

User Assessment of Internet-Based Negotiation Support Systems: An Exploratory Study ^{*}

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Abstract. The Web-based negotiation support system (NSS) Inspire has been used in experimental negotiations by over 2000 negotiators worldwide. From a survey conducted among the users we find that they have a highly positive attitude toward the Inspire system and to internet-based negotiation support in general. This paper presents results of an exploratory analysis of the data collected from user questionnaires and negotiation transcripts. An extension of the Technology Acceptance Model (TAM) is proposed to identify factors that influence user's perception of internet-based negotiation support systems in situations where a diverse user community has access to a system over a prolonged period of time. The empirical results indicate that users in their assessment of complex web-based systems like NSS differentiate between various components of such systems, and analytical features are evaluated differently from communication features. Assessments along these dimensions are strongly influenced both by users' characteristics, such as their national culture, and actual outcomes achieved when using the system. Confirming previous studies, we also find a strong impact of user attitudes on users' willingness to use similar systems in the future.

Keywords: Web-based negotiation support, electronic negotiation, system evaluation, user perception, technology evaluation

^{*} Acknowledgments: We gratefully acknowledge the contribution of each member of the InterNeg team and, in particular, wish to thank Kumudini Ponnudurai and Gordon Lo for their enthusiastic help. This research has been partially supported with the INE grant from the Social Sciences and Humanities Research Council, Canada.

1 Introduction

The internet has the potential to dramatically change the way in which business negotiations are conducted. It allows users to enter electronic negotiations with partners located anywhere in the world in synchronous or asynchronous modes at almost negligible communication costs. Asynchronous communication is especially important for negotiations as it removes some of the time pressure involved in face-to-face negotiations and thus helps negotiators to better consider offers and their implications. Further, electronic negotiations allow for a broad introduction of support tools.

In order to exploit the potential benefits of internet-based negotiation support, developers of such systems need to better understand the factors that influence the acceptance of such systems in general, and particularly their novel features. Lack of research in this area might lead system developers to forego the potential for innovative solutions. In an attempt to make the environment as friendly as possible, developers may tend to provide only capabilities which resemble the familiar face-to-face environment rather than introduce analytic methods which utilize the fact that information is available and can be processed. Thus, empirical research into the acceptance of innovative negotiation support could provide important guidelines for system development. However, since this type of negotiations has only recently been developed, experimental research is still rare. An exception is experimental research of email negotiations [1, 2]. These studies resulted in three observations: (1) the need to increase the communication bandwidth; (2) the effect of activities unrelated to the negotiation task on the process and outcomes, and (3) the potential of support tools.

This paper extends this line of research with an explicit focus on user acceptance of, and satisfaction with, an internet-based negotiation support system. The study is based on negotiation experiments conducted with the Inspire Web-based negotiation support system (<http://interneg.org/inspire>) since 1996.

The Inspire system is an experimental negotiation support system. It combines elements of traditional negotiations (i.e., possibility of exchanging messages and offers between parties) and analytical negotiation support tools. Inspire, in contrast to earlier negotiation support systems, has been deployed on a wide area network (Web) allowing participants from remote locations to access the system. Furthermore, the system is open to everyone who wishes to use it.

There are several commercial Web-based systems that are intended to support negotiations. However, they are typically auction systems (e.g., www.ebreviate.com, www.ozro.com and www.commerceone.com). There are only a few systems capable of supporting negotiations as they are understood both in everyday language and research. In most cases these systems have been developed for research and training: Bui et al. [3] developed a negotiation support system for real estate negotiations in Hong Kong; Yuan et al. [4] developed a system for union-management negotiations which differs from Inspire in its emphasis on content structure enforcement and lacks analytical support.

There is considerable empirical research on user assessment and evaluation of information systems [5]. One of the best-known models in this area is the technology acceptance model (TAM) developed by Davis [6]. The TAM model was developed for system assessment in a different setting. It is oriented towards a homogenous population of users in a well defined organizational environment, and aims at predicting user satisfaction and system use after a short exposition to the system in question. The Inspire database underlying this study contains data from a global and in many aspects heterogeneous population of users, who have undertaken negotiations for several weeks and thus gained considerable experience with the system. Furthermore, we are looking at the attitude towards Web-based negotiation support in general rather than towards a specific system. Therefore we propose a modified model that allows ex post studies of internet-based systems and of user perceptions of the system and the process.

In Section 2 we give a brief overview of the Inspire system, its history and the way negotiations are supported by that system as well as the user population. Section 3 introduces the AMIS model (Assessment Model of Internet Systems), an extension of the TAM model, which is used in this study. In Section 4 the empirical results are presented and in Section 5 we discuss ongoing and future research.

2 Inspire negotiations and data

2.1 The Inspire negotiations support system

The Inspire system, developed as a part of the InterNeg project (<http://interneg.org>), is arguably the first Web-based negotiation support system (NSS) developed to facilitate and support bilateral negotiations [7]. The roots of the system can be found in Nego, a mainframe-based NSS [8] and Negotiator Assistant, a local-area network NSS [9]. From the negotiation methodology perspective, the system implements the three phase model of negotiations: pre-negotiation, nego-

tiation, and post-settlement [10]. The main analytical model used for the construction of user's utility function is based on hybrid conjoint measurement and discrete optimization [11].

The system can be used with different negotiation cases, but to allow for comparability of results, one standardized case has been used in all negotiations included in this study. The case was designed to evoke a negotiation situation with which users from almost any country are familiar and therefore there is no need for extended contextual explanation. As the predominantly international users' proficiency in English is not easily predictable, the description of the case is fairly simple and fits within one and a half pages.

In the negotiation, the users represent two companies: Itex Manufacturing, a producer of bicycle parts, and Cypress Cycles that builds bicycles. Both sides negotiate over four issues: the price of the bicycle components, delivery schedules, payment arrangements, and terms for the return of defective parts. Negotiators are only informed about their (and their opponent's) role in the Cypress-Itex case and they make their own decisions about preferences, strategy, and tactics.

The system provides users with several tools: a communication platform to conduct negotiations, analytical tools to construct utility functions and determine offer efficiency, and visualization tools to construct graphs of negotiation dynamics [8] and the negotiation dance [10].

Negotiators exchange offers consisting of values for all four issues (price, delivery, payment, return of defective parts). For each issue there is a pre-specified set of values. Altogether, there are 180 complete and different potential solutions (alternatives) in which values of all four issues are specified.

Inspire users can attach text messages to offers or exchange messages without offers. This opportunity for free-form communication not only makes the negotiation process more realistic, but also enhances the contextualization of the negotiation situation for both parties. By exchanging information about attitudes and expectations, negotiators can more easily create a positive negotiation atmosphere and develop a personal relationship based on mutual understanding and trust, or exert pressure on the negotiation partners.

The analytical features of Inspire support users in their decision making in each phase of the negotiation. In the pre-negotiation phase, the system is used to analyze the scenario and evaluate feasible alternatives (possible offers). In this phase each user specifies his/her preferences and the system constructs the user's utility function. The system uses hybrid conjoint measurement because this method does not impose major requirements on the users and does not re-

quire linearity assumptions [12]. The ease of use and simple informational requirements are necessary features for systems used by people with very different educational, professional and cultural backgrounds.

