Building Careers in Project-Based Organizations: Breadth, Fit, and the Path to Advancement.

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Appendix 1. Principal Component Analysis

This Appendix presents the results of the Principal Component Analysis (PCA) to assess whether the service types in the data are independent of one another, or cluster within certain larger categories. If certain service types tend to cluster together, then we should see correlations among the time spent on those service types. Principal component analysis provides a systematic way to identify those clusters.

We created a dataset at the employee-year level of analysis, including information on the number of hours that each employee spent on each service type in a given year. We standardized the number of hours and excluded service types with very few observations (less than 100 observations, i.e., bottom 5% of the maximum frequency of each service type in the data set) to increase the accuracy of the analysis.

The final dataset includes 97,154 employee-year observations for 40,003 employees and 281 service types. We conducted the principal component analysis on this data and followed three analytical steps.

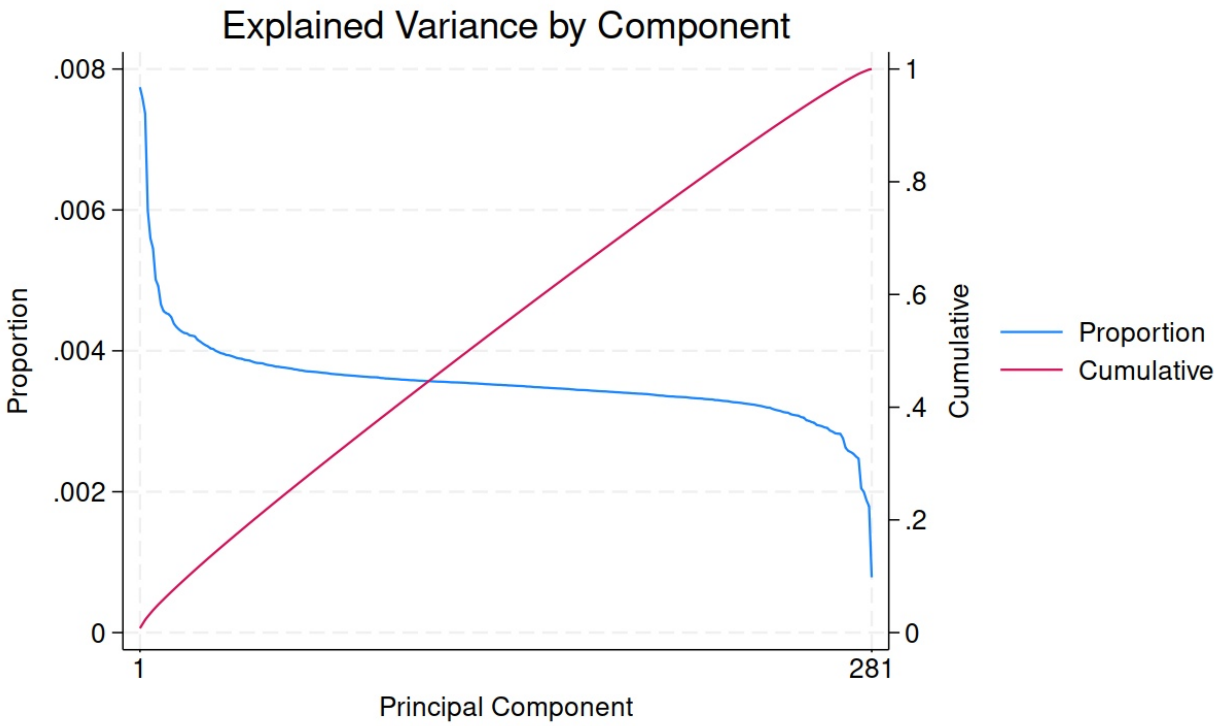
First, we evaluated the suitability of our data for principal component analysis using two standard diagnostics. Bartlett's test of sphericity was highly significant ($\chi^2 = 424{,}000$, df = 39,340, $p < 0.001$), indicating that the correlation matrix is not an identity matrix and that at least some systematic relationships exist among the service types. However, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (Abdi and Williams 2010), which calculates the proportion of variance in the hours spent on each service type that may be common variance, was notably low (KMO = 0.4). This measure ranges between 0 and 1, with high values suggesting that the correlation structure is suitable for identifying underlying components. Values below 0.5 indicate that variance is largely specific to individual variables rather than shared among them, with little common variance to be captured by interpretable underlying components. Taken together, the results suggest that although some correlations exist, the overall pattern of associations does not support the aggregation of service types into a smaller number of interpretable underlying categories via principal component analysis. Consistent with these diagnostics, the principal component analysis did not reveal a dominant structure. As shown in Figure 1

Appendix 1, the variance explained by each principal component is minimal—less than 1% per component—and the cumulative variance increases gradually and nearly linearly. This pattern suggests that no small subset of components captures a substantial share of the total variance. Accordingly, we opted not to use PCA for dimensionality reduction in the main analyses. However, as described below, we examine PCA-based approaches in supplementary analyses reported in this Appendix.

Second, we examined the eigenvalues of the principal components. We find that 118 principal components have eigenvalues larger than one (Figure 2 Appendix 1 presents a scree plot of the eigenvalues of the principal components). Consistent with the low value of the KMO measure, these results suggest that a concise number of interpretable underlying components does not emerge from the data. For a more systematic understanding of what components to retain, we also conducted a Horn's test of principal components with 10 iterations and found consistent results.

While the results of our first two steps suggest that service types can be considered as independent categories, we also assessed the robustness of our main results when only retaining the 118 components with eigenvalues larger than 1 (as described in Step 2). For each component, we calculate the number of hours worked as the sum of the hours spent on each service type with loading greater than 0 on that component (hours are weighted by the loading of the service type on the focal component). We then calculated *cumulative content variety* and *year content variety* in terms of the 118 components. We estimate our promotion analyses including these measures of content variety rather than the ones used in our main analyses (Table 5 of the paper). The results are presented in Table 1 of this Appendix. Model 1 estimates the relationship of *cumulative content variety* and *year content variety* based on the 118 retained components to *promotion*. Consistent with our main results, we find a positive and statistically significant relationship for *cumulative content variety* and a negative and statistically significant one for *year content variety.* Model 2 includes *cumulative collaborator variety* and *year collaborator variety* and shows consistent results with our main analyses. Model 3 examines and confirms the robustness of these results to the inclusion of service type fixed effects.

Figure 1 Appendix 1. Cumulative variance explained by the components [a]



[a] The blue line shows the proportion of variance explained by each individual principal component. The red line shows the cumulative variance explained as additional components are added. The variance is evenly distributed across a large number of components, with each component explaining less than 1% of the total variance. The cumulative curve rises gradually and does not exhibit a clear "elbow," suggesting that no small subset of components captures a dominant share of the variation. Based on these results, we conclude that dimensionality reduction via PCA is not appropriate for this analysis, as it would risk discarding meaningful variation spread across many dimensions. We therefore retain the full set of variables in our main analyses.

Figure 2 Appendix 1. Scree plot of eigenvalues (Top 100 components)

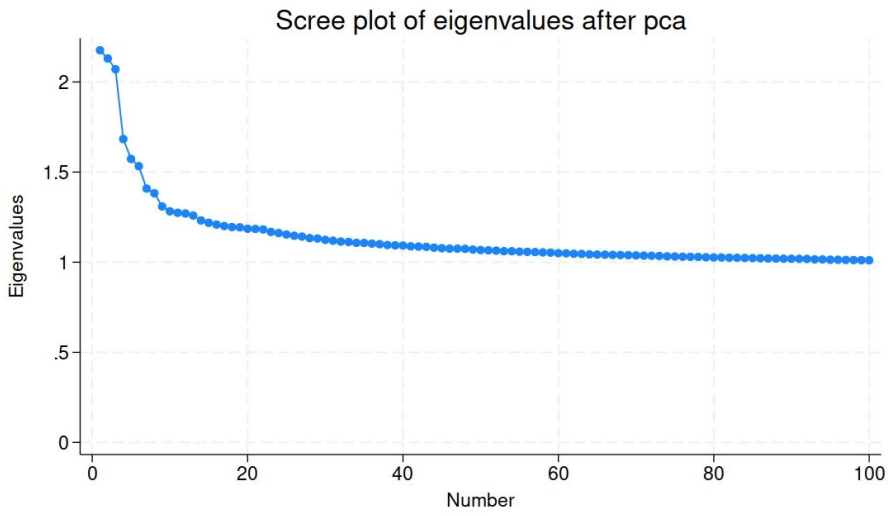


Table 1 Appendix 1. Determinants of Promotion: 118 Principal Components (LPM) [a, b, c]

