

Internet Appendix for “Survival of the fittest? Managerial Cultural Fit and Tenure”

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This internet appendix describes the machine learning algorithms used in the paper in detail. Internet Appendix A.1 presents the percentages of companies that do not mention a cultural value. Internet Appendix A.2 presents the seed word and phrases for each cultural category. Internet Appendix A.3 presents the extracted word representations for each cultural cluster created by HDBSCAN. Internet Appendix A.4 reports a snapshot of top-ranked S&P500 firms by corporate cultural strengths before merging with Execucomp. Internet Appendix A.5 reports a snapshot of top-ranked executives in S&P500 firms by personal cultural strengths. Internet Appendix A.6 reports a snapshot of top-ranked executives in S&P500 firms by cultural distances with their affiliated companies. Finally, Internet Appendix A.7 reports the hyperparameters used in the machine learning algorithms.

Appendix A1

Machine Learning Hyperparameters:

SBERT:

1. PCA number of components: 5
2. UMAP number of neighbours: 15, number of components: 5
3. The UMAP algorithm is typically unsupervised. To nudge UMAP towards pulling apart conversations of different corporate cultural topics when projecting the 384-dimensional vector to the 5-dimensional space, I follow Grootendorst (2020) by supplying UMAP with culture topic labels. I first create seed words for each culture topic, as shown in the Internet Appendix A2. I then join the seed word to build sentences and use SBERT to convert these sentences into vectors. Next, I calculate the cosine similarity between the topic vector and the earnings call conversation vectors. If a conversation vector is most similar to the average conversation vector, I assign a noise label. By supplying UMAP with culture topic labels, the algorithm pulls apart conversations with different cultural topics when conducting dimensional reduction. Finally, I project the high-dimensional data from a matrix of the shape (11,582,429, 384) to a matrix of the shape (11,582,429, 5) on a lower-dimensional manifold that preserves the closest possible equivalent fuzzy topological structure while pulling apart conversations with different cultural topics.

To ensure good performance of the UMAP algorithm, I constraint the size of the local neighbourhood UMAP will look at when attempting to learn the manifold structure of the data to 15. The more neighbours that UMAP looks at, the more global structure it learns, and the fewer neighbours that UMAP looks at, the more local structure it learns. Meanwhile, given the large size of my earnings call data, the UMAP algorithm's spectral initialisation can result in a very long initialisation stage or an inability to converge. I follow Field Kobak and Berens (2019) and use a scaled-PCA initialisation with a standard deviation of $1e-4$ in the initialisation matrix to mitigate this issue.

4. HDBSCAN minimum cluster size: 100, minimum number of samples: 1

Given the large size of the conversation embeddings matrix (11,582,429, 5), I run the UMAP and HDBSCAN on a machine with 32 physical CPUs and 512 GB of RAM for 24 hours before obtaining the final clustered matrix.

5. TF-IDF Count Vectorizer N-gram range: (1,2)
6. Sentence transformer model: paraphrase-MiniLM-L3-v2

Training sentence-BERT requires a large corpus and long training time, and therefore, I employ a pre-trained sentence-BERT model called “all-MiniLM-L12-v2”, which is based on Microsoft’s “MiniLM-L12-H384-uncased” BERT model and fine-tuned on above 1-billion sentences, including Q&As from various online resources such as Stack Exchange and Yahoo Answers, etc.

To encode the conversational speeches of the Q&A section in earnings call transcripts, I run the sentence-BERT model on an Nvidia A100-SXM-80GB GPU, and it takes approximately four hours to encode all 11,582,429 earnings call transcript conversations.

Causal survival forests:

1. Number of trees: 5000
2. SEED: 12

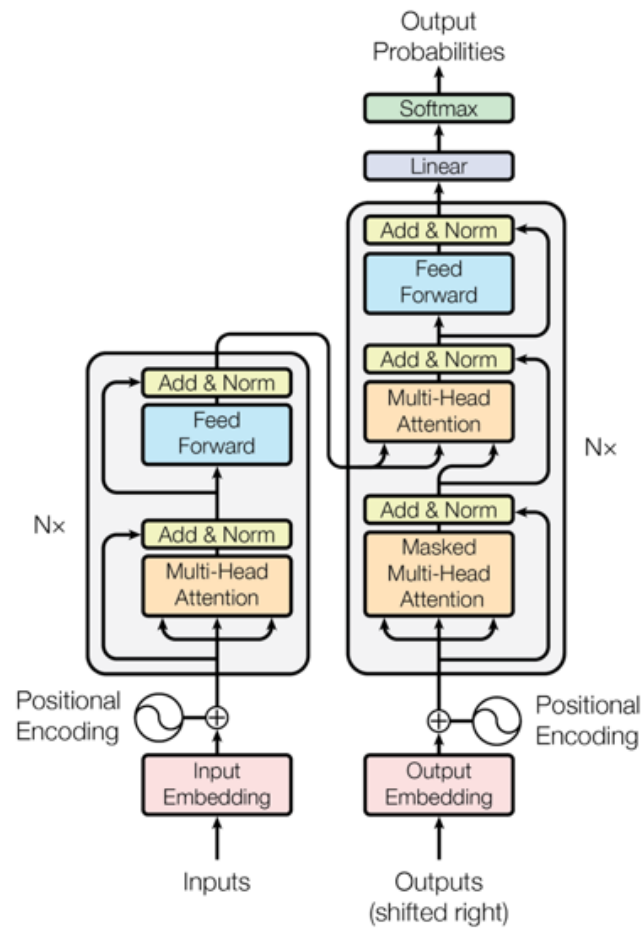


Illustration of Transformer

Appendix A2. Seed words and phrases for each culture category

Innovation culture	Respect culture	Integrity culture	Quality culture	Teamwork culture	Control culture	Competition culture	Hard work culture	Community culture
innovation	diversity	ethics	customer	collaborate	control	compete	hard working	community
innovative	employee	honest	dedication	collaboration	uniformity	competitive	effort	society
innovate	empowerment	honesty	dedicate	collaborative	rule	competition	tireless	environmental
invention	talent	integrity	dedicated	cooperation	consistency	winner	busy	philanthropy
inventive	talented	transparency	quality	cooperate	efficiency	performance	diligent	sustainability
invent	respect	transparent	commitment	cooperative	standard	goal		
	respectful	trust	satisfaction	teamwork		target		
	respected	responsibility		partner		survive		
	appreciate	responsible		partnership		survival		
	appreciation	truth		alliance		reward		
		truthfully						

Appendix A3. Topic representations for each culture category

Innovation Topic 1	['innovate', 'think innovation', 'innovation think', 'innovation', 'innovations', 'product innovation', 'innovative', 'innovation innovation', 'look innovation', 'talk innovation']
Innovation Topic 2	['innovation pipeline', 'innovations', 'breakthrough innovation', 'innovation', 'innovation youve', 'just innovation', 'product innovation', 'question innovation', 'innovation going', 'innovation year']
Innovation Topic 3	['patents', 'patent', 'intellectual property', 'patent portfolio', 'intellectual', 'litigation', 'patent office', 'infringement', 'ipr', 'court']
Innovation Topic 4	['patent', 'patents', 'exclusivity', 'formulation', 'enoxaparin', 'composition matter', 'anda', 'generic', 'pediatric extension', 'andas']
Innovation Topic 5	['talk new', 'youre excited', 'new product', 'commercialization', 'talk products', 'introductions', 'product introductions', 'product innovation', 'products coming', 'products youre']
Innovation Topic 6	['initiative', 'new initiative', 'mission idea', 'excellent broader', 'broader mission', 'idea regarding', 'initiative youre', 'initiative initiative', 'taking excellent', 'regarding new']
Innovation Topic 7	['orange book', 'composition matter', 'patent', 'orange', 'patents', 'matter patent', 'composition', 'hatchwaxman', 'matter patents', 'book patent']
Innovation Topic 8	['aladdin', 'think technology', 'tech', 'futureadvisor', 'use technology', 'blackrock', 'technology business', 'labor pyramid', 'technology really', 'technology think']
Innovation Topic 9	['product development', 'new think', 'devfactory', 'yes new', 'development product', 'development yes', 'denka', 'products development', 'new new', 'say new']
Innovation Topic 10	['discovery', 'discoverready', 'discover', 'ediscovery', 'discovery business', 'discovery live', 'think discovery', 'discoverys', 'discovery really', 'ptc']
Innovation Topic 11	['discovery', 'discoveries', 'thanking discover', 'discover', 'new discovery', 'discovery discovery', 'scale discovery', 'discovery completed', 'expert discovery', 'discovery day']

Innovation Topic 12	['technology technology', 'technology okay', 'yes technology', 'technology yes', 'just technology', 'technology right', 'technology mean', 'tech', 'technology think', 'technology just']
Innovation Topic 13	['prototype', 'prototypes', 'prototyping', 'new prototype', 'rapid prototyping', 'prototype think', 'octoblu', 'smaller prototype', 'prototype products', 'designs']
Innovation Topic 14	['product new', 'products new', 'existing products', 'new product', 'yes new', 'products yes', 'new products', 'talking new', 'existing product', 'products okay']
Innovation Topic 15	['investments okay', 'new investments', 'incremental investment', 'investments youre', 'investments just', 'investment yes', 'investment okay', 'investments investment', 'level investment', 'incremental investments']
Innovation Topic 16	['introductions', 'product introductions', 'product launches', 'new product', 'launches', 'product introduction', 'introduction', 'products coming', 'products year', 'products youre']
Innovation Topic 17	['continue invest', 'make investments', 'investment technology', 'retirement health', 'making investments', 'invest business', 'continuing invest', 'weve making', 'engineers', 'really investing']
Innovation Topic 18	['venture capital', 'venture', 'venture capitalists', 'capitalists', 'capital community', 'capital industry', 'look venture', 'think venture', 'capital firm', 'vc']
Innovation Topic 19	['new initiatives', 'initiatives initiatives', 'initiatives just', 'okay initiatives', 'initiatives okay', 'talk initiatives', 'initiatives yes', 'specific initiatives', 'initiatives youre', 'like initiatives']
Innovation Topic 20	['industry industry', 'industry yes', 'talking industry', 'industries', 'think industry', 'yes industry', 'industry mean', 'mean industry', 'industry okay', 'industry right']
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Integrity Topic 1	['trust', 'trust preferred', 'trust preferreds', 'trust 3000', 'preferreds', 'trusts', 'trust business', 'preferred', 'master trust', 'corporate trust']
Integrity Topic 2	['confidentiality', 'confidentiality agreement', 'confidentiality agreements', 'confidential', 'confidential agreement', 'subject confidentiality', 'agreement confidential', 'agreements', 'details agreement', 'agreement disclose']

