ff.</td>
<td>Information Economics, Prospect Theory</td>
</tr>
<tr>
<td><strong>H9</strong> The higher the brand image, the higher the brand loyalty.</td>
<td>HÜNECKE (2012), p. 128; Additional Input from service industries in China: WANG (2010), pp. 258 f.; OGBA/TAN (2009), p. 141.</td>
<td>Information Economics, Prospect Theory</td>
</tr>
</tbody>
</table>

### Culture Section

<table>
<thead>
<tr>
<th>No.</th>
<th>Hypothesis</th>
<th>Relevant Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H10</strong> Perception of service quality is significantly influenced by culture, which means by at least one individual level value.</td>
<td></td>
<td>Schwartz’ Value Theory</td>
</tr>
<tr>
<td><strong>H10 a-k</strong></td>
<td>Perception of service quality is significantly influenced by: conformity (CON); tradition (TRA); benevolence (BEN); universalism (UNI); self-direction (SE-D); stimulation (STI); hedonism (HED); achievement (ACH); power (POW); security (SEC).</td>
<td>KNÖRLE (2011), pp. 203 ff.</td>
</tr>
<tr>
<td><strong>H11</strong> After-sales service satisfaction is significantly influenced by culture, which means by at least one individual level value.</td>
<td></td>
<td>Schwartz’ Value Theory</td>
</tr>
<tr>
<td><strong>H11 a-k</strong></td>
<td>After-sales service satisfaction is significantly influenced by: (CON); (TRA); (BEN); (UNI); (SE-D); (STI); (HED); (ACH); (POW); (SEC).</td>
<td>VAN BIRGELEN ET AL. (2002), pp. 60 f.; REIMANN ET AL. (2008), p. 70; FRANK ET AL. (2013), pp. 2402 f.</td>
</tr>
<tr>
<td><strong>H12</strong> Brand loyalty is significantly influenced by culture, which means by at least one individual level value.</td>
<td></td>
<td>Schwartz’ Value Theory</td>
</tr>
<tr>
<td><strong>H12 a-k</strong></td>
<td>Brand loyalty is significantly influenced by: (CON); (TRA); (BEN); (UNI); (SE-D); (STI); (HED); (ACH); (POW); (SEC).</td>
<td>LAM (2007), p. 15; THOMPSON ET AL. (2014), p. 2443; YOO (2008), pp. 53 f.</td>
</tr>
<tr>
<td><strong>H13</strong> Workshop loyalty is significantly influenced by culture, which means by at least one individual level value.</td>
<td></td>
<td>Schwartz’ Value Theory</td>
</tr>
<tr>
<td><strong>H13 a-k</strong></td>
<td>Workshop loyalty is significantly influenced by: (CON); (TRA); (BEN); (UNI); (SE-D); (STI); (HED); (ACH); (POW); (SEC).</td>
<td>No directly related studies available.</td>
</tr>
</tbody>
</table>

**Table 1: Overview of Hypotheses**

Reference: Author’s table
The theoretical and conceptual foundations were comprehensively discussed. Brand loyalty was defined as the predominant success indicator, and the after-sales service success chain is presented as the basis for the research model. Additionally, cultural influences are conceptualised and integrated. The focus was on values as a core element of culture and a cause of behaviour. These were operationalised with regard to the theory of individual level values, which SCHWARTZ defines as ‘trans-situational goals, varying in importance, that serve as guiding principles in the life of a person or group.’ The set of ten distinct individual level values was organised around a motivational circle, as a coherent system which allows the effects of every single value to be researched.

Based on these comprehensive discussions, and the set of hypotheses deduced from them, the empirical research process started. Here, the success-factor research approach was presented, and PLS-SEM was chosen as the best-fitting method to statistically evaluate possible success factors. The research design took various requirements into consideration. An online survey results which suits the Chinese target group specific operationalisation, scaling and translation equivalence requirements. The surveys questionnaire was tested using two pre-tests. The collected data was challenged through an error control system, which is why the final data set was reduced to 301 cases. Afterwards, reflective and formative measurement models, as well as the structural model were strictly tested with conservative standards and thresholds. As a result, the final path model was acknowledged as absolutely appropriate, which is why the testing of hypotheses was conducted afterwards.

The following table shows the results of the empirical study.

