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**Excerpt from the Dissertational Project:**

**Combining Marketing Theory and Path Dependence**

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**Measuring and De-Locking Rigid Consumer Behavior**

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## ***Abstract***

*This excerpt from a dissertational research project combining marketing with path dependence theory presents the formation of the concept of consumer path dependence and the four dimensions assumed to underlie the latter. Drawing from previous research on consumer behavior, the process of becoming locked-in can take place on a cognitive, an emotional, a habitual, or a calculative level or on the combination of these four different dimensions. Different self-reinforcing mechanisms work on each dimension eventually narrowing down the perceived consumption alternatives a consumer considers. The question of how to measure such a rigid consumption behavior will be answered with the development of a multi-item scale, which is designed to identify the degree and level of path dependent consumption. This dissertation will contribute both to marketing research in informing current insights to consumer defection and switching barriers, as well as path dependence research in gaining new knowledge about individual path dependence and path dependent consumption.*

## **1. Introduction**

In the following, an excerpt of a dissertational project is presented that informs current consumer behavior and marketing theory with the concept of path dependence. In particular, the dissertation seeks to provide answers to the research question:

*How to measure and intentionally break path dependent consumer behavior, which was formed and stabilized under the influence of self-reinforcing mechanisms?*

To make everyday consumption decisions, individuals have to face a mass of all kinds of different product information. For matters of orientation and simplification, they develop consumption routines and more or less strong bonds to certain brands. Thereby, they avoid the effort of taking all available choices into account but also might become locked-into rigid behavior, certain consumption paths that make them stick with suboptimal consumption choices.

According to the theory of path dependence, these paths only develop under the influence of self-reinforcing mechanisms that narrow the possible alternatives down to one remaining

choice. Drawing on existing research on consumer behavior, the notion of different levels or dimensions of lock-in comes into play and it is assumed, that consumers can be locked-in on combinations of four different dimensions through learning effects, investments, as well as the development of routines and trust towards a product or brand.

This dissertational excerpt presents the development of a scale to measure the degree and level of path dependent consumption.

## **2. Combining Path Dependence and Marketing Theory**

The concept of path dependence was introduced by Paul David in 1985 in an attempt to elucidate a so called “puzzling persistence”. Although markets were largely considered rational, self-adjusting systems, inferior technologies still prevailed over more efficient ones due to self-reinforcing mechanisms. What made David’s concept so intriguing was on the one hand the possible explanation why and how inefficiency occurs in the marketplace and on the other the framework of path dependence, whose underlying assumptions oppose the neoclassical understanding of macroeconomic processes.

He identified different drivers of path dependence: technical interrelatedness, scale economics, and quasi-irreversibility of investments (David, 1985). To give a real life example of a path dependent phenomenon, David draws on the history of the QWERTY-ordering of keyboards, which is the dominant keyboard design today. Yet David argues its inferiority to other, more ergonomic designs that would allow for faster, safer typing, in particular the Dvorak-design. Supposedly only due to technical interrelatedness of the typewriter and the typists, the learning effects on the QWERTY-ordering, which accounted for some kind of irreversibility (or at least a massive barrier to reversibility), as well as the economies of scale of the sheer number of typists using the QWERTY-keyboards, the latter could secure the immense market share they still hold until this day. This is how David explained how past events influence present and future developments and in the case of path dependence, might even produce a lock-in – history undeniably mattered. Later, Arthur (1989) continued on the concept of path dependence, by presenting increasing returns as the mechanisms leading to lock-in, sharpening the notion of self-reinforcement leading to the drop out of choice alternatives.

Further developing the concept of path dependence and visualizing the process of becoming locked-in Sydow et al. (2009) come up with the “Berliner Model” that cuts the development of a path into three distinct phases. Phase one shows a whole range of options that are available to some decision-making entity. Due to random chance or even deliberately, one or more different options are tried out until in the next phase two a critical juncture leads to a narrowing down of viable options until the path appears to be stable in phase three.