	(1) Promotion t+1	(2) Promotion t+1	(3) Promotion t+1
Prior cumulative content variety $_t$	.0218***	.0183***	.0174***
	(.0023)	(.0025)	(.0025)
Year content variety $_t$	-.0964***	-.0951***	-.1005***
	(.0062)	(.0063)	(.007)
Prior cumulative collaborator variety $_t$		.0076***	.0072***
		(.0019)	(.0019)
Year collaborator variety $_t$		-.0013	-.0027
		(.0021)	(.0022)
Billable work $_t$	1.8e-04***	1.8e-04***	1.7e-04***
	(5.4e-06)	(5.4e-06)	(5.4e-06)
Internal work $_t$	1.1e-04***	1.1e-04***	1.1e-04***
	(7.7e-06)	(7.8e-06)	(7.8e-06)
Continuing Education $_t$	-3.2e-04***	-3.2e-04***	-3.3e-04***
	(1.8e-05)	(1.8e-05)	(1.8e-05)
Professional development $_t$	1.8e-04***	1.8e-04***	1.9e-04***
	(8.1e-06)	(8.1e-06)	(8.4e-06)
Other hours $_t$	-2.8e-05	-2.9e-05	-3.9e-05
	(5.7e-05)	(5.7e-05)	(5.6e-05)
Log average team size $_t$	-.0142***	-.015***	-.0152***
	(.0018)	(.002)	(.0021)
Number of clients $_t$	-5.2e-04	-5.5e-04	-.0011**
	(3.4e-04)	(3.4e-04)	(3.6e-04)
Number of projects $_t$	4.4e-04+	4.3e-04+	8.5e-04***
	(2.2e-04)	(2.2e-04)	(2.4e-04)
Year Fe	Yes	Yes	Yes
Time in level Fe	Yes	Yes	Yes
Matching indicator Fe	Yes	Yes	Yes
Year of hire Fe	Yes	Yes	Yes
Title at hire Fe	Yes	Yes	Yes
Region at hire Fe	Yes	Yes	Yes
Business line at hire Fe	Yes	Yes	Yes
Number of projects binned Fe	Yes	Yes	Yes
Service type Fe	No	No	Yes
N	88217	88217	88184
adj. R^2	0.401	0.401	0.403

[a] Standard errors in parentheses (clustered at the employee level – unit of analysis: employee-year); [b] + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; [c] Prior cumulative content variety $_t$ and Prior cumulative collaborator variety $_t$ refer to the variety up to the beginning of year t.

Appendix 2. Promotion: Mixed-Effects Estimation

This Appendix presents the results of a mixed effects estimation of our main model of promotion (Model 5 in Table 5). The goal of this analysis is to assess whether differences in the specific service types that employees work on explain differences in subsequent promotions. In particular, the mixed effects specification allows us to include random effects for each service type to estimate between-service types differences in the likelihood of promotions. Table 1 Appendix 2 presents the results of our regression analysis. The standard deviation of service types random effects is 3%, suggesting that some service types are associated with noticeably higher promotion rates than other service types.

Table 1 Appendix 2. Determinants of Promotion (Mixed-Effects Estimation) [a, b, c]

	(1) Promotion t+1
Prior cumulative content variety $_t$	.0269***
	(.0032)
Year content variety $_t$	-.0433***
	(.0038)
Prior cumulative collaborator variety $_t$	.0061**
	(.0019)
Year collaborator variety $_t$	-.0052*
	(.0022)
Billable work $_t$	1.7e-04***
	(5.3e-06)
Internal work $_t$	1.1e-04***
	(7.6e-06)
Continuing Education $_t$	-3.1e-04***
	(1.7e-05)
Professional development $_t$	1.9e-04***
	(8.6e-06)
Other hours $_t$	-8.6e-05
	(8.6e-05)
Log average team size $_t$	-.0112***
	(.0021)
Number of clients $_t$	-5.7e-04+
	(3.3e-04)
Number of projects $_t$	5.9e-04**
	(2.2e-04)
St. deviation of service type random effect	.0313
Year Fe	Yes
Time in level Fe	Yes
Year of hire Fe	Yes
Title at hire Fe	Yes
Region at hire Fe	Yes
Business line at hire Fe	Yes
Title Fe	Yes
Region Fe	Yes
Business line Fe	Yes
Number of projects binned Fe	Yes
Service type Random Effects	Yes
N	88270

[a] Standard errors in parentheses (clustered at the employee level – unit of analysis: employee-year); [b] + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; [c] Likelihood ratio tests confirm that models including service type random effects fit the data better than OLS models without such effects (Model 1: p< 0.001).

Appendix 3. Service-type promotion premium

This Appendix details the construction of our measure of *service type promotion premium*. We follow two steps.

First, we estimate the probability of *promotion* using a linear probability model (Model 1 of Table 1 Appendix 3). The model includes the same controls as the analyses presented in Table 5: *matching fixed effects, job title, region, and business line at the time of hire, year of hire, time in level, number of projects (absolute values and binned), number of clients, billable work, internal work, continuing education, professional development, and other hours,* and *log average team size.* Additionally, we include a fixed effect for the service type on which the person has spent the highest number of hours in the year (*main service type*).

Second, we extract the coefficients of the *main service type* fixed effects to create the variable *service type promotion premium* to measure the extent to which each service type was associated with subsequent promotions.

Table 1 Appendix 3. Determinants of Promotion (LPM) [a, b]

	(1) Promotion t+1
Billable work $_t$	1.8e-04***
	(5.4e-06)
Internal work $_t$	9.8e-05***
	(7.7e-06)
Continuing Education $_t$	-3.6e-04***
	(1.8e-05)
Professional development $_t$	1.7e-04***
	(8.4e-06)
Other hours $_t$	-5.5e-05
	(5.5e-05)
Log average team size $_t$	-.0167***
	(.002)
Number of clients $_t$	-.0012***
	(3.6e-04)
Number of projects $_t$	7.8e-04**
	(2.4e-04)
Year Fe	Yes
Time in level Fe	Yes
Year of hire Fe	Yes
Title at hire Fe	Yes
Region at hire Fe	Yes
Business line at hire Fe	Yes
Matching indicator Fe	Yes
Number of projects binned Fe	Yes
Service type Fe	Yes
N	88240
adj. R^2	0.401

[a] Standard errors in parentheses (clustered at the employee level – unit of analysis: employee-year); [b] + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix 4. Determinants of starting a new project

This Appendix presents our analysis of the determinants of starting a new project. We estimate a linear probability model at the employee-project-month-year level of analysis. The dependent variable *new project* equals to 1 if the observation corresponds to a billing code that the employee has never worked on. The model includes the same variables as Models 1 to 4 in Table 2. We also include individual fixed effects. Our data include 3,900,910 observations for 40,155 employees. In order to estimate our model with individual fixed effects, 1215 observations are dropped because of multi-collinearity. The final dataset includes 3,899,695 observations from 39,913 employees. Results are presented in Table 1 Appendix 4.

Consistent with our results on the determinants of starting to work on a new service type (Model 2, Table 2), we find a negative and significant relationship between *cumulative content variety* and the probability of starting a *new project*. Similarly, *tenure* is negatively related to starting a new project. While *cumulative collaborator variety, past performance*, and *service type promotion premium* are negatively related to the probability of working on *a new service type* (contingent on working on a new project, see Model 2 in Table 2), they are positively related to the probability of working on a *new project* in the first place (Table 1 Appendix 4). These results perhaps reflect a positive relationship between employees' social capital and visibility and their likelihood of being staffed on new projects.