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# Overview of Hypothesis Testing

<table>
<thead>
<tr>
<th>No.</th>
<th>Hypothesis</th>
<th>β</th>
<th>t-value</th>
<th>$R^2$</th>
<th>All criteria fulfilled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>≥0.1</td>
<td>≥1.96</td>
<td>≥small</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(≥1.65)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1</td>
<td>The higher the after-sales service satisfaction, the higher the workshop loyalty.</td>
<td>0.578***</td>
<td>7.733</td>
<td>Large</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>The higher the workshop loyalty, the higher the brand loyalty.</td>
<td>0.331***</td>
<td>5.453</td>
<td>Medium</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3</td>
<td>The higher the perceived service quality, the higher the after-sales service satisfaction.</td>
<td>0.673***</td>
<td>10.723</td>
<td>Large</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4</td>
<td>The higher the perceived workshop switching costs, the higher the workshop loyalty.</td>
<td>0.022</td>
<td>0.448</td>
<td>x</td>
<td>Rejected</td>
</tr>
<tr>
<td>H5</td>
<td>The higher the perceived workshop switching costs, the higher the brand loyalty.</td>
<td>0.305***</td>
<td>5.720</td>
<td>Medium</td>
<td>Accepted</td>
</tr>
<tr>
<td>H6</td>
<td>There is a relationship between acceptable workshop distance and after-sales service satisfaction or workshop loyalty.</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>Rejected</td>
</tr>
<tr>
<td>H6a</td>
<td>The shorter the acceptable workshop distance (AWD), the higher the after-sales service satisfaction.</td>
<td>-0.003</td>
<td>0.143</td>
<td>x</td>
<td>Rejected</td>
</tr>
<tr>
<td>H6b</td>
<td>The shorter the AWD, the higher the workshop loyalty.</td>
<td>0.031</td>
<td>1.032</td>
<td>x</td>
<td>Rejected</td>
</tr>
<tr>
<td>H7</td>
<td>The higher the brand image, the higher the after-sales service satisfaction.</td>
<td>0.162**</td>
<td>2.523</td>
<td>Small</td>
<td>Accepted</td>
</tr>
<tr>
<td>H8</td>
<td>The higher the brand image, the higher the workshop loyalty.</td>
<td>0.165***</td>
<td>2.629</td>
<td>Small</td>
<td>Accepted</td>
</tr>
<tr>
<td>H9</td>
<td>The higher the brand image, the higher the brand loyalty.</td>
<td>0.162***</td>
<td>2.730</td>
<td>Small</td>
<td>Accepted</td>
</tr>
<tr>
<td>H10</td>
<td>Perception of service quality is significantly influenced by culture, which means by at least one individual level value.</td>
<td>0.601***</td>
<td>14.982</td>
<td>Large</td>
<td>Accepted</td>
</tr>
<tr>
<td>H10a</td>
<td>Perception of service quality is significantly influenced by conformity.</td>
<td>0.127</td>
<td>1.239</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
<tr>
<td>H10b</td>
<td>Perception of service quality is significantly influenced by tradition.</td>
<td>-0.045</td>
<td>0.659</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
<tr>
<td>H10c</td>
<td>Perception of service quality is significantly influenced by benevolence.</td>
<td>0.035</td>
<td>0.311</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
<tr>
<td>H10d</td>
<td>Perception of service quality is significantly influenced by universalism.</td>
<td>0.205**</td>
<td>2.173</td>
<td>n/a</td>
<td>Accepted</td>
</tr>
<tr>
<td>H10e</td>
<td>Perception of service quality is significantly influenced by self-direction.</td>
<td>0.187*</td>
<td>1.910</td>
<td>n/a</td>
<td>Accepted</td>
</tr>
<tr>
<td>H10f</td>
<td>Perception of service quality is significantly influenced by stimulation.</td>
<td>0.139</td>
<td>1.486</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
<tr>
<td>H10g</td>
<td>Perception of service quality is significantly influenced by hedonism.</td>
<td>0.102</td>
<td>0.962</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
<tr>
<td>H10h</td>
<td>Perception of service quality is significantly influenced by achievement.</td>
<td>-0.135</td>
<td>1.290</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
<tr>
<td>H10i</td>
<td>Perception of service quality is significantly influenced by power.</td>
