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**(competitive paper)**

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# Gender Influences on Purchasing Negotiation: Objectives, Outcomes and Communication Patterns

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## Abstract

This paper analyses the results and processes of a considerable number of purchasing negotiation role plays (n=1159). It compares the objectives and results obtained and communication patterns used by men and women. Results show that male negotiators set themselves higher objectives than female negotiators, specifically under conditions of high competitiveness. Women on the other hand are more realistic when determining their negotiation objectives: they rather strive for mid range objectives. The outcome of the observed negotiations is higher for female negotiators, specifically under conditions of high and slightly less under conditions of medium competitiveness. Male negotiators are more likely to obtain mid range results. Female negotiators are more likely to reach no deal at all. Female negotiators use fewer tactics and more open communication patterns than male negotiators. All of the observed relationships are statistically significant, but relatively weak and should be considered as tendencies only.

**Key words:** purchasing negotiations, negotiation objectives, negotiation results, communication patterns, gender, role play analysis

## Educator and practitioner summary

Gender influences on negotiation patterns and results are substantial. Our research suggests that a mixed gender negotiation team is most likely to blend realism with high aims and harder tactics with softer open communication, thus achieving the best results. Multi-expertise research involving economists, linguists and sociologists should further investigate these tendencies in real life cases.

## Problem Statement

Research on the relationship between gender and negotiation success has resulted in mixed conclusions as to how both genders score differently and under which conditions this seems to be the case. This research mainly focuses on negotiations about individual pay or mediation situations and is seldom linked to commercial bargaining (Stuhlmacher and Walters, 1999). Moreover, gender is still a somewhat missing link in industrial relations research (Ardha, 2006), relying heavily on laboratory experiments. Real life case research is often missing (Matz, 2004). We would like to fill this gap partially by investigating the influence of gender on purchasing negotiations as observed in role plays in a business-to-business setting. Questions we would like to answer are:
  (a) In which way do objectives of male and female negotiators differ from one another?
  (b) In which way do results of male and female negotiators deviate from one another?
  (c) Is there a relationship between the cited objectives and realised results?
  (d) How does the communication pattern used and initiated at key exchange moments during the negotiation differ between male and female negotiators?
  (e) Do male and female negotiators use similar or different negotiation tactics?

**Previous research**

Research has drawn mixed conclusions concerning the success of women and men in negotiation situations (Rubin and Brown, 1975). Some studies suggest that men achieve more profits than women (Greenhalgh et.al., 1985; King and Hinson, 1994; Neu et.al., 1988; Stevens et.al., 1993). Gerhart and Rynes (1991) report that men negotiating a higher salary after receiving an actual job offer tend to reap more payoffs than women. Stuhlmacher and Walters (1999) contend that these differences in outcome are small but nevertheless constitute an important aspect of why women tend to hit a "glass ceiling" in their careers. In a computer simulated test situation the same result was observed by Stevens et.al. (1993). Other research seems to indicate that individual differences between negotiators (such as personality and gender) have no discernable effect on outcomes of the negotiations (King and Hinson, 1994). King and Hinson refer, amongst others, to laboratory experiments using game theory by Pruitt et.al. (1986). Recently, Craver (2002) and Pradel et. al. (2006) concluded that gender was not an accurate predictor of negotiation outcomes in more commercial settings. Some authors (Riley and Babcock, 2002) believe that these mixed results prove that gender does not directly influence negotiation outcome and that only the gender mix present in the negotiation dyad will play a role. Riley and Mc Ginn (2002) argue that gender in itself might not be the actual cause of the differences that sometimes observed, but rather, that gender acts as a trigger on negotiations to produce these differences. In summary, conclusions regarding gender differences in negotiation results appear to be based on a rather small amount of contradictory evidence.

The observed differences between both genders in the outcome of negotiations may be attributed to situational, perceptual and behavioural differences and to differences in negotiation style and communication mode (Stuhlmacher and Walters, 1999).

*Situational Differences*
Research indicates (Bowles et. al., 2005) that women and men are equally competent in "piece-rate" situations in which individuals work to maximize their own payoff without regard for others' performance. Men, however, outperform women in competitive environments in which payoffs are determined by comparing participants' results. It is not so that the pressure of competition causes women to perform less well, men rather step up their performance in competitive situations (Pradel et.al., 2006). Competitive negotiations thus act as gender triggers, consistent with the societal expectations that men are more likely than women to be competitive. This is more well-founded the more so that only individual goals and objectives are at play in the bargaining situation, such as in wage negotiations (Stevens et. al., 1993). Women are willing to set lower individual goals if, by doing so, common objectives can be reached more easily. As an "agent" of the common good, they generally portray themselves as gentler and kinder when mediating, but pay an individual price for it by achieving lower individual outcomes. Groups seem to work better for women (Croson et. al., 2008). In highly ambiguous situations, men seem to outperform women slightly, as they appear to be willing to take more risks (Comer et. al., 1995; Byrnes et. al., 1997).

The power situation of the negotiator also affects the outcome of the negotiation process. Watson (1994) argues that one would not expect highly successful outcomes from a negotiator of relatively low power status, nor would one expect poor outcomes from a high-power negotiator. As men are frequently associated with higher levels of status than women (Eagly, 1983), interactions involving mixed gender dyads often carry the implicit assumption that the man is the more powerful party of the two. Watson (1994) reviewed eight studies that

considered the effects of power and gender on negotiation outcomes. She found that gender had an effect in only one study, while power seemed to carry effects in all eight. She concluded that power was a better predictor of negotiation outcome than gender.

Another factor is the motivation which negotiators draw from the target they set themselves. Rubin and Brown (1975) and Riley and Babcock (2002) report that male negotiators set themselves higher performance targets than female negotiators and also achieve agreement payoffs which are significantly higher, both in ambiguous and high risk situations. Another study by Riley and McGinn (2002) inversely indicates that differences in target pricing, intended offers and agreement prices favouring male negotiators, diminish under conditions of lower ambiguity and when the perceived risk is lower. They match the results of studies suggesting that women tend to enter salary negotiations with lower pay expectations, which are then ultimately not even fully fulfilled (Major and Konar, 1984).

*Perceptual Differences*
Evidence suggests that women perceive themselves to be less deserving of rewards and compensation than men (Major et.al., 1984). When determining their own compensation or dividing profit between themselves and others, women consistently allocate fewer resources to themselves than men. Thus, they seem to have lower expectations of receiving profit in any negotiation. Moreover, women differ from men in the types of outcomes they value. Tannen (1990) states that women are more motivated by maintaining relationships, while men are more attracted by competition and status. Moreover, women's performance may be "devalued" in comparison to men's. This is supported by findings that (a) success by women tends to be attributed to external causes, (b) female performance is devalued relative to identical male performance and (c) women perceive their own job-related inputs as lower than men's (Stuhlmacher and Walters, 1999). Thus, to the extent that expectations and perceptions on being entitled to something lead to higher outcomes for negotiators, women will be less successful in negotiations than men in terms of individual outcomes. Furthermore, since women perceive themselves to be less powerful than men, they will achieve lower negotiation outcomes. The different power situation of men and women is thus both a predictor of outcomes and a self-fulfilling prophecy (Watson, 1994).

Some authors link this idea of "self-fulfilling prophecy" to the influence of stereotypical expectations by third parties on the outcome of the negotiation. The widely held stereotype that women are less effective at negotiating compared to men, will prove to be right in the end, because of this burden of the "stereotype threat" (Steele and Aronson, 1995). In a typical negotiation scenario involving buying a new car, for example, popular wisdom suggests that women bring a man to the dealer with them, so that they are "taken seriously" and given a fair share. Indeed, one audit revealed that car salespeople quoted women significantly higher prices than men (Ayres and Siegelman, 1995). Over and above any bias on the part of the dealer, women carry an additional burden, which is the possibility that anything they say or do will be interpreted in the light of the stereotype of women's inferior negotiating ability. Thus the stereotype activation leads to a female disadvantage at the bargaining table. People's behaviour is affected by the mere activation of a stereotype, or even by simply making a stereotype-relevant task diagnostic of the ability of the negotiator (Kray et. al., 2001).