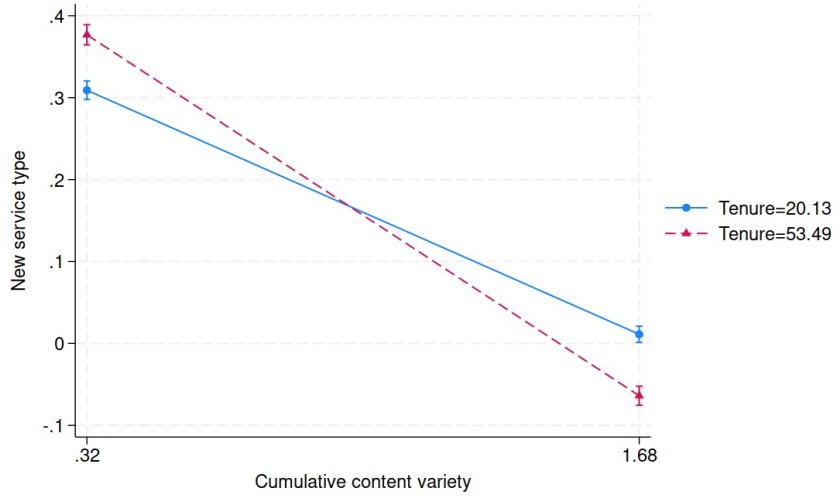
Table 1 Appendix 4. Determinants of starting a new project (LPM) [a, b]

	(1) New project
Cumulative content variety	-.0174***
	(.0022)
Cumulative collaborator variety	.0177***
	(.0019)
Log project team size	-.0392***
	(4.0e-04)
Cumulative number of prior projects	-2.2e-04*
	(9.1e-05)
Tenure	-4.3e-04***
	(1.3e-04)
Service type promotion premium	.039**
	(.0122)
Past performance	.0012*
	(5.2e-04)
Rank 2	.0073+
	(.004)
Rank 3	-.0069
	(.0045)
Rank 4	-.0146**
	(.0051)
Rank 5	-.0132*
	(.0062)
Year-month Fe	Yes
Business Line Fe	Yes
Region Fe	Yes
Individual Fe	Yes
N	3899695
adj. R^2	0.057

[a] Standard errors in parentheses (clustered at the employee level – unit of analysis: employee-project-month-year); [b] + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

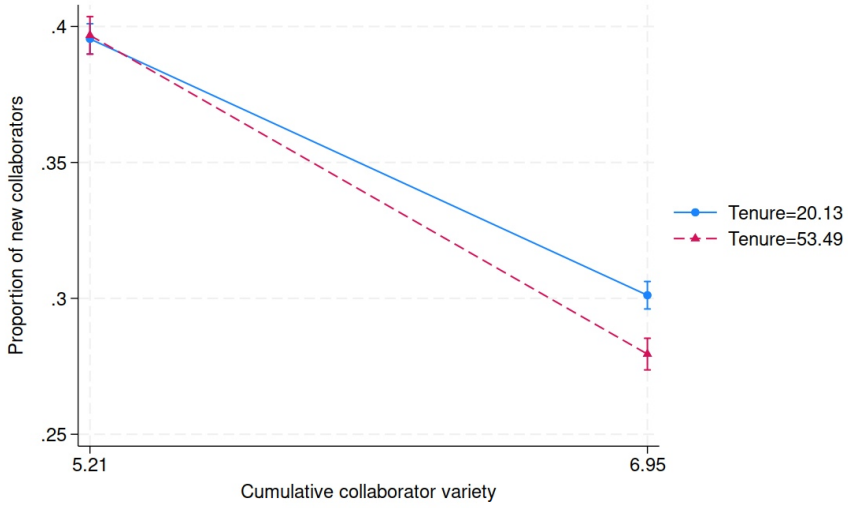
Appendix 5. Determinants of new service type: Graphical representation of interaction effects.

Figure 1 Appendix 5. Determinants of new service type: Interaction between cumulative content variety and tenure [a]



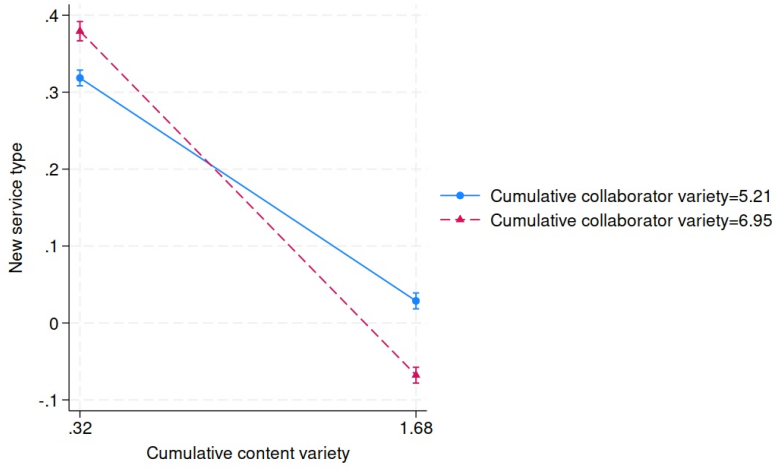
[a] Variables levels + 1 and – 1 standard deviation from the mean.

Figure 2 Appendix 5. Determinants of proportion of new collaborators: Interaction between cumulative collaborator variety and tenure [a]



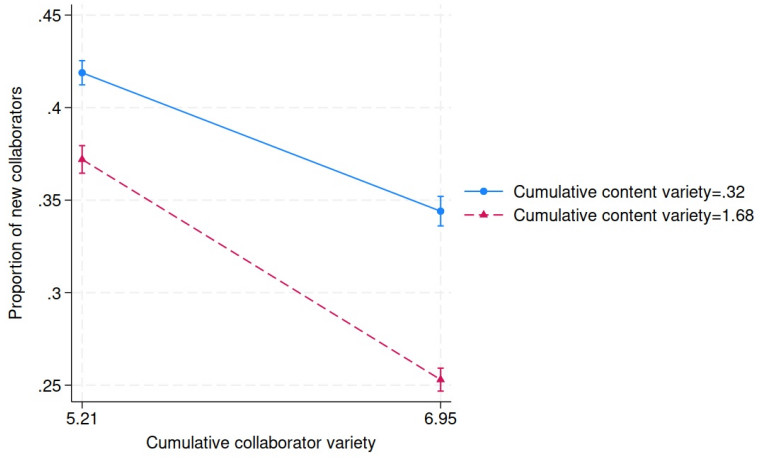
[a] Variables levels at + 1 and – 1 standard deviation from the mean.

Figure 3 Appendix 5. Determinants of new service type: Interaction between cumulative content variety and cumulative collaborator variety [a]



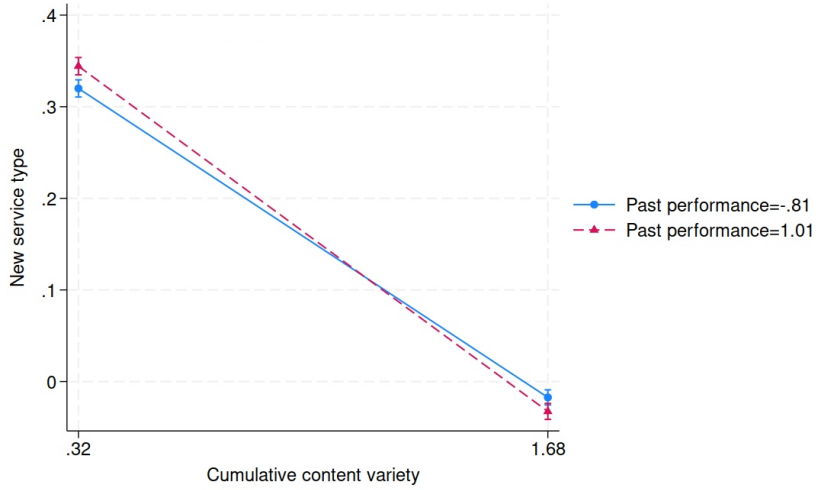
[a] Variables levels at + 1 and – 1 standard deviation from the mean.