<td>-0.013</td>
<td>0.161</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
<tr>
<td>H10k</td>
<td>Perception of service quality is significantly influenced by security.</td>
<td>0.114</td>
<td>1.349</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Significance Level *p<0.1; **p<0.05; ***p<0.01
<table>
<thead>
<tr>
<th>Criteria Requirement Level</th>
<th>β ≥0.1</th>
<th>t-value ≥1.65</th>
<th>f² ≥small</th>
<th>All criteria fulfilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>H11 After-sales service satisfaction is significantly influenced by culture, which means by at least one individual level value.</td>
<td>0.010</td>
<td>0.151</td>
<td>x</td>
<td>Rejected</td>
</tr>
<tr>
<td>H11a-k After-sales service satisfaction is significantly influenced by conformity, tradition, benevolence, universalism, self-direction, stimulation, hedonism, achievement, power or security</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>Rejected</td>
</tr>
<tr>
<td>H12 Brand loyalty is significantly influenced by culture, which means by at least one individual level value.</td>
<td>0.242***</td>
<td>4.141</td>
<td>Small</td>
<td>Accepted</td>
</tr>
<tr>
<td>H12a Brand loyalty is significantly influenced by conformity.</td>
<td>0.029</td>
<td>0.511</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
<tr>
<td>H12b Brand loyalty is significantly influenced by tradition.</td>
<td>0.040</td>
<td>0.889</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
<tr>
<td>H12c Brand loyalty is significantly influenced by benevolence.</td>
<td>0.000</td>
<td>0.007</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
<tr>
<td>H12d Brand loyalty is significantly influenced by universalism.</td>
<td>0.101*</td>
<td>1.799</td>
<td>n/a</td>
<td>Accepted</td>
</tr>
<tr>
<td>H12e Brand loyalty is significantly influenced by self-direction.</td>
<td>0.136**</td>
<td>2.376</td>
<td>n/a</td>
<td>Accepted</td>
</tr>
<tr>
<td>H12f Brand loyalty is significantly influenced by stimulation.</td>
<td>0.059</td>
<td>1.182</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
<tr>
<td>H12g Brand loyalty is significantly influenced by hedonism.</td>
<td>-0.004</td>
<td>0.083</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
<tr>
<td>H12h Brand loyalty is significantly influenced by achievement.</td>
<td>0.011</td>
<td>0.193</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
<tr>
<td>H12i Brand loyalty is significantly influenced by power.</td>
<td>0.034</td>
<td>0.754</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
<tr>
<td>H12k Brand loyalty is significantly influenced by security.</td>
<td>0.064</td>
<td>1.301</td>
<td>n/a</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Significance Level *p≤0.1; **p≤0.05; ***p≤0.01
Criteria | Requirement Level | β ≥0.1 | t-value ≥1.65 | f² ≥small | All criteria fulfilled
--- | --- | --- | --- | --- | ---
H13 | Workshop loyalty is significantly influenced by culture, which means by at least one individual level value. | 0.157** | 2.427 | Small | Accepted
H13a | Workshop loyalty is significantly influenced by conformity. | 0.052 | 0.792 | n/a | Rejected
H13b | Workshop loyalty is significantly influenced by tradition. | -0.043 | 0.849 | n/a | Rejected
H13c | Workshop loyalty is significantly influenced by benevolence. | 0.042 | 0.475 | n/a | Rejected
H13d | Workshop loyalty is significantly influenced by universalism. | 0.158** | 2.152 | n/a | Accepted
H13e | Workshop loyalty is significantly influenced by self-direction. | 0.118 | 1.624 | n/a | Rejected
H13f | Workshop loyalty is significantly influenced by stimulation. | 0.058 | 0.866 | n/a | Rejected
H13g | Workshop loyalty is significantly influenced by hedonism. | 0.042 | 0.578 | n/a | Rejected
H13h | Workshop loyalty is significantly influenced by achievement. | -0.035 | 0.466 | n/a | Rejected
H13i | Workshop loyalty is significantly influenced by power. | -0.004 | 0.073 | n/a | Rejected
H13k | Workshop loyalty is significantly influenced by security. | 0.073 | 1.144 | n/a | Rejected