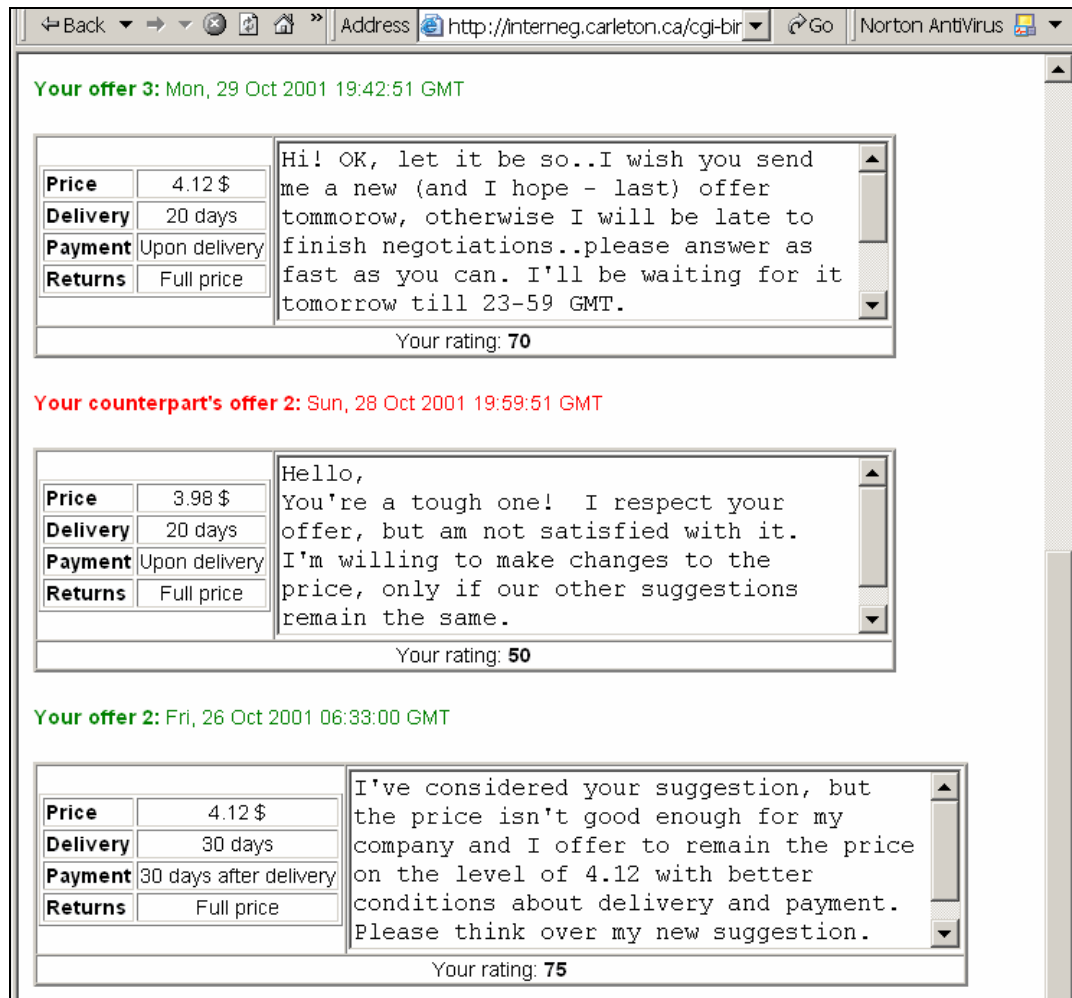


Figure 1. Example of a partial transcript of the negotiation.

During the negotiation phase the system displays utility values of alternatives that are considered by the user or offered by the opponent. The system records the process and provides a negotiation transcript as well as a graphical visualization of the negotiation's dynamics. An example of the former is given in Figure 1, and of the latter in Figure 2. In Figure 2 the negotiation dynamics is shown for both sides: *Peggy* and *mirowich*. It can be seen that *Peggy*'s third offer [3] (on top graph on the figure on left-hand side) is an improvement over *Peggy*'s second offer [2], that is this negotiator may see offer [3] being a reverse concession for *mirowich*. However, *mirowich* does not consider *Peggy*'s offer [3] to be worse than offer [2]. On the right-hand figure *Peggy*'s offers are depicted by the lower graph (beginning in the origin). As we can see

Peggy's offers [1], [2] and [3] are yielding improvements for *mirowich* as each of them yields a higher utility value for *mirowich*.

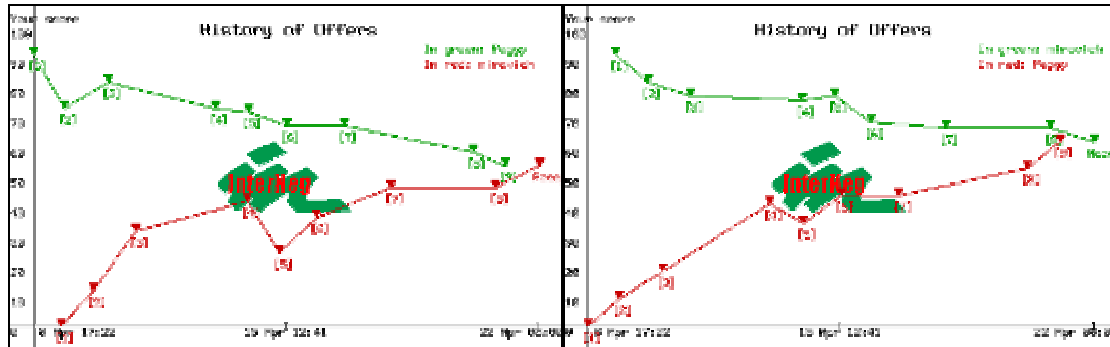


Figure 2. Example of negotiation history: as seen by user (a) *Peggy*, and (b) *mirowich*

The Inspire system presents this information to both parties in a symmetric manner. For each party, all offers are evaluated using that party's utility function. The color-coding is uniform: green for the supported user and red for his/her opponent. These representations of the negotiation dynamics provide negotiators with a rich representation of the process without guiding them towards certain alternatives or strategies.

After the parties agree upon a compromise, the system determines whether the achieved compromise is Pareto-optimal (efficient). If the compromise is inefficient, the system suggests the post-settlement phase. This phase begins with the computation of efficient alternatives which dominate the achieved compromise. Several dominating alternatives are selected and displayed. The parties may then continue negotiation until they reach an efficient compromise.

In order to keep the process simple, the system does not provide support for other types of analysis like the specification of BATNA (best alternative to a negotiated agreement) and reservation prices (lowest acceptable negotiation outcome) or an analysis of the opponent's strategies. We use only one type of graph, clearly define the negotiation issues, and provide users with several salient options for each issue. Users are not required to base their exchanges on the utility values, nor are they forced to make concessions or achieve a compromise.

2.2 Procedure

Most of the Inspire users are senior undergraduate or graduate students, who use the system as a part of their course assignment. The courses range from information systems, decision support systems, negotiations, law, international business, electronic commerce, to English as a

second language, and tourism and hospitality. Several examples of students' assignments are available at: <http://interneg.org/interneg/training/inspire>.

Inspire negotiations are set up once a month for groups of students from several universities; there are typically between 100 and 250 students from 3-5 universities who negotiate at the same time. Students log-in to the system by providing the negotiation name which is selected by the instructor, and the user name which they select. Their opponents know their counterparts by the user name but they do not know their negotiation name. Thus neither the instructor nor the counterpart can obtain access to the student's negotiation records without the consent of the latter. Although users are not prevented from revealing their identity or other personal information in the free-text messages (see Figure 1), this information cannot be verified as students from different countries and cities are paired together. During the negotiation, the parties are in contact only with each other, the researchers have no contact with the subjects.

Negotiations are conducted over three weeks with an imposed deadline. Upon request from both negotiators, the deadline may be extended. At any point in time each party may terminate the negotiation.

Inspire users do not receive any incentives from the experimenters. Those who conduct negotiations as a course assignment are motivated by the assignment requirements. However, their choice of strategy and willingness to achieve a compromise cannot be verified by their instructors because instructors do not receive any information from the InterNeg team regarding their students' activities and performance.

There is one exception to the rule in the experimenters' lack of control of the Inspire negotiations. If one negotiator complains that his/her counterpart does not participate in the negotiation, then such a counterpart receives an email from the InterNeg team and is given three days to resume negotiations. If the counterpart remains inactive, the negotiation is terminated and the active negotiator is given an option of entering a new negotiation with another counterpart. In each series of negotiations conducted so far, there was less than 5% of inactive partners. Another possible influence on the users' activities is the negotiation deadline imposed by the Inspire system and also the instructor's deadline for submitting an assignment, which is beyond the control of the experimenters. However, all instructors accept that the negotiation may take at least three weeks.