Figure 4 Appendix 5. Determinants of proportion of new collaborators: Interaction between cumulative content variety and cumulative collaborator variety [a]



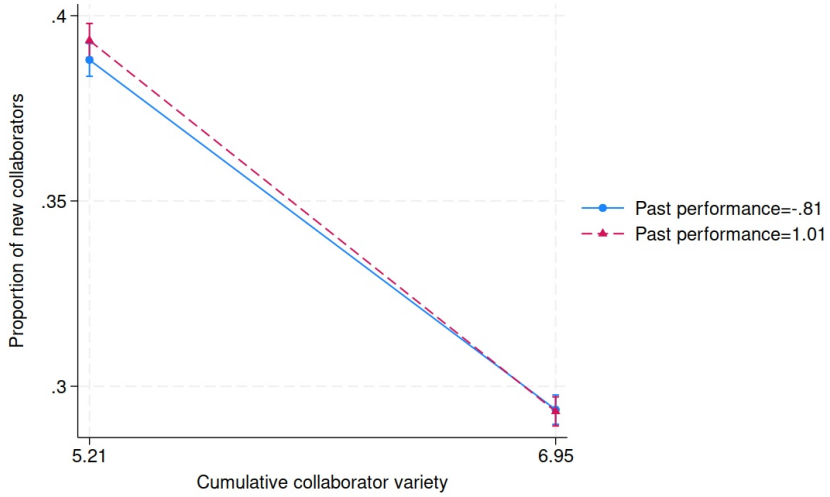
[a] Variables levels at + 1 and – 1 standard deviation from the mean.

Figure 5 Appendix 5. Determinants of new service type: Interaction between cumulative content variety and past performance [a]



[a] Variables levels at + 1 and – 1 standard deviation from the mean.

Figure 6 Appendix 5. Determinants of proportion of new collaborators: Interaction between cumulative collaborator variety and past performance [a]



[a] Variables levels at + 1 and – 1 standard deviation from the mean.

Appendix 6. Determinants of performance

This Appendix presents our analysis of the relationship between project portfolio variety and *performance*. Results are presented in Table 1 Appendix 6. Our dependent variable is *performance* in year t+1, while the main independent variables are *prior cumulative content* and *prior collaborator variety*. The models include the same control structure as in the promotion analyses presented in Table 5, as well as individual fixed effects to account for time invariant differences across individuals. We estimate models 1 and 2 in Table 1 Appendix 6 at the employee-year level of analysis. Model 2 re-estimates model 1 including the centered interaction term between cumulative content and collaborator variety.

The effects of content and collaborator variety on performance are consistent with our results on promotions. Consistent with performance appraisals reflecting in-project performance for the prior year, *year content variety* is negatively associated with performance. Instead, *prior cumulative content* and *prior collaborator variety* are positively related to it. Interestingly, we find their interaction to be positive and statistically significant. While variety in content and collaborators are substitutes in achieving promotions, they complement each other in sustaining performance.

Table 1 Appendix 6. Determinants of performance [a, b, c]

	(1) Performance t+1	(2) Performance t+1
Prior cumulative content variety $_t$	.0697***	.0676***
	(.0149)	(.015)
Year content variety $_t$	-.1275***	-.1259***
	(.0121)	(.0122)
Prior cumulative collaborator variety $_t$	.024**	.0361***
	(.0089)	(.0104)
Year collaborator variety $_t$	2.6e-04	.0031
	(.0074)	(.0075)
Billable work $_t$	3.4e-04***	3.4e-04***
	(1.8e-05)	(1.8e-05)
Internal work $_t$	8.5e-05**	8.5e-05**
	(2.8e-05)	(2.8e-05)
Continuing Education $_t$	-3.3e-04***	-3.4e-04***
	(6.8e-05)	(6.8e-05)
Professional development $_t$	1.8e-04***	1.7e-04***
	(3.1e-05)	(3.1e-05)
Other hours $_t$	-5.6e-04	-5.5e-04
	(6.8e-04)	(6.8e-04)
Log average team size $_t$	-.0275***	-.0274***
	(.008)	(.008)
Number of clients $_t$	-.0048***	-.0048***
	(.0014)	(.0014)
Number of projects $_t$	.0032**	.0032**
	(9.8e-04)	(9.8e-04)
Cum. cont. variety $_t$ X Cum. coll. variety $_t$		.0233*
		(.0098)
Year Fe	Yes	Yes
Time in level Fe	Yes	Yes
Matching indicator Fe	Yes	Yes
Year of hire Fe	Yes	Yes
Title at hire Fe	Yes	Yes
Region at hire Fe	Yes	Yes
Business line at hire Fe	Yes	Yes
Number of clients binned Fe	Yes	Yes
Service type Fe	Yes	Yes
Individual Fe	Yes	Yes
N	69002	69002
adj. R^2	0.423	0.423

[a] Standard errors in parentheses (clustered at the employee level – unit of analysis: employee-year); [b] + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$; [c] Abbreviations: Cum. cont. variety (Cumulative content variety), Cum coll. Variety (Cumulative collaborator variety).

Appendix 7. Sub-sample of lower rank employees.

This Appendix presents our analyses estimating Table 5 on a sub-sample of employees only including those in the two lowest tiers of the organizational hierarchy (excluding senior and managerial roles). As these employees should have lower degree of control over their assignments, this sub-sample should be less affected by self-selection concerns than the one including higher rank employees. The results are presented in Table 1 Appendix 7 and are fully consistent with those presented in Table 5.

Table 1 Appendix 7. Determinants of promotion (LPM Estimation of sub-sample of low rank employees) [a, b, c, d]

	(1) Promotion t+1	(2) Promotion t+1	(3) Promotion t+1	(4) Promotion t+1	(5) Promotion t+1	(6) Promotion t+1	(7) Promotion t+1	(8) Promotion t+1
Prior cumulative content variety $_t$	.0468***	.0587***			.0404***	.0427***	.0427***	.0488***
	(.0057)	(.0058)			(.0061)	(.0061)	(.0062)	(.0063)
Year content variety $_t$		-.0788***			-.0742***	-.0751***	-.0705***	-.0616***
		(.0066)			(.0067)	(.0067)	(.0069)	(.0069)
Prior cumulative collaborator variety $_t$			.0371***	.0421***	.0328***	.0244***	.0239***	.0202***
			(.0031)	(.0034)	(.0036)	(.004)	(.0041)	(.0042)
Year collaborator variety $_t$				-.0151***	-.0055	-.0055	-.0104**	-.0122**
				(.0038)	(.0039)	(.0039)	(.0039)	(.004)
Billable work $_t$	2.2e-04***	2.2e-04***	2.2e-04***	2.2e-04***	2.2e-04***	2.2e-04***	2.2e-04***	1.9e-04***
	(1.0e-05)	(1.0e-05)	(1.0e-05)	(1.0e-05)	(1.0e-05)	(1.0e-05)	(1.0e-05)	(1.0e-05)
Internal work $_t$	5.4e-05***	7.2e-05***	4.7e-05**	5.7e-05***	6.7e-05***	6.9e-05***	6.9e-05***	4.6e-05**
	(1.5e-05)	(1.5e-05)	(1.5e-05)	(1.5e-05)	(1.5e-05)	(1.5e-05)	(1.5e-05)	(1.5e-05)
Continuing Education $_t$	-4.6e-04***	-4.4e-04***	-4.6e-04***	-4.4e-04***	-4.3e-04***	-4.3e-04***	-4.4e-04***	-4.0e-04***
	(3.1e-05)	(3.1e-05)	(3.1e-05)	(3.1e-05)	(3.1e-05)	(3.1e-05)	(3.2e-05)	(3.2e-05)
Professional development $_t$	1.3e-04***	1.7e-04***	1.4e-04***	1.4e-04***	1.7e-04***	1.7e-04***	1.8e-04***	1.5e-04***
	(1.8e-05)	(1.8e-05)	(1.8e-05)	(1.8e-05)	(1.8e-05)	(1.8e-05)	(1.9e-05)	(1.9e-05)
Other hours $_t$	-8.7e-05	-8.5e-05	-8.2e-05	-8.4e-05	-8.0e-05	-7.6e-05	-7.4e-05	-5.9e-05
	(6.7e-05)	(6.7e-05)	(6.6e-05)	(6.6e-05)	(6.7e-05)	(6.7e-05)	(6.8e-05)	(6.6e-05)
Log average team size $_t$	-.0231***	-.0214***	-.031***	-.0257***	-.0258***	-.0256***	-.0266***	-.0198***
	(.0033)	(.0033)	(.0033)	(.0035)	(.0035)	(.0035)	(.0038)	(.0038)
Number of clients $_t$	-.002**	-.0018**	-.0021**	-.002**	-.0018**	-.0018**	-.0024***	-.0022***
	(6.4e-04)	(6.2e-04)	(6.3e-04)	(6.3e-04)	(6.3e-04)	(6.3e-04)	(6.3e-04)	(6.5e-04)
Number of projects $_t$	7.1e-04+	8.4e-04*	7.0e-04+	7.4e-04+	8.2e-04+	8.0e-04+	.0011*	9.2e-04*
	(4.3e-04)	(4.3e-04)	(4.2e-04)	(4.3e-04)	(4.3e-04)	(4.3e-04)	(4.3e-04)	(4.4e-04)
Cum. cont. variety $_t$ X Cum. coll. variety $_t$						-.0222***	-.022***	-.0113*
						(.0049)	(.0049)	(.0052)
Performance $_t$								.0857***
								(.003)
Year Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time in level Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Matching indicator Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Title at hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region at hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Business line at hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of projects binned Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Service type Fe	No	No	No	No	No	No	Yes	Yes
N	34910	34910	34910	34910	34910	34910	34877	33759
adj. R^2	0.331	0.334	0.333	0.333	0.336	0.337	0.342	0.355

