

THE SHIP OF CHANGE: A MODEL FOR ORGANIZATIONAL DIAGNOSIS AND  
CHANGE MANAGEMENT

A Dissertation  
Submitted to the Graduate Faculty  
of the  
North Dakota State University  
of Agriculture and Applied Science

By

Robert Lewis Swearingen

In Partial Fulfillment of the Requirements  
for the Degree of  
DOCTOR OF PHILOSOPHY

Major Program:  
Transportation & Logistics

October 2019

Fargo, North Dakota

North Dakota State University  
Graduate School

---

**Title**

THE SHIP OF CHANGE: A MODEL FOR ORGANIZATIONAL  
DIAGNOSIS AND CHANGE MANAGEMENT

---

**By**

Robert Swearingen

---

The Supervisory Committee certifies that this *disquisition* complies with North Dakota State University's regulations and meets the accepted standards for the degree of

**DOCTOR OF PHILOSOPHY**

SUPERVISORY COMMITTEE:

Joseph Szmerekovsky

---

Chair

Karen Froelich

---

Canan Bilen-Green

---

Kimberly Vachal

---

Approved:

10/17/2019

---

Date

Joseph Szmerekovsky

---

Department Chair

## ABSTRACT

Grounded in developmental theory, the Ship of Change provides a renewed look at diagnostic relationships between organizational elements, and their interactions through the lens of a metaphorical ship analogy. Elements are identified and arranged based on empirical studies from the field with causal considerations emphasized by Burke-Litwin. The model uses a two-tiered visual perspective to depict multi-dimensionality that links core organizational elements to work unit activities through the interplay of culture, communication and climate. The model is intended for both the conveyance of principles related to open systems theory, and the practical application of diagnosing organizations for planning and implementing change. The model was tested in a case study with a transportation company using multiple methods data collection including a communication satisfaction survey, workplace observations, and employee interviews. The model was used to categorize and interpret data and to inform recommendations for change.

*Keywords:* Organizational development, change management, diagnostic model, transportation management

## ACKNOWLEDGEMENTS

I would like to thank my committee members for their guidance over the process of this research, of note are Dr. Joseph Szmerekovsky and Dr. Karen Froelich. Karen was the first to see real potential in the original draft of the Ship of Change when conceived during her course in organizational change management. Joe was the patient and steady hand that saw me through to the end. And a special thanks to an original committee member, Dr. Sukumarakurup (Kumar) Krishnakumar, who helped refine the model from an organizational behavior perspective to what eventually became. Without their mentorship and collaboration, this project would not have come to fruition.

Thank you to Dr. Denver Tolliver, Director of the Upper Great Plains Transportation Institute, and Jody Bohn Baldock for providing me the opportunity to join the team in a manner best suited to my talents and encouraging me to think outside the box. I appreciate every opportunity the program opened for me.

Though the identity of the case study company will remain confidential in accordance with ethical standards, I want to thank them for their patience and understanding throughout the study process. I greatly appreciate the opportunity and accessibility they granted me in pursuit of this endeavor.

Thank you to the Veterans Administration team at the university and the regional office in Fargo for funding me through school and research, the financial support allowed me to focus on finishing.

Finally, to Dr. Matthew Shatzkin, a heartfelt thanks for being the first through the breach so others could follow.

## DEDICATION

My family patiently tolerated this endeavor over the last several years, especially down the stretch when I took valuable time away from them to dedicate to the project. I am so grateful to have a partner in life with such grace and understanding as Nakhaly Swearingen. My girls, Erika,

Sara and Madison-Jane supported me even when they didn't quite know what I was up to.

Thank you to my parents, George and Roberta, for their lifelong encouragement.

Thank you to my aunt and uncle, Judy and Steve Crowell, for providing me the refuge of their home when I needed time and space to write.

## TABLE OF CONTENTS

ABSTRACT.....	iii
ACKNOWLEDGEMENTS.....	iv
DEDICATION.....	v
LIST OF TABLES.....	viii
LIST OF FIGURES.....	ix
LIST OF APPENDIX TABLES.....	xi
INTRODUCTION.....	1
LITERATURE REVIEW.....	3
Theory and Logic.....	3
Organizational Change Models.....	6
PART I: MODEL FORMULATION.....	15
Ship of Change, Tier 1: Core Elements.....	15
Ship of Change, Tier 2: Full Perspective.....	20
PART II: CASE STUDY.....	22
Design.....	22
Participant Description.....	22
Data Collection.....	26
Phase I.....	27
Phase II.....	28
Qualitative Data Collection.....	30
Survey Data Analysis.....	31
Demographic Descriptive Statistics.....	32
Gender Analysis.....	32
Age Group Analysis.....	32

Job Location .....	32
Job Position .....	33
Management .....	33
Summary of Statistical Analysis .....	33
Detailed Survey Analysis .....	40
Key Findings .....	61
DISCUSSION.....	67
Improvement Recommendations for the Company .....	67
CONTRIBUTIONS .....	80
CONCLUSIONS.....	82
REFERENCES .....	84
APPENDIX A. SURVEY QUESTIONS.....	87
Questions for all Personnel .....	87
Questions for Managers Only .....	101
APPENDIX B. INTERVIEW QUESTION BANK.....	104
Question for all Personnel.....	104
Questions for Managers Only .....	110
APPENDIX C. BURKE-LITWIN SUMMARY OF SUPPORTING STUDIES .....	112
APPENDIX D. UNIVARIATE ANALYSIS OF VARIANCE.....	113
APPENDIX E. TUKEY POST HOC MULTIPLE COMPARISONS BY CATEGORY .....	193
APPENDIX F. TUKEY POST HOC MULTIPLE COMPARISONS BY JOB POSITION, ALL QUESTIONS.....	208
APPENDIX G. TUKEY POST HOC MULTIPLE COMPARISONS BY AGE, ALL QUESTIONS .....	258
APPENDIX H. T-TEST STATISTIC BY GENDER, ALL QUESTIONS.....	278
APPENDIX I. T-TEST STATISTIC BY MANAGEMENT, ALL QUESTIONS.....	284

## LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Participant Personnel Locations and Grouping.....	24
2. Data Collection Plan Phase I.....	29
3. Data collection Plan Phase II. ....	29
4. Interview Numbers by Gender and Position. ....	30
5. Gender T-Test Significance Summary.....	34
6. Post Hoc Summary by Age Group.....	35
7. Number of Occurrences in Post Hoc Summary by Job Position. ....	36
8. Post Hoc Summary by Job Position.....	36
9. Summary of Univariate Significance.....	39
10. Summary of Findings and Recommendations. ....	71



## LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1. Multi-level Perspective of Organization and Environment. ....	5
2. The Ship of Change, Tier 1: Core Elements .....	15
3. The Ship of Change, Tier-2: Full Perspective .....	20
4. Age Group vs. Job Location Profile Plot Q 13 .....	41
5. Job Location vs. Age Group Profile Plot Q 15. ....	42
6. Age Group vs. Job Location Profile Plot Q 17. ....	43
7. Age Group vs. Job Location Profile Plot Q 18. ....	44
8. Job Position vs. Gender Profile Plot Q 18. ....	44
9. Age Group vs. Job Location Profile Plot Q 20. ....	46
10. Job Position vs. Job Location Profile Plot Q 20. ....	46
11. Job Position vs. Age Group Profile Plot Q 26. ....	48
12. Job Location vs. Management Profile Plot Q 27. ....	49
13. Job Position vs. Gender Profile Plot Q 27. ....	49
14. Job Position vs. Gender Profile Plots Q 32. ....	51
15. Job Location vs. Management Profile Plot Q 37. ....	53
16. Job Position vs. Gender Profile Plot Q 40. ....	54
17. Job Location vs. Age Group Profile Plot Q 40. ....	55
18. Job Position vs. Age Group Profile Plot Q 40. ....	55
19. Job Location vs. Age Group Profile Plot Q 42. ....	56
20. Job Position vs. Age Group Profile Plot Q 42. ....	57
21. Job Position vs. Gender Profile Plot Q 43. ....	58
22. Job Position vs. Gender Q 44. ....	59
23. Job Location vs. Gender Profile Plot Q 47. ....	60

24. Job Position vs. Gender Profile Plot Q 47. .... 60

## LIST OF APPENDIX TABLES

<u>Table</u>	<u>Page</u>
D1. Between-Subjects Factors, Q 11. Progress in My Job. ....	113
D2. Tests of Between-Subjects Effects, Q 11. Progress in My Job.....	114
D3. Between-Subjects Factors, Q 12. Personnel News. ....	115
D4. Tests of Between-Subjects Effects, Q 12. Personnel News. ....	116
D5. Between-Subjects Factors, Q 13. Company's Policies and Goals. ....	117
D6. Tests of Between-Subjects Effects, Q 13. Company's Policies and Goals. ....	118
D7. Between-Subject Factors, Q 14. Job Compares to Others. ....	119
D8. Tests of Between-Subjects Effects, Q 14. Job Compares to Others. ....	120
D9. Between-Subjects Factors, Q 15. Performance is Assessed. ....	121
D10. Tests of Between-Subjects Effects, Q 15. Performance is Assessed. ....	122
D11. Between-Subjects Factors, Q 16. Recognition of My Efforts.....	123
D12. Tests of Between-Subjects Effects, Q 16. Recognition of My Efforts. ....	124
D13. Between-Subjects Factors, Q 17. Departmental Policies and Goals.....	125
D14. Tests of Between-Subjects Effects, Q 17. Departmental Policies and Goals. ....	126
D15. Between-Subjects Factors, Q 18. Requirements of My Job. ....	127
D16. Tests of Between-Subjects Effects, Q 18. Requirements of My Job. ....	128
D17. Between-Subjects Factors, Q 19. Changes in My Company. ....	129
D18. Tests of Between-Subjects Effects, Q 19. Changes in My Company.....	130
D19. Between-Subjects Factors, Q 20. How Problems are Being Handled. ....	131
D20. Tests of Between-Subjects Effects, Q 20. How Problems are Being Handled.....	132
D21. Between-Subjects Factors, Q 21. Pay and Benefits. ....	133
D22. Tests of Between-Subjects Effects, Q 21. Pay and Benefits.....	134
D23. Between-Subjects Factors, Q 22. Company's Financial Standing. ....	135

D24. Tests of Between-Subjects Effects, Q 22. Company's Financial Standing.....	136
D25. Between-Subjects Factors, Q 23. Achievements and Failures of the Organization. ....	137
D26. Tests of Between-Subjects Effects, Q 23. Achievements and Failures of the Organization.....	138
D27. Between-Subjects Factors, Q 25. Supervisors Understand the Problems of the Workers.....	139
D28. Tests of Between-Subjects Effects, Q 25. Supervisors Understand the Problems of the Workers.....	140
D29. Between-Subjects Factors, Q 26. Company's Comms Motivates Me. ....	141
D30. Tests of Between-Subjects Effects, Q 26. Company's Comms Motivates Me. ....	142
D31. Between-Subjects Factors, Q 27. Supervisor Listens and Pays Attention.....	143
D32. Tests of Between-Subjects Effects, Q 27. Supervisor Listens and Pays Attention. ....	144
D33. Between-Subjects Factors, Q 28. People have the Ability to Communicate.....	145
D34. Tests of Between-Subjects Effects, Q 28. People have the Ability to Communicate.....	146
D35. Between-Subjects Factors, Q 29. Supervisor Offers Guidance for Solving Problems.....	147
D36. Tests of Between-Subjects Effects, Q 29. Supervisor Offers Guidance for Solving Problems. ....	148
D37. Between-Subjects Factors, Q 30. Makes Me Feel Like a Vital Part of the Team. ....	149
D38. Tests of Between-Subjects Effects, Q 30. Makes Me Feel Like a Vital Part of the Team. ....	150
D39. Between-Subjects Factors, Q 31. Comms are Interesting and Helpful.....	151
D40. Tests of Between-Subjects Effects, Q 31. Comms are Interesting and Helpful. ....	152
D41. Between-Subjects Factors, Q 32. My Supervisors Trust Me.....	153
D42. Tests of Between-Subjects Effects, Q 32. My Supervisors Trust Me.....	154
D43. Between-Subjects Factors, Q 33. Timeliness of Information. ....	155
D44. Tests of Between-Subjects Effects, Q 33. Timeliness of Information.....	156
D45. Between-Subjects Factors, Q 34. Conflicts are Handled Appropriately.....	157

D46. Tests of Between-Subjects Effects, Q 34. Conflicts are Handled Appropriately. ....	158
D47. Between-Subjects Factors, Q 35."Grapevine" (Informal Communication) is Active. ....	159
D48. Tests of Between-Subjects Effects, Q 35."Grapevine" (Informal Communication) is Active.....	160
D49. Between-Subjects Factors, Q 36. Supervisor is Open to New Ideas. ....	161
D50. Tests of Between-Subjects Effects, Q 36. Supervisor is Open to New Ideas. ....	162
D51. Between-Subjects Factors, Q 37. Comms with Peers are Open and Free Flowing. ....	163
D52. Tests of Between-Subjects Effects, Q 37. Comms with Peers are Open and Free Flowing. ....	164
D53. Between-Subjects Factors, Q 38. Practices are Adaptable Emergencies.....	165
D54. Tests of Between-Subjects Effects, Q 38. Practices are Adaptable to Emergencies. ....	166
D55. Between-Subjects Factors, Q 39. Meetings are Well Organized. ....	167
D56. Tests of Between-Subjects Effects, Q 39. Meetings are Well Organized.....	168
D57. Between-Subjects Factors, Q 40. Amount of Supervision.....	169
D58. Tests of Between-Subjects Effects, Q 40. Amount of Supervision. ....	170
D59. Between-Subjects Factors, Q 41. Written Reports are Clear and Concise. ....	171
D60. Tests of Between-Subjects Effects, Q 41. Written Reports are Clear and Concise. ....	172
D61. Between-Subjects Factors, Q 42. Attitudes in My Area Healthy. ....	173
D62. Tests of Between-Subjects Effects, Q 42. Attitudes in My Area Healthy. ....	174
D63. Between-Subjects Factors, Q 43. Informal Communication Active and Accurate. ....	175
D64. Tests of Between-Subjects Effects, Q 43. Informal Communication Active and Accurate. ....	176
D65. Between-Subjects Factors, Q 44. Amount of Communication is About Right. ....	177
D66. Tests of Between-Subjects Effects, Q 44. Amount of Communication is About Right.....	178
D67. Between-Subjects Factors, Q 46. Rate Your Productivity.....	179
D68. Tests of Between-Subjects Effects, Q 46. Rate Your Productivity. ....	180

D69. Between-Subjects Factors, Q 47. Productivity Changed. ....	181
D70. Tests of Between-Subjects Effects, Q 47. Productivity Changed. ....	182
D71. Between-Subjects Factors, Q 51M. Workers are Responsive to Direction. ....	183
D72. Tests of Between-Subjects Effects, Q 51M. Workers are Responsive to Direction. ....	184
D73. Between-Subjects Factors, Q 52M. Workers Anticipate My Needs for Information. ....	185
D74. Tests of Between-Subjects Effects, Q 52M. Workers Anticipate My Needs for Information. ....	186
D75. Between-Subjects Factors, Q 53M. I can Avoid Information Overload. ....	187
D76. Tests of Between-Subjects Effects, Q 53M. I can Avoid Information Overload. ....	188
D77. Between-Subjects Factors, Q 54M. Workers are Receptive to Evaluation, Suggestions and Criticism. ....	189
D78. Tests of Between-Subjects Effects, Q 54M. Workers are Receptive to Evaluation, Suggestions and Criticism. ....	190
D79. Between-Subjects Factors, Q 55M. Workers Initiate Accurate Upward Communication. ....	191
D80. Tests of Between-Subjects Effects, Q 55M. Workers Initiate Accurate Upward Communication. ....	192

## INTRODUCTION

We are deep into the age of innovation, technology and information. Access to big data, smart mobile devices, sensor networks and the ubiquity of the internet has added both volume and velocity to the constancy of change. Organizational leaders must manage change at an ever-increasing speed on a continual basis, or risk falling behind. To do so requires the use of schema that are easily grasped by managers to facilitate multi-dimensional organizational and situational understanding and may be conveyed to workers to facilitate communication of company initiatives. “The constancy of change has become a cliché, now in the inevitable category along with death and taxes” (Burke, 1995, page 159). Even more to the point today: taxes, though inevitable, happen predictably; death, also inevitable, happens only once; but change is inevitable, difficult to predict and happens all the time.

There are many ways to manage change, but to be effective and efficient in its execution leaders must do so from an informed position. Gathering information related to managing change is a continuous process that should inform emerging strategic plans and actions. In a high velocity world in which we live, there is a tendency in many organizations toward action to stay ahead of the need for change. Often, managers skip right to planning change without carefully gathering adequate information to assess the situation (Sull, 2007). It is critical to have methods and a stance of vigilance in place to acquire, organize and analyze relevant data to inform the action planning processes.

Change models are widely used by academics, business leaders, consultants and gurus, most developed in the 70's, 80's and 90's in response to a need to manage change more effectively. Even then, when computers were just entering homes, and the internet highway was barely a bumpy road, organizational leaders were feeling the need to keep up with the pace of

change. Most early models label and describe organizational variables and imply a relationship between them. Most models are still relevant, and remain in use today; however, as the pace, volume and frequency of change increases, it is time to consider an update.

This study focused on developing a new model for diagnosing organizational elements for managing change while remaining grounded in respectful consideration of proven models that have gone before, particularly the Burke-Litwin causality model. The study was conducted in two parts: model formulation and model testing. The goals in model formulation were to provide a fresh comprehensive perspective that:

- (1) conveys the interrelated relationships of organizational elements,
- (2) effectively captures the interaction between the organization and the environment,
- (3) supports the inclusion of communication as an integral component to worker and work unit productivity and
- (4) illustrates the conceptual multi-dimensionality of organizations in a manner that can be easily understood by personnel at all levels.

The model was tested in a case study using multiple methods data to diagnose change needs in an international trucking company. The case study served three purposes: 1) test and illustrate the applicability of the model in a field setting; 2) refine the model as a diagnostic tool and; 3) demonstrate communications as a viable central figure in diagnosis.



## LITERATURE REVIEW

### Theory and Logic

Organizations, often compared to living entities, are open system organisms (Katz & Kahn, 1978) seeking to thrive in the fulfillment of their purpose. The open system refers to the fact that organizations are open to their environment and require input of resources in the form of material and energy which serve to create goods or services for output back into the environment (Burke, 2014). In other words, an organization is an entity comprised of multiple organisms working in relative concert. That concert of effort is relative due to the individuality of the subcomponent groups, and the fact that the organization is made of human beings, each acting within in the spectrum of their own needs and values. For the organization to be successful, the needs and values of individuals and subgroups must align with the needs and values of the organization (Nadler & Tushman, 1980; Burke & Litwin, 1992).

Often external forces of change are significant enough to alter the course of enterprise strategy, even threaten the strategic position of an entire industry. For example, governments change laws or regulations that directly affect the conduct of organizations within an industry or sector, essentially forcing organizational change. Other agents can influence strategy in less direct, yet still significant ways: markets contract or expand, new technology replaces old, competition enters and exits. These interactions with the environment are related to open systems theory, and the requirement for organizations to gain and maintain strategic external alignment. Also known as external fit, external alignment is derived from matching internal capabilities to specific external opportunities; effectively adapting to environmental trends including threats. The drive for fit within the environment is an imperative for change (Miller, 1987).

Every organization, by the nature of its formation, creates an internal environment made up of individuals acting for themselves, working in teams, grouped in any number of ways, interacting and acting for their own purposes; yet they are part of the whole. The internal and external environments coexist and interact at every level (Haeckel, 1999).

Internally, forces such as growth objectives, politics and power struggles, turnover of key personnel, or organizational crisis can cause turbulence and instability within the organization (Palmer, Dunford, & Akin, 2009). The interrelated nature of the facets of configuration theory – strategy, leadership and structure (Miller, 1987) – link enterprise activities in such a way that changes affecting one area can reverberate across the entire organization (Mintzberg, 1987). The imperative to align key internal activities, and organizational elements found in configuration theory, drive change for strategic internal fit. Internal fit matches skills and resources to requirements for successful strategy execution; accentuates organizational strengths and mitigates weaknesses in the pursuit of strategy accomplishment.

With an understanding of external environmental elements and internal organizational elements we can begin picturing a multi-level perspective. From Figure 1 we see an individual who conducts tasks as part of a sub-group within an organization. The organization itself operates within an industry; all exist within the larger environment. While this study focuses on the organization as a construct it is critical to the larger analysis that we understand that the organization is comprised of multiple internal layers while operating within a much larger external environment in which it must compete (Porter M. , 1985).

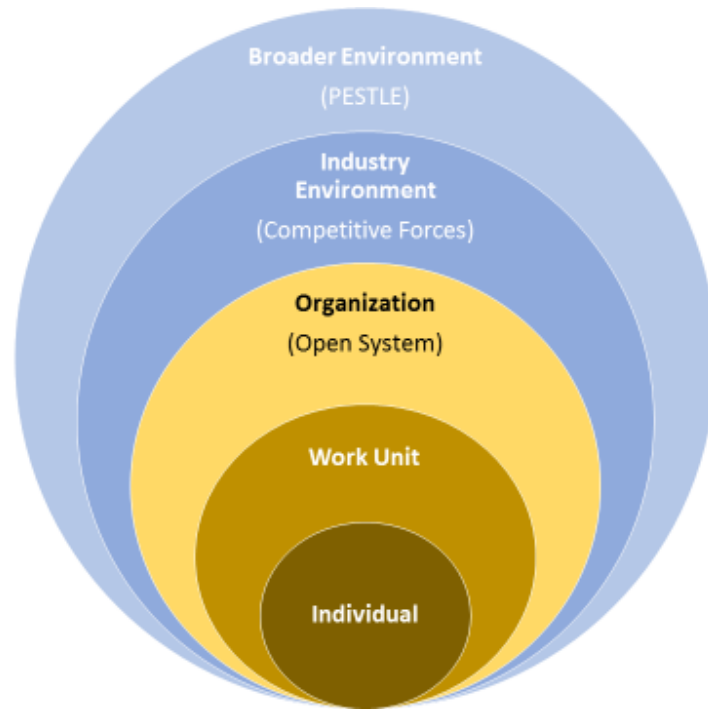


Figure 1. Multi-level Perspective of Organization and Environment.

The need for internal and external strategic fit affects productivity at every level of an organization: the organizational, work unit, and individual. Made up of multiple levels and subsystems, an organization becomes a complex adaptive system (Holland, 1995) - complex because of the multiplicity of components and levels that require internal fit; adaptive because of the need for external fit to survive and thrive within the open systems environment. As a result, organizations often have formal processes in place to adapt to change. However, individuals and sub-groups may form informally derived processes to bypass or subvert formal systems that are incongruent with their own purposes, values or norms (Nadler & Tushman, 1980); this is another form of adaptation. Largely, the point of organizational development is to utilize the naturally occurring adaptive instincts of groups and individuals to gain alignment of efforts in support of the wider need to achieve both internal and external strategic fit.

Change models are tools used to guide the broader process of managing change within an organization and facilitate adaptation toward a planned objective. From a strategic perspective, it is important to tie the planning processes to execution. Sull (2007) advocates an informed process in his four-phased model, the Strategy Loop, which links planning and execution. It includes the steps Make Sense, Make Choices, Make Things Happen and Make Revisions.

Though the larger cycle is iterative and continuous in nature, the Making Sense phase entails assimilating data for identifying discernable patterns to feed the planning processes. Approaching the process with a creative perspective, with minimal preconceived notions, facilitates dealing with new situations, and a rapidly changing environment: "...mangers should establish a tone of open inquiry rather than advocacy." (Page 32) An open mind can help leaders achieve an adaptive and agile perspective to addressing change issues.

### **Organizational Change Models**

Acquiring and organizing data for informing the change management process is a form of organizational diagnosis. Diagnostic models for effective management of organizational change address the operation of an organization as a whole (Palmer, Dunford, & Akin, 2009). Early models developed in the 70's and 80's help organizational leaders capture and arrange relevant information for managing change. Each model has its strengths and weaknesses, but in 1992 (and republished as late as 2014 in Burkes, Organization Change: Theory and Practice, 4th edition), W. Warner Burke and George H. Litwin presented an integrated model built on the previous efforts, but include more than identification of key organizational elements. The Burke-Litwin model demonstrates relational causality, interaction with the environment, and is explicitly intended for use in the change implementation process. Each of the earlier models contributed to

baseline development of the Burke-Litwin model but lacked its comprehensiveness and cause-effect relationships.

Galbraith's Star Model, first developed in the mid-60's (Galbraith Management Consultants, 2016), was originally used to address organizational design issues related to internal fit. Adhering to the classic maxim that structure follows strategy (Chandler, 1977), Galbraith placed strategy in a prominent position within the model with structure, processes, rewards and people forming the points of a star. The emphasis of Galbraith's model is importance of alignment of each element to gain optimal performance. The Star Model uses lines between the elements to depict interaction but does not specify causality.

Similar to what we will see in later models, Galbraith groups important smaller components into broadly defined larger elements. In this case, the critical component of vision is closely associated with strategy, mission and purpose; information and communication systems fall within processes. Though some aspects of external fit are addressed in his definition of strategy, environment is not depicted in the model. He further separates rewards from other systems related to motivation, but includes skills, culture and human resource functional aspects in the element of people. Later models will better delineate element definitions. The depiction of only five elements leaves much room for interpretation.

Weisbord's Six-Box Organizational Model (1976), was one of the earliest efforts to specifically propose a model for diagnosing need for organizational change. Weisbord identifies six major variables for consideration – purpose, structure, rewards, helpful mechanisms, relationships, and leadership – and each element is arranged in no particular order around leadership. The arrangement alludes metaphorically to a radar screen used by air traffic controllers to convey the impression that all are important, and systemically linked. He states that

the role of leadership is to keep all the “blips” in alignment. The model advocates monitoring relationships between the elements, not necessarily any particular element.

Key to the Six-Box Model when aligning the elements is the concept of “fit”: fit between organization and environment; and fit between individual and organization (Weisbord, *Organizational Diagnosis: Six Places to Look for Trouble With or Without a Theory*, 1976). Weisbord describes fit between organization and environment as “...the extent to which the purposes and structure support high performance and ability to change with conditions...” (Page [2]) in keeping with the open systems framework, and the need for external fit. His definition of fit between individual and organization as “... the extent to which people support or subvert formal mechanisms...” (Page [3]) is consistent with configuration theory and the need for internal fit.

When explaining formal and informal systems, Weisbord establishes that there can be a difference between what is planned or written formally, and what people actually do. Formal systems are what is outlined in official policy, records and publications. Informal systems are activities that occur outside the formal systems. Measuring the frequency with which people conduct important performance tasks within the informal system can indicate potential system problems. A system may be technically well designed, but if it does not meet the needs of those operating within it, they will seek to bypass it with normative behavior.

The significance of the Six-Box Model is that it was the first to articulate functional relationships among identified organizational elements for diagnosing change. It helped shape those that followed and set the stage for change modeling. Though it includes reference to the external environment, the emphasis is on internal elements, and it lacks the element of strategy, a key component in all subsequent models.

Nadler-Tushman (1980) shifted the focus to one of congruence. Their model, sometimes referred to as The Congruence Model, proposes that organizational elements should be in agreement or harmony with one another, demonstrating both internal and external fit. They further suggest that organizational effectiveness is linked to cause-and-effect relationship between organizational elements. The model views the organization as a transformational process with inputs from the external environment and outputs from the organization that feed back to the environment, reflecting consideration of open systems theory.

The model groups elements in three areas:

- (1) Inputs, consisting of environment, resources and history, which contribute to the transformation process through strategy;
- (2) Transformation, which includes tasks, informal organization, formal organization, and individuals; arrows that imply interrelatedness of the elements link each component;
- (3) Output from the organization, groups and individuals that feed backs to the environmental elements.

The model does not refer to culture or climate as elements for consideration outside of history. The congruence model also depicts a sequential linearity to organizational functions, which indicates a compartmentalization of elements suggesting, at least visually, a separateness of elements.

McKinsey consultants (Pascale & Athos, 1981) put together, and later refined (Peters & Waterman, In Search of Excellence: Lessons from American's Best Run Companies, 1982) the 7S Framework. Probably the most widely known model due to the consulting company's prominence in the industry, it uses a mnemonic device comprised of seven words beginning with

S to describe organizational components intended to assist leaders in assessing strategic effectiveness. The 7S Framework is effective at describing the organizational variables, and does well to depict the interrelated nature of organizational elements (though not causally); however, it does not include reference to the external environment (Burke & Litwin, 1992).

The seven elements of the model include structure, systems, strategy, referred to as the hard S's, and style, staff, skills, and shared values (formally superordinate goals) subsequently referred to as the soft S's. "Hard" describes components that are easier to define and quantify, while "soft" refers to components that are more difficult to specify and measure. The authors are known for saying, "hard is easy and soft is hard," to reflect the comparative difficulty in analyzing the soft topics (Peters, tompeters.com, 2016). Shared values sit within the center of the model to depict the perceived importance of organizational culture and values as well as vision.

The Burke-Litwin Causal Model of Organizational Performance and Change, sometimes referred to as the 12 Factor Model, provides an integration of previous models that is applicable in both theoretical and practical realms. It combines elements from the previously described Six-Box Model, 7S Framework, and Congruence Model with the goal of creating a "...model that will serve as a guide for both organizational diagnosis and planned, managed organizational change – one that shows cause-and-effect relationships [between organizational elements] and can be tested empirically" (page 525). The Burke-Litwin model adds elements and arrangement to convey key causal considerations such as impact of environmental influences, and distinction between transformational and transactional activities. It also emphasizes climate and culture as key elements in the diagnosis for planning organizational change, elements previously relegated to subcomponents or merged. The intent is not merely to depict the organizational elements in



loose association, but provide visual reference to causality, and guide the process of change implementation. They provide a comprehensive summary of causal studies in their original 1992 article that informs the physical placement of elements in the model to convey causal relationships (See Appendix C).

Another contrast from other models is an added dimension by prioritizing key elements as transformational factors (environment, leadership, mission/strategy, and culture), and lesser elements as transactional factors (the remaining elements). As a result, they point out that changes in transformational factors can cause significant upheaval in an organization leading to dramatic behavioral impact.

The original Burke-Litwin paper put forth a typology for definitions as well as an impressive table of studies supporting causal relationships. As a result, the Burke-Litwin model heavily informs this study. However, by their own admission, there is room for improvement.

First, in the original article as well as subsequent publications the authors point out that their model does not adequately convey the broader interrelated nature of the organizational elements. They fall short in the attempt to depict the relationships with a two-dimensional representation that lacks the multi-dimensionality needed to adequately represent the complexity of an organization. The authors themselves acknowledge a desire for the means to make the model a "hologram" to achieve their goals.

Second, the model uses a number of arrows between elements to show interactive relationships. They state that they would like to show the relationships with even more arrows to demonstrate that all elements are interrelated; that changes in any area eventually affect all other areas. However, the addition of more arrows would not be practical for visual effect.

Finally, Burke & Litwin relegate the constructs of information and communication within the same category of systems. While management of information systems (MIS; the computerized data gathering, storage and security system, and its alignment with value chain functions) is certainly a key element within the category of systems, the argument for bringing a broader conception of information (the communication or reception of knowledge or intelligence (Merriam-Webster.com, 2016)) more to the forefront of diagnosis is clear. With the modern volume and velocity of information, and access to formal and informal information systems, workers now have an unprecedented capability to exchange information, ideas, and news with the external and internal environment. The exchange directly affects productivity, work unit climate, organizational culture, managerial practices, and interaction between leaders and followers. Formal and informal information channels permeate and affect every aspect of an organization, and the discourse related to events; it has become the connective tissue of social and workplace activity (Barrett, Thomas, & Hocevar, 1995).

In this context, information is the commodity expressed by the information system. Information systems are the conduit through which information flows. Aligning the IT and MIS systems with the need for information flow to facilitate functional activities is critical to the productivity and performance of the organization. However, the richness, timeliness, and effectiveness of communication is closely related to culture and climate in their relation to organization and work unit performance, productivity and individual job satisfaction (Barrett, Thomas, & Hocevar, 1995).

As shown by the variety of diagnostic elements in the models described, there are many ways to navigate the waters of change. Generally, there is a lack of consensus as to which elements are central to organizational diagnosis, and which are subordinate (although still

conceptually influential and significant). Since enterprise-level change is so closely linked to strategy, it is important to include clarity of terms such as Mission Statement, Vision, and Values.

The intent of the mission statement is to articulate and shape strategy and strategic thinking within the organization as well as guide decisions at all levels. A good mission statement should be a clear and concise statement of who the organization is, what it does, who it serves and what makes it different. Careful consideration, with broad input from key stakeholders should underlie development of the mission statement, as it is nothing less than the singular guiding expression of purpose for the entire organization (Drucker, 1974).

Some companies include statements of vision, values and goals as subtext to the mission statement, but it is important to the strategy process to understand that they are separate ideas. A vision statement is a professed view of the future supported by tangible goals (Kotter, 1996); a mission statement is a statement of present facts outlining an identity that is the foundation of the organization's strategy (Drucker, 1974). Vision and goals are the outcomes of strategy; mission is the beginning. The values statement reflects bedrock cultural principles for the organization and is often used to shape internal culture and interactions as well as external perceptions about the organization.

From the models discussed, we begin to see the increase in complexity and comprehensiveness in the evolution of change theory over time. The common theme among all models is the importance of internal and external fit between elements. As models increase in elemental components and refine definitions, we see the models themselves as a means to conceptualize organizational diagnosis. While most agree on the core elements for consideration in change, only Burke-Litwin provides a visual reference for causality. Building on causality, the

next evolution in modeling should provide a visual reference for tracing the impacts of change on organizational elements through their relationships. Furthermore, by identifying symptoms of misalignment between formal and informal systems, the source could be identified by tracing relationships shown in the model.

## PART I: MODEL FORMULATION

### Ship of Change, Tier 1: Core Elements

The model seeks to use a metaphorical construct to convey the concepts of an open systems organization operating in, and as part of an environment while depicting the relationships and interrelatedness of the elements through their position within the metaphor (Morgan, 1997). The definitions used below reflect initial understanding of previous models and concepts and draw philosophically from Burke-Litwin.