In addition, men and women have a different perception on negotiation situations in general (Greenhalgh et. al., 1985). Eagly et.al. (1990) put forward that women make a more equilibrated judgement on the negotiation situation, based on more than just facts and figures or verbal cues. They internalise non-verbal cues and organisational circumstances much better

than men (Kemp and Smith, 1994), and are thus not always inclined to strive for the best results and outcomes all the time. They tend to set themselves more realistic outcomes, which leads to a more cooperative attitude during the negotiation. This may also account for the influence of preparation on negotiation outcomes, as observed by Dion et.al. (1997). The authors found that women obtain slightly better outcomes in business-to-business sales situations than men, when they have ample opportunity to prepare for all the details.

*Behavioural differences*
Some authors argue that men and women achieve different outcomes because of differences in their negotiation behaviour. Kimmel et al.(1980) report that women make less use of distributive tactics and show less interest in bargaining than men do. It is still a widely-held belief that females are more cooperative and less aggressive than males (Cook and Sloane, 1985; Gneezy et. al., 2003; Niederle and Vesterlund, 2007 and 2008), even at a very young age (Gneezy and Rustichini, 2004). This belief is supported in several studies using a variety of experiments, such as the Prisoner's Dilemma game (Mason et.al., 1991).

Research thus suggests that men are more likely than women to adopt a forceful style in both negotiation and mediation. Not all researchers agree on this, however. Neu et al. (1988) found no differences between male and female salespeople in their use of a "problem solving approach," a tactic described as cooperative and information seeking. In a buyer-seller negotiation experiment, Pruitt et al. (1986) found no differences in the tendency of men and women to engage in contentious behaviour in the presence of authority. Furthermore, there was no difference in the profits that men and women obtained, nor in their perceptions of the importance of "looking strong" (Neu et.al., 1988). This represents a minority view, however. Indeed, most research into gender differences in negotiator competitiveness (Walters et.al., 1998; Eckel et. al., 2008) found that women, in fact, display significantly more cooperative behaviour than men do. Moreover, they like cooperative situations more than their male competitors. Furthermore, they are less likely than men to enter hypercompetitive situations (Babcock and Lashever, 2003). The overall scale of this difference in attitude seems to be quite small, however. Cooperative and competitive behaviour in 62 studies varied partially under constraints such as limited response options or limited interpersonal contact (Stuhlmacher and Walters, 1999). In these circumstances gender differences were less distinct and sometimes even reversed. No clear overall pattern emerged, however.

Even if men and women have different negotiating styles, it is still very much unclear if these discrepancies really affect the outcomes of the negotiation. Some authors associate cooperation with ineffectiveness in negotiations. They argue that in cooperating, one party allows exploitation by the other, and accordingly this does not constitute good bargaining behaviour in terms of outcome (Bartos, 1970). Since women are slightly more cooperative and less "tough" in negotiations than men, the former argument leads to the conclusion that women are less effective negotiators than men. Counter to this, Womak (1987) and Dion et. al. (1997) note that a cooperative negotiation stance may be superior to a competitive orientation in negotiations, because it emphasizes good relationships between the parties in a negotiation. This will be particularly relevant in contexts where individuals who negotiate with one another, are engaged in long-term relationships, such as buyer-seller negotiations. Seeking to maximize one's own profit in any one bargaining episode may result in short-term gain, but may eventually prove harmful to a negotiator's bargaining position in future stages. Thus, cooperation may be a superior bargaining tactic because it offers a long-term perspective (Kemp and Smith, 1994; King and Hinson, 1994) and mutual long-term gains.

Due to their more cooperative attitude in bargaining, women largely outperform their male counterparts in commercial negotiation settings according to these authors.

*Differences in communication patterns*
The more cooperative style used by women in negotiations is certainly reflected by the open communication patterns they generally use. Sociolinguistic research has shown that women are better listeners than men in conversations, both in commercial and non-commercial settings (Coulmas, 1997; Lakoff, 2001). Furthermore, women are more willing to let other speakers into the conversation or to allow an other speaker to dominate the discussion (Coates, 2003). Women send out and look for signs of agreement, and adjust what they say to the speech of others. They are careful to respect each other's turns in speaking and tend to apologise for talking too much (Lakoff, 2001). As a consequence, they interrupt others less when they are speaking (Zimmerman and West, 1975) and send out more indirect signals of agreement or disagreement to those who are speaking (Tannen, 1994). Indeed, in mixed-gender conversations men interrupt women more, as a result women are less able to complete their turns and tend to talk less. In addition, women make more use of silences (Zimmerman and West, 1975). They acknowledge what the current speaker says and generally encourage her/him to go on (Coates, 2003; Holmes, 2001). Men finally like to argue, more than women do (Poynton, 1985), particularly with other men. Furthermore, they change topics more frequently in conversations (Zimmerman and West, 1975), while women focus on one element of the discussion for a longer period of time. In their research on negotiations, Pinkerton (1986) and Vine and West (1978) have classified most of these communication elements as being "open" in nature as opposed to "closed" patterns such as arguing, interruption, not answering and giving closed responses or offers. In this paper we will use their classification to indicate the above open conversation style used more frequently by women than by men.

**Hypotheses Building**

Gender differences in perceptions, behaviours, and situations have all been related to negotiation outcomes and styles in non-bargaining situations, such as courtroom discussions to intermarital conflict. Very often experiments were used when research pertained to commercial conflict resolution, real life cases or role plays were rarely observed, however (Matz, 2004). We would like to check whether some of the established results are also relevant to the purchasing side of a business-to-business dyad. In this section we will describe the logic of the hypotheses to be tested.

*Influence of gender on setting negotiation objectives.*
As men tend to be willing to dominate more than women (Kimmel et.al.,1980; Bowles et.al., 2005; Kemp et.al., 1994) and clearly act in a more competitive way (Walters et.al., 1999), they are expected to be more willing to take greater risks when setting negotiation objectives (Riley and Babcock, 2002).

> **H1:** Male negotiators tend to set themselves relatively higher objectives for negotiations than female negotiators.

On the other hand, when male negotiators are faced with very difficult negotiating situations in which only slim chances of success exist, they will assess the situation as dangerous to

their ego (Bartos, 1970; Kray et.al., 2001) and blame possible negative results more on the situation than on their own negotiation ability or style. Thus they will prepare for poor results in their objective setting in order to preventively divert potential low outcomes to the "negative" situation they are faced with. Women, on the other hand, will still try to make the best of the situation on the basis of their assumption that good relationships will work out anyway in the end (Watson, 1994).

**H2:** Women will set themselves low objectives with a higher probability than men.

This hypothesis is also matches the idea that women set themselves more "equilibrated" and realistic objectives (Kemp et.al., 1993; Riley and Babcock, 2002).

As women want relationships to be positive, but not at any expense (Womak, 1987), they will go over all details of the basic data matrix more carefully, which influences the possibilities of a particular negotiation. Thus they will be more realistic in their goal setting and reflect the variety of situations better in their objectives than their male counterparts.

**H3:** The probability that female negotiators set themselves mid-level objectives is larger than for male negotiators.

*Influence of gender on negotiation outcomes*
Female negotiators are more focused on the main objectives of the negotiation venture. They will not readily jump from one topic to another during the whole of the negotiation process (Pradel et.al., 2006). They will be more engaged in the process and will want to achieve the cited results more fervently than their male counterparts. This fact is enhanced by the reality hat women are aware that they have to be more performing than men in any business venture (Steele, 1997; Ayres and Siegelman, 1995) to be appreciated equally much, amongst others because of their lower power status. Moreover, as their objectives are more "realistic" (see H3), they will stick to them more tenaciously. Dion et. al. (1997) concluded that female sales negotiators tend to achieve better results than their male counterparts.