2.3 The users

Results reported in this paper were obtained from the analysis of 1102 negotiation dyads (2204 negotiators) on which data was extracted from the system log files. Users from 53 different countries are represented in this data set. The 10 largest groups are indicated in Table 1.

The structure of the user population is as follows: 1084 (49.18%) male and 762 (34.57%) female. The remaining 358 (16.24%) did not disclose their gender. Over 60% of all users were students, about 15% identified themselves as “professionals”, and 25% represented various small groups. Data from those users who did not disclose their gender and/or country of residence (363 users) were excluded, leaving a total of 1841 usable data records.

Table 1. Inspire users by country of residence.

Country	Number	Percent	Country	Number	Percent
Canada (CA)	696	31.6	Hong Kong (HK)	89	4.0
USA (US)	348	15.8	Austria (AT)	77	3.5
India (IN)	216	9.8	Germany (DE)	76	3.5
Ecuador (EC)	158	7.2	Taiwan (TW)	58	2.5
Finland (FI)	144	6.5	Other	242	11.0
Russia (RU)	103	4.7			

Apart from the data logged by the system, much of our knowledge about the users comes from two questionnaires administered by the system before and after the negotiations. All users fill in the pre-negotiation questionnaire, which is given after they have read the negotiation case. The second (post-negotiation) questionnaire is given after the completion of the negotiations irrespectively of the results achieved.

3 Research focus and model

3.1 Motivation

The present study was motivated by the overwhelmingly positive attitude towards Inspire and on-line negotiation support in general. This attitude was expressed by the users' willingness to fill in a voluntary post-negotiation questionnaire. Out of the 2204 users, 1200 answered the questionnaire, giving a high response rate of 54%.

The users' attitude was measured using three questions regarding their willingness to use an on-line system for negotiation. The responses are summarized in Table 2.

Table 2. User willingness to use internet-based negotiation support.

Use a system similar to Inspire to:	Percent
- practice negotiation	88.2
- prepare for actual negotiations	81.3
- conduct actual negotiations	61.3

These results per se constitute a convincing argument for the viability and acceptance of internet-based negotiation support. An important question refers to the particular factors that lead to the observed level of acceptance of this new technology.

Users' satisfaction and their willingness to use an information system are important concepts in information systems evaluation [13, 14]. Both are often used to measure the 'Success' of implementing an information system. Other models use these concepts to explain such measures of IS success as actual or reported system use [5, 15, 16].

3.2 The TAM model

The technology acceptance model (TAM) is one of the models most often used to explain users' willingness to actually use an information system [6]. The TAM was extensively tested empirically [e.g., 17, 18-20] and several extensions have been proposed [e.g., 18, 21, 22, 23]. The basic structure of TAM is given in Figure 3.

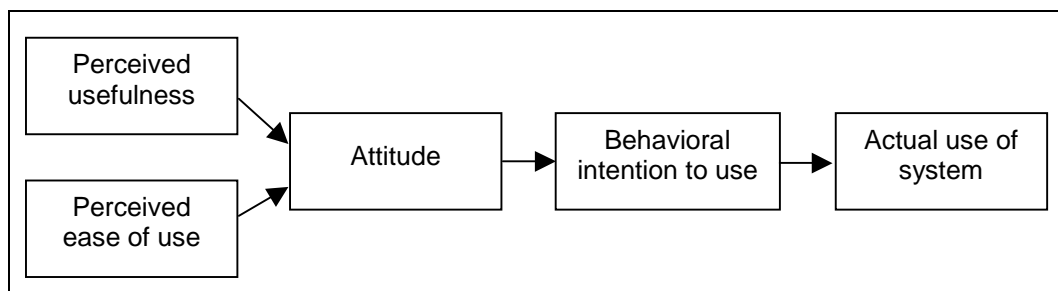


Figure 3. The technology acceptance model (TAM) [22, p. 363].

According to the TAM, the actual use of a system is determined by the behavioral intention to use a system. This intention depends on the attitude towards the system which, in turn, depends on two subjective factors: the perceived usefulness and the perceived ease of use of the system.

Several characteristics of TAM framework are important for this study, including:

1. In the TAM framework, empirical evidence suggests that perceptions of usefulness and ease of use as measured by the standard TAM instruments are developed after a *brief exposure* to the system [17].
2. The “behavioral intention to use” a system in the TAM framework refers to the *actual system* that is being studied rather than a prototype, scaled down or a similar system.
3. In the TAM framework users are asked to perform several specific tasks selected by the experimenters that are indicative of their work.
4. The system use is controlled by the experimenters; users have *no control* over the intensity and timing of the system use.
5. The user population is *uniform*, typically coming from the same organization.

The TAM model and the research instruments constructed within its framework are very useful to study potential and actual information system adoption and use in organizations. It has been widely applied and many important results have been published; many are discussed in Section 5 where they are compared with the results of this study.

3.3 The AMIS model

Systems deployed on the Web are used to solve decision problems ranging from the selection of a car, camera or a computer (see, e.g., <http://www.dealtime.com>), the most appropriate solvent for machine (part) cleaning (<http://clean.rti.org/>), or the policy for the reduction of air pollution in Europe (<http://www.iiasa.ac.at/rains/>). Other systems, e.g., Inspire and WebHipre (<http://www.hipre.hut.fi/WebHipre/>) allow users to construct their own problem representation and search for optimal (or Pareto-optimal) solutions.

The difference between support systems deployed on the Web and systems deployed in a single organization is that the latter are localized to a particular context and a homogenous user group. They are developed for a specific and well defined type of problems, tested by a small selected group of users, and maintained and controlled locally. In addition, users typically are trained and informed about both the purpose and expected contribution of the system towards the goals of the organization. The TAM was developed to study these traditional systems in view of their potential use in well-defined organizational settings.

Web-based support systems, which are open to everybody and which users can try at any time, do not conform easily to the assumptions underlying the TAM framework. This framework needs to be modified to reflect the fact that users coming from the Web cannot be controlled; data collection is similar to a field study rather than a laboratory experiment; and the system is used only if there are people who see a value in doing so.

Therefore, we suggest to replace the six characteristics presented in Section 3.2 with the following characteristics for the context of our study:

1. Users of Inspire provide their assessment after a prolonged use of the system. We thus may expect that they have good understanding of its features and capabilities. This would allow replacing the *perceived usefulness* of the system with the *experienced usefulness* of the system.
2. The users' *intention* to use a decision or negotiation support system may often not be directed towards the specific system that they are exposed to, but towards a generic class of support systems. This is the case of Inspire; the three questions listed in Table 2 do not refer to users' willingness to use Inspire but to "A system similar to Inspire."
3. The system is used to support the process of solving complete problems that users are required to consider rather than several selected tasks.
4. The type of task, which users of Web-based systems perform, allows them to control the *intensity of use* of the system. In a Web-based system offering asynchronous communication, the users control the process and the time of system use. While all users in our sample have performed one negotiation with Inspire, the actual extent to which they have used the system can be quite different. Thus, the *actual use* of the system must be considered as an important behavioral variable.
5. Systems deployed on the Web may be used by a very large number of users with different backgrounds. Often they are not localized to any single user population; they may be used in a variety of situations both expected by the systems' developers and also unexpected. This means that *the user population* may not be uniform. Users' different individual characteristics may influence their experiences with the system; they are, therefore, an important part of our model.

Taking into account the above characteristics of internet support systems, we may observe that the TAM model lacks several constructs that are required to assess the potential use of this technology, while other concepts used in TAM seem less relevant here. For these reasons we propose the *assessment model of internet systems* (AMIS), which is depicted in Figure 4.

