

# **Job Analytic Comparisons of Managerial and Leadership Competencies Across Industries**

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## **Session Abstract**

Researchers have examined competencies important for managers within specific industries assuming that there are differences across industries; however, little has investigated this assumption. To address this gap, we examined the degree of consistency in competencies required for effective managerial and leadership performance across industries using archival job analytic data. Results suggest behaviors found to be important for managers and leaders in one industry often generalize across industries. Differences across industry are thought to be present for all levels of employment in the industry. Therefore, we should work towards one competency model for managerial and leadership performance.

## **Session Summary**

Many I/O psychologists focus on identifying qualities necessary for managerial and leadership populations given the consequences they have on organizations and societies at large (e.g., Hogan, 2007; Wren, 1994). Most researchers have assumed that conceptualizations of effective managerial and leadership performance may vary across industries (e.g., Giberson, Resick, & Dickson, 2005; Man & Lau, 2005). This assumption is based on the argument that as notions of effective managerial and leadership performance vary, so may the competencies required for effective performance. As a result, there is an abundance of research focused on identifying competencies important for specific industries (e.g., hospitality – Chung-Herrera, Enz, Lankau, 2003; healthcare – Calhoun et al., 2008; Stefl, 2008).

For example, Lusch and Serpkenci (1990) found that achievement orientation, inner-direction, and other-direction were important for managerial performance in the retail industry. Koenigsfeld, Youn, Perdue, and Woods (2011) identified 28 competencies important for hospitality managers, such as the leadership competencies of treating people with respect and leading by example, the interpersonal competencies of frequently listening directly to members and maintaining working relationships, and the administrative competency of ensuring compliance with federal laws. Wagner (2011) found that innovation, in the form of new product development and commercialization, is important for transportation managers.

While researchers have focused on managerial and leadership success within industry, few have examined the assumption that there are differences across industry by directly comparing competencies necessary for manager and leader success across industries. In one study, Man and Lau (2005) compared competencies labeled as important for company managers and owners in two contrasting industries, wholesale trade and IT services industries, in Hong Kong. They found few differences between the industries in the innovation, strategy, and learning competencies.

As this research illustrates, the competencies identified as critical to managerial and leadership success may be similar across industries. However, most of this research has focused on individual industries. As a result, a lack of information exists as to the similarities and differences in job demands of manager and leader roles across industries. The purpose of this study is to address this need. Using archival job analytic data, we examine the similarities and differences in managerial and leadership jobs across industries using a standardized framework for examining competencies as job demands.

## **Using Competencies to Measure Managerial and Leadership Job Demands**

Global organizations must work within different locations, legal environments, and cultures. As a result, traditional task-based job analysis procedures lack the flexibility required to identify the characteristics essential for success in managerial and leadership jobs (Barnes-Nelson, 1996; Olian & Rynes, 1991; Sanchez, 1994). Therefore, organizations often use competency models to align many of their Human Resource Management (HRM) applications.

The work of David McClelland (1973) sets the stage for the widespread growth of competencies. McClelland argued that aptitude tests, almost universally used to predict performance, do not serve their intended purpose well and are prone to cultural biases. Also, he argued that other traditional measures, such as examination of results and references, are equally poor at predicting job success. Instead, McClelland suggested that individual competence might provide a more promising alternative for predicting performance. He described competencies as representing groups of behaviors underlying individual characteristics that enable superior job performance.

The 1980s witnessed significant growth in using competencies to identify and predict managerial and leadership effectiveness and long-term success (Boyatzis, 1982; McClelland & Boyatzis, 1982). These applications led to the development of high-level management and leadership competency models (Hollenbeck, McCall, & Silzer, 2006) and competency-based selection tools, such as behavioral event interviews (Boyatzis, 1994; McClelland, 1998; Spencer, McClelland, & Spencer, 1994). Also, competencies provide a structure for linking performance with cognitive ability and personality (Heinsman, de Hoogh, Koopman, & van Muijen, 2007), coaching employees to overcome dysfunctional behavior (Boyatzis, 2006), and selecting and developing high potential employees (McClelland, 1994).

Most recently, we see the application of competencies in such areas as emotional intelligence (Boyatzis, 2007; Boyatzis & Sala, 2004), coaching others to overcome dysfunctional behavior (Boyatzis, 2006), and linking performance with intelligence and personality (Heinsman, de Hoogh, Koopman, & van Muijen, 2007). Competencies appear in educational, training, employment, and assessment contexts, where the fundamental question involves identifying individual characteristics that lead to success (Boyatzis, Stubbs, & Taylor, 2002; Rubin et al., 2007; Spencer & Spencer, 1993). Competency models have also been incorporated into job analysis instruments to identify the characteristics required for success in various jobs under study (McLagan, 1997).

