

## 5 Results and Discussion

*“If a man will begin with certainties, he shall end in doubts; but if he will be content to begin with doubts, he shall end in certainties.”* Sir Francis Bacon

This section is organized in seven sub-sections. Section 5.1 presents the data collection process and the treatment of missing data and section 5.2 introduces the breakdown of all the variables collected. The results of structure equation modelling are reported in section 5.3, including the measurement model (CFA, section 5.3.1), the structure model (section 5.3.2) and model comparisons (section 5.3.3). A cluster analysis reveals additional information to SEM results in section 5.4, and section 5.5 presents the results of the dilemma scenario. Section 5.6 has the analysis of the experiment that measured ethical behavior. The last section of this chapter has a summary of hypotheses’ results and discussion.

### 5.1. Sample Procedures and Missing Data

The sample was based on convenience, with requests sent to business people in the author’s LinkedIn network (about 230 people) with snowball requesting to forward to other colleagues in their work network. The survey was also sent to the management and professional master classes at IAG/PUC-Rio. The invitation to answer the survey had two follow-ups during the first semester of 2014. A total of 129 on-line surveys were collected. The disadvantage of a medium size (that did not affect the analytical tools used) was positively offset by the quality of the respondents, as for example, by the number of executives responding, including women. On the other hand, people could choose whether or not to respond, resulting in only 85 valid answers and therefore preventing the experiment from being included in the SEM analyses as ethical behavior (analysis of the experiment is in section 5.5).

The survey was implemented to prevent going forward to the next question without answering all the questions on the screen in order to eliminate the occurrence of missing data. However, by design, the second question of the second scenario (looking at competitor information) was to be answered only by part of the respondents. That is, the second question appeared only if the respondent selected “definitely yes” or “probably yes” vis-à-vis looking at a competitor’s material information. However, there was an implementation error in the survey that resulted in many missing answers. Therefore, this second question was not included in the analysis. Note that this question was about voicing (or silence) for purposes of additional analysis and was not part of the SEM factors; therefore, it did not influence the dependent variable – unethical decision.

Two other problems concerning irrelevant data were identified: one respondent answered who had 50 years of tenure and another answered who expected to stay for 50 years. They were changed to the mean among the egos of the same group age (from 45 to 54); however in SEM, both answers were tested and there was no change in the results.

## **5.2. Data breakdown**

### **5.2.1. Demographic Data**

The demographic breakdown of the 129 respondents is as follows:

- a) Gender: 70 males and 59 females;
- b) Hierarchical level: 24 (19%) not supervisors, 18 (14%) supervisors, 54 (42%) managers, 27 (21%) directors and 6 (5%) were VPs or above. The women sample included good representation in top positions, with 39% managers, 44% directors (senior managers), and 33% of VPs are women, higher, in fact, than the usual share in organizations;
- c) Age: the average age is 43 years (standard deviation of 9 years); the minimum age is 26 and the maximum 60;
- d) Industry: 27 (21%) IT; 40(31%) Telecommunication; 17 Oil, energy and mining (13%); 10 Government (8%); 10 Service (8%); 25 Other (19%);

- e) Country of work and nationality: the majority of respondents, 114 (88%) work in Brazil. Fifteen respondents (12%) work in other countries – 6 in other Latin America countries, 8 in developed countries in Europe and US, and 1 in Africa. With few exceptions, nationality and country of work coincide (to avoid identification of any respondents, only nationality was used in the analysis).
- f) Tenure: the average tenure is 9.5 years, with a standard deviation of 7.7 years, minimum of one year and maximum of 36 years;
- g) Number of years that the respondent expects to stay in the company: the average is 6.9 years (standard deviation of 7.2 years) varying from 1 to 30 years.

### 5.2.2. Social Network Data

Each respondent (“ego”) reported information about their contacts (“alters”) in the ego work advice network. The majority of egos – 96 (74.4%) – reported having five alters in their network, 14 (10.9%) reported 4 alters, 13 (10.1%) reported 3 alters, 5 (3.9%) reported 2 alters, and only 1 ego reported having a single alter. Most egos (73.6%) have no weak relationship with their reported alters directly in their advice network (this does not include alters-alters relationships) and another 19% reported to have only one alter with a weak relationship. Respondents (egos) also provided information about the gender, function and hierarchical level of each of their alters in order to analyze the diversity of each network.

The variables that measure the structure of the network – constraint and centrality – were calculated using Ucinet (BORGATTI, EVERETT and FREEMAN, 2002). Each ego-matrix was entered in the “Data Matrix” software option, using zeros to fill the diagonal of the matrix. Constraint varied from a minimum of zero to the maximum value of 1.125. Centrality, measured by betweenness centrality, which usually presents a strong variability, had a mean of 4.0 and a standard deviation of 4.67, varied from zero to 18; therefore this variable suffered an LN transformation. These two variables – constraint and LN (centrality) are used as factors in SEM. Table 11 has the social network data.

| N = 129        | Number of Alters | Diversity of Gender | Diversity of Function | Diversity of Level | Constraint | Centrality |
|----------------|------------------|---------------------|-----------------------|--------------------|------------|------------|
| Mean           | 4.54             | 1.45                | 2.48                  | 2.87               | 0.65       | 1.19       |
| Std. Deviation | 0.88             | 1.31                | 1.40                  | 1.19               | 0.27       | 0.96       |
| Minimum        | 1.00             | 0.00                | 0.00                  | 0.00               | 0.00       | 0.00       |
| Maximum        | 5.00             | 5.00                | 5.00                  | 5.00               | 1.13       | 2.94       |

Table 11 - Social network data  
Source: Elaborated by the author

An analysis using ANOVA confirmed the pattern difference between men and women when building their work, similar to that identified in several previous social network business studies that focused on gender (e.g. IBARRA, 1992, 1997; BURT, 1998; VAN DEN BRINK and BENSCHOP, 2014). Men build networks that are more gender homophilous than do women ( $F = 105$ ;  $p < 0.01$ ; males mean = 0.64, Std. 0.89 and females mean = 2.40, Std. 1.10) and have less constrained networks ( $F = 3.30$ ;  $p < 0.10$ ) or more central ( $F = 4.80$ ;  $p < 0.10$ ). This mean difference weakly supports Hypothesis 8 – women have higher network closure than men.

Considering diversity of gender there was an effect of ego own gender: 39 (30%) of egos reported having a same-gender only network (that is, diversity of gender was zero). However, of these 39 egos, 37 were males (i.e., males who reported having only males in their network) and only 2 were females (i.e., reporting they had only females in their network).

### 5.2.3. Self-Monitoring Data

This study follows “the standard practice in using the average score on the scale to code self-monitoring” (SASOVOVA *et al.*, 2010) and used the continuous form as a factor in SEM. Cronbach’s alpha for the self-monitoring scale was 0.77, in line with other studies (e.g. DAY *et al.*, 2002). Self-monitoring mean was 14.05 (Std. 2.10). Considering that high self-monitors (HSM) are those who score 13 or higher, the sample is composed of 89 (69%) high self-monitors and 40 (31%) low self-monitors.

Usually populations present more low self-monitors; however, in upper corporate management, high self-monitors tend to prevail. The breakdown of self-monitors by hierarchical level in this sample is in line with the view of Day and Schleicher (2006) that there is a growing prevalence of high self-monitors at the top of organizations. In fact, in this sample the higher the position, the higher the percentage of high self-monitors relative to low self-monitors: 56% of supervisors were HSM, 67% of managers, 70% of directors (senior managers) and 83% of VPs or above. Considering gender, 66% of men were HSM and 73% were women. Although women in general are more likely to be low self-monitor than men, this sample has a very good representation of women in managerial positions and has well above the usual percentage of women in top organizations. There was no mean difference between men and women in relation to self-monitoring.

Neither constraint nor centrality measures had mean differences regarding self-monitoring. As will be discussed in the SEM results section, the self-monitor construct was insufficient to predict social network structure. However, Figure 15 shows the compound reflex of gender and self-monitoring in the structure of the network. Not only do females have networks that are significantly more closed (constrained) than males, but low self-monitors also have networks that are more constrained than high self-monitors within the same gender. That is, low self-monitor females have the networks that are the most highly constrained of all, whereas high self-monitor males have the networks that are the least constrained.

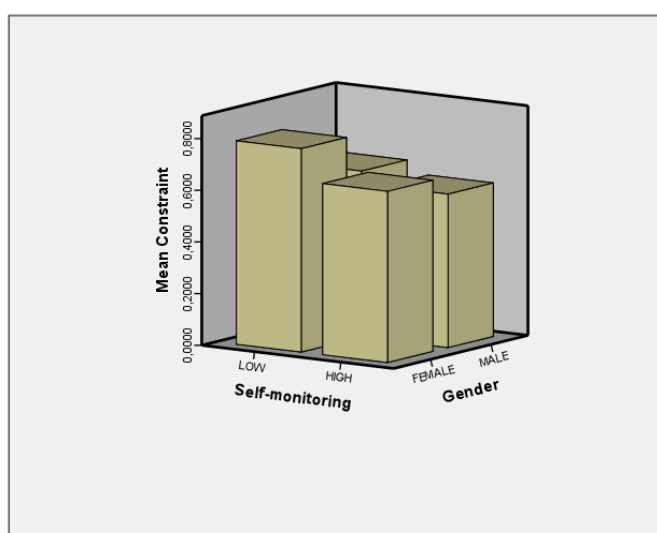


Figure 15 - Closure by self-monitoring and gender  
Source: Elaborated by the author

In addition, scores for each of the three self-monitoring sub-scales – Acting (mean = 2.72, Std. 0.76), Extraversion (mean = 3.24, Std. 0.62) and Other-directedness (mean = 2.65, Std. 0.54), were calculated as the sum of the items divided by 5 (a 5-point Likert scale was used). The three dimensions did not correlate significantly to gender, but all correlated significantly to age. Other-directedness correlated negatively to future ( $-0.15$ ,  $p < 0.10$ ).

#### **5.2.4. Future Data**

The future temporal perspective (named “future” in the SEM model and henceforth) had a Cronbach’s alpha of 0.72 (after deleting item 8, which pushed the index down to 0.68, and keeping the other 12 items in the scale). Similar to self-monitoring data, the average scores were calculated. The sample provided a very high future-perspective: mean was 8.80 (Std. = 1.10), minimum of 5.60 and maximum of 11.60. Future perspective correlated to age ( $0.18$ ,  $p < 0.05$ ) and to gender ( $0.22$ ;  $p < 0.05$ ; female = 1). An ANOVA test confirmed that there were different future means ( $F = 6.74$ ,  $p < 0.05$ ) between males (mean = 8.60, Std. 1.13) and females (mean = 9.09, Std. 1.09), although small, supporting Hypothesis 7 (women have higher future orientation than do men).

The second variable that measured future was future-self: a single-item scale, varying from 1 to 7, and which had a mean of 4.43 (Std. 1.49). As the other future variable, future-self provided little variability, probably due to the high mean age (correlation  $0.31$ ,  $p < 0.05$ ) and high hierarchical levels (correlation  $0.36$ ,  $p < 0.01$ ) of the sample. An ANOVA test resulted in different means for tenure ( $F = 4.69$ ,  $p < 0.01$ ), age ( $F = 6.26$ ;  $p < 0.01$ ) and hierarchy ( $F = 3.96$ ;  $p < 0.01$ ). However, this variable was not significant in any of the analytical methods used (SEM, cluster analysis, binary logistic regression) and therefore will not be discussed further.