**H4:** The probability that female purchasing negotiators will achieve high results is larger than for male negotiators.

The motivational fact that women are willing and capable of breaking stereotypically anticipated role patterns more than ever before in history, can only support this hypothesis, as does the fact that such behaviour and results are not really expected from them due to the "stereotype threat" (Kray et. al., 2001). This will act in their favour when they are faced with male counterparts, as it constitutes an element of surprise in the negotiation.

It is an established a fact that the ambiguity and risk involved in the situation will play a role in determining the outcome. As Major and Konar (1984) and Riley and Babcock (2002) have observed, under conditions of high stress and ambiguity, men seem to outperform women.

**H5:** The significance of H4 will be lower under conditions of high competitiveness than under conditions of lower competitiveness.

The tenacity of female negotiators also presents an important drawback in bargaining (Riley and Mc Ginn, 2002). It often leads to negotiations being stalled. Deadlock in negotiations constitutes a kind of first indication of later failure. Communication experts (Pinkerton, 1986;

Pruitt and Carnevale, 1993) indicate that only a drastic change of direction can unlock a deadlocked negotiation by either changing the topics addressed or the negotiators themselves. As both changes did not rank among the available options in our role plays and only a time-out could be organised, we have a good indicator of the relationship between gender and negotiation failure.

> **H6:** The probability that female negotiators achieve a no deal result is larger than for male negotiators.

*Influence of gender on communication exchanges and tactics used*
As verbal communication exchanges are more closely linked to the real problem solving mode than tactics, using them is considered to be "softer" towards the people involved in the negotiation (Pruitt and Carnevale, 1993). Since women are expected to try to solve problems rather via the establishment of interpersonal relations than men (Womak, 1987), we can expect them to be more inclined to use real communication exchanges than tactical tricks during the negotiation process. Since these exchanges are considered more cooperative, they are more similar to female negotiation behaviour than to male behaviour according to Neu et. al. (1988). This theory is also supported by the cited sociolinguistic research of Mesthrie (2000) and Coates (2003), according to which women seek agreement and try to find real answers to questions more than men do.

> **H7**: Female negotiators will use communication exchanges more frequently and tactics less frequently during negotiations compared to their male counterparts.

We have subdivided the communication exchanges in nine different categories in our research, according to the models previously proposed by Vine and West (1978) and Pinkerton (1986). They are: asking for proposals, open offers, closed offers, asking for clarification and giving clarification, and supporting (all regarded as rather open verbal communication types), counterarguing, not agreeing, not responding and interrupting, which are regarded as more closed and competitive verbal cues in conversation. Given the sociolinguistic research results previously mentioned, we can expect women to be more prone to using open communication patterns more frequently than men during the bargaining process (Coates, 2003; Coulmas, 1987; Holmes, 2001; Lackoff, 2001; Poynton, 1985; Siegler and Siegler, 1972; and Tannen, 2003).

> **H8:** Female negotiators will use open communication exchanges (such as asking for proposals, using open offers, using closed offers, asking for clarification, giving clarification and supporting) more frequently and closed communications (interrupting, not agreeing and not responding) less frequently than their male counterparts.

Not all tactics are equally competitive in a negotiation (Vine and West, 1978). Since women were found to exhibit less competitive behaviour than men in most situations (Walters et. al., 1998), they will only use the harder tactics on the other party as a kind of last means to increase pressure. Thus:

> **H9:** Female negotiators will use less competitive tactics more frequently and more competitive tactics less frequently than their male counterparts at key moments during the negotiation process.

**Methodology**

Most research in negotiation relies on game theory experiments. This has led some authors to state that we know very little about real negotiations since real life cases are rarely used in this stream of research (Matz, 2004). On the other hand, observation of real life cases is very difficult as many companies or players do not like the details of the cases to be published for security reasons. Moreover, comparative results can only be obtained if real triangulation (Eisenhardt, 1989; Miles and Huberman, 1994) efforts are performed, thus involving the willing participation of both parties and of all participants in the process. In this way, the period of observation is extended or it is made nearly impossible to obtain valid data.

We have tried to find a middle way between both types of research. Over a period of 19 years (from the end of 1988 until mid 2007) one of the researchers has systematically recorded the stated objectives, achieved results, used tactics and main communication exchanges in negotiation role plays during purchasing training sessions. All these negotiation courses were held in either Flanders or the Netherlands, thus limiting the possible effect of cultural differences on the observed facts. By this method we were able to gather comparative data as the same cases were used several times and we could also observe more real life negotiation patterns by the players involved. In general, 1159 games of 11 different negotiation role plays in a business-to-business context (see addendum 1) were played in this long period of time by over 3000 players. In 382 of these games (or 32,95 %) the purchasing negotiator was a woman, in 777 it was a man.

Each of the games was either videotaped or audio recorded. The results of these games have been systematically coded by the trainer together with the participants. We have deliberately not observed the activities of the dyad at play, but only those <u>initiated by the purchasing side</u>. As a consequence, we did not record data on the gender of the sales partner with whom the buyer was sitting at the bargaining table, which unfortunately makes it impossible to investigate whether gender differences are enhanced or mitigated in a certain way by the combination of gender roles present in the negotiation. The following procedure for collecting and coding the data was used. Each of the playing groups was asked to indicate whether the game was considered to be competitive in nature (on a 7 point scale) and which were the objectives in terms of total cost calculation. For each of the separate games the average competitiveness (from high to low – see annex 1). The game objectives and results were calculated over all identical case situations using the normal distribution parameters of the total cost objectives and results (average and standard deviation). The subdivision in categories was executed according to the table below.

| Subdivision of results/objectives | |
| --- | --- |
| High | > mean + 2σ |
| Medium High | ≥ mean + 1σ and ≤ mean + 2σ |
| Medium | ≥ mean + 1σ and ≥ mean - 1σ |
| Medium Low | ≥ mean - 1σ and ≥ mean - 2σ |
| Low | < mean - 2σ |

An extra category of results, the "no deal" category, was added, as some games ended in failure.

For each game, the communication pattern was coded at "<u>key moments</u>" during the negotiation. Leary (2004) defines them as: "Events and exchanges that are "critical" are distinguished from more usual ways of working in that they carry urgency. They are turning

points." This definition completes the one used by Morris and Wheeler (2001): "Critical moments in negotiation are occasions of interactive engagement and intense emotional experiencing in which the negotiation takes a different turn." Druckman (2001) indicates that these moments can only be identified by retrospective analysis, a method we applied, because the identification took place with the help of the participants after completion of the game. At the same moment the tactics and the communication exchanges used were also coded. This coding was based on a list of tactics and communication patterns (closed offers, open offers, asking proposals, asking clarification, clarifying, counter-arguing, disagreeing, supporting and interrupting) used in many negotiation training sessions and defined by Vine and West (1978). In total, 3421 tactics and 5807 communication exchanges were coded.

To overcome the main critique often mentioned about "qualitative" research, namely the lack of methodological rigor (Yeung, 1995) and the presence of subjectivity, we crosschecked the coding carried out by the participants themselves with a coding performed later by a multiple background panel. The second coding constituted a kind of data source triangulation (Yeung, 1995). Our "second" panel of "experts" consisted of two communication experts, a negotiation practitioner who did not participate in the game itself, a trained psychologist and a radio news journalist. The panel also checked the calculation of the stated objectives and achieved results. Objectivity was also increased because there was always a time lapse between the moment the game took place and the review moment by the panel. Both interpretations of the data were compared. Reinterpretation was done if both codings were not identical (6,7 % of all cases) and the reinterpreted data were used in our analysis.