Transferring the concept of path dependence from the above presented macroeconomic and firm-level settings to consumption decisions of individual consumers, it is helpful to consider concepts that might be related to rigid paths.

Such a marketing concept that was firstly introduced by Copeland in 1923 under the term “consumer insistence” is that of loyalty. It appears to have similarities with path dependence in that some kind of repeated behavior is shown that is stable and can be considered rigid.

From its research beginnings around 60 years ago up until today, the loyalty concept has undergone a development from a merely behavioral phenomenon to both an attitudinal and behavioral one, taking into account a more cognitive as well as emotional perspective on consumer loyalty (Jacoby and Chestnut, 1978). More current research investigates different loyalty segments consumers might form such as the “pure loyalists” who develop an attitude-based loyalty against the “spurious loyalists” who merely show inertia leading to re-buying without a positive brand attitude (Kim et al., 2008). Similarly, recommending the product a consumer purchases repeatedly (“active loyalist”) versus non-commitment frequent buying (“passive loyalists”) has been identified as a distinctive feature (Court et al., 2009). Here, there is a hint towards the assumption, that path dependent consumption should take place on different dimensions, as the above mentioned behavioral and attitudinal one.

Looking at previous research on the use of the path dependence concept on consumer behavior studies, it becomes evident, that path dependence is yet a rather new concept in that field. Amongst the few researchers, that from a theoretical standpoint properly applied path dependence to consumption phenomena, is Frank (2007). He draws on self-reinforcing mechanisms on a societal level to explain the increased meat consumption in western

countries despite known negative externalities and consequences regarding health, the environment and livestock. The perception of meat as a valuable, desirable and maybe even luxurious good has not changed since centuries ago, as people have as a society undergone positive reinforcement of meat as a rewarding food product. Considering its relative cheap price and its vast availability today contrasting that perception, Frank assumes a lock-in (Frank 2007).

Another interesting study is that of Langer (2012). She conducted an experiment manipulating the formation of consumption paths. She thereby identified three mechanisms that had an influence on individuals getting locked-in: complementary effects, network effects, and learning effects.

Unfortunately, many other studies that were conducted using the terms path dependence or lock-in (e.g. Barnes et al. 2004, Hopkins 2007, Murray and Häubl 2007, Maréchal, 2010) have very differing approaches to and (if any at all) definitions of path dependence. Further, these studies do not provide a detailed conception of the formation of consumption paths and the dimensionality of a lock-in. Nevertheless, previous consumer behavior research offers valuable insights for future path dependence studies, especially considering the concept of loyalty with its different dimensions, switching barriers, and commitment studies.

Other related constructs such as satisficing (see e.g. Fletcher, 1987), cognitive lock-in (see e.g. Murray and Häubl, 2007), consideration sets (see e.g. Kardes et al., 1993) and personality traits as for example preference for consistency (see e.g. Cialdini et al., 1995) are either considered or sharply distinguished from this research. Path dependency implies the existence of self-reinforcing mechanisms leading to rigid consumption behavior and a stable lock-in (Arthur, 1989). That distinguishes this phenomenon from other marketing constructs as the above mentioned ones. None the less, there are possibly overlaps between them. For example, the more products are part of a consumer's relevant or evoked set the smaller the probability of path dependent decisions. At the same time, the complexity and the amount of information needed to make a (new) consumption decision might add positively to satisficing and thereby increase the likelihood of path dependent behavior.

### 3. Path Dependent Consumption

For the construct development of path dependent consumption, this dissertation draws on the conception of brand loyalty provided by Jacoby and Chestnuts (1978). Hence a multi-dimensional view of path dependence is argued with a cognitive and emotional dimension extracted from the former attitudinal dimension, and a habitual one originally termed behavioral by Jacob and Chestnut (1978). Also, a fourth dimension is included due to the elaborate framework on consumer loyalty provided by Dick and Basu (1994). They suggested cognitive, affective, and conative antecedents as drivers of relative attitude leading to repeat purchases. The conative element consists of switching and sunk costs forming a switching barrier due to calculation of investments on the side of the consumer. Hence, this formerly termed conative dimension will here be named calculative.

