

Staying or leaving? Social structure and age as determinants of intra-organizational perspectives

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Abstract:

Research and Development (R&D) endeavors are increasingly specialized and require rarely available expertise. These circumstances make it necessary to hold valuable expertise in house. But what makes these specialists staying in the R&D unit or at the company? Previous research describes social structure in which employees are embedded as one of the major determinants of intra-organizational mobility expectations. There are two contradictory lines, however. First, social closure is supposed to strengthen the intentions of staying. Second, the efficiency and effectivity of the individual social network is assumed to enhance intra-organizational expectations. An empirical study of 44 R&D teams presented in this paper reveals that expectations to stay in the R&D team is determined positively by social closure, whereas the expectation to stay at the company is determined positively by the efficiency and effectivity of the individual social network. Age also influences staying in the R&D team and company significantly.

Keywords: Mobility expectations, Social networks, Social capital, Research and Development (R&D)

Introduction

Executing R&D activities is a tremendously difficult challenge nowadays, since the necessary expertise doing so is scattered around the world in pockets of excellence (Leenders et al., 2003). Companies are increasingly confronted with the problem of an exponential increasing number of specializations and at the same time a decreasing number of available specialists (e.g., Griffin, 1997). Most companies, therefore, attempt to hold valuable expertise and specialists in house. But, what makes highly educated R&D staff staying at their organization? This issue is addressed in this study, first by investigating factors that make employees staying at their R&D team. This issue is important since most of R&D endeavours are done using a team-based approach (e.g., Griffin, 1997). Second, it is examined which factors determine whether employees intend to stay at their company.

In the literature there is a broad range of research suggesting that the structure of the individual's network and the individual's social capital in particular influences the individual expectations to stay at the R&D team or company. It is almost self-explanatory that the higher the experienced intra-organizational career chances of employees, the more likely they are willing to stay (e.g., Brüderl et al., 1993). A large body of evidence links the ability to span crucial social boundaries with higher rates of upward future and career advancement (e.g., Gabbay and Zuckermann, 1998; Seibert et al., 2001). Well-known examples of this are the 'strength of weak ties' argument of Granovetter (1973) or the 'structural hole' argument of Burt (1992). As Burt (1991, p. 1) argues "Given an increasing number of people available with comparable levels of human capital, social capital is increasingly the factor differentiating candidates, and so determining achievement". Metaphorically, social capital refers to resources embedded in social relations that help individuals accomplishing their goals (e.g., Coleman, 1990). In research on social capital, however, there are two contradicting lines. The 'structural hole' argument of Burt (1992) claims that the lack of connections among associates determines social capital by creating higher career chances, whereas Coleman (1990) among others argues, actors benefit from social closure or density that creates a more pleasant work environment and therefore have higher intra-organizational career expectations.

The 'structural hole' argument describes a configuration of individual's networks, in which information and control benefits are realized by being connected to a selected number of colleagues who do not have connections among each other. Such individual network structures guarantee an effective and efficient access to valuable resources as information and control. On the opposite, the 'social closure' argument claims that members of highly interconnected structures trust others to provide reliable information. Dense relations among a set of actors create a situation in which interpersonal credits and debits flow at a high speed, binding actors to one another in mutually beneficial ways (Coleman, 1988). Very obvious, these two arguments contradict each other. The advantages described by Coleman would seem to be unavailable to those whose contacts are divided by structural

