

## **Proposal for the Doctoral Colloquium of the 9<sup>th</sup> International Marketing Trends Conference**

**Provisional Title:** Acceptance of innovative Self-Service-Technologies – are there differences between men and women?

**Author information abstract:** Dipl. Kffr. Jana Schlieve has passed her degree in media economics in 2008. For her diploma thesis about negative emotions of older consumers at point of sale she got the award for the best theoretical work in the year 2008. Since Mai 2008 she is a Ph.D. student at the department of marketing at Ilmenau University of Technology. Her research field is technology marketing with a special subject on the acceptance of new Self-Service-Technologies and gender differences.

**Keywords:** technology acceptance, gender influence, self-service-technologies

**Academic and managerial marketing issue:** technology marketing, technology acceptance research, gender marketing, self-service-technologies, consumer research

### **Literature review:**

Self-Service-Technologies (SSTs) are technological interfaces that enable customers to produce a service independent of direct service employee involvement (c.f. Meuter et al. 2000, p. 50). Such SSTs like online-banking, cash points, online travelling services or ticket machines are well established. They can provide more benefits for the costumers and the service encounters than the traditional way (c.f. Bruhn 2002, p. 7) and can be a factor of success (c.f. Curran et al. 2003, p. 210). But only a successful market launch can maintain or boost the competitive abilities of the companies. Whether a SST is successful, depends on the willingness of the customers to use them. The market launch of SSTs is cost- and time-intensive. Wrong decisions and initial non-acceptance are avoidable if the reasons of the customers for using and non using of SSTs are known and understood by the service encounters (cf. Curran et al. 2003, p. 209). The understanding of the customers and the adjustment of the marketing activities on this is a principal purpose of the consumer behavior research as a main field of marketing.

With regard to the acceptance of Self-Service-Technologies a few publications exist. These publications examine the acceptance and using behaviour of different technologies without having a closer look at the target group.

In times of increasing interchangeability of company offers, a stronger customer orientation and addressing is important. Accordingly, focusing on customer characteristics like gender are crucial too. Gender is an individual characteristic which has influence on the behaviour and experience of an individual. It influences the chances of an individual in the society and also the individual and social expectations in regard of this person like no other characteristic (cf. Merz in 1979, p. 9). Therefore, the detailed examination of gender aspects could help to adapt the innovation process to the customer's needs. Furthermore cultural differences can require an adaptation of the marketing activities.

Till this day there is a **research gap** related to the investigation of differences between men and women in the acceptance behaviour of innovative self-service technologies in an international comparison.

To close this gap a closer look at men and women is necessary. To do this, possible psychological differences were described in detail in the theoretical part of the thesis. Here the psychological constructs social pressure, technology anxiety and self-efficacy lead to the assumption, that the differences between men and women in general are relevant for the decision to use new technologies.