### 5.2.5. Ethical Intention - Scenarios

There were three scenarios presented to the respondents. However, the first was a dilemma and was not included as a factor in the unethical intention dependent variable. Dilemma results are discussed separately in section 5.5. Scenario 2 (competitor scenario) asked the respondent if the respondent would look at the marketing plan of a main competitor (who has dropped it on the floor) before returning it. Scenario 3 (bribery scenario) asked if the respondent would engage with a partner who uses bribery to close an important deal. Table 12 presents the decision-making option by scenario. An impressive number of 68 respondents (53%) answered “definitely yes” or “probably yes” to the competitor scenario, whereas only 24 respondents (19%) responded similarly in the bribery scenario. The difference is probably due to the higher level of moral issue between the two scenarios. The two scenarios correlate (0.23,  $p < 0.01$ ).

| Option         | Competitor |         | Bribery   |         |
|----------------|------------|---------|-----------|---------|
|                | Frequency  | Percent | Frequency | Percent |
| Definitely No  | 34         | 26      | 64        | 50      |
| Probably No    | 27         | 21      | 41        | 32      |
| Probably Yes   | 49         | 38      | 23        | 18      |
| Definitely Yes | 19         | 15      | 1         | 0       |
| Total          | 129        | 100     | 129       | 100     |

Table 12 - Competitor and Bribery scenarios  
Source: Elaborated by the author

Among the low self-monitors, 45% responded with an unethical option (that is answered “definitely yes” or “probably yes”) in the competitor scenario and 10% did so in the bribery scenario; in comparison, among high self-monitors, 56% had responded with an unethical option in the former scenario and 22% in the latter. Self-monitoring correlates significantly and positively to the competitor scenario ( $-0.17$ ,  $p < 0.05$ ) and to bribery scenario ( $-0.28$ ,  $p < 0.01$ ). Table 13 shows the breakdown by unethical option (i.e., yes if option was “probably yes” or “definitely yes”; no, otherwise).

| Gender |                 |      | Total | Unethical Competitor |     | % Unethical | Unethical Bribery |     | % Unethical |
|--------|-----------------|------|-------|----------------------|-----|-------------|-------------------|-----|-------------|
|        |                 |      |       | No                   | Yes |             | No                | Yes |             |
| Male   | Self-monitoring | Low  | 24    | 14                   | 10  | 42%         | 22                | 2   | 8%          |
|        |                 | High | 46    | 17                   | 29  | 63%         | 32                | 14  | 30%         |
|        | Total           |      | 70    | 31                   | 39  | 56%         | 54                | 16  | 23%         |
| Female | Self-monitoring | Low  | 16    | 8                    | 8   | 50%         | 14                | 2   | 13%         |
|        |                 | High | 43    | 22                   | 21  | 49%         | 37                | 6   | 14%         |
|        | Total           |      | 59    | 30                   | 29  | 49%         | 51                | 8   | 14%         |

Table 13 - Unethical option by gender and self-monitoring

Source: Elaborated by the author

Considering gender differences, the breakdown is as follows: 39 (56%) males chose unethical options in the competitor scenario and 16 (23%) in the bribery scenario, 29 (49%) females chose unethical options in the competitor scenario and 8 (14%) in the bribery scenario. The competitor scenario correlates significantly and negatively with both age ( $-0.23$ ,  $p < 0.01$ ) and tenure ( $-0.21$ ,  $p < 0.05$ ), but not the bribery scenario. Other individual variables did not correlate significantly. In the competitor scenario, of the 68 who had responded with an unethical choice, 61 (of the total 114) were Brazilians, 4 (of the total 6) were from other Latin American countries, and 3 (of total of 6) were from developed countries in Europe, but none from US. In the bribery scenario, 29 were Brazilians and 3 were from European developed countries.

The bribery scenario had a second question – “Would you tell someone in your organization about the behavior of this partner?” The idea of this question was not to test whistleblowing (beyond the theoretical scope of this study), but to verify, from among those who selected the option to use the partner who uses bribery, who would share such intention with others. Of the 24 who chose to work with the partner, 19 (80%) said they would tell someone. There was no relevant difference considering self-monitoring, gender, or social network structure. This question probably was not precisely formulated, as “someone” can mean many things. On the other hand, the answers could mean that people really do share with other people in the organization because such decisions, even if taken alone, cannot be implemented by a single individual.

### 5.3. Structure Equation Model

The measurement model (CFA) is presented in section 5.3.1 and the structure model (SEM) in section 5.3.2. Comparisons and discussion regarding the best model appear in section 5.3.3. Maximum likelihood was the estimation method used. Table 14 presents means, standard deviations and correlations among the variables that were used in the SEM and CFA models.

|   | Variable        | Mean  | SD   | 1      | 2       | 3       | 4      | 5    | 6       | 7    | 8      |
|---|-----------------|-------|------|--------|---------|---------|--------|------|---------|------|--------|
| 1 | Gender(male=0)  | -     | -    | -      |         |         |        |      |         |      |        |
| 2 | Age             | 43.11 | 8.92 | .02    | -       |         |        |      |         |      |        |
| 3 | Tenure          | 9.95  | 8.48 | .14    | .42***  | -       |        |      |         |      |        |
| 4 | Self-monitoring | 14.05 | 2.10 | -.05   | -.31*** | -.27*** | -      |      |         |      |        |
| 5 | Future          | 3.67  | 0.47 | .23**  | .19*    | .15     | -.18** | -    |         |      |        |
| 6 | Constraint      | 0.65  | 0.27 | .16*   | .04     | .10     | -.14   | .01  | -       |      |        |
| 7 | Centrality(Ln)  | 1.19  | 0.95 | -.19** | -.13    | -.05    | .14    | .01  | -.76*** | -    |        |
| 8 | Competitor      | 2.41  | 1.04 | -.08   | -.23*** | -.21**  | .18**  | -.13 | .12     | -.12 | -      |
| 9 | Bribery         | 1.70  | 0.78 | -.10   | -.06    | -.13    | .28*** | -.06 | .03     | -.03 | .23*** |

Correlation is significant at  $p < .01$  (\*\*\*),  $p < .05$  (\*\*) or  $p < .10$  (\*) levels (2-tailed);  $n=129$

Table 14 - Correlations of variables used in SEM

Source: Elaborated by the author

#### 5.3.1. The Measurement Model

Confirmatory factor analysis (CFA) is a multivariate technique that allows testing of how well the measured variables represent the constructs in the model, that is, the validity of the construct. In order to calculate construct-validity measures in CFA (which uses the error term of each factor), this study used the LN transformation of the two variables with high variability – age and centrality.

The CFA model fit the data well: minimum was achieved; chi-squared = 19.90, degrees of freedom = 17 and  $p = 0.28$ ; normalized chi-squared was 1.17; RMSEA = 0.03 with a p-close value of 0.60; CFI = 0.98; GFI = 0.97; no standardized residuals were  $> | 2.5 |$ . Hair *et al.* (2010) propose that for a model with a sample of less than 250 cases and that has less than 12 observed variables (which is the case in this study), the following fits should be considered as appropriate: a) an insignificant p-value is expected for Chi-squared; b) CFI should be 0.97 or better; and c) RMSEA (which is a badness-of-fit index) of 0.08 or lower.

All factors were statistically significant and all loadings were equal or greater than 0.5 except for future (0.33,  $p < 0.05$ ), gender (0.26,  $p < 0.10$ ) and competitor scenario (0.43,  $p < 0.05$ ). Although future and gender individual variables could be candidates to be deleted, this study followed Hair *et al.* (2010, p. 654), who suggest the “pursuit of a better fit at the expense of testing a true model is not a good trade-off,” i.e., optimally one should approximate the theory to be tested rather than increase model fit (different models considering different individual factors will be compared in the next section).

The problem of keeping lower loading variables is that doing so automatically affects some of the other construct validity measures, such as average variance extracted (AVE) and construct reliability (CR). The average variance extracted should be 0.5 or higher ( $AVE = (\sum L^2 i)/n$ ,  $L$  = standardized factor loading,  $i$  = item number,  $n$  = total number of items) and construct reliability is acceptable when between 0.6 and 0.7 ( $CR = (\sum L_i)^2 / ((\sum L_i)^2 + (\sum e_i))$ ,  $e$  = error variance terms of a construct).

Reliability indexes to assess convergent validity presented very good results for social network ( $CR = 0.91$ ) but not for individual factors ( $CR = 0.40$ ) and unethical cases ( $CR = 0.42$ ). However, the latter result is expected because the cases represent different levels of moral issues, as well as the fact that “individual factors” is not a single latent construct but, rather, a set of constructs relevant to the definition of a given respondent in light of ethical decision-making and social network. AVE indexes of social network = 0.77 were very good, but not AVE of individual factors = 0.20 and AVE of unethical cases = 0.20.

Discriminant validity can be assessed by verifying whether all modification indices (MI), which inform of potential cross loading between constructs, are lower than 4.0. As there were no MIs, discriminant validity is supported. Another discriminant validity measure determines if the AVE for any two constructs is greater than the squared inter-construct correlations (SIIC) was very good for the correlation between social network and individual factors ( $SIIC = 0.06$ ) and between social network and unethical cases ( $SIIC = 0.03$ ), but not for individual factors and unethical cases ( $SIIC = 0.62$ ). The correlation among the constructs provides evidence for nomological validity. Figure 16 presents the CFA loadings.

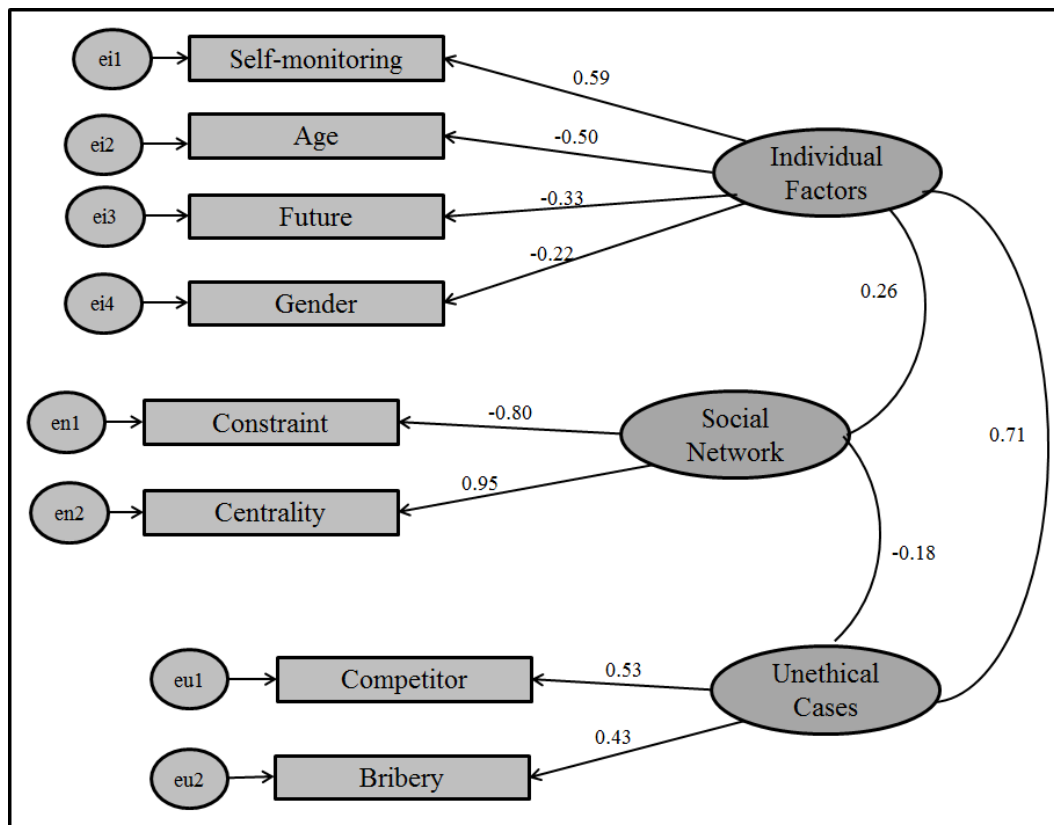


Figure 16 -The measurement model  
Source: Elaborated by the author

### 5.3.2. The Structural Model

The structural model also fits the data well. One important criteria of structural fit in case of recursive structure models is that it cannot have a lower chi-squared value than the one obtained in CFA (as the structural model does not include more construct relationships than the CFA). SEM had the following fit: minimum was achieved; chi-squared = 19.90 (same as CFA), degrees of freedom = 17 and  $p = 0.28$ ; normalized chi-squared was 1.17; RMSEA = 0.03 with a  $p$ -close= 0.60; CFI = 0.98 and GFI = 0.97; no standardized residuals were  $> | 2.5 |$ . Table 15 summarizes regression weights and  $p$ -values and Figure 17 shows the structural model with the factors' loading (standardized regression weights).

| Regression Weights |      |                    | Unstandardized | P    | Standardized |
|--------------------|------|--------------------|----------------|------|--------------|
| Social Network     | <--- | Individual factors | 0.19           | 0.07 | 0.26         |
| Unethical Cases    | <--- | Individual factors | 0.36           | 0.01 | 0.81         |
| Unethical Cases    | <--- | Social Network     | -0.24          | 0.05 | -0.39        |
| Centrality         | <--- | Social Network     | 1.00           |      | 0.95         |
| Constraint         | <--- | Social Network     | -0.24          | 0.00 | -0.80        |
| Competitor         | <--- | Unethical Cases    | 0.62           | 0.01 | 0.43         |
| Bribery            | <--- | Unethical Cases    | 1.00           |      | 0.53         |
| Self_monitor       | <--- | Individual factors | 1.00           |      | 0.59         |
| Age                | <--- | Individual factors | -0.09          | 0.00 | -0.50        |
| Future             | <--- | Individual factors | -0.30          | 0.01 | -0.33        |
| Gender             | <--- | Individual factors | -0.09          | 0.08 | -0.22        |