Integrity Topic 3	['compliance', 'compliance rate', 'compliant', 'compliance program', 'compliance compliance', 'compliance programs', 'compliance rates', 'compliance yes', 'noncompliant companies', 'think compliance']
Integrity Topic 4	['disclosure', 'disclosures', 'disclose', 'level disclosure', 'okcupid', 'disclosure think', 'juul', 'think disclosure', 'transparency', 'disclosing']
Integrity Topic 5	['disclosure', 'disclosures', 'disclose', 'terms disclosure', 'disclosure think', 'pra', 'apmi', 'disclosure point', 'disclosure going', 'apuc']
Integrity Topic 6	['professional liability', 'liability', 'professional', 'liability business', 'liability book', 'general liability', 'eo', 'liability lines', 'medical professional', 'accident']
Integrity Topic 7	['disclosure', 'disclosures', 'additional disclosure', 'disclosure quarter', 'new disclosures', 'new disclosure', 'additional disclosures', 'disclose', 'enhanced disclosure', 'change disclosure']
Integrity Topic 8	['transparency', 'transparent', 'level transparency', 'ana', 'think transparency', 'transparency important', 'transparency think', 'want transparency', 'greater transparency', 'ana report']
Integrity Topic 9	['disclosure', 'disclosures', 'disclose', 'private company', 'confidentiality', 'theyre private', 'disclose information', 'confidential', 'public company', 'thats lpu']
Integrity Topic 10	['entitlement', 'entitlements', 'entitlement process', 'entitled', 'municipalities', 'zoning', 'entitlement mean', 'fully entitled', 'entitlements dont', 'entitling']
Integrity Topic 11	['fraud', 'rights', 'rights issue', 'hbos', 'deep rights', 'lied', 'lloyds', 'hbos reading', 'victims', 'rights rights']
Integrity Topic 12	['agency', 'response letter', 'complete response', 'letter', 'agencies', 'interactions agency', 'meeting agency', 'discussions agency', 'resubmission', 'crl']
Integrity Topic 13	['disclosure', 'disclosures', 'going disclose', 'disclose', 'public disclosure', 'disclosure yes', 'level disclosure', 'public disclosures', 'let disclose', 'whats disclosure']
Integrity Topic 14	['nonagency', 'agency', 'agency portfolio', 'agency leverage', 'leverage agency', 'agency cmbs', 'rmbs', 'cmbs', 'levered', 'agency rmbs']
Integrity Topic 15	['nonagency', 'agency', 'mbs', 'nonagencies', 'agency mbs', 'agency portfolio', 'cmbs', 'agency cmbs', 'rmbs', 'agency rmbs']

Integrity Topic 16	['agreement yes', 'agreements', 'agreement agreement', 'agreement okay', 'new agreement', 'terms agreement', 'new agreements', 'yes agreement', 'agreement place', 'agreement']
Integrity Topic 17	['nonagency', 'agency', 'agencies', 'nonagencies', 'nonagency nonagency', 'agency nonagency', 'agency agency', 'yes agency', 'potential truck', 'agency mbs']
Integrity Topic 18	['liability', 'potential liability', 'liability okay', 'liable', 'product liability', 'liability yes', 'liability liability', 'liability just', 'legal liability', 'contingent liability']
Integrity Topic 19	['strong balance', 'va reform', 'sfs', 'sheet going', 'like va', '953d balance', 'reform reserves', 'prospective accounting', 'business cleanly', 'sheets makes']
Integrity Topic 20	['forgiveness', 'forgiven', 'sba', 'forgiveness process', 'forgiveness applications', 'principal forgiveness', 'portal', 'application forgiveness', 'ppp', 'loan forgiveness']
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Quality Topic 1	['commitment', 'commitments', 'commitment yes', 'commitment commitment', 'commitments yes', 'make commitment', 'thats commitment', 'commitment just', 'yes commitments', 'yes commitment']
Quality Topic 2	['million commitment', 'commitment', 'total commitment', 'miller coors', 'coors team', 'commitments', 'total commitments', 'coors', 'commitment just', 'commitments 149']
Quality Topic 3	['loyalty', 'loyalty program', 'loyalty programs', 'loyalty card', 'rewards', 'gold card', 'loyalty members', 'question loyalty', 'new loyalty', 'think loyalty']
Quality Topic 4	['customer contracts', 'contracts customers', 'customer contract', 'auc', 'solesence', 'customers contracts', 'contract customer', 'contracts customer', 'formalized', 'relationship hour']
Quality Topic 5	['10 customers', 'new customers', 'new customer', 'existing customers', '10 customer', 'customers quarter', 'new clients', 'customer concentration', 'customer count', 'concentration']
Quality Topic 6	['committed committed', 'commit', 'committed yes', 'committed', 'committed thats', 'fully committed', 'yes committed', 'commit committed', 'committing', 'im committed']
Quality Topic 7	['good quarter', 'strong quarter', 'management focused', 'great quarter', 'quarters tough', 'newer customers', 'professional trade', 'merger reduce', 'amazingly loyal', 'customers amazingly']

Quality Topic 8	['fulfillment', 'fulfillment centers', 'fulfillment center', 'micro fulfillment', 'new fulfillment', 'fba', 'fulfillment business', 'microfulfillment', 'sort centers', 'micro']
Quality Topic 9	['quality quality', 'yes highquality', 'quality yes', 'highquality largely', 'quality highest', 'quality dependent', 'intend pushing', 'largely fixed', 'quality flight', 'like curt']
Quality Topic 10	['marketing marketing', 'marketing yes', 'direct marketing', 'marketing okay', 'marketing question', 'say marketing', 'marketing mean', 'just marketing', 'yes marketing', 'guess marketing']
Quality Topic 11	['percentage completion', 'completion', '70 complete', 'completion rate', 'percent completion', 'satisfied handled', 'vic 985', '985 complete', 'update fcal', 'hangover eps']
Quality Topic 12	['sales marketing', 'marketing sales', 'marketing yes', 'yes sales', 'marketing okay', 'party city', 'triangle rewards', 'stanadyne business', 'instructional education', 'marketing say']
Quality Topic 13	['customer acquisition', 'acquisition cost', 'acquisition costs', 'new customer', 'cost customer', 'cost acquisition', 'customer acquisitions', 'user acquisition', 'lifetime value', 'cac']
Quality Topic 14	['thank shareholders', 'supporters continued', 'employees supporters', 'stockholders employees', 'courtnee', 'appreciate support', 'thank stockholders', 'continued confidence', 'want thank', 'shareholders thank']
Quality Topic 15	['feedback', 'feedback customers', 'customer feedback', 'feedback youre', 'early feedback', 'reception', 'feedback far', 'initial feedback', 'whats customer', 'customer reaction']
Quality Topic 16	['promotions', 'promotional', 'merchandise margin', 'merchandise margins', 'merchandise', 'promotion', 'promotional activity', 'promotional environment', 'question gross', 'clearance']
Quality Topic 17	['marketing expenses', 'marketing expense', 'sales marketing', 'selling marketing', 'gufeng', 'selling expense', 'expenses percentage', 'investment selling', 'referral rate', 'expense percentage']
Quality Topic 18	['midstream', 'midstream assets', 'midstream business', 'cnx', 'upstream', 'cnx midstream', 'midstream asset', 'gathering', 'midstream companies', 'midstream company']
Quality Topic 19	['vendor consolidation', 'vendor', 'consolidation', 'vendors', 'seeing vendor', 'consolidation vendors', 'vendor consolidations', 'consolidate vendors', 'consolidate', 'captive shops']

Quality Topic 20	['continue yes', 'agree methodology', 'continue continue', 'yes continue', 'methodology pretty', 'kind agree', 'colihues', 'continuing yes', 'continue hope', 'hope continue']
Respect Topic 1	['talent', 'talent management', 'recruiting', 'talent solutions', 'new talent', 'think talent', 'talented', 'talent acquisition', 'great talent', 'hire']
Respect Topic 2	['salaries', 'workers comp', 'employee benefits', 'workers', 'salary', 'employee', 'reinstated', 'salary employee', 'pay cuts', 'comp reserves']
Respect Topic 3	['benefitfocus', 'benefitsplace', 'employer', 'employers', 'benefitfocus platform', 'benefitstore', 'employee benefits', 'employee', 'open enrollment', 'large employers']
Respect Topic 4	['careerbuilder', 'classified ventures', 'gannett', 'tribune', 'mcclatchy', 'careerbuilders', 'workterra', 'monster', 'gannett tribune', 'carscom']
Respect Topic 5	['staffing', 'staff', 'staffing levels', 'staffing business', 'temporary staffing', 'staffed', 'staffing level', 'add staff', 'far staffing', 'hiring']
Respect Topic 6	['number employees', 'employee count', 'employee', 'total employees', 'employees', 'employees end', 'fulltime employees', 'employees okay', 'employees currently', 'fulltime']
Respect Topic 7	['personnel', 'personnel expense', 'hires', 'personnel costs', 'personnel expenses', 'new hires', 'increase personnel', 'hiring', 'salaries', 'expense run']
Respect Topic 8	['hiring', 'hires', 'hiring plans', 'hire', 'new hires', 'hiring environment', 'hiring plan', 'hiring quarter', 'hired', 'hiring year']
Respect Topic 9	['job growth', 'jobs', 'employment', 'economycom', 'job losses', 'million jobs', 'jobs month', 'job loss', 'wage growth', 'jobs growth']
Respect Topic 10	['appreciate appreciate', 'guys appreciate', 'appreciate thanks', 'thanks guys', 'guys thanks', 'does appreciate', 'everybody does', 'appreciate everybody', '"', '"']
Respect Topic 11	['new hires', 'hires', 'hiring', 'hiring hiring', 'hire', 'dont hire', 'hires yes', 'say hiring', 'hires mentioned', 'payroll specialist']