Each dimension may be more or less prominent in a consumption path, depending on the individual character traits of the individual, the product or service involved, and the context of path formation (for example, whether that product or service has been introduced to the consumer by a friend, has it been chosen after an extensive decision-making process, and so forth).

Taking these considerations into account, path dependent consumption here is defined as

*a form of repeat consumption behavior that a consumer is locked-into through the effects of self-reinforcing mechanisms on either a cognitive, emotional, habitual, or calculative level, or on a combination of those four.*

Starting with the very first decision-making process and / or consumption situation, self-reinforcing mechanisms set in that stabilize the path and increasingly rule out possible consumption alternatives. Driving the path on the cognitive dimension are learning effects, whereas the development of trust and attachment towards a brand are forming an emotional lock-in. The habitual dimension is connected to the emergence of consumption routines. And as mentioned above, sunk and switching costs, referring to financial, social, emotional, and similar investments the consumer has made, constitute the calculative dimension.

At the end of the path formation process, the consumer will not deviate from his or her consumption choice, even if superior alternatives are available in the market.

#### **4. Scale Development and Statistical Analysis Results**

To provide a means to measure the degree and kind of path dependent consumption and thereby identify the self-reinforcing mechanisms that formed a specific lock-in, a multi-item Likert scale is developed. This is done in accordance to the prominent approach by Churchill (1979), who's study not only reformed the development of measures in marketing research but until today offers detailed guidance to ensure validity and reliability in multi-item scales.

Firstly, the domain of the concept of path dependent consumption is specified. As mentioned above, different marketing constructs such as loyalty and switching barriers helped in forming the basis for its multi-dimensionality. Concepts included in investigating the different path dependence dimensions include amongst others cognitive lock-in, emotional attachment and brand love, habit and switching barriers (see for example Grisaffe and Nguyen 2011, Batra et al. 2012, Rossiter and Bellman 2012, Tam and Yuping 2011, and Dick and Basu 1994).

Then, the items reflecting each of the four dimensions – the cognitive, emotional, habitual, and calculative dimension – of the scale are generated. A total of 52 items were generated for all four dimensions combined. As to avoid language related misunderstandings with future survey participants, the items were generated in German. To increase the face validity of the items, improve their wording, and indicate possible overlaps of individual items with more than one dimension, the item pool was presented to experts in the field of consumer behavior as well as path dependence. Thirteen items were found to be problematic by at least one expert, so they were excluded from the sample. This procedure, referred to as cognitive testing, resulted in 39 items for all four dimensions.

Originally, there were only three dimensions included in the construct formation. Therefore a small first pretest with three dimensions was interrupted and followed by a larger one with the added fourth, calculative dimension. The participants were asked to think of the current brand of mobile phones they use while answering the paper-based survey. Both pretests were organized as convenient samples, as the intent of the pretests was not to gain generalizable results, but to refine the scale's items. The sample sizes consisted of 31 individuals in the first and 140 in the second pretest respectively. The first sample's participant's age ranged from 25 to 59, most of them were students and 16 of them females. The second pretest was entirely



conducted with students of the Freie Universität Berlin enrolled in business studies, from first year bachelor to master students. Their average age was 23 and 96 of them are female.

Accompanying the path dependent consumption items were questions related to usage duration and intensity of the product. Also, the participants of the survey were asked to indicate previous brand switches. Finally, demographic questions concerning age, sex, and educational background were included. Regarding the rather small sample size of the pretests, this information drawn from the data analysis will not be discussed here, as no solid conclusions can be drawn on the relation of for example sex and path dependence on specific lock-in dimensions.

For further improvement of the scale development, participants were asked to indicate problems of understanding the scale's items and if possible comment on the applicability of the path dependent consumption scale.