Table 15: SEM regression weights

Source: Elaborated by the author

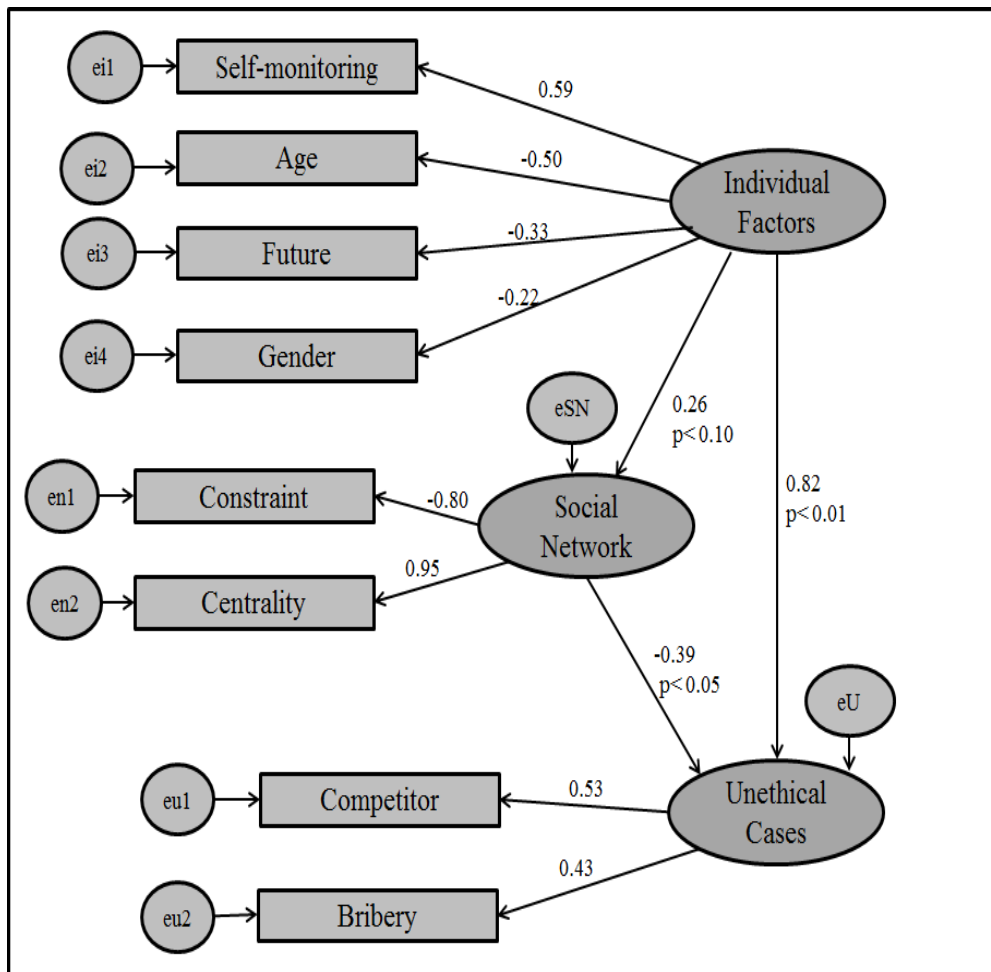


Figure 17 - The structural model

Source: Elaborated by the author

The SEM results support the following hypotheses: self-monitoring is negatively related to temporal orientation (H1); self-monitoring is negatively related to network closure, i.e., negatively to constraint measure and positively to centrality measure (H2); future orientation is positively related to network closure, i.e., positively to constraint measure and negatively to centrality (H3); self-monitoring is negatively related to ethical intention (H4) and future orientation is positively related to ethical intention (H5).

Hypothesis 9 – women have more ethical intentions than do men – is only weakly supported (small regression weight and significance) and will be discussed later, as will Hypothesis 8 – women will have higher network closeness than will men. Hypothesis 6 – network closure is positively related to ethical intention – was not supported and is further discussed in the cluster analysis.

### **5.3.3. Model Comparisons**

Table 16 presents a comparison of many models in which the difference among them are the combinations of individual factors (social network and unethical action, as well as paths among the constructs, remained the same). The relevant individual factors included in these models were self-monitoring, future orientation, age, tenure and gender. All other individual variables were not statistically significant in the model (e.g. future-self or hierarchical level). Relationships that are significant are marked in shadow (model 6 is not valid; therefore, the significant paths of this model are not marked).

| MODEL  |                                 | MODEL FIT INDEXES    |      |      |                | STRUCTURAL PATHS (Weight, p=) |                         |                         |
|--------|---------------------------------|----------------------|------|------|----------------|-------------------------------|-------------------------|-------------------------|
| Number | Individual Factors              | Chi-Squared (df, p)  | GFI  | CFI  | RMSEA (pclose) | Social Net <- Individual      | Unethical <- Social Net | Unethical <- Individual |
| 1      | Sm                              | 1.1 (df=3, p=0.77)   | 0.99 | 1.00 | 0 (0.84)       | 0.30, p=0.18                  | -0.46, p=0.08           | 1.00, p=0.02            |
| 2      | Sm + Future                     | 2.5 (df=6, p=0.86)   | 0.99 | 1.00 | 0 (0.94)       | 0.20, p=0.32                  | -0.30, p=0.16           | 0.70, p=0.27            |
| 3      | Sm + Future + Gender            | 12.3(df=11, p=0.34)  | 0.98 | 0.99 | 0.03 (0.60)    | 0.33, p=0.13                  | -0.52, p=0.07           | 1.00, p=0.08            |
| 4      | Sm + Future + Age               | 8.7 (df=11, p=0.8)   | 0.98 | 1.00 | 0 (0.84)       | 0.22, p=0.11                  | -0.35, p=0.05           | 0.76, p=0.01            |
| 5      | Sm + Future + Age+ Gender       | 19.9 (df=17, p=0.28) | 0.97 | 0.98 | 0.04 (0.60)    | 0.26, p=0.07                  | -0.39, p=0.05           | 0.82, p=0.01            |
| 6      | Sm + Age + Gender               | 11.9 (df=11, p=0.37) | 0.98 | 0.99 | 0.03 (0.60)    | 0.29, p=0.06                  | -0.43, p=0.05           | 0.88, p=0.02            |
| 7      | Sm + Fut +Tenure+ Gender        | 14.6 (df=17, p=0.60) | 0.97 | 1.00 | 0 (0.86)       | 0.25, p=0.10                  | -0.41, p=0.03           | 0.88, p=0.01            |
| 8      | Sm + Tenure + Gender            | 8.0 (df=11, p=0.72)  | 0.98 | 1.00 | 0 (0.88)       | 0.29, p=0.09                  | -0.47, p=0.03           | 1.00, p=0.02            |
| 9      | Sm+ Fut + Tenure + Age + Gender | 25.6(df=24, p=0.37)  | 0.96 | 0.99 | 0.02 (0.70)    | 0.20, p=0.11                  | -0.33, p=0.04           | 0.70, p=0.02            |

Table 16 - Model comparisons

Source: Elaborated by the author

Self-monitoring was, by far, the item that had the highest loading in individual factors in any model. Model 1 presents the results of a model that includes self-monitoring as the only individual factor. Although this model has an excellent fit, a non-significant path (0.30,  $p = 0.18$ ) was found between individual factors and social network, i.e., self-monitoring alone cannot explain how people build their social advice network in organizations.

All models except for model 2 presented significant paths between individual factors and unethical decisions as well as significant paths between social network and unethical decisions. Model 2 shows that the inclusion of future as one additional factor weakens the model as all paths between the constructs become not significant. It was necessary to include both age and gender to have all paths rate as significant (model 5). On the other hand, the option to delete future from model 5, as presented in model 6, is not a valid option because it results in gender having a non-significant loading on individual factors. Tenure, in model 8, slightly improved the model fit compared to model 5, which uses age, but reduced the significance of the path individual factors and social network.

In summary, among the factors used in this research, self-monitor was the one that has the highest impact in unethical decision (and could predict it alone) and social network structure. Tenure in company (not the age of the individual) slightly improved the model fit. The relationship between individual factors and social networks could only be explained (achieve significance) when gender was included. Future (measured by future perspective, not future-self) did not improve model fit alone, but, in conjunction with gender, did improve the significance of the predictability of social network from individual factor, as well as increase the individual factor construct reliability index.

SEM results suggest that high self-monitoring is an important individual factor influencing unethical decision. At the same time, the model made it clear that it is closure of network, not lack thereof (or centrality), that has a closer relationship to unethical acts. This seems, at first glance, a contradiction because the model also confirmed the few previous studies that high self-monitors tend to have higher centrality (or lower constraint/closure) in networks. Figure 18 shows how closure increases (measured by level of centrality), depending on the unethical act. In the top half, from left to right, the first circle describes high self-monitors' closure (white) for the entire sample, followed by closure of high self-monitors who decided to look at competitor information, followed by the closure of those who opted for bribery. The three lower circles are relative to low self-monitors' closure network variance by unethical act.

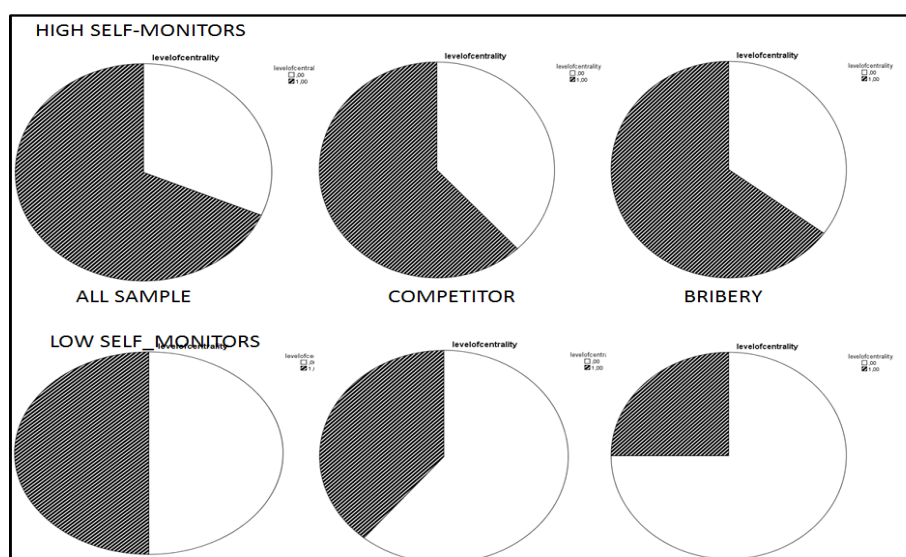


Figure 18 - Self-monitoring and closure (white) in unethical decision  
Source: Elaborated by the author

The same contradiction is apparent when gender is considered: women (weak significance) present a lower unethical score, but increased closure of the network (reduces centrality; increases constraint), which at first means increased unethical option. Constraint did present a different mean ( $F = 3.45$ ,  $p = 0.65$ ), among the ethical and the unethical responses, albeit only in the competitor scenario and not in the bribery scenario. The next section discusses the cluster analysis conducted in order to give additional support and better interpretation of the above results.

#### **5.4. Cluster Analysis – Results from Another Perspective**

A cluster analysis was conducted using the two main variables in the model – self-monitoring and centrality to provide additional perspectives to SEM results (centrality was used as it provided a better significance in the cluster results than using the constraint measure). Cluster analysis is a technique used to support the analysis of groups of observations, instead of on a case-by-case basis, as well as to support the identification of unrevealed relationships and the development of taxonomies (HAIR *et al.*, 2010).

Cluster analysis is sensitive to the presence of outliers; therefore, univariate and multivariate outlier detection processes were executed. Univariate outlier detection resulted in only one case (61), which had a z-score  $> 3.0$  for self-monitoring and none for centrality. A multivariate outlier test, which detects if the probability of the Mahalanobis  $D^2$  score is lower than 0.001, did not present any outlier. Therefore, outliers are not a problem for the cluster analysis and case 61 was kept in the sample.

A hierarchical cluster method was conducted to support the definition of the number of clusters to be used in a subsequent non-hierarchical method (K-means). The hierarchical cluster coefficients of the agglomeration schedule (ca) suggested a four-cluster solution: one-cluster (ca = 66.20), two-cluster (ca = 14.70, 11.4% of increase in heterogeneity to the next stage), three-cluster (ca = 11.40, 29% increase), and four-cluster (ca = 7.40, 54% increase). A fifth cluster would represent a small increase in heterogeneity – only 9% (ca = 6.80).