Respect Topic 12	['appreciate appreciate', 'appreciate really', 'really appreciate', 'appreciate totally', 'totally appreciate', 'appreciate sure', 'hearing appreciate', 'greatly really', 'appreciate interesting', 'appreciate greatly']
Respect Topic 13	['appreciate appreciate']
Respect Topic 14	['results outlook', 'opportunity discuss', 'outlook look', 'appreciate opportunity', 'discuss quarter', 'providing insight', 'forward providing', 'quarter results', 'today appreciate', 'appreciated opportunity']
Respect Topic 15	['management changes', 'leadership', 'senior management', 'management change', 'new management', 'leadership change', 'management team', 'leadership team', 'leadership changes', 'senior']
Respect Topic 16	['workers comp', 'workers', 'workers compensation', 'comp business', 'work comp', 'excess workers', 'loss cost', 'comp claims', 'comp market', 'comp pricing']
Respect Topic 17	['color provide', 'hot program', 'additional color', 'taxotere', 'color patient', 'provide color', 'neo program', 'color just', 'helpful color', 'prefer evaluation']
Respect Topic 18	['recruiting', 'recruitment', 'recruit', 'cx601', 'recruits', 'recruit recruiting', 'recruitment plans', 'recruiter', 'recruiting process', 'talking recruiting']
Respect Topic 19	['job okay', 'job guys', 'job great', 'nice job', 'job thanks', 'great nice', 'thanks nice', 'guys okay', 'guys thanks', 'thanks guys']
Respect Topic 20	['recruiting', 'recruiters', 'recruitment', 'recruiter', 'recruiting environment', 'recruits', 'recruiter productivity', 'recruit', 'recruiting pipeline', 'new recruiters']
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Teamwork Topic 1	['collaboration', 'collaborations', '6product collaboration', 'obeya', '6product', 'collaborating', 'trigger lock', 'collaborating collaboration', 'collaboration collaborating', 'collaborate']
Teamwork Topic 2	['collaboration', 'collaboration revenue', 'collaborative', 'collaborative revenues', 'collaborations', 'new collaborations', 'collaboration revenues', 'collaborative revenue', 'research revenues', 'tyzekasebivo royalty']
Teamwork Topic 3	['partnerships', 'partnership', 'partnering', 'strategic partnerships', 'partnership discussions', 'strategic partnership', 'lindbergh', 'partnering discussions', 'new partnerships', 'potential partners']

Teamwork Topic 4	['partnering', 'collaboration', 'proof value', 'antisense technology', 'partnering discussions', 'partnership', 'objective partner', 'major pharmaceutical', 'catasys pre', 'think partner']
Teamwork Topic 5	['alliance', 'alliances', 'think alliance', 'alliance partners', 'alliance agreement', 'alliance revenues', 'just alliance', 'alliancebernstein', 'strategic alliance', 'alliance revenue']
Teamwork Topic 6	['partner network', 'partner ecosystem', 'partner program', 'ecosystem', 'new partners', 'collaboration', 'deloitte', 'partnerships', 'partners like', 'partner business']
Teamwork Topic 7	['partnering', 'exus', 'eu', 'european partnership', 'partnerships', 'partnership', 'partner europe', 'ex', 'potential partners', 'partnering discussions']
Teamwork Topic 8	['partner okay', 'partner partner', 'potential partners', 'partner yes', 'partner partners', 'looking partner', 'partner think', 'partner youre', 'partners partners', 'partners mean']
Teamwork Topic 9	['combined company', 'combined companies', 'growth combined', 'combined business', 'profile combined', 'rate combined', 'combined entity', 'combined', 'combined companys', 'orilissa']
Teamwork Topic 10	['new partners', 'new partner', 'number partners', 'partner influenced', 'partners think', 'partner influence', 'partnerinfluenced', 'existing partners', 'partner ecosystem', 'anaplan']
Teamwork Topic 11	['combined company', 'combined entity', 'entity', 'generation combined', 'flow combined', 'combined companies', 'assisting interim', 'interim equity', 'having assisting', 'improvement rollup']
Teamwork Topic 12	['union', 'unions', 'bargaining', 'unionized', 'negotiations', 'collective bargaining', 'nonunion', 'teamsters', 'collective', 'labor negotiations']
Teamwork Topic 13	['joint venture', 'venture', 'joint', 'joint ventures', 'ventures', 'venture partner', 'venture partners', 'venture just', 'venture think', 'venture joint']
Teamwork Topic 14	['combined entity', 'combined company', 'entity', 'combined business', 'closing cross', 'combined', 'ceco', 'separate companies', 'pmfg', 'new combined']
Teamwork Topic 15	['connect', 'project connect', 'connections', 'connected', 'connect platform', 'iconnect', 'consumer connect', 'connect promote', 'connect offering', 'connect product']
Teamwork Topic 16	['joint venture', 'venture', 'china joint', 'joint', 'chinese joint', 'venture china', 'joint ventures', 'ventures', 'yima', 'chinese']

Teamwork Topic 17	['group group', 'group yes', 'tokio marine', 'tokio', 'yes group', 'group level', 'groups', 'joined tokio', 'groups group', 'okay group']
Teamwork Topic 18	['corp', 'ccorp', 'ccorp conversion', 'corp conversion', 'converting corp', 'conversion corp', 'llc', 'corporate structure', 'capital maritime', 'upc']
Teamwork Topic 19	['conference look', 'conference thank', 'quarter conference', 'joining conference', 'conference today', 'todays conference', 'participating conference', 'thank participating', 'forward speaking', 'attending conference']
Teamwork Topic 20	['group pace', 'group business', 'transient', 'citywides', 'pace year', '2019 group', 'question group', 'banquet spend', 'group bookings', 'year group']
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Control Topic 1	['things control', 'control control', 'control things', 'controllable', 'dont control', 'whats control', 'say control', 'controllables', 'control right', 'controlling controllables']
Control Topic 2	['change control', 'control control', 'control yes', 'controls', 'sec want', 'wait sec', 'control parent', 'control okay', 'value control', 'comment value']
Control Topic 3	['controliq', 'basaliq', 'basaliq controliq', 'time range', 'pump', 'controliq think', 'tsport', 'updater', 'tandem device', 'device updater']
Control Topic 4	['pretty consistent', 'think consistent', 'consistency', 'fairly consistent', 'consistent think', 'yes consistent', 'relatively consistent', 'say consistent', 'substandard accrual', 'consistent mean']
Control Topic 5	['noncontrolling', 'noncontrolling line', 'question noncontrolling', 'talking noncontrolling', 'right noncontrolling', 'noncontrolling just', 'noncontrolling interests', 'noncontrolling okay', 'just noncontrolling', 'noncontrolling think']
Control Topic 6	['consistency', 'weve consistent', 'jumei global', 'jumei', 'fund allocation', 'say consistent', 'grabbing market', 'domestic schemes', 'consistent think', 'grabbing']

Control Topic 7	['consistent yes', 'consistent consistent', 'pretty consistent', 'fairly consistent', 'yes consistent', 'consistent pretty', 'consistent weve', 'consistent think', 'consistency', 'thats consistent']
Control Topic 8	['adjustment', 'adjustments', 'adjusted basis', 'adjusted', 'adjusted yes', 'thats adjusted', 'adjustments yes', 'onetime adjustment', 'yes adjusted', 'adjust']
Control Topic 9	['evenly', 'evenly spread', 'evenly distributed', 'pretty evenly', 'spread pretty', 'spread spread', 'spread yes', 'pretty spread', 'distributed', 'yes evenly']
Control Topic 10	['standardization', 'interoperability', 'standardize', 'standards', 'standardizing', 'standardized', 'doers', 'standards bodies', 'standard', 'trill']
Control Topic 11	['consistent quarter', 'consistent quarters', 'quarter consistent', 'pretty consistent', 'consistent saw', 'okay consistent', 'consistent second', 'quarters pretty', 'relatively consistent', 'consistent couple']
Control Topic 12	['normalized margins', 'normalized margin', 'normalized', 'think normalized', 'view normalized', 'fixed ga', 'normalize', 'thinking normalized', 'margins cycle', 'sort normalized']
Control Topic 13	['simulation', 'ansys', 'cad', 'multiphysics', 'generative design', 'creo', 'generative', 'use simulation', 'physics', 'simulations']
Control Topic 14	['levers', 'lever', 'levers pull', 'levered', 'lot levers', 'pull know', 'levers thats', 'levered levers', 'different levers', 'yes levers']
Control Topic 15	['fair value', 'value adjustment', 'value adjustments', 'change fair', 'adjustment', 'value change', 'gears fair', '157', 'contingent consideration', 'prepaid expense']
Control Topic 16	['stabilization', 'stability', 'stabilizing', 'stabilized', 'pretty stable', 'fairly stable', 'say stable', 'relatively stable', 'stable think', 'stabilize']
Control Topic 17	['levers', 'lever', 'levers pull', '10 levers', 'traditional levers', 'think levers', 'different levers', 'levers just', 'multiple levers', 'levers mean']
Control Topic 18	['rule thumb', 'thumb', 'perpetual', 'rule', 'thumb yes', 'perpetual perpetual', 'good rule', 'perpetual preferred', 'perpetual yes', 'general rule']
Control Topic 19	['dynamic yes', 'yes dynamic', 'thoughts dynamics', 'dynamic right', 'dynamic', 'dynamic thats', 'similar dynamic', 'dynamics going', 'sure dynamic', 'change dynamic']