Using competencies as an organizing framework for examining managerial and leadership job demands, we set out to determine the similarities and differences in these characteristics as required for effective performance in managerial and leadership jobs across industries. We expected to find only slight differences to make the case that leadership and managerial success looks the same across industries.

## Method

### Measure and Sample

To identify competencies critical for managerial and leadership success across industries, we relied on archival data (Hogan Assessment Systems, 2013) from Hogan's job analysis instrument, the Job Evaluation Tool (JET; Hogan Assessment Systems, 2000). The JET includes a component that provides a comprehensive list of competencies that appear in, or can be translated from, major taxonomic sources, such as the "Great Eight" (Bartram, 2005). This section, called the Competency Evaluation Tool (CET), asks Subject Matter Experts (SMEs) to indicate the extent to which each of 56 competencies relates to successful performance in the job or job family under study. Raters evaluate each competency using a five-point scale ranging from "0" (*Not associated with job performance*) to "4" (*Critical to job performance*). Generally, competencies considered critical are those that receive mean ratings greater than "3" (*Important to performance*) or those that receive ratings at least one standard deviation above the mean across all competencies. These SME ratings provide a basis for developing structural models to compare jobs (J. Hogan, Davies, & R. Hogan, 2007). CET competencies and their definitions appear in Table 1.

Studies included in our sample used the CET to examine competencies required for global managerial and leadership jobs across three contrasting industries: (a) financials, (b) consumer services, and (c) industrials. These industries were chosen due to availability of enough jobs in each industry to allow for reliable comparison. Jobs were classified based on the Industry Classification Benchmark (ICB) taxonomy. This taxonomy, maintained by FTSE International, allows for comparison of companies across four levels of classification and national boundaries (Industry Classification Benchmark, 2010). The financials industry includes sectors such as financial services and real estate investments as well as subsectors such as consumer finance, investment services, and real estate services. The consumer services industry includes sectors such as general retailers and travel and leisure as well as apparel retailers, recreational services, and hotels. The industrials industry includes sectors such as transportation and engineering as well as subsectors such as trucking, delivery services, and transportation services.

Archival CET data included results from 38 managerial and leadership studies ( $N = 4,765$ ) conducted between 2004 and 2012. At least three SMEs completed the CET for each managerial group. Of those that reported demographics, 28% were female and 72% were male. Most SMEs were white (82%), with Black (9%) and Hispanic (5%) representing other significant groups. Industrial manager and leader studies included data from 2,062 SMEs reporting an average of 11 years of supervisory experience ( $SD = 9.88$ ). Financial manager and leader studies included data from 422 financial manager and leader SMEs reporting an average of 9 years of supervisory experience ( $SD = 7.05$ ). Consumer service manager and leader studies included data from 391 consumer service manager and leader SMEs reporting an average of 11 years of supervisory experience ( $SD = 9.03$ ).

Because the purpose of our research was to examine data from managerial and leadership *jobs* across industries (not individuals), we sought support to aggregate the individual-level CET ratings described above to arrive at job-level ratings. Also, in research including data from

across multiple studies, results can be biased unless each sample contributes approximately the same amount of data to the analyses (Hunter & Schmidt, 2004). As such, we calculated  $r_{wg}$  indices of agreement for each CET dimension to test whether aggregation across SMEs representing industrial, financial, and consumer services management and leadership jobs was appropriate (James, Demaree, & Wolf, 1993). We considered indices of .70 or greater as supporting aggregation. For each sample, ratings for most of the 56 CET dimensions met the .70 threshold, with most others showing indices between .60 and .69. The average  $r_{wg}$  for the industrial sample was .89, the average  $r_{wg}$  for the financial sample was .83, and the average  $r_{wg}$  for the consumer service sample was .89. Using these indices as sufficient support, we aggregated all participant-level responses to arrive at a job-level data set with each study contributing one line of data to our research. This aggregation resulted in our final sample of industrial ( $K = 14$ ), financial ( $K = 9$ ), and consumer service ( $K = 15$ ) managerial and leadership jobs. Using these data, we compared criticality ratings for all CET dimensions to determine the similarity of managerial and leadership jobs across industries.

## **Procedure**

First, we calculated descriptive statistics (i.e., means, standard deviations) for managerial and leadership jobs across industries for each of the 56 competencies included in the CET. Completing these analyses allowed us to examine (a) the rank-order of CET dimensions as required for managerial and leadership jobs across industries; (b) which competencies, receiving ratings at least one standard deviation above the mean, emerged as job-critical for industrial, financial, and consumer service jobs; and (c) the degree of similarity between job-critical competencies for managerial and leadership jobs across the three industries.