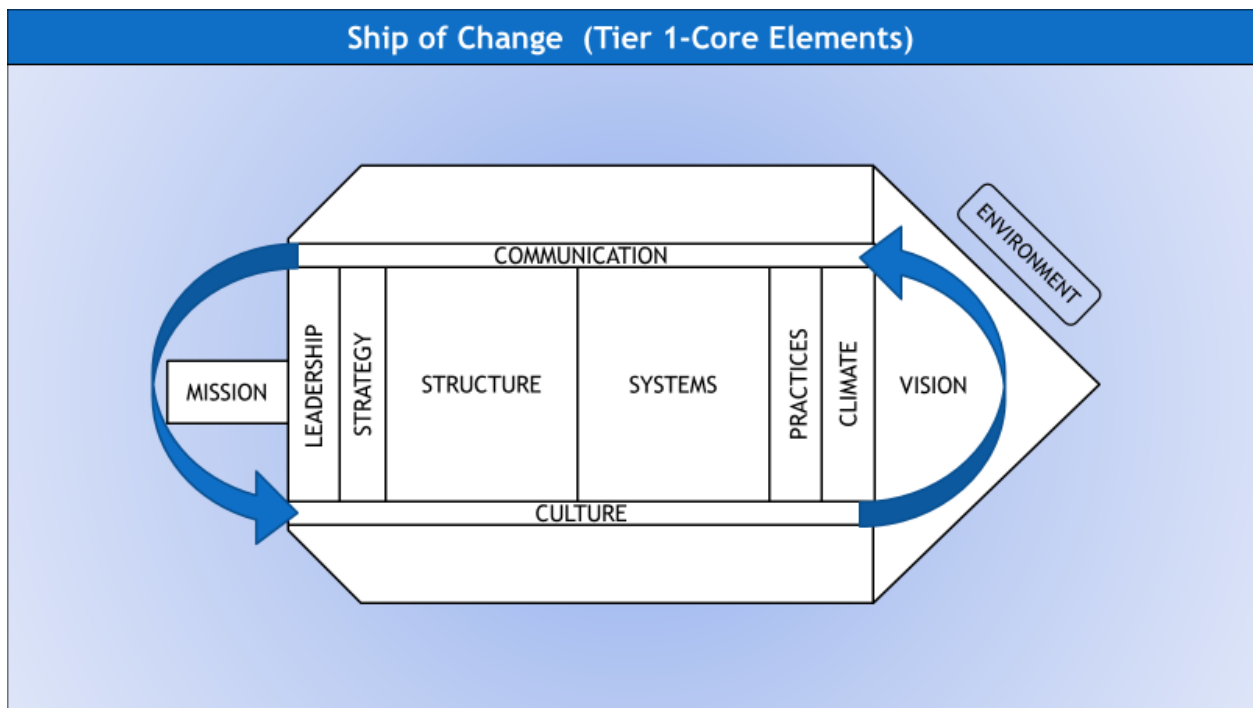


Figure 2. The Ship of Change, Tier 1: Core Elements

The metaphor of a ship evokes certain images when one visualizes a vessel at sea; particularly a wind powered sailing ship. In this case, the metaphor facilitates the concepts of an open systems organization interacting at every level with its environment as a single entity made up of individuals working in units seeking to act in relative concert to progress toward a common visualized goal. The sea can be calm or violent, can change with little or no notice, and yet

provides resources and sustenance to the ship. The success of the crew is optimized on the competency of its leaders, the plans they make, the configuration of the crew, the rules that govern conduct, and adherence to commonly understood values and standards. There are as many ways to sail a ship as there are ways to lead an organization. While it is possible for a good crew to overcome the shortcomings of less effective leadership, and good leaders can compensate for less experienced or competent crews, optimal performance is found where both are at their best.

The symmetry, simplicity and metaphor combine to help the reader intuitively grasp complex relationships among the core elements. Though explained from left to right, one may examine the flow of influence from any direction. For greater depth and dimensionality, further elements are considered later in Tier-2. Starting with a definition of terms is important to ensure common understanding, and to deepen the metaphor when discussing positions within the ship.

**Mission:** Mission, as described by (Drucker P. F., 1974; Drucker P. , 2001) should state what the company does, who it does it for and what makes it different. The mission is the touchstone of the organization that emits an understanding of who they are right now. The mission is placed in the position of control at the back of the ship where the rudder is located. All activity and decisions derive from the mission.

**Leadership:** Leadership steers the ship from a position at the rudder and develops strategy to direct the activities of the organization. Leaders serve as examples of organizational culture and values for others to emulate (Burke & Litwin, 1992; Drucker P. F., 1974).

**Strategy:** An expression of how leadership intends to fulfill the mission of the organization over time; the plan of action (Burke & Litwin, 1992; Burke W. W., 2008; Burke W. W., 2014). Strategy, Leadership and Mission combine in a position of prominence within the

model at the rear of the ship known as the quarterdeck to distinguish key transformational factors from the other elements and make decisions based on the needs of the enterprise (Porter M. E., 1996).

**Structure:** The arrangement of activities and power within the organization (Galbraith Management Consultants, 2016). Adhering to the commonly accepted principle that structure follows strategy, the model places structure immediately adjacent to strategy. An argument can be made for the inverse, but there is no doubt the two are interrelated (Burgelman, 1983; Waterman & Peters, 1980).

**Systems:** Both informal and formalized mechanisms for coordinating activities and governing work (Burke & Litwin, 1992). Systems follow structure in the sense that systems tie structural activities together, facilitate workflow between structural nodes and provide the means of delivering resources. Examples include information, rewards, supply, appraisal, budgeting and the procedures for managing them.

**Practices:** Found explicitly in Burke-Litwin (1992), this category refers primarily to the methods of *how* managers carry out tasks related to quality, specificity, and thoroughness. Practices relate to the execution of system-oriented tasks, and result in a direct impact on climate, hence its placement between the two.

**Climate:** The prevailing cumulative social-psychological state of the organization (Burke & Litwin, 1992). Organizational climate is a reflection of the general impression personnel have of their interactions with each other, their bosses, other work units and the environment. Climate directly influences performance in the pursuit of goals that support vision.

**Vision:** Serves as an aspirational future expression of strategic goals that guide the direction of the organization (Kotter, 1996). Vision is placed in the bow of the ship to indicate

direction of purpose sought by all organizational elements and serves as an expression of performance; performance measures should align with goals associated with the larger Vision. Vision is often relegated to a subordinate element of mission or strategy, but its inclusion in the model facilitates the sense of direction and purpose for organizational members.

**Culture:** An enduring set of values and principles that govern organizational behavior (Burke & Litwin, 1992). Though they may be formally articulated and documented, they are often informally enforced, or subverted by the actions of individuals (Martin, 2002). Due to the permeating nature, and wide impact of culture on all aspects of the organization, it is placed in parallel to the other elements.

**Communication:** The sharing of information, organizational stories and lore, news and its normalizing effect. This is a new category added within the Ship of Change in the sense that it is implied, but not specified in other models. Arguably, communication in this sense could be considered an informal system. However, as previously emphasized, the flow of information through access to digital media is growing at a tremendous rate. Social networks, both digital and physical, are vast and powerful influencers of climate and culture, giving birth to new fields of study in network analysis (Downs & Adrian, 2004). The binding effect of social networks and the communication of information within them makes a case for bringing them to the forefront of consideration. Hence, the model reflects communication running in parallel to culture as a framing factor with other elements.

When contemplating elemental relationships, mission is in the position of control and is interpreted by leadership. Leadership develops strategy, and strategy begets structure. Systems facilitate and support structure. Managers carry out systems through practices, which are reflected in climate. All elements are framed by communication and culture in the pursuit of a



strategically derived vision. Conversely, climate is cumulative and influences (positively or negatively) managerial practices which reflect limitations within systems. Systems can smooth the inadequacies of poorly structured organizations or hamper correct structures with inadequate connectivity. Structure and strategy are interlocked where alignment is critical to the success of both. Leaders are pivotal to the success of the strategy based on their understanding of the mission and the environment, adherence to the cultural foundation of the organization and articulation of the vision. Each element is interrelated and inseparable.

The removal of arrows and the placement of contiguous boxes conveys the sense that the elements respond to changes or events in other areas, reverberating outward and reflected back. Similar to ripples in a pond, a ship reverberates with the impact of waves, and shifts in wind or current. The entire ship, like an organization, exists surrounded and exposed to the environment.

This concept translates to the interplay of organizational elements, whether the changes are internal or external to the organization. As an internal example, a shift in information systems policy could lead to a misalignment with organizational structure, which is an expression of strategy. The resulting incongruence leads to change resistance to the policy, the formation of new norms, which subsequently effect climate as a manifestation of change in practices. As an external example, changes in the market where the organization operates affect all elements of the model. This is reflected by the environment depicted around the model as with a ship in the ocean. Though the ship itself creates a point of distinction between internal and external elements, the model and metaphor allow for an intuitive grasp that the environment can be felt across all organizational aspects, not at a specific or isolated point of entry.

## Ship of Change, Tier 2: Full Perspective

To address the multi-dimensionality issue mentioned by Burke-Litwin, the ship may be viewed from the side to see how the core elements interact with the work units and add depth to the metaphor. Work Unit n depicts the interrelated elements of the work unit associated with performance as drawn from the literature. Tier 2 facilitates visualization of the multi-dimensional aspect of an organization to convey the impact of individuals on group, groups on other groups and the assembly of elements into the larger organization. The study does not seek to pursue assessment of individual activity and productivity, but it is important to convey the cumulative effect of interactions at the individual and work unit level.

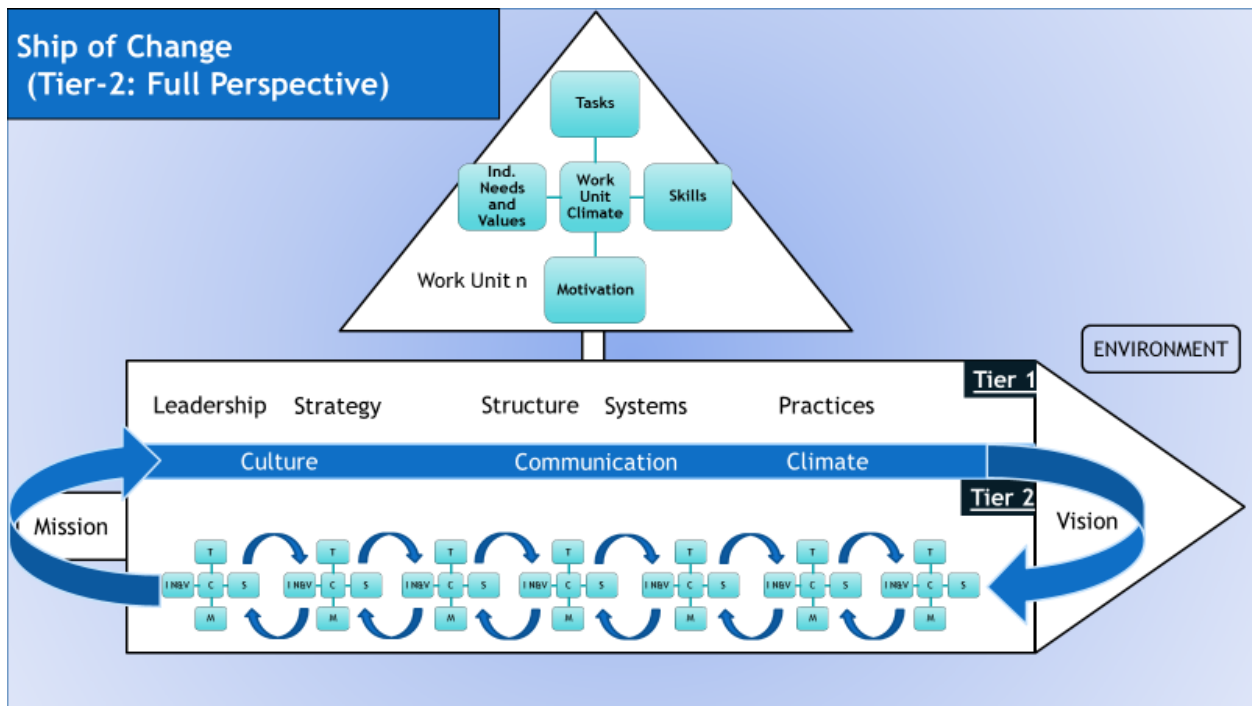


Figure 3. The Ship of Change, Tier-2: Full Perspective

Notice first that Work Unit n is placed in the position of the sail. Work unit activities are the driving factor of productivity. They are the components of an organization that capture resources from the environment and transform them into productive output. This concept is

closely related to the central portion of the Nadler-Tushman model, and the lower portion of the Burke-Litwin model. This is the area where business is conducted, the belly of the ship.

**Tasks:** What the work unit is asked to do in support of strategic goals.

**Skills:** The training and abilities of the unit to conduct the tasks.

**Motivation:** Separate from formal incentives, motivation is the feeling of importance or criticality of the work unit function (Nadler & Tushman, 1980)

**Individual Needs and Values:** The makeup of the individuals within the work unit.

Members come to work with their own needs that shape their willingness to participate, and the values that shape their perceptions.

**Work Unit Climate:** Like organizational climate, the work unit climate reflects the prevailing cumulative social-psychological state, but specific to the work unit. The organizational climate is made of the aggregated work units across the enterprise in varying degrees.

Tier 2 helps visualize the interrelated nature of strategic organizational elements and the work unit components. When viewed from the side, the Ship of Change conceptualizes the interplay between leadership, strategy, structure, systems and practices on the organization (made up of work units) through the construct of culture, communication, and climate. This interplay serves to bind the organization to what it is (as expressed by the mission) and where it is going (as expressed by the vision).

## **PART II: CASE STUDY**

### **Design**

The case study served three purposes: 1) test and illustrate the applicability of the model in a field setting; 2) demonstrate communications as a viable central element in diagnosis and; 3) refine the model as a diagnostic tool.

The overall objective of the case study was to examine the veracity of the model developed and demonstrate practical application of the model for diagnosing the need for change through elemental relationships. The pilot study focused on assembling appropriate data to evaluate the change needs of the organization starting with communication satisfaction related to climate and culture. The elements depicted in the Ship of Change are well established in the Burke-Litwin model with the exception of Communication as a standalone element. Data collection activities centered on communication satisfaction as a means of demonstrating the significance of communication and to warrant its prominence in the model.

A multiple methods application was chosen to generate a rich source of data to apply to the model and facilitate greater contextual understanding of the organization. The methods included a Communications Satisfaction Questionnaire, workplace observations, and interactive interviews. Organizational documents (e.g. newsletters) and displays (e.g. information boards and posters) were reviewed for cultural context.

All ethical precautions were taken to ensure confidentiality of the company and participants according to the standards of the Internal Review Board process of the university.

### **Participant Description**

The case study was conducted with an international trucking company in North America. It is one of 17 business units making up a larger corporation specializing in

transportation and third-party logistics services operating worldwide. The trucking company operates independently with its own president and internal hierarchy but relies on the corporation for specialized technical and managerial support. Truck company personnel are dispersed across western North America at 11 locations, some collocated with other corporate entities and others at independent locations. The company headquarters is collocated with the corporate headquarters (location nine in Table 1).

For the purposes of delineation and the application of the model, the trucking company was viewed as the primary organization and its parent corporation and sister activities as part of the operating environment. Though the trucking company operated in close relationship, and within a broader business strategy with the parent company, the trucking company was the focus of the study. In a larger case study with the parent company, the trucking might have been a work unit of the larger company, but in this case, the trucking company was the focus.

Locations were grouped regionally to provide a larger pool of participants for statistical analysis and to protect confidentiality of small sample size locations as indicated in Table 1. With the exception of location nine, company locations were primarily transportation hub warehouse operations performing cross-dock shipping, receiving, packaging and storage services. Customer service and sales operations were performed at most locations. Truck drivers and laborers were unionized separately by region/location. Sales personnel and managers were not unionized; customer service personnel are only unionized at one location. The personnel count in Table 1 reflects a snapshot of personnel approximately midway through the study. Personnel numbers fluctuated slightly during the study through normal attrition and hiring practices.

Table 1. Participant Personnel Locations and Grouping.

Group	Location	Personnel
Alaska	1	32
	2	75
	3	10
		117
Canada	4	4
	5	48
		52
West Coast	6	3
	7	1
	8	51
	9*	23
		78
Texas	10	8
	11	21
		29
Total Personnel		276

Note: \*Indicates company headquarters office

The participant company had a history of culture improvement efforts with consulting companies, primarily focused on the use of surveys to test culture and climate health annually for the three years before this study. Prior to 2016, past surveys showed the participant company with more negative culture aspects than other companies under the same parent company. As a result, the company president committed to a culture improvement initiative which began with him personally interviewing every employee in the company over a one-year period. His key finding was a significant level of dissatisfaction in the quality and timeliness of communication across the organization.

After researching consultant options in the local area, he launched a culture improvement initiative called “Excellent Cultures” in 2016 which focused on improving employee satisfaction through communications training and manager/supervisor development. The top executives and managers were trained in improving communications through the program and the results were immediate. In fact, the improvements were so dramatic they were seen as suspicious by the parent company and survey consultants. However, subsequent surveys upheld the improvements from predominantly negative or neutral to predominantly positive results.

One consulting survey was titled “Values & Measurable Behaviors” and was divided into the areas of Efficiency, Safety, Unified Performance, Accountability, Commitment, and Integrity/Respect. The survey results made available to this study were from April 2016 and included 103 respondents from the company. The demographics of the respondents were not identified in the documents provided, but the survey results indicated a largely positive culture aligned with the values listed above. However, it also identified areas of dissatisfaction related to organizational communication, teamwork, and clearly defined goals without indicating specifics.

A second outside consulting survey summary entitled “Employee Satisfaction Survey with Engagement Index” was made available to this study for comparison. This survey, sponsored by the parent corporation, was the third in an annual series that began in 2013. It included 233 respondents across the company at all locations. The survey included areas of consideration including effectiveness of leadership and management, communication, pay and benefits, operational effectiveness, organizational practices, employee recognition, work life satisfaction, and employee commitments. The results were dated December 20, 2016 and another survey was taken at approximately the same period as this study, but results were unavailable at the time.

The results of the employee satisfaction survey included an overall satisfaction assessment that was largely positive with an 85% “favorable” and a 15% “unfavorable” value. The survey provided a comparison to a regional and national norms in each of the rated areas. It was not clear how the comparative norm data was attained. The results summary included a comparison to the 2013 baseline and indicated significant improvement in all areas. Included in the report was an assessment of employee engagement that indicated the company had 46% engagement, 50% partial engagement and 4% disengagement; much better than the national norm, according to the summary. The results concluded with an estimate of strengths and opportunities identified from the survey and four recommendations for improvement:

- (1) Seek ways to provide quality communication throughout distributed workforce.
- (2) Consider ongoing supervisor coaching on recognizing employees, holding people accountable and ensuring aligned communication.
- (3) Look for ways to solicit employee input into equipment and facilities decisions.
- (4) Consider pay and benefits education so employees have a clear picture of their total rewards.

The benefit of these conditions to the study was that the cultural maturity of the company was high enough to make it more challenging to find areas of improvement not already identified. The company addressed low hanging fruit in the area of improvements and required a deeper analysis to move forward. It was noted at the start of this study that the above surveys were not accompanied by interviews or observations in the workplace.

### **Data Collection**

Data collection for the study ran from September 2017 until March 2018. Data collection was conducted using four methods in two phases with participant observation on-going from first



contact with the organization. Each technique for data acquisition served to build a picture of the organization and its components.

## **Phase I**

Document examination: the study reviewed documents related to elements within the model to establish an understanding of formal systems and policies. Though not directly related to human studies, data from documentation served as comparison of observed activities and behaviors with organizational expectations as well as context for subsequently attained data. Documents and pictures related to operations, policies, and cultural elements were collected primarily in a digital format to provide context to the study. They were categorized according to their relation to model elements. Documents included the current newsletter published internally by the parent company, safety posters and policies, and maps showing the dispersion of company locations. The company provided personnel accountability documents reflecting the location, quantity, gender and role of employees. Pictures were taken of operational facilities, bulletin boards, posters and signs, and workspaces to provide references for the evaluation of communications channels. Model elements were identified in organizational documents and publications related to the environment through qualitative coding (Rubin & Rubin, 2012; Charmaz, 2014).

Survey: The Downs-Hazen Communication Satisfaction Questionnaire (CSQ) (Downs & Adrian, 2004) was administered as a confidential employee survey to establish workplace satisfaction specifically related to climate and culture. The CSQ was a well-established academic survey that links communication satisfaction with climate and culture. The questionnaire provided background for further investigation in the interview stage.

General participant observation: the researcher conducted a participant observational study to support emerging understanding of management practices, workplace climate, adherence to cultural norms and general fit between formal and informal systems. Specifically, the researcher observed behavior in the form of workplace conversation, the conduct of meetings and events, and general interactions to reinforce the larger assessment of elemental fit. The researcher kept a running field log to capture observations. Observational field notes were thematically coded similarly to documents and interviews. However, it is important to remember that the researcher's presence affects the setting. Primarily, methods of analysis relied on the observational skills of the observer (Taylor & Bogden, 1998).

## **Phase II**

Personnel Interviews: Using a series of communication satisfaction questions listed by Downs and Adrien (Downs & Adrian, 2004), and an interactive interview technique (Rubin & Rubin, 2012), the researcher interviewed key leaders and employees central to the observed communication network and productivity flows. Not all questions were necessary for all interviews, and the answers given required follow-up and clarification to explore data as it emerged.

Targeted participant observation: after sufficient contextual material was collected, the study focused observations to reinforce triangulation of data collected in the survey and interviews. The use of multiple data collection methods (document examination, leader interviews, employ survey, and participant observation) coupled with ensuring adequate diversity in the range of exhibits contributed to triangulation and strengthen conclusions. The second pass of observation served as a form of respondent validation by looking at specific circumstances

that demonstrated preliminary conclusion where available and interacting with participants (Maxwell, 2013).

Table 2. Data Collection Plan Phase I.

Phase I (Broad Data Gathering)			
Method:	Document Review	Survey	General Observation
Goal:	Establish familiarity of formal policy systems related to business elements.	Identify key elements of consideration related to communication satisfaction within the company.	Gain understanding of how the company does business; how personnel interact and conduct tasks.
Description:	Company provides documents related to culture climate and communications.	An online survey of questions administered to all employees thru Qualtrics.	Observed meetings, functions, operations, etc. Coded data thematically to identify culture, climate and communication elements.

Table 3. Data collection Plan Phase II.

Phase II (Targeted Data Gathering)		
Method:	Interactive Interviews	Targeted Observation
Goal:	Gain depth of understanding related to survey results across spectrum of participants.	Observed specific workplace occurrences to gain deeper understanding of elemental relationships at play.
Description:	Participants were interviewed privately in the workplace. Participants were selected to demonstrate a cross section of the organization.	Observed targeted work groups identified as comparatively less or more satisfied in the survey.

Compiled data included 118 completed surveys, 24 formal employee interviews totaling 12 hours, 214 photos of office and operational spaces, 62 hours of interactive workplace

observations over a seven-month period and 12 monthly corporate newsletters beginning from first contact with the subject company.

### Qualitative Data Collection

The study included 24 interactive interviews using a responsive interview method which allowed subjects to expand on topics of interest and facilitated depth of discussion. Interviews were conducted at the company headquarters and the Seattle area service center, as well as the Los Angeles, Dallas and Houston centers. Interview questions were drawn from the interview bank indicated in Appendix B as they applied to expanding topics indicated as potential improvement areas in the survey or as discovered in observations and earlier interviews. The questions served as a starting point; interviews were not limited to the listed questions. Not all questions were used. Formal interviews were recorded and later reviewed in detail. Passages were selectively transcribed and coded manually to capture key points. Interviews averaged 30 minutes and ranged from 13 to 50 minutes.

Table 4. Interview Numbers by Gender and Position.

Gender	Executives	Driver/Dock workers	Customer Service	Maintenance	Ops	Sales	Total
Male	2	6	0	1	5	2	16
Female	2	0	3	1	1	1	8
							24

Interview participants represented approximately 9% of the total population of the company and excluded members from Canada and Alaska due to access and availability. Though managers were overrepresented in the interviews due to their positions relative to information flow, drivers and dock workers were better represented than in the survey. There were no female drivers or dock workers in the company at the time of the study and no male customer service workers were available at the sites to which the study had access.

The study included 62 hours of general and targeted interactive observation with the researcher moving within work areas with the permission of the company and consent of the workers according to ethical standards approved by the university internal review board. In-depth observation opportunities were limited to the Seattle area where the company provided access to one of the main service centers. Approximately 80% of observation time was spent at the service center in the Seattle area due to proximity and availability. However, limited observation was conducted at the Los Angeles, Dallas and Houston service center locations. Employees freely discussed day-to-day operations, company stories and their duties and responsibilities. Targeted observations in Phase II included shift change meetings, safety briefings, operations dispatching, customer service center and dock operations. The researcher kept detailed field notes to identify themes and commonalities.

During the observation periods, the study collected 214 pictures of company work areas, information boards, posters, pictures and meeting spaces along with the parent company's monthly newsletters released from September 2017 to August 2018. The pictures and newsletters served to inform the study of leadership messages affecting culture and provided context and reference to the interviews and observations.

Qualitative data was arranged and coded by the model categories as applicable. Issues directly related to communications satisfaction were followed up during interviews and observations. Themes and trends associated with survey results were combined in the findings.

### **Survey Data Analysis**

The survey was administered between November 2, 2017 and January 3, 2018 using the web-based survey platform, Qualtrics. After responses were collected, data was exported to SPSS version 26 for analysis.

Demographic categories captured by the survey included Gender, Age, Job Location, Job Position and Management. Race was not included due to the relative homogeneity of the organization which would allow for identification of minority individuals responding to the survey. Participants had the option to skip questions or quit the survey at any time without repercussions.

The survey consisted of 42 total satisfaction questions, five of which only applied to managers.

### **Demographic Descriptive Statistics**

134 of 276 employees (48%) signed on to the Qualtrics platform to participate in the survey. 118 (42% of population) completed the survey. Eight chose to decline consent and eight consented but did not complete the survey.

### **Gender Analysis**

The gender mix of the company population at the time of the survey was roughly 86% male and 14% female. The survey sample reflected more strongly the opinions of female members compared to the population as 26% of respondents were Females.

### **Age Group Analysis**

The company was unable to provide age statistics of the population at the time of the survey. However, they acknowledged an aging workforce, particularly among drivers. Many of the employees had been with the company since the 1980's and are nearing retirement. The pie chart (Figure 12) indicates that nearly half of those who completed the survey were over 50.

### **Job Location**

Company locations were batched in four categories to mask the identity of respondents from locations with smaller populations; several locations had as few as 1-5 personnel. Company

records at the time of the survey indicated 42% total personnel in Alaska; 28% on the West Coast; 11% in Texas; and 19% in Canada. Participants in the survey favored the West Coast with 44% of the sample (location of the company headquarters).

### **Job Position**

Six general categories were used to batch employees by position. Dock workers and drivers made up 72% of the company workforce and were underrepresented in the survey. Employees who work with computers were more likely to participate in the survey than those who did not have access to computers routinely. There were no female dock workers or drivers in the company at the time of the survey.

### **Management**

Managers were overrepresented in the survey and identify predominantly in the Operations and Safety category lending weight to the results associated with the job category. There were no managers in the dock worker or driver categories.

### **Summary of Statistical Analysis**

The statistical analysis was based on t-test statics for two variable categorical questions (gender and management), Tukey's post hoc analysis to compare within variable responses for categorical questions with more than two variables (age, location, job) and univariate analysis of variance to show interactions between independent variables. The questions covered in the analysis reflect statistical significance with an  $\alpha=.05$ .

The order of responses in the survey assigned lower number values to higher levels of satisfaction: "Extremely Satisfied" was the first available response and received a value of one; "Extremely Dissatisfied" was the last available response and received a value of seven. The general assessment of the company-wide satisfaction level was positive; average scores equal to

or lower than 3 (1-3 positive, 4 neutral, 5-7 negative). However, there were pockets of dissatisfaction and higher than average levels of dissatisfaction in several areas when variables were isolated for analysis.

There were no significant results associated with location in the analysis of variance post hoc using the Turkey formula. However, every question except Q 46 (How would others rate your productivity?) showed significance at the 95% level when comparing managers to non-managers in the 2-tailed t-test. Managers scored significantly higher levels of satisfaction than non-managers even when controlling for other variables.

Ten questions resulted in significance when comparing satisfaction between genders. In each instance females reported lower satisfaction than men.

Table 5. Gender T-Test Significance Summary.

Question	Sig. (2-tailed)	Lower Bound	Upper Bound
Q 14. Job compares to others	0.005	-1.483	-0.272
Q 15. Performance is assessed	0.030	-1.369	-0.070
Q 19. Changes in my company	0.022	-1.291	-0.104
Q 20. How problems are being handled	0.044	-1.321	-0.020
Q 21. Pay and benefits	0.007	-1.535	-0.251
Q 25. Supervisors understand the problems of the workers	0.005	-1.546	-0.278
Q 26. Company's comms motivates me	0.016	-1.296	-0.135
Q 30. Makes me feel like a vital part of the team	0.041	-1.293	-0.026
Q 32. My supervisors trust me	0.011	-1.460	-0.195
Q 40. Amount of supervision	0.046	-1.223	-0.012
Total Questions with Sig.	10		



14 questions resulted in significance when comparing age groups with 12 of the 14 showing the 30-39 age group category reporting higher levels of satisfaction than another group (4 instances each when compared to 18-29, 40-49, and 50+).

Table 6. Post Hoc Summary by Age Group.

<b>Dependent Variable</b>	<b>Greater Sat</b>	<b>Lower Sat</b>	<b>Sig.</b>	<b>Lower Bound</b>	<b>Upper Bound</b>
Q 20. How problems are being handled	30-39	40-49	0.042	-2.71	-0.04
Q 28. People have the ability to communicate	30-39	40-49	0.040	-2.57	-0.04
Q 29. Supervisor offers guidance for solving problems	30-39	40-49	0.015	-2.88	-0.22
Q 34. Conflicts are handled appropriately	30-39	18-29	0.045	-2.49	-0.02
Q 35. "Grapevine" (informal communication) is active	30-39	50+	0.036	-1.83	-0.04
Q 37. Comms with peers are open and free flowing	30-39	50+	0.015	-1.58	-0.12
Q 36. Supervisor is open to new ideas	30-39	18-29	0.028	-2.26	-0.09
Q 40. Amount of supervision	30-39	18-29	0.031	-2.34	-0.08
Q 41. Written reports are clear and concise	30-39	40-49	0.021	-2.19	-0.13
Q 42. Attitudes in my area healthy	30-39	18-29	0.022	-2.54	-0.14
Q 43. Informal communication active and accurate	30-39	50+	0.004	-1.78	-0.26
Q 44. Amount of communication in is about right	30-39	50+	0.048	-1.72	-0.01
Q 47. Productivity changed	18-29	40-49	0.020	-1.29	-0.08
Q 47. Productivity changed	18-29	50+	0.032	-0.94	-0.03
Total Questions with Sig.			14		

Post Hoc analysis of questions by Job Position yielded 57 instances of significance, 48 of which showed Ops & Safety with significantly higher levels of satisfaction than other job positions. This is not surprising due to the high level of association between managers and the operations category. The operations and safety category within the job position demographic showed significantly higher satisfaction scores than customer service in 24 questions and higher than drivers and dock workers in 13 instances. The operations and safety category was overrepresented in the survey and weighted with management participants compared to the population of the company, 59% of operations & safety respondents were managers. However, there is a clear delineation between jobs of higher satisfaction and those with lower satisfaction as reflected in Table 7 when we look at the total occurrences of lower satisfaction scores of dock workers, drivers and customer service.

Table 7. Number of Occurrences in Post Hoc Summary by Job Position.

Job Position	Number of Greater Sat.	Number of Lower Sat
Ops & Safety	48	0
Sales	6	0
Maintenance	3	0
Driver	0	14
Dock Worker	0	17
Customer Service	0	26
Total	57	57

Table 8. Post Hoc Summary by Job Position.

Dependent Variable	Greater Sat	Lower Sat	Sig.	Lower Bound	Upper Bound
Q 11. Progress in my job	Ops & Safety	Customer Service	0.006	-2.14	-0.24
Q 14. Job compares to others	Ops & Safety	Customer Service	0.001	-2.84	-0.52
Q 15. Performance is assessed	Ops & Safety	Dock Worker	0.010	-3.29	-0.28
Q 15. Performance is assessed	Ops & Safety	Customer Service	0.002	-2.85	-0.45

Table 8. Post Hoc Summary by Job Position (continued).

<b>Dependent Variable</b>	<b>Greater Sat</b>	<b>Lower Sat</b>	<b>Sig.</b>	<b>Lower Bound</b>	<b>Upper Bound</b>
Q 16.Recognition of my efforts	Ops & Safety	Customer Service	0.011	-2.97	-0.25
Q 17.Departmental policies and goals	Maintenance	Dock Worker	0.033	-3.04	-0.08
Q 18. Requirements of my job	Ops & Safety	Customer Service	0.037	-2.19	-0.04
Q 19. Changes in my company	Ops & Safety	Customer Service	0.006	-2.55	-0.28
Q 20. How problems are being handled	Ops & Safety	Customer Service	0.001	-2.93	-0.50
Q 21.Pay and benefits	Ops & Safety	Customer Service	0.022	-2.64	-0.13
Q 22. Company's financial standing	Ops & Safety	Driver	0.000	-2.56	-0.59
Q 22. Company's financial standing	Ops & Safety	Dock Worker	0.008	-3.00	-0.29
Q 22. Company's financial standing	Ops & Safety	Customer Service	0.015	-2.22	-0.15
Q 22. Company's financial standing	Sales	Driver	0.001	-2.63	-0.44
Q 22. Company's financial standing	Sales	Dock Worker	0.020	-3.04	-0.17
Q 22. Company's financial standing	Sales	Customer Service	0.048	-2.29	-0.01
Q 23. Achievements and failures of the organization	Ops & Safety	Driver	0.020	-1.83	-0.10
Q 23. Achievements and failures of the organization	Ops & Safety	Dock Worker	0.001	-2.81	-0.50
Q 23. Achievements and failures of the organization	Ops & Safety	Customer Service	0.029	-1.89	-0.06
Q 23. Achievements and failures of the organization	Sales	Dock Worker	0.007	-2.71	-0.28
Q 23. Achievements and failures of the organization	Maintenance	Dock Worker	0.041	-3.05	-0.04
Q 25. Supervisors understand the problems of the workers	Ops & Safety	Driver	0.003	-2.51	-0.34
Q 25. Supervisors understand the problems of the workers	Ops & Safety	Dock Worker	0.005	-3.26	-0.37
Q 25. Supervisors understand the problems of the workers	Sales	Customer Service	0.039	-2.52	-0.04
Q 26. Company's comms motivates me	Ops & Safety	Customer Service	0.001	-2.61	-0.43

Table 8. Post Hoc Summary by Job Position (continued).

<b>Dependent Variable</b>	<b>Greater Sat</b>	<b>Lower Sat</b>	<b>Sig.</b>	<b>Lower Bound</b>	<b>Upper Bound</b>
Q 27. Supervisor listens and pays attention	Ops & Safety	Driver	0.010	-2.69	-0.24
Q 27. Supervisor listens and pays attention	Ops & Safety	Dock Worker	0.028	-3.39	-0.12
Q 27. Supervisor listens and pays attention	Ops & Safety	Customer Service	0.012	-2.84	-0.22
Q 28. People have the ability to communicate	Ops & Safety	Customer Service	0.010	-2.58	-0.22
Q 29. Supervisor offers guidance for solving problems	Ops & Safety	Dock Worker	0.030	-3.24	-0.10
Q 30. Makes me feel like a vital part of the team	Ops & Safety	Customer Service	0.020	-2.56	-0.14
Q 31. Comms are interesting and helpful	Ops & Safety	Driver	0.048	-1.85	-0.01
Q 31. Comms are interesting and helpful	Ops & Safety	Customer Service	0.004	-2.22	-0.28
Q 32. My supervisors trust me	Ops & Safety	Customer Service	0.007	-2.70	-0.28
Q 32. My supervisors trust me	Sales	Customer Service	0.024	-2.74	-0.12
Q 33. Timeliness of information	Ops & Safety	Driver	0.030	-2.22	-0.07
Q 34. Conflicts are handled appropriately	Ops & Safety	Customer Service	0.018	-2.73	-0.16
Q 37. Comms with peers are open and free flowing	Ops & Safety	Dock Worker	0.026	-2.41	-0.10
Q 37. Comms with peers are open and free flowing	Maintenance	Dock Worker	0.020	-3.19	-0.17
Q 36. Supervisor is open to new ideas	Ops & Safety	Driver	0.026	-2.20	-0.09
Q 36. Supervisor is open to new ideas	Ops & Safety	Dock Worker	0.023	-2.95	-0.14
Q 38. Practices are adaptable to emergencies	Ops & Safety	Driver	0.009	-1.97	-0.18
Q 38. Practices are adaptable to emergencies	Ops & Safety	Dock Worker	0.011	-2.68	-0.22
Q 38. Practices are adaptable to emergencies	Ops & Safety	Customer Service	0.008	-2.09	-0.20
Q 39. Meetings are well organized	Ops & Safety	Driver	0.009	-1.96	-0.18
Q 39. Meetings are well organized	Ops & Safety	Dock Worker	0.006	-2.66	-0.29

Table 8. Post Hoc Summary by Job Position (continued).