Control Topic 20	['mechanical issues', 'mechanical', 'manufacturing issue', 'batches', 'snout', 'batch', 'original problem', 'warranty', 'mechanical issue', 'root cause']
Competition Topic 1	['rewards', 'rewards program', 'reward', 'redemption', 'rewards expense', 'total rewards', 'rapid rewards', 'redemption rate', 'rewards customers', 'ultimate redemption']
Competition Topic 2	['competitive landscape', 'competitive environment', 'landscape', 'competitor', 'change competitive', 'entrants', 'think competitive', 'new entrants', 'competing', 'changes competitive']
Competition Topic 3	['win rate', 'win rates', 'wins', 'new wins', 'business wins', 'wins quarter', 'won', 'customer wins', 'winning', 'wins just']
Competition Topic 4	['competitive process', 'process competitive', 'win competitive', 'unsolicitedly accurate', 'mtty approached', 'process mty', 'approached unsolicitedly', 'assume competitive', 'unsolicitedly', 'theres goshop']
Competition Topic 5	['goals', 'ambition', 'internal goals', 'set goals', 'financial goals', 'goal goal', 'objectives', 'goal line', 'goal think', '3m']
Competition Topic 6	['competitive reasons', 'competitive information', 'information competitive', 'disclose', 'disclose competitive', 'thats competitive', 'reasons dont', 'just competitive', 'dont disclose', 'information dont']
Competition Topic 7	['survival', 'overall survival', 'survival data', 'ash', 'survival analysis', 'progressionfree', 'progressionfree survival', 'asco', 'number events', 'mrg229']
Competition Topic 8	['longterm goal', 'longterm goals', 'goal longterm', 'goals', 'shortterm goal', 'term goal', 'laid sorts', 'sorts goals', 'goal years', 'terms sum']
Competition Topic 9	['competitive reasons', 'reasons competitive', 'reasons dont', 'prefer competitive', 'comment competitive', 'reasons going', 'answer competitive', 'reasons really', 'competitive purposes', 'reasons wont']
Competition Topic 10	['design wins', 'design win', 'wins', 'automotive design', 'award', 'automotive', 'automotive wins', 'wins automotive', 'awards', 'design cycle']
Competition Topic 11	['outcome', 'outcome outcome', 'outcome yes', 'possible outcome', 'likely outcome', 'good outcome', 'eur cheeseburger', 'outcome reasonable', 'cheeseburger', 'outcomes']

Competition Topic 12	['change strategy', 'strategy think', 'strategy changed', 'think strategy', 'executing', 'strategic plan', 'focus right', 'thats focus', 'strategy going', 'strategies']
Competition Topic 13	['design wins', 'design win', 'wins', 'new design', 'win activity', 'number design', 'designs', 'terms design', 'wins quarter', 'wins design']
Competition Topic 14	['thats goal', 'goal thats', 'goal yes', 'goal goal', 'thats objective', 'certainly goal', 'yes goal', 'objective', 'objective thats', 'objective yes']
Competition Topic 15	['change strategy', 'strategy yes', 'strategy okay', 'strategy just', 'strategy strategy', 'strategy going', 'strategy thats', 'thats strategy', 'changes strategy', 'lindbergh']
Competition Topic 16	['champion', 'activewear', 'champion brand', 'champion business', 'c9', 'innerwear', 'champion europe', 'growth champion', 'championx', 'hanes']
Competition Topic 17	['target year', 'longterm target', '20 target', 'target 17', 'longerterm target', 'target range', 'target okay', 'allstates target', 'target 2011', 'target contingent']
Competition Topic 18	['participation', 'participate', 'participations', 'participant', 'participation yes', 'say participation', 'going participate', 'decides participate', 'participate okay', 'participants']
Competition Topic 19	['stages', '28 stages', 'number stages', 'stages day', '20 stages', '60 stages', 'stages okay', 'stages yes', '14 stages', 'stages range']
Competition Topic 20	['net promoter', 'promoter', 'promoter score', 'score', 'nps', 'promoter scores', 'scores', 'satisfaction', 'nps score', 'customer satisfaction']
<hr/>	
Hard work Topic 1	['working way', 'working working', 'job define', 'yes working', 'way overcome', 'midst working', 'working right', 'way working', 'working yes', 'lanham winston']
Hard work Topic 2	['hard say', 'say hard', 'hard tell', 'tell hard', 'say point', 'tell point', 'difficult say', 'really hard', 'right hard', 'pinpoint hard']
Hard work Topic 3	['force sales', 'sales force', 'sharrolyn', 'salespeople', 'force mean', 'talking sales', 'kind idealizing', 'craftspeople just', 'deep task', 'think idealize']

Hard work Topic 4	['making progress', 'good progress', 'weve progress', 'progress think', 'think making', 'making good', 'progress weve', 'lifting', 'heavy lifting', 'yes progress']
Hard work Topic 5	['average working', '100 working', 'percent working', '50 working', '75 working', 'lucius', '80 working', 'working working', '40 working', 'lucius excited']
Hard work Topic 6	['yes working', 'working yes', 'work yes', 'working working', 'work progress', 'work working', 'lot work', 'working right', 'working speak', 'work process']
Hard work Topic 7	['easy yes', 'easy easy', 'yes easy', 'thats tough', 'easy thats', 'hard yes', 'straightforward', 'complicated', 'tough yes', 'easy']
Hard work Topic 8	['highway', 'bidding', 'civil', 'jobs', 'highway work', 'large projects', 'south stream', 'emar', 'bridge', 'infrastructure projects']
Hard work Topic 9	['making progress', 'think making', 'iberia', 'progressing', 'good progress', 'start goals', 'creo', 'progress think', 'planscan', 'early stages']
Hard work Topic 10	['margin improvement', 'verigene', 'base productivity', 'xbrl', 'compliance mandates', 'progress gross', 'strong gross', 'waterbury', 'productivity programs', 'margin improvements']
Hard work Topic 11	['force productivity', 'sales productivity', 'productivity sales', 'sales force', 'salespeople', 'sales capacity', 'question sales', 'new sales', 'sales people', 'force efficiency']
Hard work Topic 12	['cost reduction', 'north campus', 'jcurve', 'white sheet', 'creative necessity', 'working jcurve', 'costsaving measures', 'conference explaining', 'costsaving', 'capstone']
Hard work Topic 13	['making progress', 'progress yes', 'yes making', 'progress progress', 'good progress', 'okay progress', 'making good', 'progress think', 'progress okay', 'progress feel']
Hard work Topic 14	['labor labor', 'labor', 'labor issues', 'just labor', 'labor like', 'labor issue', 'okay labor', 'labor okay', 'labor availability', 'labor shortages']
Hard work Topic 15	['tobacco', 'floc', 'pmi', 'farm labor', 'farm', 'growers', 'labor practices', 'workers', 'farm workers', 'altria']
Hard work Topic 16	['wework', 'coworking', 'weworks', 'coworking space', 'landlords', 'wework coworking', 'coworking operators', 'tenants', 'tenant', 'shared workspace']

Hard work Topic 17	['pushing hard', 'pushed', 'pushing', 'mean push', 'close push', 'push hard', 'push push', 'push right', 'hard pushed', 'pushed push']
Hard work Topic 18	['opportunistic', 'say opportunistic', 'opportunistic think', 'going opportunistic', 'think opportunistic', 'opportunistic buys', 'opportunistically', 'continue opportunistic', 'opportunistic yes', 'yes opportunistic']
Hard work Topic 19	['think productivity', 'productivity improvements', 'productivity gains', 'productivity improvement', 'terms productivity', 'productivity initiatives', 'productivity number', 'yes productivity', 'productivity productivity', 'productivity think']
Hard work Topic 20	['challenge yes', 'challenge', 'yes challenge', 'yes challenging', 'challenges challenges', 'challenging', 'linemanagement', 'linemanagement spans', 'market autonomy', 'challenges challenge']
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Community Topic 1	['new communities', 'communities', 'newer communities', 'land deals', 'older communities', 'new land', 'old communities', 'land', 'land cost', 'legacy communities']
Community Topic 2	['community count', 'communities', 'new communities', 'count growth', 'community', 'community counts', 'count', 'sales pace', 'number communities', 'average community']
Community Topic 3	['communities', 'percentage communities', 'pricing power', 'able raise', 'raised prices', 'pace price', 'raise prices', 'communities able', 'communities raised', 'communitybycommunity']
Community Topic 4	['social gaming', 'social', 'games', 'social games', 'social point', 'gaming', 'facebook', 'social networking', 'social game', '51com']
Community Topic 5	['culture', 'cultural', 'cultures', 'think culture', 'change culture', 'cultural fit', 'culture think', 'culture change', 'culture company', 'cultural change']
Community Topic 6	['facebook', 'social', 'instagram', 'social media', 'ads', 'twitter', 'facebook', 'google', 'social networking', 'google facebook']
Community Topic 7	['municipalities', 'municipal', 'municipal market', 'municipals', 'municipality', 'local contents', 'municipalities think', 'municipal customers', 'municipal markets', 'think municipalities']