Next, we split the 56 competencies into quartiles of 14 competencies using the rank-ordered CET results. We examined the degree of consistency with which each CET dimension was placed into the same quartile. These comparisons allow us to draw broader conclusions about the overall degree of consistency of competencies required for managerial and leadership jobs across the industries. For example, we can compare examples of competencies that fall into different quartiles across the three industries.

Finally, we conducted one-way ANOVAs comparing the mean ratings of all 56 CET dimensions. Regardless of the job criticality or quartile placement of each CET dimension, these analyses allow us to determine whether differences in mean ratings of each competency reach statistically significant thresholds. In contrast to the first two sets of analyses, this final analysis allows us to draw conclusions about which competencies are significantly different in terms of their necessity for managerial and leadership jobs across industries.

## Results

Table 2 presents rank-ordered mean criticality ratings for all CET across industries. Across all competencies, the average criticality rating provided by industrial SMEs was 3.17 ( $SD = 0.35$ ). Critical competencies, or those with ratings falling one standard deviation above the mean, included Trustworthiness, Work Attitude, Leadership, Decision Making, Achievement Orientation, Problem Solving, Stress Tolerance, and Teamwork. The average criticality rating provided by financial SMEs was 3.19 ( $SD = 0.38$ ). Critical competencies were Work Attitude, Trustworthiness, Achievement Orientation, Leadership, and Initiative. The average criticality rating provided by consumer service SMEs was 3.25 ( $SD = 0.35$ ). Critical competencies were Trustworthiness, Leadership, Achievement Orientation, Decision Making, Problem Solving, Work Attitude, Integrity, Adaptability, and Flexibility.

Of the five competencies identified by financial SMEs as job-critical, four competencies (i.e., Work Attitude, Trustworthiness, Achievement Orientation, Leadership) also received job-critical ratings among industrial and consumer service SMEs. Of the eight competencies (i.e., Trustworthiness, Work Attitude, Leadership, Decision Making, Achievement Orientation, Problem Solving, Stress Tolerance, Teamwork) identified by industrial SMEs as job critical, only four also appear as job critical for both financial and retail SMEs. However, if the criticality threshold for the financial industry were lowered to the industrial threshold, they would share six out of eight job-critical competencies excluding Problem Solving and Teamwork. Similarly, if the criticality threshold for the consumer service industry were lowered to the industrial threshold, they would share all eight of the industrial job-critical competencies.

Table 2 also presents the quartile distribution of CET dimensions. In the top quartile, 12 of 14 competencies (86%) are shared across all three industries. This degree of consistency declines in the second and third quartiles, with only 5 (36%) and 7 (50%) of the competencies being shared, respectively. However, in the bottom quartile, 10 of the 14 competencies (71%) are common across all three industries. Overall, 33 of 56 competencies (59%) appear in the same quartiles across all three industries and 22 of 56 competencies (39%) appear in the same quartile across at least two of the industries.

It is also worth noting that the competencies marked in Table 2 as crossing quartiles between the groups (e.g., Judgment, Strategic Vision) are still often similar in terms of their overall rankings. There are however, a few exceptions. For example, Integrity is rated as job-critical for manager jobs in the consumer service industry and is in the top quartile for manager jobs in the industrial industry, but is in the second quartile for financial industry jobs. This suggests that Integrity is viewed as less important by SMEs for financial managers and leaders. Flexibility had similar findings in that it is rated as job-critical in the consumer service industry, but it falls in the second quartile for industrial and financial industry jobs. This suggests that Flexibility is more important for consumer service managers. Finally, Teaching Others falls in different quartiles across all three industries suggesting that training others is viewed as most important in the consumer service industry and least important in the financial industry.

We used one-way ANOVAs to test differences in mean criticality ratings across all CET dimensions. Table 3 presents these results, including partial eta squared effect sizes (Cohen, 1973). Differences reached statistical significance for only four competencies: (a) financial SMEs provided significantly lower ratings for Safety than customer service and industrial SMEs, (b) financial SMEs provided significantly lower ratings for Problem Solving than customer service SMEs, (c) consumer service SMEs provided significantly higher ratings for Flexibility than financial and industrial SMEs, and (d) industrial SMEs provided significantly higher ratings than financial SMEs and significantly lower ratings than consumer service SMEs on Verbal Direction. These differences did reach significance at a meaningful level, indicated by fairly large effect size (average  $\eta^2 = .23$ ). In contrast, differences failed to reach significance for 51 of 56 CET dimensions, or only slightly less (91%) that we would expect due to chance.

### **Discussion**

Business texts are rife with examples underscoring the importance of effective performance in managerial and leadership roles. It comes as no surprise, then, that many I/O professionals engage in a leadership development and coaching industry that generates billions of dollars each year. Previous research has focused on identifying managerial and leadership behaviors important to specific industries. The current research suggests that these behaviors often generalize across industries.

