

“The rise of smartphone apps: opportunities for customer-centric retail banking”

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The rise of smartphone apps: opportunities for customer-centric retail banking

Abstract

Increased competition and price convergence in the retail banking sector force traditional banks to create differentiation strategies in order to compete against low cost financial service providers. Establishing a strong relationship with the customer and pursuing rigorous customer centricity is the most relevant option for differentiators. First, this article explores the concept of customer processes as a promising approach for banks to establish a customer-centric business model. Second, the paper presents selected empirical results for the current offering of smartphone apps for banking. Next, the conceptualization of a smartphone app to support customer processes by banks is presented. The development of such an application is motivated by the boom in smartphone apps and it is suggested that it can act as an enabler to add emotional value to bank products and services. Furthermore, the potential success of such an application is elaborated from a theoretical perspective of attitude formation theory.

Keywords: app, customer centricity, customer process, retail banking, smartphone.

JEL Classification: G21, L86, M31.

Introduction

In the retail banking sector the emergence of digital distribution channels tore down former entry barriers and, consequently, new financial service providers enter the market (Tropp and Reichel, 2007). Karakostas et al. (2005, p. 855) emphasize this fact as “customers are just a mouse-click away from competitors”. Relinquishing branches these competitors are able to offer products at lower prices and more favorable interest rates. Thus, differentiation strategies for traditional banks are sought after to compete against low cost financial service providers. New distribution opportunities facilitate new products, new business processes, and business models. However, the emergence of new information and communication technologies (IT) and, thus, alternative distribution channels do not only threaten traditional banks but also open up new opportunities for traditional banks. These opportunities allow finding new ways to create customer value and to differentiate from competitors.

One way to differentiate from low cost providers is to adjust the business model to a rigorous *customer-centric* view. In many banks, customer orientation has so far often been misunderstood as offering comprehensive advisory services and exploiting opportunities of cross-selling financial products (Wallace et al., 2010). Still, business models are predominantly product-oriented (Shah et al., 2006). The problem with this approach is that product-orientation does not add real value since it encounters an “inside-out” perspective, i.e., convincing customers of buying existing products. Contrary, an “outside-in” perspective incorporates the strict focus on customer needs for establishing product offerings.

Hence, banks have to recognize that the need for financial services usually does not occur isolated but within a *customer process*. Generally, a customer process can be characterized as the entire procedure (“end-to-end process”) that a customer passes through to meet a desired outcome. The initial point is a specific customer need. The process includes every step that the customer has to take until this specific need is satisfied or the problem has been solved (Behara et al., 2002). Taking these customer processes into account and finding ways to link bank products and services to customer processes or even supporting them holistically is a promising approach for differentiation (Heckl and Moormann, 2007).

Due to the boom of smartphone applications and the increase in the popularity of mobile banking, offering apps appears to be a promising strategy for banks to keep in touch with their clients. However, apps for banking should provide real value added, i.e., they should support a customer-centric strategy. We propose an application that directly aims to support banking-related customer processes. Hence, the research question in the context of this paper is: *How can the functional design of a banking smartphone app, which allows the support of customer processes, look like from a business point of view?*

The paper follows the *Design Science* paradigm. According to Hevner et al. (2004), Design Science research consists of the following phases: *Building/Development* and *Evaluation*. In particular, this paper addresses aspects of theory building in terms of *Development* according to Hevner et al. (2004). March and Smith (1995) state that this phase comprises the conceptualization of an artifact and, hence, is the most important step in Design Science. In this paper we present the conceptualization of an IT artifact, i.e., the smartphone app. The design explicitly focuses at a business perspective rather than a tech-

nical view. According to Hevner et al. (2004), an artifact has to be built upon *Business Needs* and *Applicable Knowledge*. The business need of the smartphone application is founded in the lack of apps provided by banks that meet customer needs whereas the applicable knowledge is based on the theory and concepts of customer processes. As a part of the *Evaluation*, this paper will theoretically elaborate on the expected success of the exemplary smartphone app, following theoretical foundations from the field of attitude formation and attitude change models.

The paper is structured as follows. In section 1, we describe prevalent approaches of banks towards customer centricity to motivate business needs for the approach presented. Section 2 deals with the applicable knowledge for the development of a customer-centric app. The section consists of findings on current mobile banking services and the concept of customer processes. Furthermore, a motivation is provided why the support of customer processes is a good opportunity to enforce customer centricity and a chance for differentiation in retail banking. In section 3, the functional design of a smartphone app to support customer processes in banking is presented, i.e., the artifact is designed. In section 4, the effects of the app on consumer behavior is theoretically evaluated following the Theory of Reasoned Action (TRA) and attitude change strategies. The last section concludes.