Most of the thus obtained data are summarized into cross-tabulations between a number of variables observed during the games, such as the competitiveness of the case situation as identified by the participants, their stated objectives and obtained results and the coded events. The data collected from the survey were analysed using the Statistical Package for the Social Sciences (SPSS) Version 15. The significance level ($\alpha$) for the main statistical tests was set at .05. A more stringent significance level ($\alpha = .01$) was used to protect against inflating the Type 1 error rate. The categorical data was analysed using a variety of non-parametric tests:

- Chi-square ($\chi2$) tests were used to test for the independence of categorical variables.
- The strength of association between categorical variables was measured using either the phi ($\varphi$) coefficient (for 2 × 2 tables) or Cramer's V coefficient (for tables larger than 2 × 2).
- Other non-parametric methods, such as Somers'd (for ordinal by ordinal data), were used to analyse whether a dependency relationship exists. The "gender" categorization was used as the dependent variable.
- In order to better understand what the relationship between variables looks like, analyses were undertaken within each variable using an adjusted standardised residual statistic (ASR). The ASR indicates the relative difference between the observed and expected frequencies for a particular cell, adjusted for row and column totals, and divided by an estimate of their standard deviation. This statistic can be used to identify those cells with observed frequencies significantly higher or lower than expected. Adjusted standardized residuals are approximately normally distributed with a mean of 0 and a standard deviation of 1, and can be interpreted as z-scores (Haberman, 1978). To illustrate, there is only a 5-percent chance of an ASR value larger than 1 .96 or less than -1.96 occurring if the observed frequency in a cell is only a random variation from the expected value. If the value is larger than 1 .96 or less than -1.96, we can assume that the number of cases in the cell is significantly different from the expected value, and that there is a significant relationship between the two cross-classified variables (with $\alpha = 5$ %).

**Findings**

The verification of our first three hypotheses can be done simultaneously by analysing table 1a. The results of the statistical tests indicate that there is a significant relationship between the level of objectives of the purchasing negotiators and their gender, albeit at the α = .05 level. The relationship is not very strong as indicated by the value of Cramers' V. Additionally, Somers'd shows that there is no monotone relationship. Indeed, from the adjusted standardised residuals we can conclude that female negotiators are less likely to set high and low middle level objectives, whereas male negotiators are less likely to set themselves middle level objectives. High middle and low level objectives are equally probable to be set by female or male negotiators. Although the relationships between the analysed variables are weak, we must accept H1 and H3. However, since H2 assumes that male negotiators are more likely to set themselves low objectives, this hypothesis must be rejected.

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Insert Table 1a and 1 b here
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We can try to find out under which circumstances the observed relationships are more likely to be present. To analyse this, we have used a layered approach to the chi-square testing of the cross-tabulations of relationships between the variables 'gender', 'competitiveness of the situation' and 'objectives of the negotiator' (table 1b). The non-parametric statistical tests indicate that only in situations of high competitiveness the relationships are statistically significant, be it again only at the 95 % level (α = .05). Consequently, the fact that H1 and H3 are supported is mainly due to the statistical significance of the observed relationship in circumstances of high competitiveness. The value of Cramers' V indicates the weakness of the relationship. Somers'd is positive, which signifies that the relationship is monotone and higher objectives are thus more probable with male negotiators and middle or lower objectives more probable with female negotiators. From the adjusted standardised residuals we can conclude that high objectives are more probable with male negotiators and middle objectives more probable with female negotiators under conditions of high competitiveness.

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Insert Table 2a here
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With regard to negotiation results we put forward that the probability of female purchasing negotiators achieving high results is larger than for male negotiators (H4). We verify this by analysing table 2a. The statistical tests indicate significance even at the α = .01 level. The low value of Cramers' V shows that the relationship must be considered weak. Somers'd is not significant, so the relationship is not monotone. High and medium results are more probable with female negotiators as well as low, low middle and no deal results. Medium results on the other hand are more probable with male negotiators. Thus, next to accepting H4, we can also pretend that male negotiators are more probable to obtain mid range results than female negotiators. Moreover, ASR only reaches the threshold values 2 or -2 for the high and middle results. This means that the observed statistical significance between both genders is mainly due to different probabilities in those two categories of results.

The subdivision of the variable 'objectives set by the negotiator' is categorical in nature except for the possibility of achieving no result. It is consequently relevant to investigate whether the observed associations still exist if we did not take the no deal category into account. This is analysed in table 2b. We can conclude that the relationship does not change substantially when the 'no deal' category is omitted from the variable 'results'. The

statistically significant relationship between the variables 'gender' and 'result' remains identical. Cramers' V still indicates the weakness of this relationship and Somers' d reveals its non-monotone character.

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Insert Table 2b and 2c here
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We can analyse under which competitiveness conditions the relationship between 'gender' and 'results' is more likely to be significant, using a layered chi-square testing approach (table 2c). The non-parametric statistical tests of this contingency table indicate that the observed relationships are only significant under conditions of medium competitiveness, this only at the $\alpha = .03$ level. Thus H5 must be rejected. The nature of the observed significance is weak given the low values of Cramers' V. Somers'd is not significant for both high competitive and medium competitive situations, indicating a non-monotone relationship. This is identical to what we observed in table 2b and confirms H4: higher results are more probable with female negotiators and middle or lower objectives more probable with male negotiators. Based on the the adjusted standardised residuals we can infer that male negotiators tend to achieve more mid-range results than female purchasing negotiators, whereas female negotiators tend to achieve higher results than their male counterparts under conditions of high competitiveness or more "high medium" results under conditions of medium level competitiveness.

Finally, we hypothesise that the occurrence of a no deal situation is more frequent when the purchasing negotiator is a woman (H6). The statistical test in table 3 indicate a significant relationship between the variables "gender" and "result is deal or no deal", but only at the $\alpha = .05$ level. The value of Cramers' Phi is low, so this relationship is weak. The ASR show that the direction of the probability assumed in H6 is correct. Thus H6 can be accepted.

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Insert Table 3 here
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H7 suggested that male negotiators would proportionally use more tactics than communication exchanges, whereas the inverse would hold true for female negotiators. The ratio of communication exchanges over tactics used at key moments during the negotiation seems to support this hypothesis (for male negotiators the ratio is 1.56, whereas it equals 2.14 for female negotiators). The ratio of tactics per case is 3.14 for men and only 2.56 for women; the ratio of communication exchanges per case is 4.78 for men versus 5.48 for women. Statistical analysis of table 4 indicates that there is indeed a significant relationship between the 'type of observed event' and the 'gender of the negotiator' at the $\alpha = .01$ level. The relationship is not very strong as is indicated by Cramers' Phi. The value of the ASR indicates that men are more likely to use more tactics than communication exchanges. H7 is supported.

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Insert Table 4 and Table 5 here
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H8 proposes that women are more likely to use more open communication exchanges than men and vice versa. We verify this using contingency table 5. Again, a significant relationship between the variables 'gender' and 'openness of the communication exchanges' exists at the $\alpha = .01$ level. The relationship is weak (Cramers' Phi) and monotone (Somers' d). Thus H8 can be accepted.

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Insert Table 6 here
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H9 assumes that female negotiators are more likely to use less competitive tactics than their male counterparts and vice versa. The non-parametric tests in table 6 indicate a significant relationship between 'gender' and 'competitiveness of tactics'. The value of Cramers'V (lower than 0.300) indicates that the relationship is relatively weak. Furthermore, Somers'd is negative, which indicates that the relationship is monotone. Indeed, men seem to use high and medium high competitive tactics more than women, while women tend to use medium low and low competitive tactics more than men. In both cases, the deviation is, relatively speaking, much higher at the ends of the spectrum than in the middle, which is indicated by the values of the adjusted standardised residuals. Thus, although the relationship is rather weak, H9 can be accepted.