The initial clusters' centers were set based on the mean +/- standard deviation of the variables self-monitoring and centrality. Final and initial cluster centers, as well as the number of cases assigned to each cluster, are in Table 17.

| Initial and Final Cluster Centers |                 | Cluster Number |       |       |       |
|-----------------------------------|-----------------|----------------|-------|-------|-------|
|                                   |                 | 1              | 2     | 3     | 4     |
| Initial Centers                   | Self-monitoring | 16.00          | 16.00 | 12.00 | 12.00 |
|                                   | Centrality      | 0.25           | 2.15  | 0.25  | 2.15  |
| Final Centers                     | Self-monitoring | 14.89          | 17.72 | 13.14 | 11.51 |
|                                   | Centrality      | 1.47           | 1.38  | 0.44  | 1.53  |
| Cases Assigned                    |                 | 49             | 17    | 35    | 28    |

Table 17 - Clusters centers and number of assigned cases

Source: Elaborated by the author

The Wilcoxon's nonparametric tests rejected the hypothesis that the initial and final clusters were different, providing evidence that the initially proposed four-cluster centers were valid. In order to test if the clusters are different considering the two variables, a multivariate test and a univariate test were conducted. All multivariate tests – Pillai's, Wilks Lambda, Hotelling's T2 and Roy's gcr – were significant ( $p < 0.01$ ), as well as the ANOVA test, providing evidence that at least one of the clusters was different. However, these results could be impacted by the lack of homoscedasticity assumption, both in multivariate (Box's M had  $p < 0.01$ ) and in univariate tests (Levene's test for self-monitoring had a  $p < 0.01$ ). Table 18 provides summary information about the same variables used in SEM, by cluster.

|                 | Cluster 1 (49) |                | Cluster 2 (17) |                | Cluster 3 (35)             |                | Cluster 4 (28) |                |
|-----------------|----------------|----------------|----------------|----------------|----------------------------|----------------|----------------|----------------|
|                 | High SM        |                | Very High SM   |                | Medium SM,<br>High closure |                | Very Low SM    |                |
| Variables       | Mean           | Std.           | Mean           | Std.           | Mean                       | Std.           | Mean           | Std.           |
| Ego_age         | 42.39          | 8.85           | 37.82          | 8.95           | 43.94                      | 7.79           | 46.54          | 9.09           |
| Ego_tenure      | 10.00          | 9.36           | 4.71           | 3.58           | 9.66                       | 7.54           | 13.43          | 8.73           |
| Constraint      | 0.57           | 0.24           | 0.61           | 0.23           | 0.82                       | 0.29           | 0.60           | 0.23           |
| Centrality      | 1.47           | 0.91           | 1.38           | 1.01           | 0.44                       | 0.60           | 1.53           | 0.89           |
| Self-monitoring | 14.89          | 0.64           | 17.72          | 1.40           | 13.14                      | 0.65           | 11.51          | 1.02           |
| Future          | 8.69           | 1.19           | 8.41           | 1.37           | 9.14                       | 0.88           | 8.89           | 1.12           |
| Competitor      | 2.33           | 0.98           | 2.82           | 1.10           | 2.57                       | 0.97           | 2.11           | 1.10           |
| Bribery         | 1.86           | 0.81           | 2.00           | 0.86           | 1.63                       | 0.73           | 1.32           | 0.61           |
| <b>Gender</b>   | <b>Males</b>   | <b>Females</b> | <b>Males</b>   | <b>Females</b> | <b>Males</b>               | <b>Females</b> | <b>Males</b>   | <b>Females</b> |
|                 | 26             | 23             | 13             | 4              | 10                         | 25             | 21             | 7              |

Table 18 - Cluster details

Source: Elaborated by the author

Taking into consideration the fact that high self-monitors are the individuals who score above 13, clusters 1 and 2 consist exclusively of high self-monitors. However, cluster 2 has very high self-monitors (scores from 16.40 to 21.80 on a scale of 25), whereas cluster 1 has high self-monitors scores from 13.80 to 16.20. Cluster 3 has 13 low self-monitors (scores from 11.80 to 12.80) and 22 high self-monitors (scores from 13.00 to 14.40); however, this cluster contains the highest closure (lowest centrality) by far of all clusters (the lowest centrality mean = 0.44 or the highest constraint mean = 0.82). Cluster 4 is composed mostly of low self-monitors (scores from 9.20 to 12.80); indeed, there is only one high self-monitor (with a 13.20 score, the lower bound of high self-monitoring) among the 28 cases. Centrality does not present very much variability among the clusters, except for cluster 3. That is, even the low self-monitor clusters presented a high centrality mean, compared, for example, to very high self-monitors' cluster. Figure 19 illustrates the discussion above (centrality is the variable used in this figure, so low centrality means high closure).

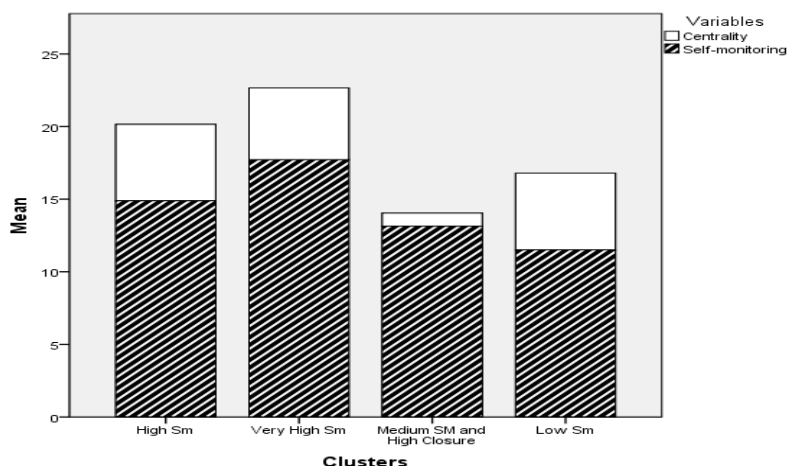


Figure 19 - Clusters: Self-monitoring(Sm) and closure  
Source: Elaborated by the author

In order to test whether the clusters were different in terms of unethical decision, a multivariate ANOVA test was conducted using the scenario variables competitor (scenario 2) and bribery (scenario 3). For these two tests, the homoscedasticity assumption was followed both in multivariate (Box's M was not significant) and in univariate tests (Levene's test not significant). All multivariate tests – Pillai's, Wilks Lambda, Hotelling's T2 and Roy's gcr – were significant ( $p < 0.01$ ), as well as the ANOVA test (bribery scenario at a  $p < 0.01$ , competitor scenario at  $p < 0.10$ ). The plot in Figure 20 presents a similar pattern for the two scenarios, although the level of the moral issue (looking at a competitor's information versus working with a partner who is willing to bribe to win a deal) has a clear influence on decision-making.

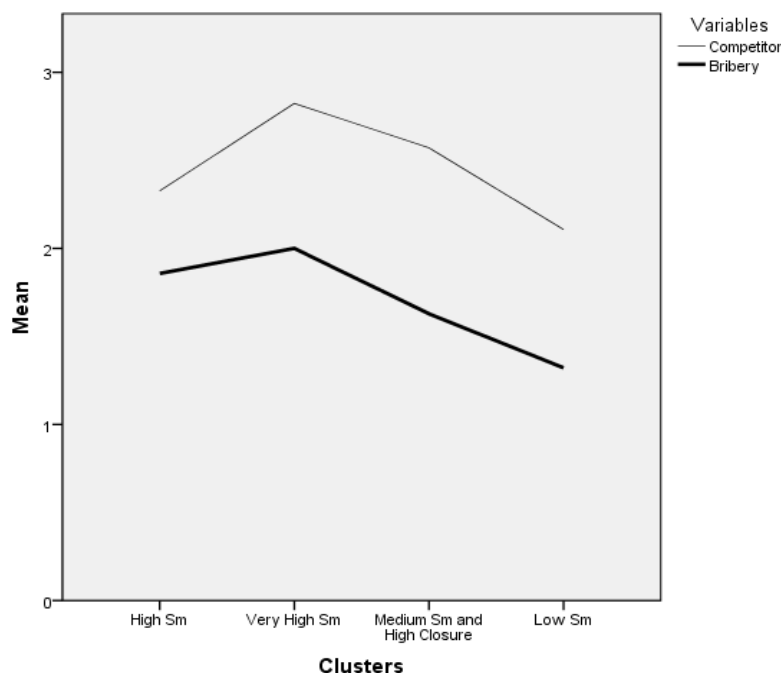


Figure 20 - Clusters and unethical decision-making (Sm = Self-monitoring)  
Source: Elaborated by the author

The clusters were also different relative to gender (ANOVA test:  $F = 6.50$ ;  $p < 0.01$ ), age ( $F = 3.80$ ,  $p < 0.05$ ) and tenure ( $F = 4.00$ ,  $p < 0.01$ ), but not future (not significant). Insofar as these factors influence composition of the network structure (as discussed in the SEM results) a closer look at the breakdown of the clusters by these factors is presented in Table 19. Figure 21 shows how these variables trend by cluster. Tenure has the inverse trend to self-monitoring; thus the very high self-monitors have the lowest tenure mean.

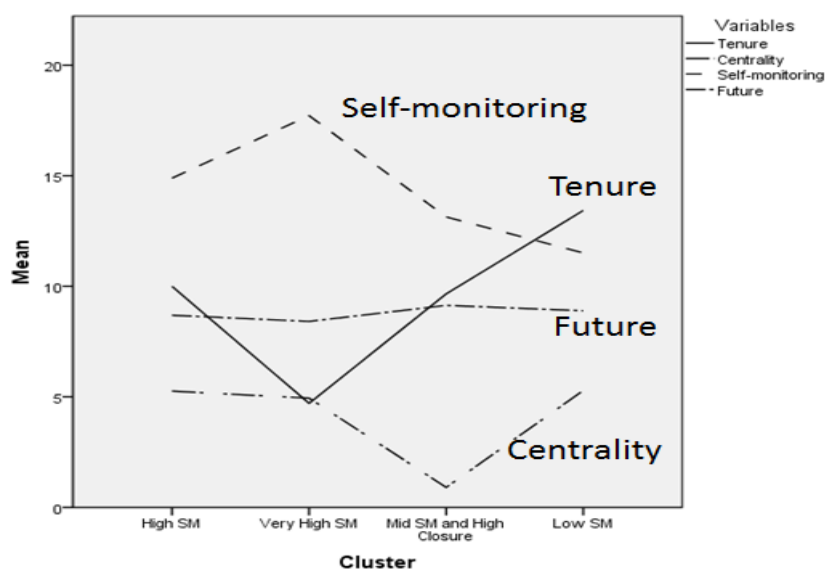


Figure 21 - Variables by cluster (SM = Self-monitoring)  
Source: Elaborated by the author

| Clusters                                | High Sm         | Very High Sm     | Medium Sm,<br>High Closure | Low Sm          |
|-----------------------------------------|-----------------|------------------|----------------------------|-----------------|
| <b>All Sample</b>                       | 49              | 17               | 35                         | 28              |
| Self-monitoring                         | 14.9 (Std. 0.6) | 17.7. (Std. 1.4) | 13.4 (Std.0.7)             | 11.5 (Std.1.0)  |
| Centrality                              | 1.5 (Std. 0.9)  | 1.4 (Std. 1.0)   | 0.4 (Std. 0.6)             | 1.5 (Std. 0.9)  |
| Future                                  | 8.7 (Std. 1.1)  | 8.4 (Std. 1.4)   | 9.1 (Std. 0.9)             | 8.9 (Std. 1.2)  |
| <b>Competitor = yes or probably yes</b> | 24 (49%)        | 12 (71%)         | 22 (63%)                   | 10 (36%)        |
| Self-monitoring                         | 15.0 (Std. 0.7) | 17.7 (Std. 1.6)  | 13.2 (Std. 0.7)            | 11.6 (Std. 1.1) |
| Centrality                              | 1.3 (Std. 0.8)  | 1.2 (Std. 1.0)   | 0.3 (Std. 0.6)             | 1.7 (Std.0.9)   |
| Future                                  | 8.6 (Std. 1.1)  | 8.2 (Std. 1.4)   | 9.1 (Std. 0.9)             | 8.8 (Std. 1.2)  |
| <b>Bribery = yes or probably yes</b>    | 11 (22%)        | 6 (35%)          | 5(14%)                     | 2 (7%)          |
| Self-monitoring                         | 15.0 (Std. 0.7) | 18.3 (Std. 1.7)  | 13.0 (Std. 0.8)            | 11.7 (Std. 1.5) |
| Centrality                              | 1.2 (Std. 0.8)  | 1.1 (Std. 0.9)   | 0.5 (Std. 0.8)             | 1.6 (Std. 1.3)  |
| Future                                  | 8.4 (Std. 1.7)  | 8.2 (Std. 1.4)   | 9.9 (Std. 0.9)             | 8.7 (Std. 1.8)  |

Table 19 - Clusters and unethical decision

Source: Elaborated by the author

The very high self-monitors cluster (cluster 2 – 17 males and 4 females) are the least ethical: 71% in the competitor scenario and 35% in the bribery scenario. These very high self-monitors are also younger (a mean age of 38 years) than the rest of the sample, and had by far the lowest tenure. Males accounted for the majority of the unethical responses: in the bribery scenario, all 6 were men and in the competitor scenario only 1 woman (versus 11 men) selected yes or probably yes in their decision. The centrality of the unethical responses presents a decline, that is, unethical very high self-monitors have networks that are more closed than do the ethical responses. One possible explanation for the very high self-monitor women being more ethical than the men in this cluster relates to their future orientation: they had the highest future mean (9.80, Std. 1.01), and unexpected, among all clusters. The very high self-monitor men in this cluster had the lowest mean (7.98, Std. 1.1) and therefore a significantly different mean in future perspective ( $F = 7.63$ ,  $p < 0.05$ ).

On the opposite side, the very low self-monitors (cluster 4 – 21 men and 7 women) are the most ethical among all the others. This cluster keeps a centrality mean similar to cluster 1 (high self-monitors) and cluster 2 (very high self-monitors). All are low self-monitors, although one woman had a 13.20 self-monitoring score (this woman had an unethical option in the competitor scenario, but not in the bribery scenario). The breakdown of the unethical option was as follows among the 27 low self-monitors: in the competitor scenario, 8 men (38%

of men in this cluster) and 1 woman (17% of the women in this cluster) had the unethical option; only one man (5%) and one woman (17%) decided to engage with a partner willing to engage in bribery.