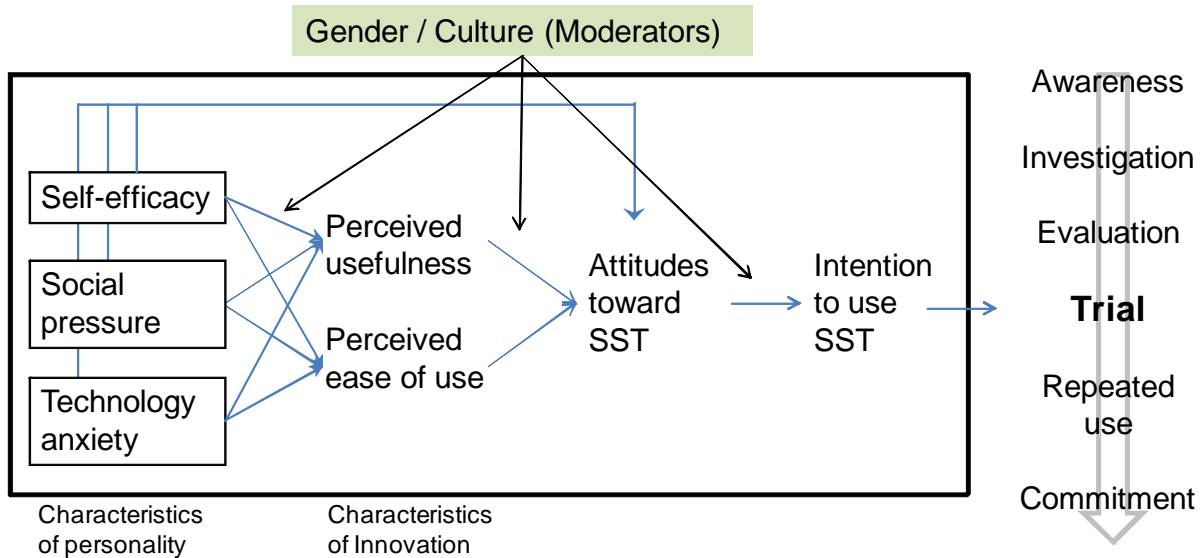
To see if the results for men and women are universally valid across borders or not, it makes sense to compare the results of Germany with an other country. For this, Russia was chosen. Russia as a country in transition with a lot of economic changes and developments in last years should be compared with Germany, which has a social market economy.

Via the thesis the following **research questions** should be answered:

- How do the psychological constructs social pressure, technology anxiety and self-efficacy influence the factors perceived ease of use and perceived usefulness and their impact on forming attitudes toward using SST and the intention to use SST?
- Are there differences between men and women?
- Are there differences between the countries Russia and Germany?

## Theoretical framework:

To investigate the acceptance of innovative technologies in the retail industry and the influence of the variables gender and culture the following **research model** was developed.



The research model is an extension of the Technology Acceptance Model (TAM) by Davis et al. (1989), which is a theory that shows how users come to accept and use new technologies. The model suggests that the decision of users about how and when they will use the innovation is influenced by a number of factors, like Perceived Usefulness (PU) - "the degree to which a person believes that using a particular system would enhance his or her performance" (Davis 1989, p. 320) and Perceived Ease-of-Use (PEOU) - "the degree to which a person believes that using a particular system would be free from effort" (Davis 1989, p. 320).

The three personality characteristics: self-efficacy, subjective norm and technology anxiety and their impact on forming of attitudes and the intention to use Self-Service Technologies are of special interest.

Self-efficacy is defined as an individual's assessment of his or her ability to perform a specific behavior. The construct is based on the theory of Bandura (1977) and some extensions (Van Beuningen et al. 2009).

Technology anxiety is the anxiety experienced by an individual confronted with the decision to use a technological innovation (Igbaria / Iivari 1989).

Social pressure is a person's perception that most people who are important to her or him think she or he should or should not perform a specific behavior (Fishbein / Ajzen 1975, p. 302).

Moderating variables are gender and culture. It is interesting to know if there are differences between men and women, and of course, if there are differences between the two countries Russia and Germany.

### **Research Design:**

As a research design a **survey via questionnaire** was chosen because it provides the ability to get a sufficient number of participants in each country. Participants of the study are students at the Ilmenau University of Technology, students at Saint-Petersburg State University and the parents of the students.

For the questionnaire psychological scales, developed by different researchers were used and adapted to the specific topic, e.g.

- The Sexual Identity Scale (Stern et al. 1987),
- Cultural Value Scale (Yoo / Donthu 2002),
- Self-efficacy (Compeau / Higgins 1995; Pedersen 2003),
- Social / normative pressure (Bhattacharjee 2000),
- Technology anxiety (Igarria / Parasuraman 1989),
- Perceived Usefulness (Davis et al. 1989),
- Perceived Ease of Use (Davis et al. 1989, Dabholkar 1994),
- Attitudes (Dabholkar 1994),
- Intention to use (Dabholkar 1994).