Dependent Variable	Greater Sat	Lower Sat	Sig.	Lower Bound	Upper Bound
Q 39. Meetings are well organized	Ops & Safety	Customer Service	0.001	-2.26	-0.39
Q 40. Amount of supervision	Ops & Safety	Customer Service	0.006	-2.54	-0.27
Q 41. Written reports are clear and concise	Ops & Safety	Driver	0.013	-1.93	-0.14
Q 41. Written reports are clear and concise	Ops & Safety	Dock Worker	0.007	-2.64	-0.27
Q 41. Written reports are clear and concise	Ops & Safety	Customer Service	0.009	-2.07	-0.19
Q 42. Attitudes in my area healthy	Ops & Safety	Driver	0.025	-2.46	-0.10
Q 42. Attitudes in my area healthy	Ops & Safety	Customer Service	0.046	-2.49	-0.01
Q 43. Informal communication active and accurate	Ops & Safety	Driver	0.016	-1.94	-0.13
Q 43. Informal communication active and accurate	Ops & Safety	Dock Worker	0.046	-2.43	-0.01
Q 43. Informal communication active and accurate	Ops & Safety	Customer Service	0.018	-2.03	-0.12
Q 44. Amount of communication in is about right	Ops & Safety	Driver	0.029	-2.15	-0.07

In 21 instances the survey resulted in significant differences between element of different categories as demonstrated through the univariate analysis of variance. In the next section, profile plots were used to illustrate differences in mean responses between variables where univariate analysis of variance test of between-subjects effects indicated statistical significance.

Table 9. Summary of Univariate Significance.

Question	Source	Sig.
Q 13. Company's policies and goals	Age * Loc	0.040
Q 15. Performance is assessed	Age * Job	0.023
Q 17. Departmental policies and goals	Age * Loc	0.026
Q 18. Requirements of my job	Gender * Job	0.021
Q 18. Requirements of my job	Age * Loc	0.004
Q 20. How problems are being handled	Age * Loc	0.030

Table 9. Summary of Univariate Significance (continued).

Question	Source	Sig.
Q 20. How problems are being handled	Loc * Job	0.041
Q 26. Company's comms motivates me	Age * Job	0.031
Q 27. Supervisor listens and pays attention	Gender * Job	0.029
Q 27. Supervisor listens and pays attention	Loc * Mngr	0.025
Q 32. My supervisors trust me	Gender * Job	0.032
Q 37. Comms with peers are open and free flowing	Loc * Mngr	0.049
Q 40. Amount of supervision	Gender * Job	0.013
Q 40. Amount of supervision	Age * Loc	0.028
Q 40. Amount of supervision	Age * Job	0.020
Q 42. Attitudes in my area healthy	Age * Loc	0.027
Q 42. Attitudes in my area healthy	Age * Job	0.043
Q 43. Informal communication active and accurate	Gender * Job	0.024
Q 44. Amount of communication in is about right	Gender * Job	0.041
Q 47. Productivity changed	Gender * Loc	0.034
Q 47. Productivity changed	Gender * Job	0.019
Number of questions with univariate sig.		21

### Detailed Survey Analysis

The following analysis focuses on question aspects that demonstrated statistically significant differences between categorical variables and groups at an  $\alpha=.05$ . The significance level of the univariate analysis is indicated in parentheses in each case.

#### *Q 11 Progress in My Job*

Operations and safety showed higher levels of satisfaction (.006) than customer service regarding information related to progress in their job.

#### *Q 13 Information about my Company's Policies and Goals*

The profile plot comparing differences between age and location (.040) illustrates significant differences in mean responses to Q 13 when comparing age and location where participants in the 40-49 age group had higher than average dissatisfaction when located in

Canada, West Coast, and Texas when compared to their Alaskan counterparts; the inverse was true in the 30-39 category (except Canada with no responses).

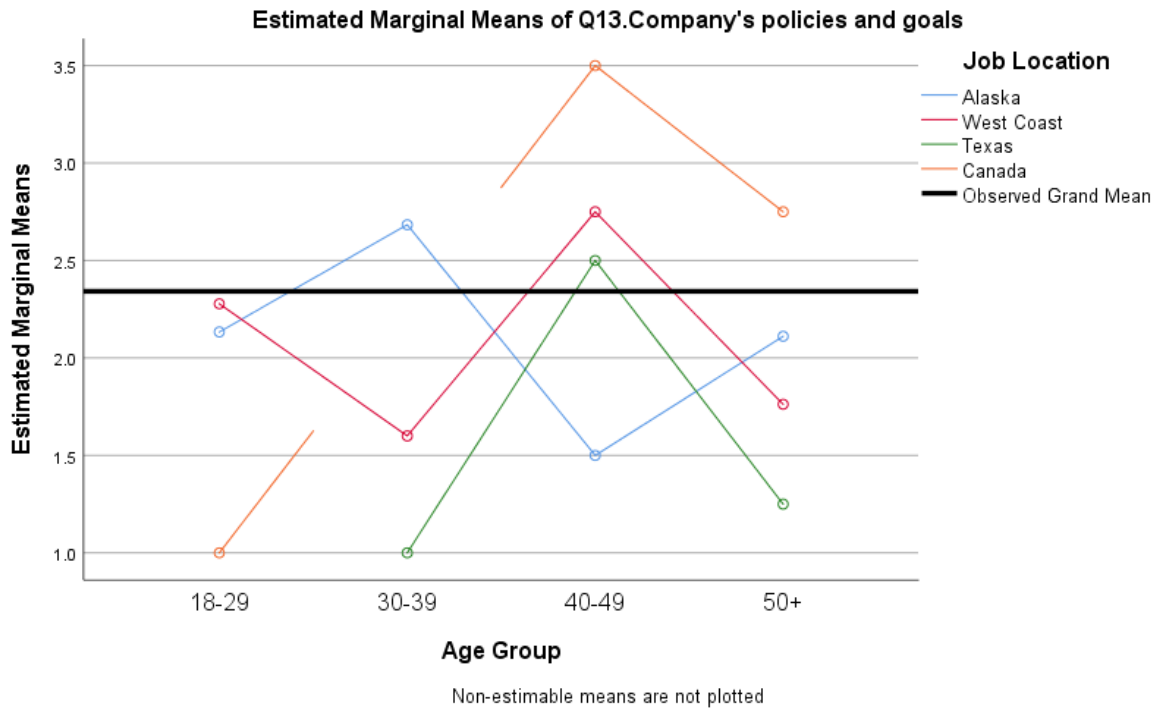


Figure 4. Age Group vs. Job Location Profile Plot Q 13

**Q 14 Information about how my Job Compares to Others**

Females significantly (.005) reported lower levels of satisfaction compared to men on Q 14 regarding information about how their job compares to others. Customer service was predominantly made up of females, so it follows that significance is indicated when compared to operations and safety.

**Q 15 Information about how my Performance is being Assessed**

Females, dockworkers and customer service reported lower levels of satisfaction related to how their performance was being assessed as indicated in the results of Q 15.

There were significant (.023) differences when comparing age groups between locations.

Dock workers in the 30-39 category reported higher satisfaction about how their performance

was being assessed than any other category which all fell below the grand mean. Likewise, all reporting age groups in customer service reported satisfaction levels below the mean. Only drivers in the 40-49 age group reported lower satisfaction levels.

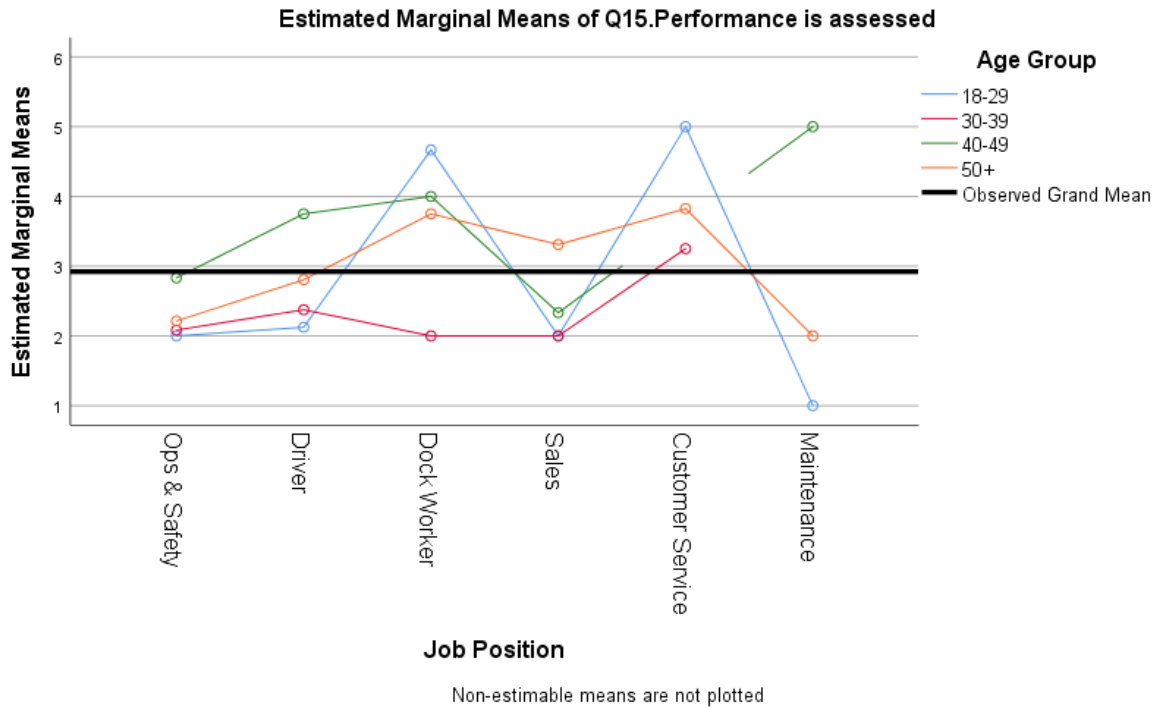


Figure 5. Job Location vs. Age Group Profile Plot Q 15.

**Q 17 Information about my Departmental Policies and Goals**

Maintenance workers reported greater satisfaction than dock workers regarding information about departmental policies and goals (Q 17). Maintenance is a relatively small group in the organization (5.7%) and only 6.6% of the survey sample. Contract maintainers (non-employees) were excluded from the survey. Maintenance personnel are primarily in management or administrative roles and exposed to great information level regarding goals and polices by the nature of their job. Docker workers, conversely, had little to no exposure to managerial or administrative information.



The profile plot for Q 17 indicates lower than mean levels of satisfaction among the 40-49 age group at the Texas, Canada and West Coast locations and 50+ age group at the Texas location. The Alaska location scores are above the mean in the of the four age group categories.

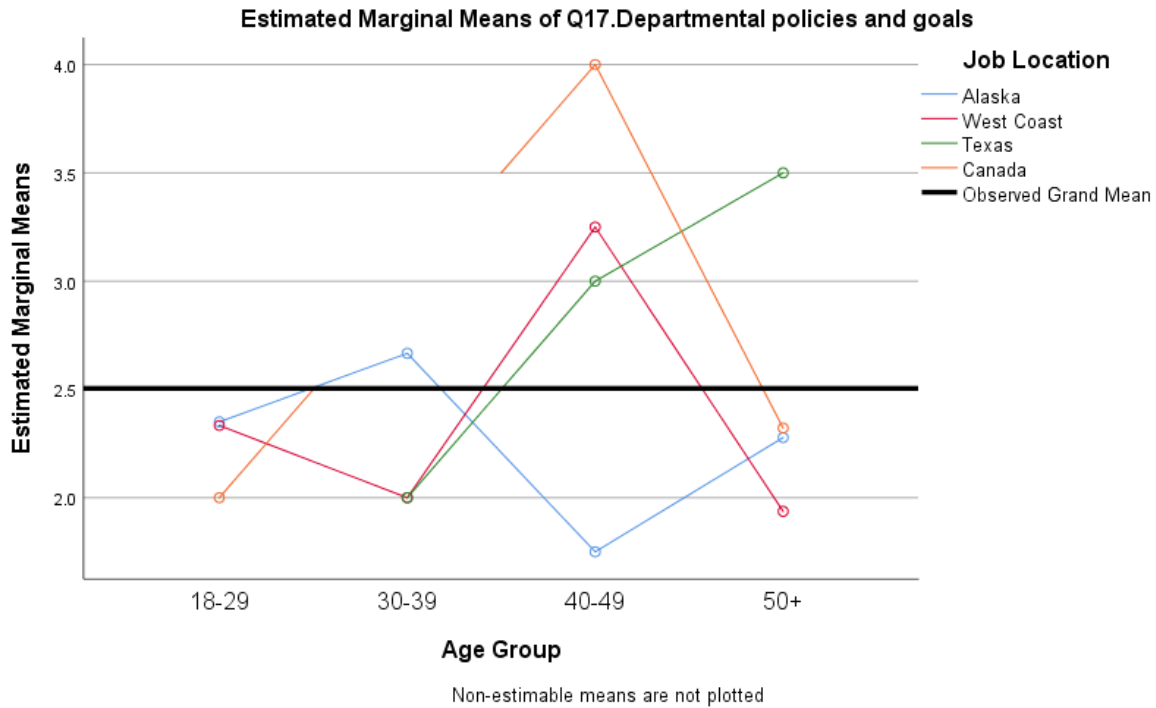


Figure 6. Age Group vs. Job Location Profile Plot Q 17.

**Q 18 Information about the Requirements of my Job**

The profile plot in Figure 13 illustrates below the mean levels of satisfaction among 40-49-year-olds in Canada, Texas and the West Coast, but higher satisfaction at the Alaska location when questioned regarding information about job requirements. While the averages remain above the neutral level, the Canada location rises into the dissatisfaction range with a score greater than four. The 18-29 group shows neutral levels at the Canada location.

Males with less satisfaction (.004) than females in customer service but both falling below the mean when asked about information regarding job requirements. Females scored significantly higher levels of satisfaction than males in the maintenance job position.

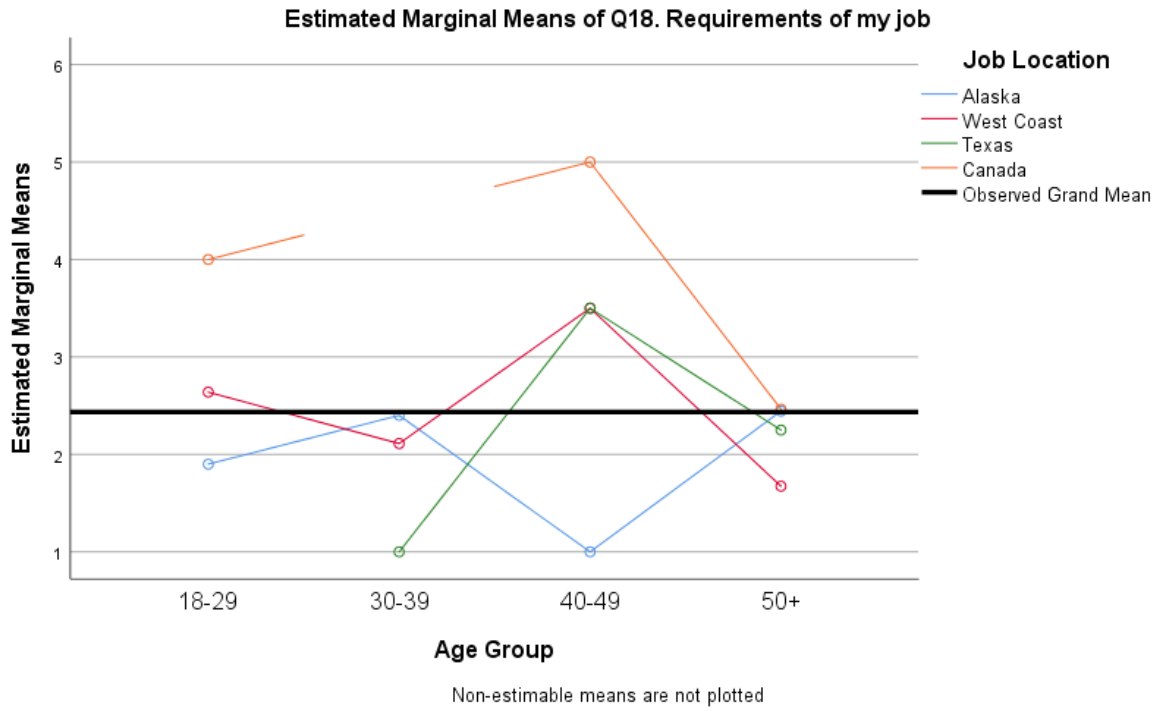


Figure 7. Age Group vs. Job Location Profile Plot Q 18.

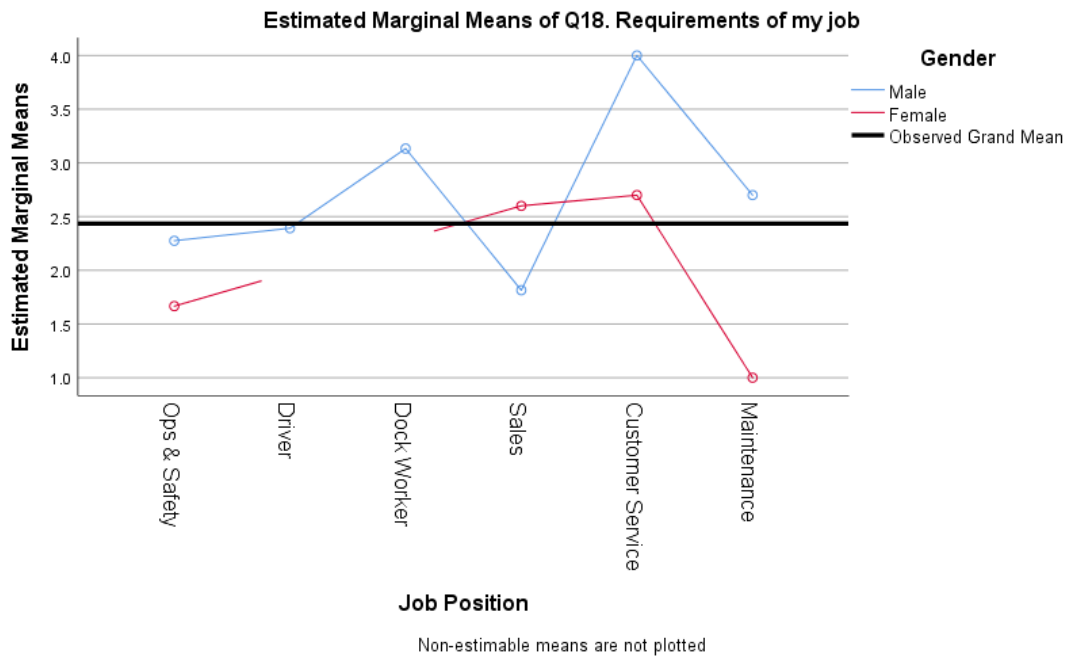


Figure 8. Job Position vs. Gender Profile Plot Q 18.

### ***Q 19 Information about Changes in my Company***

Males had greater levels of satisfaction (.022) regarding information about changes in the company. A higher concentration of females in customer service positions leads to the disparity in satisfaction when compared to Ops & Safety.

### ***Q 20 Reports about how Problems in my Job are being Handled***

There was less satisfaction (.044) between males and females, customer service and operations and safety (.001) and the 30-39 age group compared to the 40-49 group (.042) when asked about how problems are handled in the company.

18-29 age group personnel in Canada with relatively high levels of dissatisfaction about how problems are handled in the company; far higher levels than indicated by their age group at other locations. Again, we see lower than average levels of satisfaction in the 40-49 age group, this time at all locations.

Elevated levels of dissatisfaction about the handling of problems in the customer service and sales job positions at the Canada location and neutral to dissatisfied levels among dock workers, sales and customer service at the Alaska location. Notably, the Texas location shows neutral in Ops & Safety. This is notable due to the higher levels of management respondents in that job position category. The widely disparate responses coupled with a grand mean score higher than three indicates issues with local methods of dealing with problems.

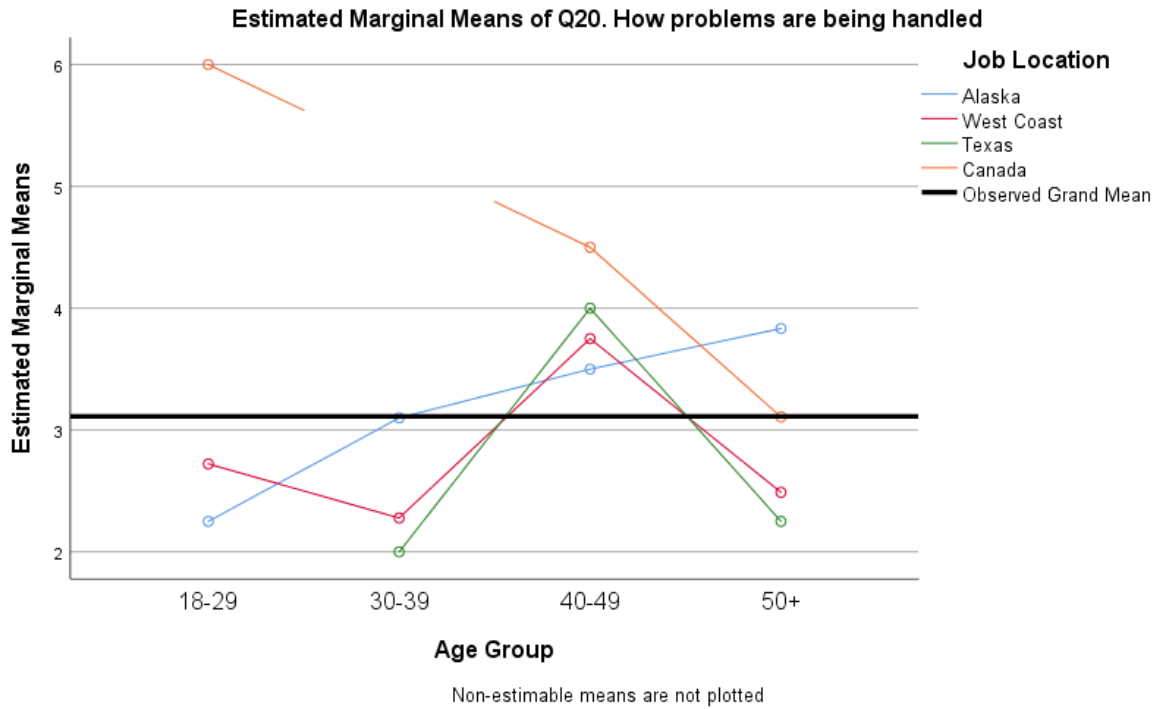


Figure 9. Age Group vs. Job Location Profile Plot Q 20.

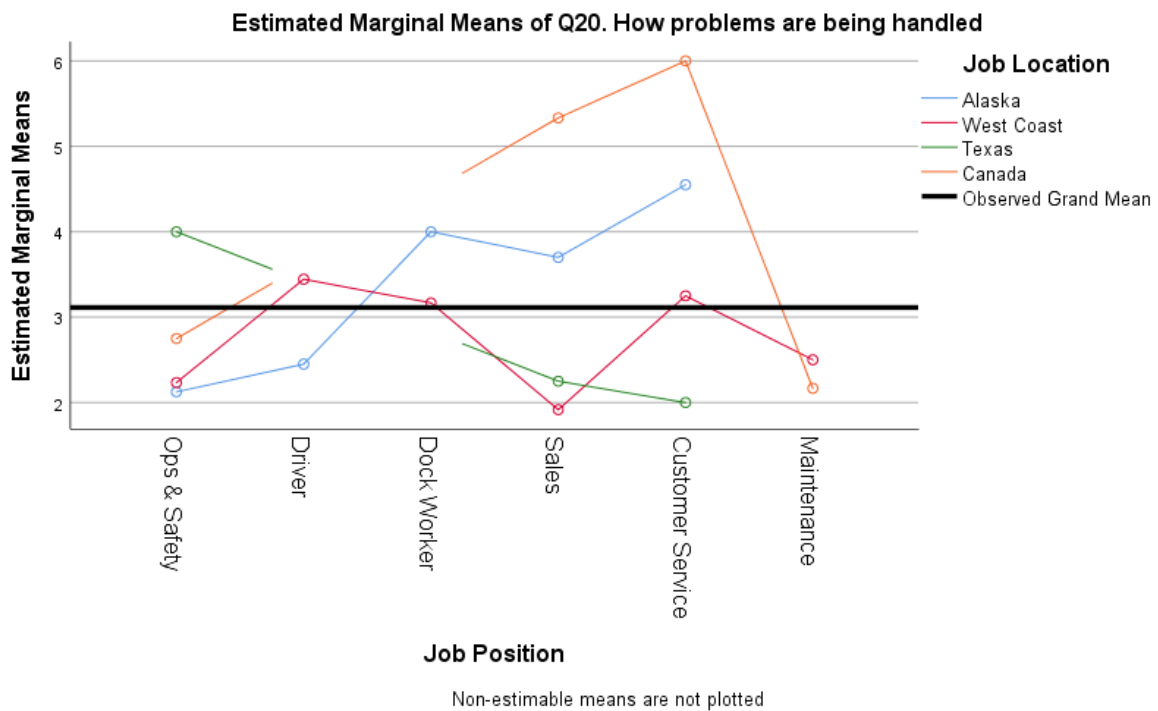


Figure 10. Job Position vs. Job Location Profile Plot Q 20.

### ***Q 21 Information about Employee Pay and Benefits***

There were lower reported levels of satisfaction (.007) among females compared to males regarding information about pay and benefits. A higher concentration of females in customer service resulted in customer service with lower levels of satisfaction (.022) than Ops & Safety.

### ***Q 22 Information about the Company's Financial Standing***

Ops & Safety and Sales personnel had more access to company performance information than dock workers, drivers and customer service personnel. Scores reflected an expected disparity in satisfaction between the groups.

### ***Q 25 Supervisors Understand the Problems of the Workers***

Females had lower levels of satisfaction (.003) regarding the extent to which supervisors understand the problems of the workers. As seen previously, Operations & Safety score significantly higher than Drivers, Dock Workers and Customer Service. Sales, however, scored higher than Customer Service (.039). The Sales population has some female members, and there are no females in the Driver or Dock Worker categories. These results suggest that lower satisfaction by job position is unrelated to gender and opens the possibility that lower satisfaction in Customer Service, which is dominated by females, may have more to do with managerial practices or worker expectations within that department.

### ***Q 26 Company's Communication Motivates me to Meet its Goals***

Females scored lower levels of satisfaction (.016) on Q 26 regarding motivation from company communications which is supported by the significance indicated between Operations & Safety and Customer Service (.001).

The between-subject output indicated significance (.031) between Age and Job Position. The 18-29 group scored lower in satisfaction is working in Customer Service or Dock Work, the 30-39 group consistent scored about the grand mean, and the 40-49 group scored lower as Drivers, Customer Service or Maintenance. The 50+ age group general ran along the grand mean.

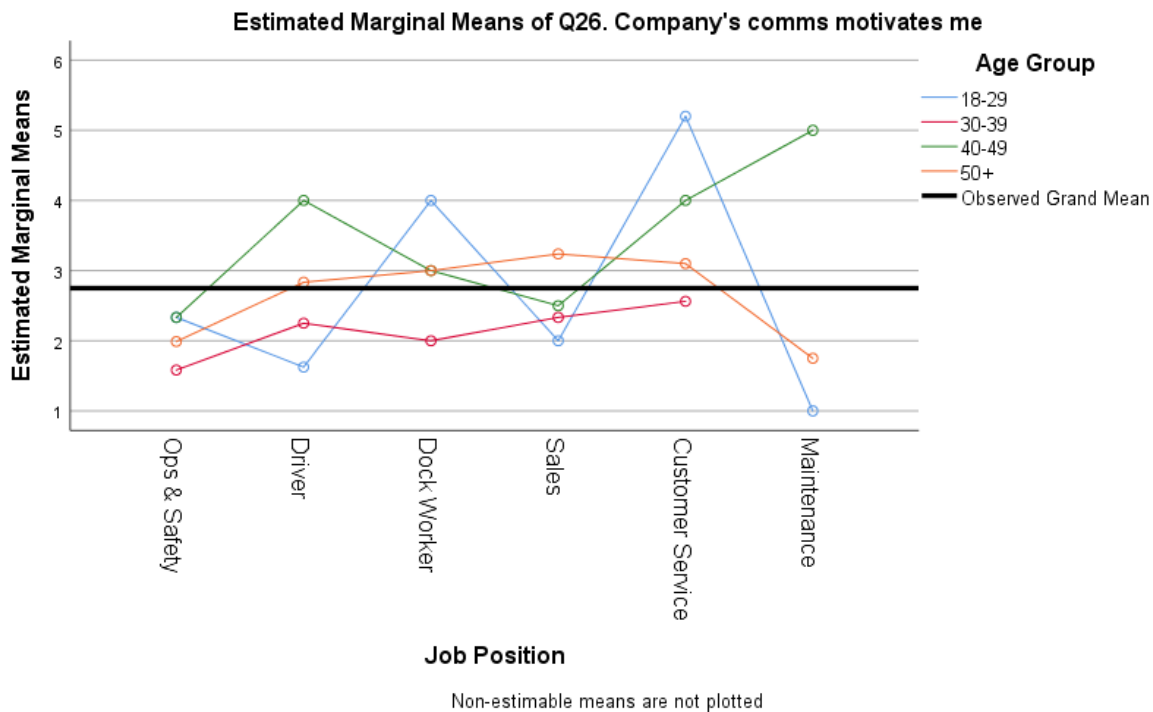


Figure 11. Job Position vs. Age Group Profile Plot Q 26.

***Q 27 Supervisor Listens and Pays Attention to Me***

The 59% of managers sampled fell into the category of Operations & Safety. There were no managers in the Driver or Dock Worker category. Results indicated that drivers, dock workers and customer service personnel score lower levels of satisfaction than Ops & Safety in regard to how supervisors listen and pay attention to them. Managers in Texas were significantly less satisfied than their counterparts at other locations, while the inverse is true of non-managers.

Lower satisfaction levels among males in Customer Service than females and the opposite in Sales.

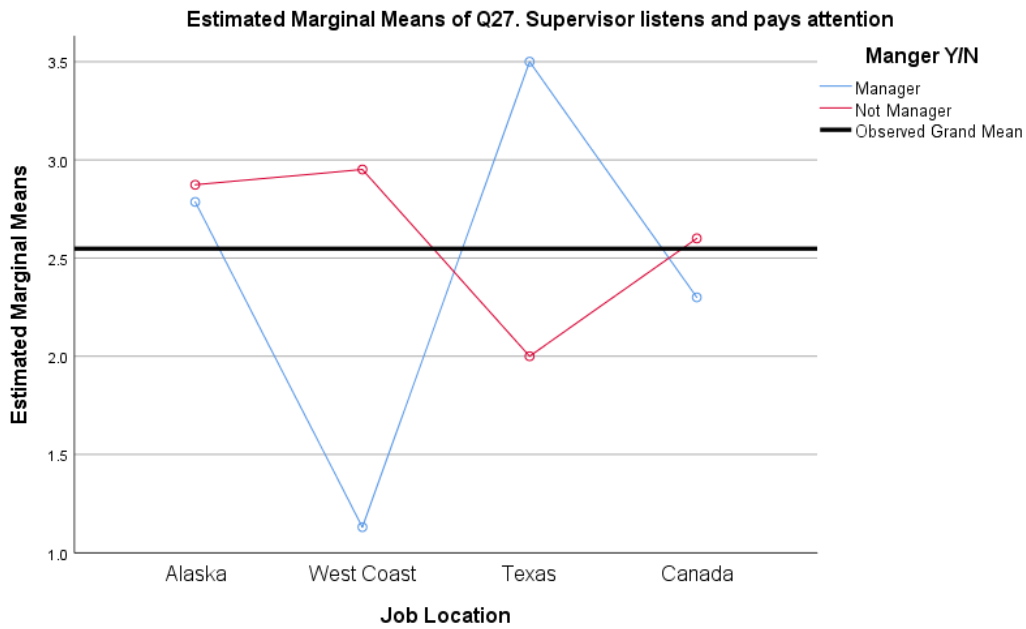


Figure 12. Job Location vs. Management Profile Plot Q 27.

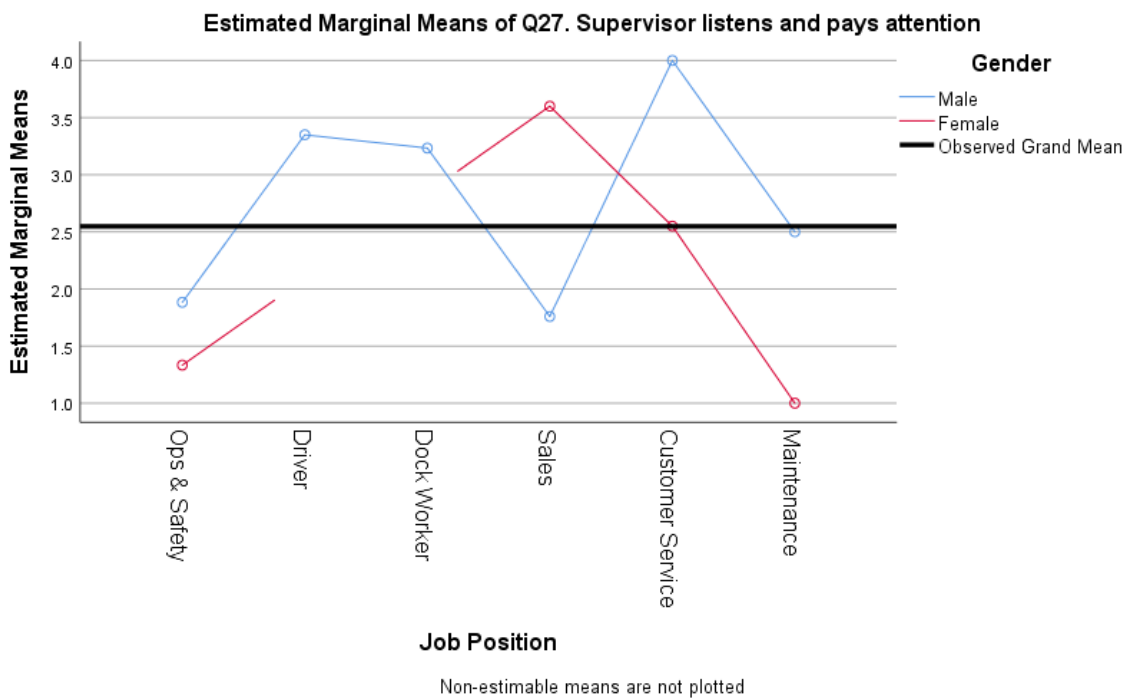


Figure 13. Job Position vs. Gender Profile Plot Q 27.

***Q 28 People in my Company have the Ability to Communicate***

Scores showed significantly (.010) lower satisfaction among customer service workers when compared to Ops & Safety related to ability to communicate within the company.

Survey results showed significantly (.040) lower satisfaction among 40-49-year-old employees when compared to 30-39-year-old employees related to ability to communicate within the company.