1. Business needs for customer-centric banking apps

Since established banks are unlikely to succeed in a price war against low cost providers, they have to offer value adding products and services to their customers that clearly distinguish from competitors' offers. Differentiation in retail banking in terms of product specifications has mostly failed. Usually the result is increased complexity (e.g., certificates, exchange traded funds) which might not be fully understandable for the customer. In such cases, the customer might miss or even doubt the differentiating feature. The non-physical nature of bank products poses even more problems. For a customer it is not straight forward how to assess the value of an intangible product (Zeithaml et al., 2003).

Therefore, innovative approaches of differentiation, which cannot easily be copied by competitors, are required. Building up a strong relationship with the customer can be an essential factor of differentiation, especially considering low switching costs in retail banking. However, establishing an inimitable customer relation is difficult.

A number of researchers have been analyzing methods and approaches to customer-oriented banking (e.g., Karakostas et al., 2005; Shah et al., 2006; Neilson and Chadha, 2008; Omarini, 2011). Espe-

cially for retail banking, "satisfaction has been found to be the ultimate measure of service performance" (Neilson and Chadha, 2008, p. 204).

Being one of the new distribution channels in retail banking, interest is growing towards mobile devices (Meyer, 2010). This has been pushed by the rise of smartphones. According to Curtis (2009, p. 22) "even mobile services, which are often criticized for being user-hostile, are enjoying increased popularity on the back of the smartphone boom". Most recently, the focus of mobile services lies on lifestyle applications that serve individual customer needs. For example, for Apple's iPhone currently more than 600,000 smartphone apps are available in the App Store. These apps deliver problem solving for virtually any task in daily routines.

2. Applicable knowledge for the development of a customer-centric app

2.1. Current offering of banking apps. For several years, financial service providers have been offering services via mobile phones, promoting *mobile banking*. A major push for mobile banking occurred with the uptake of smartphones. Today, banks and other financial service providers offer a range of services in different app stores. For capturing the status quo about banks' activities in providing smartphone apps, we analyzed apps offered by the world's 100 largest banks. The list of these banks was attained by ranking the banks according to their market capitalization as of September 15, 2010 following data from Bankscope. The survey includes those banking apps which are available in the iTunes App Store (Apple).

In November 2011, 208 banking apps have been offered in the App Store by the top 100 banks, compared to just 69 apps in September 2010 and 84 apps in January 2011. It should be noted that the size of the bank is not a determinant of the amount of apps offered. Some of the largest banks do not provide any app at all whereas some banks, which are not stock-listed and thus were not included in our analysis, provide multiple apps (e.g., a number of public savings banks and cooperative banks).

We observe a rise of regional apps as well as a trend to several apps per bank. For instance, Citigroup and Standard Chartered Bank offer multiple apps which include the same functionalities but with the focus on the respective regional market (language, branch and ATM finder, local offers of the bank and their cooperation partners). The Brazilian banks Banco Bradesco, Banco de Brasil, and Itaú Unibanco offer several apps which target different customer groups; these apps are equipped with quite different functionalities. The main target group continues to be the retail banking segment. Table 1 summarizes those of the world's top 100 banks which offer more than five different apps in November 2011.

Table 1. Banks offering more than five different apps in November 2011

| Bank | Country of origin (headquarters) | Number of apps offered | Thereof regional apps |
|--------------------------------|----------------------------------|------------------------|-----------------------|
| Citigroup Inc. | USA | 23 | 18 |
| Shinhan Financial Group | South Korea | 16 | 1 |
| Standard Chartered PLC | Great Britain | 11 | 10 |
| Banco Bradesco S.A. | Brazil | 9 | 0 |
| BNP Paribas | France | 9 | 5 |
| Banco do Brasil S.A. | Brazil | 7 | 0 |
| DBS Group Holdings Ltd. | Singapore | 7 | 2 |
| Itaúsa Investimentos Itau S.A. | Brazil | 7 | 1 |
| Akbank T.A.S. | Turkey | 6 | 0 |
| Danske Bank A/S | Denmark | 6 | 2 |
| Deutsche Bank AG | Germany | 6 | 0 |
| Turkiye Garanti Bankasi A.S. | Turkey | 6 | 1 |

As a next step, we investigated the functionalities of banking apps. For this purpose the app descriptions in the app store have been used. The functionalities have been categorized in three groups: (a) banking services; (b) near-banking services; and (c) non-banking services. As expected, the major number of functionalities is banking-related (55.2% of all functionalities) followed by non-banking services (26.1%) and near-banking services (18.7%). On average, one app includes 5.4 functionalities in total, from which, on average, 3.0 are banking services, 1.0 are near-banking services, and 1.4 are non-banking services.

Based on our findings it can be concluded that the current app offerings neither make best use of the strategic opportunities nor the technological capabilities of smartphones. In terms of strategic opportunities, there are hardly applications that can be regarded as substantially differentiating from other offerings and that incorporate the potential for a competitive advantage. From the technological perspective, except for the branch and ATM finder, the applications resemble more a “light”-version of desktop Internet applications, e.g., they do not fully exploit the opportunities of location specific services (GPS functionality). Overall, currently available apps tend to be piecemeal solutions that do not provide an orchestrated support for an entire end-to-end scenario of a customer process.