Using archival job analysis data collected on 38 managerial jobs in and outside the U.S., we were able to determine the degree of overlap between competency-based job requirements across three different industries. From examining job-critical competencies, the distribution of competencies across quartiles, and the significance and effect sizes for mean differences in criticality ratings, we can conclude that the competency requirements of managerial and leadership jobs are largely the same across industries.

This is not to say there is perfect overlap or that the differences are not meaningful. The finding that Integrity is rated by SMEs as less important for leaders in the financial industry is important, even if not surprising. In contrast, it is not surprising that safety is not as important for financial managers as managers in the other industries given their job setting. Being concerned with following safety precautions and displaying safe on-the-job behavior would be important for all levels of employees in the industrial and consumer service industries. These findings suggest that the few differences across industries may exist at all levels of employment in the industry and have less to do with necessary leadership behaviors. Therefore, I/O professionals may want to continue focusing on building competency models for general employment within industry; however, it is likely not necessary to build managerial and leadership competency models that are industry specific.

These findings could be extended by future research focused on comparing other industries as well as differences at multiple levels of employment within each industry. Nonetheless, these results may be useful to I/O professionals engaged in managerial and leadership selection and development. By recognizing both similarities and differences across industries, they can tailor their efforts toward cultivating competencies most critical to performance in specific jobs.

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Table 1  
*CET Competencies and Definitions*

<b>Competency</b>	<b>Definition</b>
Achievement Orientation	Strives to meet and exceed goals for self and others.
Adaptability	Is able to change directions quickly and work without explicit guidance.
Building Partnerships	Builds strategic relationships to help achieve business goals.
Building Strategic Work Relationships	Develops collaborative relationships to facilitate the accomplishment of work goals.
Building Teams	Uses appropriate methods to build a cohesive team.
Citizenship	Represents the company favorably to outsiders.
Conflict Resolution	Resolves interpersonal problems and disputes with tact and decisiveness.
Consultative Sales	Develops understanding of client history and goals in order to offer needed services.
Continuous Learning	Actively identifies new areas for personal learning.
Customer Service	Provides courteous and helpful service to customers and associates.
Decision Making	Evaluates issues and uses sound reasoning to make decisions.
Data Entry	Ensures high quality data entry by balancing the needs for speed and accuracy.
Delegation	Assigns work to others based on their skills and future development needs.
Dependability	Performs work in a consistent and timely manner.
Detail Orientation	Performs work with great care and accuracy over a period of time.
Employee Development	Provides support and career direction to peers and subordinates.
Facilitating Change	Encourages others to find or adopt innovative solutions.
Facilitative Sales	Uses detailed product knowledge to facilitate the sale of products and services.
Flexibility	Adapts quickly to changing circumstances and is willing to try new methods.
Follow-Up	Monitors the results of work assigned to others.
Formal Presentation	Presents ideas effectively to individuals or groups.
Gaining Commitment	Uses appropriate methods to gain acceptance of ideas or plans.
Impact	Creates a good first impression and commands attention and respect.
Industry Knowledge	Understands the industry and its emerging trends.
Influence	Provides effective rationale to support own opinion and ideas.
Information Monitoring	Sets up procedures to collect information needed to manage activities.
Initiative	Takes action before being told what to do.
Innovation	Finds innovative solutions to problems at work.
Integrity	Follows rules and is a good organizational citizen.
Interpersonal Skills	Gets along well with others, is tactful, and behaves appropriately in social situations.

Table 1  
*CET Competencies and Definitions (Continued)*

<b>Competency</b>	<b>Definition</b>
Job Knowledge	Understands all aspects of the job.
Judgment	Uses and synthesizes information to solve problems, make evaluations, and draw sound conclusions based on subjective and/or objective criteria.
Leadership	Provides direction and motivates others to work for a common goal.
Management	Coordinates resources to maximize productivity and efficiency.
Performance	Uses mathematics appropriately to answer questions or solve problems.
Math Skills	Ensures that meetings accomplish their business objectives.
Meeting Leadership	Is an active participant during meetings.
Meeting Participation	Explores alternatives to reach outcomes acceptable to all parties.
Negotiation	Conveys information clearly and expresses self well in conversations.
Oral Communication	Shows dedication and loyalty to his/her company.
Organizational Commitment	Plans work to maximize efficiency (in time and resources) and minimize downtime.
Planning/Organizing	Identifies and implements effective solutions to problems.
Problem Solving	Takes chances to achieve goals while considering possible negative consequences.
Risk Taking	Follows safety precautions and displays safe on-the-job behavior.
Safety	Uses appropriate interpersonal styles and communication methods to sell products or services.
Sales Ability	Understands and talks about the big picture.
Strategic Vision	Handles pressure without getting upset, moody, or anxious.
Stress Tolerance	Provides training for others.
Teaching Others	Works well in groups and is a good team player.
Teamwork	Uses existing technology and considers the use of new technology to increase productivity.
Technical Knowledge	Performs well in job training sessions or courses.
Training Performance	Is honest and trustworthy.
Trustworthiness	Listens to and follows verbal directions from others.
Verbal Direction	Remains watchful and alert while performing monotonous tasks.
Vigilance	Has a positive attitude toward work.
Work Attitude	Writes clearly and concisely.
Written Communication	