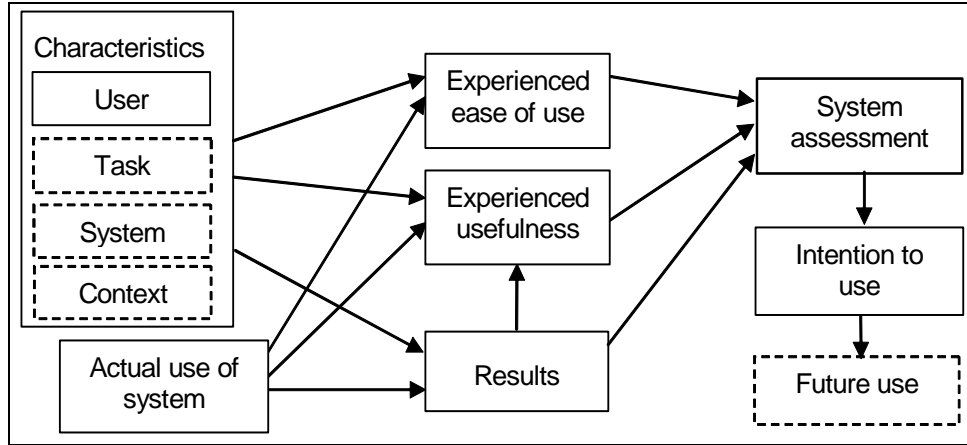


Figure 4. Assessment model of internet systems (AMIS)

We have already introduced most of the AMIS constructs and relationships. To better describe the model, we present it in terms of the Inspire experiments. Based on the users' input (see Table 2), we know that the users' intention to use systems similar to Inspire is high. Presumably this is the result of their positive evaluation of the whole system. Thus, the *attitude* towards the system is replaced with *system assessment* based on users' experience. The holistic assessment may depend on the *results* (i.e. the negotiation outcome), the *usefulness* of the system and its *ease of use*. Because of the experimental setting and the long exposure of users to the system we replace the perceived usefulness and perceived ease of use proposed in TAM with *experienced* usefulness and *experienced* ease of use. Furthermore, we explicitly consider factors influencing the users' experiences like *user*, *system*, *task* and *context characteristics*, and the *actual use* of the system.

The AMIS model includes some of the factors proposed for TAM extensions oriented towards internet usage. By taking into account context, we implicitly consider facilitating conditions and social factors proposed by Cheung et al. [24]. We do not include information quality proposed by Lederer et al. [25] for Web sites, because we look at a single system deployed on the Web rather than many sites or systems.

4 Data and hypothesis

4.1 Variables

Inspire negotiations provide a considerable amount of information for analysis; both in the form of process logs, which are automatically generated during the negotiations, and in the form of the pre- and post negotiation questionnaires. Originally, these questionnaires were not developed specifically to assess the users' attitudes towards technology adoption, but to provide

some background information about their experiences. Nevertheless, they provide unique data that we think is relevant to the assessment of the system. Variables which are obtained from the questionnaires, and from the negotiation logs are listed in Table 1 of the Appendix, which also shows their initial assignment to the constructs of the AMIS model discussed.

This study is motivated *ex post* by the surprisingly positive responses of Inspire users. It has exploratory character in that it attempts to determine the underlying reasons for these responses. For this purpose we use the AMIS model, in which several relationships between constructs need to be verified. The data we use for this analysis is not obtained from a controlled laboratory experiment. Furthermore, it refers to only one system. We conduct an exploratory analysis of the relationships. Thus we formulate research questions (RQs), even though in some instances, they refer to well defined variables and there are some *a priori* assumptions on the direction of influences.

4.2 User characteristics

User characteristics, such as experience, education and culture, are frequently used in behavioral IS research. Taylor et al. [18] consider the context factors (e.g., influence from superiors) and user characteristics in the TPB model (theory of planned behavior) which is an extension of the TAM model. The application of the TPB model predicted system usage better than the original TAM model, however, the improvement in the fit was rather small.

User characteristics affect, according to the proposed AMIS model, (1) the experienced ease of system's use, (2) the experienced usefulness, and (3) the results. Our first research question considers these effects:

RQ1: Is there a relationship between specific user characteristics and experienced usefulness, ease of use, or results of negotiations?

There are seven variables describing users that are available in the dataset. Three variables describe different aspects of users' experience: negotiation experience (NEXP), previous use of NSS (NSSBEFOR), and the frequency of access and use of the Internet (IACC). The other variables describe demographic characteristics and culture.

Direct relationships between user characteristics and system assessment have been reported in several studies. Guimaraes [14] found a weak influence of decision makers' characteristics, their experience in particular, on satisfaction with a decision support system (DSS), but Udo

[26] found a positive relationship between experience and satisfaction with a DSS, while Bergeron [16] reports a positive influence of experience on the actual use.

In the AMIS model, user characteristics affect the system assessment through intermediate variables (Usefulness and 'Ease of use'). Agarwal [27] observes that the level of education and previous experience positively influence the 'Ease of use' of the system. We thus expect that users' experience contributes to the system's ease of use and to the ability to use the system more effectively.

The influence of users' characteristics on results achieved by using a system was studied by Udo and Davis [28]. They found that experience was positively related to cost effectiveness, but negatively to other outcome dimensions. In another series of experiments, a positive relationship of user experience to both productivity and cost effectiveness was reported [26]. This suggests that more experienced users achieve better results than the inexperienced users.

RQ1a: Is there a positive impact of users' experience, measured respectively with variables NEXP, NSSBEFOR and IACC, on the system's ease of use, its experienced usefulness, and on the negotiation results?

Yaverbaum [29] reports relationships between demographic characteristics of IS users, such as their age, education or job experience, and the 'motivating potential score', which is related to users' willingness to use a system. Demographic information collected from the Inspire pre-questionnaire includes users' age (year of birth—YOFB), their gender (GENDER) and their country of residence (CRESIDE). Younger users are often more familiar with the Web and various information technologies, so a negative impact of age can be expected. We therefore ask the following question:

RQ1b: Is there a negative impact of the users' age on the system's experienced ease of use and usefulness and on the negotiation results?

NSSs as well as group decision support systems (GDSSs) are increasingly implemented in an international context. Cultural impacts on user attitudes towards systems have, however, been neglected in this field of research [30, 31]. DeVreede et al. [32, p. 202] note, in their survey of empirical studies, that almost all GDSS research was carried out using American groups alone.

Recently, there have been a few studies exploring cultural aspects in technological communication. Tan et al. [33] note that GDSSs equalize status that is perceived differently in Singapore and USA. Kersten et al. [7] observes a significant impact of the user's country of origin on sev-

eral variables describing the negotiation process. Ulijin and his colleagues [34, 35] explore cultural aspects of computer-mediated communication in general. These studies concentrate on cultural differences in the communication, negotiation or group processes rather than on differences in technology assessment and adoption.

However, the impact of specific cultures on the dependent variables cannot be predicted a priori. The same applies to gender, so the following research question does not refer to a specific direction:

RQ1c: Is there a relationship between the users' culture and their gender and the system's experienced ease of use, its usefulness, and the negotiation results?

4.3 Use of the system

The AMIS model indicates that in addition to the users' characteristics, the actual extent to which they use the system influences their perceptions of the system's ease of use and usefulness as well as the negotiation results. The Inspire system records three variables describing system use: the number of offers sent (OFR), the number of offers accompanied by messages (OFFRWMSG), and the number of messages sent (MSG).

The relationship between actual system use and perception variables has been extensively studied in the IS evaluation literature. Karahanna [36] found a positive relationship between perceived usefulness and actual use of an e-mail system, while the relationship was weaker for ease of use. Parthasarathy and Bhattacharjee [37] confirm these results. They obtained a significant influence of perceived usefulness on the decision to continue or discontinue the use of online services, while ease of use had no significant influence. Downing [38] and Bergeron [16] also established positive relationship between actual use and user attitude.

These studies followed the TAM framework and considered system use as a consequence of perceptions. Bajaj and Nidumolu [39] combined influences in both directions in a feedback model and found a positive relationship between attitude and usage; the perceived ease of use was positively influenced by previous usage.

Results of these studies should be interpreted carefully, especially in light of the results reported by Szajna [15, 21] and Collopy [40]. They found significant differences between actual and self-reported system use and showed that results depend heavily on the concept employed. Our study is based on objective, rather than self-reported, measures of system use.