## Conclusions and Interpretation

Male negotiators tend to set themselves higher objectives than female negotiators, specifically under conditions of high competitiveness (H1). However, they do not set themselves low objectives more regularly (H2 rejected). Women, on the other hand, are much more realistic when determining their negotiation objectives: they tend to set themselves much more mid range objectives (H3). The outcome of the negotiations we observed is much higher for female negotiators than for male negotiators (H4), specifically under conditions of high (H5 rejected) and a little less under conditions of mid-level competitiveness. Male negotiators are more likely to obtain mid-range results. Female negotiators are more likely to reach no deal (H6). Furthermore, female negotiators use communication exchanges more frequently than their female counterparts, whereas the opposite holds true for tactics (H7). Open communication is more frequently used by female negotiators, whereas closed communication is preferred by male negotiators (H8). Women tend to use less competitive tactics more often (H9), while men use more competitive tactics more frequently. All of the observed relationships are weak and not always significant at the 0.01 significance level.

The conclusions of this study deviate in part from what was previously observed (Stuhlmacher et. al., 1998; Riley and McGinn, 2002; Craver, 2002; Babcock and Lashever, 2003 and Pradel et. al., 2006), since most researchers found no evidence of gender differences in negotiation outcome and competitiveness of behaviour in negotiations (Pruitt, 1986; Neu et.al. 1988). In that respect our results support some research results of game theory (Cook and Sloane, 1985). Our research also confirms the assumptions commonly held by most research about the different communication styles used by men and women, showing women to be more committed than men to cooperative communication modes (Coulmas, 1997; Poynton, 1985; Lakoff, 2001). Moreover, they foster a more cooperative attitude towards their interlocutors through frequent signs of comprehension and support (Siegler and Siegler, 1975; Fasold, 1990) and by involving them actively in the discussion using open ended propositions (Tannen, 1994). The contradictory nature of our results may be due to the specific research method we used, namely the observation of role play situations, whereas most other researchers used an experimental approach. The phenomenon may also be explained by the fact that we observed only one side of the commercial negotiation table, namely the buying side, whereas other research takes both sides of the equation into consideration or investigates totally different situations. Finally, other factors that were not taken into account in our research such as age, power status or work experience may also lie at the basis of this discrepancy. After all, many writers have found mixed results on how gender differentiates the negotiation outcome.

The deviation from previous research results, as well as the fact that most of the statistical tests indicate weak relationships and statistical significance mainly at the $\alpha = .05$ level, anyway strengthen the observation that one has to be very careful when interpreting these results. We therefore prefer to talk about trends, not about causal relationships.

We will <u>try to explain</u> these tendencies, however. In our view, female negotiators consider their jobs even more seriously than male negotiators. This can be explained by the fact that in business female professionals still have to prove themselves much more than their male counterparts, which will lead to a much more focused approach to the negotiation task. This will cause realism in stating objectives. Moreover, these objectives will not be excessively high and, consequently, also safe for the negotiator: it might very well be an intelligent way of avoiding to disappoint people higher up in the hierarchy. At the same time, being scrutinised more by superiors might incite female negotiators to outperform their male counterparts, which may explain the higher probability of better results (Dion et. al, 1997; Ecker et. al., 2008; Niederle and Vesterlund, 2008). This explanation is supported by the fact that women tend to reach a no deal result a little more frequently than men as well: if one is very focused and motivated to perform, one might be more tenacious during the negotiation itself. Sticking longer and more consciously to objectives might be regarded by the interlocutor as inflexible behaviour and, consequently, lead to failure. It also supports the view expressed by Gneezy et. al. (2003) that, more than men, women display a tendency to shy away from very competitive situations, but try to perform better when going for it.

Another potential explanation for the trends we observed might be that women show more cooperative (Cook and Sloan, 1985; Frank et. al., 1991; Gneezy and Rustichini, 2004; Niederle and Vesterlund, 2007) negotiation behaviour than men, which is supported by their better performance in groups (Eckel et. al., 2008). Since some research suggests that cooperation may be a superior bargaining tactic because it offers a long-term perspective (Kemp and Smith, 1994; King and Hinson, 1994) and mutual long-term gains, women may indeed outperform their male counterparts in negotiations due to their more cooperative attitude.  In as far as cooperation can be considered the better approach to negotiations, our research logically observes women to reach relatively more high results than men. This potential link between style and results would indicate that an open and softer, yet resolute approach to negotiations, promises to be the most fruitful one. Nevertheless, it constitutes a highly controversial research topic, which should be researched in more depth.

**Implications for management and ideas for further research**

The observed differences between men and women in setting objectives, obtaining results and using communication patterns in purchasing negotiations are important for both business practitioners and researchers.

It seems obvious that women are still playing a role too limited in both sales and purchasing functions, in spite of their growing number in those functions. Based on the observed results, their potential far exceeds the position they normally take in these functions. Companies might forego huge opportunities as women seem to outperform their male counterparts when negotiating. Business practitioners should also be aware that, although the observed tendencies in negotiation objectives and negotiation outcome are researched in external negotiations, these tendencies might be relevant to the stance that both men and women take

in underline internal conflict resolution as well. The role of mixed gender teams thus becomes more important at every level and in any function of any company. In this respect, this research certainly provides further evidence of the importance of "breaking the glass ceiling" in women's careers.

Commercial managers should acknowledge the observed tendencies and make the best use of them in trying to obtain good commercial deals. The awareness that in objective setting men and women seem to blend high aspirations (high objectives set by men), realism (mid range objectives set by female negotiators) and tenacity (better results and failure are more obtained by female negotiators) with a feeling to close deals when they are on the table (mid range objectives more obtained by men), is extremely useful. Blending the communication styles (open for women and more closed and with more emphasis on tactics for men) of both genders could prove to be wise as well. This implies a radical change from actual buying practice as most negotiations are solitary exercises of individual buyers due to time and personnel restrictions. In our eyes, implementation of this team approach should at least start with the most important negotiations in purchasing and should pertain to both preparation and execution of these negotiations.

Negotiation trainers and practitioners can also learn from this research. They should first concentrate on teaching and learning about the importance of preparation in objective setting. Furthermore, it is important to focus as much as possible on the use of more open communication styles and on emphasising the importance of using less competitive tactics more frequently than is often the case now. Endless exercises in negotiation training on how to use tactics and how to avoid falling into their traps are valid, but they should be framed in a setting which fosters assertiveness. In reality, purchasing managers should also focus more on communication than on tactics in their mentoring process of newly hired buyers. The hiring of "open minded" employees in purchasing (and in sales as well), is important. It should be reflected by the profiles companies are willing to hire.

For researchers, the proposed explanations of the observed tendencies constitute new hypotheses, which have to be verified by a combined in-depth research effort of commercially-oriented and sociological researchers. Sociological research can better relate results to how men and women behave in various conditions, whereas marketing researchers would be better at interpreting these data more from the angle of practical negotiation aspects. A research venture using in-depth interviewing of participants in negotiation cases before and after the case or game is appropriate in this respect.

Looking further into the different negotiation styles that men and women display, is certainly another worthwhile research venture. An analysis, using real-life cases as a basis for observation, no matter how difficult this would be to accomplish, would be extremely welcome. It could eventually rule out the fact that either the game theory approach (used by other researchers) or the role play research method (which we applied) influences the obtained results. The lack of this type of research in negotiation literature is striking and unfortunate (Matz, 2004). Analysing the communication patterns that men or women are more likely to use in detail is an interesting research avenue using this case-based research method. It could help in explaining why some of the observed tendencies exist. A multi-expertise team effort involving economists, sociologists and linguists is needed for this research, since it can only bear fruit if the results of previous sociolinguistic research are also taken into account.

# References

Araujo, L., Dubois, A., Gadde, L.E., 1999. Dyadic Business Relationships within a business network context. Journal of Marketing, 58(1), 1-15.