Table 2  
*Rank-Ordered Job Criticality Ratings for CET Dimensions*

Industrial Industry			Financial Industry			Consumer Service Industry		
CET Dimension	M	SD	CET Dimension	M	SD	CET Dimension	M	SD
Trustworthiness*	3.75	.154	Work Attitude*	3.78	.187	Trustworthiness*	3.82	.141
Work Attitude*	3.64	.204	Trustworthiness*	3.76	.288	Leadership*	3.74	.235
Leadership*	3.62	.270	Achievement Orientation*	3.74	.353	Achievement Orientation*	3.73	.177
Decision Making*	3.59	.188	Leadership*	3.64	.430	Decision Making*	3.72	.196
Achievement Orientation*	3.56	.210	Initiative*^	3.64	.187	Problem Solving*	3.69	.135
Problem Solving*	3.54	.113	Oral Communication	3.56	.223	Work Attitude*	3.69	.187
Stress Tolerance*	3.54	.176	Interpersonal Skills^	3.56	.186	Integrity*^	3.63	.421
Teamwork*	3.52	.206	Stress Tolerance	3.55	.208	Adaptability*	3.62	.211
Adaptability	3.51	.135	Decision Making	3.54	.499	Flexibility*^	3.60	.135
Integrity^	3.51	.280	Adaptability	3.54	.130	Dependability	3.60	.274
Dependability	3.49	.173	Dependability	3.51	.226	Customer Service^	3.59	.482
Oral Communication	3.48	.149	Problem Solving	3.50	.206	Stress Tolerance	3.58	.193
Initiative^	3.47	.158	Conflict Resolution^	3.43	.373	Teamwork	3.57	.211
Management Performance	3.46	.294	Teamwork	3.43	.302	Judgment^	3.54	.211
Flexibility^	3.45	.148	Flexibility^	3.42	.276	Initiative^	3.54	.195
Planning/Organizing	3.45	.130	Integrity^	3.42	.485	Building Teams	3.50	.321
Organizational Commitment	3.44	.308	Judgment^	3.41	.342	Oral Communication	3.48	.136
Judgment^	3.41	.201	Build Strategic Work Relationships	3.41	.212	Management Performance^	3.48	.289
Customer Service^	3.40	.323	Planning/Organizing	3.40	.328	Job Knowledge	3.47	.275
Job Knowledge	3.40	.202	Organizational Commitment	3.39	.473	Interpersonal Skills^	3.46	.209
Building Teams	3.40	.301	Job Knowledge	3.37	.280	Follow-Up^	3.43	.512
Interpersonal Skills^	3.38	.255	Customer Service^	3.36	.295	Planning/Organizing	3.41	.407
Conflict Resolution ^	3.27	.249	Building Teams	3.36	.438	Organizational Commitment	3.39	.328
Strategic Vision^	3.25	.276	Building Partnerships^	3.34	.394	Build Strategic Work Relationships	3.36	.151
Build Strategic Work Relationships	3.25	.236	Management Performance^	3.34	.313	Conflict Resolution^	3.35	.225
Negotiation^	3.24	.338	Impact^	3.33	.393	Teaching Others^^	3.32	.571
Follow-Up^	3.19	.347	Gaining Commitment^	3.32	.315	Building Partnerships^	3.32	.262
Citizenship^	3.17	.483	Citizenship^	3.29	.344	Strategic Vision^	3.31	.157