[a] Standard errors in parentheses (clustered at the employee level – unit of analysis: employee-year); [b] $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; [c] The sample for Model 8 is smaller than for the previous models due to missing values in the performance appraisals data; [d] Prior cumulative content variety $_t$ and Prior cumulative collaborator variety $_t$ refer to the variety up to the beginning of year t; Abbreviations: Cum. cont. variety (Cumulative content variety), Cum coll. Variety (Cumulative collaborator variety).

Appendix 8. Determinants of minimum distance

This Appendix presents our analyses of the determinants of minimum distance (Table 1 Appendix 8). As with the analyses in Table 2, the unit of analysis is employee-project-month-year. Since the distance between the new service type and those the employee worked on in the past is only relevant for employees who work on a new service type, our analyses focus on the sub-sample of observations corresponding to employees working on a new service type.

Models 1 and 2 include the same variables as our analyses on the determinants of *new service type* in Table 2 but estimated on this difference sub-sample. In Model 1, we find a positive and statistically significant association between *cumulative content variety* and *minimum distance*. We also find *log project team size* and *tenure* to be positively associated with *minimum distance*. *Cumulative number of prior projects* and *past performance* are instead negatively associated with distance. Model 2 re-estimates Model 1 including individual fixed effects. While we still find a positive and statistically significant relationship between *log project team size* and *minimum distance,* the other results are not statistically significant. The difference in the estimates of two models suggest that the results on *tenure*, *performance*, and *cumulative content variety* in Model 1 were largely accounted for by differences across individuals. Contrary to the negative relationship between rank and new service type (Model 2 of Table 2 of the paper), Model 2 reveals a positive association between *rank* and *minimum distance*. These findings suggest that while those in higher ranks are less likely to change service type, they search further when they do so.

Table 1 Appendix 8. Determinants of minimum distance [a, b, c]

	(1) Minimum distance	(2) Minimum distance
Cumulative content variety	.0699***	.0032
	(.0041)	(.0101)
Cumulative collaborator variety	-.0011	.0164*
	(.0024)	(.0071)
Log project team size	.0102***	.0054***
	(.0011)	(.0012)
Cumulative number of prior projects	-1.3e-04***	6.8e-05
	(3.8e-05)	(5.5e-05)
Tenure	7.9e-04***	1.6e-04
	(1.2e-04)	(3.4e-04)
Service type promotion premium	.0034	.0693
	(.0388)	(.0478)
Past performance	-.0139***	8.7e-04
	(.0015)	(.0023)
Rank 2	.0113	.0268
	(.01)	(.0188)
Rank 3	-.0031	.0583**
	(.01)	(.0206)
Rank 4	-.0273**	.0657**
	(.0104)	(.0226)
Rank 5	-.104***	.0499+
	(.011)	(.0263)
Year-month Fe	Yes	Yes
Business Line Fe	Yes	Yes
Region Fe	Yes	Yes
Service type Fe	Yes	Yes
Individual Fe	No	Yes
N	106069	97840
adj. R^2	0.103	0.265

[a] Standard errors in parentheses (clustered at the employee level – unit of analysis: employee-project-month-year); [b] + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; [c] Sub-sample of observations corresponding to new service type.

Appendix 9. Determinants of new service type characteristics

This Appendix presents our analyses of the determinants of two characteristics of the new service type workers work on: the *rarity* (in terms of the proportion of employees working on the new service type) and the *value* (in terms of promotion prospects of the new service type). These analyses are presented in Table 1 Appendix 9. As for the analyses in Appendix 8, the unit of analysis is employee-project-month-year and our analyses focus on the sub-sample of observations corresponding to employees working on a new service type.

Model 1 estimates the determinants of the *rarity* of the new service type. We measure *rarity* as the ratio between the number of employees working on the focal service type and the total number of people active during the focal month. The model includes the same variables as the models on the determinants of *new service type* in Table 2 and individual fixed effects. We find *content* and *collaborator cumulative variety*, as well as *tenure* and *performance* to be negatively related to the relative *rarity* of the new service type. We also find a negative association between *service type promotion premium* and *rarity*. Overall, these results are consistent with our findings on the determinants of working on a *new service type* (Table 2, Models 1 and 2). Differently from the results in Table 2, we find a positive association between *cumulative number of prior projects* and *rarity*.

Model 2 estimates the determinants of the *value* of the new service type, measured as the new *service type promotion premium*. The model includes the same variables as the models on the determinants of *new service type* in Table 2, apart from *service type promotion premium*. It also includes individual fixed effects. We find *cumulative collaborator variety* and *cumulative number of prior projects* to be negatively related to the *value* of the new service type.

Table 1 Appendix 9. Determinants of rarity and value [a, b, c]

	(1) New service type rarity	(2) New service type value
Cumulative content variety	-.0056***	.003
	(9.2e-04)	(.0019)
Cumulative collaborator variety	-.0048***	-.0043**
	(7.7e-04)	(.0014)
Log project team size		.0012***
		(2.2e-04)
Cumulative number of prior projects	3.3e-05*	-9.3e-05**
	(1.4e-05)	(3.1e-05)
Tenure	-6.4e-05*	-3.8e-05
	(2.8e-05)	(6.8e-05)
Past performance	-3.9e-04*	1.4e-04
	(1.9e-04)	(4.0e-04)
Rank 2	-.0011	8.5e-04
	(.0012)	(.0027)
Rank 3	-.0011	.0021
	(.0014)	(.0032)
Rank 4	-1.5e-04	.0021
	(.0016)	(.0037)
Rank 5	.0011	-.003
	(.0021)	(.0045)
Service type promotion premium	-.0111**	
	(.0037)	
Year-month Fe	Yes	Yes
Business Line Fe	Yes	Yes
Region Fe	Yes	Yes
Service type Fe	Yes	Yes
Individual Fe	Yes	Yes
N	97831	103176
adj. R^2	0.241	0.278

[a] Standard errors in parentheses (clustered at the employee level – unit of analysis: employee-project-month-year); [b] + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; [c] Sub-sample of observations corresponding to new service type.

Appendix 10. Determinants of compensation: Descriptive statistics

Table 1 of this appendix reports means, standard deviations, and correlations for the main dependent and independent variables in our compensations analyses (Section 5.2).