***Q 29 Supervisor Offers Guidance for Solving Job Related Problems***

Scores indicated (.030) lower level of satisfaction among dock workers compared to employees in Ops & Safety on regarding supervisor offer guidance for resolving problems. There was lower satisfaction (.015) among 40-49-year-old employees compared to 30-39-year-old employees.

***Q 30 Communication in my Company Makes me Feel Like a Vital Part of the Team***

Scores demonstrated lower levels (.041) of satisfaction among Females than men when feeling like a vital part of the team. Scores demonstrated lower levels (.020) of satisfaction among customer service employees compared to Ops & Safety in the same area.

***Q 31 Company's Communication is Interesting and Helpful***

Drivers (.048) and customer service (.004) employees showed lower levels of satisfaction than Ops & Safety when asked in company communications were interesting and helpful.

***Q 32 Supervisors Trust Me***

There were lower levels of satisfaction among Females (.011) compared to men when asked about supervisor's trust in them. Additionally, there were lower levels of satisfaction among customer service employees when compared to Ops & Safety (.007) and Sales (.024)



employees. Males and females in customer service and females in sales scored lower levels of satisfaction in the same area.

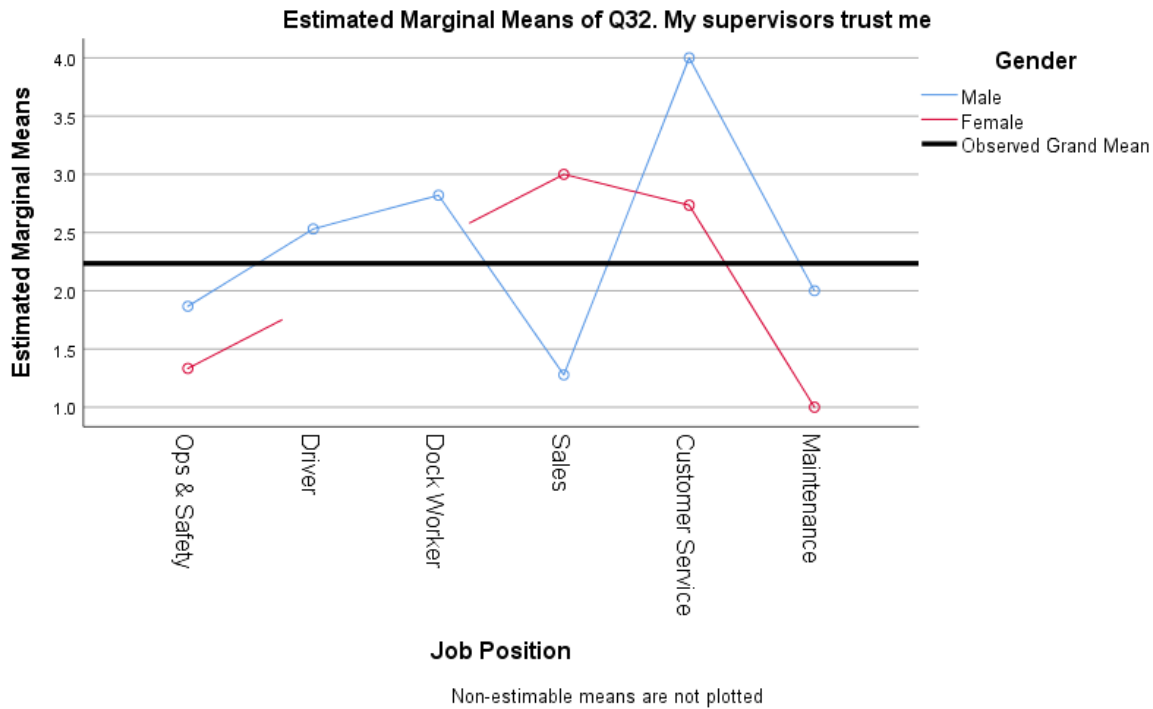


Figure 14. Job Position vs. Gender Profile Plots Q 32.

**Q 33 Timeliness of Information I Need to do my Job**

Scores reflected lower levels of satisfaction among drivers (.030) in timeliness of information when compared to Ops & Safety.

**Q 34 Conflicts are Handled Appropriately**

Scored indicated lower satisfaction scores among customer service employees (.018) compared to Ops & Safety in how they felt conflicts were handed appropriately in the workplace. There were lower levels of satisfaction among ages 18-29 (.045) compared to 30-39.

***Q 35 The "Grapevine" (Informal Communication) is Active***

Employees above the age of 50 showed lower satisfaction (.036) than those age 30-39 when asked about the "grapevine". This question was eliminated in consideration as the word "grapevine" could be interpreted positively or negatively.

***Q 36 Supervisor is Open to New Ideas***

Scores reflected lower satisfaction among drivers (.026) and dock workers (.023) when compared to Ops & Safety when asked if their supervisors were open to new ideas. Similar results occurred comparing ages 18-29 to 30-39 (.028).

***Q 37 Communication with Other Employees at my Level is Open and Free Flowing***

Scores indicated lower satisfaction levels among dock workers when compared to Ops & Safety (.026) and Maintenance (.020) when asked if information with employees at their level was open and free flowing. Employees above the age of 50 when compared to 30-39 (.015) had lower levels of satisfaction in the same area.

Mangers in Canada and Alaska scored lower levels of satisfaction than their counterparts at other locations and non-mangers at the same location as indicated in Figure 21.

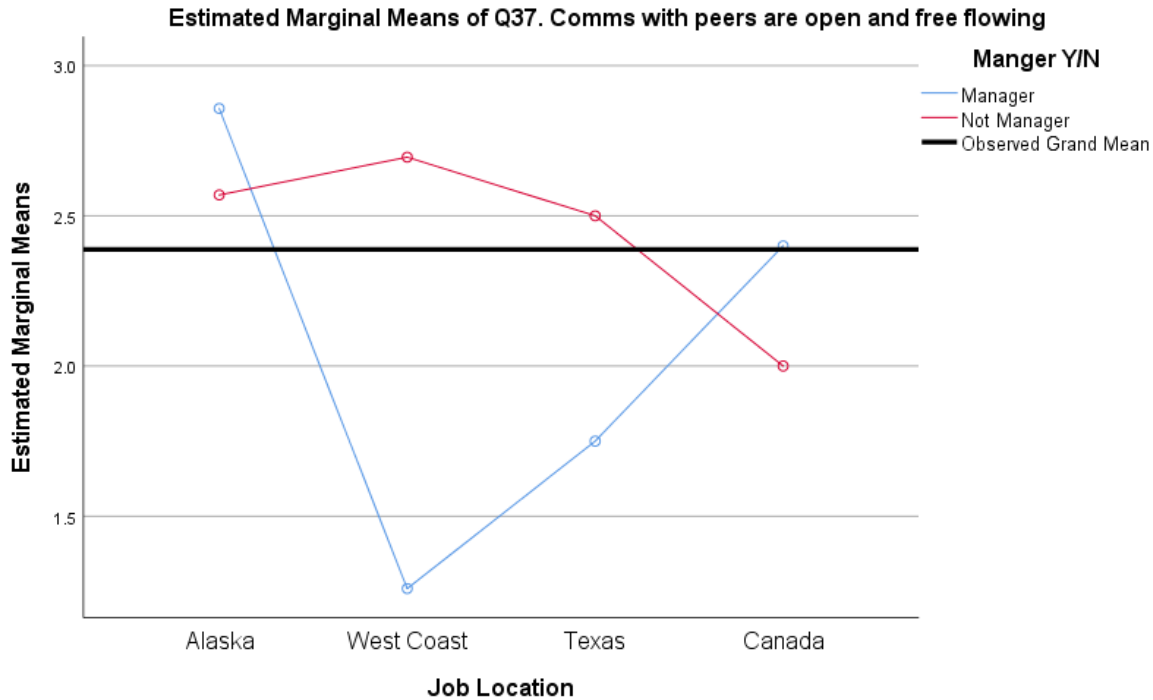


Figure 15. Job Location vs. Management Profile Plot Q 37.

***Q 38 Communication Practices are Adaptable to Emergencies***

There was lower satisfaction among driver (.009), dock workers (.011) and customer service (.008) employees when compared to Ops & Safety regarding how adaptable communications practice are in an emergency.

***Q 39 Meetings are Well Organized***

Scores showed drivers (.009), dock workers (.006) and customer service (.001) scored lower levels of satisfaction than Ops & Safety about meetings being well organized.

***Q 40 Amount of Supervision I Receive is About Right***

There were lower levels of satisfaction among customer service workers (.006) when compared to Ops & Safety regarding level of supervision being about right. 18-29-year-old employees (.031) also scored lower when compared to 30-39. Males in customer service and

females in sales scoring lower levels of satisfaction when compared to their peers as indicated in Figure 16.

Figure 17 compares satisfaction levels by age groups and location. Employees above the age of 50 and between 18-29 scored lower level of satisfaction in Alaska than their counterparts at that location. Same is true of 18-29 and 40-49 ages in Canada. 30-39 ages were highest in Texas and the West Coast.

Figure 18 compares satisfaction by age group and job position related to the question of supervision. Employees above the age of 50 showed lower levels of satisfaction when working as drivers, dock workers, sales or customer service. Same applies to ages 40-49 among drivers and 18-29 among dock workers and customer service.

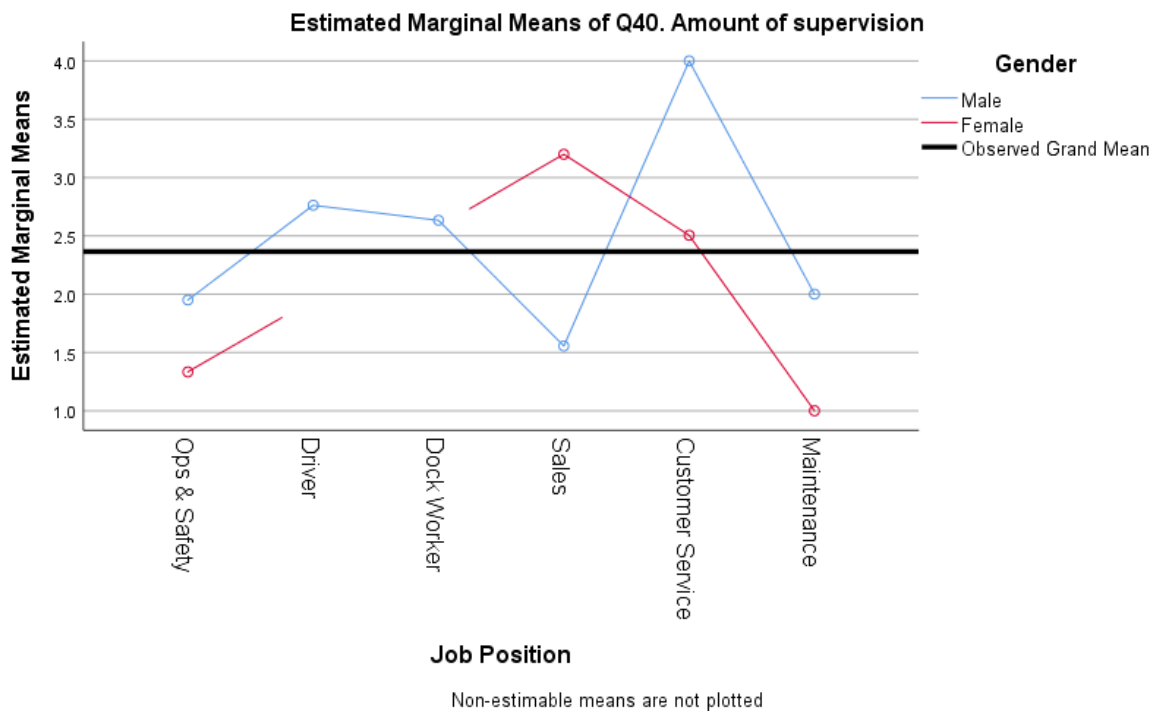


Figure 16. Job Position vs. Gender Profile Plot Q 40.

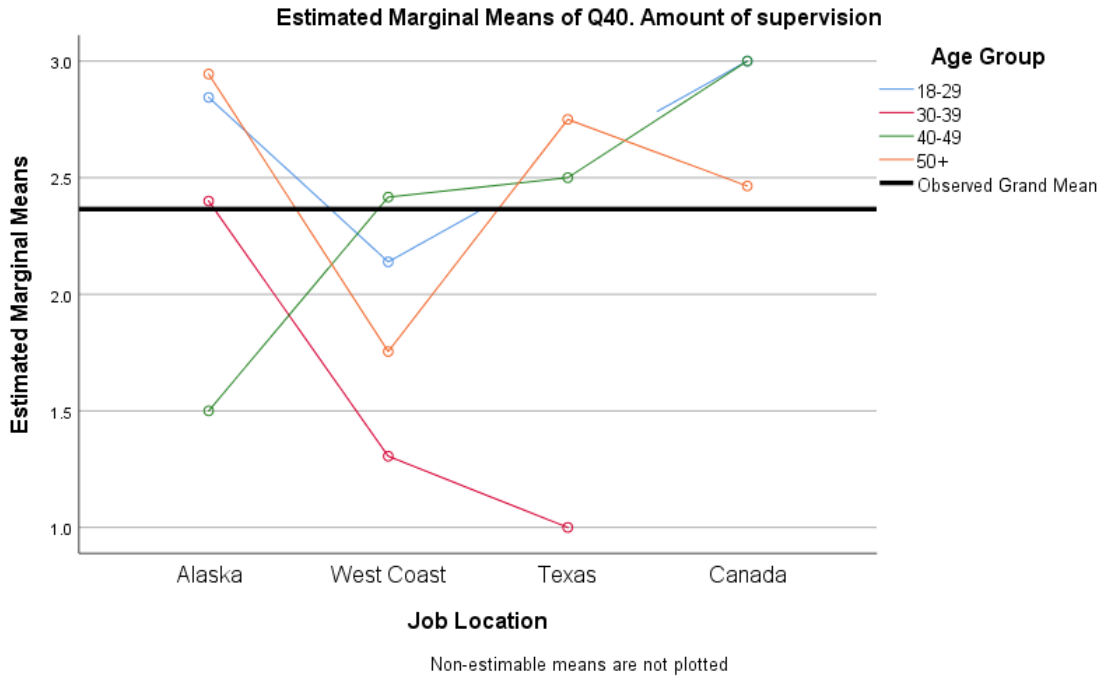


Figure 17. Job Location vs. Age Group Profile Plot Q 40.

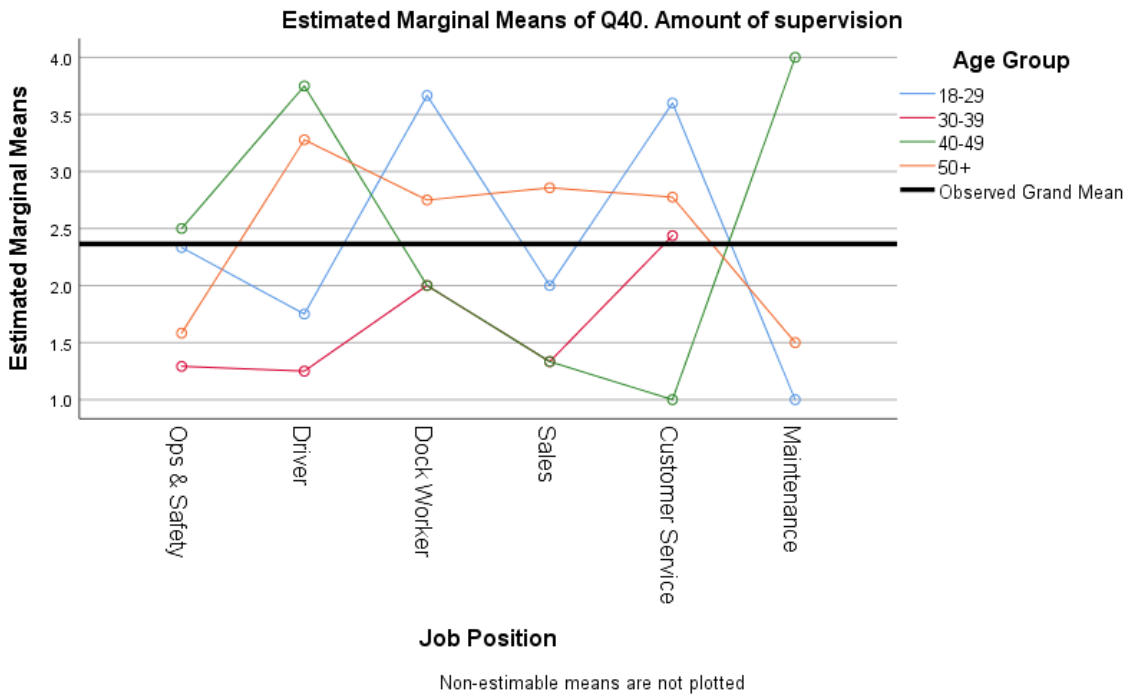


Figure 18. Job Position vs. Age Group Profile Plot Q 40.

**Q 41 Written Reports are Clear and Concise**

Scores showed drivers (.013), dock workers (.007) and customer service (.009) scored lower satisfaction than Ops & Safety when asked is written reports were clear and concise. Employees aged 40-49 scored lower satisfaction (.021) levels than 30-39.

**Q 42 Attitudes in my Company are Healthy**

Customer service (.046) and drivers (.025) scored lower levels of satisfaction when compared to Ops & Safety regarding healthy attitudes in the company. Ages 18-29 (.022) had lower levels of satisfaction compared to 30-39.

Figure 19 compares satisfaction levels by age and location when asked about healthy attitudes. Employees age 18-29 scored significantly lower than their counterparts at the Canada location.

Figure 20 compares scores by age and job position. Drivers, dock workers and customer service employees aged 18-29 and 40-49 scored lower levels of satisfaction compared to other ages in those jobs. Maintenance employees ages 40-49 also scored lower.

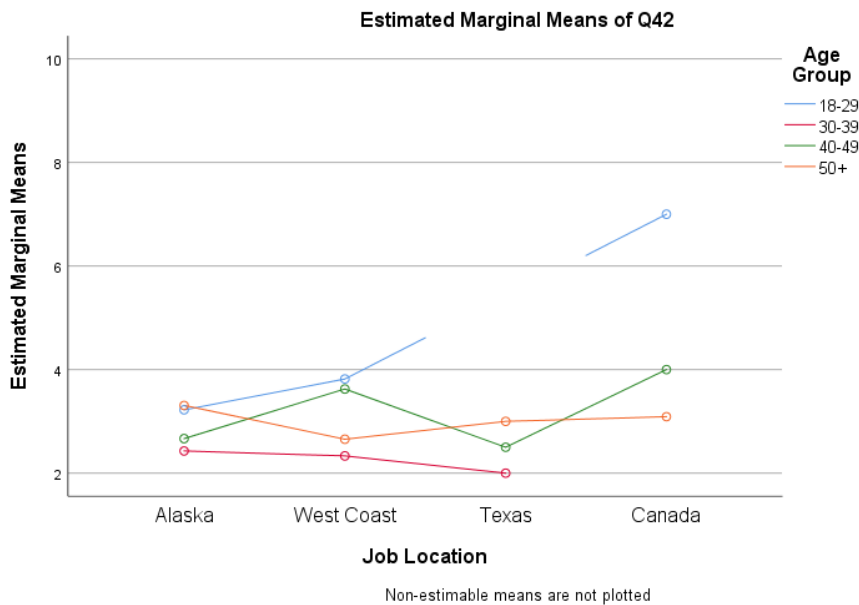


Figure 19. Job Location vs. Age Group Profile Plot Q 42.

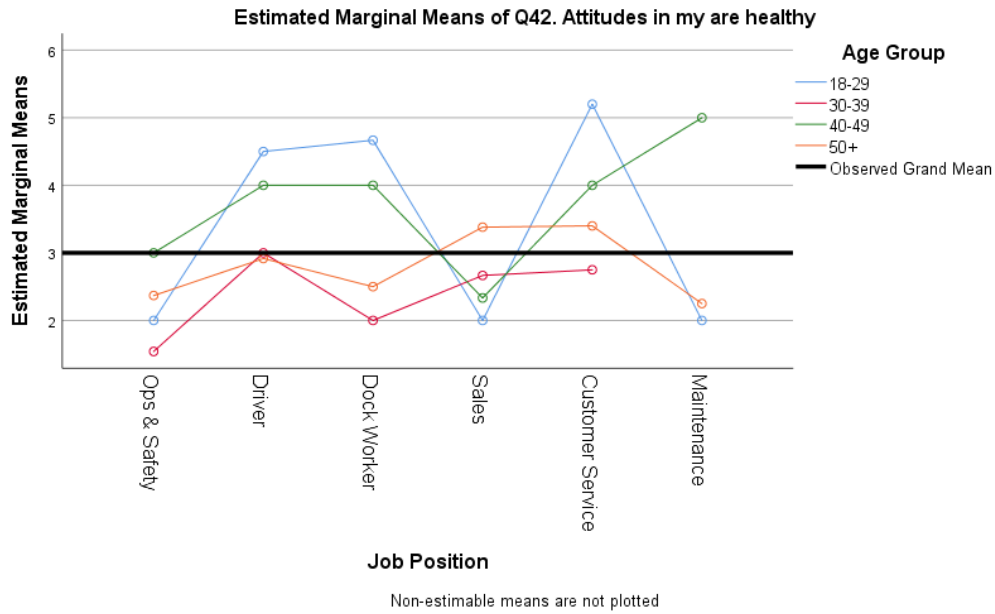


Figure 20. Job Position vs. Age Group Profile Plot Q 42.

***Q 43 Informal Communication in my Company is Active and Accurate***

There were lower scores among drivers (.016), dock workers (.046) and customer service (.018) employees when compared to Ops & Safety regarding accurate and active informal communication. Employees above age 50 (.004) scored lower than those 30-39.

Figure 21 compares scored by gender and job position. Males in customer service and Females in sales scored lower than their counterparts in those jobs.

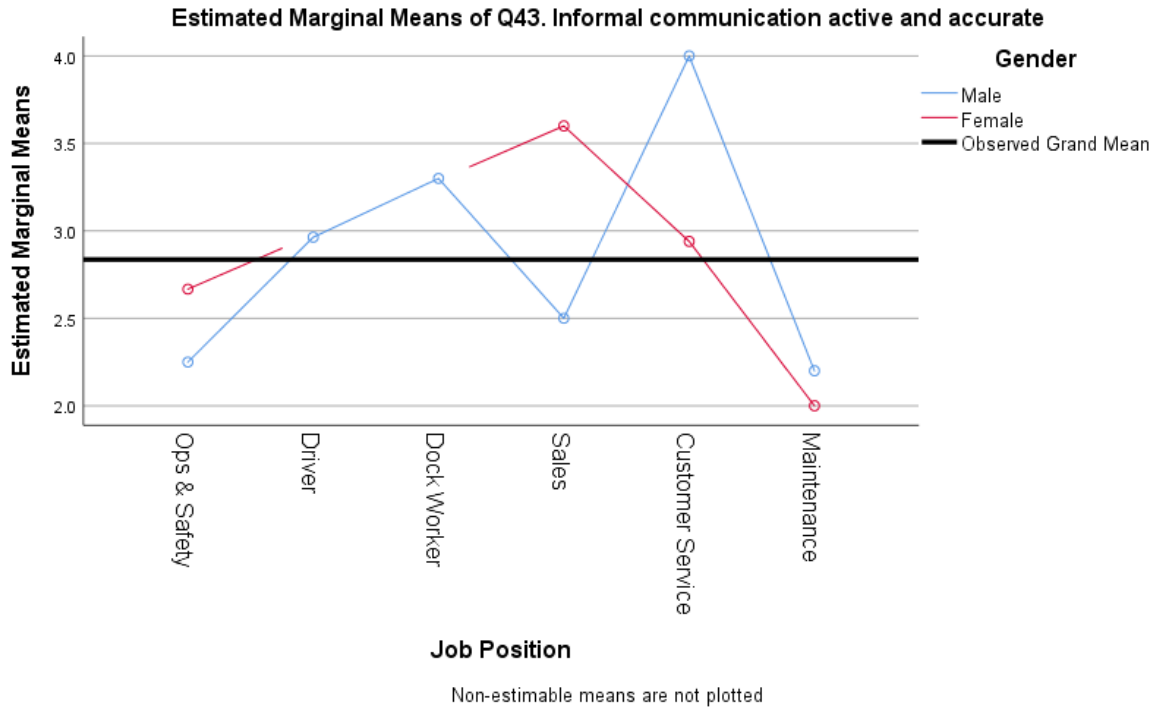


Figure 21. Job Position vs. Gender Profile Plot Q 43.

***Q 44 The Amount of Communication in my Company is About Right***

Drivers (.029) scoring lower than Ops & Safety when asked if communication is the company was about right. Employees above age 50 (.048) scored lower than those 30-39.

Figure 22 compares scores by gender and position. Males in customer service and females in sales scored lower levels of satisfaction.



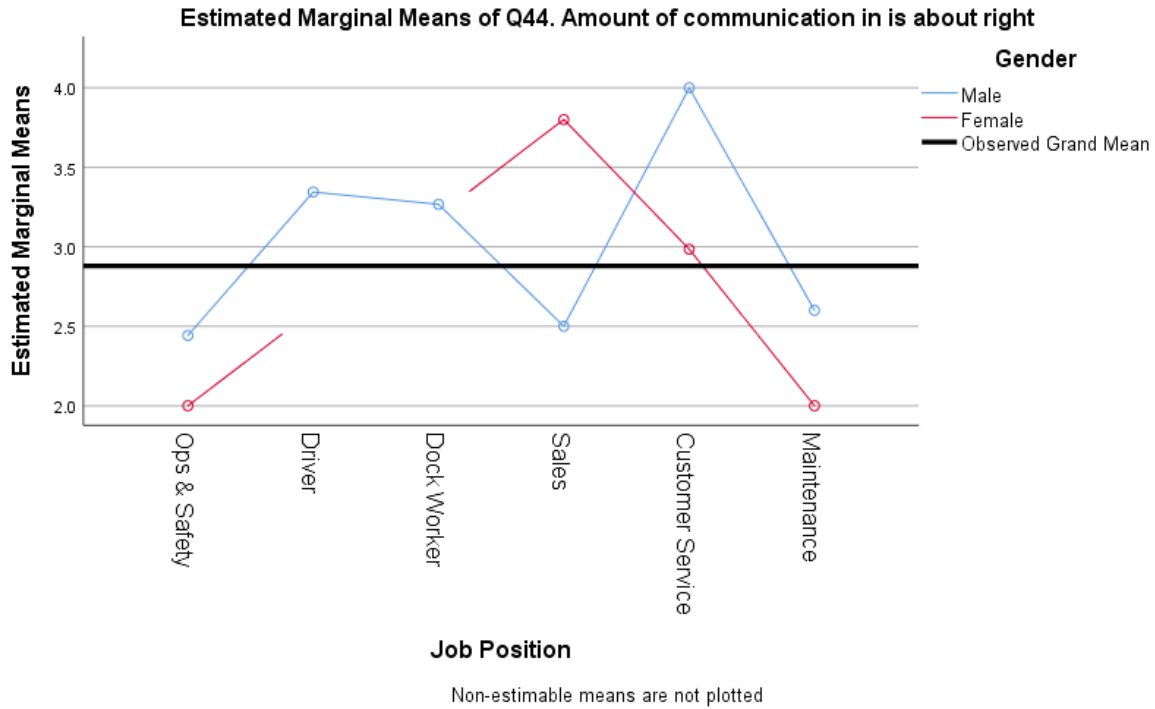


Figure 22. Job Position vs. Gender Q 44.

**Q 47 To what Degree has Your Productivity Changed?**

There were lower scores among ages 40-49 (.020) and 50+ (.032) compared to 18-29 when asked about changes to their productivity.

Figure 23 compares gender scores by location. Females in Texas scored lower than their counterparts.

Figure 24 compares scores by gender and job position. Females in maintenance scored significantly higher than males in the same position as well as the grand mean.

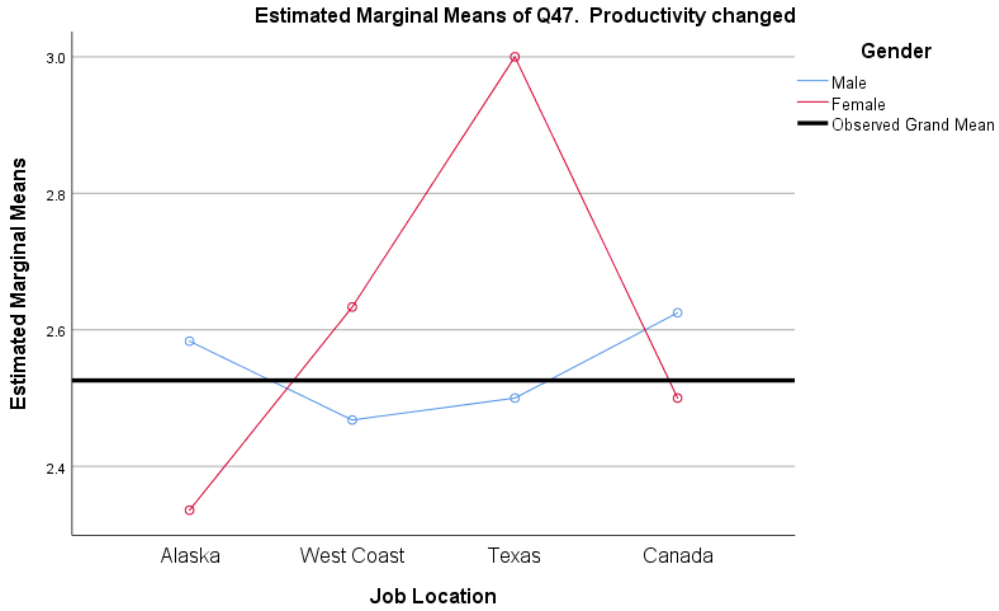


Figure 23. Job Location vs. Gender Profile Plot Q 47.

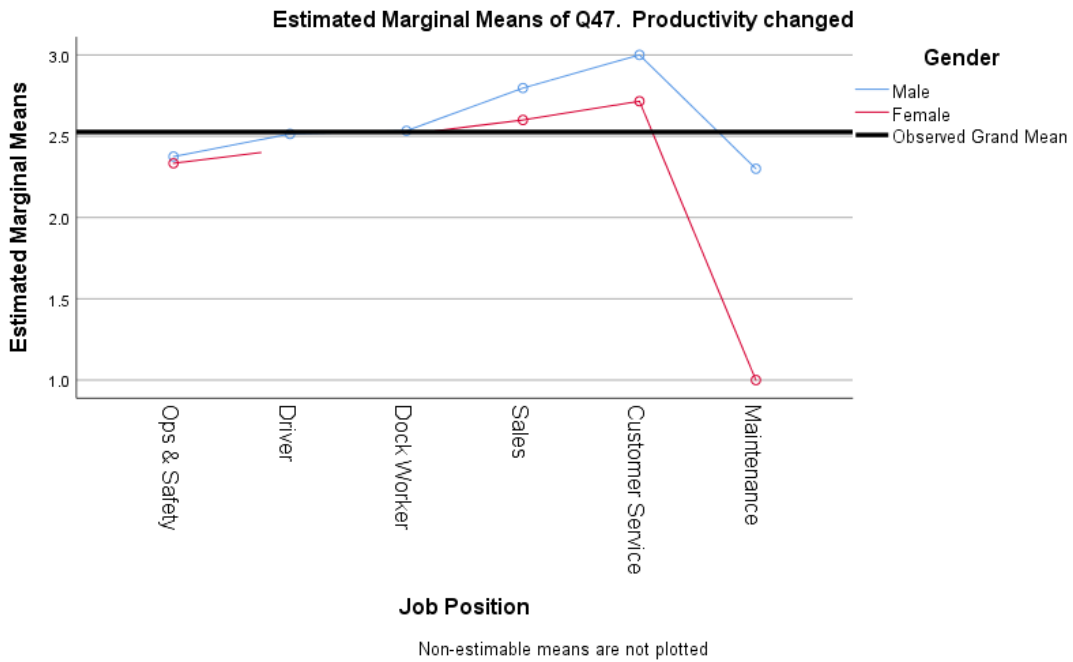


Figure 24. Job Position vs. Gender Profile Plot Q 47.

## Key Findings

The following assessment of the data and subsequent recommendations follow a pattern of identifying the issue as represented by the data, using the model elements to assess internal and external alignment (fit) and applying assessment based the model and supporting literature.

The subject company reflected a generally positive level of communications satisfaction. Though management personnel scored significantly higher in satisfaction, non-manager employee averages were generally positive, as well. All interviews were generally positive in their perception of the company and appeared at ease with speaking their opinions (with only two exception). Recent efforts to improve communication across the organization resulted in a positive cultural shift and reduced climate friction within work units. This aspect indicates good internal fit within the elements of Culture, Climate and Communication.

Operations & Safety and Sales positions consistently scored significantly higher levels of satisfaction than Drivers, Dock Workers and Customer Service personnel indicating misalignment of some aspects of Communication, Structure, Systems and Practice. Variation in training, maturity, and temperament of junior supervisors resulted in variation of practices across and within business centers. Employees in positions of independence and/or control, to include access to communications systems, tend to have higher satisfaction levels. Specific areas included:

- (1) How performance is assessed: There is no formal review system and few managers provide regular feedback to employees.
- (2) Healthy attitudes in the company: Friction within units reflects incongruence between members' skills, tasks, motivation and need/values.
- (3) Recognition of effort: Practices directly impact climate and motivation.

- (4) Requirements of the job: Employees perform better when they fully understand job requirements. Shifting expectations or perceived unfair distribution of work affects motivation.
- (5) How problems are handled: Work unit problems should be resolved at the lowest level, but with common standards of application.
- (6) Company financial information and achievements of the company: Employees with access to financial data in their positions have a better understanding of the company's welfare. Communicating company health to employees will improve climate and motivation.
- (7) Supervisors understand the problems of the workers: Common training and practice standards help alleviate variability between supervisors and their treatment of workers.
- (8) Supervisors listen and pay attention to employees: The highest levels of dissatisfaction in the survey and interviews was with junior supervisors.
- (9) Supervisors offer guidance for solving problems: Work unit level misalignment with individual needs and values, tasks and motivation are detrimental to the over climate of the organization.

Females showed significantly lower levels of satisfaction than their male counterparts on 10 questions. Customer service employees consistently scored below the grand mean when compared to other positions. Customer service employees were predominantly female. Scores and comments from the survey indicate misalignment between Leadership, Culture, Practices, and Work Unit Climate within the customer service work teams at multiple sites. Coupled with interview data, indications are that customer service personnel feel underappreciated for their

role in the company. The rigors of customer service within a transportation company are directly tied to operational success.

Males in customer service indicated lower levels of satisfaction compared to Females. There are very few men in customer service and scores reflected negative satisfaction levels. These indications show a possible misalignment between Culture, Climate and Individual Needs/Values. The prevalence of Females in the customer service role may imply a cultural perception of femininity that conflicts with the needs and values of men in the role relative to the male dominated aspects of the profession. This point requires further verification, male customer service workers were not available to interview.

Personnel with regular access to computers were over overrepresented in the survey and generally scored higher levels of satisfaction related to information than employees who do not have routine access to computers (except customer service). Access to System, specifically communications systems, fails fit the needs of individuals for information related to their job. Drivers and dock workers had limited access to information systems. Active communication with employees increases satisfaction and performance.