The medium self-monitors in high closure cluster (cluster 3 – 10 males and 25 females) includes both high self-monitors and low self-monitors (scores varying from 11.80 to 14.40). Additionally, they do not vary in their unethical option: in fact, in this case, the low self-monitors have a higher percentage of unethical decision-making. In this cluster, there are no differences in the means between males and females when considering all the variables. Women are the majority vis-à-vis the unethical option but only in the competitor scenario: 17 women (68% of the women in this cluster) and 5 men (50%). In the bribery scenario, there were 2 men (20% of men in this cluster) and 3 women (12%) choosing unethical options. This cluster presents the highest future scores. Table 20 shows the breakdown by self-monitoring, gender and unethical option (in bold is the percentage of unethical option) in this cluster.

| Cluster 3 : High closure |                   | Total | Unethical Competitor |            | Unethical Bribery |            |
|--------------------------|-------------------|-------|----------------------|------------|-------------------|------------|
|                          |                   |       | No                   | Yes        | No                | Yes        |
| Males                    | Low Self-monitor  | 3     | 33%                  | <b>67%</b> | 67%               | <b>33%</b> |
|                          | High Self-monitor | 7     | 57%                  | <b>43%</b> | 86%               | <b>14%</b> |
|                          | Total males       | 10    | 50%                  | 50%        | 80%               | 20%        |
| Females                  | Low Self-monitor  | 10    | 30%                  | <b>70%</b> | 90%               | <b>10%</b> |
|                          | High Self-monitor | 15    | 33%                  | <b>67%</b> | 87%               | <b>13%</b> |
|                          | Total females     | 25    | 32%                  | 68%        | 88%               | 12%        |

Table 20 - Cluster 3 and Unethical Decision  
Source: Elaborated by the author

Finally, the high self-monitor cluster (cluster 1 – 26 males, 23 females) is a gender-balanced cluster. It also has a high mean centrality but, as in the very high self-monitors cluster, there is also a slight trend to reduce centrality (increase closure) among those with unethical options. In the competitor scenario, 15 (57%) men and 9 (39%) women were unethical, in contrast with 7 (27%) men and 4 (17%) women in the bribery scenario.

Figure 22 shows how closure of the network strongly affects decision-making in the competitor scenario (higher mean in the scenario is related to the unethical option), both for low and high self-monitors (cluster 3 – mid self-monitors cluster) and specifically, decision-making by women. That is, mid self-monitor women in closure had more unethical options than did higher self-monitor women in the lower moral issue level scenario. However, this only happened in the competitor scenario, not in the bribery scenario.

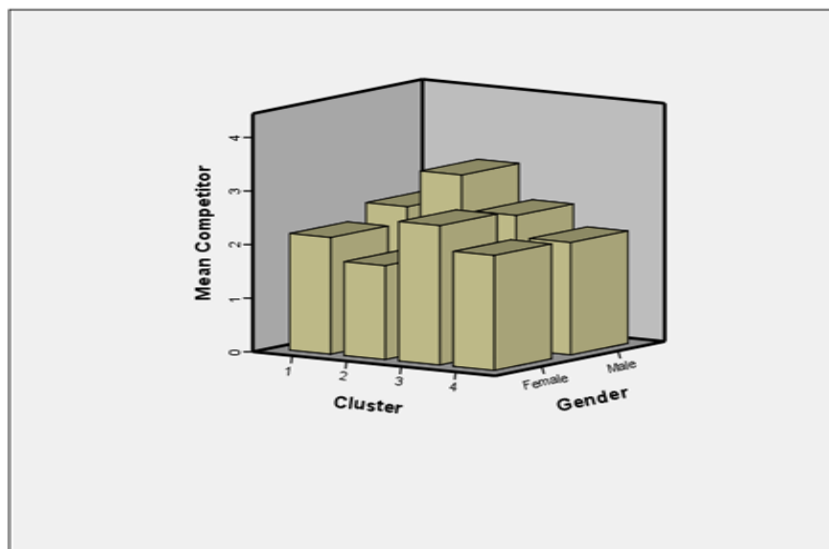


Figure 22 - Competitor Scenario by cluster and gender  
Source: Elaborated by the author

The pattern that the level of moral issue affects the decision is the same in all clusters (Figure 23). That is, people in the bribery scenario had less unethical decision than in the competitor scenario. However, the difference in the moral issue has a stronger influence on the decisions of women: of the 24 (19% of the sample) who decided to work with a partner willing to engage in bribery, 16 (23% of males sample) were men, 8 (14% of females sample) were women. One possible explanation is that bribery is at the same time an unethical and illegal act, that is, bribery poses a higher risk. Future orientation has been previously associated to lower risk-taking personality as well as to higher consideration of future consequences (ZIMBARDO and BOYD, 1999; KEOUGH *et al.*, 1999), and women in this sample are higher in future than are men (as mentioned before, this difference is significant when using a temporal perspective measure, but not with future self-orientation).

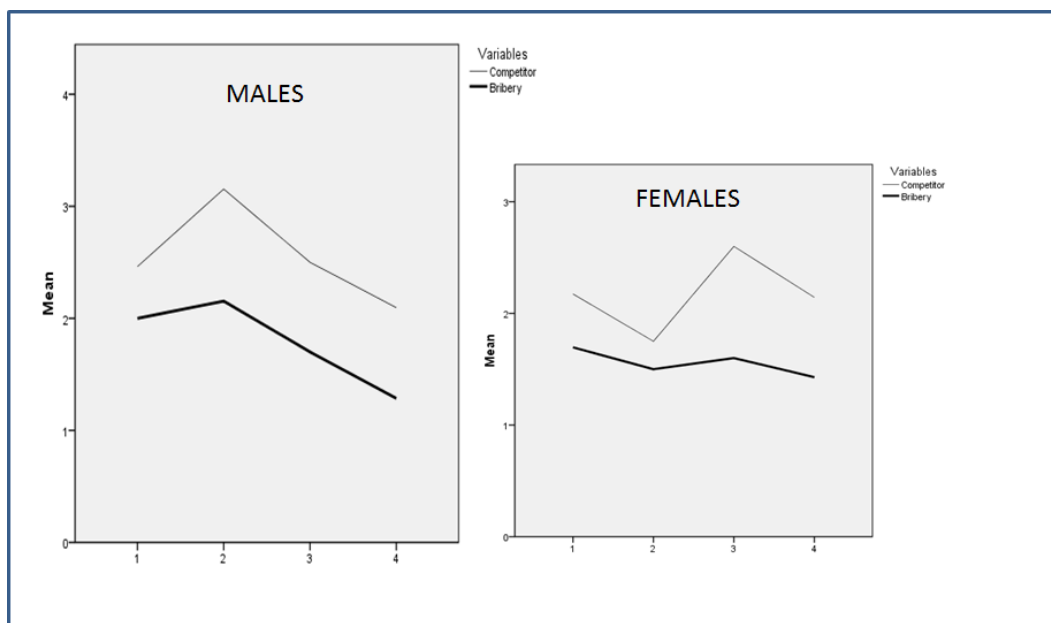


Figure 23 – Unethical intentions by gender  
Source: Elaborated by the author

Furthermore, it is interesting to notice that a high self-monitoring personality has a deeper effect on males than females (Figure 24) for an unethical option. The question then becomes, “What is the difference among high self-monitoring personality between males and females that affects their unethical decision?” Although the self-monitor variables have better explanatory power as a one-dimension score, its three sub-dimensions – Extraversion, Acting and Other-directedness – can help shed some light on the gender difference.

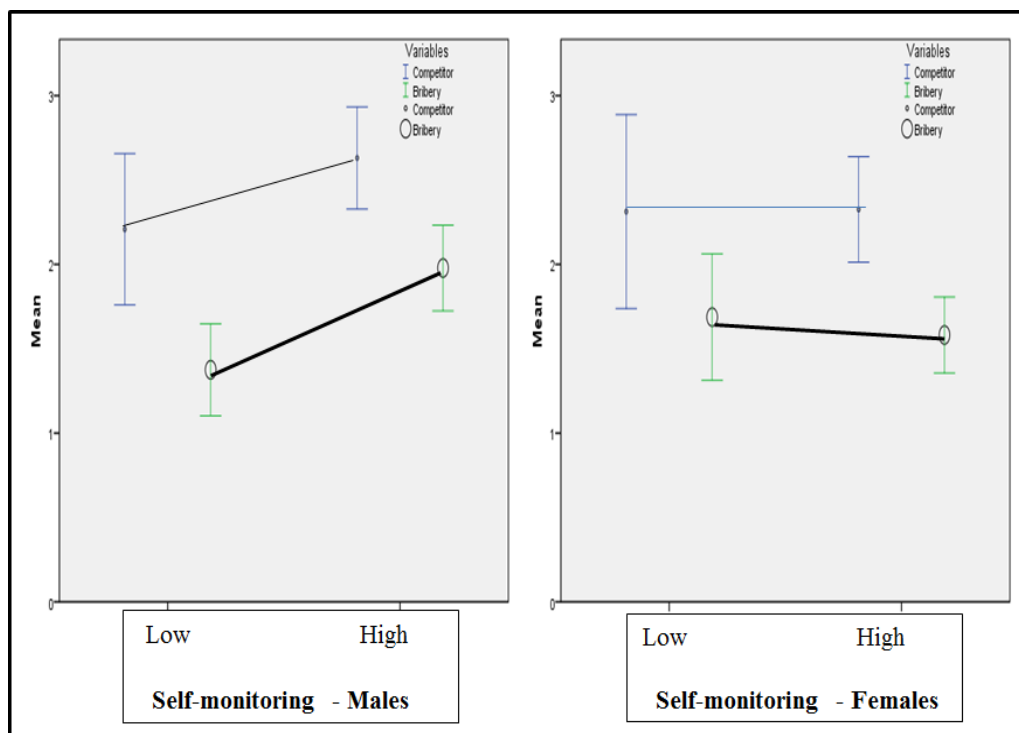


Figure 24 - Self-monitoring and gender by scenarios  
Source: Elaborated by the author

The left-side of Figure 25 presents how the acting sub-dimension is higher for males than females when they are high self-monitors. However, among the low self-monitors, this trend is inverted: low self-monitor women have a higher acting score. An ANOVA test confirmed what the pictures revealed: acting is the only sub-dimension that has a significant difference ( $F = 7.5$ ,  $p < 0.01$ ) between high self-monitor males and females; the same happens comparing low self-monitor men and women, but at weaker significance ( $F = 3.8$ ,  $p < 0.1$ ) and in the opposite direction. As discussed before, although self-monitoring did not differ by gender in this sample, a closer look restricted to the high self-monitoring group showed that high self-monitor women (mean = 4.65, Std. 1.32) had lower and significant means ( $F = 15.95$ ;  $p < 0.05$ ) than did high self-monitor men (mean = 15.46, Std. 1.79). Considering the low self-monitors, there was no significant difference, but the mean of men was slight lower (11.59, Std. 0.99) than that of women (12.06, Std. 0.85).

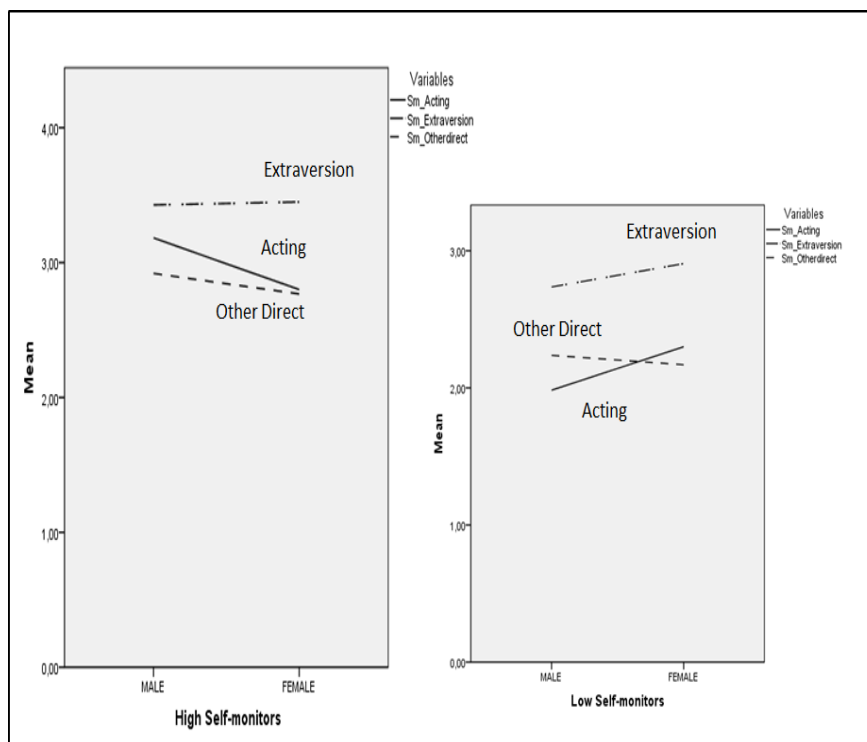


Figure 25 - The three sub-dimensions of self-monitoring  
Source: Elaborated by the author

The self-monitoring sub-dimensions also support understanding about the main difference among the respondents who tolerate the use of bribes through partnering. Figure 26 presents on the left the three dimensions for the overall sample; the right side presents the numbers of unethical responses in the bribery scenario. As discussed before, self-monitoring, the variable that strongly influenced bribery (not network structure itself), and acting do make a difference in relation to bribery. Among the low self-monitors, not only does acting increase, but also there is a deep decline in the other-directedness dimension. However, the results related to low self-monitoring have to be taken with caution because of the small number of low self-monitors who opted for bribery (four low self-monitors versus twenty high self-monitors).