Table 1 Appendix 10. Compensation: Descriptive Statistics [a, b]

		Mean	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1.	Log salary	10.69	0.66	1.00															
2.	Log bonus	8.42	0.81	0.71	1.00														
3.	Prior cumulative content variety	0.69	0.63	0.26	0.29	1.00													
4.	Prior cumulative collaborator variety	5.47	1.03	-0.03	0.11	0.40	1.00												
5.	Year content variety	0.58	0.53	0.21	0.18	0.47	0.09	1.00											
6.	Year collaborator variety	5.21	0.93	-0.07	-0.01	0.09	0.48	0.27	1.00										
7.	Billable work	1839.80	394.36	-0.21	-0.15	-0.15	-0.02	-0.25	-0.10	1.00									
8.	Internal work	170.11	243.49	0.11	0.11	0.17	0.07	0.24	0.17	-0.57	1.00								
9.	Continuing Education	74.93	82.58	-0.06	-0.09	-0.12	-0.00	0.05	0.22	-0.19	0.03	1.00							
10.	Professional development	117.75	224.93	0.36	0.34	0.22	-0.02	0.34	0.04	-0.51	0.11	-0.01	1.00						
11.	Other hours	0.16	12.33	0.00	-0.01	-0.01	-0.01	0.00	-0.01	-0.00	-0.00	-0.00	0.00	1.00					
12.	Log average team size	3.32	0.83	-0.09	-0.12	-0.13	0.07	-0.20	0.19	0.25	-0.15	-0.10	-0.21	-0.00	1.00				
13.	Time in level	2.25	1.19	0.24	0.13	0.15	0.05	0.01	-0.12	-0.11	-0.00	-0.10	0.08	0.01	0.01	1.00			
14.	Number of clients	6.46	10.73	0.02	0.00	0.16	0.08	0.31	0.24	-0.15	0.13	0.14	0.11	-0.00	-0.22	0.00	1.00		
15.	Number of projects	10.32	16.77	-0.00	-0.01	0.17	0.09	0.33	0.25	-0.11	0.12	0.13	0.07	-0.00	-0.25	0.01	0.89	1.00	
16.	Performance	0.28	0.89	0.06	0.39	0.08	0.11	-0.02	0.02	0.10	0.01	-0.10	0.00	-0.01	-0.03	-0.07	0.01	0.03	1.00

[a] $N = 72{,}615$; b Unit of analysis: employee-year.

Appendix 11. Determinants of Promotion: Average Distance and Rarity

This Appendix presents our promotion analyses including *average distance* and *rarity* measures described in Section 5.1.

Model 1 of Table 1 presents model 5 of Table 5 including *average distance*. We find a positive but only marginally significant relationship between the *average distance* of the projects in the portfolio and *promotion*. The coefficients of *prior cumulative content variety* and *prior cumulative collaborator variety* are consistent with the results presented in Table 5 of the paper.

Model 2 of Table 1 includes *rarity* in the model. We measure *rarity* as the yearly average of rarity of the service types the employee has worked on during the year (measured as the ratio between the number of employees working on the focal service type and the total number of people active during each month). Consistent with prior results we find a positive albeit marginally significant relationship between *rarity* and *promotion*. The coefficients of *prior cumulative content variety* and *prior cumulative collaborator variety* are consistent with our main results.

Table 1 Appendix 11. Determinants of Promotion: Project Distance and Rarity (LPM Estimation) [a, b, c]

	(1) Promotion t+1	(2) Promotion t+1
Average distance $_t$	.0173^{+}	
	(.0091)	
Rarity $_t$		.0786^{+}
		(.0427)
Prior cumulative content variety $_t$	.0147***	.0177***
	(.0036)	(.0032)
Year content variety $_t$	-.0492***	-.0435***
	(.0044)	(.0039)
Prior cumulative collaborator variety $_t$	.0087***	.0085***
	(.0019)	(.0019)
Year collaborator variety $_t$	-.0016	-.0019
	(.0022)	(.0022)
Billable work $_t$	1.8e-04***	1.8e-04***
	(5.4e-06)	(5.4e-06)
Internal work $_t$	1.0e-04***	1.0e-04***
	(7.8e-06)	(7.8e-06)
Continuing Education $_t$	-3.3e-04***	-3.3e-04***
	(1.8e-05)	(1.8e-05)
Professional development $_t$	1.7e-04***	1.7e-04***
	(8.2e-06)	(8.1e-06)
Other hours $_t$	-7.8e-06	-4.1e-05
	(1.9e-04)	(5.7e-05)
Log average team size $_t$	-.0154***	-.0156***
	(.002)	(.002)
Number of clients $_t$	-7.2e-04*	-7.5e-04*
	(3.4e-04)	(3.4e-04)
Number of projects $_t$	5.9e-04**	6.0e-04**
	(2.2e-04)	(2.2e-04)
Year Fe	Yes	Yes
Time in level Fe	Yes	Yes
Matching indicator Fe	Yes	Yes
Year of hire Fe	Yes	Yes
Title at hire Fe	Yes	Yes
Region at hire Fe	Yes	Yes
Business line at hire Fe	Yes	Yes
Number of projects binned Fe	Yes	Yes
N	88247	88274
adj. R^2	0.400	0.400

[a] Standard errors in parentheses (clustered at the employee level – unit of analysis: employee-year); [b] $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; [c] Prior cumulative content variety $_t$ and Prior cumulative collaborator variety $_t$ refer to the variety up to the beginning of year t.

Appendix 12. Collaborators rank

This Appendix presents our analyses of collaborator variety by collaborators rank: *prior cumulative superior variety* and *prior cumulative peer and subordinate variety*. Linear probability models examining the relationships between these variables and *promotion* are presented in Table 1 Appendix 12. The models in this table contain the same specifications as those presented in Table 5.

Although we find that *prior cumulative peer and subordinate variety* had a positive and statistically significant relationship with promotions (as did our overall measure of collaborator variety), there is a negative relationship between *prior cumulative superior variety* and future promotion rates. This finding is consistent with interviewees' suggestions that working with too many managers carries the risk that no one is fully invested in an employee's career development.

Table 1 Appendix 12. Determinants of Promotion: Collaborators rank (LPM Estimation) [a, b, c]

	(1) Promotion t+1	(2) Promotion t+1	(3) Promotion t+1	(4) Promotion t+1	(5) Promotion t+1	(6) Promotion t+1	(7) Promotion t+1
Prior cumulative superior variety $_t$	-.0018	-.0048**			-.0775***	-.0832***	-.085***
	(.0017)	(.0018)			(.003)	(.0031)	(.0031)
Year superior variety $_t$		.0107***			.0529***	.0581***	.0532***
		(.0021)			(.0032)	(.0032)	(.0032)
Prior cumulative subordinates-below variety $_t$			.0255***	.031***	.0888***	.0877***	.0892***
			(.0016)	(.0017)	(.0028)	(.0028)	(.0028)
Year subordinates-below variety $_t$				-.0178***	-.0554***	-.0541***	-.0516***
				(.002)	(.003)	(.003)	(.003)
Cumulative content variety $_t$						.0267***	.0244***
						(.0033)	(.0033)
Year content variety $_t$						-.0495***	-.0498***
						(.0037)	(.0038)
Continuing Education $_t$	-3.5e-04***	-3.6e-04***	-3.4e-04***	-3.2e-04***	-3.2e-04***	-3.2e-04***	-3.2e-04***
	(1.8e-05)	(1.8e-05)	(1.8e-05)	(1.8e-05)	(1.8e-05)	(1.8e-05)	(1.8e-05)
Professional development $_t$	1.6e-04***	1.5e-04***	1.6e-04***	1.6e-04***	1.5e-04***	1.6e-04***	1.8e-04***
	(8.0e-06)	(8.0e-06)	(8.0e-06)	(8.0e-06)	(8.0e-06)	(8.1e-06)	(8.4e-06)
Other hours $_t$	-4.6e-05	-4.7e-05	-4.1e-05	-4.5e-05	-6.0e-05	-5.5e-05	-6.2e-05
	(5.6e-05)	(5.6e-05)	(5.6e-05)	(5.5e-05)	(5.5e-05)	(5.8e-05)	(5.7e-05)
Log average team size $_t$	-.0152***	-.0181***	-.0202***	-.0129***	-.0132***	-.0133***	-.0139***
	(.0018)	(.0019)	(.0019)	(.002)	(.002)	(.002)	(.0021)
Number of clients $_t$	-8.2e-04*	-9.1e-04**	-9.6e-04**	-8.6e-04**	-8.5e-04**	-7.2e-04*	-.0011**
	(3.3e-04)	(3.3e-04)	(3.3e-04)	(3.3e-04)	(3.3e-04)	(3.3e-04)	(3.6e-04)
Number of projects $_t$	5.4e-04*	5.3e-04*	5.2e-04*	5.8e-04**	5.3e-04*	5.6e-04*	8.7e-04***
	(2.2e-04)	(2.2e-04)	(2.2e-04)	(2.2e-04)	(2.2e-04)	(2.2e-04)	(2.5e-04)
Year Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time in level Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Matching indicator Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Title at hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region at hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Business line at hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of clients binned Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Service type Fe	No	No	No	No	No	No	Yes
N	88274	88274	88274	88274	88274	88274	88240
adj. R^2	0.399	0.399	0.400	0.401	0.407	0.408	0.410

[a] Standard errors in parentheses (clustered at the employee level – unit of analysis: employee-year); [b] + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; [c] Prior cumulative content variety $_t$ and Prior cumulative collaborator variety $_t$ refer to the variety up to the beginning of year t.