Community Topic 8	['street', 'think street', 'streets', 'street numbers', 'relative street', 'consensus', 'street number', 'street modeling', 'street estimates', 'street missing']
Community Topic 9	['group business', 'transient', 'corporate transient', 'corporate group', 'group life', 'groups', 'group demand', 'association business', 'association', 'think group']
Community Topic 10	['natural gas', 'physician', 'talent', 'capital allocation', 'gulf', 'commitment', 'rents', 'environmental', 'dedicated', 'drugs']
Community Topic 11	['nonprofit', 'nonprofits', 'nonprofit sector', 'forprofit', 'notforprofit', 'nonforprofit', 'lot nonprofits', 'fundraising', 'blackbaud', 'nonprofitable']
Community Topic 12	['united community', 'thank united', 'mass affluent', 'ppnr', 'hope great', 'bankfinancial', 'christopher banks', 'business banking', 'great day', 'banking']
Community Topic 13	['institutional', 'institutional yes', 'institutional business', 'institution', 'institutions', 'just institutional', 'institutional institutional', 'institutional just', 'yes institutional', 'talking institutional']
Community Topic 14	['diversity', 'women', 'gender', 'diversity inclusion', 'inclusion', 'equality', 'female', 'diverse', 'racial', 'diversity board']
Community Topic 15	['neighborhood yes', 'neighborhood', 'yes neighborhood', 'neighborhood neighborhood', 'right neighborhood', 'thats neighborhood', 'neighborhood want', 'youre neighborhood', 'probably neighborhood', 'think neighborhood']
Community Topic 16	['impaired', 'communities impaired', 'communities', 'impaired quarter', 'previously impaired', 'total communities', 'percentage communities', 'impaired communities', 'impaireds', 'impaired wanted']
Community Topic 17	['clubs', 'club', 'dues', 'membership', 'memberships', 'new clubs', 'trunk club', 'members', 'number clubs', 'member']
Community Topic 18	['governments', 'prop 13', 'feds government', 'theyll reroute', 'conducted governments', 'governments timelines', 'communication province', 'ilc', 'share resolving', 'alignment hopeful']
Community Topic 19	['decentralized', 'decentralization', 'centralized', 'centralization', 'centralize', 'decentralized model', 'centralized decentralized', 'decentralized structure', 'decentralize', 'think decentralization']

Community Topic 20 ['nations', 'indigenous', 'aboriginal', 'northern gateway', 'nation', 'consultation', 'indigenous people', 'traditional owners',
'indigenous peoples', 'prior informed']

Appendix A4

This table reports a snapshot of top-ranked S&P500 firms by corporate cultural strengths before merging with Execucomp.

Panel A (2002 – 2006)

Top Innovation Culture	Top Integrity Culture	Top Quality Culture	Top Respect Culture	Top Teamwork Culture
Qualcomm Inc	Exxon Mobil Corp	Convergys Corp	Bmc Software Inc	Ca Inc
Altria Group Inc	Amgen Inc	Cognizant Tech Solutions	Cognizant Tech Solutions	Verisign Inc
Coca-Cola Co	Xcel Energy Inc	Tellabs Inc	Omnicom Group	Biogen Inc-Old
Medimmune Inc	Apple Inc	Biogen Inc-Old	Avon Products	Mcdonald's Corp
Analog Devices	Adobe Inc	Bmc Software Inc	Microsoft Corp	Williams Cos Inc
Bmc Software Inc	Micron Technology Inc	Jabil Inc	Jabil Inc	Ncr Corp
Gap Inc	Linear Technology Corp	Best Buy Co Inc	Netapp Inc	Tellabs Inc
Harman International Inds	Maxim Integrated Products	Ca Inc	Genzyme Corp	Kla Corp
Ncr Corp	Mcdonald's Corp	Maxim Integrated Products	Automatic Data Processing	Halliburton Co
Novell Inc	Medimmune Inc	Novell Inc	Novell Inc	Jabil Inc

Top Community Culture	Top Hardwork Culture	Top Control Culture	Top Compete Culture
Comcast Corp	Ca Inc	Coca-Cola Co	Omnicom Group
Autozone Inc	Omnicom Group	Verisign Inc	Biogen Inc-Old
Gilead Sciences Inc	Dominion Energy Inc	Goldman Sachs Group Inc	Advanced Micro Devices
Biogen Inc	Halliburton Co	Genzyme Corp	Ca Inc
Agilent Technologies Inc	Apollo Education Group Inc	Xilinx Inc	Emc Corp/Ma
Dell Technologies Inc	Cisco Systems Inc	Novell Inc	Harman International Inds
Novell Inc	Harman International Inds	Home Depot Inc	Gateway Inc
Qualcomm Inc	Staples Inc	Maxim Integrated Products	Ebay Inc
Citigroup Inc	Avon Products	Applied Materials Inc	Automatic Data Processing
Williams Cos Inc	Apple Inc	Cisco Systems Inc	Time Warner Inc

Panel B (2007 – 2012)

Top Innovation Culture	Top Integrity Culture	Top Quality Culture	Top Respect Culture	Top Teamwork Culture
Barr Pharmaceuticals Inc	Sprott Inc	Paychex Inc	Janus Capital Group Inc	Consolidated Edison Inc
Wyeth	Discover Financial Svcs	Cognizant Tech Solutions	Cincinnati Financial Corp	Lennar Corp
Sprott Inc	Cit Group Inc	Convergys Corp	Host Hotels & Resorts Inc	Kimco Realty Corp
Lilly (Eli) & Co	American Express Co	Jabil Inc	Cognizant Tech Solutions	Kb Home
	Bank of New York Mellon Corp	Tellabs Inc	Travelers Cos Inc	Public Storage
Cephalon Inc	First Horizon Corp	Cerner Corp	Unisys Corp	Wyeth
Qualcomm Inc	Plum Creek Timber Co Inc	Amazon.Com Inc	Accenture Plc	Phillips 66
Perrigo Co Plc	Travelers Cos Inc	Akamai Technologies Inc	St Jude Medical Inc	Starwood Hotels&Resorts Wrld
Pfizer Inc	Capital One Financial Corp	Chipotle Mexican Grill Inc	Aflac Inc	Life Storage Inc
Jones Group Inc	Cardinal Health Inc	Sanmina Corp	Coventry Health Care Inc	Semptra Energy
Allergan Plc				

Top Community Culture	Top Hardwork Culture	Top Control Culture	Top Compete Culture
National City Corp	Kraft Foods Group Inc	Barr Pharmaceuticals Inc	American Express Co
Bristol-Myers Squibb Co	Unisys Corp	Medtronic Plc	Progressive Corp-Ohio
Gilead Sciences Inc	Pactiv Corp	Officemax Inc	Teradata Corp
Apa Corp	Paychex Inc	Autodesk Inc	Omnicom Group
Qualcomm Inc	St Jude Medical Inc	Leggett & Platt Inc	Ashland Global Holdings Inc
Lilly (Eli) & Co	Whirlpool Corp	Coca-Cola Co	Grainger (W W) Inc
Boston Properties Inc	Ca Inc	Brunswick Corp	Aetna Inc
Dollar Tree Inc	Union Pacific Corp	Accenture Plc	Ew Scripps -Cl A
Pitney Bowes Inc	Robert Half Intl Inc	Cooper Industries Plc	Kroger Co
Crown Castle Intl Corp	Nordstrom Inc	Genuine Parts Co	Pmc-Sierra Inc

Panel C (2013 - 2020)

Top Innovation Culture	Top Integrity Culture	Top Quality Culture	Top Respect Culture	Top Teamwork Culture
Celgene Corp	M & T Bank Corp	Amazon.Com Inc	Cincinnati Financial Corp	Globe Life Inc
Qualcomm Inc	Western Union Co	Domino'S Pizza Inc	Berkley (W R) Corp	Freeport-Mcmoran Inc
Allergan Plc	Berkley (W R) Corp	Jabil Inc	Tegna Inc	Adient Plc
Discovery Inc	Ameriprise Financial Inc	Paychex Inc	Travelers Cos Inc	Technipfmc Plc
Align Technology Inc	Northern Trust Corp	Paycom Software Inc	Csra Inc	L3Harris Technologies Inc
Ansys Inc	Navient Corp	Bed Bath & Beyond Inc	Robert Half Intl Inc	Consolidated Edison Inc
Hospira Inc	Vontier Corp	Ulta Beauty Inc	Hartford Financial Services	Dun & Bradstreet Holdngs Inc
Amgen Inc	Interpublic Group of Cos	Alliance Data Systems Corp	Arthur J Gallagher & Co	Walgreens Boots Alliance Inc
Arista Networks Inc	Bank Of New York Mellon Corp	Kohl'S Corp	Kraft Heinz Co	Hilton Worldwide Holdings
Mohawk Industries Inc	Corteva Inc	Teradata Corp	Host Hotels & Resorts Inc	Host Hotels & Resorts Inc

Top Community Culture	Top Hardwork Culture	Top Control Culture	Top Compete Culture
Facebook Inc	Altria Group Inc	Ansys Inc	Hanesbrands Inc
Catalent Inc	Boston Properties Inc	Autodesk Inc	Paycom Software Inc
Gilead Sciences Inc	Philip Morris International	Nabors Industries Ltd	Adient Plc
Intuitive Surgical Inc	Expeditors Intl Wash Inc	Csra Inc	Leidos Holdings Inc
Arconic Corp	Cbre Group Inc	Graham Holdings Co	Discover Financial Svcs
Activision Blizzard Inc	Gartner Inc	Globe Life Inc	Csra Inc
Broadcom Corp	Paycom Software Inc	Catalent Inc	Omnicom Group
Pultegroup Inc	Kraft Foods Group Inc	Halliburton Co	Henry (Jack) & Associates
Boston Properties Inc	Sl Green Realty Corp	Cincinnati Financial Corp	American Express Co
Federal Realty Investment Tr	Walgreens Boots Alliance Inc	Abercrombie & Fitch -Cl A	Ingersoll Rand Inc

Appendix A5

This table reports a snapshot of top-ranked executives in S&P500 firms by personal cultural strengths.