Ardha, D., 2006. Gender: the missing link in industrial relations research. Industrial Relations Journal, 37(4), 329-343.

Ayres, I., Siegelman, P., 1995. Race and gender discrimination in bargaining for a new car. The American Economic Review, 85 (3), 304–321.

Babcock, L., Laschever, S., 2003. Women don't ask: Negotiation and the gender divide. Princeton, NJ: Princeton University Press.

Bowles, H.R., Babcock, L., McGinn, K.L., 2005. Constraints and Triggers: Situational Mechanics in Gender Negotiations. Journal of Personality and Social Psychology, 89(6), 951-965.

Byrnes J. P., Miller, D.C., Schafer, W.D., 1999. Gender differences in risk taking: A meta-analysis. Psychological Bulletin, 125: 367–383.

Coates, B., 2003. Women, Men and Language: a Sociolinguistic Account of Sex Differences in Language. 3rd edition, Longman, London, U.K.

Cook, H., Sloane, J., 1985. Locus of control and cooperative behaviour. Journal of Social Psychology, 125(4), 619-630.

Coulmas, F., 1997. The Handbook of Sociolinguisitics. Blackwell Publications, Oxford, U.K.

Craver, C.B., 2002. Gender and Negotiation Performance. Sociological Practice: A Journal of Clinical and Applied Sociology, 4(3), 183-193.

Comer, L. B., M.A. Jolson, Dubinsky A.J., Yammarino, F.J., 1995. When the Sales Manager Is a Woman: An Exploration into the Relationship Between Salespleple's Gender and Their Responses to Leadership Styles. Journal of Personal Selling, 15(4), 17-32.

Croson R., Marks, M., Snyder, J., 2008. Groups Work for Women: Gender and Group Identity in Social Dilemmas. Negotiation Journal. 24(4), 411-427.

Dubois, B.L., Crouch, I., 1972. The Question of Tag Questions in Womens' Speech: They don't really use more of them, do they? Language and Sociology, (4), 289-294.

Druckman, D., 2001, Turning Points in International Negotiation: A Comparative Analysis. Journal of Conflict Resolution, 45 (4), 519-544.

Dion, P.A., Easterling, D., Javalgi, R., 1997. Women in the Business-to-Business Salesforce: Differences in Performance Factors. Industrial Marketing Management, 26(5), 447-457.

Eckel, C., de Oliveira, A., Grossman, P.J., 2008. Gender and Negotiation in the Small: Are Women (Perceived to Be) More Cooperative than Men? Negotiation Journal, 24(4), 429-445.

Eisenhardt, K.M., 1989, Building Theories from Case Study Research. Academy of Management Review, 14 (4), 532-550.

Eagly, A.H., 1983. Gender and social influence: A social psychological analysis. American Psychologist, 38(6), 971-981.

Gerhart, B., Rynes, S., 1991. Determinants and consequences of salary negotiations by male and female MBA graduates. Journal of Applied Psychology, 76(4), 256-262.

Greenhalgh, L., Neslin, S.L., Gilkey, R.W., 1985. The effects of negotiator preferences, situational power, and negotiator personality on outcomes of business negotiations. Academy of Management Journal, 28(1), 9-33.

Gneezy, U., Niederle, M., Rustichini, A., 2003. Performance in competitive environments: Gender differences. Quarterly Journal of Economics, 118(3): 1049–1074.

Gneezy, U., Rustichini, A., 2004. Gender and competition at a young age. *American Economic Review Papers and Proceedings,* May, 377–381.

Haberman, S. J., 1978. The analysis of qualitative data, New York : Academic Press.

Holmes, J., 2001. An Introduction to Sociolinguistics, Harlow Publications, Longman, London, U.K.

Kemp, K.E., Smith, P.W., 1994. Information exchange, toughness, and integrative bargaining: The roles of explicit cues and perspective taking. The International Journal of Conflict Management, 5(1)*,* 5-21

King, W.C., Miles, E.W., Kniska, J., 1991. Boys will be boys (and girls will be girls): The attribution of gender role stereotypes in a gaming situation. Sex Roles, 25 (6)*,* 607-623.

Kimmel, M.J., Pruitt, D.G., Magenau, J.M., Konar-Goldband, E.K., Carnevale, P.J.D., 1980*.* Effects of trust, aspiration, and gender on negotiation tactics. Journal of Personality and Social Psychology, 38(1), 9-22.

Kray, L.J., L. Thompson and A.D. Galinsky, 2001. Battle of the sexes: Gender Stereotype Activation in Negotiations. Journal of Personality and Social Psychology, 80(6), 942-958.

Kray, L.J., Galinsky, A.D., Thompson, L., 2002. Reversing the Gender Gap in negotiations: An exploration of Stereotype Regeneration. Organisational Behaviour and Human Decision Processes, 87(2), 386-410.

Lakoff, R.T., 2001. Language and Women's Place. The Language War, Harper and Row, New York, U.S.A.

Leary, K., 2004, Critical Moments in Negotiation. Negotiation Journal, april, 143-145.

Maltz, D., Borks, L., 1982. A Cultural Approach to Male-Female Miscommunication. Language and Social Identity, 195-216.

Mason, C. F., Phillips, O. R., Redington, D. B.,1991. The role of gender in a non-cooperative game. Journal of Economic Behavior and Organization, 15(3), 215-235.

Matz, D., 2004. How Much Do We Know About Real Negotiations? Problems in Constructing Case Studies. International Negotiation, 9 (3), 359-374.

Mesthrie, R., 2000. Introducing Sociolinguistics, Edinburgh University Press, U.K.

Muller, E., 2001. Report on Job Analysis to Update the CPM and Accredited Purchasing Practioners Examinations. CAPS, 1-108.

Neu, J., Graham, J.L., Gilly, M.C., 1988. The influence of gender on behaviors and outcomes in a retail negotiation simulation. Journal of Retailing, 64(4)*,* 427-451.

Niederle, M., Vesterlund, L., 2007. Do women shy away from competition? Do men compete too much? Quarterly Journal of Economics, 122(3): 1067–1101.

Niederle, M., Vesterlund, L., 2008. Gender differences in competition. Negotiation Journal, 24(4), 447-463.

Pinkerton, J., 1986. Purchsing and negotiation Tactics and Strategies. AHI report, 286 pp.

Poynton, K., 1985. Language and Gender: Making the Difference, Oxford University Press, Oxford, U.K.

Pradel, D.W., Bowles, H.R. McGinn, K.L., 2006. When does gender matter in negotiations? Contract Management, 46(5), 6-10.

Pruitt D.G., Carnevale, P.J.D., Forcey, B., Van Slyck, M.V., 1986. Gender effects in negotiation: Constituent surveillance and contentious behaviour. Journal of Experimental Social Psychology, 22(3), 264-265.

Rubin, J. Z., Brown, B.R., 1975. Bargainers as individuals, The social psychology of bargaining and negotiation. New York: Academic Press, 157-196

Riley, H.C., Babcock, L., 2002. Gender as a situational phenomenon. Cambridge, Ma: Kennedy School of Government and Harvard University, Working Paper, 36 pp.

Riley, H.C., Mc Ginn, H.R., 2002. "When does gender matter in Negotiation? Cambridge, Ma.: Kennedy School of Government and Harvard University, Working Paper, 31 pp.

Sassaman, K.E., Anderson, D.G., 1997. Studies in Interactional Sociolinguistics, vol. 14.

Steele, C. M., Aronson, J., 1995. Stereotype threat and the intellectual test performance of African Americans. Journal of Personality and Social Psychology, 69 (4), 797–811.

Stevens, C.K., Bavetta, A.G., Gist, M.E., 1993. Gender differences in the acquisition of salary negotiation skills: The role of goals, self-efficacy, and perceived control. Journal of Applied Psychology, 78(6), 723-735.