holes. The density of networks highly correlates (negatively) with the efficiency and effectivity of individual networks. In fact, network density represents what Leenders and Gabbay (2001) label as corporate social capital, since it only exists on the level of a collective. So, when investigating the intra-organizational expectations of R&D team members both approaches should be taken into account. On the one hand side, the individual network structure or social capital and on the other hand side the membership of individuals in groups denoted by a certain aggregated structure or corporate social capital. Besides structural variables gender seems to play a relevant role for intra-organizational perspectives. Valcour and Tolbert (2003) found that women experience more inter-organizational mobility while men experience more intra-organizational mobility. Moreover, it has been suggested that the greater intra-organizational future experienced by men is in large part due to the fact that they make more extensive use of informal networks (e.g., Brass, 1995; Hopcroft, 1996; Tharenou, 1997). As it is argued, even in most progressive companies with the best intentions, women are sometimes excluded from the informal channels of information (Van der Hulst, 2004). When considering the character of R&D teams, however, one should be cautious about examining gender effects, as R&D teams are “men-dominated” units (e.g., Cohen and Cohen, 1991; Leenders et al., 2003). Age might also play an important role as work experience is often related to promotion opportunities. In addition, chances of inter-organizational mobility are also lower at a higher age (e.g., Rhebergen and Wognum, 1997) and norms about career development might also differ by age and cohort (Greller, 2000). Gabbay and Zuckerman (1998) have found a curvilinear effect of age on mobility expectations (positive age effect and negative sign of age square) and a negative effect of seniority if both were imputed in the model. Age also seems to affect the patterns of individual networks. Kratzer (2001) has found that older R&D team members have less contact to other team members than younger members. Moreover, older R&D team members stay more central in the team’s communication network despite of having a lower number of contacts. So, seemingly the personal networks of older R&D team members are more efficient and effective in the sense of Burt (1992). The central aim of the study is to unravel how social structure, gender and age affect the intra-team and intra-organizational expectations of R&D team members. By generating knowledge about how these expectations develop, managers of R&D settings will be enabled to navigate these expectations in a way that these employees are more likely stay at their company and/or team, and in turn help to save costs for searching and/or training highly specialized R&D staff. Accordingly, the study aims to shed light on how intra-organizational perspectives of R&D team members are determined, and in turn, contributes to resolve the tension between the contradicting paradigm of social capital and corporate social capital. In the next section the theoretical body of the study is worked out leading to a number of hypotheses. Thereafter, the study design and the use of methods are explained. In the final two sections of the study the results are presented and scientific as well as managerial conclusions are drawn.

Intra-organizational perspectives: Hypotheses

The arguments advanced in the previous sections of this paper point to the laudable effects of social structure on intra-organizational perspectives. The basic argument is that the social structure aids in the creation and dissemination of ideas and to the timely availability and control of information. Because of its obvious advantages and importance, the closeness of interaction and the effectivity and efficiency of interaction have become the first and foremost explanatory variable when looking at intra-organizational perspectives (Van der Hulst, 2004). First, it will be outlined why researchers expect close contacts to contribute to intra-organizational perspectives and after the contrary line of thinking is discussed. Thereafter, the effects of gender and age on individual expectations are hypothesized.

One line of theorizing refers to communicational closure of personal relations. One form of informal conversation that is frequent in work teams is morale-building communication (Jehn and Shah, 1996). Morale-building communication is defined as communication encouraging team members to perform better by exchanging positive comments about the team member's contributions (Jehn and Shah, 1996). When the cohesiveness of personal relations is high, all members express solidarity, mutual liking and positive feelings about attending meetings and carrying out the tasks. In this case more information is shared (e.g., Roloff, 1987). In addition close personal relations create trust among the team members (Jehn and Shah, 1996; Roloff, 1987).

Moreover, closer contacts facilitate orientations towards each other, according to Homans (1974). As a consequence, a cohesive network in a team strengthens actor's orientation to their peers and enhances conformity of opinions and behavior in the team. This argument is referred as the 'cohesiveness-compliance hypothesis'. Consistent with the 'cohesiveness-compliance hypothesis', numerous studies have found a positive relationship between cohesiveness of personal relations and compliance to group norms and trust among the group members. As Coleman (1988) argues strong group bonds are beneficial for all belonging to the group, because the information shared is trustworthy and control is exhibited by rewarding each other. So, it can be expected that R&D team members who stay in dense or close R&D teams have greater intra-team expectations than those who are members of less close teams. This expectation might be similar when considering the company as the whole, because the boundaries of the company are still closer than the outside world and positive intra-team experiences might be also translated into more positive feelings about the company.

H1: Higher network closure of the R&D team increases the intra-team and intra-organizational expectations of R&D team members.

Another line of thinking addresses the structure of the individual's network. A more recently developed concept with respect to the provision with information is the concept of structural holes (Burt, 1992). The 'structural hole' argument describes a configuration of

individual's networks, in which information and control benefits are realized. Information and control benefits can be realized by two kinds of configurations. First, the number of contacts increases the effectivity of the individual network and second the number of non-redundant or non-overlapping contacts increases the efficiency of the individual network. The interplay between effectivity and efficiency determines chances of intra-organizational mobility (Burt, 1992). As Burt (1992) argues, actors with contact networks optimized for structural holes, or in other words actors with networks providing high structural autonomy (highly effective and yet highly efficient networks) enjoy higher rates of return on their investments because they know about, have a hand in, and exercise control over, more rewarding opportunities. A number of studies have confirmed that this individual network configuration increases intra-team and intra-organizational expectations (e.g., Gabbay and Zuckerman, 1998). So, in contrast to network closure claims this argumentation that the efficiency and effectivity of the individual's network increases the intra-team and intra-organizational expectations due to the perception of much higher career chances.