Table 2  
*Rank-Ordered Job Criticality Ratings for CET Dimensions (Continued)*

Industrial Industry			Financial Industry			Consumer Service Industry		
CET Dimension	<i>M</i>	<i>SD</i>	CET Dimension	<i>M</i>	<i>SD</i>	CET Dimension	<i>M</i>	<i>SD</i>
Influence	3.16	.205	Influence	3.29	.321	Employee Development <sup>^</sup>	3.29	.401
Detail Orientation <sup>^</sup>	3.14	.326	Industry Knowledge <sup>^</sup>	3.27	.489	Detail Orientation <sup>^</sup>	3.27	.318
Formal Presentation	3.13	.306	Facilitating Change	3.24	.323	Delegation	3.25	.494
Gaining Commitment <sup>^</sup>	3.13	.229	Formal Presentation	3.23	.270	Gaining Commitment <sup>^</sup>	3.23	.186
Impact <sup>^</sup>	3.13	.287	Strategic Vision <sup>^</sup>	3.18	.636	Facilitating Change	3.22	.191
Written Communication <sup>^</sup>	3.11	.231	Follow-Up <sup>^</sup>	3.18	.391	Verbal Direction <sup>^</sup>	3.20	.410
Innovation	3.11	.192	Meeting Leadership	3.16	.467	Influence	3.18	.205
Building Partnerships <sup>^</sup>	3.11	.441	Negotiation <sup>^</sup>	3.13	.419	Citizenship <sup>^</sup>	3.14	.357
Delegation	3.10	.360	Continuous Learning <sup>^</sup>	3.07	.353	Formal Presentation	3.12	.202
Industry Knowledge <sup>^</sup>	3.09	.364	Delegation	3.05	.671	Impact <sup>^</sup>	3.11	.202
Facilitating Change	3.07	.239	Innovation	3.05	.382	Meeting Leadership	3.07	.191
Teaching Others <sup>^^</sup>	3.00	.277	Written Communication <sup>^</sup>	3.03	.549	Innovation	3.07	.348
Verbal Direction <sup>^</sup>	2.99	.303	Meeting Participation <sup>^</sup>	3.02	.206	Continuous Learning <sup>^</sup>	3.06	.262
Meeting Leadership	2.98	.240	Consultative Sales <sup>^</sup>	3.02	.572	Negotiation <sup>^</sup>	3.05	.373
Employee Development <sup>^</sup>	2.98	.259	Teaching Others <sup>^^</sup>	3.01	.723	Sales Ability	3.00	.330
Continuous Learning <sup>^</sup>	2.96	.252	Employee Development <sup>^</sup>	3.01	.833	Written Communication <sup>^</sup>	2.99	.276
Safety	2.94	.760	Sales Ability	2.99	.770	Safety	2.94	.822
Meeting Participation <sup>^</sup>	2.93	.205	Detail Orientation <sup>^</sup>	2.91	.547	Industry Knowledge <sup>^</sup>	2.94	.382
Information Monitoring	2.89	.187	Risk Taking	2.87	.541	Meeting Participation <sup>^</sup>	2.94	.177
Technical Knowledge	2.87	.231	Technical Knowledge	2.82	.496	Information Monitoring	2.89	.385
Sales Ability	2.64	.810	Information Monitoring	2.75	.573	Training Performance	2.78	.562
Vigilance	2.63	.484	Verbal Direction <sup>^</sup>	2.65	.285	Facilitative Sales	2.71	.619
Consultative Sales <sup>^</sup>	2.62	.642	Facilitative Sales	2.62	.720	Technical Knowledge	2.69	.457
Training Performance	2.58	.393	Training Performance	2.55	.442	Risk Taking	2.67	.381
Risk Taking	2.58	.358	Vigilance	2.54	.555	Math Skills	2.60	.491
Math Skills	2.44	.466	Math Skills	2.40	.399	Vigilance	2.59	.590
Data Entry	2.37	.442	Safety	2.10	.996	Consultative Sales <sup>^</sup>	2.59	.470
Facilitative Sales	2.29	.798	Data Entry	2.08	.944	Data Entry	2.37	.491

Table 3

*Independent Samples t-Test Results for Job Criticality Ratings*

<b>Competency</b>	<b>Industry</b>	<b>K</b>	<b>M</b>	<b>SD</b>	<b>F(3,48)</b>	<b>p</b>	<b><math>\eta^2</math></b>
Achievement Orientation	Financials	9	3.74	.353	2.308	0.11	0.117
	Consumer Services	15	3.73	.177			
	Industrials	14	3.56	.210			
Adaptability	Financials	9	3.54	.130	1.746	0.19	0.091
	Consumer Services	15	3.62	.211			
	Industrials	14	3.51	.135			
Build Strategic Work Relationships	Financials	9	3.41	.212	1.883	0.17	0.097
	Consumer Services	15	3.36	.151			
	Industrials	14	3.25	.236			
Building Partnerships	Financials	9	3.34	.394	1.608	0.22	0.084
	Consumer Services	15	3.32	.262			
	Industrials	14	3.11	.441			
Building Teams	Financials	9	3.36	.438	0.574	0.57	0.032
	Consumer Services	15	3.50	.321			
	Industrials	14	3.40	.301			
Citizenship	Financials	9	3.29	.344	0.405	0.67	0.023
	Consumer Services	15	3.14	.357			
	Industrials	14	3.17	.483			
Conflict Resolution	Financials	9	3.43	.373	0.912	0.41	0.050
	Consumer Services	15	3.35	.225			
	Industrials	14	3.27	.249			
Consultative Sales	Financials	9	3.02	.572	1.851	0.17	0.096
	Consumer Services	15	2.59	.470			
	Industrials	14	2.62	.642			
Continuous Learning	Financials	9	3.07	.353	0.626	0.54	0.035
	Consumer Services	15	3.06	.262			
	Industrials	14	2.96	.252			
Customer Service	Financials	9	3.36	.295	1.276	0.29	0.068
	Consumer Services	15	3.59	.482			
	Industrials	14	3.40	.323			
Data Entry	Financials	9	2.08	.944	0.757	0.48	0.041
	Consumer Services	15	2.37	.491			
	Industrials	14	2.37	.442			
Decision Making	Financials	9	3.54	.499	1.221	0.31	0.065
	Consumer Services	15	3.72	.196			
	Industrials	14	3.59	.188			
Delegation	Financials	9	3.05	.671	0.541	0.59	0.030
	Consumer Services	15	3.25	.494			
	Industrials	14	3.10	.360			
	Industrials	14	3.11	.231			