The AMIS framework, as well as the fact that we are considering a relationship between actual, measured use and experienced usefulness and ease of use, lead us to consider system use as an antecedent of perceptions, rather than as their consequence. This also allows us to consider negotiation outcomes, which by definition are the consequences of system use, in the same way.

RQ2: Is there a positive relationship between the intensity of the system's use measured by the exchanged offers and messages on the system's experienced ease of use and usefulness, and on the negotiation results?

4.4 Negotiation results

The AMIS model posits that the results of the system use have a direct impact on the usefulness experienced by the user and the user's assessment of the system. This corresponds with observations made by Venkatesh and Davis [41] and Lederer et al. [25]. They studied a number of Web applications and presented arguments for the existence of a positive relationship between information (system output) quality and the perceived usefulness.

The relationship between results and experienced usefulness has been considered in earlier studies. Igbaria and Tan [42] determined a positive relationship between satisfaction and individual impact. A significant correlation between user satisfaction and performance (measured by user productivity) was found by Gelderman [43]. Lastly, this relationship was observed in another study of the Inspire negotiations, which used a smaller number of observations in a controlled environment [7].

Three variables are used to measure the negotiation results describing whether an agreement was achieved at all (AGR), the agreement efficiency (OPT), and the utility value of an agreement to the user (SCORE). We therefore formulate a research question concerning possible impacts of system use in three parts:

RQ3a: Do users who achieved an agreement experience higher system usefulness and assess the system better than users who did not achieve it?

RQ3b: Do users who achieved an efficient agreement experience higher system usefulness and assess the system better than users who achieved an inefficient agreement?

RQ3c: Is there a positive relationship between the utility value of the agreement and the experienced usefulness and/or the assessment of the system?

4.5 Experienced ease of use and usefulness

System assessment is, according to AMIS, influenced by the results of the negotiation process and also by the ease of use and usefulness of the system as experienced by the user. The influence of the latter two constructs on the users' attitudes has been extensively studied within the TAM framework. Different findings, however, have been reported regarding their relative importance. Jackson et al. [22] found that the ease of use has a significant influence on attitude while usefulness does not have any. In contrast, Taylor and Todd [18] found that the effect of ease of use was not significant. Dishaw and Strong [44] and Parthasarathy and Bhattacharjee [37] report that usefulness has stronger influence on attitude than ease of use.

Users' long exposure to a system led us to replace their attitude towards the system with their system assessment (see Section 3.3). The two experiential constructs, 'Ease of use' and Usefulness, should continue influencing the assessment in a positive way, thus we ask:

RQ4: Do experienced ease of use and usefulness of the system lead to a better assessment?

4.6 System assessment

The last relationship which we want to study involves users' system assessment and their intention to use a similar system in the future. We know of no studies directly addressing this issue. One may speculate, however, that the users who have strong confidence in the system and are satisfied with the results may be more willing to use similar systems than unsatisfied users. Results surveyed by Benbasat and Nault [13] indicate that the confidence in decisions is higher for DSS users than for those who did not use them. More recent studies by Downing [38] and Igarbaria and Tan [42] report a positive relationship between system use and user satisfaction. Similar results, both in terms of confidence in the decision as well as satisfaction with the group process, are reported in empirical studies of GDSS use [45, 46].

This leads us to expect that users' do generalize their experiences with the Inspire system to other NSS they may encounter later on:

RQ5: Does better the assessment of Inspire lead to stronger intentions to use a similar system in the future?

5 Analysis

5.1 Verification of constructs

The influence of user characteristics on the system assessment is one of the key issues of this study. Therefore, and also because the variables describing users represent a heterogeneous spectrum of attributes, these variables are not integrated into a single construct. To test the validity of the remaining constructs, we performed an exploratory factor analysis. The variables AGR and OPT are binary variables and were therefore not included. Based on the Scree plot given in Figure 1 of the Appendix and theoretical consideration of the items contained in the factors, four factors were retained in that analysis. The resulting factor loadings after a Varimax rotation are shown in the Annex, Table 2.

Using a threshold of 0.6 for factor loadings, a clear pattern emerges. The original assignment of items to the construct ‘Actual use’ is confirmed with the exception of variable MSG (the number of messages sent which did not accompany offers), which fails to reach the threshold. However, we retain this variable as part of the construct for two reasons. Firstly, its factor loading on factor 3 is still considerably higher than that of any other item. Secondly, all three variables are objective measures that describe the system’s use. Thus, in contrast to subjective measures, construct validity is not seen as a major concern.

The assignment of items to the construct “Assessment” is also confirmed with one exception. Variable FRNDLY (perceived friendliness of negotiations) has a factor loading below the threshold. Although perceived friendliness is an important issue in the subjective assessment of a negotiation, it may be more related to personal factors than to the use of an NSS. Therefore this variable is removed from the construct.

As expected, the item SCORE does not load on any of the factors. This confirms that “Results” can be considered as a construct of its own.

The most important results from the factor analysis concern two constructs: Usefulness and ‘Ease of use’. The two items assigned to the construct ‘Usefulness’ do not load significantly on any of the extracted factors, furthermore, their correlation coefficient is only 0.2733. Although both items clearly measure usefulness, they relate to different aspects of the system: the helpfulness of the message facility (MSGHELPH) relates to the communication part of the system, while the helpfulness of utility values (UTILITYV) refers to the analytical features of the system. It is thus possible that the users perceived the communication features of the system and

the analytical, decision-oriented features of the system as distinct components, each having a usefulness of its own.

The distinct role of analytical components versus the communication components is confirmed in the factor loadings of the variables that were assigned to the construct ‘Ease of use’ given in the Appendix, Table 2. Variables that describe the ease of use of the components used to weight issues and options (respectively WTGISSUE and WTGOPTIO), load onto a different factor than variables describing the ease of the use of the system (INEASY) and clarity of its instructions (INSTRUCT). The latter two variables relate to more general and descriptive characteristics of the system.

Variable CASEUND relates to the problem description and its understanding rather than to the actual system. It has a low loading on both factors (see Appendix, Table 2) and therefore it is removed from the construct.

Thus we replaced the two constructs ‘Ease of use’ and ‘Usefulness’ with four constructs reflecting the distinction between analytical and general components of the system. The standardized values for these four constructs are given in Annex, Table 3.

In the following analysis, we therefore use the constructs listed in the Annex, Table 3. Using a paired t-test, differences between analytical and communication features are found significant for both ‘Ease of use’ ($t=-32.06$, $p<.0001$) and Usefulness ($t=8.23$, $p<.0001$).

5.2 Impact of user characteristics

The AMIS model led us to expect that users’ characteristics influence the perception of different features of Inspire as well as negotiation results. To test RQ1, we used linear regression of the dependent variables on the following user characteristics: age, gender, country of residence, previous negotiation experience, previous experience with a NSS and present internet access. The results are presented in the Annex, Table 5, and two of them seem to be noteworthy:

1. Users’ experience in negotiations in general (NEXP) and with NSS (NSSBEFOR) has significant impact on the perceived ease of use of the analytical features (see Annex, Table 5). More experienced negotiators find the system’s analytical features more difficult to use than those who are less experienced. Users who are more familiar with NSS and thus with preference elicitation and utility construction perceive Inspire easier to use.
2. Users’ country of residence (CRESIDE), which can be interpreted as a proxy of national culture, has a consistent impact on all dependent variables (see, Table 5, Annex) except

usefulness of communication features (MSGHELPF). In the Annex (see Table 6), the adjusted means of the dependent variables are presented for all countries. For the assessment variables, lower scores indicate better evaluations. For the outcome variable, higher scores indicate better individual negotiation outcome.

The ease of use of analytical features was assessed lowest by the Germanic countries and highest by Ecuadorians and Russians. However, usefulness of these features was evaluated highest by German and Swiss users and lowest by Finnish users. Furthermore, users from Latin and Asian countries (except India) assessed usefulness of analytical features low. Usefulness of the communication platform was evaluated highest by Swiss users and lowest by Ecuadorians as well as users from Taiwan and Hong Kong. Americans and users from Canada also rated usefulness of the communication features relatively high. General ease of use was evaluated highest by Indians and lowest by users from Taiwan.