While the survey reflected general satisfaction among younger employees across the organization, all five employees interviewed between the ages of 18 and 29 indicated a desire to leave the company when the opportunity presented itself. They stated appreciation for the relatively high pay but did not see a future working the docks or driving trucks. The data indicates current satisfaction, but projects potential future dissatisfaction if they remain in their current positions. The president noted a plan to keep good employees in the company through relocation or training in other positions. This data indicates a misalignment between Systems, Practices and Communication. The company had system in place but there was a breakdown in

communication between leadership and younger employees. Indications in the data were that Communications practices by managers and a lack of a system to convey retention options to younger employees represents a misalignment between leadership intent and managerial practice. However, this data also indicates strong entry level compensation systems.

Nearly all interviewees indicated high levels of satisfaction with the company communications improvement initiative “Excellent Cultures” and perceived a positive impact to employee relations as a result. The show good alignment between Communication, Leadership and Culture. Communications improvement initiatives are on track.

At least six interviewees indicated dissatisfaction with sister companies' culture, attitudes and/or business practices. This indicates a lack of external fit between the subject company and its adjacent corporate components within Culture and Communication. Work units that interact with sister companies with different cultures and communication quality require reinforcement motivationally and indicates a need to extend communications practice to external elements.

Employees at one location indicated dissatisfaction with working conditions at the time of the interview. Leadership was in the process of rectifying the situation, but their actions were not clear to the employees at the time of the interview. Positive communication activities directly influence work unit motivation. Perceived inequities run counter to individual values and task congruence; can lead to work unit breakdown.

Employees at Texas locations expressed apprehension at the prospect of their lead manager's retirement and the expected upheaval of the change to a new manager.

Communications of management continuity plan can serve to improve work unit climate, reduce stress.

The organization relies heavily on email communication to groups and individuals resulting in dissatisfaction related to the volume and fear of missing something important. Though dissatisfied, most see it as a "necessary evil" of daily work life, as stated by more than one employee. Current lack of fit with Communication requirements and Information Systems results in decreased satisfaction and performance. Flooded communications channels cause interference with quality of work within units; contributes to signal attenuation.

Many older employees (10 or more years with the company) lament a loss of social connection to the company; fondly remember a time when the company "felt like family", as stated by one employee. However, most feel recent improvements in communication are a step in the right direction. This point reflects an improvement to recent levels of Culture satisfaction directly related to better fit with Communication. Reinforcing culture through active communication can positively impact work unit climate.

Interview subjects universally expressed respect and admiration of the executive level leadership, but most expressed a desire to see them more. Some felt "connected to certain people in the headquarter, not to others". There is a need for connection to Leadership that can be attained through Culture Climate and Communication. The Leadership element in this case was positively perceived, but not wholly or universally.

Approximately 2/3 employees felt they are fairly compensated. Younger employees felt very well compensated. However, no employee formally interviewed or in conversation during observation periods could explain how the company bonuses were calculated. Reward systems affect motivation more positively if they are communicated effectively. This demonstrates an incongruity between Systems and Communication.

The union-directed seniority board for drivers may be an impediment to hiring experienced, well qualified drivers who do not want (or are too old) to work on the docks while they await sufficient seniority to drive regularly. This demonstrates a point of fit between Systems and Individual Need & Values that will need to be addressed in the light of an aging workforce within the company and the possible loss of younger employees. Older potential employees (ages 35-50) do not have an opportunity to enter the company at a level commensurate with their work experience. Perceived fairness in work assignments and their adherence directly impacts motivation. New experienced employees may not feel like their needs and values are being met by current seniority system.

Laborers do not feel they are heard by immediate supervisors and consistently do not feel conflicts are resolved appropriately. This represents a misalignment of Practices and Individual Needs & Values. Individual needs and values are directly tied to motivation and work unit climate. Workers who feel neglected will have reduced performance.

Selection criteria of new trucks for the company are being driven by local environmental regulations. Drivers fear new trucks will be underpowered. This is an external fit issue with the Environment and is an example of environmental conditions conflicting with individual perceptions of conditions and a conflation of conflict with needs and values.

There is no internally dedicated human resource manager. The lack of a full time HR representative does not align with the company's cultural improvement Strategy, show a hole in the company Structure and fails to represent the needs of the Systems. Without a dedicated HR manager, talent management, personnel development, conflict resolution, and culture improvement become secondary consideration to functional and operational activities.



## DISCUSSION

Following the identification of organizational incongruences as indicated in the previous section, it is important to recognize the managerial impact of those issues to the organization. The motivation of the executive leadership and their focus on organizational culture at the time of the study indicated a commitment to increase performance through organizational development. The following summary of improvement recommendations is intended to help inform a plan to continue developmental efforts.

### **Improvement Recommendations for the Company**

In light of the company's success with Excellent Cultures the first recommendation must be to maintain efforts to improve communication competencies through the ongoing culture improvement training down to at least the junior supervisory level. This will benefit the overall culture improvement initiative and provide the social framework to reach excellence in most areas. To gain wide acceptance of the communication and culture improvement program, it is necessary to develop a strategic implementation plan that maximizes organization-wide penetration to junior levels, especially at remote facilities.

The current leadership and management team has done well to get the culture improvement effort going across the organization. However, as noted earlier, the low hanging fruit has been addressed and a more concerted effort is required to move forward. The lack of a HR representative at the time of the study in the face of major HR focused efforts indicates a need to hire a full time, fully qualified strategic HR manager to lead communications training, employee and manager development, and retention policy efforts. Among the tasks for an HR professional and the leadership team are:

- (1) Institute a formal performance feedback program at all levels to provide constructive development of employees. This will facilitate employee understanding of performance and expectations.
- (2) Devise an organization communications strategy that fulfills the need of employees to understand the standing and achievements of the company. The current corporate newsletter is not specific to meet this need, consider a company level newsletter or bulletin and provide it to personnel who do not work with computers regularly.
- (3) Focus training and development on junior leaders within work unit level activities to have the strongest impact on employee satisfaction and performance. Junior supervisors are often the most insecure in their position.
- (4) Customer service personnel most consistently expressed lower satisfaction levels. Executive emphasis on the foundational value of the role as well as supervisor level practices will positively impact work unit climate and employee motivation. Further evaluation is required in this area, specifically consider inquiry into the satisfaction levels on men in customer service roles.
- (5) The company president expressed intent to provide options for quality employees to move to different positions to retain them within the organization. This intent along with other retention incentives (e.g. tuition assistance) must be effectively communicated to junior level employees.
- (6) The parent corporation would benefit from adopting the culture improvement and communication program to facilitate external alignment. Friction at points of integration with sister companies degrades operational performance.

- (7) Effective communication of the facility transition plan in Texas would benefit motivation within the work unit in question. As data collection was concluding, this issue was being addressed by proposed renovations of the facility in question.
- (8) Implement specified rules for group emails and better utilization of chat applications available with the enterprise/operations system to alleviate a significant amount of unnecessary correspondence.
- (9) Incorporate reviews and feedback at the executive and managerial levels with multidirectional assessments (e.g. a 360-degree evaluation). Subordinate feedback can provide insights into how leaders are perceived.
- (10) Communicate formalized rewards systems (bonuses) in detail to employees for them to be effective. Bonuses are used to incentivize performance, if they are not understood, they are not effective.
- (11) Consider union negotiations that allow newly hired high-skilled drivers to enter the seniority board at a level commensurate with their abilities, particularly if they come from other unionized companies. Union driver age groups within the company were stratified above 50 and below 30. If younger employees leave the company or enter non-union driver positions as indicated in interviews, there will not be a workforce to take the place of older drivers as they retire.

The table of findings and recommendations (Table 10) links model elements to issues identified during data analysis. The proximity of elements within the model provides organizational context related to how an issue in one area affects other areas by their association. For instance, Item 18: There is no internally dedicated human resource manager, reflects a functional vacancy within the organizational structure. It was a strategic decision made by past

leadership to go without a dedicated HR role and to assign the tasks to other managers. The discovery of high levels of dissatisfaction in the organization indicated by past culture surveys and the presidents interview strategy, spurred the current company president to launch a large-scale effort to improve satisfaction with an organizational culture improvement initiative (which focused on interpersonal communication training). The improvement effort, while effective, required time and attention from operational managers. The lack of an HR manager resulted in the improvement efforts taking on the form of projectized secondary efforts rather than becoming systemically incorporated and transmitted through all areas via culture, communication and climate management initiatives. One key recommendation of this study is to hire a fulltime human resource manager to professionalize the effort to lead communications, development, retention and training. Though hardly a panacea, this single recommendation impacts nearly all other areas the study diagnosed for improvement. All other items covered in the findings and recommendations were similarly derived following the logic of the Ship of Change model orientation.

Throughout the case study the model served to inform contextual understanding and categorization of data and to visualize the linkages of organizational elements. Though the data collection efforts focused on communication as the entry medium into the model, linkages between communication and other areas emerged clearly and allowed for logical conclusions as supported by the literature. Whether the company in question acts on the recommendations remains to be seen. However, they are at least armed with empirically derived information to which they can draw their own conclusions. The next step for them is to evaluate and prioritize the recommendations, create an implementation plan, execute and follow-up to ensure long lasting improvements.

Table 10. Summary of Findings and Recommendations.

Item	Source	Finding	Model Elements of Fit	Model Interpretation	Improvement Recommendations
1	Survey	The subject company reflected a generally positive level of communications satisfaction. Though management personnel scored significantly higher in satisfaction, non-manager employee averages were generally positive, as well.	Culture, Communication, Climate	Recent efforts to improve communication across the organization resulted in a positive cultural shift and reduced climate friction within work units.	Maintain efforts to improve communication competencies through the ongoing culture improvement program.
2	Survey	Operations & Safety and Sales positions consistently scored significantly higher levels of satisfaction than Drivers, Dock Workers and Customer Service personnel.  Topics included: items a. thru i. below.	Communication, Structure, Systems, Practices, Climate	Variation in training, maturity, and temperament of junior supervisors resulted in variation of practices across and within centers. Employees in positions of independence and/or control, to include access to communications systems, tend to have higher satisfaction levels.	To gain wide acceptance of the communication and culture improvement program, it is necessary to develop a strategic implementation plan that maximizes penetration to junior levels of the organization and at remote facilities.
a.	Survey	How performance is assessed.	Systems, Communication	There is no formal review system and few managers provide regular feedback to employees.	Institute a formal performance feedback program at all levels to provide constructive development to employees.

Table 10. Summary of Findings and Recommendations (continued).

Item	Source	Finding	Model Elements of Fit	Model Interpretation	Improvement Recommendations
b.	Survey	Healthy attitudes in the company.	Work unit climate	Friction within units reflects incongruence between members' skills, tasks, motivation and need/values.	See Item 1.
c.	Survey	Recognition of effort.	Systems, Practices	Practices directly impact climate and motivation.	See Item 1 and 2.
d.	Survey	Requirements of the job.	Communication, Practices	Employees perform better when they fully understand job requirements. Shifting expectations or perceived unfair distribution of work affects motivation.	See Item 1 and 2.
e.	Survey	How problems are handled.	Practices	Work unit problems should be resolved at the lowest level	See Item 1 and 2.
f.	Survey	Company financial information; Achievements of the company.	Communication	Employees with access to financial data in their positions have a better understanding of the company's welfare. Communicating company health to employees will improve climate and motivation	Devise an organization communications strategy that fulfills the need of employees to understand the achievements of the company. The current corporate newsletter is not specific to meet this need, consider a company level newsletter and provide it to personnel who do not work on computers regularly.

Table 10. Summary of Findings and Recommendations (continued).

Item	Source	Finding	Model Elements of Fit	Model Interpretation	Improvement Recommendations
g.	Survey	Supervisors understand the problems of the workers.	Practices, Communication	See item 2.	Junior supervisors are often the most insecure in their position. Focus training and development on junior leaders within work unit level activities to have the strongest impact on employee satisfaction and performance. See Items 1 and 2.
h.	Survey	Supervisors listen and pay attention to employees.	Practices, Communication	See item 2.	
i.	Survey	Supervisors offer guidance for solving problems.	Practices, Communication	See item 2.	
3	Survey	Females showed significantly lower levels of satisfaction than their male counterparts on 10 questions. Customer service employees consistently scored below the grand mean when compared to other positions; Customer service employees are predominantly female.	Leadership, Culture, Practices, Work unit climate	Coupled with interview data, indications are that customer service personnel feel underappreciated for their role in the company. The rigors of customer service within a transportation company are directly tied to operational success.	Customer service personnel most consistently expressed lower satisfaction levels. Executive emphasis on the foundational value of the role and well as supervisor level practices will positively impact work unit climate and employee motivation.

Table 10. Summary of Findings and Recommendations (continued).

Item	Source	Finding	Model Elements of Fit	Model Interpretation	Improvement Recommendations
4	Survey	Males in customer service indicated lower levels of satisfaction compared to Females. There are very few men in customer service. Several scored reflected negative satisfaction levels.	Culture, Individual Needs/Values	The prevalence of Females in the customer service role may imply a cultural perception of femininity that conflicts with the needs and values of men in the role. This point requires further verification; Male customer service workers were not available to interview.	Further evaluation is required in this area. Management should consider further inquiry into the satisfaction levels on men in customer service roles.
5	Survey	Personnel with regular access to computers were over represented in the survey and generally scored higher levels of satisfaction related to information than employees who do not have routine access to computers (except customer service).	Systems, Communication	Drivers and dock workers had limited access to information systems. Active communication with employees increases satisfaction and performance.	See Items 1 and 2



Table 10. Summary of Findings and Recommendations (continued).

Item	Source	Finding	Model Elements of Fit	Model Interpretation	Improvement Recommendations
6	Interviews	All employees interviewed between the ages of 18 and 29 indicated a desire to leave the company when the opportunity presented itself. They stated appreciation for the relatively high pay but did not see a future working the docks or driving trucks. The data indicates current satisfaction, but projects potential future dissatisfaction if they remain in their current positions.	Systems, Practices and Communication	Indicates strong entry level compensation system. Future options are not being communicated to younger employees. Junior managerial practices do not include identifying quality employees for retention beyond current positions.	Company president expressed intent to provide options for quality employees to move to different position to retain them within the organization. This intent along with other retention incentives (e.g. tuition assistance) must be effectively communicated to junior level employees. See Item 1 and 2.
7	Interviews	Nearly all interviewees indicated high levels of satisfaction with the company communications improvement initiative and perceived a positive impact to employee relations as a result.	Communication, Leadership and Culture	Communications improvement initiatives are on track.	See Item 1.
8	Interviews	At least six interviewees indicated dissatisfaction with sister companies' culture, attitudes and/or business practices.	Culture conflict and Communication	Work units that interact with sister companies with different cultures and communication quality require reinforcement.	The parent corporation would benefit from adopting the culture improvement and communication program. See Items 1 and 2.

Table 10. Summary of Findings and Recommendations (continued).

Item	Source	Finding	Model Elements of Fit	Model Interpretation	Improvement Recommendations
9	Interviews	Employees at one location indicated dissatisfaction with working conditions at the time of the interview.	Work unit motivation, and Communication	Perceived inequities run counter to individual values and task congruence; can lead to work unit breakdown.	As data collection was concluding, this issue was being addressed by proposed renovations of the facility in question.
10	Interviews	Employees at Texas locations expressed apprehension at the prospect of their lead manager's retirement and the expected upheaval of the change to a new manager.	Systems and Communication	Communications of management continuity plan can serve to improve work unit climate, reduce stress.	Effective communication of the transition plan would benefit motivation within the work unit in question.
11	Interviews and Observation	The organization relies heavily on email communication to groups and individuals resulting in dissatisfaction related to the volume and fear of missing something important. Though dissatisfied, most see it as a "necessary evil" of daily work life.	Communication and Systems	Flooded communications channels cause interference with quality of work within units. Contributes to signal attenuation.	Specified rules for group emails and better utilization of chat application available with the enterprise/operations system would alleviate a significant amount of unnecessary correspondence.

Table 10. Summary of Findings and Recommendations (continued).

Item	Source	Finding	Model Elements of Fit	Model Interpretation	Improvement Recommendations
12	Interviews and Observation	Many older employees (10 or more years with the company) lament a loss of social connection to the company; fondly remember a time when the company "felt like family". However, most feel recent improvements in communication are a step in the right direction.	Culture, Communication	Reinforcing culture through active communication can positively impact work unit climate.	See Item 1 and 2.
13	Interviews and Observation	Interview subjects universally expressed respect and admiration of the executive level leadership, but most expressed a desire to see them more. Some felt "connected to certain people in the headquarter, not to others".	Leadership	Leadership element was positively perceived, but not wholly or universally.	See item 2 and 2a. Incorporate reviews and feedback at the executive and managerial levels with multidirectional assessments (e.g. a 360-degree evaluation). Subordinate feedback can provide insights into how leaders are perceived.

Table 10. Summary of Findings and Recommendations (continued).

Item	Source	Finding	Model Elements of Fit	Model Interpretation	Improvement Recommendations
14	Interviews and Observation	No employee formally interviewed or in conversation during observation periods could explain how the company bonuses were calculated.	Systems and Communication	Reward systems affect motivation more positively if they are communicated effectively.	Formalized rewards systems should be explained in detail to employees for them to be effective. Bonuses are used to incentivize performance, if they are not understood, they are not effective.
15	Interviews and Observation	The union directed seniority board for drivers may be an impediment to hiring experienced, well qualified drivers who do not want to work on the docks while they await sufficient seniority to drive regularly.	Systems and Individual Need & Values	Perceived fairness in work assignments and their adherence directly impacts motivation. New experienced employees may not feel like their needs and values are being met by current seniority system.	Union driver age groups within the company were stratified above 50 and below 30. If younger employees leave the company or enter non-union driver positions as indicted in Item 7, there will not be a workforce to take the place of drivers as they retire. Consider union negotiations that allow newly hired high-skilled drivers to enter the seniority board at a level commensurate with their abilities, particularly if they come from other unionized companies.

Table 10. Summary of Findings and Recommendations (continued).

Item	Source	Finding	Model Elements of Fit	Model Interpretation	Improvement Recommendations
16	Interviews and Observation	Laborers do not feel they are heard by immediate supervisors and consistently do not feel conflicts are resolved appropriately.	Practices and Individual Needs & Values	Individual needs and values are directly tied to motivation and work unit climate. Workers who feel neglected will have reduced performance.	See Items 1 and 2.
17	Interviews and Observation	Selection criteria of new trucks for the company are being driven by local environmental regulations. Drivers fear new trucks will be underpowered.	Environment	Example of environmental conditions conflicting with individual perceptions of conditions and a conflation of conflict with needs and values.	See Items 1 and 2.
18	Interviews and Observation	There is no internally dedicated human resource manager.	Strategy, Structure, Systems	Without a dedicated HR manager, talent management, personnel development, conflict resolution, and culture improvement become secondary consideration to functional and operational activities.	Hire a full time fully qualified strategic HR manager to lead communications, development, retention and training efforts.

Note: The above table represents a summary of findings based on cumulative data analysis from all data sources. Topical items covered in Table 10 reflect issues gleaned from the survey, interviews and observations. Data from all sources were compiled thematically according to the model to identify findings that impact the organization. Managerial considerations are covered in the final column as improvement recommendations.

## CONTRIBUTIONS

The Ship of Change model provides four key elements to the field compared to the Burke-Litwin model and its predecessors. First, by removing the arrows graphically linking organizational elements, it effectively conveys the interrelatedness of all organizational elements. Second, the model captured interaction between the organization and the environment. Third, the model brings communication to the forefront of consideration to emphasize its impact as the medium by which culture and climate flow within the organization. Finally, the metaphorical framework of the model provides multi-dimensionality more closely reflecting an open system organization operating in time, space and environment.

One goal the study did not bear out was to prove that it illustrates the conceptual multi-dimensionality of organizations in a manner that can be easily understood by personnel at all levels. While the model was constructed to this intent, the case study was not designed toward the goal of establishing a comparison of pedagogical benefit, that will have to wait for another study.

Regarding the case study, previous surveys provided by consulting agencies resulted in similar recommendation to this case study. The Employee Satisfaction Survey in 2016 resulted in only four:

- (1) Seek ways to provide quality communication throughout distributed workforce.
- (2) Consider ongoing supervisor coaching on recognizing employees, holding people accountable and ensuring aligned communication.
- (3) Look for ways to solicit employee input into equipment and facilities decisions.
- (4) Consider pay and benefits education so employees have a clear picture of their total rewards.

The results of this study agree with the recommendations, however The Ship of Change study clearly resulted in more recommendations, both in quantity and specificity, when compared with the output of previous survey material. The richness of data from the combination of methods used in this study resulted in as thorough an understanding of organizational issues as an outside consultant is likely to attain within the scope of the access to personnel. If internal leaders and managers were trained in the use of the Ship of Change, and the assessment of data gathered during their interactions with employees, an even clearer picture could be achieved, particularly if the data could be centrally accumulated for assessment. Greater reliability and validity of the finding could have been achieved with additional researchers to observe work activities and code interviews.

The case study served to test and illustrate the applicability of the model in a field setting, demonstrate communication as a viable central element in diagnosis and refined the model as a diagnostic tool. The tool can be used by managers and consultants to evaluate organizations for change, identify change requirements and communicate change initiatives as demonstrated.

While this study did not directly demonstrate a significant weakness of the model itself, it did not include an element to test the model pedagogically.

## CONCLUSIONS

The Ship of Change model worked as a serviceable method to provide context to data within categories shown to have relationships to adjacent elements within the model. This is not surprising as the Ship of Change is anchored in foundational models that preceded it, as described in the literature review. However, at question was the veracity of the model's focus on communication as the central element to evaluating and managing change. The case study used communications centric data gathering techniques in the form of a communications satisfaction questionnaire and interactive interview techniques to demonstrate linkages to culture and climate and their linkages to elements depicted in the model. By evaluating communications satisfaction, the study was able to draw conclusions in areas not directly related to communications. The close relationship between culture, climate and communication, as indicated in the literature, facilitated analysis of data related to a wide variety of areas. While this study is not definitive in proving the Ship of Change as the best method for evaluating change, it does indicate that the model is viable and serviceable as a diagnostic tool.

The Ship of Change Model draws from the foundations of change management, organizational development and strategic communications fields to address a holistic and comprehensive perspective of organizational diagnosis. The metaphorical framework of the schema facilitates visualization of key concepts related to open systems theory. Coupled with a broader understanding of the application of strategic business tools as illustrated in Figure 1, Multi-level Perspective of Organization and Environment, managers have a fighting chance to manage change at an ever-increasing speed on a continual basis.

Refinement of the model will require further research. While it is safe to say the researcher refined his understanding of the application of the model, the study did not find cause



to change the model itself. The model was effective in interpreting a large amount of multiple data and provided more recommendations with greater specificity than previous models used by the company. However, as noted, previous evaluation by consultants did not include interviews and observations. It remains to be seen if the Ship of Change can effectively interpret survey data alone.

In future studies it would be interesting to evaluate the Ship of Change for its pedagogical benefit relative to other models that were either too simplistic or too confusing. Additionally, the next iteration of development would be to exercise the model through multiple phases of change management (e.g. diagnosis, evaluation and prioritization, planning and implementation) and to test how data collected in areas other than communication could drive conclusions related to other areas linked in the model. This study focused on communication as the entry medium due to its central importance, however, a survey asking questions to provide insight into various elemental areas is certainly warranted.

## REFERENCES

- Barrett, F., Thomas, G., & Hocevar, S. (1995). The Central Role of Discourse in Large-Scale Change: A social Construction Perspective. *The Journal of Applied Behavioral Science*, 352-372.
- Burgelman, R. A. (1983, Jan). A Model of the Interaction of Strategic Behavior, Corporate Context, and the Concept of Strategy. *Academy of Management Review*, 8(1), 61-70.
- Burke, W. W. (2008). *Organization Change: Theory and Practice* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Burke, W. W. (2014). *Organization Change: Theory and Practice* (4th ed.). Los Angeles: Sage Publications.
- Burke, W. W., & Litwin, G. (1992). A Causal Model of Organizational Performance and Change. *Journal of management*, 18(3), 523-545.
- Chandler, A. (1977). *The Visible Hand: the Managerial Revolution in American Business*. Cambridge, MA: Belknap Press.
- Charmaz, K. (2014). *Constructing Grounded Theory*. Thousand Oaks, CA: Sage Publications.
- Downs, C. W., & Adrian, A. D. (2004). *Assessing Organizational Communication: Strategic Communication Audits*. New York, NY: The Guilford Press.
- Drucker, P. (2001). *The Essential Drucker: the Best of Sixty Years of Peter Drucker's Essential Writings on Management*. New York, NY: HarperCollins Publishing.
- Drucker, P. F. (1974). *Management: Tasks, Responsibilities, Practices*. New York, NY: Harper Business Press.
- Galbraith Management Consultants. (2016, April 21). *jaygalbraith.com*. Retrieved from [jaygalbraith.com: http://www.jaygalbraith.com/services/star-model](http://www.jaygalbraith.com/services/star-model)
- Haeckel, S. (1999). *Adaptive Enterprise*. Boston: Harvard Business School Press.
- Holland, J. (1995). *Hidden Order: How Adaptation Build Complexity*. Reading, MA, USA: Perseus Books.
- Katz, D., & Kahn, R. (1978). *The Social Psychology of Organizations*. New York: Wiley.
- Kotter, J. (1996). *Leading Change*. Boston, MA: Harvard Business School Press.
- Martin, J. (2002). *Organizational Culture: Mapping the Terrain*. Thousand Oaks, CA: Sage Press.
- Maxwell, J. (2013). *Qualitative Research Design: An interactive Approach* (3rd ed.). Thousand Oaks, CA: Sage Publications.

- Merriam-Webster.com. (2016, March 24). *Merrriam-Webster Dictionary*. Retrieved from Merriam-Webster Dictionary: <http://www.merriam-webster.com/dictionary/holistic>
- Miller, D. (1987). The Genesis of Configuration Theory. *Academy of Management Review*, 12(4), 686-701.
- Mintzberg, H. (1987). The Strategy Concept I: Five Ps for Strategy. *California Managment Review Reprint Series*, Volume 30, Number 1, 11-25.
- Morgan, G. (1997). *Images of Organizations*. Thousand Oaks, CA: Sage Publications.
- Nadler, D., & Tushman, M. (1980). A Model for Diagnosing Organizational Behavior. *Organizational Dynamics*, 35-51.
- Palmer, I., Dunford, R., & Akin, G. (2009). *Manging Organizational Change: A Multiple Perspectives Approach, 2nd Edition*. New York, NY: McGraw Hill.
- Pascale, R., & Athos, A. (1981). *The Art of Japanese Management*. New York: Warner Books.
- Peters, T. (2016, April 19). *tompeters.com*. Retrieved from tompeters.com: <http://tompeters.com/docs/7SHistory.pdf>
- Peters, T., & Waterman, R. (1982). *In Search of Excellence: Lessons from American's Best Run Companies*. New York: Harper & Row.
- Porter, M. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. New York, NY: The Free Press.
- Porter, M. E. (1996, Novemeber-December). What is Strategy? *Harvard Business Review*, 3-20.
- Rubin, H., & Rubin, I. (2012). *Qualitative Interviewing: the Art of Hearing Data* (3rd ed.). Thousand Oaks, CA: Sage Publicaitons.
- Schein, E. H. (1999). The Role of the CEO in Management of Change: the Case for Information Technology. In R. Galliers, D. Leidner, & B. Baker, *Strategic Information Mangagement* (2nd ed., pp. 102-122). Woburn, MA: Butterworh-Heinemann.
- Sull, D. (2007). Closing the Gap Between Strategy and Execution. *MIT Sloan Mangement review*, 48(4), 29-38.
- Taylor, S., & Bogden, R. (1998). *Introduction to Qualitative Research Methods*. New York, NY, USA: John Wiley & Sons Inc.
- Waterman, R., & Peters, T. (1980, June). Structure is Not Organization. *Business Horizons*, pp. 14-26.
- Weisbord, M. (1976). Organizatinal Diagnosis: Six Places to Look for Trouble With or Without a Therory. *Group and Organization Studies*, 1:430-47.
- Weisbord, M. (2016, April 19). *marvinweisbord.com*. Retrieved from marvinweisbord.com: <http://www.marvinweisbord.com/index.php/six-box-model/>

Zalesnik, A. (1977). Managers and Leaders: are they Different? *Harvard Business Review*, 55(3), 67-78.

## APPENDIX A. SURVEY QUESTIONS

### Questions for all Personnel

Q 1 Omitted

Q 2 Please indicate if you consent to taking the survey. Remember, you may quit at any time:

- I consent to participate in the survey
- I decline to participate in the survey at this time

Q 3 Please indicate your gender?

- Male
- Female

Q 4 What is your age?

- 18-29
- 30-39
- 40-49
- 50+

Q 5 To which location are you assigned for work?

- Alaska
- West Coast
- Texas
- Canada

Q 6 Which of the following best describes your usual duties?

- Ops & Safety
- Diver
- Dock Worker

- Sales
- Customer Service
- Maintenance

Q 7 How satisfied are you with your job? (Check One)

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 8 In the past 6 months, to what degree has your job satisfaction changed? (Check One)

- No change
- Gone up
- Gone down

Q 9 If the communication associated with your job could be changed in any way to make you more satisfied, please indicate how: [space provided]

Q 10 Statement: Below are several kinds of information often associated with a person's job.

Please indicate your level of satisfaction with the amount and/or quality in each case.

Q 11 Information about my progress in my job

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied

- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 12 Personnel news

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 13 Information about my company's policies and goals

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 14 Information about how my job compares to others

- Extremely satisfied
- Moderately satisfied

- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 15 Information about how my performance is being assessed

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 16 Recognition of my efforts

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 17 Information about my departmental policies and goals

- Extremely satisfied



- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 18 Information about the requirements of my job

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 19 Information about changes in my company

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 20 Reports about how problems in my job are being handled

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 21 Information about employee pay and benefits

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 22 Information about the company's financial standing

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 23 Information about the achievements and failures of the organization

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 24 Statement: Below are statements regarding communication and interactions in the workplace. Please indicate the extent of your satisfaction in each case.

Q 25 The extent to which supervisors understand the problems of the workers

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 26 The extent to which my company's communication motivates me to meet its goals

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied

- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 27 The extent to which my supervisor listens and pays attention to me

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 28 The extent to which people in my company have the ability to communicate

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 29 The extent to which my supervisor offers guidance for solving job related problems

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied

- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 30 The extent to which communication in my company makes me feel like a vital part of the team

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 31 The extent to which my company's communication is interesting and helpful

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 32 The extent to which my supervisors trust me

- Extremely satisfied

- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 33 The timeliness of information I need to do my job

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 34 The extent to which conflicts are handled appropriately through communications channels

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 35 The extent to which the "grapevine" (informal communication) is active in my company

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 36 The extent to which my supervisor is open to new ideas

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 37 The extent to which communication with other employees at my level is open and free flowing

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied

- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 38 The extent to which communication practices are adaptable to emergencies

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 39 The extent to which meetings are well organized

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 40 The extent to which the amount of supervision I receive is about right

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied



- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 41 The extent to which written reports are clear and concise

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 42 The extent to which attitudes in my company are healthy

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 43 The extent to which informal communication in my company is active and accurate

- Extremely satisfied
- Moderately satisfied

- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 44 The extent to which the amount of communication in my company is about right

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 45 Statement: Please indicate your estimate of your productivity:

Q 46 How would one rate your productivity compared to others?

[Score values were inverted during analysis to maintain uniformity of the data. However, this question was discarded from consideration due to the subjectivity of self-analyzed productivity]

- Much lower
- Moderately lower
- Slightly lower
- About the same
- Slightly higher
- Moderately higher

- Much higher

Q 47 In the past 6 months, to what degree has your productivity changed?

- Stayed the same
- Gone up
- Gone down

Q 48 If communication associated with your job could be changed in any way to help you be more productive, what would it be? [Space provided]

Q 49 Are you a manger or supervisor responsible for workers?

- Manger
- Not manager

### **Questions for Managers Only**

Q 51 The extent to which my workers are responsive to direction

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 52 The extent to which my workers anticipate my needs for information

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied

- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 53 The extent to which I can avoid information overload

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 54 The extent to which my workers are receptive to evaluation, suggestions and criticism

- Extremely satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

Q 55 The extent to which my workers initiate accurate upward communication

- Extremely satisfied
- Moderately satisfied

- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied

## APPENDIX B. INTERVIEW QUESTION BANK

(Reference: Downs & Adrian, Assessing Organizational Communication: Strategic Communications Audits, 2004; Tables 5.1-5.4)

### Question for all Personnel

1. Describe your position in the organization.
  - a. What are your chief responsibilities and duties?
  - b. With whom or with what positions do you regularly communicate?
  - c. What factors tend to facilitate your effectiveness on the job? Please give me an example.
  - d. What, if anything, inhibits your effectiveness?
2. Describe the way decisions are made in your organization.
  - a. What decisions do you normally make?
  - b. What information do you need to make these decisions?
  - c. Are these formal or informal policies that determine how you get information?
3. Describe the organization's primary objectives for this year.
  - a. How does the organization know when it has done a good or a bad job? What are the criteria for success?
  - b. What are your own personal objectives?
  - c. What communication strategies does one use to achieve them?
4. What kinds of communication are necessary for you to have with other work units? How well does this interunit communication work?
5. Describe the formal channels through which you typically receive information. What kinds of information do you tend to receive? How often?

6. Describe the informal channels through which you typically receive information.
  - a. What kind of information do you hear?
  - b. How active are informal channels?
7. What are the major communication strengths of the organization? Be specific.
8. What are the major communication weaknesses of the organization? Be specific.
  - a. What do you see as the greatest unresolved problem of this organization?
9. What would one like to see done to improve communication here?
  - a. Why hasn't it been done already?
  - b. What are the major obstacles?
  - c. If you had a suggestion to improve communication, how would you make it?
10. When conflict occurs, how is it resolved? What normally causes conflict here? Give examples.
11. Describe the communication relationship you have with:
  - a. Your immediate supervisor
  - b. Top management
  - c. Coworkers
  - d. Subordinates, if applicable
12. How do most people react to their managers?
13. How would you evaluate your manager in terms of:
  - a. Openness to new ideas?
  - b. Willingness to share information?
  - c. Ability to clarify expectations?
  - d. Ability to coordinate the work in the unit?

14. How do you get ideas about how your superiors feel about your work?
15. How would you evaluate the communication from top management?
16. How would you describe the general communication climate here?
17. How often do you receive information of little value? Give an example.
  - a. How often are you overloaded with information?
  - b. How often do you feel you get too little information?
18. How does your physical work setting here affect your communication?
19. How does communication here affect your job satisfaction? Is this typical for others?
20. How does communication here affect your productivity? Is this typical for others?
21. If you were to advise me as to what to look for to get the greatest insight into this organization, what would that be?
22. Describe the chain of command in this organization and how it operates.
23. What criteria for effective communication are used in this organization? How do these compare with the way people talk about communication?
24. Is there anything that I have left out that I should have included?
25. Generally, when we do an analysis of an organization, we find that people can identify some strengths and some weaknesses for the organization.
  - a. What do you see as the strengths of [YOUR COMPANY]?
  - b. What do you see as the weaknesses of communication here?
  - c. What strengths do you think the employees will mention?
  - d. What weaknesses will they mention?
  - e. How accurate do you think their assessment is? Why?