Table 3

*Independent Samples t-Test Results for Job Criticality Ratings (Continued)*

<b>Competency</b>	<b>Industry</b>	<b>K</b>	<b>M</b>	<b>SD</b>	<b>F(3,48)</b>	<b>p</b>	<b><math>\eta^2</math></b>
Dependability	Financials	9	3.51	.226	0.852	0.44	0.046
	Consumer Services	15	3.60	.274			
	Industrials	14	3.49	.173			
Detail Orientation	Financials	9	2.91	.547	2.408	0.11	0.121
	Consumer Services	15	3.27	.318			
	Industrials	14	3.14	.326			
Employee Development	Financials	9	3.01	.833	1.688	0.20	0.088
	Consumer Services	15	3.29	.401			
	Industrials	14	2.98	.259			
Facilitating Change	Financials	9	3.24	.323	1.827	0.18	0.095
	Consumer Services	15	3.22	.191			
	Industrials	14	3.07	.239			
Facilitative Sales	Financials	9	2.62	.720	1.389	0.26	0.074
	Consumer Services	15	2.71	.619			
	Industrials	14	2.29	.798			
Flexibility	Financials	9	3.42	.276	3.979	0.03	0.185
	Consumer Services	15	3.60	.135			
	Industrials	14	3.45	.148			
Follow-Up	Financials	9	3.18	.391	1.462	0.25	0.077
	Consumer Services	15	3.43	.512			
	Industrials	14	3.19	.347			
Formal Presentation	Financials	9	3.23	.270	0.550	0.58	0.030
	Consumer Services	15	3.12	.202			
	Industrials	14	3.13	.306			
Gaining Commitment	Financials	9	3.32	.315	1.796	0.18	0.093
	Consumer Services	15	3.23	.186			
	Industrials	14	3.13	.229			
Impact	Financials	9	3.33	.393	1.994	0.15	0.102
	Consumer Services	15	3.11	.202			
	Industrials	14	3.13	.287			
Industry Knowledge	Financials	9	3.27	.489	1.875	0.17	0.097
	Consumer Services	15	2.94	.382			
	Industrials	14	3.09	.364			
Influence	Financials	9	3.29	.321	0.838	0.44	0.046
	Consumer Services	15	3.18	.205			
	Industrials	14	3.16	.205			
Information Monitoring	Financials	9	2.75	.573	0.494	0.62	0.027
	Consumer Services	15	2.89	.385			
	Industrials	14	2.89	.187			