Significance Level *p≤0.1; **p≤0.05; ***p≤0.01

Table 2: Overview of Hypotheses Testing

Reference: Author’s table

The following Figure 2 shows the path model with a summary of all theoretically proposed relationships, which are also empirically accepted. The strength of each path coefficient (β) is indicated through the thickness of the arrow. Additionally, the significance level is reported. The total effects of individual level values are symbolised targeting the second-order construct, Culture1–4, but the number of the hypothesis indicates the full relationship – for instance H10d shows a total effect on perceived service quality. Non-significant relationships are not illustrated.
3 INTERPRETATION OF RESULTS

A detailed discussion of this study’s findings are now summarised and interpreted. The interpretation takes place against the background of a priori theorised relationships and context-related studies. The endogenous automobile constructs are presented sequentially – in the manner of ‘How to achieve…’ – starting with perceived service quality. Finally, cultural aspects are deepened.

How to Achieve Perceived Service Quality

Perceived service quality is the starting point of the after-sales service success chain. The formative measurement approach makes it possible to give information about the most important drivers of perceived service quality, which are very familiar to the after-sales service instruments of the marketing mix, which can be steered by the OEMs. Often Chinese consumers are considered to be highly price sensitive, and very different from Westerners, especially when it comes to rich consumers. The perceived service quality is not generally moderated by income, but in fact the formative drivers are different from those in Western markets. In China costs are only the seventh important driver for quality, in contrast to

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3 Cf. Saidi et al. (2010), pp 1 ff.
France, Italy and Spain, where they rank within the top four. KNÖRLE has (2011) doubted the predominance of price consciousness in Chinese consumer behaviour, and the findings of the current study acknowledge his argumentation.

The most important drivers for Chinese premium customers are convenience, the attractiveness of the facility (both relatively unimportant in Europe), as well as honesty and integrity (desired in Europe). Additionally, the after-sales marketing should be aware of significant age- and gender-related customer preferences. Here most importantly, the ability to do the job right is a strong positive driver for men but a negative one for women.

Finally, cultural effects as proposed, significantly influence the perception of service quality, thus H10 is accepted. Two individual level values are empirically identified as causal influences.

First, universalism significantly predicts perceived service quality with a path coefficient of 0.205, thus hypothesis H10d is accepted. Generally, universalism expresses tolerance of others and the understanding, appreciation, and protection of the welfare of all people and of nature. (Note that here the dimension of tolerance or wisdom and equality is emphasised, not the enhancement of welfare, which would be individual level value benevolence). On the first view that might seem to be a mismatch with the automotive context, but understanding and appreciation are dimensions which can be seen as linked to the C/D paradigm. The theory is that the customer compares perceived performance (is) with a reference standard (should be). If the reference standard is relatively low, which might be the case due to the characteristics of high tolerance and understanding, then the customer perceives or judges the service quality as being relatively high.

Second, the perception of service quality is significantly influenced by self-direction (H10e). Likewise, this proposed relationship holds true for the empirical tests. Self-direction is an individual level value which stands for such things as independent thinking, choosing action over inaction, creativity and exploration. KELLEY’s attribution theory (1973) says that transaction partners endeavour to explain the (positive) outcome of actions by attributing causes to their own behaviour, and in contrast the transaction partner’s behaviour to the environment. With regard to the customer’s own perception, this theory might explain that self-direction fosters perceived service quality, because if a person thinks they have made a good choice with their car service provider, the perception of quality likewise adapts in its strength or is more generous. In fact, this arguments, and that universalism and self-direction both are causal for the mentioned perception, is in line with the general argumentation of SCHWARTZ (1996) who say that, ‘Self-direction and universalism both express reliance upon one’s own judgement and comfort with the diversity of existence.’ Moreover, ZHANG ET AL. (2008) argue that in general, Eastern service demanders have lower overall expectations of service quality, and are more likely to be satisfied when they evaluate services. The two individual level values self-direction and universalism in combination with the CD-paradigm may now offer an explanation for the causal background.