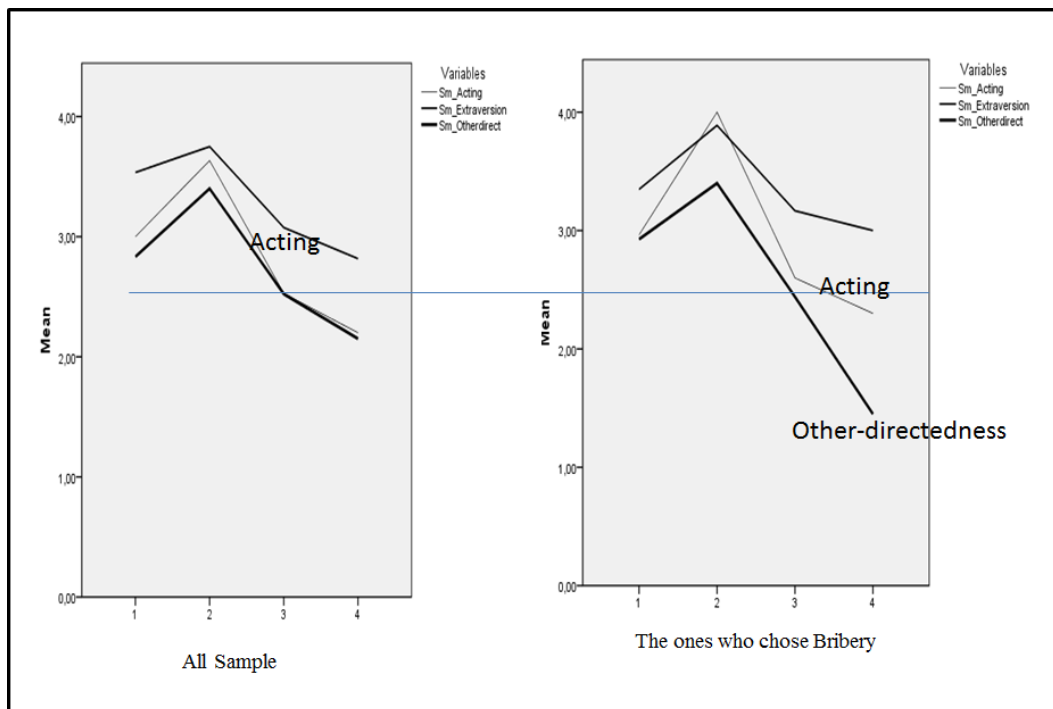


Figure 26 - Self-monitoring sub-dimensions and bribery  
Source: Elaborated by the author

Future orientation, although differences are small – probably due to the often-witnessed “goal-orientation” of management teams which renders this measure a weak candidate to analyze the future factor individual differences – nevertheless helps explain differences in ethical decision-making. Figure 27 shows that in cluster 2, very high self-monitor women have the highest temporal orientation (see Table 21), and they also had a much lower unethical decision score than did males in the same cluster. Moreover, these males had the highest unethical decision percentage in the entire sample and the lowest future orientation mean score. On the other hand, future orientation can also give one possible explanation as to why men in cluster 3 were more ethical than were women.

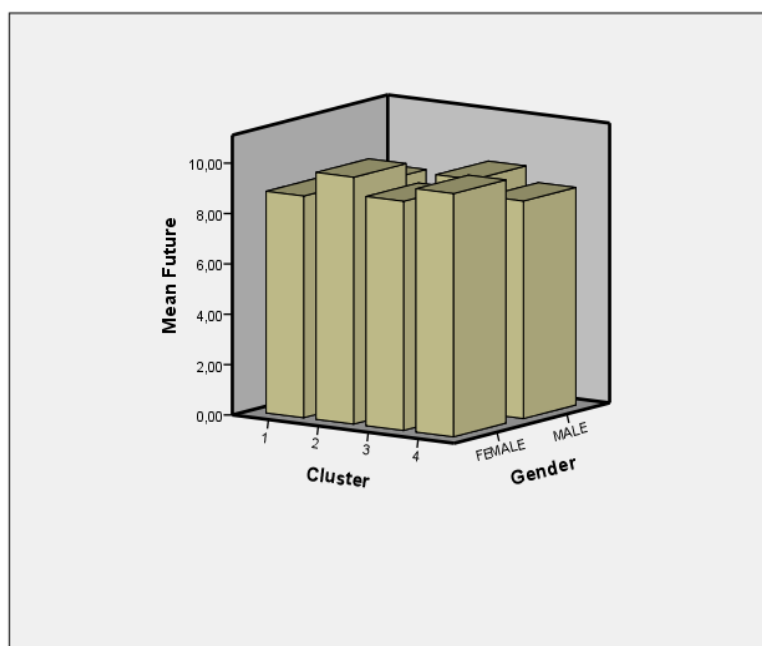


Figure 27 - Future orientation by cluster and gender  
Source: Elaborated by the author

|         | High SM (1)     | Very High SM (2) | Medium SM in High Closure (3) | Low SM (4)      |
|---------|-----------------|------------------|-------------------------------|-----------------|
| Females | 8.80, Std 1.33  | 9.80 , std 1.01  | 9.09, std 0.87                | 9.66, Std. 0.57 |
| Males   | 8.50, Std. 1.05 | 7.98, Std. 1.18  | 9.24, Std. 0.91               | 8.64, Std. 1.14 |

Table 21 - Future orientation by cluster and gender  
Source: Elaborated by the author

## 5.5. Dilemma

The first scenario presented in the survey was a dilemma rather than an unethical issue and therefore was not included as a factor of unethical decision. However, it sheds additional light about individual differences. The scenario had two questions. The first question concerned whether people would betray a close friend pro-actively by telling (i.e., without being questioned) the employees not to engage in the selection process. Table 22 shows that the majority of people chose to remain silent.

| Disclose information?  | No  | Yes | Total |
|------------------------|-----|-----|-------|
| Pro-actively           | 105 | 24  | 129   |
| If asked by employees? | 82  | 47  | 129   |

Table 22 – Dilemma

Source: Elaborated by the author

The second question of the scenario was the real dilemma. Were the employee to be asked directly whether the respondent's colleague had already chosen someone, would the respondent then tell the truth in order to obviate a futile application process (but “betray” a close friend), or would he/she continue to withhold such information? An ANOVA test informed that there is a difference, both considering the clusters ( $F = 2.20$ ,  $p < 0.10$ ) and considering only high versus low self-monitors ( $F = 3.0$ ,  $p < 0.10$ ). In this case, low self-monitors had a mean of 2.50 (Std. 0.90) versus the high self-monitor mean of 2.20 (Std. 0.70). High self-monitors prefer to avoid creating a conflict with colleagues, which is consistent with the key characteristics of high self-monitors of creating their social environment in order to construct positive social appearances.

Considering the cluster (Figure 28), cluster 4, which has basically low self-monitor males in high mean centrality, has the highest percentage (46%) of respondents who would betray a very close colleague but tell the truth to the employees. A closer look on the low self-monitors in cluster 3 (which has high and low self-monitors in high closure) revealed that low self-monitor females in this cluster did not disclose information from the very close friend (8 out of a total of 10 females did not disclose). That is, low self-monitor males (who have a less constrained network than do low self-monitor women) will disclose such information, whereas the low self-monitor females will not. This gender difference was confirmed by an ANOVA test ( $F = 3.57$ ,  $p = 0.06$ ; females = 2.13, Std. 0.95; males = 2.71, Std = 0.95). However, this gender difference did not manifest among high self-monitors: regardless of gender, they did not disclose information, as shown in Figure 29.

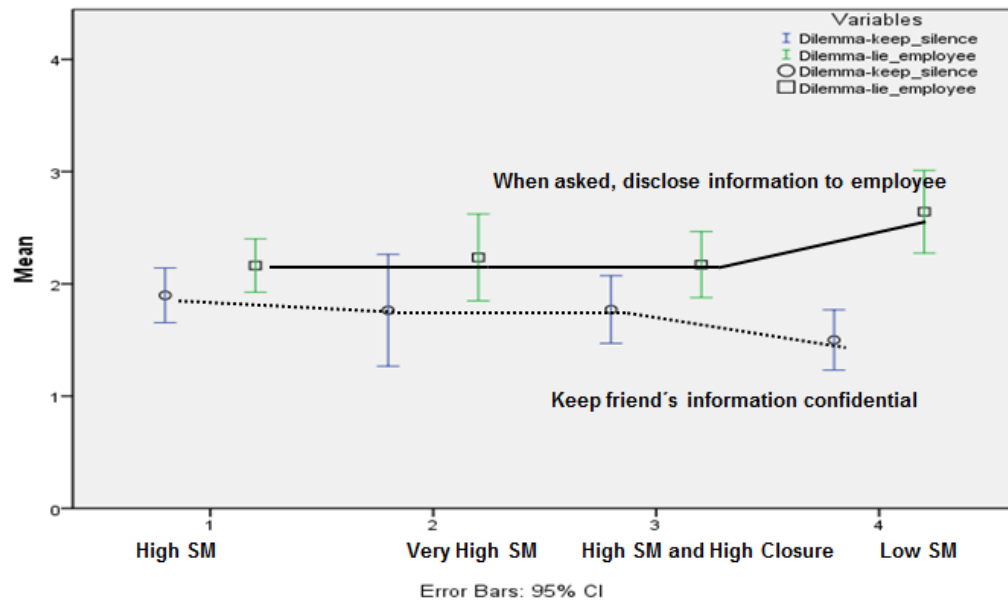


Figure 28 - The dilemma by cluster  
Source: Elaborated by the author



Figure 29 - Dilemma: Disclose information, if asked?  
Source: Elaborated by the author

## 5.6. Cheating Matrix Experiment Results

This study collected 85 valid experiments representing the respondents who performed the three-minute experiment until completion (chronometer reached 179 or 180 seconds). The design of the “cheating matrix” experiment allowed the respondent to abandon the survey at any time during the experiment (including without answering it).

The cheating matrix experiment was first proposed by Mazar *et al.* (2008) in a very compelling article titled “The dishonesty of honest people,” which can be used to test behavior, i.e., whether people lie even if “just a little bit.” The experiment sample was well balanced in terms of gender (48 males and 37 females) and hierarchy (17 not supervisors, 11 supervisors, 38 managers, 15 directors (senior managers), and 4 VPs or above). Self-monitoring had the following distribution: 26 were low self-monitors and 59 were high self-monitors.

The situation that respondents could just commit a mistake (not intentionally lie) by selecting a wrong matrix – although it could happen to some respondents – does not seem to be the best explanation considering the data (Table 23): 45% of people who did the experiment selected at least one matrix with no solution. Among the low self-monitors, 10 (38%) checked a matrix that had no solution, against 28 (47%) high self-monitors who checked the matrix with no solution. However, only high self-monitors committed more than one error; in fact, 10 of the 28 – that is 36% – of high self-monitors made 2 to 4 (maximum possible) errors. The variable “Matrix-Errors” contains the number of matrices with no solution that a respondent checked as valid. An ANOVA test found that error means were different between high self-monitors (3.80, Std. 0.80) and low self-monitors (4.00, Std. 0.90) at a marginal significance of  $p < 0.10$ .

|                 | Matrix Errors |    |   |   |   |       |          |
|-----------------|---------------|----|---|---|---|-------|----------|
| Self-Monitoring | 0             | 1  | 2 | 3 | 4 | Total | Errors % |
| Low             | 16            | 10 | 0 | 0 | 0 | 26    | 38%      |
| High            | 31            | 18 | 4 | 2 | 4 | 59    | 47%      |
| Total           | 47            | 28 | 4 | 2 | 4 | 85    | 45%      |

Table 23 - Self-monitoring and matrix experiment  
Source: Elaborated by the author

Considering the four clusters discussed in section 5.5, the results of the experiment (Table 24) present the same trend as unethical intention: very high self-monitors are the ones who want to present themselves as more “able” to find the results, whereas low self-monitors are the ones least likely to do so. This is consistent with the theory that high self-monitors will engage in impression management in order to influence a positive evaluation of themselves (e.g. DAY *et al.*, 2002, HOGUE *et al.* 2013) or, as suggested by Oh *et al.* (2014), that in private (that is, out of social situations) high self-monitors could behave to win “at all costs.” Clusters were different when taking into account the “errors” that were made, also at a significance of  $p < 0.10$ .

| Clusters                          | Unethical Behavior |     | Total | %   |
|-----------------------------------|--------------------|-----|-------|-----|
|                                   | No                 | Yes |       |     |
| High Self-Monitors                | 16                 | 17  | 33    | 52% |
| Very High Self-Monitors           | 4                  | 6   | 10    | 60% |
| Mid Self-monitors in High Closure | 16                 | 10  | 26    | 38% |
| Low Self-monitors                 | 11                 | 5   | 16    | 31% |
| Total                             | 47                 | 38  | 85    | 45% |

Table 24 - Experiment by cluster  
Source: Elaborated by the author

However, when considering gender, a different pattern emerged from the experiment’s results compared to the unethical intention scenarios: women had a higher percentage of checking an invalid matrix than did men (62% of women who finished the experiment, versus only 31% of men who checked “I found it” in a matrix with no solution). An ANOVA test confirmed this result ( $F = 8.70$ ;  $p < 0.01$ ): males (3.60, Std. 0.90) and females (4.10, Std. 0.70).