However, from a strategic standpoint it could be a competitive advantage to offer holistic support for customer needs. The question arising is: What is the real need of a customer? A customer would not have a reason to buy a bank product if it was not to satisfy any superordinated need or to solve a specific problem. For example, a customer would only apply for a loan if he intends to use the money for a specific investment or need, e.g., to buy a car.

In order to support customer needs holistically, entire customer processes have to be taken into account. Thus, not products (like a mortgage-backed loan) but customer processes (like housing) have to

be considered for designing successful smartphone applications.

2.2. Theoretical background for a customer-centric banking app. The core idea of the banking app presented in section 3 is to enable a holistic support of customer processes by banks. The theoretical background of the customer process concept as well as examples how to support these customer processes by banks is provided in the following sections.

2.2.1. Defining customer processes. The chronological steps of a customer process can be derived by using the Customer Buying Cycle (CBC) (Heinrich, 2002). The CBC comprises four phases – stimulation, evaluation, purchase, and after-sales – which a customer has to pass in order to fully accomplish the buying cycle. Following the CBC, the steps of the customer process for a specific need (e.g., “housing”, “raising a family”, “going on vacation”) can be derived and the sub-needs resulting for each process step can be defined. Lots of information, services, but also financial products are demanded by the customer within this process. As a result, the customer encounters different tasks within the process, searches for solutions, and gets in touch with different suppliers to fully cover the superior need following the customer process (Heinrich, 2002).

2.2.2. Banking-related customer processes. Banks usually offer products for single parts of customer needs, e.g., financing, and neglect to identify the intrinsic need or actual desire of customers, e.g., “housing”. The identification of banking-related customer processes requires a fully understanding of customer needs and procedures. Thus, before applying a customer-centric business approach, the bank has to identify relevant customer processes. In a survey, Kahmer and Moormann (2005) found out for which customer processes a stronger support by banks is generally desired and for which customer processes there is no need for a holistic support by banks (Table 2). The group involved in the survey was comprised of 373 participants.

Table 2. Customer processes and the degree of desired support by banks

| Strong desire for support | Limited desire for support | No desire for support |
|------------------------------------|--|--|
| Retirement | Buying or selling a car | Buying and administrating IT equipment |
| Buying or selling a house | Buying and protection of household goods | Travel planning |
| Pension coverage | Private administration | Further (professional) education |
| Covering individual risk | Renting and furnishing an apartment | Renovation, home improvement |
| Death and inheritance processing | | |
| Asset building; financial planning | | |

Source: Kahmer and Moormann (2005).

2.3. Matching customer processes with banking processes. Based on the identified customer processes, the bank can determine which processes could be handled by the bank to fulfill the customer

needs (Heinrich, 2002; Winter, 2003). Figure 1 presents an example of the customer process “housing” and the opportunities for the bank to support this process.