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4 All ranks are related to a maximum of nine drivers. Western markets are analysed in the same manner by Hünecke (2012), pp. 229 ff.
The in-depth analyses, which elaborates insights going beyond the hypothesis system show, via multiple group analysis, that gender, age and income moderate the relationship between individual level values and perceived service quality. Importantly, universalism is much more strongly causal for women than for men. Moreover, various values become significant if subgroups are analysed in detail. For instance, achievement (personal success through a demonstration of competence according to social standards) is a significant individual level value for women, which negatively affects their perception of quality. For young Chinese between 20 and 29, conformity (restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations and norms) is a valid influence of culture with a path coefficient of 0.408. Additionally, if we focus on income groups, benevolence, hedonism, power and tradition become relevant and significant. Marketers should take this into account for every kind of marketing action, because it allows them to address target groups very specifically.

How to Achieve After-Sales Service Satisfaction

Service quality or its perception is regarded as the main antecedent of customer satisfaction in various predominantly Western car markets. However, no knowledge in accordance with today's most important car market China existed. Hypothesis H3 is accepted, thus it is empirically confirmed that 'the higher the perceived service quality, the higher the after-sales service satisfaction'. As the highest path coefficient of the whole model indicates (0.673), this relationship is quite strongly, and likewise the effect size $f^2$ is considered large. As a result, perceived service quality is the most important exogenous factor of the model, in order to reach after-sales service satisfaction.

Perceived service quality explains 52.8% of the variance of after-sales service satisfaction. Brand image contributes too (0.163), but with a small effect size $f^2$ (percentage of $R^2=9.9\%$). Nonetheless, hypothesis H7 is empirically confirmed, which is in line with prior studies concerning other Chinese industries. Moreover, marketers should notice that this relationship is moderated by the customer's age, as brand image is more important for customers under 30 than for older generations.

With regard to cultural aspects, this study was not able to validate a relationship between individual level values and after-sales service satisfaction. However, due to non-significance, though cannot be concluded that ZHANG ET Al. (2008), who argue that culture influences every service experience dimension, are wrong. But researchers and practitioners should be aware that cultural effects are indeed most relevant when it comes to the dimensions of perceived quality and loyalty.

How to Achieve Workshop Loyalty

According to previous studies, after-sales service satisfaction is postulated as the main antecedent of workshop loyalty. This holds true for the Chinese premium market, as the empirical acceptance of hypothesis H1 shows. This relationship, called 'the higher the after-sales service satisfaction, the higher the workshop loyalty', is the second strongest in the model, and the effect size $f^2$ is correspondingly large.

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Moreover, hypothesis H8 is accepted, because the path analysis of the relationship described as 'the higher the brand image, the higher the workshop loyalty', shows significance and relevance; indicated through a coefficient of 0.165. From a detailed scientific perspective we should consider that this path coefficient would be higher if, after-sales service satisfaction were omitted from the model, because this variable works as a partial mediator (VAF= 0.362). However, usually satisfaction is considered when it comes to loyalty analysis; thus the explained variance of workshop loyalty is composed of the following exogenous factors.

- After-sales service satisfaction → 44.3%
- Brand Image → 10.4%
- Culture → 8.7%

With regard to culture generally (H13), and to the causal influence of the individual level value of universalism in particular (H13d), the empirical analysis shows that significant relationships exist.

Analogue to perceived service quality, more basic values are significant, if we focus on distinct subgroups. It is significant that, compared with the total model or with other income-subgroups, very affluent Chinese are less loyal to a given workshop. One explanation is that achievement is a value with a strong cultural influence, which negatively affects workshop loyalty by an extent of -0.340.

**How to Achieve Brand Loyalty**

Brand loyalty is the primary success indicator of this study. In order to achieve it, the most important factor is achieving workshop loyalty. Because the hypothesised relationship (H2), which says ‘the higher the workshop loyalty, the higher the brand loyalty’, holds true for the empirical evaluation in China. The path coefficient has a value of 0.331 and the $f^2$ effect size is considered medium. Looking deeper into Chinese customer subgroups, we see that a significant difference occurs with regard to income levels: the path coefficient towards brand loyalty is much stronger in the case of the affluent (0.414), than it is for the very affluent (0.193).