This study uses binary logistic regression to predict the experiment results. Binary logistic regression is an analytical tool to predict and explain a binary categorical variable and, although it has the advantage of having a general lack of assumptions, the sample size for each group has to include at least 10 cases for each parameter estimated (HAIR *et al.*, 2010).

The issue-contingent model of ethical decision-making (JONES, 1991) proposes that unethical intention, the level of the moral issue, as well as individual and situational factors can predict unethical behavior. The unethical behavior dependent variable *logit\_matrix* was defined as zero if the respondent did not select any matrix with no solution, and one otherwise. The competitor scenario was used as a proxy for unethical intention because it has a moral issue level that is weaker than bribery. The experiment also has a weaker moral issue than bribery: it is a case of “lie just a little bit”. Moreover, it presents a situation where a respondent could decide to look at the competitor’s information for one or both reasons: to improve their own performance in a new position in the context of a new boss, and/or to help the company with competitive information. The experiment could be interpreted as an opportunity to demonstrate the ability to solve problems.

Moreover, Kish-Gepart *et al.* (2010) suggested that an “impulsive” act could explain the difference between intentions and behavior, leading to a less “deliberative approach to ethical decision-making.” In order to measure whether people made choices influenced by time pressure and impulsive act, a measure of time pressure was included in the analysis. A subset of the future scale was used in the analysis: item 8 (“I tend to lose my temper when I am provoked”) and item 10 (“I complete projects on time by making steady progress”). Item 10 presented a different mean ( $F = 14.60$ ,  $p < 0.01$ ) between genders for the whole sample: male (3.60, Std. 0.90) and female (4.10, Std. 0.70), as well as among respondents who finished the experiment ( $F = 11.30$ ,  $p < 0.01$ ). Item 8 did not present any difference, considering gender or self-monitoring.

Some studies also suggest that self-monitoring personality and gender impact the prediction of behavior from intention: 1) low self-monitors’ behaviors are usually predicted by their intentions, whereas high self-monitors’ behaviors are a function of intention and perceived behavioral control of the situation (AJZEN *et al.*, 1982; PRISLIN and KOVRLIJA, 1992) and 2) high self-monitors’ choice of situations are related to gender: high self-monitor females are more likely to choose situations whose behaviors reflect their attitudes; the low self-monitor choices are not related to gender (SNYDER and KENDZIERSKY, 1982).

The variables that were used in the model with the best fit are presented in Table 25. The model of the others, using the self-monitoring variable or the self-monitoring different sub-dimension presented a worse fit; therefore two items from the self-monitoring scale were used that present such behaviors: item 2 (“My behavior is usually an expression of my true inner feelings, attitudes and beliefs”) and item 21 (“I have trouble changing my behavior to suit different people and different situations”). These two items specifically differentiate low and high self-monitors, taking into consideration the consistency of intention-behaviors.

| <b>Logistic Regression</b> | <b>B</b> | <b>S.E.</b> | <b>Wald</b> | <b>Sig.</b> | <b>Exp(B)</b> |
|----------------------------|----------|-------------|-------------|-------------|---------------|
| Unethical Intention        | 0.74     | 0.31        | 5.75        | 0.02        | 2.09          |
| Gender                     | 1.13     | 0.56        | 4.11        | 0.04        | 3.08          |
| Time Pressure              | 1.23     | 0.40        | 9.39        | 0.00        | 3.43          |
| Behavior (sm2)             | 0.72     | 0.36        | 4.01        | 0.05        | 2.06          |
| Behavior(sm21)             | 0.68     | 0.29        | 5.34        | 0.02        | 1.98          |
| Constant                   | -10.74   | 2.62        | 16.8        | 0.00        | 0.00          |

Table 25 - Variables in Logistic equation  
Source: Elaborated by the author

The binary logistic regression has three different types of model fit measures. First, model fit can be verified by the Hosmer and Lemeshow measure, which tests the correspondence of the actual and the predicted values (a non-significant value indicates that the fit is acceptable). The second statistical fit measure is done using the chi-square tests (Cox and Snell  $R^2$  or Nagelkerke  $R^2$ ) for the difference in the -2LL measure between base model and proposed models, that is, the smaller the 2LL, the better the fit. Another way to measure model fit is to examine the classification accuracy of the model (predicted versus observed).

The Hosmer and Lemeshow test supports the model (5.60,  $p = 0.68$ ), as well as the Cox and Snell (0.30) and Nagelkerke  $R^2$  (0.40) tests for the -2LL fit (86.70), representing a reduction of 20 points from the model with only unethical intention and time pressure (for which 2LL = 101.00). However the percentage of correct classification (predicted versus observed) was only 80% (83% of correct classification when unethical behavior was zero, and 76% otherwise).

Snyder (1986) suggested that to predict a low self-monitor behavior a study should use information about respondent attitudes and dispositions, but to predict and understand high self-monitor behaviors, a study should examine the characteristics of the situation. Following this suggestion, this study also conducted a separate logistic regression for low and high self-monitors (although the small sample in this case is a problem). The results confirmed that bribery intention alone ( $\text{Exp}(B) = 3.20$ ,  $p < 0.10$ ) could explain 73% of low self-monitor behavior. By contrast, none of the intentions scenarios could predict high self-monitor behavior. However, intention (competitor) and time pressure classified correctly 73% of high self-monitor behavior.

The logistic model confirmed that females increase by 200% ( $\text{Exp}(B) = 3.08$ ) the odds to select a matrix with no solution. Table 26 has a further breakdown of unethical intention and behavior by gender and self-monitoring. Behavior of women – low or high self-monitors – had to some extent a relationship with intention, except for the high self-monitor women who had ethical choice; in this case, unethical behavior was higher, which could be explained by social bias or by a possible time pressure of the experiment. On the other hand, the behavior of unethical men, independent of whether high or low self-monitors, has no relationship to ethical behavior, whereas ethical male behavior is consistent with ethical intention.

| Females LSM            |     | Unethical Behavior |     | Total |
|------------------------|-----|--------------------|-----|-------|
|                        |     | No                 | Yes |       |
| Unethical<br>Intention | No  | 75%                | 25% | 4     |
|                        | Yes | 29%                | 71% | 7     |

| Males LSM              |     | Unethical Behavior |     | Total |
|------------------------|-----|--------------------|-----|-------|
|                        |     | No                 | Yes |       |
| Unethical<br>Intention | No  | 67%                | 33% | 9     |
|                        | Yes | 83%                | 17% | 6     |

| Females HSM            |     | Unethical Behavior |     | Total |
|------------------------|-----|--------------------|-----|-------|
|                        |     | No                 | Yes |       |
| Unethical<br>Intention | No  | 36%                | 64% | 14    |
|                        | Yes | 33%                | 67% | 12    |

| Males HSM              |     | Unethical Behavior |     | Total |
|------------------------|-----|--------------------|-----|-------|
|                        |     | No                 | Yes |       |
| Unethical<br>Intention | No  | 92%                | 8%  | 13    |
|                        | Yes | 50%                | 50% | 20    |

Table 26 - Intention versus Behavior (LSM= low, HSM=high self-monitors)

Source: Elaborated by the author

As mentioned above, women (4.16; Std. 0.65) had higher time pressure than did men (3.54, Std. 0.97). Considering the time pressure among high self-monitors, the mean difference is slightly higher: women (4.19, Std. 0.69) versus men (3.39, Std. 0.93). Figure 30 presents the time pressure difference between males and females who finished the experiment. Time pressure could then be one possible explanation for the difference of behavior and intention of high self-monitor women.

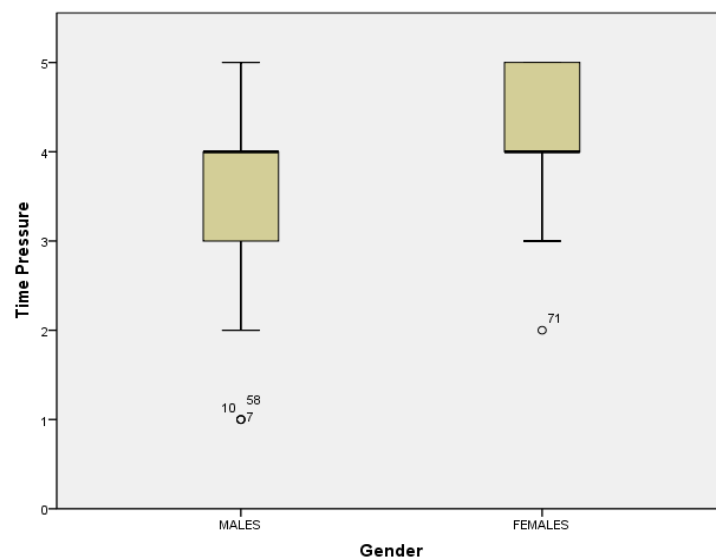


Figure 30 - Time pressure and gender  
Source: Elaborated by the author

Another explanation comes from the findings of Dalton and Ortegren (2011) that women present more social desirability in ethical research. However, self-monitoring, and in particular the other-directedness sub-dimension, is a construct that can explain social bias. For example, the other-directedness sub-scale contains items such as “In order to *get along* and be liked, I tend to be what people expect me to be rather than anything else.” As such, the explanation of social bias could be even stronger considering the self-monitoring personality in women. That is, high self-monitor women probably present more social bias than do low self-monitor women. In fact, among the 9 high self-monitor women who did not choose an unethical option but had unethical behavior, 7 were from cluster 1 or 2, that is from high to very high self-monitors, and 4 committed from 2 to 4 “errors.” On the other hand, the possibility of an influence of the moral issue should not be disregarded. That is, to “lie” a little bit about finding a sum of two

numbers is quite different than looking at the material of a competitor before returning it.

If inconsistent behavior on the part of women could have possible explanations through social bias or/and time pressure, the same cannot be suggested for the behavior of men. First, ethical men had a high consistent rate of ethical behavior considering their ethical intention (93% among the high self-monitors and 63% among the low self-monitors). On the other hand, unethical men had much lower unethical behaviors compared to their intentions. One possible explanation could be that men had a higher need for perceived behavioral control. As an example, one male respondent said, “I need to admit that I was checking off many of the matrices, but then I thought, there is something tricky about this,” and then I decided to do the right thing.”

To understand whether perceived behavior control of the situation could influence unethical behavior, this study conducted a test using item 20 of the self-monitoring scale: “I have never been good at games like charades or improvisational acting” (notice that high scores in this question mean being not so good at charades). Item 20 proved to have different means for males with unethical intention ( $F = 2.90$ ,  $p = 0.03$ ). In fact, among the 26 men who had unethical intention, those who had unethical behavior had lower perception of the “trick” situation (mean = 4.0, Std. 0.90) than did men who did not have unethical behavior (mean = 3.30; Std. 0.90). This trend did not repeat among women with unethical intention.

In summary, high self-monitors had more unethical behavior than low self-monitors, consistent with the unethical intention results presented both in SEM and cluster analysis. However, gender behaved in the opposite direction (men had more ethical behavior than women did). Further, whereas the increase in unethical behavior by women could be explained partially by a higher time pressure than men or by social bias, the decrease in expected unethical behavior by men could be due to the higher need of perceived behavioral control (in this case, to understand the trick of the situation). As Prislin and Kovrlja (1992) discussed, “perception of control is based not only on estimation of one’s abilities to perform a behavior but also on the perception of situational opportunities (facilitators and inhibitors) for the behaviors as well.”

Therefore, Hypothesis 10 (gender and the degree of self-monitoring moderates the relationship between intention to commit an unethical act and actual behavior) is supported. However, there was an unexpected effect of lower unethical behavior in the behavior of men, regardless of low or high self-monitoring, probably a function of perceived behavioral control of the situation and a higher unethical behavior on the part of women due to possible social bias and/or time pressure.