For all concepts the respondents are asked to rate their level of agreement with statements using seven-point scales ranging from "strongly disagree" to "strongly agree".

The questionnaire was already pretested at the Saint-Petersburg State University some weeks ago. In the next weeks the questionnaire will be tested in Germany, too. After modifying and complementing the questionnaires, they will be handed out in Germany and Russia.

To test the model an innovative technology is necessary. For this study the self-scan checkout was selected. The self-scan check-out is a check-out, where the customers scan the barcodes of their products, pay for the products and put them into bags on their own without the help of service employees. It is a very new technology and not very common in Germany or Russia.

### **Proposed methodology:**

The proposed statistical methodology is a **Structural Equation Model**. It is chosen because it is good for testing and estimating causal relationships using a combination of statistical data and qualitative causal assumptions.

### **Anticipated results or preliminary findings or results:**

The anticipated result of the survey is a better understanding of women and men as users of self-service-technologies. It will be very interesting to see, if the stereotypes and cliché of men and women and their usage of technologies will be approved or refuted.

### **Conclusion, theoretical and managerial implication:**

It is necessary to know the reasons of technology acceptance, because technologies are an important factor of competitive ability in nearly all branches. Especially in the service industries using Information and Communication technologies are a crucial factor of success. But only a successful market launch can maintain or boost the competitive abilities of the companies. The main factor service encounters should think about when they want to install and implement self-service-technologies is the acceptance of this technologies by their customers. This Ph.D. thesis will provide a better understanding of customers and their acceptance process. With looking on the important characteristic gender a better target group oriented marketing would be possible. The better understanding will be generated by the combination of the knowledge of general psychological gender differences with the technology acceptance process.

**Main references:**

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## **Research Statement**

Name: Schliewe, Jana

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98693 Ilmenau

Title: Dipl.-Kffr.

Thesis Advisor: Prof. Dr. Kerstin Pezoldt

Date of Enrolement: Mai 2008, full-time Ph.D.-Student

Research Agenda: Investigation of gender differences when confronted with the decision to use innovative technologies in an international comparison.

Stage of Process: intermediate / middle stage: theoretical development, hypothesis, research design, pretested questionnaire

Next Steps: Survey in Germany and Russia

## Curriculum Vitae



**Name:** Jana Schlieve

**Date of birth:** 11<sup>th</sup> of October 1982, in Germany

**University address:** Department of Marketing,  
Institut of Business Studies,  
Faculty of Economic Sciences,  
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### Education

since Mai 2008 Ph.D. student at the department of Marketing, Ilmenau  
University of Technology

19.02.2008 Degree as Dipl.-Kffr. in media economics

07/2007 - 01/2008 Diploma thesis at the department of marketing with the title:  
„Negative Emotionen älterer Konsumenten in der Kaufsituation“  
(Negative Emotions of older Consumers at the Point-of-Sale)  
rated with the mark 1,1;  
Award for the best theoretical thesis in the year 2008

10/2002 - 02/2008 Study of media economics with emphasis on: marketing and  
corporate management at Ilmenau University of Technology



**Work Experience**

10/2005 - 11/2006                      Extra curricular part time job in the marketing department of a big assurance company (HUK-Coburg)

04/2005 - 09/2005                      Internship in the marketing department of HUK-Coburg

**Research Interests:**

combination of gender and technology marketing  
consumer psychology

Since 2009: manager of a gender related project of the department of marketing at the Ilmenau University of Technology with the focus on analysing stereotypes and cliché of men and women.

**Main Publications:**

Sattler, B.; Schlieve, J. (2008):

Negative Emotions of older Consumers at the Point-of-Sale, in: NeuroPsychoEconomics Conference Proceedings, München;

Schlieve, Jana (2009):

Negative Emotionen ältere Konsumenten in der Kaufsituation, in: Ilmenauer Schriften zur Betriebswirtschaftslehre 4/2009

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