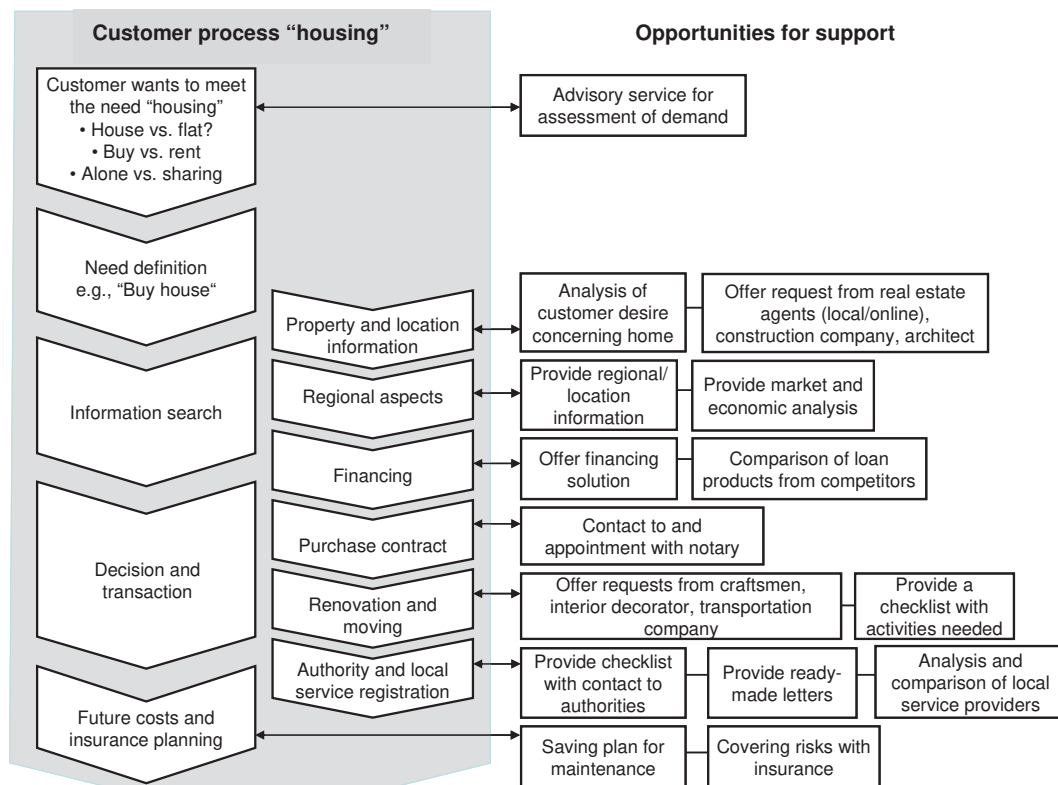


Fig. 1. Example for the customer process “housing” and opportunities for support

This example shows how a bank can provide comprehensive support for the customer process “housing”. According to Schmid et al. (2000) the entire customer process should be analyzed and the bank’s offering should be adjusted accordingly. Within each step of this process, the customer needs support in terms of, e.g., information, services, and products from different kinds of suppliers in order to fulfill the superordinated need of the customer. The next step for the bank is to decide which services should be accomplished by the bank itself and which activities should be carried out by external suppliers. These decisions are primarily based on the decision which business model to pursue. A bank could, e.g., act as a service integrator in a collaboration network and offer all customer process-related services to the customer, or it could join a network and participate as a service provider.

Servicing the whole process chain and producing or delivering all products, services, and information needed should not be a bank’s objective. However, utilizing a smartphone app, a bank could deliver required information around the customer process in an integrated way to its customers. Hence, the bank will secure its position as a primary contact point to the customer and eventually strengthen its customer relationships.

3. Design of the artifact: a banking app to support customer processes

The conceptualization of a smartphone app to support customer processes in banking is exhibited in Figure 2 and described in the following section.

3.1. Functionality of the app from a business perspective. When clicking on the bank’s app (E_1) a

list of banking-related customer processes (e.g., “housing”, “car purchase”, “wealth accumulation”) will be displayed. The amount and scope of customer processes provided can be determined based on the results of Kahmer and Moormann (2005). However, each bank has to identify those customer processes which are most relevant to its own retail customers. This is a strategic decision because the choice of customer processes reflects the scope of the bank’s service offering. Furthermore, it has to be examined beforehand which steps and which chronological sequence of steps each customer process comprises. This can be conducted following the procedure described in section 2.2. Both the scope of customer processes and the steps of each process should be stored in a “customer process database” of the bank. From here, relevant information for the app’s functionalities can be derived.

In the next step, the customer chooses the process he is interested in (E_2). For instance, if the customer has selected the process “housing”, he can individualize this process by choosing criteria according to the type of housing (rent vs. buy; commercial vs. private), location, size, etc. The criteria of choice should be predefined. Based on the data entered by the customer, the individualized customer process for “housing” will be derived and the sequence of customer process steps will be displayed. In the bank’s customer process database it should also be predefined which combination of criteria chosen at E_3 leads to which version of an individualized customer process. Storing the relevant information in the customer process database of the bank has the further advantage that altering any sequence of customer process steps would be performed centrally.