Panel A (2002 – 2006)

Top Innovation	Top Integrity	Top Quality	Top Respect	Top Teamwork
Tal Liani (QUALCOMM INC)	Kevin Sharer (AMGEN INC)	Charles Dibona (MICROSOFT CORP)	Trace Urdan (APOLLO EDUCATION GROUP INC)	Gregg Swearingen (NCR CORP)
Brian Spillane (COCA-COLA CO)	Henry Hubble (EXXON MOBIL CORP)	Dana Telsey (BEST BUY CO INC)	Craig Peckham (AUTOMATIC DATA PROCESSING)	Tracy Pai (STAPLES INC)
Paul Sagawa (QUALCOMM INC)	Peter Oppenheimer (APPLE INC)	Scott Devitt (AMAZON.COM INC)	Bernard Sosnick (FAMILY DOLLAR STORES)	Kevin Buttigieg (VERISIGN INC)
Brian Tunick (GAP INC)	Michael Rollins (VERIZON COMMUNICATIONS INC)	Matt McCormack (CONVERGYS CORP)	Kevin Buttigieg (BMC SOFTWARE INC)	David Wong (MICRON TECHNOLOGY INC)
Roger Read (HALLIBURTON CO)	Michael Schlotman (KROGER CO)	Bernie Mahon (JABIL INC)	Julio Quinteros (COGNIZANT TECH SOLUTIONS)	Scott Soler (WILLIAMS COS INC)
Steve Smigi (ANALOG DEVICES)	Michael Smith (DARDEN RESTAURANTS INC)	Paul Ginocchio (OMNICOM GROUP)	Jeffrey Kessler (HARMAN INTERNATIONAL INDS)	David Wu (INTEL CORP)

Lou Lupin (QUALCOMM INC)	Michael Splinter (APPLIED MATERIALS INC)	Wayne Johnson (FIRST DATA CORP)	Brent Thill (NOVELL INC)	Evelyn Angelle (HALLIBURTON CO)
Hans Mosesmann (INTEL CORP)	Michael Turits (BMC SOFTWARE INC)	John Mansfield (QUESTAR CORP)	Lloyd Zeitman (AUTOMATIC DATA PROCESSING)	Kiley Rawlins (FAMILY DOLLAR STORES)
Ian Cook (COLGATE- PALMOLIVE CO)	Michael Turits (CA INC)	Nicole Decker (HESS CORP)	Filippe Goossens (AVON PRODUCTS)	Michael Christenson (CA INC)
Jeffrey Bezos (AMAZON.COM INC)	Michael Turits (CONVERGYS CORP)	Roger Freeman (E TRADE FINANCIAL CORP)	Matt Sheerin (JABIL INC)	Kevin Kessel (JABIL INC)

Top Community	Top Hardwork	Top Control	Top Compete
April Scee (PROCTER & GAMBLE CO)	Rick Justice (CISCO SYSTEMS INC)	Peter Kuper (VERISIGN INC)	Andrew Neff (NETAPP INC)
Mark Rowen (COSTCO WHOLESALE CORP)	John Swainson (CA INC)	Chris Stanley (XILINX INC)	Peruz Pavarande (MAXIM INTEGRATED PRODUCTS)
David Mann (FAMILY DOLLAR STORES)	Bernard Girod (HARMAN INTERNATIONAL INDS)	Sterling Auty (VERISIGN INC)	John Jares? (LINEAR TECHNOLOGY CORP)

Jason Gere
(PROCTER & GAMBLE CO)

Ron Sargent
(STAPLES INC)

Gary Balter
(HOME DEPOT INC)

Rebecca Runkle
(EMC CORP/MA)

Bob Drbul
(COSTCO WHOLESALE CORP)

Peter Oppenheimer
(APPLE INC)

Tore Svanberg
(MAXIM INTEGRATED
PRODUCTS)

Dan Geiman
(COSTCO WHOLESALE CORP)

Mitch Caplan
(E TRADE FINANCIAL CORP)

Brian Mueller
(APOLLO EDUCATION GROUP
INC)

John Butler
(GENZYME CORP)

Tayyib Shah
(BIOGEN INC-OLD)

Michael Masdea
(TEXAS INSTRUMENTS INC)

Reuben Mark
(COLGATE-PALMOLIVE CO)

Charlie Giancarlo
(CISCO SYSTEMS INC)

Ross Seymore
(TEXAS INSTRUMENTS INC)

Michael Masdea
(MAXIM INTEGRATED
PRODUCTS)

Kim
(GENZYME CORP)

Stratton Sclavos
(VERISIGN INC)

Safa Rashtchy
(EBAY INC)

Michael Smith
(DARDEN RESTAURANTS INC)

Michael Urban
(HALLIBURTON CO)

David Viniar
(GOLDMAN SACHS GROUP
INC)

Charles Wolf
(GATEWAY INC)

Michael Splinter
(APPLIED MATERIALS INC)

Michael Splinter
(APPLIED MATERIALS INC)

Shantanu Narayen
(ADOBE INC)

Alexia Quadrani
(OMNICOM GROUP)

Panel B (2007 – 2012)

Top Innovation	Top Integrity	Top Quality	Top Respect	Top Teamwork
Linda Bolton-Weiser (PROCTER & GAMBLE CO)	Gil Marchant (DISCOVER FINANCIAL SVCS)	Terry Davenport (STARBUCKS CORP)	Ann Kohler (CONOCOPHILLIPS)	Clem Teng (PUBLIC STORAGE)
John Osborn (CEPHALON INC)	Mike Surgass (WYNN RESORTS LTD)	Jennifer Milan (TJX COS INC (THE))	Laura Conigliaro (NETAPP INC)	Susan Berlinger (PULTEGROUP INC)
Gretchen Guo (MCCORMICK & CO INC)	John Levin (BANK OF NEW YORK MELLON CORP)	George Nicolaus (AFFILIATED COMPUTER SERVICES)	Salvatore Dimartino (M & T BANK CORP)	Eric Larson (HERSHEY CO)
Elliot Wilbur (BARR PHARMACEUTICALS INC)	Gordon Douthat (PIONEER NATURAL RESOURCES CO)	Brandt Sakakeeny (AUTOMATIC DATA PROCESSING)	Nick Mode (AVON PRODUCTS)	David Faley (NEWMONT CORP)
Jeremy Pinchot (LEGGETT & PLATT INC)	David George (U S BANCORP)	Unidentified Analyst (PAYCHEX INC)	Josh Schwartz (ABERCROMBIE & FITCH -CL A)	Kevin Kim (EQUITY RESIDENTIAL)
Michael Krensavage (WYETH)	Stephen Scinicariello (ZIONS BANCORPORATION NA)	Gary Krishnan (PAYCHEX INC)	Bill Bird (INTERPUBLIC GROUP OF COS)	Patrick Young (EXXON MOBIL CORP)
Jerry Pappert (CEPHALON INC)	Anna Gupta;Sanford And Bernstein (COVENTRY HEALTH CARE INC)	Lawrence Harris (COMVERSE TECHNOLOGY INC)	Navdeep Singh (AMGEN INC)	Wendy Machana (SCRIPPS NETWORKS INTERACTIVE)

Steve Scala (WYETH)	Marty Mosby (NORTHERN TRUST CORP)	Bernard Lirola (THERMO FISHER SCIENTIFIC INC)	Neil Maglaque (AMERIPRISE FINANCIAL INC)	Michael Kelly (DEVON ENERGY CORP)
Rick Wise (ST JUDE MEDICAL INC)	Heather Wolf (FIFTH THIRD BANCORP)	Sam Yake (CARMAX INC)	Stephan Petersen (TRAVELERS COS INC)	Robert Dickerson (GENERAL MILLS INC)
Edward Maguire (INTL BUSINESS MACHINES CORP)	David Konrad (KEYCORP)	Christine Cho (EQT CORP)	Walter Director (VERISIGN INC)	Qi Lu (MICROSOFT CORP)
Top Community	Top Hardwork	Top Control	Top Compete	
Brian Morrissey (MICROSOFT CORP)	Kevin Buttigieg (MCAFEE INC)	Ben Rose (AUTODESK INC)	Jason Arnold (CAPITAL ONE FINANCIAL CORP)	
George Hu (SALESFORCE.COM INC)	Finbar Sheehy (GOODRICH CORP)	Gloria Woo (GILEAD SCIENCES INC)	Kareem De Felipe (BIOGEN INC)	
Karen Mccarthy (MICROSOFT CORP)	Scott Mushkin (KRAFT FOODS GROUP INC)	Natarajan Subrahmanyam (JUNIPER NETWORKS INC)	Michael Holt (GARMIN LTD)	
Peter Furlan (WALMART INC)	Michael Crosby (ALTRIA GROUP INC)	John Moore (HESS CORP)	Mitch Kaiser (BEST BUY CO INC)	
Deepak Mathivanan (TRIPADVISOR INC)	Robert Dezego (DAVITA INC)	John Mayeta (AUTODESK INC)	Brett Harriss (DISCOVERY INC)	

Anna Torma
(WEYERHAEUSER CO)

Patrick Elgrably
(APOLLO EDUCATION GROUP
INC)

Seth Bastien
(STAPLES INC)

Chris Brendler
(AMERICAN EXPRESS CO)

Scott Malat
(AMERICAN TOWER CORP)

Cathy Rowan
(PHILIP MORRIS
INTERNATIONAL)