With very similar characteristics to those of workshop loyalty, perceived workshop switching costs are causal (0.305/medium), which is why hypothesis H5 is accepted. This is an important finding, because switching costs can be influenced by brands, with for instance linked guarantees, which tie the customer to the brand, in other words increase the switching costs. Interestingly, the perceived switching costs in this study are not significant towards workshop loyalty, which is different from the German market, where they are causal towards workshop loyalty, but comparably less relevant towards brand loyalty.\(^\text{13}\)

As twice before, brand image is a significant determining factor. Hypothesis H9, which postulates that a higher brand image leads to higher brand loyalty, is empirically confirmed, and the path coefficient (0.162) is relevant. This finding is in line with HÜNECKE (2012) who shows empirically that brand image is the most important driver for brand loyalty in Italy and Spain, and an important one in France.\(^\text{14}\) In China, analogue to the previously mentioned mediation, again the direct effect of brand image on brand loyalty is partially mediated through workshop loyalty (VAF=0.252), and thus weaker as if the mediator would be omitted. However, taking everything into account, in fact brand image is more important than

focussing on each single brand image path coefficient indicates, because brand image is the only significant non-cultural effect which influences more than one endogenous construct. Actually, brand image constantly influences, and therefore fosters almost the entire after-sales service success chain. In fact this is an important contribution to the existing body of knowledge, because prior research on this topic reveals ambiguities, and widely neglects the analysis of image in accordance with the entire service delivery chain.

Regarding the explained variance in brand loyalty, this study concludes that the applied model has fairly strong predictive accuracy, and the success indicator is fairly well explained by the model, in other words by the predictor constructs. The explained variance of brand loyalty is 64.8%. This is a high number, particularly because this study focusses on and therefore researches only after-sales services. But usually, brand loyalty is predicted by pre- and at sales services, as well as product-related aspects such as for instance product satisfaction. Generally, PLS- and CB-SEM approaches are not directly comparable, but prior familiar research on automobile after-sales was not able to elaborate a model with such a high predictive accuracy $R^2$. Brand loyalty in Germany is explained by a variance of 22% and in France, Spain and Italy by 40.3%. On the one hand, after-sales services seem to be relatively important for Chinese customers. On the other hand, culture is considered a relevant dimension of interest, because 14.8% of brand loyalty’s $R^2$ are predicted by individual level values or, more generally, by cultural effects. The whole $R^2$ contribution split of brand loyalty is as follows.

- Brand image $\rightarrow$ 10.5%
- Culture $\rightarrow$ 14.8%
- Perceived workshop switching costs $\rightarrow$ 17.6%
- Workshop loyalty $\rightarrow$ 21.9%

Finally, in order to reach brand loyalty, focussing on the total effects is important. Here, the three most important drivers are workshop loyalty, perceived workshop switching costs and brand image. If additionally the perspective of effectiveness is taken into account via performance analysis, then one should first focus on perceived workshop switching costs, because besides the second strongest path coefficient, this variable shows the biggest room for improvement. This is especially essential in order to support managerial decisions, because due to limited resources – which should be the common case – knowledge about effectiveness is crucial.

Collectivistic cultures such as China are considered relatively brand loyal. This study cannot achieve a national comparison, but the $R^2$ contribution of culture indicates strongly that cultural effects are quite important (14.8% of 64.8%). In line with that, the empirical confirmation of hypothesis H12 shows that cultural influences indeed affect brand loyalty. Particularly, universalism (H12d) and self-direction (H12e) are individual level values which have a significant influence, thus both hypothesis are accepted. With respect to sub-groups, security (safety, harmony stability of society and relationships, and of self) is a value which is also causal in a positive sense for 40- to 49-year-old Chinese, and in a negative sense for Chinese with a mainstream income. For very affluent customers, hedonism (pleasure and sensuous gratification of one’s own desires) contributes to brand-loyal behaviour, but in contrast benevolence has a strong negative effect. The two latter opposed effects are in line

with SCHWARTZ’S theory, because within the circular arrangement of values, the values are diametrically opposed.

**Individual Level Values as Cultural Causes**

Often researchers argue that various aspects of consumer behaviour are affected by culture, particularly when it comes to services. As a result, ZHANG ET AL. (2008) claimed to go beyond HOFSTEDE by applying other theories. Prior research usually focussed on national comparisons, which is why it offered no information on the causality of culture. Due to the individual level value approach of this study, particular values have been empirically confirmed as being causal with regard to after-sales services. At first view, it seems to be sober that just two of ten individual level values are predominantly causal. However, the deeper analysis acknowledges the arguments of KNÖRLE (2011) who researches brand loyalty in China more generally than this study. He says that the constant change in China leads to a very complex consumer, and a reduction to any single cultural dimension is not valid any more. For instance, he argues that collectivistic and individualistic aspects exist simultaneously.\(^{17}\) The in-depth multi-group analysis of this study shows that moderating effects have a strong influence in China. If age, income and gender are considered, various other relationships with causal individual level values become significant, which is why a detailed picture of subgroups can be drawn.