After the interruption of the first pretest, the comments concerning ease of understanding were browsed to initially purify the data. Hence, items that proved to be ambiguous or difficult to understand or answer were excluded from the pool of items. Next, the collected data was analyzed with SPSS-software to check for internal consistency via the coefficient alpha. All 31 participants completed the survey and no single survey form had to be excluded from the sample. The items of the first three dimensions produced reliable data regarding their Cronbach's Alpha values. The Cronbach's Alpha for the cognitive dimension amounted to 0.813, for the emotional items to 0.922 and the habitual dimension's items reached a value of 0.878.

The scale refinement after the first pretest resulted in four items per each of the three dimensions included. See table 1 to 3 for the SPSS results. The each dimension's Cronbach Alpha could be improved by deleting one of the remaining four items respectively. But due to guarding the face validity of the scale and the theoretically assessed value of those items, they were kept part of the scale.

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CD04	11,4074	5,174	,622	,771
CD06	11,7778	3,872	,569	,852
CD07	11,0370	4,652	,781	,699
CD09	11,3333	5,615	,738	,754

Table 1: Item-total statistics of the first pretest's cognitive dimension

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
ED01	8,7407	12,738	,808	,904
ED02	9,4815	11,644	,760	,925
ED07	9,1852	12,234	,846	,891
ED11	9,0370	11,806	,885	,877

Table 2: Item-total statistics of the first pretest's emotional dimension

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
BD01	8,2593	11,584	,761	,835
BD02	8,4815	13,028	,582	,902
BD06	8,6667	11,462	,808	,817
BD10	8,8148	11,157	,809	,815

Table 3: Item-total statistics of the first pretest's habitual dimension

As the Kaiser-Meyer-Olkin Measure (KMO) of 0.67 showed, an exploratory factor analysis was feasible. Once conducted in the form of a principal component analysis, the latter was able to extract the three supposed dimensions of the first pretest with an overall explained variance of 79.84% (see table 4 and 5). Despite these satisfying results, it should be noted here again, that the sample-size of the first pretest was not nearly big enough to produce irrevocable results. These results should therefore only be considered as a first glance at the workings of path dependent consumption dimensions.

**Rotated Component Matrix<sup>a</sup>**

	Component		
	1	2	3
ED01	,920	,036	,052
ED02	,709	,255	,491
ED07	,869	,044	,232
ED11	,896	-,148	,331
CD04	-,116	,851	,006
CD06	,501	,671	,055
CD07	,054	,884	-,072
CD09	-,011	,891	,098
BD01	,324	,008	,811
BD02	-,021	-,009	,884
BD06	,558	,005	,694
BD10	,558	,066	,698

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Table 4: Rotated component matrix showing distinguishable dimensions for the first pretest

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,460	45,503	45,503	5,460	45,503	45,503	3,902	32,514	32,514
2	2,769	23,074	68,577	2,769	23,074	68,577	2,846	23,718	56,232
3	1,353	11,271	79,848	1,353	11,271	79,848	2,834	23,616	79,848
4	,650	5,414	85,261						
5	,522	4,349	89,611						
6	,365	3,044	92,654						
7	,314	2,615	95,269						
8	,227	1,889	97,159						
9	,162	1,354	98,513						
10	,090	,752	99,265						
11	,057	,479	99,744						
12	,031	,256	100,000						

Extraction Method: Principal Component Analysis.

Table 5: Variance explained by the first pretest's three dimensions

After the examination of the first pretest's data, the new, slimmed set of items were used in the second pretest of the scale development along with the items representing the fourth, calculative dimension. To test for reliability, each dimension's Cronbach's Alpha was again assessed. The data show pleasant results with a Cronbach's Alpha of 0.738 for the cognitive dimension, of 0.816 for the emotional, of 0.627 for the habitual, and of 0.702 for the calculative dimension. Except for the cognitive dimension, each dimensions score could be improved by dropping one specific item (EmD02, HaD02, CaD03, see tables 7 to 9). But just as it was the case with the first pretest's results, as these items are considered valuable in

forming the construct of path dependent consumption they were not excluded from the scale for reasons of face validity.