Appendix 13. Network clustering

This Appendix presents our analyses including a measure of network *clustering* (Section 5.3). For the focal employee in the focal year, we measure *clustering* as the probability that their collaborators are connected to capture the extent to which collaborators tend to cluster together (Wasserman and Faust 1994). The clustering coefficient (C_i) for employee i is calculated as:

$$C_i = \frac{2\ e_i}{k_i(k_i - 1)}$$

Where e_i is the number of edges between the collaborators of employee i and k is the number of collaborators. We find a negative and statistically significant relationship between *clustering* and *promotion*. The coefficients of *prior cumulative content variety* and *prior cumulative collaborator variety* are consistent with the results presented in Table 5 of the paper.

Table 1 Appendix 13. Determinants of Promotion: Network clustering [a, b, c, d]

	(1) Promotion t+1	(2) Promotion t+1	(3) Promotion t+1	(4) Promotion t+1	(5) Promotion t+1
Clustering $_t$	-.1103***	-.1301***	-.1306***	-.1199***	-.1082***
	(.0106)	(.0107)	(.0107)	(.0109)	(.011)
Prior cumulative collaborator variety $_t$	.0131***	.0086***	.0053**	.005*	.0041+
	(.0018)	(.0019)	(.002)	(.0021)	(.0021)
Year collaborator variety $_t$	-.0031	.0035	.0034	.0013	-3.2e-04
	(.0022)	(.0022)	(.0022)	(.0022)	(.0023)
Prior cumulative content variety $_t$		.0167***	.0177***	.0155***	.0194***
		(.0032)	(.0032)	(.0033)	(.0033)
Year content variety $_t$		-.0515***	-.0517***	-.052***	-.0457***
		(.0038)	(.0038)	(.0039)	(.0039)
Billable work $_t$	1.7e-04***	1.7e-04***	1.7e-04***	1.7e-04***	1.5e-04***
	(5.4e-06)	(5.4e-06)	(5.4e-06)	(5.4e-06)	(5.5e-06)
Internal work $_t$	8.7e-05***	9.1e-05***	9.2e-05***	9.2e-05***	7.8e-05***
	(7.9e-06)	(7.9e-06)	(7.9e-06)	(7.9e-06)	(8.0e-06)
Continuing Education $_t$	-3.5e-04***	-3.5e-04***	-3.4e-04***	-3.5e-04***	-3.3e-04***
	(1.8e-05)	(1.8e-05)	(1.8e-05)	(1.8e-05)	(1.9e-05)
Professional development $_t$	1.5e-04***	1.6e-04***	1.6e-04***	1.8e-04***	1.6e-04***
	(8.0e-06)	(8.1e-06)	(8.1e-06)	(8.5e-06)	(8.6e-06)
Other hours $_t$	-4.7e-05	-4.1e-05	-4.0e-05	-4.9e-05	-3.7e-05
	(5.5e-05)	(5.6e-05)	(5.6e-05)	(5.5e-05)	(5.4e-05)
Log average team size $_t$	-.0201***	-.0219***	-.0218***	-.0211***	-.0178***
	(.0021)	(.0021)	(.0021)	(.0022)	(.0022)
Number of clients $_t$	-.0013***	-.0012***	-.0012***	-.0014***	-9.6e-04**
	(3.4e-04)	(3.4e-04)	(3.4e-04)	(3.7e-04)	(3.6e-04)
Number of projects $_t$	6.1e-04**	6.5e-04**	6.5e-04**	9.0e-04***	6.2e-04*
	(2.2e-04)	(2.2e-04)	(2.2e-04)	(2.5e-04)	(2.4e-04)
Cum. cont. variety $_t$ X Cum. coll. variety $_t$			-.0111***	-.012***	-.0093***
			(.0024)	(.0024)	(.0025)
Performance $_t$					.0624***
					(.0015)
Year Fe	Yes	Yes	Yes	Yes	Yes
Time in level Fe	Yes	Yes	Yes	Yes	Yes
Matching indicator Fe	Yes	Yes	Yes	Yes	Yes
Year of hire Fe	Yes	Yes	Yes	Yes	Yes
Title at hire Fe	Yes	Yes	Yes	Yes	Yes
Region at hire Fe	Yes	Yes	Yes	Yes	Yes
Business line at hire Fe	Yes	Yes	Yes	Yes	Yes
Number of projects binned Fe	Yes	Yes	Yes	Yes	Yes
Service type Fe	No	No	No	Yes	Yes
N	88274	88274	88274	88240	85552
adj. R^2	0.400	0.401	0.401	0.404	0.417

[a] Standard errors in parentheses (clustered at the employee level – unit of analysis: employee-year); [b] + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; [c] The sample for Model 5 is smaller than for the previous models due to missing values in the performance appraisals data; [d] Prior cumulative content variety $_t$ and Prior cumulative collaborator variety $_t$ refer to the variety up to the beginning of year t; Abbreviations: Cum. cont. variety (Cumulative content variety), Cum coll. Variety (Cumulative collaborator variety).

Appendix 14. Employees' Exits

Table 1 of this appendix presents the estimation of our main promotion models (Table 5) on a sub-sample excluding individuals that leave the organization during year t+1 (22.6% of observations are excluded) to account for the possibility that employees may leave the organization before being promoted in year t+1. The results are consistent with those presented in Table 5 of the manuscript.

Table 2 of this appendix presents the regression analyses of the relationship between *prior cumulative content* and *collaborator variety* and the probability of leaving the company (*exit* = 1 if the employee leaves the company, 0 otherwise). We find a positive and significant relationship between the probability of leaving the company and *prior cumulative content* and *collaborator variety*, as well as *year content variety*. A parsimonious explanation for these results would be that people with a stronger taste for variety are more likely to change project types and collaborators and to leave the firm. This finding can also reflect that experimentation not only allows employees to find the right fit within the organization, but also to realize when the organization is not a good fit (Chatterji et al. 2016, Kristof-Brown et al. 2005).

Table 1 Appendix 14. Determinants of promotion: Sub-sample excluding employees who leave Nexus in t+1 (LPM) [a, b, c, d]