H2: The higher the effectivity and efficiency of the R&D team member networks the higher are their intra-team and intra-organizational expectations.

Previous studies found that men experience more intra-organizational mobility than women (Valcour and Tolbert, 2003). A similar hypothesis will be formulated in this study. It was discussed earlier that men make more extensive use of their individual networks (e.g., Brass, 1985) and have greater access to informal networks (e.g., Ohlott et al., 1994). So, when informal networks play a role in expecting an intra-team and intra-organizational future, these expectations are different between men and women. Making more use of their individual networks indicates a higher closure of male networks and higher network effectivity by having more contacts. This indication has been confirmed in very recent research (e.g., Van der Hulst, 2004). Moreover, it has been found that men have access to many more first and second order contacts (e.g., Van der Hulst, 2004), so their network is not only more effective but also structured in a way of providing more structural holes. In this way men might profit from being embedded in more contacts as well as having more information and control benefits due to the bigger size of male networks. In short, individual structural characteristics are correlated with gender, hence those studies that neglected network variables might have found significant gender effects that could at least partly be attributed to structural characteristics. Based on the arguments above, it is very likely, however, that both structure and gender have a net effect on intra-organizational mobility expectations.

H3: Men are more likely to expect an intra-team and intra-organizational future than women.

Finally, age was discussed as being influential on individual intra-organizational expectations. Previous studies found a curvilinear effect of age (cf. Gabbay and Zuckerman, 1998). It was also discussed that employees with a higher age provide about less contacts but still stay more central in the network (e.g., Kratzer, 2001). This finding indicates that employees with a higher age have more access to control and information benefits, but do not profit so much from the closure of the network. Since age is expected to correlate with structural characteristics, part of age effects in an analysis that disregards structural variables can be at least partly attributed to differences in network efficiency and effectivity. Most arguments, however, lead towards a hypothesis that predicts also a positive net effect of age on the expectation of staying in the team and at the company.

H4: The higher the age of R&D team members the higher are their intra-team and intra-organizational expectations.

Method

Sample and Procedure

For this study data were collected on 44 R&D teams in eleven companies engaged in the development of digital products in the Netherlands. All team members were requested to fill out a questionnaire regarding their expectations whether to intend staying in their R&D team and at the company. The questionnaire also included items on which teammate they interacted at least on a weekly basis about “work-related” matters: communication involving the discussion, innovation, or evaluation of new ideas or approaches to technical problems; technical or scientific help or advice; mutual use as ‘sounding board’ for ideas; distribution of scientific or technical information stemming from outside of the team, and questions about their age and gender.

In the questionnaire, a full roster of team members was used for each R&D team. The rosters of team members had been established in communication with team members and, where applicable, team management. As a result, all team rosters were reported to be ‘complete’ by all respondents. The result of this question is an asymmetric matrix for each team with values 0 = no (or less than) weekly communication and 1 = (at least) weekly communication. This procedure is typical for the way in which communication network data are collected (e.g., Rice, 1994; Kratzer, 2001).

In addition, team members were asked several questions regarding their background and their membership of the team. On average, team members had been in their field of specialization for 9.3 years, and had been with the company for an average of 7.3 years. The main fields of specialization were chemical engineering (12 percent), mechanical engineering (24 percent), and computer science (22 percent). Most had polytechnic education (44 percent) or an academic education (30 percent). In addition, 14 percent had a doctorate.

The questionnaires were administered on site during formal team meetings and achieved a response rate of 95 percent (the five percent missing is due to members not being present at the meetings). At these meetings, a researcher was present to answer potential questions. The questionnaire was personalized such that each team member could unequivocally report with whom he or she maintained interaction. This individual identification was removed once the data were entered, such that the structure of the communication network was maintained but information about the identity of the individuals was invalidated.

Dependent measures: Intra-team and intra-organizational expectations

All R&D team members were asked to indicate whether they see their individual future (in a period of ten years from now) within the same R&D team (0 no / 1 yes) or within the same company at which they are employed currently (0 no / 1 yes). Intra-team expectation is labeled *team perspective* and intra-organizational expectation is labeled *company perspective* in the tables.