J. Hopson
(JANUS CAPITAL GROUP
INC)

Bob Hopkins
(ABBOTT LABORATORIES)

Barbara Noverini
(PITNEY BOWES INC)

Anne Donley
(ALTRIA GROUP INC)

Jeff Hoernemann
(DAVITA INC)

Tiffany Kanaga
(KROGER CO)

Vinny Frees
(PULTEGROUP INC)

Bob Hopkins
(ST JUDE MEDICAL INC)

Andrew Anagnost
(AUTODESK INC)

Andrew Kim
(SCRIPPS NETWORKS
INTERACTIVE)

Jay Mccanless
(PULTEGROUP INC)

Jessica Schoen
(KOHL'S CORP)

Andrew Levi
(CONSTELLATION ENERGY
GRP INC)

Adam Svanberg
(LINEAR TECHNOLOGY CORP)

Panel C (2013 - 2020)

Top Innovation	Top Integrity	Top Quality	Top Respect	Top Teamwork
Roger George (ALIGN TECHNOLOGY INC)	Marianne Short (UNITEDHEALTH GROUP INC)	Andrew Mcnellis (TRIPADVISOR INC)	D. Wilson (UNITEDHEALTH GROUP INC)	William Atcheson (OCCIDENTAL PETROLEUM CORP)
Amit Solomon (WESTERN DIGITAL CORP)	Gail Wilensky (UNITEDHEALTH GROUP INC)	Christian Schwab (DOVER CORP)	Lisa Lindsley (GOLDMAN SACHS GROUP INC)	Sam Arnold (SEMPRA ENERGY)
Rajiv Malik (ABBOTT LABORATORIES)	James Dow (COCA-COLA CO)	Lauren Wolff (ESTEE LAUDER COMPANIES INC)	Paul Thomas (COGNIZANT TECH SOLUTIONS)	Dan Rollins (NEWMONT CORP)
David Risinger (CARDINAL HEALTH INC)	Lauren Wood (KROGER CO)	Charles Mcdowell (PPG INDUSTRIES INC)	Sean Kras (DOLLAR TREE INC)	Jordan Novet (SALESFORCE.COM INC)
Marc Goodman (ABBOTT LABORATORIES)	Robert Herz (M & T BANK CORP)	Matthew Russell (SOUTHWESTERN ENERGY CO)	Mark Geneste (DUN & BRADSTREET HOLDNGS INC)	Peter O'Keefe (CORNING INC)
Scott Kessler (VERISIGN INC)	R. Dodge (DISH NETWORK CORP)	Mark Kelleher (ARISTA NETWORKS INC)	Jean Song (ROBERT HALF INTL INC)	Suzanne Folsom (UNITED STATES STEEL CORP)
Janet Knopf (FOSSIL GROUP INC)	Daniel Sanchez (ENDO INTERNATIONAL PLC)	Kulbinder Garcha (DELL TECHNOLOGIES INC)	Vasundhara Govil (AUTOMATIC DATA PROCESSING)	Vijay Kumar (CAREFUSION CORP)

James Dawson (ALLERGAN PLC)	Jeffrey Sprague (VONTIER CORP)	Daniel Neumann (ANADARKO PETROLEUM CORP)	Kayvan Rahbar (VERISK ANALYTICS INC)	Harry Rappaport (CISCO SYSTEMS INC)
Jan Siegmund (COGNIZANT TECH SOLUTIONS)	Sarah Smith (GOLDMAN SACHS GROUP INC)	Aziza Gazieva (FMC CORP)	Rick Paterson (CSX CORP)	Ken Liu (MGM RESORTS INTERNATIONAL)
Matthew Mcconnell (LOCKHEED MARTIN CORP)	Willie Watt (LEGG MASON INC)	Harold Vogel (NEWS CORP)	Robert Simmons (ANSYS INC)	Jacques-Henri Gaulard (LABORATORY CP OF AMER HLDGS)

Top Community	Top Hardwork	Top Control	Top Compete
William Somplatsky-Jarman (HP INC)	Timothy Smith (BANK OF NEW YORK MELLON CORP)	J. Leavitt (REGENCY CENTERS CORP)	Steve Hire (DANAHER CORP)
Julia Frost (BANK OF AMERICA CORP)	Peter Heltzel (PHILIP MORRIS INTERNATIONAL)	John Coyle (MOHAWK INDUSTRIES INC)	Kevin Kedra (ALLERGAN PLC)
Michael Eisen (PULTEGROUP INC)	Katie McCloskey (REGENERON PHARMACEUTICALS)	Frank Atkins (XEROX HOLDINGS CORP)	Kenneth Keverian (INTL BUSINESS MACHINES CORP)
Myra Davis (LYONDELLBASELL INDUSTRIES NV)	Cathy Rowan (PHILIP MORRIS INTERNATIONAL)	Stephen Sheldon (EQUIFAX INC)	Robert Peck (EBAY INC)

Nina Berglund
(JPMORGAN CHASE & CO)

Cathy Rowan
(BRISTOL-MYERS SQUIBB CO)

Matthew Tsien
(GENERAL MOTORS CO)

Francesca Caramenti
(STANLEY BLACK & DECKER
INC)

David Rowlett
(VULCAN MATERIALS CO)

Justin Flores
(PHILIP MORRIS
INTERNATIONAL)

Anthony Dawson
(ANSYS INC)

Stephen Byrd
(FIRST SOLAR INC)

Caitlin Walsh
(SALESFORCE.COM INC)

Steve Runholt
(DUKE ENERGY CORP)

Scott Frost
(MARSH & MCLENNAN COS)

Colin Langan
(HONEYWELL INTERNATIONAL
INC)

Persis Drell
(NVIDIA CORP)

Ralph Gonzalez
(WALGREENS BOOTS
ALLIANCE INC)

Brandy Burkhalter
(CENTENE CORP)

Jonathan Kim
(CITRIX SYSTEMS INC)

Gary Henderson
(WELLS FARGO & CO)

Brendan Griffith
(PHILIP MORRIS
INTERNATIONAL)

Tristan Margot
(FLOWSERVE CORP)

Steven Gavios
(AMERICAN INTERNATIONAL
GROUP)

Jason Marcus
(D R HORTON INC)

Natalie Wasek
(ALTRIA GROUP INC)

Anil Doradla
(AUTODESK INC)

Rachael Rothman
(MCDONALD'S CORP)

Appendix A6

This table reports a snapshot of top-ranked executives in S&P500 firms by cultural distances with their affiliated companies.

2013-2020	2007-2012	2002-2006
Brandy Burkhalter (CENTENE CORP)	Bruce Lundstrom (TIDEWATER INC)	Ian Cook (COLGATE-PALMOLIVE CO)
Marianne Short (UNITEDHEALTH GROUP INC)	George Hu (SALESFORCE.COM INC)	Jeffrey Bezos (AMAZON.COM INC)
Gertrude Boyle (COLUMBIA SPORTSWEAR CO)	Denis Suggs (BELDEN INC)	David Moskowitz (DISH NETWORK CORP)
Joseph Leonti (PARKER-HANNIFIN CORP)	Seth Weisberg (STAMPS.COM INC)	Jay Margolis (L BRANDS INC)
Judith Newman (SCHOLASTIC CORP)	Kurt Rogers (VONAGE HOLDINGS CORP)	John Swainson (CA INC)
Jan Siegmund (COGNIZANT TECH SOLUTIONS)	Robert Linden (LEMAITRE VASCULAR INC)	Kevin Sharer (AMGEN INC)
Alan Braverman (DISNEY (WALT) CO)	Edwin Buker (TECUMSEH PRODUCTS CO)	Loren Mcfarland (MENTOR CORP)

Christopher Motl
(WEBSTER FINANCIAL
CORP)

Richard Agree
(AGREE REALTY CORP)

Herbert Zarkin
(BJ'S WHOLESALE CLUB
INC)

Thomas Dineen
(STURM RUGER & CO
INC)

Timothy Robbins
(GREAT ELM GROUP INC)

Sergey Brin
(ALPHABET INC)

Thomas Knapp
(SUCAMPO
PHARMACEUTICALS
INC)

Sumner Redstone
(VIACOMCBS INC)

Ian Smith
(VERTEX
PHARMACEUTICALS INC)

Peter Edwards
(MALLINCKRODT PLC)

John Hynes
(SYMMETRY MEDICAL
INC)

John Wren
(OMNICOM GROUP)

Johnny Hsu
(PREFERRED BANK
LOS ANGELES)

Mark Light
(SIGNET JEWELERS LTD)

George Davis
(APPLIED MATERIALS INC)

Allen Muhich
(FARO TECHNOLOGIES
INC)

Peter Ho
(BANK OF HAWAII CORP)

Bernard Girod
(HARMAN INTERNATIONAL
INDS)

Sanjiv Lamba
(LINDE PLC)

Michael Kearney
(ASBURY AUTOMOTIVE
GROUP INC)

Michael Christenson
(CA INC)

Earl Stratton
(TCF FINANCIAL CORP)

Peyton Howell
(AMERISOURCEBERGEN
CORP)

Nathan Sarkisian
(ALTERA CORP)

Robert Koch
(ONTO INNOVATION
INC)

Dror Levy
(DSP GROUP INC)

James Shanks
(CDW CORP)

Sanjay Madhu
(HCI GROUP INC)

Sergey Brin
(ALPHABET INC)

Charles Betty
(EARTHLINK HOLDINGS
CORP)

Suzanne Folsom
(UNITED STATES
STEEL CORP)

David Buchen
(ALLERGAN PLC)

Kyle Huebner
(STAMPS.COM INC)

James Smith
(DXC TECHNOLOGY
CO)

Ladd Hall
(NUCOR CORP)