Stuhlmacher, A.F., Walters, A.E., 1999. Gender Differences in negotiation Outcome: a Meta-Analysis.  Personnel Psychology, 52(5), 653-677.

Swacker, T., 1975. The Sex of the Speaker as a Sociolinguistic Variable. in Thorne and Herley (eds.) Language and Sex: Difference and Dominance, Newbury House, Massachusetts, U.S.A., 76-83.

Tannen, D., 1994. Gender and Discourse, Oxford University Press, Oxford, U.K.

Vine, M.R., West, R., 1978. Negotiation Tactics which lead to more profitable results. AMA Review, 186-199.

Watson, C. 1994. Gender differences in negotiating behavior and outcomes: Fact or artifact? In Taylor A.,  Beinstein-Miller J. (eds.), Conflict and gender. Cresskill, NJ: Hampton
Press.

Walters, A.E., Stuhlmacher, A.F., Meyer, L.L., 1998. Gender and negotiator competitiveness: A meta-analysis. Organizational Behavior and Human Decision Processes, 76(1), 1-29.

Wheeler, M., Morris, G., 2001, A Note on Critical Moments in Negotiations. Harvard Business School Note nr. 9-902-163, 19 p.

Womak, D.F., 1987.  Cooperative behavior by female negotiators: Experts or masochists? in Nadler L.B., M.K.Nadler and W.R. Mancillas (eds,), Advances in gender communication research. New York: University Press of America.

Yeung, H., 1995. Qualitative personal interviews in international business research: Some lessons from a study of Hong Kong transnational corporations.  International Business Review, 4 (3), 313-339.

Zimmerman, D., West, C., 1975. Sex Roles, Interruptions and Silences in Conversation. in Thorne and Herley (eds.) Language and Sex: Difference and Dominance, Newbury House, Massachusetts, U.S.A., 105-119.

**Annex 1  Overview of the case situations and outcomes**

| Case Situations | Competitive Situation (scale 1-7) | Number of cases played | HC/MC/LC | High Result | High Middle Result | Middle Result | Low Middle Result | Low Result | No Deal | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Case 1 (PVC/alternatives) | 5,86 | 157 | High | 15 | 46 | 38 | 22 | 3 | 33 | 157 |
| Case 2 (Truck) | 5,61 | 102 | High | 11 | 40 | 32 | 11 | 5 | 3 | 102 |
| Case 3 (Project component) | 4,33 | 212 | Middle | 4 | 21 | 144 | 31 | 7 | 5 | 212 |
| Case 4 (Research results) | 2,86 | 24 | Low | 1 | 2 | 3 | 9 | 2 | 7 | 24 |
| Case 5 (Packaging) | 4,76 | 68 | Middle | 0 | 13 | 44 | 5 | 2 | 4 | 68 |
| Case 6 (Spare parts) | 4,81 | 123 | Middle | 1 | 24 | 72 | 13 | 3 | 10 | 123 |
| Case 7 (Coffee distribution) | 3,66 | 55 | Low | 3 | 2 | 10 | 18 | 15 | 7 | 55 |
| Case 8 (PVC/no alternatives) | 4,50 | 198 | Middle | 4 | 37 | 118 | 29 | 4 | 6 | 198 |
| Case 9 (Knives) | 6,01 | 27 | High | 2 | 8 | 6 | 1 | 3 | 7 | 27 |
| Case 10 (Syringes) | 3,51 | 57 | Low | 3 | 4 | 7 | 18 | 17 | 8 | 57 |
| Case 11 (Collective labour agreement) | 4,53 | 136 | Middle | 1 | 31 | 78 | 18 | 4 | 4 | 136 |
| Total | 4,71 | 1159 | | 45 | 228 | 552 | 175 | 65 | 94 | 1159 |

Table 1a: Cross tabulation 'Level of Objectives' versus 'Gender'[1]

| Objectives | | High | High Middle | Middle | Low Middle | Low | TOTAL | |
|---|---|---|---|---|---|---|---|---|
| Gender | Male | 73 10% (2.8) | 118 15% (0.0) | 443 57% (-2.1) | 110 14% (0.9) | 33 4% (0.0) | 777 100% | Pearson χ² = 9.689 (sign.=0.046) |
| | Female | 18 5% (-2.8) | 58 15% (0.0) | 243 64% (2.1) | 47 12% (-0.9) | 16 4% (0.0) | 382 100% | Cramer's V= 0.091 (sign.=0.046) |
| | TOTAL | 91 8% | 176 15% | 686 59% | 157 14% | 49 4% | 1159 | Somers' d= -0.032 (sign. = 0.307) |

Table 1b: Cross tabulation for 'Level of Objectives' versus 'Competitiveness of situation' and 'Gender'

| Competitiveness of situation | | | High | High Mid | Mid | Low Mid | Low | TOT | |
|---|---|---|---|---|---|---|---|---|---|
| High | Gen-der | Male | 50 27% (2.5) | 57 31% (1.2) | 63 34% (-3.0) | 15 8% (-0.3) | 1 1% (-0.4) | 186 100% | Pearson χ²= 11.419 (sign.=0.022) |
| | | Female | 14 14% (-2.5) | 24 24% (-1.2) | 52 52% (3.0) | 9 9% (0.3) | 1 1% (0.4) | 100 100% | Cramer's V= 0.200 (sign.=0.022) |
| | TOT | | 64 22% | 81 28% | 115 40% | 24 8% | 2 1% | 286 | Somers' d = 0.206 (sign. = 0.002) |
| Mid | Gen-der | Male | 20 4% (1.6) | 58 12% (-0.6) | 353 71% (-0.9) | 62 12% (0.9) | 8 2% (0.3) | 501 100% | Pearson χ² = 3.945 (sign.=0.413) |
| | | Female | 4 2% (-1.6) | 31 13% (0.6) | 174 74% (0.9) | 24 10% (-0.9) | 3 1% (-0.3) | 236 100% | Cramer's V= 0.073 (sign.=0.413) |
| | TOT | | 24 3% | 89 12% | 527 72% | 86 12% | 11 2% | 737 | Somers' d= -0.012 (sign. = 0.738) |
| Low | Gen-der | Male | 3 3% (1.3) | 3 3% (-0.9) | 27 30% (-0.8) | 33 37% (0.7) | 24 27% (0.1) | 90 100% | Pearson χ² = 3.036 (sign.=0.552) |
| | | Female | 0 0% (-1.3) | 3 7% (0.9) | 17 37% (0.8) | 14 30% (-0.7) | 12 26% (0.1) | 46 100% | Cramer's V= 0.149 (sign.=0.552) |
| | TOT | | 3 2% | 6 4% | 44 32% | 47 35% | 36 27% | 136 | Somers' d= -0.046 (sign. = 0.644) |

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[1] In all tables % refers to row percentage, numbers between brackets are standardized adjusted residuals.