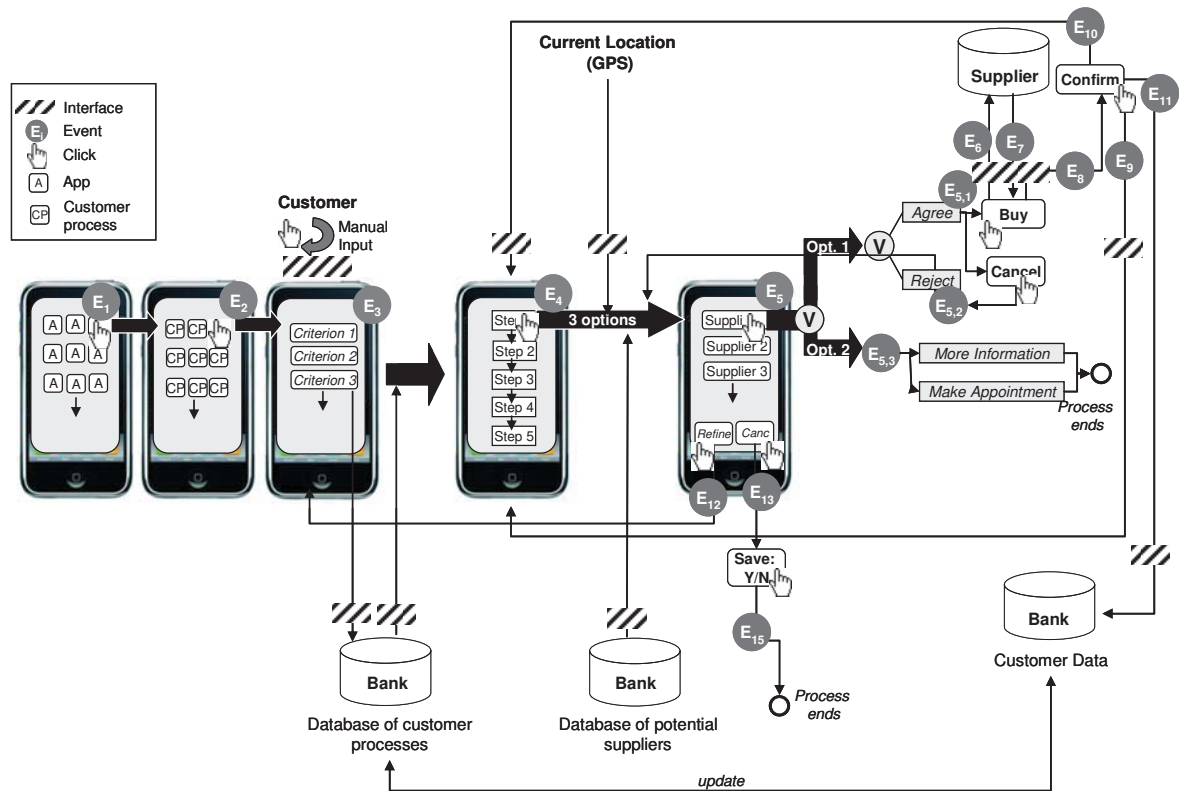


Fig. 2. Basic functionality of the banking-related smartphone app

As a result of E_3 , the smartphone user receives a graphical representation of his customized customer process where all his tasks and needs to be considered for “housing” are listed in a chronological order. This set of activities will help the customer to navigate through his process. As a service, he should have the opportunity to get offers or suggestions for suppliers and products/services which might be helpful for fulfilling any need along his process chain.

Clicking on one of the process steps (E_4) will result in a list of suggested services, products, and the corresponding suppliers within the respective step. For instance, within the phase of information search,

step 1 of the customer process “housing” could be the specification of the need. At this point it is worthwhile for a customer to contact an estate agent. The smartphone app can provide suggestions for agents in the corresponding city or region. The app should further allow the customer to contact the agents directly.

In order to provide a list of suppliers for each process step, the app also needs to be connected to a database of the bank where offered products and services as well as the corresponding suppliers of the bank’s cooperation network are stored and updated regularly. The customer can be given three

options to proceed from E_4 : (1) show suppliers at the current location of the mobile phone; (2) show suppliers at the location the customer had entered as a criterion in E_3 ; or (3) manually enter a preferred location. Conditional upon his choice, the customer receives suggestions for suppliers which can best fulfill the needs of this customer process step.

As a next step, the smartphone user can choose an offer (E_5), defined by a specific combination of a product/service and a supplier. In some cases it might *not* be appropriate to directly accept a certain offer via the app. This is especially true for most banking products where a signature is required for the contract or where the customer might have security concerns about buying the product via a mobile phone. In other cases, a direct offer to buy could be provided by a supplier, e.g., material for house renovation in the customer process “housing”. Thus, there are two options depending on the kind of supplier: (a) receive a direct offer (and proceed with $E_{5,1}$ or $E_{5,2}$); or (b) get more information and/or make an appointment with a sales agents ($E_{5,3}$). For the second option, the customer can choose the relevant information or make an appointment. In case of the first option, the customer can decide whether to accept ($E_{5,1}$) or to reject ($E_{5,2}$) the offer. If the customer accepts, he can click on a “buy” button or cancel the purchasing process.

When deciding to accept the order he will be directed to the supplier’s system, website, or e-shop (E_6) where the order will be identified and relevant additional information on price, conditions, etc. will be sent to the app (E_7).

The final agreement on purchase is processed by clicking on a “confirm” button (E_8). The confirmation should be conducted on the supplier’s system, since all legal issues related to online-purchase will now be under the responsibility of the supplier. Moreover, there should be a connection from the supplier’s system to the app for the purpose of (a) sending a confirmation and the related documents – e.g., confirmation, guarantee – after successful purchase (E_{10}) and (b) sending information that initiates an update of the individualized customer process (E_9). Depending on the products or services acquired after-sales offers might change. This should be reflected in an actualization of this customer process step. After confirmation, the purchasing information can also be sent to the bank’s database in order to update the customer data (E_{11}) which, e.g., can be used for marketing purposes.

If at node E_5 the customer denies to agree to any offer, he will be redirected to the supplier suggestions (E_5). The customer might further be given the opportunity to refine the criteria he entered at E_3 (E_{12}) or to finish the app (E_{13}). The latter choice

should offer the option to save the individualized customer process (E_{15}).

The primary purpose of the presented app should be to serve as an interface between the customer, the bank, and the suppliers within a cooperation network. Thus, the app should mainly work as a service broker and should *not* be involved in the actual purchasing process.