Independent variables

Whenever possible, existing and commonly used operationalizations were chosen for the empirical study. The operationalizations we used for the ‘Closeness of the R&D team’ and the ‘Efficiency/effectivity of the individual’s networks’ are common in social network analysis (e.g., Burt, 1992; Wasserman and Faust, 1994; Van der Hulst, 2004).

‘Closeness of the R&D team’

The ‘Closeness of the R&D team’ was determined by the density of the communication network. Density describes the overall level of interaction reported by the team members. It is analogous to the mean number of ties per team member and varies between 0 (no communication in the team) and 1 (everyone communicates with everyone, at least once a week). The variable is labeled *density* in the tables.

‘Efficiency/effectivity of the individual’s networks’

‘Efficiency/effectivity of the individual’s networks’ was determined by the constraint-measure developed by Burt (1992). Individual constraints refer to the efficiency and effectivity of the individual communication network. The efficiency describes the ratio of non-redundant (not overlapping) and redundant (overlapping) network connections. The central idea behind network efficiency is, the more individuals invest in contacts that are connected themselves the more time and energy the waste, which could rather be invested in non-redundant contacts (Burt, 1992). Effectivity describes the size of the individual network. Individual constraints are higher when someone has fewer connections and when more connections are redundant. As Burt puts it “Your entrepreneurial opportunities are constrained to the extent that you have invested the bulk of your network time and energy

in relationships that lead back to a single contact” (1992: 55). Individual constraints vary between 0 (the network is not constrained at all) to 1 (the network is fully constrained). Note that this measure is subject to criticism (e.g., Krackhardt, 1995). The variable is labeled *constraints* in the tables.

Gender and age

Gender was measured by asking each team member to indicate whether she/he is male (1) or female (2). Age was measured using 5 categories (1 – under 30; 2 – 30-39; 3 – 40-49; 4 – 50-59; and 5 – over 60).

Table 1 summarizes the descriptive statistics of the individual level variables. As it is shown correlations are rather small and only statistically significant regarding company perspectives and team perspectives; age and company perspectives; and constraints and company perspectives (negative). Table 2 illustrates the descriptive statistics of density - the only team level variable that is included.

Insert Table 1 about here

Insert Table 2 about here

In a next step a closer look at gender and age is presented. As Table 3 displays there are only 14 women in the sample, which confirms the postulation that R&D settings are male dominated. Moreover, it raises the question whether to continue including gender in the analyses. Being aware of the limitations, we decided to do so. Age also is distributed unevenly. R&D team members who are older than 49, do not see any perspective in their R&D teams. Only very few of them indicate a perspective in the company over a period of ten years from now. This might be an indication of expected retirement. We decided to take this into account and to execute separate statistical analyses including all team members and including only team members that are younger than 50 years.

Insert Table 3 about here

Analysis

For the analysis of data multilevel logistic regression is used (Bryk and Raudenbush, 1992; Goldstein, 1995). In our two-level models, individual characteristics are the lower level observations and characteristics of the teams are the higher level observations. The two-level model allows us to correct for the methodological problem that observations within the teams are not independent.

Since the dependent variables are binary, the logit transformation will be used. Formally, let the function P_{it} denote the propensity of actor i to expect staying in the same team or company t ten years from now. The propensity of expectation of staying is specified by the logit link function, which is the natural logarithm of the quotient of the probability of expectation of staying $P_{it}(S)$ and the probability of expectation of not staying $P_{it}(M)$ (cf. Goldstein, 1995: Chapter 7).

$$P_{it} = \ln\left(\frac{P_{it}(S)}{P_{it}(M)}\right) = \alpha_0 + \beta_1 x_{1t} + \varepsilon_t + \beta_2 x_{2it} + \dots + \xi_{it},$$

where α_0 is a baseline expectation propensity. The baseline expectation might depend on the general economic climate and on other general background variables that are not interesting for this study. The team-level variation depends on density (social closure, x_{1t}) and on other team characteristics. Notation ε_t stands for a team level error term and embodies all between-teams variation that is not covered by the team-level explanatory variable. We assume that the team level error has a zero expected value and has a normal distribution that is

$$\varepsilon_t \sim N(0, \sigma^2),$$

where the variance σ^2 is going to be estimated.