## 5.7.

### Summary of Hypotheses and Discussion

Table 27 presents the summary of the hypotheses. Considering all the different analytical tools used, Hypothesis 4 is supported: self-monitoring is positively related to unethical intention. Low self-monitors, regardless of gender, were more ethical than were high self-monitors. The cluster of very high self-monitors, formed mostly of men, presented the highest rate of unethical option in all scenarios.

| Number | Hypotheses                                                                                                                                         | Conclusion    |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| H1     | Self-monitoring will be negatively related to future orientation                                                                                   | Supported     |
| H2     | An individual's self-monitoring will be negatively related to closure of his/her network                                                           | Supported     |
| H3     | An individual's future orientation will be positively related to closure of his/her network                                                        | Supported     |
| H4     | An individual's self-monitoring will be negatively related to ethical intentions                                                                   | Supported     |
| H5     | An individual's future orientation will be positively related to ethical intention                                                                 | Supported     |
| H6     | An individual's network closure will be positively related to ethical intention                                                                    | Not Supported |
| H7     | Women will have higher future temporal orientation than will men                                                                                   | Supported     |
| H8     | Women will have higher network closure than will men                                                                                               | Supported     |
| H9     | Women will have more ethical intentions than will men                                                                                              | Not Supported |
| H10    | Gender and the degree of self-monitoring moderates the relationship between one's intention to commit an unethical act and his/her actual behavior | Supported     |

Table 27: Hypotheses Results

Source: Elaborated by the author

If the high self-monitors are the candidates to be the so-called “bad apples,” the next question is in which “barrel” (social network)? The results of the structure equation model showed that closure related to unethical intentions and cluster analysis confirmed this pattern. Therefore, Hypothesis 6 is not supported. However, to clarify this answer it is necessary to disentangle the influence that individual factors, and especially gender, have in the creation of social networking structures.

First, all of the hypotheses concerning creation of social network were supported (H2, H3, and H8). That is, self-monitoring (H2, negatively related to network closure), gender (H8, females are positively related to network closure) and temporal orientation (H3, positively related to closure) are individual factors that influences the structure of the work advice network.

As part of an individual trait and personality, these factors are also intertwined in a reinforcement process because the other hypotheses related to individual factors were supported: self-monitoring and future orientation are negatively related (H1), and women have higher future orientation than do men (H7). Cluster analysis supported this finding: cluster 3 is composed of people in lower levels of self-monitoring and higher future orientation, most of them women, in the highest closure group of all. Van den Brink and Benschop (2014) reviewed studies on networking and gender and cited how women exercise less networking activities because of time constraints and family (FORRET and DOUGHERTY, 2001) and that women suffer more barriers to networking which could lead to a higher reluctance for networking itself (TONGE, 2008).

Therefore, social network closure is not associated with an unethical option per se. The first graph on the left of Figure 31 (using constraint) shows that the relationship social network vs. self-monitoring vs. gender ranks those who had only ethical options: women have higher closure than do men and low self-monitors have higher closure than do high self-monitors. Further, this gap is prominent among women. The graph in the middle of the Figure 31 shows how closure is higher among the ones who had the unethical option in competitor scenario, and that this increase is much more accentuated among men. The same pattern seen in the previous graph continues in the self-monitor and gender dimensions: low self-monitors have more closed networks than do low self-monitors, and women have networks that are more closed than do men.

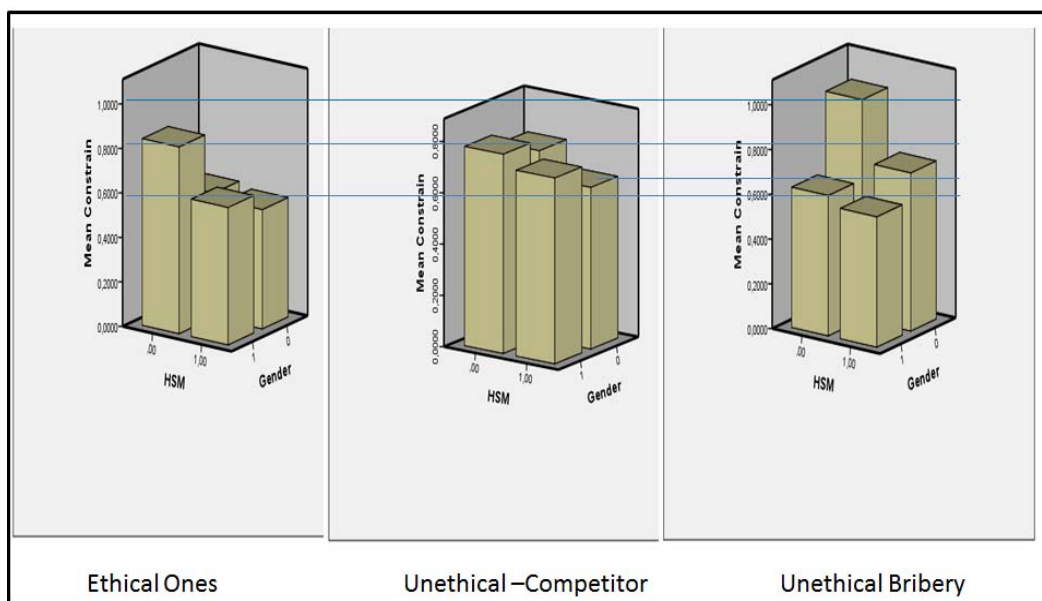


Figure 31 – Intention: ethical versus unethical (female=1; high self-monitors=1)  
Source: Elaborated by the author

However, moving on to the bribery scenario, closure increased, but only among males (an effect that was even stronger among low self-monitor males). By contrast, a different pattern was evident among females: constraint reduced to lower levels was the case for ethical females. That is, the structure of the network pattern is inverted among the ethical and the unethical females.

Figure 32 shows the same trend as that witnessed in the bribery scenario (the constraint mean of low self-monitors, which is hidden in the left side of the Figure 32, is 0.66, Std. 0.31). Ethical females had higher constraint networks (mean= 0.87) than unethical females (mean= 0.69) confirmed by an ANOVA test ( $F=6.75$ , sig <0.05).

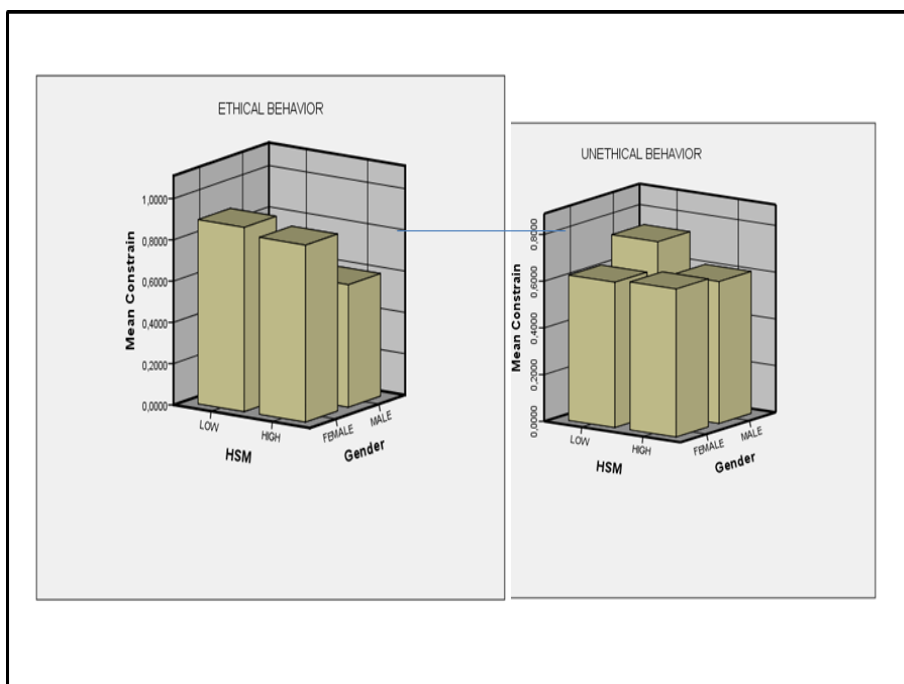


Figure 32 - Behavior: ethical versus unethical  
Source: Elaborated by the author

The response bias could be a possible explanation for the difference of unethical intention options between high and very high self-monitor females (cluster 1 and 2) and females in high closure (clusters 3) in the competitor scenario: high self-monitor women had much higher unethical behavior than unethical intention, showing a possible response bias. Figure 33 presents unethical intention in competitor scenario versus unethical behavior in the experiment (left side = males; right side = females; all sample). As high self-monitor women are in high-centrality, the final mean result of closure could be inflated by this response bias. That is, this response bias could have affected the inverted structural pattern in the competitor scenario. In the bribery scenario, however, as only few low self-monitor females chose the unethical option, the closure mean was less affected by possible response bias.

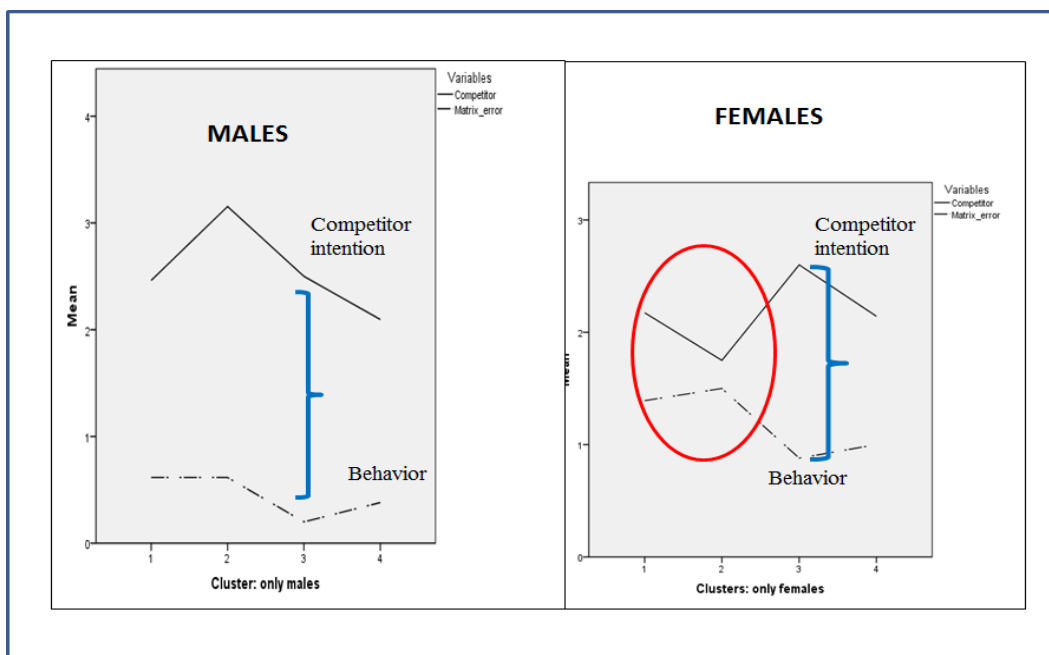


Figure 33 – Response bias  
Source: Elaborated by the author

Differences in ethics across gender have also presented contradictory results in the literature; this study, however, does not support Hypothesis 9 (women are more ethical than are men). First, the significance of gender is irrelevant in light of the other variables: self-monitoring, the network the individual is in and even future orientation (which also had a weak loading of 0.33). Structure equation results presented a weak significance for gender (loading = 0.20,  $p < 0.10$ ); additionally, model 1 presented how self-monitoring alone could predict unethical intention.

Second, as discussed above, the experiment results suggest that women have much more response social bias than do men (or have more time pressure) and, specifically, that high self-monitoring women have higher propensity to be unethical. Unfortunately, this means that the number of people who would have unethical options could be even higher. On the other hand, one could argue that the results also suggest that the moral issue had a stronger effect in women than men. That is, women might be more likely to “lie” in the experiment insofar as lying has a lower level of moral issue than looking at a competitor’s material before returning it. Other possible explanations can arise when looking at other individual factors, such as the future measures, as discussed in the end of section 5.4 (e.g. see Figure 27).

As discussed before, an interesting pattern emerged from the experiment: women were apparently more “naive” than men, at least high self-monitor women. Whether this was a result of time pressure, social bias, or the constant need to prove that women are as good as men in business (e.g. comment received from one female blaming herself for not finding the sums: “I used to be good with numbers, but in this exercise... I just don’t know what happened...”) will have to be investigated in future studies. Men – including those who chose unethical options – did not resort to unethical behavior, even without really understanding the objective or results behind the act (at least without some valuable reward). As discussed in the experiment section, men who had better intuitions as to the “trick” of the situation did not select wrong matrices.

Therefore, Hypothesis 10 (gender and self-monitoring moderates the intention-behavior) is supported. However, it is important to clarify that this study originally posited that women would be more consistent in the intention-behavior. However, the results found no such evidence: high self-monitor women manifest more unethical behavior than intention behavior (probably due to social bias/time pressure), whereas men had much less unethical behavior compared to intention behavior (probably due to the perception of behavioral control).