3.2. Creation of emotional value by the app. In addition to providing functional value added to support customer processes, the smartphone app also enables to arouse emotional value. Emotional value adding products can be defined as “products that ‘fit’ the emotions of the users, that is, products that elicit the emotions that the user would like to experience” (Desmet et al., 2001, p. 32). Emotional value is created by emotional responses which are determined by how the product corresponds with the buyer’s set of goals, standards, and attitudes (Ortony et al., 1988). Bank products are generally perceived as a necessity, so that the opportunities of creating emotional value for banking products are limited (Engstler, 2006).

People nowadays are often devoted to their mobile devices such as smartphones and tablets, and it can be expected that this trend will even increase. It is remarkable that “research shows that the cell phone bill is the first bill consumers will pay – before their mortgage, rent or any other debt” (Steward, 2009, p. 17). Today’s Generation Y is expected to place much more importance to their mobile device than the “traditional” desktop Internet access (Steward, 2009).

The creation of emotional value by offering the smartphone app is based on two reasons. First, the fact that a bank offers a sophisticated smartphone app can lead to the perception that this bank is very innovative. The emotions attached to the smartphone can be projected onto the bank – similar to already pursued projects in providing “experience banking“, as, e.g., by designing emotionally capturing bank branches (Köhler and Lang, 2008). Second, the support of customer processes via the smartphone app can enhance the relationship the customer has established with the bank. He is guided through the steps of his individual process and he receives solutions for all the problems and needs he had encountered during that process. If the app can help him this way, the customer might attach positive emotions to the provider of the app. Other financial products related to the customer process “housing”, as for example moving the bank account or signing new insurance contracts for the new house, might also be drawn from this particular app provider.

4. Evaluation and discussion

In the following section, we suggest a theoretical foundation for evaluating the effects of the app on consumer behavior.

An increased acceptance of bank products due to the support of customer processes via the suggested smartphone app can be justified following the Theory of Reasoned Action (TRA) (Ajzen, 1991; Peter and Olson, 2005) and attitude change strategies (Peter and Olson, 2005).

Consumer behavior is a wide topic in marketing literature. Within the context of this paper we focus on “buying a product” as a behavior (Peter and Olson, 2005). All conclusions about effects on the buying behavior to be drawn in the following are limited to the *intention* to perform this behavior since it is impossible to predict the actual behavior of a consumer.

To understand the theoretical evaluation, basic concepts to be used should be explained. *Beliefs* towards an object “constitutes an associative network of linked meanings stored in memory” (Peter and Olson, 2005, p. 140). They are determined by the knowledge about the product and its attributes. Beliefs can, e.g., be structured following the *Means-End-Chain*. This chain specifies that each product *attribute* has to lead to *functional consequences* to be a belief which further lead to *psychological consequences* and, in turn, *personal values*. The activated beliefs are called *salient beliefs*. Only the salient beliefs about an object (those that are activated at a particular time and in a specific context) create a person’s attitude towards that object (Fishbein and Ajzen, 1975; Mitchell and Olson, 1981).

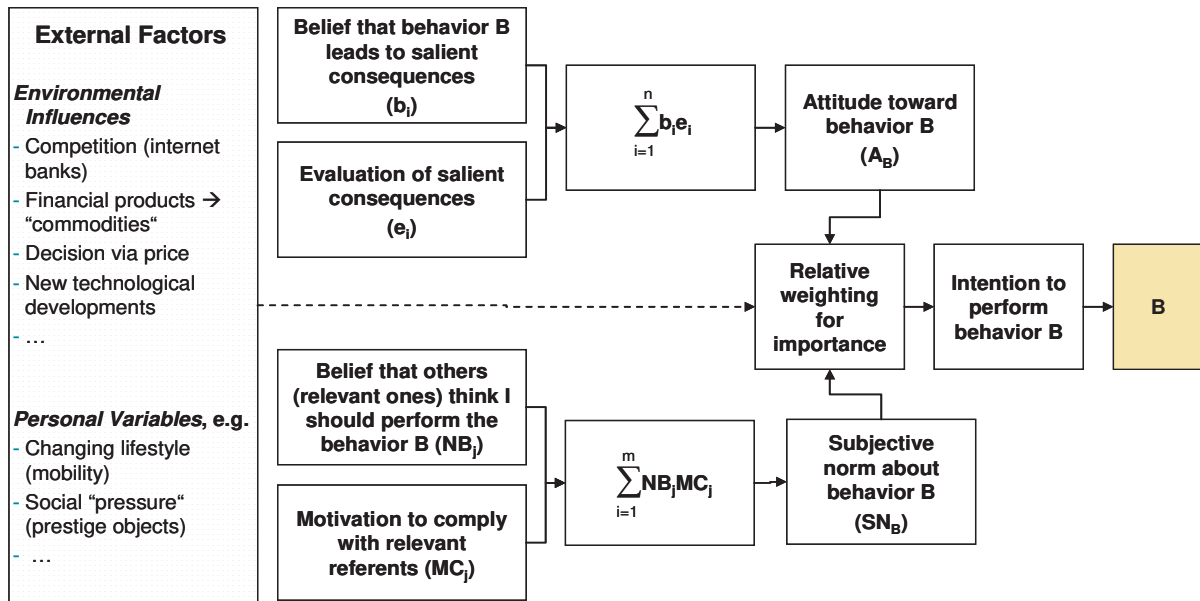
The consumer forms his attitude towards an object by a combination of his “knowledge, meanings, and beliefs about a product” or behavior in order to generate an overall evaluation (Peter and Olson, 2005, p. 142). One of the most prominent models in this context is the *Multiattribute Attitude Model* by Fishbein and Ajzen (1975). It “accounts for the integration process by which product knowledge (the evaluations and strengths of salient beliefs) is combined form to an overall evaluation or attitude” (Peter and Olson, 2005, p. 143). This model is expressed as:

$$A_o = \sum_{i=1}^n b_i e_i$$

where A_o is the attitude toward the objects, b_i is the strength of the belief that the object has attribute i ; e_i is the evaluation of attribute i ; n is the number of salient beliefs about the object.

The *Theory of Reasoned Action (TRA)* generally follows the conceptual framework depicted in Figure 3, exemplified by the behavior “Applying for a loan”. The intention to perform any behavior is determined by the person’s attitude towards the behavior (A_B) on the one hand and the subjective norm about behavior B (SN_B) on the other hand. Furthermore, external factors influence the relative weighting of importance of both determinants. Salient beliefs, or in this case salient consequences of a behavior, determine A_B . The attitude is formed following the *Multiattribute Attitude Model* and consists of the sum of beliefs that the behavior leads to n salient consequences (b_i) times the sum of the evaluation of these salient consequences (e_i) (Peter and Olson, 2005). The former one (b_i) can be interpreted as the strength of association between the behavior and the salient consequence and the latter one (e_i) as the evaluation of this link. The evaluation can be positive or negative and can incorporate different magnitudes.

The belief that others (relevant ones) support pursuing the behavior times the motivation to comply with the reference group determines the subjective norm towards a behavior. For instance, for the behavior “Applying for a loan”, salient consequences could, e.g., be “I can buy a house”, “I have to pay interests”, “I have liabilities to a bank”. Each of them is evaluated by each person differently. For example, “I can buy a house” would incorporate a positive evaluation whereas “I have liabilities to a bank” would be evaluated negatively. Considering the formation of the subjective norm it is imaginable that the environment of the person (e.g., neighborhood) thinks that he should not have any outstanding debts. The motivation to comply with this reference group is increased if these persons are very important to him, such as the family. In addition, external factors, like current interest rates or the need for a new house, further influence the intention to apply for a loan.



Source: Peter and Olson (2005).

Fig. 3. Framework for TRA, exemplified for the behavior (B) “Applying for a Loan”

It is well conceivable that the attitude towards the behavior of applying for a loan generally includes salient beliefs that are evaluated more negatively (like paying interests). Applying for a loan is merely a necessity to fulfill individual wishes. Furthermore, the subjective norm will not be positive; nobody will encourage someone to apply for a loan if there is no actual need for it. The question is how the support of customer processes via the smartphone app can change the attitude or the subjective norm, i.e., how the customer can be *persuaded*.

According to Miller (1980, p. 12) persuasive communication is “any message that is intended to shape, reinforce, or change the responses of another or others”. Cameron (2009) points out that persuasive communication consists of (a) response shaping; (b) response reinforcing; and (c) response changing. Response shaping is the creation of responses to a new stimulus. Response reinforcing can occur when the individual already has an attitude towards an object or behavior. The persuader in this case reinforces an already existing attitude. Response changing is the most recognized aspect of persuasion (Cameron, 2009). It can encompass the change of any value,

belief, attitude, intention, and behavior advocated by the persuader. It should be noted that persuasion is constrained to intentional behavior only. This means that a successful persuasion does not lead to the behavior per se, but strengthens the intention to do so; whether a behavior actually occurs is never assured. Response changing can, for example, be achieved following several attitude change strategies. Basically, any attitude towards an object or a behavior can be changed by (a) adding a new salient belief, (b) increasing the strength of an existing positive belief, (c) improving the evaluation of a strongly held belief, and (d) making an existing belief more salient (Peter and Olson, 2005).

Following these strategies, a smartphone app like the one presented in this paper can be expected to change the attitude towards the behavior of buying bank products due to the following reasons. As an example the customer process “housing” and the core banking product within this process, the loan, is chosen for demonstration. In Table 3 possible consequences of using the smartphone app leading to changes in the attitude towards “Applying for a loan” are provided.