Table 2a: Cross tabulation for 'Results' versus 'Gender'

| Results | | High | High Mid | Mid | Low Mid | Low | No Deal | *TOT* | |
|---------|--------|------|----------|------|---------|------|---------|-------|---|
| | Male | 23 | 138 | 402 | 117 | 43 | 54 | *777* | Pearson$\chi^2$= 21.850 |
| | | 3% | 18% | 52% | 15% | 6% | 7% | *100%* | (sign.=0.001) |
| | | (-2.3) | (-2.3) | (4.0) | (-0.1) | (-0.2) | (-2.1) | | |
| Gen -der | Female | 22 | 90 | 150 | 58 | 22 | 40 | *382* | Cramer's V= 0.137 |
| | | 6% | 24% | 40% | 15% | 6% | 11% | *100%* | (sign.=0.001) |
| | | (2.3) | (2.3) | (-4.0) | (0.1) | (0.2) | (2.1) | | Lambda = 0.000 |
| | *TOT* | *45* | *228* | *552* | *175* | *65* | *94* | *1159* | Somers' d= -0.028 |
| | | *4%* | *20%* | *48%* | *15%* | *6%* | *8%* | | (sign. = 0.440) |

Table 2b: Cross tabulation for 'Results' versus 'gender' without taking into account no deal situations

| Results | | High | High Mid | Mid | Low Mid | Low | *TOT* | |
|---------|--------|------|----------|------|---------|------|-------|---|
| | Male | 23 | 138 | 402 | 117 | 43 | *723* | Pearson $\chi^2$= 17.827 |
| | | 3% | 19% | 56% | 16% | 6% | *100%* | (sign.=0.001) |
| | | (-2.5) | (-2.7) | (3.6) | (-0.3) | (-0.3) | | |
| Gen -der | Female | 22 | 90 | 150 | 58 | 22 | *342* | Cramer's V= 0.129 |
| | | 6% | 26% | 44% | 17% | 6% | *100%* | (sign.=0.001) |
| | | (2.5) | (2.7) | (-3.6) | (0.3) | (0.3) | | |
| | *TOT* | *45* | *228* | *552* | *175* | *65* | *1065* | Somers' d= -0.075 |
| | | *4%* | *21%* | *52%* | *16%* | *6%* | | (sign. = 0.039) |

Table 2c: Cross tabulation for 'Results' versus 'Competitiveness of situation' and 'Gender'

| Competitiveness of situation | | | Results | | | | | | | |
|---|---|---|------|-------|------|-------|------|-------|------|---|
| | | | High | H.Mid | Mid | L.Mid | Low | NDeal | *TOT* | |
| High | Gender | Male | 14 | 58 | 59 | 24 | 7 | 24 | *186* | Pearson$\chi^2$= 10.624 |
| | | | 8% | 31% | 32% | 13 | 4% | 13% | *100%* | (sign.=0.059) |
| | | | (-1.8) | (-0.8) | (2.7) | (0.7) | (-0.1) | (-1.4) | | |
| | | Female | 14 | 36 | 17 | 10 | 4 | 19 | *100* | Cramer's V= 0.193 |
| | | | 14% | 36% | 17% | 10% | 4% | 19% | *100%* | (sign.=0.059) |
| | | | (1.8) | (0.8) | (-2.7) | (-0.7) | (0.1) | (1.4) | | |
| | *TOTAL* | | *28* | *94* | *76* | *34* | *11* | *43* | *286* | Somers' d= -0.060 |
| | | | *10%* | *33%* | *27%* | *12%* | *4%* | *15%* | | (sign. = 0.412) |
| Mid | Gender | Male | 5 | 76 | 329 | 63 | 13 | 15 | *501* | Pearson$\chi^2$= 12.372 |
| | | | 1% | 15% | 66% | 13% | 3% | 3% | *100%* | (sign.=0.030) |
| | | | (-1.2) | (-2.0) | (3.1) | (-0.5) | (-0.3) | (-1.9) | | |
| | | Female | 5 | 50 | 127 | 33 | 7 | 14 | *236* | Cramer's V= 0.130 |
| | | | 2% | 21% | 54% | 14% | 3% | 6% | *100%* | (sign.=0.030) |
| | | | (1.2) | (2.0) | (-3.1) | (0.5) | (0.3) | (1.9) | | |
| | *TOTAL* | | *10* | *126* | *456* | *96* | *20* | *29* | *737* | Somers' d= -0.016 |
| | | | *1%* | *17%* | *62%* | *13%* | *3%* | *4%* | | (sign. = 0.706) |
| Low | Gender | Male | 4 | 4 | 14 | 30 | 23 | 15 | *90* | Pearson $\chi^2$ = 1.398 |
| | | | 4% | 4% | 16% | 33% | 26% | 17% | *100%* | (sign.=0.924) |
| | | | (-0.5) | (-1.0) | (0.4) | (0.1) | (0.2) | (0.2) | | Cramer's V= 0.101 |
| | | Female | 3 | 4 | 6 | 15 | 11 | 7 | *46* | (sign.=0.924) |
| | | | 7% | 9% | 13% | 33% | 24% | 15% | *100%* | |
| | | | (0.5) | (1.0) | (-0.4) | (-0.1) | (-0.2) | (-0.2) | | Somers' d= -0.057 |
| | *TOTAL* | | *7* | *8* | *20* | *45* | *34* | *22* | *136* | (sign. = 0.575) |

| | | 5% | 6% | 15% | 33% | 25% | 16% | | |
|---|---|---|---|---|---|---|---|---|---|

Table 3: Cross tabulation of 'Deal/No Deal' versus 'Gender' *(\*)*

| | | DEAL | NO DEAL | *TOTAL* | |
|---|---|---|---|---|---|
| Gender | Male | 723<br>93%<br>(2.1) | 54<br>7%<br>(-2.1) | *777*<br>*100%* | Pearson $\chi^2$ = 4.261<br>(sign.= 0.039) |
| | Female | 342<br>89%<br>(-2.1) | 40<br>11%<br>(2.1) | *382*<br>*100%* | Cramer's Phi = 0.061<br>(sign.= 0.039) |
| | *TOTAL* | *1065*<br>*92%* | *94*<br>*8%* | *1159* | |

Table 4: Cross tabulation for 'Type of Event' versus 'Gender'*(\*)*

| | | TACTICS | COMM.<br>EXCH. | *TOTAL* | |
|---|---|---|---|---|---|
| Gender | Male | 2443<br>40%<br>(7.3) | 3715<br>60%<br>(-7.3) | *6158*<br>*100%* | Pearson $\chi^2$ = 53.638<br>(sign.= 0.000) |
| | Female | 978<br>32%<br>(4.8) | 2092<br>68%<br>(-4.8) | *3070*<br>*100%* | Cramer's Phi = 0.076<br>(sign.= 0.000) |
| | *TOTAL* | *3421*<br>*37%* | *5807*<br>*63%* | *9228* | |

Table 5: Cross tabulation for 'Type of communication Exchange' versus 'Gender'*(\*)*

| Openness of communica-tion exchanges | | CLOSED<br>EXCHAN-GES | OPEN<br>EXCHAN-GES | *TOTAL* | |
|---|---|---|---|---|---|
| Gender | Male | 935<br>26%<br>(4.6) | 2780<br>74%<br>(-4.6) | *3715*<br>*100%* | Pearson $\chi^2$ = 21.314<br>(sign.= 0.000) |
| | Female | 415<br>20%<br>(-4.6) | 1677<br>80%<br>(4.6) | *2092*<br>*100%* | Cramer's Phi = 0.061<br>(sign.= 0.000)<br>Somers' d = 0.061<br>(sign. = 0.000) |
| | *TOTAL* | *1350*<br>*24%* | *4457*<br>*76%* | *5807* | |

Table 6: Cross tabulation for 'Gender' versus 'Competitiveness of tactics' *(\*)*

| | | MALE | FEMALE | *TOTAL* | |
|---|---|---|---|---|---|
| Competitiveness of tactics | Low | 239<br>59%<br>(-6.0) | 168<br>41%<br>(6.0) | *407*<br>*100%* | Pearson $\chi^2$ = 92.270<br>(sign.= 0.000) |
| | Low Middle | 919<br>67%<br>(-4.3) | 446<br>33%<br>(4.3) | *1365*<br>*100%* | Cramer's V = 0.164<br>(sign.= 0.000) |
| | High Middle | 956<br>76%<br>(4.1) | 309<br>24%<br>(-4.1) | *1265*<br>*100%* | Somers' d = -0.146<br>(sign.= 0.000) |
| | High | 329<br>86%<br>(6.6) | 55<br>14%<br>(-6.6) | *384*<br>*100%* | |
| | *TOTAL* | *2443*<br>*71%* | *978*<br>*29%* | *3421* | |