Concerning outcomes of the negotiations (SCORE), only two user characteristics had some impact: the user's country of residence (CRESIDE) and gender (GENDER). SCORE is one of the rare occasions where users' gender shows a significant impact; male users achieved on average a higher score ($AV = 67.77$, $SD = 22.39$) than female users ($AV = 64.06$, $SD = 23.45$).

The cultural impact on negotiation outcomes confirms earlier results obtained from a smaller sample [7]. Users from Ecuador reached highest individual outcomes, followed by users from Switzerland and Russia. Lowest scores were obtained by Austrians and users from Hong Kong. However, as negotiation outcomes are determined to a great extent by the negotiation process, a thorough analysis of the processes is required to interpret these cultural differences in negotiation outcomes.

5.3 The aggregate model

We used correlation analysis to verify the aggregate model introduced in Section 3. All significant correlation coefficients between constructs are presented in Figure 5. Following the disaggregation of two constructs discussed in Section 5.1, usefulness and ease of use are considered separately for the analytical, general and communication features of the system.

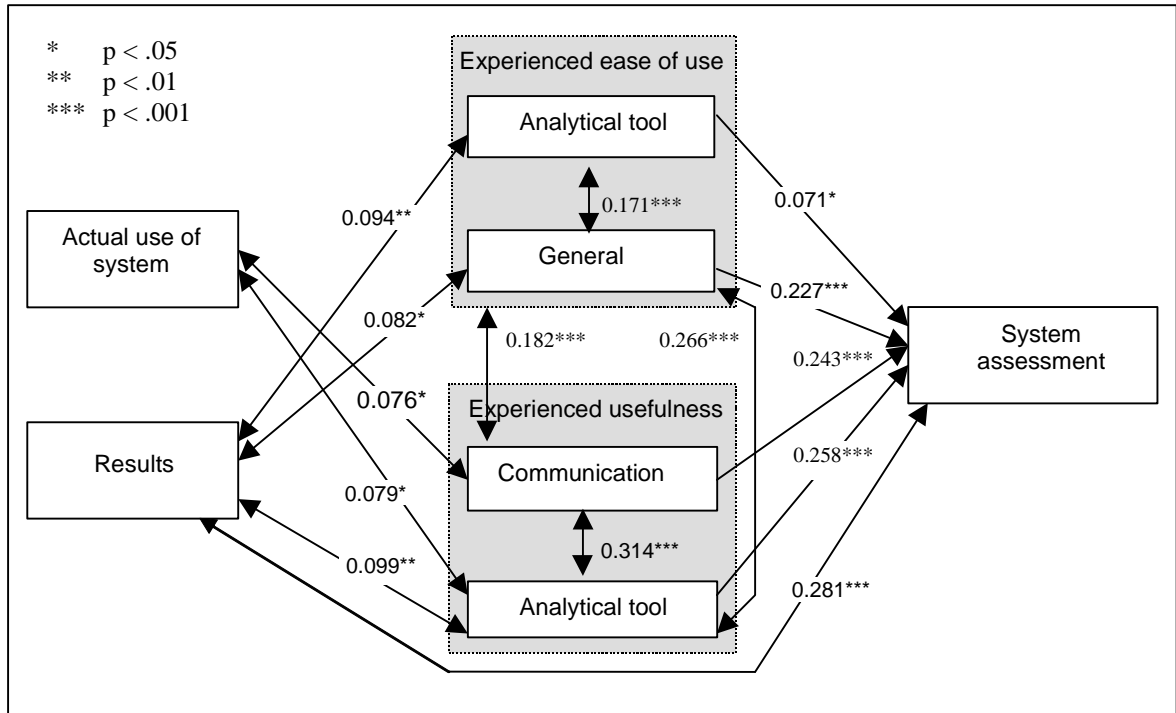


Figure 5. Overview of results.

In research question RQ2, we study the relationship between system use and the user's perceptions of usefulness and ease of use as well as the negotiation results.

The effects of system use on the ease of use and usefulness are weaker than expected. Significant positive correlation exists only between 'Actual use' and the variables representing usefulness, but not the ease of use. Regarding usefulness, both correlation coefficients have the expected positive sign; users who used the system more also had a higher opinion of its usefulness.

Several explanations of this situation are possible and they require further research. Since Inspire is a Web-based system and users are typically familiar with web browsers already at the beginning of the negotiation, more intensive use of the system might have no impact on familiarity with the user interface. This could explain the lack of correlation between actual use and experienced usefulness.

Research question RQ2 also concerns a possible positive effect of actual use on the negotiation results. However, no significant relationship was found between those two variables.

Previous studies provided only inconsistent empirical findings on the impact of GDSS and NSS on decision results. While early studies [47, 48] take a rather skeptical view of the impact of

such systems, newer studies [45, 46] provide more positive evidence. However, it should be noted that previous empirical studies on GDSS or NSS mostly defined “system use” as a binary variable indicating whether the system was used or not. In our study, the system was used in all negotiations and the ‘Actual use’ is a cardinal variable that measures the extent to which various features of the system were used. The non-significant result indicates that no direct relationship between more extensive use of system features in Inspire and the negotiation outcome exists. We should note, however, that the NSS use may reflect users’ strategies in different ways. Some users may use only offers because they prefer not to write, other users may wait for a long time to ‘soften’ their opponents, yet others may write many messages in an attempt to influence their opponents to make large concessions. These issues need to be further studied and also the AMIS model needs to be verified with systems other than NSS.

Research question RQ3 concerns the impact of negotiation results. Since the correlation analysis shown in figure 5 uses cardinal variables, only RQ3c can be tested in this framework. The relationship stipulated in RQ3c is partially confirmed. Here the distinction between analytical and communication components of the system is also relevant. Better results are related to a more favorable perception of the usefulness of the analytical components of the system, but not of the communication component. The relationship between the two variables can be seen bidirectional, as perceived usefulness may lead to better results and a higher negotiation outcome could lead to a better ex post assessment of the system.

The impact of negotiation results on assessment can be tested for all three outcome dimensions mentioned in RQ3a, b and c. The positive relationship between assessment and SCORE is clearly confirmed by our correlation analysis. The probit analysis shown in Table 7 also indicates consistent impact of the score achieved by the negotiator on the items that are contained in the aggregate satisfaction construct. On the other hand, whether an agreement was reached at all (variable AGR) or whether the agreement was Pareto optimal (variable OPT) had no significant impact on assessment, thus questions RQ3a and RQ3b must be answered negatively.

RQ4 concerns the relationship between system assessment and experienced usefulness and ease of use. The correlation analysis confirms a positive relationship between these variables for both the analytical and other features of the system. Furthermore, the magnitude of the correlation coefficients exhibits an interesting pattern. For the communication and general components, the impact of ease of use and usability on assessment are rather similar. This similarity contradicts previous studies based on the TAM model, which found either a stronger effect of ease of use [22] or of perceived usefulness [6, 44]. Following the argument of Agarwal [27], this effect can be attributed to a transitory stage. The basis for users’ evaluation remains, in this

stage, timesaving and user friendliness. However, at the same time, users begin to discover more complex benefits of system use. This means that they become influenced by usefulness as well as usefulness considerations.

For the analytical functions, the influence of usefulness on assessment seems to be stronger than the influence of ease of use. Under the same reasoning as above, this would indicate that the evaluation of analytical features is more ‘mature’ than the assessment of communication features. This is a rather unlikely explanation considering that users are probably more familiar with internet-based communication than with interactive elicitation of utility function. An alternative explanation takes the difference in evaluation between analytical and communication and general features (shown in Table 5) into account: communication and general features are evaluated as more easy to use than the analytical features. If overall assessment of the system is high, despite the lower usability rating of analytical features, the impact of this rating on overall assessment must be low.