26. A number of our questions deal with perceptions of upper management. What perceptions do you think the employees have of upper management? Why?
27. What is the communication role of the supervisors? How are they trained? Evaluated? What particular communication problems do they have? How do you think employees perceive them?
28. In other organizations, we have found that employees desire increased opportunities to communicate upward on such matters as suggestions for improvement. Do you think that we will find this here? Why? How do you feel about this?
29. How timely is the information exchanged between units and departments within? What, if anything, could be done to alleviate any particular problems in this regard?
30. Generally, how do employees get information that affects them personally? For example, how do they find out about new policies? New management thrusts?
31. Many employees often indicate a desire for more evaluative and informative feedback through face-to-face communication. What keeps this from being given? How does this affect productivity? Job satisfaction?
32. One suggestion we have encountered is that new policies should be programmed into the computers immediately. Is there any reason why this cannot be done?
33. The ratings for communication in [YOUR COMPANY] vary greatly among employees. The average rating, however, is not as high as it might be. Why do you think this is?
34. Have there been any significant changes in the communication patterns recently?
35. If you could make any changes you wanted in [YOUR COMPANY]'s communication, what would you change? Give us your wish list.
36. How are communication concerns reflected in your organizational strategies?
37. Are there additional areas that we ought to cover?

38. What do you think will happen as a result of this assessment?
39. Have there been any significant changes in communication patterns recently?
40. What motivates people in the organization now? What are their principal concerns? How is the communication here relating to and perhaps satisfying these concerns and needs?
41. What information in these areas would you like to receive? How would you get it? From whom? Why aren't you getting it now?

Areas:

- a. Progress in job and how you are being judged.
  - b. Organizational policies.
  - c. How organizations decisions are made that affect you.
  - d. Promotion and advancement opportunities.
  - e. Important new service or program development.
42. How do you know what you need to send to others? How do you make the decision to initiate communication? Do you receive many requests for information?
43. Do you find yourself requesting information to do your job? What kind? Why is this not sent routinely?
44. Is there any way in which you do not get to participate in an evaluation of superiors or supervisors? Would you find such participation useful? How high up would you like to evaluate? What would happen if you could do that?
45. In terms of upward/downward communication, what kinds of filtering are planned in the system?
46. What happens when you send upward communication to your:
- a. Immediate supervisor?

- b. Middle management?
  - c. Top management?
47. Where is the greatest lag or block? Why?
48. When there are blocks to communication, what kinds of formal techniques do you use to get around them? What kinds of informal techniques get the best results for you?
49. How much do you use the informal channels? How are they structured? How do people tap them if they want to?
50. What should top management be communicating that they are not?
51. How would you evaluate your immediate supervisor as a communicator?
52. How would you evaluate your departmental meetings in terms of:
- a. Information?
  - b. Decisions?
  - c. Frequency?
53. How do you get the information needed to do your job?
54. What kinds of information do you need to know is available but do not necessarily need to receive all the time? How should it be made available?
55. What channels are best at keeping you abreast of the day-to-day operations of the organization?
56. How does the organization reward excellence in:
- a. Productivity?
  - b. Service?
  - c. Research?
57. What affects your own commitment to this organization?

58. Some people have said that there is a need for greater coordination within the organization.

How do you feel about this? Are there some examples that you can share?

59. What do you think we are going to find as a result of conducting the assessment? What is going to happen as a result of our report?

60. Are there questions that we have not asked that you expected to be asked?

### **Questions for Managers Only**

1. How much input do you have in decisions made by upper management?

2. In what type of situation(s) is your input necessary or important?

3. What information is needed from you in order to make organizational decisions?

4. How much weight does your input carry?

5. How important are managerial meetings? Why? 6. How important should they be?

6. How many managerial meetings are there now?

7. How many should there be? Is that enough?

8. What do you say or do when you're not satisfied with your subordinates' day-to-day performances? Can you give me an example? How often do you do this?

10. What do you say or do when you're satisfied with your subordinates' day-to-day performance?

11. Do you use definite criteria in judging their levels of performance?

12. Are your employees aware of these criteria? How are they aware (e.g., feedback, job descriptions, "work" contracts)?

13. Do you conduct an annual performance review with your subordinates? What criteria are used? Describe them. (Probe for an example.)

14. Does the criteria used in the annual performance review match the criteria that you use on a day-to-day basis?

## APPENDIX C. BURKE-LITWIN SUMMARY OF SUPPORTING STUDIES

Dimensions of Model		Studies
External Environment	Mission Strategy Leadership Culture	Prescott 1978) Miles & snow 1978) Gordon (1985)
Mission and Strategy	Structure Leadership/Culture	Chandler (1962); Miles et al. (1978) Tregoe & Zimmerman (1980)
Leadership	Management Practices Performance	Fleishman (1953) Weiner & Mahoney (1981); Smith et al. (1984)
Culture	Reward System Management Practices Performance	Kerr & Slocum (1987) Bernstein & Burke (1989) Wilkins & Ouchi (1983)
Structure	Climate Management Practices Systems Task Requirements	Joyce & Slocum 1984): Schneider & Snyder (1975) Lawrence & Lorsch (1967) Ouchi (1977) Galbraith (1977; 1973)
Management Practices	Climate	Schneider (1980); Schneider & Bowen (1985)
Systems	Climate Management Practices Individual Needs and Values	Bullock & Lawler (1984); Cummings (1982) Cummings & Schwab (1973); Hammer (1988); Zuboff (1988) Deutsch (1985); Jordun (1986)
Climate	Motivation - Performance	Rosenberg & Rosenstein (1980)
Task-Person	Motivation- Performance	M.J. Burke & Pearlman (1988) Hunter & Schmidt (1982)
Individual Needs and Values		Hackman Oldham 1980): Guzzo et al. (1988)

Note: (Burke & Litwin, 1992)

## APPENDIX D. UNIVARIATE ANALYSIS OF VARIANCE

Table D1. Between-Subjects Factors, Q 11. Progress in My Job.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D2. Tests of Between-Subjects Effects, Q 11. Progress in My Job.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	97.126 <sup>a</sup>	58	1.675	1.338	0.136
Intercept	203.956	1	203.956	163.000	0.000
Gender	2.591	1	2.591	2.071	0.156
Age	3.000	3	1.000	0.799	0.499
Loc	9.375	3	3.125	2.497	0.069
Job	20.858	5	4.172	3.334	0.010
Mngr	1.106	1	1.106	0.884	0.351
Gender * Age	0.000	0			
Gender * Loc	0.205	1	0.205	0.163	0.687
Gender * Job	1.000	1	1.000	0.799	0.375
Gender * Mngr	0.000	0			
Age * Loc	7.193	4	1.798	1.437	0.234
Age * Job	7.855	6	1.309	1.046	0.405
Age * Mngr	0.000	0			
Loc * Job	4.643	4	1.161	0.928	0.454
Loc * Mngr	2.277	1	2.277	1.820	0.183
Job * Mngr	0.990	1	0.990	0.791	0.378
Error	71.322	57	1.251		
Total	934.000	116			
Corrected Total	168.448	115			

Note: R Squared = .577 (Adjusted R Squared = .146)



Table D3. Between-Subjects Factors, Q 12. Personnel News.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	30
Age Group	1	18-29	22
	2	30-39	23
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	39
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	22
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	72

Table D4. Tests of Between-Subjects Effects, Q 12. Personnel News.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	83.420 <sup>a</sup>	58	1.438	1.208	0.239
Intercept	186.311	1	186.311	156.501	0.000
Gender	1.785	1	1.785	1.499	0.226
Age	7.710	3	2.570	2.159	0.103
Loc	5.646	3	1.882	1.581	0.204
Job	8.074	5	1.615	1.356	0.255
Mngr	3.576	1	3.576	3.004	0.089
Gender * Age	0.000	0			
Gender * Loc	2.750	1	2.750	2.310	0.134
Gender * Job	1.000	1	1.000	0.840	0.363
Gender * Mngr	0.000	0			
Age * Loc	8.001	4	2.000	1.680	0.167
Age * Job	10.673	6	1.779	1.494	0.197
Age * Mngr	0.000	0			
Loc * Job	4.826	4	1.207	1.014	0.408
Loc * Mngr	0.092	1	0.092	0.077	0.782
Job * Mngr	0.045	1	0.045	0.038	0.846
Error	66.667	56	1.190		
Total	959.000	115			
Corrected Total	150.087	114			

Note: R Squared = .556 (Adjusted R Squared = .096)

Table D5. Between-Subjects Factors, Q 13. Company's Policies and Goals.

Between-Subjects Factors		Value Label	N
Gender	1	Male	84
	2	Female	30
Age Group	1	18-29	22
	2	30-39	22
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	39
	2	West Coast	55
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	10
	4	Sales	19
	5	Customer Service	22
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	71

Table D6. Tests of Between-Subjects Effects, Q 13.Company's Policies and Goals.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	100.436 <sup>a</sup>	57	1.762	1.131	0.323
Intercept	139.506	1	139.506	89.568	0.000
Gender	0.185	1	0.185	0.118	0.732
Age	0.340	3	0.113	0.073	0.974
Loc	2.717	3	0.906	0.581	0.630
Job	6.043	5	1.209	0.776	0.571
Mngr	2.052	1	2.052	1.318	0.256
Gender * Age	0.000	0			
Gender * Loc	0.023	1	0.023	0.015	0.904
Gender * Job	2.250	1	2.250	1.445	0.234
Gender * Mngr	0.000	0			
Age * Loc	16.787	4	4.197	2.694	0.040
Age * Job	11.763	5	2.353	1.511	0.201
Age * Mngr	0.000	0			
Loc * Job	10.133	4	2.533	1.626	0.180
Loc * Mngr	1.464	1	1.464	0.940	0.336
Job * Mngr	0.611	1	0.611	0.392	0.534
Error	87.222	56	1.558		
Total	813.000	114			
Corrected Total	187.658	113			

Note: R Squared = .535 (Adjusted R Squared = .062)

Table D7. Between-Subject Factors, Q 14. Job Compares to Others.

Between-Subjects Factors		Value Label	N
Gender	1	Male	84
	2	Female	30
Age Group	1	18-29	21
	2	30-39	24
	3	40-49	15
	4	50+	54
Job Location	1	Alaska	40
	2	West Coast	54
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	22
	6	Maintenance	7
Manger Y/N	1	Manager	42
	2	Not Manager	72

Table D8. Tests of Between-Subjects Effects, Q 14. Job Compares to Others.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	148.499 <sup>a</sup>	57	2.605	1.397	0.106
Intercept	298.124	1	298.124	159.879	0.000
Gender	0.046	1	0.046	0.024	0.876
Age	1.167	3	0.389	0.209	0.890
Loc	2.515	3	0.838	0.450	0.719
Job	25.786	5	5.157	2.766	0.027
Mngr	0.429	1	0.429	0.230	0.633
Gender * Age	0.000	0			
Gender * Loc	0.091	1	0.091	0.049	0.826
Gender * Job	4.000	1	4.000	2.145	0.149
Gender * Mngr	0.000	0			
Age * Loc	13.221	4	3.305	1.772	0.147
Age * Job	6.306	6	1.051	0.564	0.757
Age * Mngr	0.000	0			
Loc * Job	4.224	4	1.056	0.566	0.688
Loc * Mngr	3.731	1	3.731	2.001	0.163
Job * Mngr	0.247	1	0.247	0.133	0.717
Error	104.422	56	1.865		
Total	1261.000	114			
Corrected Total	252.921	113			

Noe: R Squared = .587 (Adjusted R Squared = .167)

Table D9. Between-Subjects Factors, Q 15. Performance is Assessed.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	30
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	14
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	55
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	22
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	72

Table D10. Tests of Between-Subjects Effects, Q 15. Performance is Assessed.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	182.773 <sup>a</sup>	57	3.207	1.766	0.017
Intercept	292.468	1	292.468	161.035	0.000
Gender	0.293	1	0.293	0.162	0.689
Age	1.467	3	0.489	0.269	0.847
Loc	19.645	3	6.548	3.606	0.019
Job	26.821	5	5.364	2.954	0.019
Mngr	0.858	1	0.858	0.472	0.495
Gender * Age	0.000	0			
Gender * Loc	0.091	1	0.091	0.050	0.824
Gender * Job	1.000	1	1.000	0.551	0.461
Gender * Mngr	0.000	0			
Age * Loc	17.498	4	4.375	2.409	0.060
Age * Job	29.210	6	4.868	2.681	0.023
Age * Mngr	0.000	0			
Loc * Job	10.055	4	2.514	1.384	0.251
Loc * Mngr	5.742	1	5.742	3.161	0.081
Job * Mngr	0.247	1	0.247	0.136	0.713
Error	103.522	57	1.816		
Total	1268.000	115			
Corrected Total	286.296	114			

Note: R Squared = .638 (Adjusted R Squared = .277)



Table D11. Between-Subjects Factors, Q 16. Recognition of My Efforts.

Between-Subjects Factors		Value Label	N
Gender	1	Male	84
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	14
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	13
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	18
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	42
	2	Not Manager	73

Table D12. Tests of Between-Subjects Effects, Q 16. Recognition of My Efforts.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	185.265 <sup>a</sup>	57	3.250	1.182	0.265
Intercept	289.955	1	289.955	105.472	0.000
Gender	1.798	1	1.798	0.654	0.422
Age	7.672	3	2.557	0.930	0.432
Loc	28.490	3	9.497	3.454	0.022
Job	29.670	5	5.934	2.159	0.071
Mngr	3.488	1	3.488	1.269	0.265
Gender * Age	0.000	0			
Gender * Loc	0.568	1	0.568	0.207	0.651
Gender * Job	4.000	1	4.000	1.455	0.233
Gender * Mngr	0.000	0			
Age * Loc	22.776	4	5.694	2.071	0.097
Age * Job	15.278	6	2.546	0.926	0.483
Age * Mngr	0.000	0			
Loc * Job	11.786	4	2.946	1.072	0.379
Loc * Mngr	2.624	1	2.624	0.955	0.333
Job * Mngr	0.409	1	0.409	0.149	0.701
Error	156.700	57	2.749		
Total	1365.000	115			
Corrected Total	341.965	114			

Note: R Squared = .542 (Adjusted R Squared = .084)

Table D13. Between-Subjects Factors, Q 17. Departmental Policies and Goals.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	30
Age Group	1	18-29	22
	2	30-39	23
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	39
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	22
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	72

Table D14. Tests of Between-Subjects Effects, Q 17. Departmental Policies and Goals.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	87.998 <sup>a</sup>	58	1.517	1.312	0.155
Intercept	203.020	1	203.020	175.585	0.000
Gender	0.288	1	0.288	0.249	0.620
Age	1.524	3	0.508	0.439	0.726
Loc	2.612	3	0.871	0.753	0.525
Job	7.856	5	1.571	1.359	0.254
Mngr	1.669	1	1.669	1.443	0.235
Gender * Age	0.000	0			
Gender * Loc	0.023	1	0.023	0.020	0.889
Gender * Job	1.000	1	1.000	0.865	0.356
Gender * Mngr	0.000	0			
Age * Loc	13.823	4	3.456	2.989	0.026
Age * Job	7.885	6	1.314	1.137	0.353
Age * Mngr	0.000	0			
Loc * Job	5.628	4	1.407	1.217	0.314
Loc * Mngr	0.656	1	0.656	0.567	0.454
Job * Mngr	0.045	1	0.045	0.039	0.844
Error	64.750	56	1.156		
Total	874.000	115			
Corrected Total	152.748	114			

Note: R Squared = .576 (Adjusted R Squared = .137)

Table D15. Between-Subjects Factors, Q 18. Requirements of My Job.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	30
Age Group	1	18-29	22
	2	30-39	23
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	39
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	22
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	72

Table D16. Tests of Between-Subjects Effects, Q 18. Requirements of My Job.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	150.528 <sup>a</sup>	58	2.595	2.354	0.001
Intercept	215.585	1	215.585	195.563	0.000
Gender	0.007	1	0.007	0.006	0.939
Age	4.981	3	1.660	1.506	0.223
Loc	10.773	3	3.591	3.258	0.028
Job	7.756	5	1.551	1.407	0.236
Mngr	1.571	1	1.571	1.425	0.238
Gender * Age	0.000	0			
Gender * Loc	0.023	1	0.023	0.021	0.886
Gender * Job	6.250	1	6.250	5.670	0.021
Gender * Mngr	0.000	0			
Age * Loc	19.272	4	4.818	4.371	0.004
Age * Job	10.428	6	1.738	1.577	0.171
Age * Mngr	0.000	0			
Loc * Job	2.307	4	0.577	0.523	0.719
Loc * Mngr	2.395	1	2.395	2.173	0.146
Job * Mngr	0.409	1	0.409	0.371	0.545
Error	61.733	56	1.102		
Total	894.000	115			
Corrected Total	212.261	114			

Note: R Squared = .709 (Adjusted R Squared = .408)

Table D17. Between-Subjects Factors, Q 19. Changes in My Company.

Between-Subjects Factors		Value Label	N
Gender	1	Male	84
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	54
Job Location	1	Alaska	40
	2	West Coast	55
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	26
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	72

Table D18. Tests of Between-Subjects Effects, Q 19. Changes in My Company.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	145.536 <sup>a</sup>	58	2.509	1.418	0.096
Intercept	238.154	1	238.154	134.544	0.000
Gender	0.338	1	0.338	0.191	0.664
Age	3.586	3	1.195	0.675	0.571
Loc	16.704	3	5.568	3.146	0.032
Job	16.670	5	3.334	1.883	0.112
Mngr	2.062	1	2.062	1.165	0.285
Gender * Age	0.000	0			
Gender * Loc	0.205	1	0.205	0.116	0.735
Gender * Job	2.250	1	2.250	1.271	0.264
Gender * Mngr	0.000	0			
Age * Loc	8.019	4	2.005	1.133	0.351
Age * Job	5.200	6	0.867	0.490	0.813
Age * Mngr	0.000	0			
Loc * Job	5.727	4	1.432	0.809	0.525
Loc * Mngr	0.330	1	0.330	0.186	0.668
Job * Mngr	0.255	1	0.255	0.144	0.706
Error	99.125	56	1.770		
Total	1124.000	115			
Corrected Total	244.661	114			

Note: R Squared = .595 (Adjusted R Squared = .175)



Table D19. Between-Subjects Factors, Q 20. How Problems are Being Handled.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D20. Tests of Between-Subjects Effects, Q 20. How Problems are Being Handled.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	193.571 <sup>a</sup>	58	3.337	1.866	0.010
Intercept	310.883	1	310.883	173.776	0.000
Gender	0.197	1	0.197	0.110	0.741
Age	4.723	3	1.574	0.880	0.457
Loc	18.931	3	6.310	3.527	0.020
Job	24.945	5	4.989	2.789	0.025
Mngr	1.229	1	1.229	0.687	0.411
Gender * Age	0.000	0			
Gender * Loc	0.023	1	0.023	0.013	0.911
Gender * Job	6.250	1	6.250	3.494	0.067
Gender * Mngr	0.000	0			
Age * Loc	20.722	4	5.180	2.896	0.030
Age * Job	18.153	6	3.026	1.691	0.140
Age * Mngr	0.000	0			
Loc * Job	19.116	4	4.779	2.671	0.041
Loc * Mngr	4.199	1	4.199	2.347	0.131
Job * Mngr	0.247	1	0.247	0.138	0.711
Error	101.972	57	1.789		
Total	1419.000	116			
Corrected Total	295.543	115			

Note: R Squared = .655 (Adjusted R Squared = .304)

Table D21. Between-Subjects Factors, Q 21. Pay and Benefits.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D22. Tests of Between-Subjects Effects, Q 21. Pay and Benefits.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	173.749 <sup>a</sup>	58	2.996	1.430	0.089
Intercept	279.760	1	279.760	133.566	0.000
Gender	0.022	1	0.022	0.010	0.920
Age	2.705	3	0.902	0.431	0.732
Loc	12.488	3	4.163	1.987	0.126
Job	21.487	5	4.297	2.052	0.085
Mngr	0.015	1	0.015	0.007	0.934
Gender * Age	0.000	0			
Gender * Loc	5.818	1	5.818	2.778	0.101
Gender * Job	0.250	1	0.250	0.119	0.731
Gender * Mngr	0.000	0			
Age * Loc	13.509	4	3.377	1.612	0.184
Age * Job	22.549	6	3.758	1.794	0.117
Age * Mngr	0.000	0			
Loc * Job	15.686	4	3.921	1.872	0.128
Loc * Mngr	7.820	1	7.820	3.733	0.058
Job * Mngr	0.854	1	0.854	0.408	0.526
Error	119.389	57	2.095		
Total	1398.000	116			
Corrected Total	293.138	115			

Note: R Squared = .593 (Adjusted R Squared = .178)

Table D23. Between-Subjects Factors, Q 22. Company's Financial Standing.

Between-Subjects Factors		Value Label	N
Gender	1	Male	84
	2	Female	31
Age Group	1	18-29	21
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	55
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	10
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	72

Table D24. Tests of Between-Subjects Effects, Q 22. Company's Financial Standing.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	132.933 <sup>a</sup>	58	2.292	1.234	0.215
Intercept	169.999	1	169.999	91.548	0.000
Gender	4.364	1	4.364	2.350	0.131
Age	2.513	3	0.838	0.451	0.718
Loc	3.745	3	1.248	0.672	0.573
Job	13.103	5	2.621	1.411	0.234
Mngr	2.130	1	2.130	1.147	0.289
Gender * Age	0.000	0			
Gender * Loc	1.455	1	1.455	0.783	0.380
Gender * Job	0.000	1	0.000	0.000	1.000
Gender * Mngr	0.000	0			
Age * Loc	13.993	4	3.498	1.884	0.126
Age * Job	13.271	6	2.212	1.191	0.324
Age * Mngr	0.000	0			
Loc * Job	4.117	4	1.029	0.554	0.697
Loc * Mngr	0.986	1	0.986	0.531	0.469
Job * Mngr	0.990	1	0.990	0.533	0.468
Error	103.989	56	1.857		
Total	1030.000	115			
Corrected Total	236.922	114			

Note: R Squared = .561 (Adjusted R Squared = .106)

Table D25. Between-Subjects Factors, Q 23. Achievements and Failures of the Organization.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D26. Tests of Between-Subjects Effects, Q 23. Achievements and Failures of the Organization.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	101.216 <sup>a</sup>	58	1.745	1.386	0.110
Intercept	181.107	1	181.107	143.876	0.000
Gender	3.334	1	3.334	2.649	0.109
Age	0.719	3	0.240	0.190	0.903
Loc	1.489	3	0.496	0.394	0.758
Job	9.969	5	1.994	1.584	0.179
Mngr	0.003	1	0.003	0.003	0.958
Gender * Age	0.000	0			
Gender * Loc	0.091	1	0.091	0.072	0.789
Gender * Job	0.000	1	0.000	0.000	1.000
Gender * Mngr	0.000	0			
Age * Loc	4.096	4	1.024	0.813	0.522
Age * Job	16.321	6	2.720	2.161	0.060
Age * Mngr	0.000	0			
Loc * Job	5.356	4	1.339	1.064	0.383
Loc * Mngr	0.857	1	0.857	0.681	0.413
Job * Mngr	1.636	1	1.636	1.300	0.259
Error	71.750	57	1.259		
Total	888.000	116			
Corrected Total	172.966	115			

Note: R Squared = .585 (Adjusted R Squared = .163)



Table D27. Between-Subjects Factors, Q 25. Supervisors Understand the Problems of the Workers.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D28. Tests of Between-Subjects Effects, Q 25. Supervisors Understand the Problems of the Workers.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	207.999 <sup>a</sup>	58	3.586	2.583	0.000
Intercept	323.052	1	323.052	232.679	0.000
Gender	2.596	1	2.596	1.870	0.177
Age	3.103	3	1.034	0.745	0.530
Loc	12.905	3	4.302	3.098	0.034
Job	13.676	5	2.735	1.970	0.097
Mngr	0.444	1	0.444	0.320	0.574
Gender * Age	0.000	0			
Gender * Loc	0.205	1	0.205	0.147	0.703
Gender * Job	1.000	1	1.000	0.720	0.400
Gender * Mngr	0.000	0			
Age * Loc	9.873	4	2.468	1.778	0.146
Age * Job	12.971	6	2.162	1.557	0.177
Age * Mngr	0.000	0			
Loc * Job	0.625	4	0.156	0.112	0.978
Loc * Mngr	4.023	1	4.023	2.897	0.094
Job * Mngr	1.293	1	1.293	0.931	0.339
Error	79.139	57	1.388		
Total	1392.000	116			
Corrected Total	287.138	115			

Note: R Squared = .724 (Adjusted R Squared = .444)

Table D29. Between-Subjects Factors, Q 26. Company's Comms Motivates Me.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D30. Tests of Between-Subjects Effects, Q 26. Company's Comms Motivates Me.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	154.433 <sup>a</sup>	58	2.663	1.822	0.012
Intercept	251.927	1	251.927	172.352	0.000
Gender	0.001	1	0.001	0.001	0.977
Age	3.506	3	1.169	0.799	0.499
Loc	10.912	3	3.637	2.488	0.070
Job	9.536	5	1.907	1.305	0.275
Mngr	0.185	1	0.185	0.127	0.723
Gender * Age	0.000	0			
Gender * Loc	0.205	1	0.205	0.140	0.710
Gender * Job	4.000	1	4.000	2.737	0.104
Gender * Mngr	0.000	0			
Age * Loc	8.599	4	2.150	1.471	0.223
Age * Job	22.089	6	3.681	2.519	0.031
Age * Mngr	0.000	0			
Loc * Job	10.824	4	2.706	1.851	0.132
Loc * Mngr	2.624	1	2.624	1.795	0.186
Job * Mngr	0.409	1	0.409	0.280	0.599
Error	83.317	57	1.462		
Total	1115.000	116			
Corrected Total	237.750	115			

Note: R Squared = .650 (Adjusted R Squared = .293)

Table D31. Between-Subjects Factors, Q 27. Supervisor Listens and Pays Attention.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	30
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	14
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	55
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	22
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	72

Table D32. Tests of Between-Subjects Effects, Q 27. Supervisor Listens and Pays Attention.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	220.670 <sup>a</sup>	57	3.871	2.167	0.002
Intercept	204.618	1	204.618	114.551	0.000
Gender	0.020	1	0.020	0.011	0.917
Age	15.060	3	5.020	2.810	0.047
Loc	6.126	3	2.042	1.143	0.339
Job	24.655	5	4.931	2.761	0.027
Mngr	0.039	1	0.039	0.022	0.882
Gender * Age	0.000	0			
Gender * Loc	2.273	1	2.273	1.272	0.264
Gender * Job	9.000	1	9.000	5.038	0.029
Gender * Mngr	0.000	0			
Age * Loc	10.465	4	2.616	1.465	0.225
Age * Job	16.653	6	2.776	1.554	0.178
Age * Mngr	0.000	0			
Loc * Job	4.056	4	1.014	0.568	0.687
Loc * Mngr	9.491	1	9.491	5.314	0.025
Job * Mngr	0.727	1	0.727	0.407	0.526
Error	101.817	57	1.786		
Total	1069.000	115			
Corrected Total	322.487	114			

Note: R Squared = .684 (Adjusted R Squared = .369)

Table D33. Between-Subjects Factors, Q 28. People have the Ability to Communicate.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D34. Tests of Between-Subjects Effects, Q 28. People have the Ability to Communicate.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	168.162 <sup>a</sup>	58	2.899	1.642	0.031
Intercept	314.923	1	314.923	178.396	0.000
Gender	0.787	1	0.787	0.446	0.507
Age	8.053	3	2.684	1.521	0.219
Loc	18.045	3	6.015	3.407	0.024
Job	15.843	5	3.169	1.795	0.128
Mngr	0.230	1	0.230	0.130	0.719
Gender * Age	0.000	0			
Gender * Loc	0.818	1	0.818	0.463	0.499
Gender * Job	4.000	1	4.000	2.266	0.138
Gender * Mngr	0.000	0			
Age * Loc	11.646	4	2.912	1.649	0.174
Age * Job	12.689	6	2.115	1.198	0.321
Age * Mngr	0.000	0			
Loc * Job	1.032	4	0.258	0.146	0.964
Loc * Mngr	2.321	1	2.321	1.315	0.256
Job * Mngr	0.081	1	0.081	0.046	0.831
Error	100.622	57	1.765		
Total	1283.000	116			
Corrected Total	268.784	115			

Note: R Squared = .626 (Adjusted R Squared = .245)



Table D35. Between-Subjects Factors, Q 29. Supervisor Offers Guidance for Solving Problems.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D36. Tests of Between-Subjects Effects, Q 29. Supervisor Offers Guidance for Solving Problems.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	174.938 <sup>a</sup>	58	3.016	1.470	0.074
Intercept	249.105	1	249.105	121.411	0.000
Gender	0.026	1	0.026	0.013	0.910
Age	19.086	3	6.362	3.101	0.034
Loc	4.825	3	1.608	0.784	0.508
Job	11.431	5	2.286	1.114	0.363
Mngr	0.020	1	0.020	0.010	0.922
Gender * Age	0.000	0			
Gender * Loc	0.818	1	0.818	0.399	0.530
Gender * Job	4.000	1	4.000	1.950	0.168
Gender * Mngr	0.000	0			
Age * Loc	11.651	4	2.913	1.420	0.239
Age * Job	15.026	6	2.504	1.221	0.309
Age * Mngr	0.000	0			
Loc * Job	0.516	4	0.129	0.063	0.993
Loc * Mngr	0.830	1	0.830	0.405	0.527
Job * Mngr	0.409	1	0.409	0.199	0.657
Error	116.950	57	2.052		
Total	1115.000	116			
Corrected Total	291.888	115			

Note: R Squared = .599 (Adjusted R Squared = .192)

Table D37. Between-Subjects Factors, Q 30. Makes Me Feel Like a Vital Part of the Team.

Between-Subjects Factors		Value Label	N
Gender	1	Male	84
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	54
Job Location	1	Alaska	40
	2	West Coast	55
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	26
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	72

Table D38. Tests of Between-Subjects Effects, Q 30. Makes Me Feel Like a Vital Part of the Team.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	167.930 <sup>a</sup>	58	2.895	1.493	0.067
Intercept	268.914	1	268.914	138.677	0.000
Gender	1.094	1	1.094	0.564	0.456
Age	9.393	3	3.131	1.615	0.196
Loc	17.028	3	5.676	2.927	0.042
Job	13.434	5	2.687	1.386	0.244
Mngr	0.426	1	0.426	0.219	0.641
Gender * Age	0.000	0			
Gender * Loc	0.000	1	0.000	0.000	1.000
Gender * Job	6.250	1	6.250	3.223	0.078
Gender * Mngr	0.000	0			
Age * Loc	15.579	4	3.895	2.008	0.106
Age * Job	17.785	6	2.964	1.529	0.186
Age * Mngr	0.000	0			
Loc * Job	4.363	4	1.091	0.563	0.691
Loc * Mngr	0.848	1	0.848	0.437	0.511
Job * Mngr	0.085	1	0.085	0.044	0.834
Error	108.592	56	1.939		
Total	1195.000	115			
Corrected Total	276.522	114			

Note: R Squared = .607 (Adjusted R Squared = .201)

Table D39. Between-Subjects Factors, Q 31. Comms are Interesting and Helpful.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D40. Tests of Between-Subjects Effects, Q 31. Comms are Interesting and Helpful.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	115.017 <sup>a</sup>	58	1.983	1.473	0.073
Intercept	244.484	1	244.484	181.611	0.000
Gender	1.212	1	1.212	0.900	0.347
Age	3.605	3	1.202	0.893	0.451
Loc	11.964	3	3.988	2.962	0.040
Job	11.106	5	2.221	1.650	0.162
Mngr	0.203	1	0.203	0.151	0.699
Gender * Age	0.000	0			
Gender * Loc	0.000	1	0.000	0.000	1.000
Gender * Job	0.250	1	0.250	0.186	0.668
Gender * Mngr	0.000	0			
Age * Loc	12.602	4	3.151	2.340	0.066
Age * Job	11.372	6	1.895	1.408	0.227
Age * Mngr	0.000	0			
Loc * Job	3.129	4	0.782	0.581	0.678
Loc * Mngr	1.583	1	1.583	1.176	0.283
Job * Mngr	0.409	1	0.409	0.304	0.584
Error	76.733	57	1.346		
Total	1069.000	116			
Corrected Total	191.750	115			

Note: R Squared = .600 (Adjusted R Squared = .193)

Table D41. Between-Subjects Factors, Q 32. My Supervisors Trust Me.

Between-Subjects Factors		Value Label	N
Gender	1	Male	84
	2	Female	31
Age Group	1	18-29	21
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	55
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	10
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	72

Table D42. Tests of Between-Subjects Effects, Q 32. My Supervisors Trust Me.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	178.072 <sup>a</sup>	58	3.070	1.644	0.032
Intercept	151.743	1	151.743	81.248	0.000
Gender	0.210	1	0.210	0.112	0.739
Age	3.626	3	1.209	0.647	0.588
Loc	14.545	3	4.848	2.596	0.061
Job	32.062	5	6.412	3.433	0.009
Mngr	0.059	1	0.059	0.032	0.859
Gender * Age	0.000	0			
Gender * Loc	0.818	1	0.818	0.438	0.511
Gender * Job	9.000	1	9.000	4.819	0.032
Gender * Mngr	0.000	0			
Age * Loc	17.349	4	4.337	2.322	0.068
Age * Job	10.768	6	1.795	0.961	0.460
Age * Mngr	0.000	0			
Loc * Job	2.655	4	0.664	0.355	0.839
Loc * Mngr	6.237	1	6.237	3.340	0.073
Job * Mngr	0.990	1	0.990	0.530	0.470
Error	104.589	56	1.868		
Total	857.000	115			
Corrected Total	282.661	114			

Note: R Squared = .630 (Adjusted R Squared = .247)



Table D43. Between-Subjects Factors, Q 33. Timeliness of Information.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D44. Tests of Between-Subjects Effects, Q 33. Timeliness of Information.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	151.872 <sup>a</sup>	58	2.618	1.849	0.011
Intercept	198.808	1	198.808	140.413	0.000
Gender	0.474	1	0.474	0.335	0.565
Age	12.630	3	4.210	2.973	0.039
Loc	11.477	3	3.826	2.702	0.054
Job	14.680	5	2.936	2.074	0.082
Mngr	0.346	1	0.346	0.244	0.623
Gender * Age	0.000	0			
Gender * Loc	0.818	1	0.818	0.578	0.450
Gender * Job	2.250	1	2.250	1.589	0.213
Gender * Mngr	0.000	0			
Age * Loc	10.815	4	2.704	1.910	0.121
Age * Job	18.328	6	3.055	2.157	0.061
Age * Mngr	0.000	0			
Loc * Job	1.051	4	0.263	0.186	0.945
Loc * Mngr	0.329	1	0.329	0.232	0.632
Job * Mngr	0.323	1	0.323	0.228	0.635
Error	80.706	57	1.416		
Total	993.000	116			
Corrected Total	232.578	115			

Note: R Squared = .653 (Adjusted R Squared = .300)

Table D45. Between-Subjects Factors, Q 34. Conflicts are Handled Appropriately.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D46. Tests of Between-Subjects Effects, Q 34. Conflicts are Handled Appropriately.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	188.934 <sup>a</sup>	58	3.257	1.474	0.072
Intercept	272.402	1	272.402	123.240	0.000
Gender	0.004	1	0.004	0.002	0.968
Age	8.205	3	2.735	1.237	0.305
Loc	11.757	3	3.919	1.773	0.163
Job	6.118	5	1.224	0.554	0.735
Mngr	1.442	1	1.442	0.652	0.423
Gender * Age	0.000	0			
Gender * Loc	1.114	1	1.114	0.504	0.481
Gender * Job	2.250	1	2.250	1.018	0.317
Gender * Mngr	0.000	0			
Age * Loc	10.540	4	2.635	1.192	0.324
Age * Job	14.718	6	2.453	1.110	0.368
Age * Mngr	0.000	0			
Loc * Job	2.513	4	0.628	0.284	0.887
Loc * Mngr	0.770	1	0.770	0.348	0.557
Job * Mngr	0.854	1	0.854	0.386	0.537
Error	125.989	57	2.210		
Total	1377.000	116			
Corrected Total	314.922	115			

Note: R Squared = .600 (Adjusted R Squared = .193)

Table D47. Between-Subjects Factors, Q 35."Grapevine" (Informal Communication) is Active.