But, how could this be in line with the widely accepted condition that culture and values are both very time-stable phenomena? In fact, values should be the same, if income subgroups are considered. In contrast, for instance RALSTON ET AL. (1999) have the rarely mentioned opinion that cultural aspects might shift more than generally thought. They focus on, and empirically confirm a general shift of work values in Chinese management from Confucian dynamism toward individualism.\(^{18}\) If this idea is taken into consideration as along with the new findings of the present study, the author raises the question whether it is likely that broad cultural norms such as collectivism are relatively stable, and that finely distinct sub dimensions (as revealed via individual level values) might be more strongly affected by cultural shifts.

A second approach might be worth considering if the behavioural research of BARDI/SCHWARTZ (2003) is taken into account. They focus on value-behaviour relationships, and found substantial correlations between both, but some values are more strongly related to common behavior than others.\(^{19}\) As a reason they argue in line with SHODA (1999) that external situational pressure has to be considered, because ‘(…) the stronger the situational pressure to act in a particular way, the weaker the influence of internal factors [i.e. values]. Norms for behavior in relevant groups pose an important situational pressure. People may conform with norms, even when the normative behavior opposes their own values.’\(^{20}\)

This argumentation, indeed, is fostered by the detailed multi-group analysis results (moderation) of this study, which empirically show that differences exist, and distinct values are causal, if it comes to consumer behaviour. It is very likely that different groups are exposed to different circumstances (or situational pressure), which is why values may appear


\(^{18}\) Cf. Kirkman et al. (2006), p. 312; Ralston et al. (1999), pp. 415 ff.; Moreover, Lennartowicz/Roth (2001), pp. 305 ff. can be stated, because they show that subculture matters within country boarders.


\(^{20}\) Ibidem, p. 1217.
insignificant, if a total research model has not taken all relevant aspects into account. Very likely, there are more moderating issues that are relevant, but which could not be addressed by this study. However, the findings mentioned in this study strongly enrich the body of knowledge with regard to automotive after-sales service behaviour and cultural determinants.

With regard to the latter aspect, the difficulty is that there is not a single definition of culture, and culture is therefore often interpreted differently. However, there are indications that culture is not always as stable as it was long considered to be. By implication this research raises the question whether it is likely that broad cultural dimensions are relatively stable, and finely distinct sub-dimensions (as revealed via individual level values) might be more strongly affected by cultural shifts. Here again, future research should consider the 19-value approach, as here three hierarchical levels are incorporated, easily applicable and therefore comparable.

This working paper is based on the following study:


4 REFERENCES


Success Factors of Automobile After-Sales Service in China


n. a. (2013e): Quality watchdog keeps eye on VW, in: ChinaDaily, 7/1/2013, available online at


n. a. (2012b): Foreign cars may be shut out of govt fleet, in: ChinaDaily, 28/2/2012, available online at

n. a. (2012c): Luxury int'l car brands running over Chinese trust, in: ChinaDaily, 14/12/2012, available online at

n. a. (2012d): After-Sales Dealer Service Satisfaction in China Plateaus After Six Consecutive Years
of Increases, in: J.D. Powers Asia Pacific Reports, 30/7/2012, available online at
https://pictures.dealer.com/jdpower/d5b3f0b60a0d02b70145bb9db890c18_00.pdf, accessed 28/5/2013.

n. a. (2012g): Mercedes strauchelt auf Chinas Automarkt, in: Handelsblatt-Online, 21/9/2012, available online at


York: Macmillian.


Saccani, N./Songini, L./Gaiardelli, P. (2006): The role and performance measurement of after-sales in the
durable consumer goods industries: an empirical study, in: International Journal of

Marketing in Advanced Emerging Countries: A Case Study of Chinese Luxury Consumers, in:


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