5.4 Assessment and intention for future use

Our final research question, RQ5, concerns the relationship between the overall assessment of the system and the users’ willingness to use Inspire or a similar web-based NSS in the future. Intentions to use future NSS were measured by three categorical (yes/no) variables, where users indicated their willingness to use an NSS similar to Inspire to (1) practice negotiations; (2) prepare for real negotiations; and (3) in actual negotiations.

To determine the impact of the system assessment on willingness to use a NSS we first aggregated the six variables describing assessment into the additive scale variable ASSESS and then conducted a probit analysis linking ASSESS and the three concepts describing users future intentions. The results of the analysis are given in the Annex, Table 8.

Research question RQ5 is answered positively: Assessment of the Inspire system has a significantly positive impact on users’ willingness to use NSS in the future. The significance of the effect increases when moving from the simple task of practicing negotiations to the more demanding task of use in actual negotiations. It should be noted that although fewer users were willing to use NSS in actual negotiations (see Table 2), the coefficients obtained in the probit analysis show that the impact of a positive attitude is stronger for the more complex tasks.

6 Discussion and conclusions

To explore the factors generating the users' very positive assessment of internet-based negotiation support exemplified in the Inspire system we proposed AMIS model, a modification of the TAM model. The AMIS model suggested 12 possible relationships between different concepts. Validation of the concepts involved led us to the first result of our analysis: in evaluating internet-based negotiation support systems, users clearly distinguish between the analytical and communication components of such systems. This distinction concerns both perceived ease of use and perceived usefulness.

This distinct role of analytical features of support systems, and the weaker acceptance of such features compared to other system functions, corroborates evidence that has also emerged in the literature on (G)DSS. Lu [49] found a rather low level of acceptance of analytical methods. Benbasat and Lim [45] pointed out differences in the effects of Level 2 GDSS, which provide analytical support, as compared to Level 1 GDSS, which provide only communication support. Their meta-analysis of empirical studies, however, found a higher level of satisfaction with Level 2 GDSS.

The results concerning the 5 research questions we studied are summarized in Table 3. Most of the relationships proposed in the AMIS model are supported by the empirical data. The most notable exception is the impact of system use on negotiation outcomes. This result contradicts empirical results on GDSS, where a positive impact of system use on decision quality was found in the studies surveyed by Benbasat and Lim [45] and Fjermestad and Hiltz [46]. One explanation may be the different interpretation of "system use" in this study. In most previous studies, system use is a binary variable indicating whether the system was used at all. In our study, system use is a quantitative construct indicating the extent of use of various features. When more extensive use of certain features of the system does not increase a negotiator's performance, this does not indicate that the negotiator could have performed as well if the system had not been there at all. However, the current experimental setup does not allow us to perform comparisons with unsupported negotiations.

Among the relationships that were confirmed, strong impact of culture stands out. Culture is a new factor appearing in the context of information systems used for cross-cultural applications like international negotiations. Our results also indicate that culture needs to be considered in the assessment of internet-based systems used for making individual decisions.

Culture has already been shown to have strong influence on the negotiation process [50]. The present study indicates that culture is a factor that also has to be taken into account in determining the user's perception of and attitudes towards an information system. If we understand cultural differences in technology adoption, development of systems and their features can be better adjusted to specific needs.

Table 3. Summary of results

Research question	Dependent variables	Independent variables	Result
RQ1	Experienced usefulness, ease of use, and results	User characteristics	Strong effects of culture on all variables except perceived usefulness of communication features. Perceived ease of use is also affected by previous experience in negotiations and with NSS. Significant effect of gender on results.
RQ2	Experienced usefulness, ease of use and results	Actual use of system	Significant positive effect on usefulness, no effect on perceived ease of use or results.
RQ3	Experienced usefulness and system assessment	Results	Significant positive effect on usefulness of analytical component, no effect on usefulness of communication components. Strong positive effect on assessment.
RQ4	System assessment	Experienced usefulness and ease of use	Significant positive effect of perceived usefulness and perceived ease of use of both analytical and communication components on assessment.
RQ5	Intention to use a Web-based NSS	System assessment	Strong positive effect.

The cultural differences in the assessment of Inspire need to be further explored. It seems plausible, that different communication patterns and cognitive styles of different cultural groups may cause the differences in the evaluation of the analytical and communication features of Inspire. Especially in computer-mediated communication, differences in preferred communication patterns may have an important impact on negotiation processes and outcomes. This assumption is supported by previous research in computer-mediated communication, which has shown that the reduction of important social and personal cues in non-face-to-face interaction affects both perception and self-presentation processes [51-54]. We plan to analyze the quantitative and qualitative (i.e. written messages) data provided by Inspire system to explore cultural patterns of technology adoption in detail.

We can already notice, however, that features important and useful for users of one culture might be less valuable or even a nuisance for users from another culture. Whether it will be

possible to design truly global information systems that are well received by users of all cultures remains an open question. One could also imagine highly flexible, adaptable systems that can easily be adjusted to different cultural settings.

Apart from culture, our research identified experience as another personal factor influencing user perceptions and attitudes. This result is consistent with previous studies [14, 26]. If user characteristics have an impact on assessment and willingness to use future systems, this is probably mainly due to their impact on results which a user is able to achieve with the system.

Obtaining good results by using the system turned out to have a strong impact on the user's perceptions of a system, much stronger than mere experience gained from using the system. This result can be seen both as a confirmation as well as an extension of previous research using the TAM model. To a certain extent, it confirms those studies which found a strong influence of perceived usefulness on attitudes [36, 37]. But it also goes beyond the notion of perceived usefulness as it is used in the TAM framework, where users are asked questions about how they expect the system to increase their productivity in the future. Our results show that actually experiencing a positive outcome is a strong factor for creating a positive attitude towards a system.

We believe that our results convey some important messages for the development and evaluation of internet-based systems not only for negotiation support, but also for a broader context. In electronic commerce, there is a growing tendency to use autonomous software agents to automate many tasks like searching for information and transaction partners, or even to conduct negotiations with suppliers [55]. To perform these tasks effectively, such software agents need to be informed about their users' preferences. Our results have shown that analytical methods based on elicitation and mathematical representation of preferences are less well received by users than features enabling communication between humans. These attitudes clearly need to be taken into account when developing strategies for electronic commerce.

Our study utilized a database that is quite unique due to both its size and its truly global scale. But the factors that led to these advantages of our data also contribute to some limitations of our work. First of all, there is limited control of the user population. While each Inspire user is assigned a negotiation partner by the system administration and thus could be prevented from using the system, this would decrease the number of negotiation cases available. Furthermore, such a database could only be created in the course of several years during which the system and the questionnaires administered to users cannot be changed. Thus it is not possible to adjust

the questions to specific research topics and exploratory studies, like the present one, have to use data that is available in the existing questionnaires.

Appendix

Table 1. Variables and their measurement

Construct	Variable	Type	Description
User characteristics	YOFB	real	Year of birth
	GENDER	categorical	User's gender
	OCCUPATN	categorical	User's occupation
	CRESIDE	categorical	User's country of residence
	IACC	Likert scale	Present internet access
	NEXP	Likert scale	Negotiation experience
	NSSBEFOR	categorical	Used negotiation support system before
Actual use	OFR	real	Number of offers sent
	OFRWMSG	real	Number of offers sent by user that included written messages.
	MSG	real	Number of written message sent by user besides offers
Ease of use	CASEUND	Likert scale	Ease to understand case
	WTGISSUE	Likert scale	Ease of weighting issues
	WTGOPTIO	Likert scale	Ease of weighting options
	INEASY	Likert scale	Ease of using the system
	INSTRUCT	Likert scale	Clarity of the system instructions
Usefulness	MSGHELPH	Likert scale	Messages helpful/detrimental to negotiations
	UTILITYV	Likert scale	Usefulness of the utility value displayed with offers
Results	SCORE	real	User's utility rating of the compromise
	AGR	binary	Indicates whether an agreement was reached at all
	OPT	binary	Indicates whether agreement (if any) was Pareto-optimal
Assessment	AGRSAT	Likert scale	User's satisfaction with agreement
	METE	Likert scale	Did negotiations meet the user's prior expectations
	CONTROL	Likert scale	User's level of perceived control
	FRNDLY	Likert scale	Were the negotiations friendly
	PERF	Likert scale	User's assessment of own performance