The inter-individual variation depends on age (x_{2it}), on gender, on network constraints and on other personal characteristics. The individual-level error term ξ_{it} represents the residual inter-individual variance that is not estimated. We conducted further analyses controlling for the kind of product development in the team (basic vs. applied), specialization of the company, and individual work experience next to the presented multilevel logistic regressions. These models did not show any significant effect of these control variables nor a radical change in the parameter estimates of the main variables. For this reason, these models are not presented here.

Results

Table 4 displays the results of multilevel logistic regression on team perspectives. Model 1, including all respondents, shows that only density has a statistically significant positive effect on team perspectives. All other variables have no significant effects. In Model 2, excluding respondents who are older than 49, age exhibits next to density a statistically significant effect on the team perspectives. The effect of age is curvilinear and the age group 30-39 has the highest expectations of staying in the team. In other words, considering all included R&D team members the expectation to stay in the R&D team is positively influenced by the closeness or density of the team. When considering only team members younger than 50, not only density, but also age affects the expectation to stay in the team. There are no significant random variation on the team level.

Insert Table 4 about here

As it is displayed in Table 5, not density, but constraints influence the expectations of R&D team members to stay in the company on a statistically significant level. When excluding respondents over 49 years, also age has a positive linear effect on company perspectives at a statistically significant level next to the negative effect of constraints. Phrased in other words, the results imply that not social closure, but the efficiency and effectivity of the individual social networks impact positively the expectations to stay at the company as constraints are the reverse of efficiency and effectivity. Age has the same effect on company expectations than on team expectation. In Model 1, presented in Table 5, a statistically significant variation on the team-level is found. In Model 2, however, no significant random effects were detected.

Insert Table 5 about here

Summarizing the results it can be stated that with regard to perspectives in the team, network closure of the team has a significant positive effect and age has a significant curvilinear effect. Considering the future perspectives in the company, the efficiency and effectivity of the individual network as well as the age exert a positive impact. According to the results, Hypothesis 1 can partly be confirmed with respect to perspectives in the team and Hypothesis 2 can partly be confirmed regarding perspectives in the company. These results indicate that the contradicting arguments about social closure and structural holes are both relevant, but at another level of analysis. Social closure is a significant predictor of expectations at the team-level and structural holes play an important role in expectations at the company level. Hypothesis 4 is largely supported as age has a curvilinear effect on perspectives in the team and a positive linear effect on company perspectives (when excluding all team members that are older than 49). Hypothesis 3 cannot be confirmed, however, as gender does not have a significant effect.

Conclusion

R&D endeavors increasingly require specialized knowledge in order to create successful new products. This knowledge is carried by specialists most often trained and educated in the company. Since it is very difficult to find this kind of specialists on the labor market, companies have a strong interest to hold these specialists in house. This study have addressed the question about what does make these specialists staying at their R&D team or at their company. Two prominent arguments of the literature about the structural embeddedness of employees were contrasted. The first argument claims that the closure of the social structure in which the employees are embedded increases positive feelings towards the team and in turn also career expectations within the organization. The second

argument claims that the efficiency and effectivity of the individual networks determines career expectations within the organization. Translated into the question at hand it can be expected that on one side a higher closure of the team and on the other side a higher efficiency and effectivity of the individual networks would increase the likelihood to stay in the R&D team or at the company. These arguments, however, contradict each other.

This paper presented the results of an empirical study that revealed that both arguments can be confirmed regarding different social horizons. Social closure contributes positively to the individual perspectives in the same R&D team. So, a pleasant team atmosphere and possible career expectation make employees believing to stay in the same team also ten years from now. A different picture appears when looking at the expectation to stay at the same company. Results show that not social closure, but the efficiency and effectivity of individual networks affect the expectation to stay at the same company ten years from now positively. Thus, with respect to individual perspectives at the company, channeling career chances becomes more important than a pleasant team atmosphere. Considering the results, the tension between these two arguments can be eased in the way that the social horizon determines the effect of different network structures on intra-organizational perspectives. In a small social space, closure, cohesion, trust, and positive feelings are more important for a decision to stay. In a larger social space, this closure is most often absent, a team seemingly cannot give orientation for a larger social space as the company; and a more efficient and effective network, or in other words the chances of an upward mobility, determine the decision to stay or to go. Another result of the empirical study is that age positively contributes to individual perspectives in the team and at the company (when excluding all respondents who are older than 49). This result is not very surprising because it shows a dynamic that is well-known, namely, that inter-organizational job mobility among younger cohorts is higher than among older cohorts. Gender did not show any effect, but with only 14 women in the sample it cannot be well-researched whether gender plays an important role or not. Moreover, it will be difficult to research gender effects in R&D settings because R&D settings are seemingly 'male dominated'.

