6 DISCUSSION AND OUTLOOK

6.1 Conclusion

The conclusion will briefly summarise the core constructs of the research model and the outcome of the analyses. Furthermore, the importance of this study will be outlined and which implications are expected.

There is a vast amount of information on the Internet and it becomes more and more important to offer convenient tools for the user to filter out relevant information. Recommender and personalised systems offer the possibility to propose the user targeted and tailored results. These types of web sites are more complex than usual targeted ones and therefore need thorough investigation.

The study aimed to test a comprehensive explanatory model for system satisfaction including several system and personal factors. A research model and its dimensions were proposed on the basis of existing studies. The measurement scale was developed by using items applied in previous studies or by suggesting own questions and pre-testing them. Finally, a user evaluation of three personalised internet applications was conducted and the online user survey resulted in a sample size of 1386. Structural Equation Modelling was used to identify important influencing factors on system satisfaction with three personalised internet applications. However, the scope of the findings can be much broader and of general significance for PIAs, since the ones used for the evaluation stem from three different areas.

First, the construct of usefulness is a necessary characteristic and was found to have the highest influence on satisfaction with a personalised internet application. A system can be very easy to use but if the information contained is not relevant or up-to-date it is useless. On the other hand, ease of use or system quality does play an important role as well. If information is not found, it is once again useless. Trust is a significant construct because of the increasing sales function of the Internet but also if the focus is on a high risk product or service like real estates. Hedonic benefits, like exploratory browsing behaviour (EBB) can play a role as well although the influence varies across systems. The influence of EBB for the e-learning platform was rather low compared to the travel web site and the real estate platform. This assumption seems logical: EBB does not play a role for personalised internet applications predominantly used for
goal-directed behaviour. Finally, personal characteristics such as experience and attitude towards the Internet have an influence when interacting with a website. However, the effect hypothesised was stronger than it turned out to be when tested with empirical data. Internet familiarity served only as antecedent of attitude towards information search via the WWW and had a negative impact upon EBB. The assumptions that internet familiarity also exerts a direct influence upon satisfaction and an indirect via trust, usefulness and ease of use were not confirmed. Attitude showed no direct influence on satisfaction either but indirect effects were found via usefulness and trust.

The method of expert interviews was used to complement the results of structural equation modelling. Furthermore, opinions about future developments, challenges, risks and opportunities were captured by the expert interviews which would not have been possible to gain by the user survey. The majority of the experts considered ease of use still as one of the major influencing factors when looking at the number of issues named. However, they argued that trust will become increasingly important in the future because more and more cases and types of internet fraud arose. Moreover, issues like domain names, personalisation, visual appeal and sophistication when designing the web site were mentioned.

6.2 Implications for Practitioners

What are the implications for providers of personalised internet applications? Results can provide proposals to design recommender and personalised systems more satisfactorily for the user. Structural Equation Modelling showed that usefulness is still the dominant factor positively influencing satisfaction with personalised internet applications. Therefore, the content of the personalised internet applications should be kept as accurate and helpful as possible no matter in which domain the provider is operating.

Exploratory browsing should be facilitated depending on the web site. As shown in the multiple group analysis it does play a more important role for the real estate web site and the travel platform which both offer a lot of information additional to the search of real estate or travel products and services. However, in the case of Learn@WU its effect was rather negligible.
Trust had a higher influence on satisfaction with the real estate platform compared to the other two systems. Thus, for high risky products or services like real estate are, special attention should be paid to trust building cues like certificates or security and privacy statements (as mentioned by the experts).

Attitude towards information search via the WWW and the use of e-service and Internet familiarity serve as antecedents for usefulness, trust and exploratory behaviour. Personal characteristics did not have a direct influence on satisfaction. This could be a good result for the providers of personalised internet applications because they cannot or can only hardly influence personal characteristics (e.g. expectations could be influenced to a certain degree).

In conclusion, ease of use and usefulness do play a role for most (if not all) web sites or personalised internet applications. The effect of trust towards the web site and how information is processed strongly depends on the type of web site. The same is true for exploratory browsing behaviour.

6.3 Limitations and Implications for Future Research

One of the obvious shortcomings is that the sample consists of rather experienced users. Furthermore, the number of study participants already knowing the web sites was rather high considering the way how people were invited to answer the questionnaires. Newsletters and postings at the respective web sites were primarily used to encourage people to participate in the user survey. Therefore, the inclusion of a higher number of study participants who are not particularly familiar with the Internet and who don’t have knowledge of the respective web sites could be fruitful and offer new insights.

Future studies could concentrate more specifically on recommender systems which was not the case in this study. The availability of recommenders (particularly German systems) was not given and therefore, the requirements were lowered and the study focused on personalised internet applications. However, recommender systems are often handled as the type of systems having most potential to create a satisfactory online user experience. Therefore, further research on the influencing factors on satisfaction with online recommender systems should be conducted.

As far as the research model is concerned, further research from the methodological point of view could involve Inferred Causation Theory (ICT).
Directions of causality could be checked as proposed by Pearl (2001). Moreover, latent class analysis could be applied with the goal to either confirm the grouping because of the different samples (different web sites) or if grouping based on other personal characteristics of the sample such as attitude or experience is more appropriate.

In future studies the type of internet application could be considered more explicitly and different types could be compared to each other in terms of usefulness or hedonic aspects. Is it a web site which is rather used for goal directed behaviour or which should also provide some kind of fun? The influence of exploratory browsing behaviour or trust is likely to vary across systems.

What is the most appropriate construct to measure hedonic related aspects or intrinsically motivated user behaviour? Further research could focus on the constructs of Exploratory Browsing versus enjoyment, playfulness or Flow because their influence could become even stronger in the future.