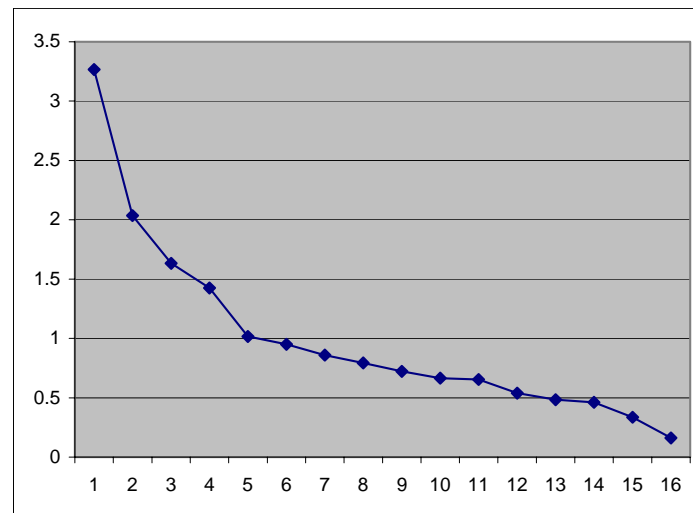


Figure 5: Scree plot

Table 2. Factor loadings (Varimax rotation)

Actual use	Factor 1	Factor 2	Factor 3	Factor 4
OFR	0.05860	-0.04782	0.92782	-0.06206
OFRWMSG	0.02366	-0.12437	0.92292	-0.07032
MSG	0.03206	0.03308	0.31217	0.06582
Ease of use				
CASEUND	0.02977	0.49542	0.13190	0.39602
WTGISSUE	0.07771	0.03810	0.01240	0.86917
WTGOPTIO	0.08439	0.03811	-0.02573	0.86848
INEASY	0.09176	0.74546	0.06707	0.14084
INSTRUCT	0.08803	0.73585	0.02386	0.12199
Usefulness				
MSGHELPF	0.16351	0.50321	-0.09075	-0.18510
UTILITYV	0.09953	0.58546	-0.13266	-0.03341
Results				
SCORE	-0.49563	0.03200	0.06611	-0.03599
Assessment				
AGRSAT	0.74746	0.13555	0.09619	-0.01733
METE	0.64652	0.02814	0.02313	-0.02832
CONTROL	0.70157	0.14668	0.04555	0.11321
FRNDLY	0.50911	0.26332	0.17885	-0.04604
PERF	0.71983	0.14306	0.01099	0.16690

Table 3. Descriptive statistics for standardized 'Ease of use' and Usefulness

Construct	Mean	SD
Ease of use (analytical)	0.5381	0.2115
Ease of use (general)	0.7895	0.1665
Usefulness (analytical)	0.7782	0.2332
Usefulness (communication)	0.7037	0.2322

Table 4. Constructs and assigned items (final)

Construct	Cronbach alpha	Items
Actual use	0.72	OFR, OFRWMSG, MSG
Ease of use (analytical)	0.79	WTGISSUE, WTGOPTION
Ease of use (general)	0.70	INEASY, INSTRUCT
Usefulness (communication)		MSGHELPF
Usefulness (analytical)		UTILITYV
Results		SCORE
Assessment	0.78	AGRSAT, METE, CONTROL, PERF

In Table 5 and in the following tables, results significant at the 5% level are printed in *italics*, and results significant at the 1% level in **boldface**.

Table 5. Regression of perceived ease of use, usefulness, and score on user characteristics.

Independent Variables	YOFB	IACC	NEXP	NSSBEFOR	GENDER	CRESIDE
Dependent variable: Ease of use - analytical features (aggregate construct, RQ 1)						
Parameter	-0.0032	0.0351	0.2074	-0.3842	0.1020	
F value	0.2400	1.0900	28.1900	10.8300	1.5100	3.7300
Pr>F	0.6240	0.2976	<0.0001	0.0010	0.2197	<0.0001
Dependent variable: General ease of use (aggregate construct, RQ 1)						
Parameter	-0.0058	0.0683	-0.0413	-0.1416	0.1858	
F value	0.3100	1.2300	0.3700	0.5100	1.8000	1.9000
Pr>F	0.5765	0.2678	0.5427	0.4750	0.1804	0.0017
Dependent variable: Usefulness of analytical features (UTILITYV, RQ 1)						
Parameter	-0,0003	-0.0160	-0.0442	-0.0861	-0.0350	
F value	0.0000	0.1400	0.8600	0.3800	0.1300	1.8100
Pr>F	0.9659	0.7121	0.3551	0.5379	0.7205	0.0036
Dependent variable: Usefulness of communication features (MSGHELPE, RQ 1)						
Parameter	<i>0.0154</i>	0.0228	0.0242	0.0621	-0.0397	
F value	<i>4.1300</i>	0.2600	0.2500	0.1800	0.1600	1.2700
Pr>F	<i>0.0425</i>	0.6123	0.6194	0.6689	0.6909	0.1397
Dependent variable: Individual outcome of negotiation (SCORE, RQ 1)						
Parameter	-0,0134	-0,3237	-1,1528	1,4133	-2,9914	
F value	0,0100	0,2700	2,8000	0,5300	4,3200	4,5100
Pr>F	0,9121	0,6062	0,0947	0,4659	0,0380	<0.0001

Table 6. Adjusted means of Countries in dependent variables

	Ease of use - analytical features	General ease of use	Usefulness of analytical features	Usefulness of communica- tion features	Results
Ecuador	4.50	5.22	2.94	2.79	84.02
Hong Kong	5.95	5.25	2.75	2.60	58.96
Taiwan	5.64	5.58	2.80	2.69	70.16
India	5.57	3.90	2.61	2.07	69.94
USA	5.93	4.63	2.66	2.05	64.40
Canada	5.99	4.37	2.59	2.16	63.49
Austria	6.00	5.26	3.02	2.37	56.72
Germany	6.06	5.09	2.49	2.38	65.27
Switzerland	6.24	4.62	2.38	1.99	77.20
Finland	5.88	4.79	3.29	2.32	65.28
Russia	4.74	4.87	2.67	2.58	71.00

Table 7. Influence of results on the assessment variables

Independent Variables:	SCORE	AGR	OPT
Dependent variable: Satisfaction with agreement (AGRSAT)			
Parameter	-0,0184	0,0212	-0,0725
F value	78,2500	0,0200	0,5800
Pr>F	0,0001	0,8969	0,4452
Dependent variable: Results met expectations (METE)			
Parameter	-0,0093	0,0227	0,0542
F value	15,0600	0,0100	0,2500
Pr>F	0,0001	0,9043	0,6195
Dependent variable: Perceived control during negotiation (CONTROL)			
Parameter	-0,0077	-0,0032	-0,1452
F value	18,1200	0,0000	3,1100
Pr>F	0,0001	0,9823	0,0780
Dependent variable: Perceived friendliness (FRNDLY)			
Parameter	-0,0047	0,1939	-0,1121
F value	4,7800	1,3100	1,3100
Pr>F	0,0292	0,2524	0,2530
Dependent variable: Satisfaction with one's own performance (PERF)			
Parameter	-0,0088	-0,0620	-0,1469
F value	19,6300	0,1600	2,6000
Pr>F	0,0001	0,6935	0,1070

Table 8. Assessment and intentions

ASSESS					
PRACTICE (Use for practice)					
Parameter	0,0223	Chi value	4,9378	Pr>Chi	0,0263
PREPARE (Use to prepare for actual negotiations)					
Parameter	0,0331	Chi value	13,8639	Pr>Chi	0,0002
NEGO (Use in actual negotiations)					
Parameter	0,0307	Chi value	14,7974	Pr>Chi	0,0001

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