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CoD01	11,9786	4,597	,531	,678
CoD02	12,6000	3,911	,537	,689
CoD03	11,8000	5,542	,439	,728
CoD04	12,2000	4,391	,657	,609

Table 6: Item-total statistics of the second pretest's cognitive dimension

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EmD01	10,2357	8,066	,589	,793
EmD02	11,2857	6,277	,557	,832
EmD03	10,5929	6,862	,716	,732
EmD04	10,3357	6,901	,752	,718

Table 7: Item-total statistics of the second pretest's emotional dimension

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
HaD01	13,0500	31,199	,487	,561
HaD02	13,1929	16,675	,304	,844
HaD03	13,0429	30,876	,486	,558
HaD04	13,3214	29,054	,622	,511
HaD05	13,9929	29,158	,632	,511

Table 8: Item-total statistics of the second pretest's habitual dimension

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CaD01	7,9643	7,402	,582	,585
CaD02	7,8429	7,802	,548	,609
CaD03	8,2643	9,117	,368	,710
CaD04	7,1929	7,178	,485	,653

Table 9: Item-total statistics of the second pretest's calculative dimension

When conducting the exploratory factor analysis (again a principal component analysis) with the second pretest's data, slightly differing results of the statistical data analysis were produced compared to the first pretest. With the KMO of 0.89, this procedure was once more feasible. Unfortunately, the preceding analysis only showed three instead of the expected four factors with a variance explained of 60.11% (see table 10 and 11).

**Rotated Component Matrix<sup>a</sup>**

	Component		
	1	2	3
HaD05	,786	,367	-,019
CaD04	,774	,145	,187
CaD02	,764	,127	,072
HaD03	,755	,198	,231
EmD02	,599	,512	,015
HaD04	,586	,568	-,057
CaD01	,583	,478	-,240
CoD02	,487	,361	,410
EmD01	-,024	,827	,280
EmD03	,172	,777	,166
EmD04	,375	,764	,156
HaD01	,361	,700	,058
HaD02	,197	,290	,026
CoD03	,063	,194	,686
CoD04	,537	,185	,646
CaD03	,360	,275	-,594
CoD01	,287	,331	,504

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Table 10: Rotated component matrix of the second pretest without fixed number of dimensions

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7,220	42,471	42,471	7,220	42,471	42,471	4,494	26,438	26,438
2	1,714	10,084	52,555	1,714	10,084	52,555	3,857	22,688	49,125
3	1,369	8,055	60,611	1,369	8,055	60,611	1,953	11,485	60,611
4	,955	5,617	66,227						
5	,927	5,452	71,680						
6	,714	4,202	75,881						
7	,652	3,838	79,720						
8	,528	3,107	82,827						
9	,450	2,646	85,473						
10	,411	2,415	87,888						
11	,394	2,315	90,204						
12	,367	2,159	92,362						
13	,332	1,952	94,314						
14	,317	1,866	96,180						
15	,246	1,445	97,625						
16	,240	1,412	99,037						
17	,164	,963	100,000						

Extraction Method: Principal Component Analysis.

Table 11: Variance explained by the second pretest’s four dimensions without fixed number of dimensions

One possible explanation for this deviation might have been the very small sample size of the first pretest compared to the second pretest. Hence, to further analyze the data, a new exploratory factor analysis was conducted, only this time fixing the number of extracted factors to four. The Cronbach’s Alpha was again high enough, with a score of 0.695 for the cognitive, of 0.834 for the emotional, of 0.821 for the habitual, and 0.720 for the calculative dimension. The total variance explained now being set at 80.78%.

Unfortunately, some individual items of the scale showed cross-loadings on two dimensions. As these items showed satisfying results in the first pretest, the new results might have originated from the inclusion of the fourth dimension. Therefore, it was feasible to check the data excluding the calculative items, in order to mimic the first pretest’s conditions and check for differing results.

Interestingly, the new analysis repeats the results produced with the first pretest’ data, thereby confirming the distinctiveness of the cognitive, emotional, and habitual dimension. Table 12 shows each item sorted according to its intended dimension whereas table 13 shows the accumulated variance of the three dimensions of 66%.