Table 3. Possible attitude changes due to the usage of the presented smartphone app

| Attitude change strategy | Expected consequences of the app using |
|-------------------------------|--|
| Add a new salient consequence | Supporting the complete customer process does not only add convenience to the customer but can also add new salient impacts to his behavior of applying for, e.g., a loan. These salient consequences can be beneficial for the bank. This is especially true for cross-selling other bank products with regard to the customer process “housing”. In a traditional setting a customer would ask for a loan in isolation from his superordinated process. In this case he would probably not think about other bank products or services he might need in conjunction with the real estate. In case he gets support for his customer process via the smartphone app by providing the sequence of process steps he needs to accomplish, the customer will recognize that he might also need, e.g., an insurance for the house or financing new furniture. Now he is given the opportunity to choose these offers from the same bank which provides the loan. Thus, the smartphone app links “applying for a loan” to new salient requirements like “I need insurance” or “I need financing for my new furniture” via the customer process. Furthermore, the fact that he is given the choice and that he is not locked in a sales talk, he might increase his trust towards the bank and might feel “gently” supported but not offended with cross-selling. |

Table 3 (cont.). Possible attitude changes due to the usage of the presented smartphone app

| Attitude change strategy | Expected consequences of the app using |
|--|---|
| Increase the strength of a positive consequence | One consequence of applying for a loan will be the possession of the good, in this case the real estate. This will be evaluated positively by customers. However, the association of this consequence might not be very strong, if other consequences like "paying interests" or "having liabilities" are more prevalent. A smartphone app supporting the complete customer process might change the strength of the association with "possessing the real estate" with the behavior "applying for a loan". Being permanently involved in needs resulting from other steps of his process, the customer is permanently reminded of the physical object the loan will enable and the wish that it will satisfy. Furthermore, showing pictures of houses, maybe even in the current location of the smartphone, will lead to a stronger association of "applying for a loan" with a specific house. As a consequence, this might lead to more positive associations because of feelings like "I want <i>that</i> house!" Generally, the evaluation of a bank product is not straight forward due to its complexity and non-physical nature. The support of the customer process via the smartphone app increases the probability that the customer links the abstract financial product with the physical object (e.g., the house) and eases the formation of an evaluation. Furthermore, the app improves the customer relationship to the bank along the whole process. |
| Improve the evaluation of a strongly held belief | A salient consequence strongly associated with applying for a loan but evaluated negatively is "I have to pay interests". The direct evaluation of this salient consequence cannot be improved, since a person will never develop a positive association to "paying interests". However, if the customer uses the smartphone app, he is guided through his process and reminded about the real estate permanently. Thus, the required payment of interests might be weakened in its importance for the formation of the overall attitude. Other salient consequences like "possession of the real estate" might become more important instead. Thus, the improvement of strong but negative beliefs can be achieved by placing more importance on other positive beliefs which would be weaker and less salient without the usage of the smartphone app. |
| Make an existing belief more salient | In cases the consequence "I get this house" is not a salient one, the direct association of the bank products with the superior need of the customer process might make the possession of the house as a positive consequence of applying of a loan a more salient belief. |

Conclusion and avenues for further research

Banks are still reluctant in identifying and supporting customer processes. This paper contributes to this domain by (a) presenting a banking-app to enable the support of customer processes; (b) demonstrating the possible effects of this app on consumer behavior, and (c) showing how to evaluate these expected effects on the basis of the Theory of Reasoned Action.

According to Engstler (2006), banks have to foster their appearance in the market place in order to grow and to increase profits. He describes three main strategic considerations that have to be taken into account by banks. First, the scope of services has to be determined by the needs of customers. Second, the design of customer contacts has to create functional and also emotional value to the customers. Third, the appearance of a bank has to be adjusted in such a way that (a) trust is created by permanent presence of the bank in all relevant distribution channels; (b) integration of distribution channels and control over channel-wide sales process is ensured; and (c) cooperation with service providers who can generate value added for the customer increases the frequency of interaction between the bank and its customers.

The conceptualized smartphone app to support customer processes in retail banking fulfills these criteria. First, it focuses on a new approach of "real"

customer centricity which is supposed to become a competitive advantage in terms of differentiation. Second, the app enables (1) the presence over the whole customer process which can have a positive impact on trust, (2) control over the contact channels throughout the whole customer process; and (3) the provision of value added services, which a bank cannot supply by itself, from partners in a cooperation network. Moreover, the bank's position as a provider of the smartphone app as primary point of contact ensures a high frequency of interaction with the customer throughout the whole customer process, strengthening the personal relationship with their retail clients. Finally, especially emotional value can be created by offering these kinds of smartphone applications as lifestyle products for the bank's customers.

The results of the paper open up several avenues for further research. The described functionality of the smartphone app has to be regarded as a first conceptualization of a new IT artifact, and as such as an initial step of a more comprehensive design science research project. Subsequent stages of our research will seek empirical validation of our hypotheses that assume benefits to the stakeholders involved. This indicates also an analysis if the proposed theoretical evaluation, based on the attitude formation theory, holds as well in an empirical context.

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