Translated into managerial terms the results imply two things. Creating a team atmosphere that is pleasant for all participants helps to hold valuable specialists in the team. Next to this pleasant atmosphere, the perceived chances for an in house career contribute to make these specialists staying at the company. So, the managerial approach to hold these specialists should include (at least) two things. First, a concentration of team building, teaming groups of specialist, should be realized. That does not only help to make employees staying, but also increases the creative output of such groups (cf. Kratzer, 2004). Second, career chances should be made explicit, not only for holding valuable specialists, but also for creating clarity and in turn a perspective at the company.

The study has illustrated how important the social structure (in which employees are embedded) is for their expectations to stay in the same R&D team or company. So, staying or leaving is also a matter of how the social structures are molded. Future research on mobility and mobility expectations should, therefore, include also this facet of individual

decision making in more detail. Moreover, a longitudinal study design can help also to investigate the endogenous dynamics of social structures.

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Table 1: Descriptive statistics and correlations of individual level variables

Variable	N	Mean	s.d.	(1)	(2)	(3)	(4)
(1) Team perspectives	233	.3433	.476				
(2) Company perspectives	233	.5279	.500	.141*			
(3) Age	233	2.107	.831	-.115	.174**		
(4) Gender	233	1.060	.238	-.107	-.086	-.098	
(5) Constraints	243	.695	.267	.083	-.155*	.028	.039

Note: ** significant at the 1% level * significant at the 5% level (two-tailed).

Table 2: Descriptive statistics of team level variables

Variable	N	Mean	s.d.
Density	44	.5839	.25110

Table 3: Mean team and company perspectives by independent variables

Independent variable	Category	N	Team perspectives	Company perspectives
			Percentages of saying 'yes'	Percentages of saying 'yes'
Gender	male	219	.36	.54
	female	14	.14	.36
Age	Under 30	55	.29	.31
	30-39	111	.45	.56
	40-49	55	.25	.75
	50-59	11	.00	.27
	over 60	1	.00	.00

Note: ** significant at the 1% level * significant at the 5% level (two-tailed).

Notes for Table 4: N=243 members in 44 teams for Model 1. N=231 members in 44 teams for Model 2. † Age is included as an ordinal variable in Model 1. In Model 2, age 30-39 is a dichotomous variable.

Iterative Generalized Least Squares estimates. Numbers in parentheses are standard errors.

*** significant at the 0.1% level * significant at the 5% level (two-tailed). For testing random effects deviance tests are used.

Notes for Table 5: N=243 members in 44 teams for Model 1. N=231 members in 44 teams for Model 2. Iterative Generalized Least Squares estimates. Numbers in parentheses are standard errors.

*** significant at the 0.1% level ** significant at the 1% level * significant at the 5% level (two-tailed). For testing random effects deviance tests are used.

Table 4: Results of multilevel logistic regression on team perspectives

Independent variables	model with all respondents	model with respondents below age 50
	Model 1	Model 2
<i>FIXED EFFECTS</i>		
α baseline future team perspectives	-0.627 (1.200)	-2.032 (1.124)
<i>team-level variables</i>		
Density	1.864* (0.759)	1.940* (0.765)
<i>individual-level variables</i>		
Age [†]	-0.364 (0.196)	0.870* (0.384)
Gender	-1.060 (0.813)	-1.050 (0.810)
Constraints	0.995 (0.654)	0.996 (0.654)
<i>RANDOM EFFECTS</i>		
team-level variance σ^2	0.543 (0.315)	0.515 (0.316)
-2 Log Likelihood model	278.89	269.82

Table 5: Results of multilevel logistic regression on company perspectives

Independent variables	model with all respondents	model with respondents below age 50
	Model 1	Model 2
<i>FIXED EFFECTS</i>		
α baseline future team perspectives	0.325 (1.022)	-0.570 (1.086)
<i>team-level variables</i>		
Density	0.623 (0.754)	0.473 (0.764)
<i>individual-level variables</i>		
Age	0.312 (0.178)	0.765*** (0.227)
Gender	-0.329 (0.628)	-0.231 (0.655)
Constraints	-1.264* (0.564)	-1.163* (0.581)
<i>RANDOM EFFECTS</i>		
team-level variance σ^2	0.647* (0.310)	0.607 (0.320)
-2 Log Likelihood model	311.96	282.54