Between-Subjects Factors		Value Label	N
Gender	1	Male	84
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	54
Job Location	1	Alaska	40
	2	West Coast	55
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	27
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	42
	2	Not Manager	73

Table D48. Tests of Between-Subjects Effects, Q 35. "Grapevine" (Informal Communication) is Active.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	137.868 <sup>a</sup>	58	2.377	1.354	0.128
Intercept	359.189	1	359.189	204.613	0.000
Gender	1.098	1	1.098	0.625	0.432
Age	19.717	3	6.572	3.744	0.016
Loc	15.494	3	5.165	2.942	0.041
Job	6.256	5	1.251	0.713	0.616
Mngr	0.122	1	0.122	0.070	0.793
Gender * Age	0.000	0			
Gender * Loc	2.273	1	2.273	1.295	0.260
Gender * Job	4.000	1	4.000	2.279	0.137
Gender * Mngr	0.000	0			
Age * Loc	8.256	4	2.064	1.176	0.331
Age * Job	16.133	6	2.689	1.532	0.185
Age * Mngr	0.000	0			
Loc * Job	9.245	4	2.311	1.317	0.275
Loc * Mngr	3.251	1	3.251	1.852	0.179
Job * Mngr	0.427	1	0.427	0.243	0.624
Error	98.306	56	1.755		
Total	1459.000	115			
Corrected Total	236.174	114			

Note: R Squared = .584 (Adjusted R Squared = .153)

Table D49. Between-Subjects Factors, Q 36. Supervisor is Open to New Ideas.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D50. Tests of Between-Subjects Effects, Q 36. Supervisor is Open to New Ideas.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	146.534 <sup>a</sup>	58	2.526	1.529	0.055
Intercept	193.180	1	193.180	116.947	0.000
Gender	1.809	1	1.809	1.095	0.300
Age	4.604	3	1.535	0.929	0.433
Loc	6.733	3	2.244	1.359	0.265
Job	9.795	5	1.959	1.186	0.327
Mngr	0.914	1	0.914	0.553	0.460
Gender * Age	0.000	0			
Gender * Loc	0.364	1	0.364	0.220	0.641
Gender * Job	6.250	1	6.250	3.784	0.057
Gender * Mngr	0.000	0			
Age * Loc	9.540	4	2.385	1.444	0.231
Age * Job	7.920	6	1.320	0.799	0.575
Age * Mngr	0.000	0			
Loc * Job	1.115	4	0.279	0.169	0.953
Loc * Mngr	1.006	1	1.006	0.609	0.438
Job * Mngr	1.293	1	1.293	0.783	0.380
Error	94.156	57	1.652		
Total	936.000	116			
Corrected Total	240.690	115			

Note: R Squared = .609 (Adjusted R Squared = .211)



Table D51. Between-Subjects Factors, Q 37. Comms with Peers are Open and Free Flowing.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D52. Tests of Between-Subjects Effects, Q 37. Comms with Peers are Open and Free Flowing.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	85.588 <sup>a</sup>	58	1.476	1.137	0.314
Intercept	162.757	1	162.757	125.443	0.000
Gender	0.355	1	0.355	0.274	0.603
Age	8.228	3	2.743	2.114	0.108
Loc	6.307	3	2.102	1.620	0.195
Job	8.479	5	1.696	1.307	0.274
Mngr	0.715	1	0.715	0.551	0.461
Gender * Age	0.000	0			
Gender * Loc	0.818	1	0.818	0.631	0.430
Gender * Job	2.250	1	2.250	1.734	0.193
Gender * Mngr	0.000	0			
Age * Loc	0.987	4	0.247	0.190	0.943
Age * Job	5.325	6	0.887	0.684	0.663
Age * Mngr	0.000	0			
Loc * Job	0.807	4	0.202	0.156	0.960
Loc * Mngr	5.267	1	5.267	4.059	0.049
Job * Mngr	0.081	1	0.081	0.062	0.804
Error	73.956	57	1.297		
Total	821.000	116			
Corrected Total	159.543	115			

Note: R Squared = .536 (Adjusted R Squared = .065)

Table D53. Between-Subjects Factors, Q 38. Practices are Adaptable to Emergencies.

Between-Subjects Factors		Value Label	N
Gender	1	Male	83
	2	Female	31
Age Group	1	18-29	21
	2	30-39	23
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	39
	2	West Coast	55
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	27
	2	Driver	27
	3	Dock Worker	10
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	42
	2	Not Manager	72

Table D54. Tests of Between-Subjects Effects, Q 38. Practices are Adaptable to Emergencies.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	98.745 <sup>a</sup>	57	1.732	1.286	0.174
Intercept	217.532	1	217.532	161.479	0.000
Gender	0.220	1	0.220	0.163	0.688
Age	6.944	3	2.315	1.718	0.174
Loc	10.938	3	3.646	2.707	0.054
Job	7.654	5	1.531	1.136	0.352
Mngr	3.380	1	3.380	2.509	0.119
Gender * Age	0.000	0			
Gender * Loc	0.568	1	0.568	0.422	0.519
Gender * Job	2.250	1	2.250	1.670	0.202
Gender * Mngr	0.000	0			
Age * Loc	4.740	4	1.185	0.880	0.482
Age * Job	9.022	5	1.804	1.339	0.261
Age * Mngr	0.000	0			
Loc * Job	3.713	4	0.928	0.689	0.603
Loc * Mngr	0.839	1	0.839	0.623	0.433
Job * Mngr	0.081	1	0.081	0.060	0.807
Error	75.439	56	1.347		
Total	917.000	114			
Corrected Total	174.184	113			

Note: R Squared = .567 (Adjusted R Squared = .126)

Table D55. Between-Subjects Factors, Q 39. Meetings are Well Organized.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D56. Tests of Between-Subjects Effects, Q 39. Meetings are Well Organized.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	105.470 <sup>a</sup>	58	1.818	1.345	0.132
Intercept	269.437	1	269.437	199.353	0.000
Gender	0.962	1	0.962	0.712	0.402
Age	4.696	3	1.565	1.158	0.334
Loc	9.389	3	3.130	2.316	0.085
Job	11.593	5	2.319	1.715	0.146
Mngr	0.032	1	0.032	0.024	0.877
Gender * Age	0.000	0			
Gender * Loc	0.205	1	0.205	0.151	0.699
Gender * Job	0.250	1	0.250	0.185	0.669
Gender * Mngr	0.000	0			
Age * Loc	3.080	4	0.770	0.570	0.686
Age * Job	8.693	6	1.449	1.072	0.390
Age * Mngr	0.000	0			
Loc * Job	8.044	4	2.011	1.488	0.218
Loc * Mngr	1.707	1	1.707	1.263	0.266
Job * Mngr	0.020	1	0.020	0.015	0.903
Error	77.039	57	1.352		
Total	995.000	116			
Corrected Total	182.509	115			

Note: R Squared = .578 (Adjusted R Squared = .148)

Table D57. Between-Subjects Factors, Q 40. Amount of Supervision.

Between-Subjects Factors		Value Label	N
Gender	1	Male	84
	2	Female	31
Age Group	1	18-29	21
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	39
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	26
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	72

Table D58. Tests of Between-Subjects Effects, Q 40. Amount of Supervision.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	173.439 <sup>a</sup>	57	3.043	2.246	0.001
Intercept	162.426	1	162.426	119.891	0.000
Gender	0.130	1	0.130	0.096	0.758
Age	4.007	3	1.336	0.986	0.406
Loc	13.876	3	4.625	3.414	0.023
Job	21.696	5	4.339	3.203	0.013
Mngr	0.579	1	0.579	0.427	0.516
Gender * Age	0.000	0			
Gender * Loc	1.841	1	1.841	1.359	0.249
Gender * Job	9.000	1	9.000	6.643	0.013
Gender * Mngr	0.000	0			
Age * Loc	13.262	3	4.421	3.263	0.028
Age * Job	19.974	5	3.995	2.949	0.020
Age * Mngr	0.000	0			
Loc * Job	2.660	4	0.665	0.491	0.742
Loc * Mngr	1.941	1	1.941	1.433	0.236
Job * Mngr	0.081	1	0.081	0.060	0.808
Error	77.222	57	1.355		
Total	894.000	115			
Corrected Total	250.661	114			

Note: R Squared = .692 (Adjusted R Squared = .384)



Table D59. Between-Subjects Factors, Q 41. Written Reports are Clear and Concise.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D60. Tests of Between-Subjects Effects, Q 41. Written Reports are Clear and Concise.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	106.549 <sup>a</sup>	58	1.837	1.428	0.090
Intercept	262.478	1	262.478	204.002	0.000
Gender	0.640	1	0.640	0.497	0.484
Age	9.036	3	3.012	2.341	0.083
Loc	8.252	3	2.751	2.138	0.105
Job	14.552	5	2.910	2.262	0.060
Mngr	0.387	1	0.387	0.301	0.585
Gender * Age	0.000	0			
Gender * Loc	0.091	1	0.091	0.071	0.791
Gender * Job	2.250	1	2.250	1.749	0.191
Gender * Mngr	0.000	0			
Age * Loc	3.257	4	0.814	0.633	0.641
Age * Job	9.823	6	1.637	1.272	0.285
Age * Mngr	0.000	0			
Loc * Job	1.408	4	0.352	0.274	0.894
Loc * Mngr	3.554	1	3.554	2.762	0.102
Job * Mngr	0.247	1	0.247	0.192	0.663
Error	73.339	57	1.287		
Total	1003.000	116			
Corrected Total	179.888	115			

Note: R Squared = .592 (Adjusted R Squared = .177)

Table D61. Between-Subjects Factors, Q 42. Attitudes in My Area Healthy.

Between-Subjects Factors		Value Label	N
Gender	1	Male	84
	2	Female	31
Age Group	1	18-29	21
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	39
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	27
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	42
	2	Not Manager	73

Table D62. Tests of Between-Subjects Effects, Q 42. Attitudes in My Area Healthy.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	178.267 <sup>a</sup>	58	3.074	1.598	0.040
Intercept	327.450	1	327.450	170.209	0.000
Gender	0.208	1	0.208	0.108	0.744
Age	6.382	3	2.127	1.106	0.354
Loc	27.986	3	9.329	4.849	0.005
Job	12.924	5	2.585	1.344	0.260
Mngr	1.495	1	1.495	0.777	0.382
Gender * Age	0.000	0			
Gender * Loc	1.114	1	1.114	0.579	0.450
Gender * Job	2.250	1	2.250	1.170	0.284
Gender * Mngr	0.000	0			
Age * Loc	22.952	4	5.738	2.983	0.027
Age * Job	27.065	6	4.511	2.345	0.043
Age * Mngr	0.000	0			
Loc * Job	5.585	4	1.396	0.726	0.578
Loc * Mngr	2.009	1	2.009	1.044	0.311
Job * Mngr	1.636	1	1.636	0.851	0.360
Error	107.733	56	1.924		
Total	1321.000	115			
Corrected Total	286.000	114			

Note: R Squared = .623 (Adjusted R Squared = .233)

Table D63. Between-Subjects Factors, Q 43. Informal Communication Active and Accurate.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D64. Tests of Between-Subjects Effects, Q 43. Informal Communication Active and Accurate.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	113.416 <sup>a</sup>	58	1.955	1.677	0.026
Intercept	247.589	1	247.589	212.308	0.000
Gender	0.035	1	0.035	0.030	0.864
Age	9.429	3	3.143	2.695	0.054
Loc	5.932	3	1.977	1.696	0.178
Job	9.473	5	1.895	1.625	0.168
Mngr	1.991	1	1.991	1.707	0.197
Gender * Age	0.000	0			
Gender * Loc	0.205	1	0.205	0.175	0.677
Gender * Job	6.250	1	6.250	5.359	0.024
Gender * Mngr	0.000	0			
Age * Loc	4.179	4	1.045	0.896	0.472
Age * Job	5.655	6	0.942	0.808	0.568
Age * Mngr	0.000	0			
Loc * Job	0.807	4	0.202	0.173	0.951
Loc * Mngr	3.304	1	3.304	2.833	0.098
Job * Mngr	0.126	1	0.126	0.108	0.743
Error	66.472	57	1.166		
Total	1113.000	116			
Corrected Total	179.888	115			

Note: R Squared = .630 (Adjusted R Squared = .254)

Table D65. Between-Subjects Factors, Q 44. Amount of Communication is About Right.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D66. Tests of Between-Subjects Effects, Q 44. Amount of Communication is About Right.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	140.755 <sup>a</sup>	58	2.427	1.696	0.024
Intercept	276.360	1	276.360	193.151	0.000
Gender	0.151	1	0.151	0.106	0.746
Age	11.557	3	3.852	2.692	0.055
Loc	15.530	3	5.177	3.618	0.018
Job	6.383	5	1.277	0.892	0.493
Mngr	1.667	1	1.667	1.165	0.285
Gender * Age	0.000	0			
Gender * Loc	0.364	1	0.364	0.254	0.616
Gender * Job	6.250	1	6.250	4.368	0.041
Gender * Mngr	0.000	0			
Age * Loc	13.618	4	3.405	2.379	0.062
Age * Job	12.358	6	2.060	1.439	0.216
Age * Mngr	0.000	0			
Loc * Job	3.615	4	0.904	0.632	0.642
Loc * Mngr	0.509	1	0.509	0.356	0.553
Job * Mngr	0.505	1	0.505	0.353	0.555
Error	81.556	57	1.431		
Total	1184.000	116			
Corrected Total	222.310	115			

Note: R Squared = .633 (Adjusted R Squared = .260)



Table D67. Between-Subjects Factors, Q 46. Rate Your Productivity.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D68. Tests of Between-Subjects Effects, Q 46. Rate Your Productivity.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	84.538 <sup>a</sup>	58	1.458	0.861	0.715
Intercept	962.461	1	962.461	568.369	0.000
Gender	1.555	1	1.555	0.918	0.342
Age	2.297	3	0.766	0.452	0.717
Loc	4.430	3	1.477	0.872	0.461
Job	9.510	5	1.902	1.123	0.359
Mngr	0.067	1	0.067	0.039	0.843
Gender * Age	0.000	0			
Gender * Loc	0.023	1	0.023	0.013	0.908
Gender * Job	1.000	1	1.000	0.591	0.445
Gender * Mngr	0.000	0			
Age * Loc	5.188	4	1.297	0.766	0.552
Age * Job	10.650	6	1.775	1.048	0.404
Age * Mngr	0.000	0			
Loc * Job	7.670	4	1.917	1.132	0.350
Loc * Mngr	3.682	1	3.682	2.174	0.146
Job * Mngr	7.293	1	7.293	4.307	0.042
Error	96.522	57	1.693		
Total	3233.000	116			
Corrected Total	181.060	115			

Note: R Squared = .467 (Adjusted R Squared = -.076)

Table D69. Between-Subjects Factors, Q 47. Productivity Changed.

Between-Subjects Factors		Value Label	N
Gender	1	Male	85
	2	Female	31
Age Group	1	18-29	22
	2	30-39	24
	3	40-49	15
	4	50+	55
Job Location	1	Alaska	40
	2	West Coast	56
	3	Texas	6
	4	Canada	14
Job Position	1	Ops & Safety	28
	2	Driver	27
	3	Dock Worker	11
	4	Sales	19
	5	Customer Service	23
	6	Maintenance	8
Manger Y/N	1	Manager	43
	2	Not Manager	73

Table D70. Tests of Between-Subjects Effects, Q 47. Productivity Changed.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	38.784 <sup>a</sup>	58	0.669	1.722	0.021
Intercept	196.009	1	196.009	504.655	0.000
Gender	0.433	1	0.433	1.115	0.295
Age	7.113	3	2.371	6.104	0.001
Loc	1.289	3	0.430	1.107	0.354
Job	2.988	5	0.598	1.539	0.192
Mngr	0.346	1	0.346	0.891	0.349
Gender * Age	0.000	0			
Gender * Loc	1.841	1	1.841	4.740	0.034
Gender * Job	2.250	1	2.250	5.793	0.019
Gender * Mngr	0.000	0			
Age * Loc	1.124	4	0.281	0.724	0.579
Age * Job	2.162	6	0.360	0.928	0.482
Age * Mngr	0.000	0			
Loc * Job	1.034	4	0.259	0.666	0.618
Loc * Mngr	0.007	1	0.007	0.017	0.896
Job * Mngr	0.611	1	0.611	1.573	0.215
Error	22.139	57	0.388		
Total	801.000	116			
Corrected Total	60.922	115			

Note: R Squared = .637 (Adjusted R Squared = .267)

Table D71. Between-Subjects Factors, Q 51M. Workers are Responsive to Direction.

Between-Subjects Factors		Value Label	N
Gender	1	Male	37
	2	Female	6
Age Group	1	18-29	4
	2	30-39	8
	3	40-49	6
	4	50+	25
Job Location	1	Alaska	14
	2	West Coast	17
	3	Texas	3
	4	Canada	9
Job Position	1	Ops & Safety	26
	2	Driver	2
	4	Sales	8
	5	Customer Service	2
	6	Maintenance	5
	Manger Y/N	1	Manager

Table D72. Tests of Between-Subjects Effects, Q 51M. Workers are Responsive to Direction.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5.345 <sup>a</sup>	22	0.243	0.940	0.558
Intercept	54.876	1	54.876	212.425	0.000
Gender	0.000	1	0.000	0.000	1.000
Age	0.073	3	0.024	0.094	0.962
Loc	0.098	3	0.033	0.127	0.943
Job	1.481	4	0.370	1.433	0.260
Mngr	0.000	0			
Gender * Age	0.000	0			
Gender * Loc	0.000	1	0.000	0.000	1.000
Gender * Job	0.000	0			
Gender * Mngr	0.000	0			
Age * Loc	0.014	2	0.007	0.027	0.974
Age * Job	0.000	0			
Age * Mngr	0.000	0			
Loc * Job	0.393	3	0.131	0.508	0.681
Error	5.167	20	0.258		
Total	152.000	43			
Corrected Total	10.512	42			

Note: R Squared = .508 (Adjusted R Squared = -.032)

Table D73. Between-Subjects Factors, Q 52M. Workers Anticipate My Needs for Information.

Between-Subjects Factors		Value Label	N
Gender	1	Male	37
	2	Female	6
Age Group	1	18-29	4
	2	30-39	8
	3	40-49	6
	4	50+	25
Job Location	1	Alaska	14
	2	West Coast	17
	3	Texas	3
	4	Canada	9
Job Position	1	Ops & Safety	26
	2	Driver	2
	4	Sales	8
	5	Customer Service	2
	6	Maintenance	5
	Manger Y/N	1	Manager

Table D74. Tests of Between-Subjects Effects, Q 52M. Workers Anticipate My Needs for Information.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4.541 <sup>a</sup>	22	0.206	0.660	0.828
Intercept	64.383	1	64.383	206.025	0.000
Gender	0.000	1	0.000	0.000	1.000
Age	0.256	3	0.085	0.273	0.844
Loc	0.540	3	0.180	0.576	0.637
Job	1.079	4	0.270	0.863	0.503
Mngr	0.000	0			
Gender * Age	0.000	0			
Gender * Loc	0.000	1	0.000	0.000	1.000
Gender * Job	0.000	0			
Gender * Mngr	0.000	0			
Age * Loc	0.050	2	0.025	0.080	0.924
Age * Job	0.000	0			
Age * Mngr	0.000	0			
Loc * Job	0.106	3	0.035	0.113	0.951
Error	6.250	20	0.313		
Total	171.000	43			
Corrected Total	10.791	42			

Note: R Squared = .421 (Adjusted R Squared = -.216)



Table D75. Between-Subjects Factors, Q 53M. I can Avoid Information Overload.

Between-Subjects Factors		Value Label	N
Gender	1	Male	37
	2	Female	6
Age Group	1	18-29	4
	2	30-39	8
	3	40-49	6
	4	50+	25
Job Location	1	Alaska	14
	2	West Coast	17
	3	Texas	3
	4	Canada	9
Job Position	1	Ops & Safety	26
	2	Driver	2
	4	Sales	8
	5	Customer Service	2
	6	Maintenance	5
	Manger Y/N	1	Manager

Table D76. Tests of Between-Subjects Effects, Q 53M. I can Avoid Information Overload.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	17.262 <sup>a</sup>	22	0.785	0.621	0.860
Intercept	76.087	1	76.087	60.267	0.000
Gender	2.273	1	2.273	1.800	0.195
Age	0.190	3	0.063	0.050	0.985
Loc	4.067	3	1.356	1.074	0.383
Job	4.926	4	1.232	0.976	0.443
Mngr	0.000	0			
Gender * Age	0.000	0			
Gender * Loc	2.273	1	2.273	1.800	0.195
Gender * Job	0.000	0			
Gender * Mngr	0.000	0			
Age * Loc	0.286	2	0.143	0.113	0.893
Age * Job	0.000	0			
Age * Mngr	0.000	0			
Loc * Job	2.125	3	0.708	0.561	0.647
Error	25.250	20	1.263		
Total	248.000	43			
Corrected Total	42.512	42			

Note: R Squared = .406 (Adjusted R Squared = -.247)

Table D77. Between-Subjects Factors, Q 54M. Workers are Receptive to Evaluation, Suggestions and Criticism.

Between-Subjects Factors		Value Label	N
Gender	1	Male	37
	2	Female	6
Age Group	1	18-29	4
	2	30-39	8
	3	40-49	6
	4	50+	25
Job Location	1	Alaska	14
	2	West Coast	17
	3	Texas	3
	4	Canada	9
Job Position	1	Ops & Safety	26
	2	Driver	2
	4	Sales	8
	5	Customer Service	2
	6	Maintenance	5
	Manger Y/N	1	Manager

Table D78. Tests of Between-Subjects Effects, Q 54M. Workers are Receptive to Evaluation, Suggestions and Criticism.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	29.694 <sup>a</sup>	22	1.350	0.746	0.748
Intercept	76.153	1	76.153	42.112	0.000
Gender	0.364	1	0.364	0.201	0.659
Age	2.030	3	0.677	0.374	0.773
Loc	3.314	3	1.105	0.611	0.616
Job	3.860	4	0.965	0.534	0.713
Mngr	0.000	0			
Gender * Age	0.000	0			
Gender * Loc	0.000	1	0.000	0.000	1.000
Gender * Job	0.000	0			
Gender * Mngr	0.000	0			
Age * Loc	0.799	2	0.399	0.221	0.804
Age * Job	0.000	0			
Age * Mngr	0.000	0			
Loc * Job	1.177	3	0.392	0.217	0.883
Error	36.167	20	1.808		
Total	267.000	43			
Corrected Total	65.860	42			

Note: R Squared = .451 (Adjusted R Squared = -.153)

Table D79. Between-Subjects Factors, Q 55M. Workers Initiate Accurate Upward Communication.

Between-Subjects Factors		Value Label	N
Gender	1	Male	37
	2	Female	6
Age Group	1	18-29	4
	2	30-39	8
	3	40-49	6
	4	50+	25
Job Location	1	Alaska	14
	2	West Coast	17
	3	Texas	3
	4	Canada	9
Job Position	1	Ops & Safety	26
	2	Driver	2
	4	Sales	8
	5	Customer Service	2
	6	Maintenance	5
	Manger Y/N	1	Manager

Table D80. Tests of Between-Subjects Effects, Q 55M. Workers Initiate Accurate Upward Communication.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	14.643 <sup>a</sup>	22	0.666	0.929	0.569
Intercept	62.941	1	62.941	87.824	0.000
Gender	0.364	1	0.364	0.507	0.484
Age	0.384	3	0.128	0.179	0.910
Loc	1.231	3	0.410	0.573	0.640
Job	1.661	4	0.415	0.579	0.681
Mngr	0.000	0			
Gender * Age	0.000	0			
Gender * Loc	0.000	1	0.000	0.000	1.000
Gender * Job	0.000	0			
Gender * Mngr	0.000	0			
Age * Loc	0.558	2	0.279	0.389	0.682
Age * Job	0.000	0			
Age * Mngr	0.000	0			
Loc * Job	0.771	3	0.257	0.359	0.783
Error	14.333	20	0.717		
Total	205.000	43			
Corrected Total	28.977	42			

Note: R Squared = .505 (Adjusted R Squared = -.039)

**APPENDIX E. TUKEY POST HOC MULTIPLE COMPARISONS BY CATEGORY**

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Q 11. Progress in my job	Alaska	West Coast	0.361	0.249	0.472	-0.29	1.01
		Texas	0.467	0.529	0.814	-0.91	1.85
		Canada	0.300	0.376	0.855	-0.68	1.28
	West Coast	Alaska	-0.361	0.249	0.472	-1.01	0.29
		Texas	0.105	0.519	0.997	-1.25	1.46
		Canada	-0.061	0.361	0.998	-1.00	0.88
	Texas	Alaska	-0.467	0.529	0.814	-1.85	0.91
		West Coast	-0.105	0.519	0.997	-1.46	1.25
		Canada	-0.167	0.590	0.992	-1.71	1.37
	Canada	Alaska	-0.300	0.376	0.855	-1.28	0.68
		West Coast	0.061	0.361	0.998	-0.88	1.00
		Texas	0.167	0.590	0.992	-1.37	1.71
Q 12. Personnel news	Alaska	West Coast	0.475	0.236	0.190	-0.14	1.09
		Texas	0.449	0.499	0.805	-0.85	1.75
		Canada	0.306	0.354	0.824	-0.62	1.23
	West Coast	Alaska	-0.475	0.236	0.190	-1.09	0.14
		Texas	-0.026	0.488	1.000	-1.30	1.25
		Canada	-0.169	0.339	0.959	-1.05	0.72
	Texas	Alaska	-0.449	0.499	0.805	-1.75	0.85
		West Coast	0.026	0.488	1.000	-1.25	1.30
		Canada	-0.143	0.555	0.994	-1.59	1.30
	Canada	Alaska	-0.306	0.354	0.824	-1.23	0.62
		West Coast	0.169	0.339	0.959	-0.72	1.05
		Texas	0.143	0.555	0.994	-1.30	1.59
Q 13. Company's policies and goals	Alaska	West Coast	-0.042	0.269	0.999	-0.74	0.66
		Texas	0.667	0.565	0.641	-0.81	2.14
		Canada	-0.238	0.402	0.934	-1.29	0.81
	West Coast	Alaska	0.042	0.269	0.999	-0.66	0.74
		Texas	0.708	0.554	0.578	-0.74	2.15
		Canada	-0.196	0.385	0.957	-1.20	0.81
	Texas	Alaska	-0.667	0.565	0.641	-2.14	0.81
West Coast		-0.708	0.554	0.578	-2.15	0.74	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
	Canada	Canada	-0.905	0.629	0.479	-2.55	0.74	
		Alaska	Alaska	0.238	0.402	0.934	-0.81	1.29
			West Coast	0.196	0.385	0.957	-0.81	1.20
			Texas	0.905	0.629	0.479	-0.74	2.55
Q 14. Job compares to others	Alaska	West Coast	-0.186	0.313	0.933	-1.00	0.63	
		Texas	-0.150	0.660	0.996	-1.87	1.57	
		Canada	-0.221	0.468	0.965	-1.44	1.00	
	West Coast	Alaska	0.186	0.313	0.933	-0.63	1.00	
		Texas	0.036	0.648	1.000	-1.65	1.73	
		Canada	-0.035	0.451	1.000	-1.21	1.14	
	Texas	Alaska	0.150	0.660	0.996	-1.57	1.87	
		West Coast	-0.036	0.648	1.000	-1.73	1.65	
		Canada	-0.071	0.735	1.000	-1.99	1.85	
	Canada	Alaska	0.221	0.468	0.965	-1.00	1.44	
		West Coast	0.035	0.451	1.000	-1.14	1.21	
		Texas	0.071	0.735	1.000	-1.85	1.99	
Q 15. Performance is assessed	Alaska	West Coast	0.014	0.331	1.000	-0.85	0.88	
		Texas	0.258	0.699	0.983	-1.56	2.08	
		Canada	-0.146	0.496	0.991	-1.44	1.15	
	West Coast	Alaska	-0.014	0.331	1.000	-0.88	0.85	
		Texas	0.244	0.686	0.984	-1.54	2.03	
		Canada	-0.161	0.477	0.987	-1.41	1.08	
	Texas	Alaska	-0.258	0.699	0.983	-2.08	1.56	
		West Coast	-0.244	0.686	0.984	-2.03	1.54	
		Canada	-0.405	0.779	0.954	-2.44	1.63	
	Canada	Alaska	0.146	0.496	0.991	-1.15	1.44	
		West Coast	0.161	0.477	0.987	-1.08	1.41	
		Texas	0.405	0.779	0.954	-1.63	2.44	
Q 16. Recognition of my efforts	Alaska	West Coast	0.336	0.358	0.785	-0.60	1.27	
		Texas	0.125	0.759	0.998	-1.86	2.11	
		Canada	-0.260	0.554	0.966	-1.70	1.18	
	West Coast	Alaska	-0.336	0.358	0.785	-1.27	0.60	
		Texas	-0.211	0.744	0.992	-2.15	1.73	



Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
	Texas	Canada	-0.595	0.533	0.680	-1.99	0.80	
		Alaska	-0.125	0.759	0.998	-2.11	1.86	
		West Coast	0.211	0.744	0.992	-1.73	2.15	
	Canada	Alaska	Canada	-0.385	0.856	0.970	-2.62	1.85
			West Coast	0.260	0.554	0.966	-1.18	1.70
			Texas	0.595	0.533	0.680	-0.80	1.99
		West Coast	Alaska	0.385	0.856	0.970	-1.85	2.62
			Texas	-0.073	0.242	0.990	-0.70	0.56
			Canada	-0.564	0.510	0.686	-1.89	0.77
Q 17. Departmental policies and goals	Alaska	West Coast	-0.073	0.242	0.990	-0.70	0.56	
		Texas	-0.564	0.510	0.686	-1.89	0.77	
		Canada	-0.064	0.362	0.998	-1.01	0.88	
	West Coast	Alaska	0.073	0.242	0.990	-0.56	0.70	
		Texas	-0.491	0.499	0.758	-1.79	0.81	
		Canada	0.009	0.347	1.000	-0.90	0.91	
	Texas	Alaska	0.564	0.510	0.686	-0.77	1.89	
		West Coast	0.491	0.499	0.758	-0.81	1.79	
		Canada	0.500	0.567	0.814	-0.98	1.98	
	Canada	Alaska	0.064	0.362	0.998	-0.88	1.01	
		West Coast	-0.009	0.347	1.000	-0.91	0.90	
		Texas	-0.500	0.567	0.814	-1.98	0.98	
	Q 18. Requirements of my job	Alaska	West Coast	-0.243	0.284	0.828	-0.98	0.50
			Texas	-0.269	0.599	0.970	-1.83	1.29
			Canada	-0.555	0.426	0.562	-1.66	0.56
West Coast		Alaska	0.243	0.284	0.828	-0.50	0.98	
		Texas	-0.026	0.586	1.000	-1.56	1.50	
		Canada	-0.312	0.407	0.870	-1.37	0.75	
Texas		Alaska	0.269	0.599	0.970	-1.29	1.83	
		West Coast	0.026	0.586	1.000	-1.50	1.56	
		Canada	-0.286	0.667	0.973	-2.02	1.45	
Canada		Alaska	0.555	0.426	0.562	-0.56	1.66	
		West Coast	0.312	0.407	0.870	-0.75	1.37	
		Texas	0.286	0.667	0.973	-1.45	2.02	
Q 19. Changes in my company		Alaska	West Coast	0.104	0.301	0.986	-0.68	0.89
			Texas	0.800	0.637	0.593	-0.86	2.46