Table 3

*Independent Samples t-Test Results for Job Criticality Ratings (Continued)*

<b>Competency</b>	<b>Industry</b>	<b>K</b>	<b>M</b>	<b>SD</b>	<b>F(3,48)</b>	<b>p</b>	<b><math>\eta^2</math></b>
Initiative	Financials	9	3.64	.187	2.476	0.10	0.124
	Consumer Services	15	3.54	.195			
	Industrials	14	3.47	.158			
Innovation	Financials	9	3.05	.382	0.111	0.90	0.006
	Consumer Services	15	3.07	.348			
	Industrials	14	3.11	.192			
Integrity	Financials	9	3.42	.485	0.921	0.41	0.050
	Consumer Services	15	3.63	.421			
	Industrials	14	3.51	.280			
Interpersonal Skills	Financials	9	3.56	.186	1.735	0.19	0.090
	Consumer Services	15	3.46	.209			
	Industrials	14	3.38	.255			
Job Knowledge	Financials	9	3.37	.280	0.497	0.61	0.028
	Consumer Services	15	3.47	.275			
	Industrials	14	3.40	.202			
Judgment	Financials	9	3.41	.342	1.211	0.31	0.065
	Consumer Services	15	3.54	.211			
	Industrials	14	3.41	.201			
Leadership	Financials	9	3.64	.430	0.688	0.51	0.038
	Consumer Services	15	3.74	.235			
	Industrials	14	3.62	.270			
Management Performance	Financials	9	3.34	.313	0.688	0.51	0.038
	Consumer Services	15	3.48	.289			
	Industrials	14	3.46	.294			
Math Skills	Financials	9	2.40	.399	0.678	0.51	0.037
	Consumer Services	15	2.60	.491			
	Industrials	14	2.44	.466			
Meeting Leadership	Financials	9	3.16	.467	1.043	0.36	0.056
	Consumer Services	15	3.07	.191			
	Industrials	14	2.98	.240			
Meeting Participation	Financials	9	3.02	.206	0.626	0.54	0.035
	Consumer Services	15	2.94	.177			
	Industrials	14	2.93	.205			
Negotiation	Financials	9	3.13	.419	0.926	0.41	0.050
	Consumer Services	15	3.05	.373			
	Industrials	14	3.24	.338			
Oral Communication	Financials	9	3.56	.223	0.838	0.44	0.046
	Consumer Services	15	3.48	.136			
	Industrials	14	3.48	.149			

Table 3

*Independent Samples t-Test Results for Job Criticality Ratings (Continued)*

<b>Competency</b>	<b>Industry</b>	<b>K</b>	<b>M</b>	<b>SD</b>	<b>F(3,48)</b>	<b>p</b>	<b><math>\eta^2</math></b>
Organizational Commitment	Financials	9	3.39	.473	0.073	0.93	0.004
	Consumer Services	15	3.39	.328			
	Industrials	14	3.44	.308			
Planning/Organizing	Financials	9	3.40	.328	0.063	0.94	0.004
	Consumer Services	15	3.41	.407			
	Industrials	14	3.45	.130			
Problem Solving	Financials	9	3.50	.206	6.31	0.01	0.265
	Consumer Services	15	3.69	.135			
	Industrials	14	3.54	.113			
Risk Taking	Financials	9	2.87	.541	1.284	0.29	0.068
	Consumer Services	15	2.67	.381			
	Industrials	14	2.58	.358			
Safety	Financials	9	2.10	.996	3.434	0.04	0.164
	Consumer Services	15	2.94	.822			
	Industrials	14	2.94	.760			
Sales Ability	Financials	9	2.99	.770	1.272	0.29	0.068
	Consumer Services	15	3.00	.330			
	Industrials	14	2.64	.810			
Strategic Vision	Financials	9	3.18	.636	0.378	0.69	0.021
	Consumer Services	15	3.31	.157			
	Industrials	14	3.25	.276			
Stress Tolerance	Financials	9	3.55	.208	0.194	0.82	0.011
	Consumer Services	15	3.58	.193			
	Industrials	14	3.54	.176			
Teaching Others	Financials	9	3.01	.723	1.653	0.21	0.086
	Consumer Services	15	3.32	.571			
	Industrials	14	3.00	.277			
Teamwork	Financials	9	3.43	.302	1.026	0.37	0.055
	Consumer Services	15	3.57	.211			
	Industrials	14	3.52	.206			
Technical Knowledge	Financials	9	2.82	.496	0.786	0.46	0.043
	Consumer Services	15	2.69	.457			
	Industrials	14	2.87	.231			
Training Performance	Financials	9	2.55	.442	0.860	0.43	0.047
	Consumer Services	15	2.78	.562			
	Industrials	14	2.58	.393			
Trustworthiness	Financials	9	3.76	.288	0.620	0.54	0.034
	Consumer Services	15	3.82	.141			
	Industrials	14	3.75	.154			

Table 3

*Independent Samples t-Test Results for Job Criticality Ratings (Continued)*

<b>Competency</b>	<b>Industry</b>	<b>K</b>	<b>M</b>	<b>SD</b>	<b>F(3,48)</b>	<b>p</b>	<b><math>\eta^2</math></b>
Verbal Direction	Financials	9	2.65	.285	7.179	0.00	0.291
	Consumer Services	15	3.20	.410			
	Industrials	14	2.99	.303			
Vigilance	Financials	9	2.54	.555	0.085	0.92	0.005
	Consumer Services	15	2.59	.590			
	Industrials	14	2.63	.484			
Work Attitude	Financials	9	3.78	.187	1.583	0.22	0.083
	Consumer Services	15	3.69	.187			
	Industrials	14	3.64	.204			
Written Communication	Financials	9	3.03	.549	0.444	0.65	0.025
	Consumer Services	15	2.99	.276			
	Industrials	14	3.11	.231			