**Rotated Component Matrix<sup>a</sup>**

	Component		
	1	2	3
HaD05	,840	,209	,181
HaD04	,748	,416	,092
HaD03	,710	,033	,457
HaD02	,501	,115	-,014
EmD01	,087	,856	,243
EmD03	,244	,822	,151
EmD04	,472	,679	,250
CoD03	-,156	,141	,786
CoD04	,401	,143	,726
CoD01	,183	,208	,695
CoD02	,364	,349	,521

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Table 12: Rotated component matrix of the second pretest with only three dimensions

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,901	44,554	44,554	4,901	44,554	44,554	2,661	24,192	24,192
2	1,267	11,517	56,072	1,267	11,517	56,072	2,305	20,953	45,145
3	1,092	9,928	66,000	1,092	9,928	66,000	2,294	20,855	66,000
4	,870	7,905	73,905						
5	,655	5,953	79,858						
6	,587	5,335	85,193						
7	,456	4,147	89,340						
8	,374	3,400	92,741						
9	,323	2,939	95,680						
10	,267	2,427	98,106						
11	,208	1,894	100,000						

Extraction Method: Principal Component Analysis.

Table 13: Variance explained by the second pretest with only three dimensions included

## 5. Conclusion

This excerpt from a dissertational project successfully merges two different areas of research. The theoretical conception of path dependent consumption presented here assumes a multi-dimensional construct that consists of a cognitive, an emotional, a habitual, and a calculative level, that consumers might be locked-into. Different self-reinforcing mechanisms according to the kind of product or service, and the consumption context come into play, that lead to a

narrowing down of consumption choices, until the consumer sticks with one consumption path.

The development of a multi-item scale is partly presented that enables the measurement of the different dimensions of path dependent consumption along with the specific degree of lock-in. As no comparable study has ever been conducted in path dependence research, the analysis of the collected data in the scale development process had to cover different possible combinations of the four dimensions. Thereby, it was shown, that - based on the data collected - the cognitive, emotional, and habitual dimension can easily be distinguished from one another. The inclusion of the fourth, calculative dimension leading to somewhat blurry results concerning the distinctiveness of the four path dependent consumption dimensions raises interesting questions. Theoretically, a fourth dimension to the path dependent consumption construct seems not only feasible, but also necessary. Switching and sunk costs consumers have to face logically can cumulate and lead to a lock-in situation. But after all, the pretests were not designed as representative and were both rather small sized convenient samples consisting of mainly students of the same age group. The norm development process of the dissertation will further clarify the dimensionality of the path dependent consumption concept and will gain more generalizable insights into the relationship of individual path dependence with other marketing constructs such as preference for consistency or the optimal stimulation level.

Also, there is another limitation to this pretests design that concerns the generalizability over different product groups. Only one product was investigated and no data on services or different product groups exists for comparisons. That specific product could have had a considerable effect on the calculative dimensions results.

Despite the limitations every science project faces, this study will contribute to path dependence as well as marketing research by combining both areas of research. The dimensionality of rigid behavior in the field of consumer behavior studies can greatly inform path dependence research at the individual level. Also, the gaps in the loyalty research considering the mechanisms behind the formation of rigid consumer behavior can be closed by adding self-reinforcing mechanisms. Further it will deliver valuable implications for firms as how to identify path dependent consumers, and provides a means to measure the kind and degree of their lock-in. Moreover, a segmentation of consumers by their path dependence



would be of major importance to marketing practitioners. Consumers who are loyal on a purely behavioral base and those who are emotionally and cognitively attached might for example engage in different kinds of word-of-mouth activities or have very different perceptions of brand value.

Within the scope of the dissertation, a further investigation of path dependent consumption processes will take place in form of experiments. Firstly, a consumption path formation will be manipulated and its magnitude tested by applying the path dependence consumption scale presented here. Then different path breaking manipulations will be tested, that will show, which measures are to be taken when breaking paths on different lock-in dimensions.

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