	(1) Promotion t+1	(2) Promotion t+1	(3) Promotion t+1	(4) Promotion t+1	(5) Promotion t+1	(6) Promotion t+1	(7) Promotion t+1	(8) Promotion t+1
Prior cumulative content variety $_t$	.0262***	.0325***			.0262***	.0267***	.0241***	.0277***
	(.0034)	(.0035)			(.0037)	(.0037)	(.0037)	(.0037)
Year content variety $_t$		-.0422***			-.0402***	-.0403***	-.0412***	-.0354***
		(.0041)			(.0042)	(.0042)	(.0043)	(.0044)
Prior cumulative collaborator variety $_t$			.0149***	.0173***	.0113***	.0095***	.0091***	.0079**
			(.0019)	(.0021)	(.0022)	(.0023)	(.0023)	(.0024)
Year collaborator variety $_t$				-.0082***	-.003	-.003	-.0049*	-.0057*
				(.0024)	(.0024)	(.0024)	(.0024)	(.0025)
Billable work $_t$	1.6e-04***	1.6e-04***	1.6e-04***	1.6e-04***	1.6e-04***	1.6e-04***	1.6e-04***	1.4e-04***
	(6.1e-06)	(6.0e-06)	(6.1e-06)	(6.1e-06)	(6.1e-06)	(6.0e-06)	(6.1e-06)	(6.2e-06)
Internal work $_t$	1.0e-04***	1.1e-04***	1.0e-04***	1.1e-04***	1.1e-04***	1.1e-04***	1.1e-04***	9.2e-05***
	(8.7e-06)	(8.7e-06)	(8.7e-06)	(8.8e-06)	(8.8e-06)	(8.8e-06)	(8.8e-06)	(8.9e-06)
Continuing Education $_t$	-3.7e-04***	-3.6e-04***	-3.8e-04***	-3.7e-04***	-3.6e-04***	-3.5e-04***	-3.6e-04***	-3.5e-04***
	(2.1e-05)	(2.1e-05)	(2.1e-05)	(2.1e-05)	(2.1e-05)	(2.1e-05)	(2.1e-05)	(2.2e-05)
Professional development $_t$	1.7e-04***	1.8e-04***	1.7e-04***	1.7e-04***	1.8e-04***	1.8e-04***	2.0e-04***	1.8e-04***
	(9.1e-06)	(9.3e-06)	(9.1e-06)	(9.1e-06)	(9.3e-06)	(9.3e-06)	(9.7e-06)	(9.8e-06)
Other hours $_t$	-1.6e-04	-1.4e-04	-1.7e-04	-1.7e-04	-1.5e-04	-1.5e-04	-1.9e-04	-1.4e-04
	(2.2e-04)	(2.1e-04)	(2.2e-04)	(2.2e-04)	(2.1e-04)	(2.1e-04)	(2.1e-04)	(2.0e-04)
Log average team size $_t$	-.0121***	-.0115***	-.0151***	-.012***	-.0123***	-.0123***	-.0125***	-.0101***
	(.0021)	(.0021)	(.0021)	(.0023)	(.0023)	(.0023)	(.0024)	(.0024)
Number of clients $_t$	-5.5e-04	-3.6e-04	-5.2e-04	-4.8e-04	-3.9e-04	-3.8e-04	-6.6e-04	-2.3e-04
	(3.6e-04)	(3.7e-04)	(3.6e-04)	(3.6e-04)	(3.7e-04)	(3.7e-04)	(4.0e-04)	(3.9e-04)
Number of projects $_t$	4.0e-04+	4.3e-04+	3.7e-04	4.0e-04+	4.2e-04+	4.2e-04+	6.5e-04*	3.8e-04
	(2.3e-04)	(2.4e-04)	(2.3e-04)	(2.3e-04)	(2.4e-04)	(2.4e-04)	(2.7e-04)	(2.7e-04)
Cum. cont. variety $_t$ X Cum. coll. variety $_t$						-.0059*	-.0068*	-.0043
						(.0027)	(.0027)	(.0029)
Performance $_t$								.06***
								(.0017)
Year Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time in level Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Matching indicator Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Title at hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region at hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Business line at hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of projects binned Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Service type Fe	No	No	No	No	No	No	Yes	Yes
N	68295	68295	68295	68295	68295	68295	68259	66034
adj. R^2	0.452	0.453	0.452	0.452	0.453	0.453	0.456	0.469

[a] Standard errors in parentheses (clustered at the employee level – unit of analysis: employee-year); [b] + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; [c] The sample for Model 8 is smaller than for the previous models due to missing values in the performance appraisals data; [d] Prior cumulative content variety $_t$ and Prior cumulative collaborator variety $_t$ refer to the variety up to the beginning of year t; Abbreviations: Cum. cont. variety (Cumulative content variety), Cum coll. Variety (Cumulative collaborator variety).

Table 2 Appendix 14. Determinants of exit (LPM) [a, b, c]

	(1) Exit t+1	(2) Exit t+1	(3) Exit t+1	(4) Exit t+1	(5) Exit t+1	(6) Exit t+1	(7) Exit t+1	(8) Exit t+1
Prior cumulative content variety $_t$	.038***	.0346***			.0287***	.0276***	.0284***	.0246***
	(.0032)	(.0033)			(.0035)	(.0035)	(.0035)	(.0036)
Year content variety $_t$		.0228***			.0261***	.0262***	.0269***	.0248***
		(.004)			(.004)	(.004)	(.0042)	(.0042)
Prior cumulative collaborator variety $_t$			.0133***	.0156***	.0104***	.014***	.014***	.0131***
			(.0018)	(.0019)	(.0021)	(.0022)	(.0022)	(.0024)
Year collaborator variety $_t$				-.0077***	-.0084***	-.0083***	-.0083***	-.0073**
				(.0023)	(.0023)	(.0023)	(.0024)	(.0025)
Billable work $_t$	-1.1e-04***	-1.2e-04***	-1.1e-04***	-1.1e-04***	-1.2e-04***	-1.2e-04***	-1.2e-04***	-1.1e-04***
	(5.8e-06)	(5.8e-06)	(5.8e-06)	(5.8e-06)	(5.8e-06)	(5.8e-06)	(5.9e-06)	(6.0e-06)
Internal work $_t$	-6.1e-05***	-6.5e-05***	-6.1e-05***	-5.7e-05***	-6.2e-05***	-6.3e-05***	-6.5e-05***	-5.7e-05***
	(8.2e-06)	(8.2e-06)	(8.2e-06)	(8.3e-06)	(8.3e-06)	(8.3e-06)	(8.4e-06)	(8.5e-06)
Continuing Education $_t$	7.5e-05***	6.9e-05***	6.9e-05***	7.9e-05***	7.9e-05***	7.5e-05***	7.3e-05***	6.2e-05**
	(2.0e-05)	(2.0e-05)	(2.0e-05)	(2.0e-05)	(2.0e-05)	(2.0e-05)	(2.0e-05)	(2.1e-05)
Professional development $_t$	-4.7e-05***	-5.6e-05***	-4.3e-05***	-4.1e-05***	-5.5e-05***	-5.5e-05***	-5.7e-05***	-4.8e-05***
	(9.3e-06)	(9.4e-06)	(9.3e-06)	(9.3e-06)	(9.4e-06)	(9.4e-06)	(9.7e-06)	(1.0e-05)
Other hours $_t$	1.9e-04*	1.9e-04*	1.9e-04*	1.9e-04*	1.9e-04*	1.8e-04*	1.9e-04*	1.7e-04*
	(8.2e-05)	(8.3e-05)	(8.4e-05)	(8.4e-05)	(8.3e-05)	(8.2e-05)	(8.4e-05)	(8.6e-05)
Log average team size $_t$	.0016	.0013	-.0013	.0017	.003	.0029	.0021	9.6e-04
	(.002)	(.002)	(.002)	(.0022)	(.0022)	(.0022)	(.0024)	(.0024)
Number of clients $_t$	.0011***	9.9e-04**	.0012***	.0012***	.001**	1.0e-03**	.0015***	.0013***
	(3.3e-04)	(3.3e-04)	(3.3e-04)	(3.3e-04)	(3.3e-04)	(3.3e-04)	(3.5e-04)	(3.5e-04)
Number of projects $_t$	-7.9e-04***	-8.1e-04***	-8.2e-04***	-8.0e-04***	-7.9e-04***	-7.9e-04***	-.0012***	-.0011***
	(2.1e-04)	(2.1e-04)	(2.1e-04)	(2.1e-04)	(2.1e-04)	(2.1e-04)	(2.3e-04)	(2.3e-04)
Cum. cont. variety $_t$ X Cum. coll. variety $_t$						.0122***	.0117***	.0114***
						(.0026)	(.0026)	(.0028)
Performance $_t$								-.0329***
								(.0017)
Year Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time in level Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Matching indicator Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Title at hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region at hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Business line at hire Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of clients binned Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Service type Fe	No	No	No	No	No	No	Yes	Yes
N	88274	88274	88274	88274	88274	88274	88240	85552
adj. R^2	0.094	0.094	0.093	0.093	0.095	0.095	0.096	0.099

[a] Standard errors in parentheses (clustered at the employee level – unit of analysis: employee-year); [b] + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; [c] Prior cumulative content variety $_t$ and Prior cumulative collaborator variety $_t$ refer to the variety up to the beginning of year t.

References

Abdi H, Williams LJ (2010) Principal component analysis. *Wiley Interdiscip. Rev. Comput. Stat.* 2(4):433–459.

Wasserman S, Faust K (1994) *Social network analysis: Methods and applications* (Cambridge university press).