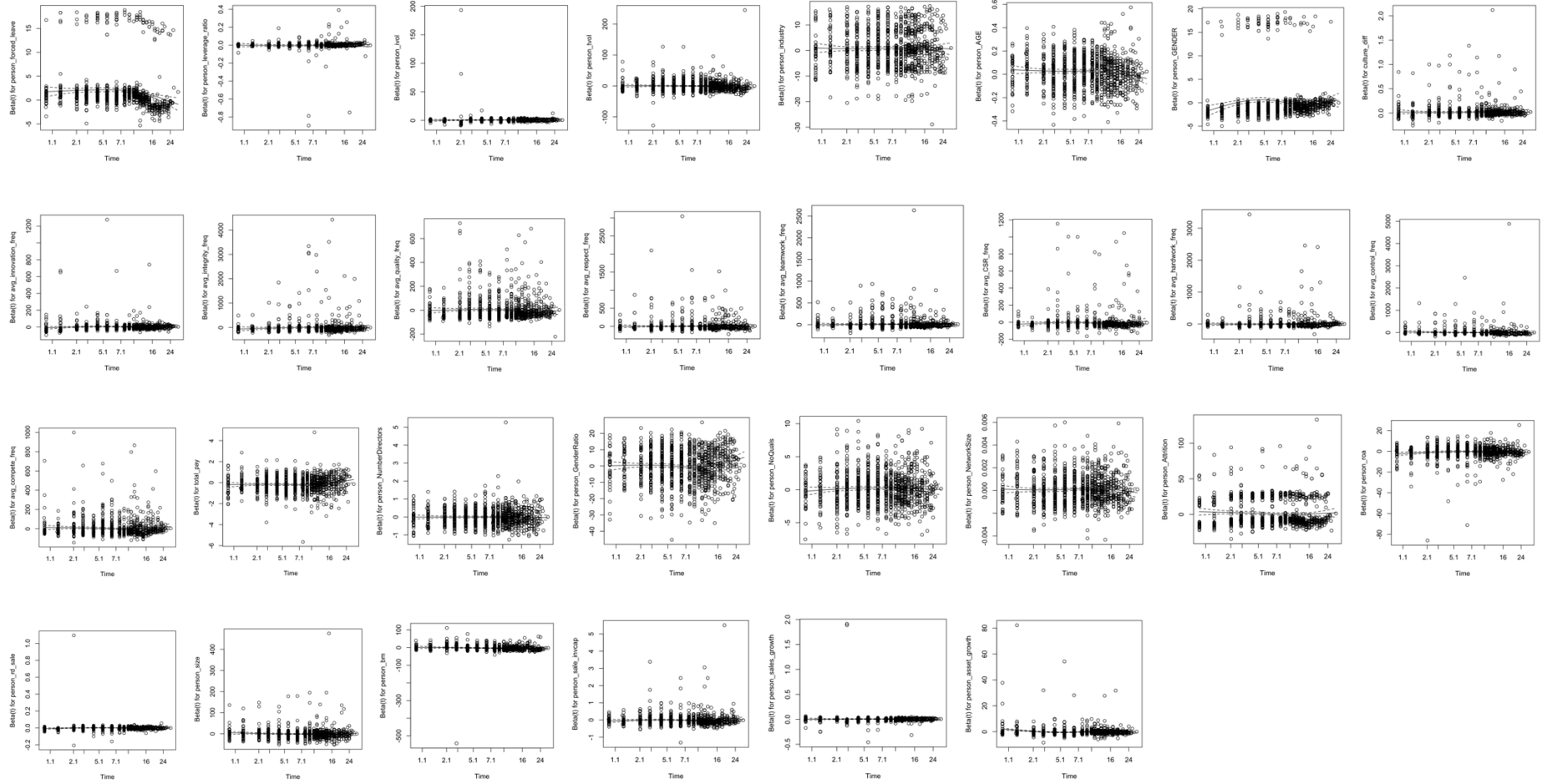
Claire Babrowski
(RS LEGACY CORP)

Samuel Meckey
(EXLSERVICE
HOLDINGS INC)

Joseph Pietras
(INTEVAC INC)

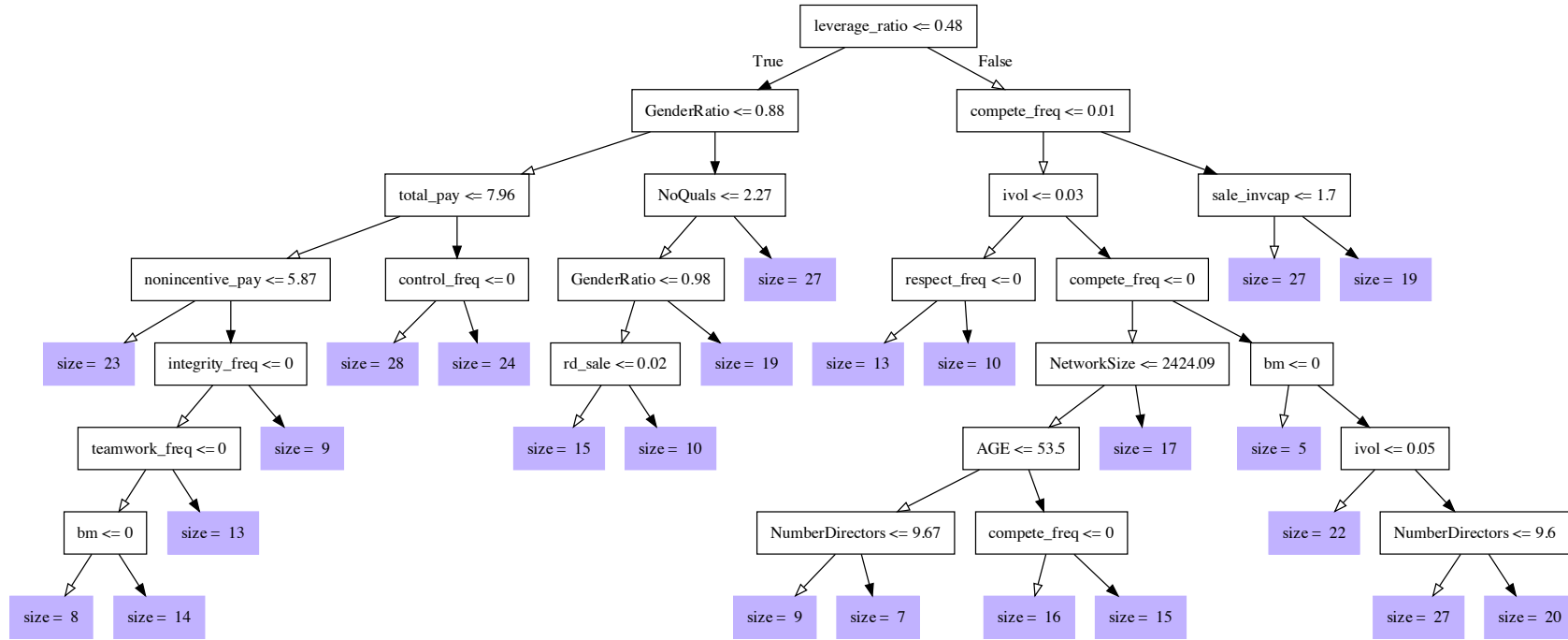
Brian Dunn
(BEST BUY CO INC)

Appendix A7



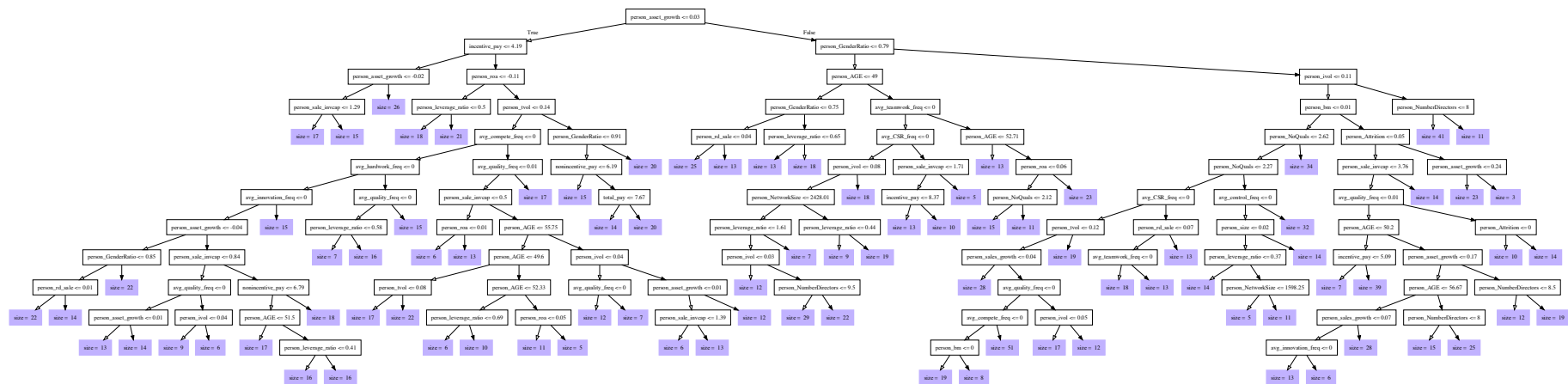
Testing for proportional hazards for each independent variable

Appendix A8



Best-tree plot in the survival forests (corporate cultural distance)

This plot shows the best-pruned tree in the causal survival forests when the treatment is corporate cultural distance. The best-pruned tree is the tree in the causal survival forests with the minimum loss after pruning.



Best-tree plot in the survival forests (personal cultural distance)

This plot shows the best-pruned tree in the causal survival forests when the treatment is personal cultural distance. The best-pruned tree is the tree in the causal survival forests with the minimum loss after pruning.