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
		Canada	-0.486	0.452	0.705	-1.66	0.69	
	West Coast	Alaska	-0.104	0.301	0.986	-0.89	0.68	
		Texas	0.696	0.625	0.682	-0.93	2.33	
		Canada	-0.589	0.435	0.530	-1.72	0.54	
	Texas	Alaska	-0.800	0.637	0.593	-2.46	0.86	
		West Coast	-0.696	0.625	0.682	-2.33	0.93	
		Canada	-1.286	0.710	0.274	-3.14	0.57	
	Canada	Alaska	0.486	0.452	0.705	-0.69	1.66	
		West Coast	0.589	0.435	0.530	-0.54	1.72	
		Texas	1.286	0.710	0.274	-0.57	3.14	
	Q 20. How problems are being handled	Alaska	West Coast	0.335	0.332	0.744	-0.53	1.20
			Texas	0.467	0.704	0.911	-1.37	2.30
Canada			0.014	0.499	1.000	-1.29	1.32	
West Coast		Alaska	-0.335	0.332	0.744	-1.20	0.53	
		Texas	0.132	0.690	0.998	-1.67	1.93	
		Canada	-0.321	0.480	0.909	-1.57	0.93	
Texas		Alaska	-0.467	0.704	0.911	-2.30	1.37	
		West Coast	-0.132	0.690	0.998	-1.93	1.67	
		Canada	-0.452	0.784	0.939	-2.50	1.59	
Canada		Alaska	-0.014	0.499	1.000	-1.32	1.29	
		West Coast	0.321	0.480	0.909	-0.93	1.57	
		Texas	0.452	0.784	0.939	-1.59	2.50	
Q 21. Pay and benefits	Alaska	West Coast	0.182	0.329	0.945	-0.68	1.04	
		Texas	0.867	0.699	0.603	-0.96	2.69	
		Canada	-0.157	0.496	0.989	-1.45	1.14	
	West Coast	Alaska	-0.182	0.329	0.945	-1.04	0.68	
		Texas	0.684	0.685	0.750	-1.10	2.47	
		Canada	-0.340	0.476	0.892	-1.58	0.90	
	Texas	Alaska	-0.867	0.699	0.603	-2.69	0.96	
		West Coast	-0.684	0.685	0.750	-2.47	1.10	
		Canada	-1.024	0.779	0.556	-3.05	1.01	
	Canada	Alaska	0.157	0.496	0.989	-1.14	1.45	
		West Coast	0.340	0.476	0.892	-0.90	1.58	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Texas	1.024	0.779	0.556	-1.01	3.05
Q 22. Company's financial standing	Alaska	West Coast	-0.143	0.297	0.963	-0.92	0.63
		Texas	0.958	0.628	0.425	-0.68	2.60
		Canada	0.125	0.445	0.992	-1.04	1.29
	West Coast	Alaska	0.143	0.297	0.963	-0.63	0.92
		Texas	1.101	0.616	0.284	-0.50	2.71
		Canada	0.268	0.428	0.924	-0.85	1.39
	Texas	Alaska	-0.958	0.628	0.425	-2.60	0.68
		West Coast	-1.101	0.616	0.284	-2.71	0.50
		Canada	-0.833	0.700	0.634	-2.66	0.99
	Canada	Alaska	-0.125	0.445	0.992	-1.29	1.04
		West Coast	-0.268	0.428	0.924	-1.39	0.85
		Texas	0.833	0.700	0.634	-0.99	2.66
Q 23. Achievements and failures of the organization	Alaska	West Coast	-0.232	0.252	0.795	-0.89	0.43
		Texas	0.567	0.536	0.716	-0.83	1.96
		Canada	-0.029	0.380	1.000	-1.02	0.96
	West Coast	Alaska	0.232	0.252	0.795	-0.43	0.89
		Texas	0.798	0.525	0.429	-0.57	2.17
		Canada	0.203	0.365	0.945	-0.75	1.15
	Texas	Alaska	-0.567	0.536	0.716	-1.96	0.83
		West Coast	-0.798	0.525	0.429	-2.17	0.57
		Canada	-0.595	0.597	0.751	-2.15	0.96
	Canada	Alaska	0.029	0.380	1.000	-0.96	1.02
		West Coast	-0.203	0.365	0.945	-1.15	0.75
		Texas	0.595	0.597	0.751	-0.96	2.15
Q 25. Supervisors understand the problems of the workers	Alaska	West Coast	0.393	0.325	0.622	-0.45	1.24
		Texas	1.042	0.689	0.434	-0.75	2.84
		Canada	0.375	0.489	0.869	-0.90	1.65
	West Coast	Alaska	-0.393	0.325	0.622	-1.24	0.45
		Texas	0.649	0.675	0.772	-1.11	2.41
		Canada	-0.018	0.469	1.000	-1.24	1.21
	Texas	Alaska	-1.042	0.689	0.434	-2.84	0.75
West Coast		-0.649	0.675	0.772	-2.41	1.11	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
	Canada	Canada	-0.667	0.768	0.821	-2.67	1.34	
		Alaska	Alaska	-0.375	0.489	0.869	-1.65	0.90
			West Coast	0.018	0.469	1.000	-1.21	1.24
			Texas	0.667	0.768	0.821	-1.34	2.67
Q 26. Company's comms motivates me	Alaska	West Coast	0.233	0.297	0.861	-0.54	1.01	
		Texas	0.733	0.630	0.651	-0.91	2.38	
		Canada	-0.029	0.447	1.000	-1.19	1.14	
	West Coast	Alaska	-0.233	0.297	0.861	-1.01	0.54	
		Texas	0.500	0.618	0.850	-1.11	2.11	
		Canada	-0.262	0.429	0.929	-1.38	0.86	
	Texas	Alaska	-0.733	0.630	0.651	-2.38	0.91	
		West Coast	-0.500	0.618	0.850	-2.11	1.11	
		Canada	-0.762	0.702	0.699	-2.59	1.07	
	Canada	Alaska	0.029	0.447	1.000	-1.14	1.19	
		West Coast	0.262	0.429	0.929	-0.86	1.38	
		Texas	0.762	0.702	0.699	-1.07	2.59	
Q 27. Supervisor listens and pays attention	Alaska	West Coast	0.311	0.349	0.810	-0.60	1.22	
		Texas	0.275	0.739	0.982	-1.65	2.20	
		Canada	0.561	0.524	0.708	-0.81	1.93	
	West Coast	Alaska	-0.311	0.349	0.810	-1.22	0.60	
		Texas	-0.036	0.725	1.000	-1.93	1.85	
		Canada	0.250	0.504	0.960	-1.06	1.56	
	Texas	Alaska	-0.275	0.739	0.982	-2.20	1.65	
		West Coast	0.036	0.725	1.000	-1.85	1.93	
		Canada	0.286	0.823	0.986	-1.86	2.43	
	Canada	Alaska	-0.561	0.524	0.708	-1.93	0.81	
		West Coast	-0.250	0.504	0.960	-1.56	1.06	
		Texas	-0.286	0.823	0.986	-2.43	1.86	
Q 28. People have the ability to communicate	Alaska	West Coast	0.704	0.309	0.110	-0.10	1.51	
		Texas	-0.033	0.657	1.000	-1.75	1.68	
		Canada	0.014	0.466	1.000	-1.20	1.23	
	West Coast	Alaska	-0.704	0.309	0.110	-1.51	0.10	
		Texas	-0.737	0.644	0.663	-2.42	0.94	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
	Texas	Canada	-0.689	0.447	0.417	-1.86	0.48	
		Alaska	0.033	0.657	1.000	-1.68	1.75	
		West Coast	0.737	0.644	0.663	-0.94	2.42	
	Canada	Alaska	Canada	0.048	0.732	1.000	-1.86	1.96
			West Coast	-0.014	0.466	1.000	-1.23	1.20
			Texas	0.689	0.447	0.417	-0.48	1.86
		West Coast	Alaska	-0.048	0.732	1.000	-1.96	1.86
			Texas	0.101	0.330	0.990	-0.76	0.96
			Canada	-0.250	0.701	0.984	-2.08	1.58
Q 29. Supervisor offers guidance for solving problems	Alaska	West Coast	0.393	0.497	0.859	-0.90	1.69	
		Texas	-0.101	0.330	0.990	-0.96	0.76	
		Canada	-0.351	0.687	0.956	-2.14	1.44	
	West Coast	Alaska	0.292	0.478	0.928	-0.95	1.54	
		Texas	0.250	0.701	0.984	-1.58	2.08	
		Canada	0.351	0.687	0.956	-1.44	2.14	
	Texas	Alaska	0.643	0.781	0.844	-1.39	2.68	
		West Coast	-0.393	0.497	0.859	-1.69	0.90	
		Canada	-0.292	0.478	0.928	-1.54	0.95	
	Q 30. Makes me feel like a vital part of the team	Alaska	West Coast	-0.643	0.781	0.844	-2.68	1.39
			Texas	0.629	0.320	0.207	-0.21	1.46
			Canada	0.367	0.676	0.948	-1.40	2.13
		West Coast	Alaska	0.414	0.480	0.824	-0.84	1.67
			Texas	-0.629	0.320	0.207	-1.46	0.21
			Canada	-0.262	0.664	0.979	-1.99	1.47
Texas		Alaska	-0.214	0.462	0.967	-1.42	0.99	
		West Coast	-0.367	0.676	0.948	-2.13	1.40	
		Canada	0.262	0.664	0.979	-1.47	1.99	
Canada	Alaska	0.048	0.754	1.000	-1.92	2.01		
	West Coast	-0.414	0.480	0.824	-1.67	0.84		
	Texas	0.214	0.462	0.967	-0.99	1.42		
	Alaska	West Coast	-0.048	0.754	1.000	-2.01	1.92	
		West Coast	0.191	0.268	0.892	-0.51	0.89	
		Texas	0.375	0.569	0.912	-1.11	1.86	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
Q 31. Comms are interesting and helpful		Canada	0.089	0.403	0.996	-0.96	1.14	
	West Coast	Alaska	-0.191	0.268	0.892	-0.89	0.51	
		Texas	0.184	0.557	0.987	-1.27	1.64	
		Canada	-0.102	0.387	0.994	-1.11	0.91	
	Texas	Alaska	-0.375	0.569	0.912	-1.86	1.11	
		West Coast	-0.184	0.557	0.987	-1.64	1.27	
		Canada	-0.286	0.634	0.969	-1.94	1.37	
	Canada	Alaska	-0.089	0.403	0.996	-1.14	0.96	
		West Coast	0.102	0.387	0.994	-0.91	1.11	
		Texas	0.286	0.634	0.969	-1.37	1.94	
	Q 32. My supervisors trust me	Alaska	West Coast	0.411	0.326	0.590	-0.44	1.26
			Texas	0.667	0.689	0.768	-1.13	2.46
Canada			0.286	0.489	0.937	-0.99	1.56	
West Coast		Alaska	-0.411	0.326	0.590	-1.26	0.44	
		Texas	0.256	0.676	0.981	-1.51	2.02	
		Canada	-0.125	0.471	0.993	-1.35	1.10	
Texas		Alaska	-0.667	0.689	0.768	-2.46	1.13	
		West Coast	-0.256	0.676	0.981	-2.02	1.51	
		Canada	-0.381	0.768	0.960	-2.38	1.62	
Canada		Alaska	-0.286	0.489	0.937	-1.56	0.99	
		West Coast	0.125	0.471	0.993	-1.10	1.35	
		Texas	0.381	0.768	0.960	-1.62	2.38	
Q 33. Timeliness of information	Alaska	West Coast	0.284	0.293	0.768	-0.48	1.05	
		Texas	0.775	0.623	0.600	-0.85	2.40	
		Canada	0.275	0.442	0.925	-0.88	1.43	
	West Coast	Alaska	-0.284	0.293	0.768	-1.05	0.48	
		Texas	0.491	0.611	0.852	-1.10	2.08	
		Canada	-0.009	0.424	1.000	-1.12	1.10	
	Texas	Alaska	-0.775	0.623	0.600	-2.40	0.85	
		West Coast	-0.491	0.611	0.852	-2.08	1.10	
		Canada	-0.500	0.694	0.889	-2.31	1.31	
	Canada	Alaska	-0.275	0.442	0.925	-1.43	0.88	
		West Coast	0.009	0.424	1.000	-1.10	1.12	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Texas	0.500	0.694	0.889	-1.31	2.31
Q 34. Conflicts are handled appropriately	Alaska	West Coast	0.455	0.338	0.535	-0.43	1.34
		Texas	1.350	0.717	0.242	-0.52	3.22
		Canada	0.279	0.509	0.947	-1.05	1.61
	West Coast	Alaska	-0.455	0.338	0.535	-1.34	0.43
		Texas	0.895	0.703	0.582	-0.94	2.73
		Canada	-0.177	0.489	0.984	-1.45	1.10
	Texas	Alaska	-1.350	0.717	0.242	-3.22	0.52
		West Coast	-0.895	0.703	0.582	-2.73	0.94
		Canada	-1.071	0.800	0.540	-3.16	1.01
	Canada	Alaska	-0.279	0.509	0.947	-1.61	1.05
		West Coast	0.177	0.489	0.984	-1.10	1.45
		Texas	1.071	0.800	0.540	-1.01	3.16
Q 35. "Grapevine" (informal communication) is active	Alaska	West Coast	0.504	0.296	0.328	-0.27	1.28
		Texas	0.075	0.626	0.999	-1.56	1.71
		Canada	0.575	0.444	0.568	-0.58	1.73
	West Coast	Alaska	-0.504	0.296	0.328	-1.28	0.27
		Texas	-0.429	0.614	0.898	-2.03	1.17
		Canada	0.071	0.427	0.998	-1.04	1.19
	Texas	Alaska	-0.075	0.626	0.999	-1.71	1.56
		West Coast	0.429	0.614	0.898	-1.17	2.03
		Canada	0.500	0.698	0.890	-1.32	2.32
	Canada	Alaska	-0.575	0.444	0.568	-1.73	0.58
		West Coast	-0.071	0.427	0.998	-1.19	1.04
		Texas	-0.500	0.698	0.890	-2.32	1.32
Q 37. Comms with peers are open and free flowing	Alaska	West Coast	0.046	0.245	0.998	-0.59	0.69
		Texas	0.117	0.520	0.996	-1.24	1.47
		Canada	0.236	0.369	0.919	-0.73	1.20
	West Coast	Alaska	-0.046	0.245	0.998	-0.69	0.59
		Texas	0.070	0.510	0.999	-1.26	1.40
		Canada	0.189	0.354	0.951	-0.73	1.11
	Texas	Alaska	-0.117	0.520	0.996	-1.47	1.24
		West Coast	-0.070	0.510	0.999	-1.40	1.26

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
	Canada	Canada	0.119	0.579	0.997	-1.39	1.63	
		Alaska	Alaska	-0.236	0.369	0.919	-1.20	0.73
			West Coast	-0.189	0.354	0.951	-1.11	0.73
			Texas	-0.119	0.579	0.997	-1.63	1.39
Q 36. Supervisor is open to new ideas	Alaska	West Coast	-0.126	0.300	0.975	-0.91	0.66	
		Texas	0.400	0.637	0.923	-1.26	2.06	
		Canada	-0.100	0.452	0.996	-1.28	1.08	
	West Coast	Alaska	0.126	0.300	0.975	-0.66	0.91	
		Texas	0.526	0.625	0.834	-1.10	2.16	
		Canada	0.026	0.434	1.000	-1.11	1.16	
	Texas	Alaska	-0.400	0.637	0.923	-2.06	1.26	
		West Coast	-0.526	0.625	0.834	-2.16	1.10	
		Canada	-0.500	0.710	0.895	-2.35	1.35	
	Canada	Alaska	0.100	0.452	0.996	-1.08	1.28	
		West Coast	-0.026	0.434	1.000	-1.16	1.11	
		Texas	0.500	0.710	0.895	-1.35	2.35	
Q 38. Practices are adaptable to emergencies	Alaska	West Coast	0.131	0.260	0.958	-0.55	0.81	
		Texas	0.500	0.547	0.798	-0.93	1.93	
		Canada	0.167	0.389	0.973	-0.85	1.18	
	West Coast	Alaska	-0.131	0.260	0.958	-0.81	0.55	
		Texas	0.369	0.536	0.901	-1.03	1.77	
		Canada	0.036	0.373	1.000	-0.94	1.01	
	Texas	Alaska	-0.500	0.547	0.798	-1.93	0.93	
		West Coast	-0.369	0.536	0.901	-1.77	1.03	
		Canada	-0.333	0.609	0.947	-1.92	1.26	
	Canada	Alaska	-0.167	0.389	0.973	-1.18	0.85	
		West Coast	-0.036	0.373	1.000	-1.01	0.94	
		Texas	0.333	0.609	0.947	-1.26	1.92	
Q 39. Meetings are well organized	Alaska	West Coast	0.331	0.260	0.581	-0.35	1.01	
		Texas	0.375	0.552	0.905	-1.06	1.81	
		Canada	0.375	0.391	0.773	-0.65	1.40	
	West Coast	Alaska	-0.331	0.260	0.581	-1.01	0.35	
		Texas	0.044	0.541	1.000	-1.37	1.45	



Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
	Texas	Canada	0.044	0.376	0.999	-0.94	1.02	
		Alaska	-0.375	0.552	0.905	-1.81	1.06	
		West Coast	-0.044	0.541	1.000	-1.45	1.37	
	Canada	Alaska	Canada	0.000	0.615	1.000	-1.60	1.60
			West Coast	-0.375	0.391	0.773	-1.40	0.65
			Texas	-0.044	0.376	0.999	-1.02	0.94
		West Coast	Alaska	0.000	0.615	1.000	-1.60	1.60
			Texas	-0.375	0.391	0.773	-1.40	0.65
			Canada	-0.044	0.376	0.999	-1.02	0.94
Q 40. Amount of supervision	Alaska	West Coast	0.413	0.308	0.540	-0.39	1.22	
		Texas	0.474	0.651	0.885	-1.22	2.17	
		Canada	0.355	0.462	0.869	-0.85	1.56	
	West Coast	Alaska	-0.413	0.308	0.540	-1.22	0.39	
		Texas	0.061	0.637	1.000	-1.60	1.72	
		Canada	-0.058	0.443	0.999	-1.21	1.10	
	Texas	Alaska	-0.474	0.651	0.885	-2.17	1.22	
		West Coast	-0.061	0.637	1.000	-1.72	1.60	
		Canada	-0.119	0.724	0.998	-2.01	1.77	
	Canada	Alaska	-0.355	0.462	0.869	-1.56	0.85	
		West Coast	0.058	0.443	0.999	-1.10	1.21	
		Texas	0.119	0.724	0.998	-1.77	2.01	
	Q 41. Written reports are clear and concise	Alaska	West Coast	-0.052	0.260	0.997	-0.73	0.63
			Texas	-0.017	0.552	1.000	-1.46	1.42
			Canada	0.079	0.392	0.997	-0.94	1.10
West Coast		Alaska	0.052	0.260	0.997	-0.63	0.73	
		Texas	0.035	0.541	1.000	-1.38	1.45	
		Canada	0.130	0.376	0.986	-0.85	1.11	
Texas		Alaska	0.017	0.552	1.000	-1.42	1.46	
		West Coast	-0.035	0.541	1.000	-1.45	1.38	
		Canada	0.095	0.615	0.999	-1.51	1.70	
Canada		Alaska	-0.079	0.392	0.997	-1.10	0.94	
		West Coast	-0.130	0.376	0.986	-1.11	0.85	
		Texas	-0.095	0.615	0.999	-1.70	1.51	
Q 42. Attitudes in my are healthy	Alaska	West Coast	-0.042	0.329	0.999	-0.90	0.82	
		Texas	0.256	0.695	0.983	-1.56	2.07	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
		Canada	-0.577	0.494	0.648	-1.87	0.71	
	West Coast	Alaska	0.042	0.329	0.999	-0.82	0.90	
		Texas	0.298	0.680	0.972	-1.48	2.07	
		Canada	-0.535	0.473	0.671	-1.77	0.70	
	Texas	Alaska	-0.256	0.695	0.983	-2.07	1.56	
		West Coast	-0.298	0.680	0.972	-2.07	1.48	
		Canada	-0.833	0.774	0.704	-2.85	1.18	
	Canada	Alaska	0.577	0.494	0.648	-0.71	1.87	
		West Coast	0.535	0.473	0.671	-0.70	1.77	
		Texas	0.833	0.774	0.704	-1.18	2.85	
	Q 43. Informal communication active and accurate	Alaska	West Coast	0.023	0.258	1.000	-0.65	0.70
			Texas	0.733	0.548	0.540	-0.70	2.16
Canada			0.114	0.389	0.991	-0.90	1.13	
West Coast		Alaska	-0.023	0.258	1.000	-0.70	0.65	
		Texas	0.711	0.537	0.550	-0.69	2.11	
		Canada	0.091	0.373	0.995	-0.88	1.06	
Texas		Alaska	-0.733	0.548	0.540	-2.16	0.70	
		West Coast	-0.711	0.537	0.550	-2.11	0.69	
		Canada	-0.619	0.611	0.742	-2.21	0.97	
Canada		Alaska	-0.114	0.389	0.991	-1.13	0.90	
		West Coast	-0.091	0.373	0.995	-1.06	0.88	
		Texas	0.619	0.611	0.742	-0.97	2.21	
Q 44. Amount of communication in is about right	Alaska	West Coast	0.458	0.286	0.380	-0.29	1.20	
		Texas	0.292	0.606	0.963	-1.29	1.87	
		Canada	0.054	0.430	0.999	-1.07	1.18	
	West Coast	Alaska	-0.458	0.286	0.380	-1.20	0.29	
		Texas	-0.167	0.594	0.992	-1.72	1.38	
		Canada	-0.405	0.413	0.761	-1.48	0.67	
	Texas	Alaska	-0.292	0.606	0.963	-1.87	1.29	
		West Coast	0.167	0.594	0.992	-1.38	1.72	
		Canada	-0.238	0.676	0.985	-2.00	1.52	
	Canada	Alaska	-0.054	0.430	0.999	-1.18	1.07	
		West Coast	0.405	0.413	0.761	-0.67	1.48	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Texas	0.238	0.676	0.985	-1.52	2.00
Q 46. Rate your productivity	Alaska	West Coast	0.064	0.260	0.995	-0.61	0.74
		Texas	0.608	0.552	0.689	-0.83	2.05
		Canada	0.561	0.392	0.482	-0.46	1.58
	West Coast	Alaska	-0.064	0.260	0.995	-0.74	0.61
		Texas	0.544	0.541	0.747	-0.87	1.96
		Canada	0.496	0.376	0.553	-0.48	1.48
	Texas	Alaska	-0.608	0.552	0.689	-2.05	0.83
		West Coast	-0.544	0.541	0.747	-1.96	0.87
		Canada	-0.048	0.615	1.000	-1.65	1.56
	Canada	Alaska	-0.561	0.392	0.482	-1.58	0.46
		West Coast	-0.496	0.376	0.553	-1.48	0.48
		Texas	0.048	0.615	1.000	-1.56	1.65
Q 47. Productivity changed	Alaska	West Coast	-0.196	0.150	0.561	-0.59	0.20
		Texas	-0.267	0.319	0.838	-1.10	0.57
		Canada	-0.171	0.226	0.873	-0.76	0.42
	West Coast	Alaska	0.196	0.150	0.561	-0.20	0.59
		Texas	-0.070	0.313	0.996	-0.89	0.75
		Canada	0.025	0.217	0.999	-0.54	0.59
	Texas	Alaska	0.267	0.319	0.838	-0.57	1.10
		West Coast	0.070	0.313	0.996	-0.75	0.89
		Canada	0.095	0.356	0.993	-0.83	1.02
	Canada	Alaska	0.171	0.226	0.873	-0.42	0.76
		West Coast	-0.025	0.217	0.999	-0.59	0.54
		Texas	-0.095	0.356	0.993	-1.02	0.83
Q 51M. Workers are responsive to direction	Alaska	West Coast	0.206	0.189	0.695	-0.30	0.71
		Texas	0.262	0.337	0.864	-0.64	1.16
		Canada	-0.071	0.226	0.989	-0.68	0.53
	West Coast	Alaska	-0.206	0.189	0.695	-0.71	0.30
		Texas	0.056	0.330	0.998	-0.83	0.94
		Canada	-0.278	0.216	0.577	-0.86	0.30
	Texas	Alaska	-0.262	0.337	0.864	-1.16	0.64
		West Coast	-0.056	0.330	0.998	-0.94	0.83

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
	Canada	Canada	-0.333	0.353	0.781	-1.28	0.61	
		Alaska	Alaska	0.071	0.226	0.989	-0.53	0.68
			West Coast	0.278	0.216	0.577	-0.30	0.86
			Texas	0.333	0.353	0.781	-0.61	1.28
Q 52M. Workers anticipate my needs for information	Alaska	West Coast	0.294	0.186	0.403	-0.21	0.79	
		Texas	0.071	0.333	0.996	-0.82	0.96	
		Canada	-0.040	0.223	0.998	-0.64	0.56	
	West Coast	Alaska	-0.294	0.186	0.403	-0.79	0.21	
		Texas	-0.222	0.326	0.903	-1.10	0.65	
		Canada	-0.333	0.213	0.411	-0.91	0.24	
	Texas	Alaska	-0.071	0.333	0.996	-0.96	0.82	
		West Coast	0.222	0.326	0.903	-0.65	1.10	
		Canada	-0.111	0.348	0.989	-1.05	0.82	
	Canada	Alaska	0.040	0.223	0.998	-0.56	0.64	
		West Coast	0.333	0.213	0.411	-0.24	0.91	
		Texas	0.111	0.348	0.989	-0.82	1.05	
Q 53M. I can avoid information overload	Alaska	West Coast	0.683	0.351	0.226	-0.26	1.62	
		Texas	-0.095	0.626	0.999	-1.77	1.58	
		Canada	0.460	0.421	0.695	-0.67	1.59	
	West Coast	Alaska	-0.683	0.351	0.226	-1.62	0.26	
		Texas	-0.778	0.614	0.589	-2.42	0.87	
		Canada	-0.222	0.402	0.945	-1.30	0.85	
	Texas	Alaska	0.095	0.626	0.999	-1.58	1.77	
		West Coast	0.778	0.614	0.589	-0.87	2.42	
		Canada	0.556	0.656	0.832	-1.20	2.31	
	Canada	Alaska	-0.460	0.421	0.695	-1.59	0.67	
		West Coast	0.222	0.402	0.945	-0.85	1.30	
		Texas	-0.556	0.656	0.832	-2.31	1.20	
Q 54M. Workers are receptive to evaluation, suggestions and criticism	Alaska	West Coast	1.087	0.415	0.058	-0.03	2.20	
		Texas	0.310	0.741	0.975	-1.68	2.30	
		Canada	-0.024	0.498	1.000	-1.36	1.31	
	West Coast	Alaska	-1.087	0.415	0.058	-2.20	0.03	
		Texas	-0.778	0.727	0.709	-2.73	1.17	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
		Canada	-1.111	0.476	0.107	-2.39	0.16	
	Texas	Alaska	-0.310	0.741	0.975	-2.30	1.68	
		West Coast	0.778	0.727	0.709	-1.17	2.73	
		Canada	-0.333	0.777	0.973	-2.42	1.75	
	Canada	Alaska	0.024	0.498	1.000	-1.31	1.36	
		West Coast	1.111	0.476	0.107	-0.16	2.39	
		Texas	0.333	0.777	0.973	-1.75	2.42	
	Q 55M. Workers initiate accurate upward communication	Alaska	West Coast	0.421	0.285	0.461	-0.34	1.18
			Texas	0.143	0.508	0.992	-1.22	1.51
Canada			-0.413	0.341	0.625	-1.33	0.50	
West Coast		Alaska	-0.421	0.285	0.461	-1.18	0.34	
		Texas	-0.278	0.498	0.944	-1.61	1.06	
		Canada	-0.833	0.326	0.067	-1.71	0.04	
Texas		Alaska	-0.143	0.508	0.992	-1.51	1.22	
		West Coast	0.278	0.498	0.944	-1.06	1.61	
		Canada	-0.556	0.533	0.726	-1.98	0.87	
Canada		Alaska	0.413	0.341	0.625	-0.50	1.33	
		West Coast	0.833	0.326	0.067	-0.04	1.71	
		Texas	0.556	0.533	0.726	-0.87	1.98	

**APPENDIX F. TUKEY POST HOC MULTIPLE COMPARISONS BY JOB POSITION,  
ALL QUESTIONS**

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Q 11. Progress in my job	Ops & Safety	Driver	-0.500	0.312	0.598	-1.40	0.40
		Dock Worker	-0.565	0.415	0.750	-1.77	0.64
		Sales	-0.479	0.342	0.726	-1.47	0.51
		Customer Service	-1.189*	0.328	0.006	-2.14	-0.24
		Maintenance	-0.304	0.468	0.987	-1.66	1.05
	Driver	Ops & Safety	0.500	0.312	0.598	-0.40	1.40
		Dock Worker	-0.065	0.415	1.000	-1.27	1.14
		Sales	0.021	0.342	1.000	-0.97	1.01
		Customer Service	-0.689	0.328	0.295	-1.64	0.26
		Maintenance	0.196	0.468	0.998	-1.16	1.55
	Dock Worker	Ops & Safety	0.565	0.415	0.750	-0.64	1.77
		Driver	0.065	0.415	1.000	-1.14	1.27
		Sales	0.086	0.438	1.000	-1.18	1.36
		Customer Service	-0.625	0.428	0.690	-1.86	0.62
		Maintenance	0.261	0.542	0.997	-1.31	1.83
	Sales	Ops & Safety	0.479	0.342	0.726	-0.51	1.47
		Driver	-0.021	0.342	1.000	-1.01	0.97
		Dock Worker	-0.086	0.438	1.000	-1.36	1.18
		Customer Service	-0.711	0.357	0.353	-1.75	0.32

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
	Customer Service	Maintenance	0.175	0.488	0.999	-1.24	1.59	
		Ops & Safety	1.189*	0.328	0.006	0.24	2.14	
		Driver	0.689	0.328	0.295	-0.26	1.64	
		Dock Worker	0.625	0.428	0.690	-0.62	1.86	
		Sales	0.711	0.357	0.353	-0.32	1.75	
		Maintenance	0.886	0.479	0.439	-0.50	2.27	
	Maintenance	Ops & Safety	0.304	0.468	0.987	-1.05	1.66	
		Driver	-0.196	0.468	0.998	-1.55	1.16	
		Dock Worker	-0.261	0.542	0.997	-1.83	1.31	
		Sales	-0.175	0.488	0.999	-1.59	1.24	
		Customer Service	-0.886	0.479	0.439	-2.27	0.50	
	Q 12. Personnel news	Ops & Safety	Driver	-0.679	0.303	0.227	-1.56	0.20
			Dock Worker	-0.386	0.403	0.930	-1.55	0.78
			Sales	-0.650	0.331	0.371	-1.61	0.31
			Customer Service	-0.568	0.322	0.494	-1.50	0.37
Maintenance			0.000	0.454	1.000	-1.32	1.32	
Driver		Ops & Safety	0.679	0.303	0.227	-0.20	1.56	
		Dock Worker	0.292	0.403	0.978	-0.88	1.46	
		Sales	0.029	0.331	1.000	-0.93	0.99	
		Customer Service	0.110	0.322	0.999	-0.82	1.05	
		Maintenance	0.679	0.454	0.668	-0.64	1.99	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Dock Worker	Ops & Safety	0.386	0.403	0.930	-0.78	1.55
		Driver	-0.292	0.403	0.978	-1.46	0.88
		Sales	-0.264	0.425	0.989	-1.50	0.97
		Customer Service	-0.182	0.418	0.998	-1.39	1.03
		Maintenance	0.386	0.526	0.977	-1.14	1.91
	Sales	Ops & Safety	0.650	0.331	0.371	-0.31	1.61
		Driver	-0.029	0.331	1.000	-0.99	0.93
		Dock Worker	0.264	0.425	0.989	-0.97	1.50
		Customer Service	0.082	0.350	1.000	-0.93	1.10
		Maintenance	0.650	0.474	0.743	-0.72	2.02
	Customer Service	Ops & Safety	0.568	0.322	0.494	-0.37	1.50
		Driver	-0.110	0.322	0.999	-1.05	0.82
		Dock Worker	0.182	0.418	0.998	-1.03	1.39
		Sales	-0.082	0.350	1.000	-1.10	0.93
		Maintenance	0.568	0.467	0.828	-0.79	1.92
	Maintenance	Ops & Safety	0.000	0.454	1.000	-1.32	1.32
		Driver	-0.679	0.454	0.668	-1.99	0.64
		Dock Worker	-0.386	0.526	0.977	-1.91	1.14
		Sales	-0.650	0.474	0.743	-2.02	0.72
		Customer Service	-0.568	0.467	0.828	-1.92	0.79
	Ops & Safety	Driver	-0.786	0.335	0.185	-1.76	0.19



Dependent Variable		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
Q 13. Company's policies and goals		Dock Worker	-1.243	0.462	0.085	-2.58	0.10
		Sales	-0.393	0.367	0.892	-1.46	0.67
		Customer Service	-0.734	0.357	0.318	-1.77	0.30
		Maintenance	-0.018	0.502	1.000	-1.47	1.44
	Driver	Ops & Safety	0.786	0.335	0.185	-0.19	1.76
		Dock Worker	-0.457	0.462	0.920	-1.80	0.88
		Sales	0.393	0.367	0.892	-0.67	1.46
		Customer Service	0.052	0.357	1.000	-0.98	1.09
		Maintenance	0.768	0.502	0.647	-0.69	2.22
	Dock Worker	Ops & Safety	1.243	0.462	0.085	-0.10	2.58
		Driver	0.457	0.462	0.920	-0.88	1.80
		Sales	0.850	0.485	0.501	-0.56	2.26
		Customer Service	0.509	0.478	0.894	-0.88	1.90
		Maintenance	1.225	0.594	0.315	-0.50	2.95
	Sales	Ops & Safety	0.393	0.367	0.892	-0.67	1.46
		Driver	-0.393	0.367	0.892	-1.46	0.67
		Dock Worker	-0.850	0.485	0.501	-2.26	0.56
		Customer Service	-0.341	0.387	0.950	-1.46	0.78
		Maintenance	0.375	0.524	0.980	-1.15	1.90
	Customer Service	Ops & Safety	0.734	0.357	0.318	-0.30	1.77
Driver		-0.052	0.357	1.000	-1.09	0.98	

Dependent Variable		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
		Dock Worker	-0.509	0.478	0.894	-1.90	0.88
		Sales	0.341	0.387	0.950	-0.78	1.46
		Maintenance	0.716	0.517	0.737	-0.78	2.22
	Maintenance	Ops & Safety	0.018	0.502	1.000	-1.44	1.47
		Driver	-0.768	0.502	0.647	-2.22	0.69
		Dock Worker	-1.225	0.594	0.315	-2.95	0.50
		Sales	-0.375	0.524	0.980	-1.90	1.15
		Customer Service	-0.716	0.517	0.737	-2.22	0.78
Q 14. Job compares to others	Ops & Safety	Driver	-0.571	0.376	0.652	-1.66	0.52
		Dock Worker	-0.860	0.501	0.522	-2.31	0.59
		Sales	-0.479	0.412	0.854	-1.67	0.72
		Customer Service	-1.679*	0.401	0.001	-2.84	-0.52
		Maintenance	-0.679	0.594	0.863	-2.40	1.05
	Driver	Ops & Safety	0.571	0.376	0.652	-0.52	1.66
		Dock Worker	-0.289	0.501	0.992	-1.74	1.16
		Sales	0.093	0.412	1.000	-1.10	1.29
		Customer Service	-1.107	0.401	0.071	-2.27	0.06
		Maintenance	-0.107	0.594	1.000	-1.83	1.62
	Dock Worker	Ops & Safety	0.860	0.501	0.522	-0.59	2.31
		Driver	0.289	0.501	0.992	-1.16	1.74
		Sales	0.382	0.528	0.979	-1.15	1.91

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
		Customer Service	-0.818	0.519	0.616	-2.32	0.69	
		Maintenance	0.182	0.680	1.000	-1.79	2.15	
	Sales	Ops & Safety	0.479	0.412	0.854	-0.72	1.67	
		Driver	-0.093	0.412	1.000	-1.29	1.10	
		Dock Worker	-0.382	0.528	0.979	-1.91	1.15	
		Customer Service	-1.200	0.435	0.072	-2.46	0.06	
		Maintenance	-0.200	0.618	1.000	-1.99	1.59	
		Customer Service	Ops & Safety	1.679*	0.401	0.001	0.52	2.84
	Driver		1.107	0.401	0.071	-0.06	2.27	
	Dock Worker		0.818	0.519	0.616	-0.69	2.32	
	Sales		1.200	0.435	0.072	-0.06	2.46	
	Maintenance		1.000	0.610	0.575	-0.77	2.77	
	Maintenance	Ops & Safety	0.679	0.594	0.863	-1.05	2.40	
		Driver	0.107	0.594	1.000	-1.62	1.83	
		Dock Worker	-0.182	0.680	1.000	-2.15	1.79	
		Sales	0.200	0.618	1.000	-1.59	1.99	
		Customer Service	-1.000	0.610	0.575	-2.77	0.77	
	Q 15. Performance is assessed	Ops & Safety	Driver	-0.714	0.389	0.448	-1.84	0.41
			Dock Worker	-1.786*	0.518	0.010	-3.29	-0.28
			Sales	-0.386	0.426	0.945	-1.62	0.85
Customer Service			-1.649*	0.415	0.002	-2.85	-0.45	

Dependent Variable		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
	Driver	Maintenance	-0.036	0.584	1.000	-1.73	1.66
		Ops & Safety	0.714	0.389	0.448	-0.41	1.84
		Dock Worker	-1.071	0.518	0.312	-2.57	0.43
		Sales	0.329	0.426	0.972	-0.91	1.57
		Customer Service	-0.935	0.415	0.222	-2.14	0.27
		Maintenance	0.679	0.584	0.854	-1.01	2.37
	Dock Worker	Ops & Safety	1.786*	0.518	0.010	0.28	3.29
		Driver	1.071	0.518	0.312	-0.43	2.57
		Sales	1.400	0.547	0.116	-0.19	2.99
		Customer Service	0.136	0.538	1.000	-1.42	1.70
		Maintenance	1.750	0.677	0.109	-0.21	3.71
	Sales	Ops & Safety	0.386	0.426	0.945	-0.85	1.62
		Driver	-0.329	0.426	0.972	-1.57	0.91
		Dock Worker	-1.400	0.547	0.116	-2.99	0.19
		Customer Service	-1.264	0.450	0.064	-2.57	0.04
		Maintenance	0.350	0.609	0.993	-1.42	2.12
	Customer Service	Ops & Safety	1.649*	0.415	0.002	0.45	2.85
		Driver	0.935	0.415	0.222	-0.27	2.14
		Dock Worker	-0.136	0.538	1.000	-1.70	1.42
		Sales	1.264	0.450	0.064	-0.04	2.57
		Maintenance	1.614	0.601	0.087	-0.13	3.36
	Maintenance	Ops & Safety	0.036	0.584	1.000	-1.66	1.73

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Driver	-0.679	0.584	0.854	-2.37	1.01
		Dock Worker	-1.750	0.677	0.109	-3.71	0.21
		Sales	-0.350	0.609	0.993	-2.12	1.42
		Customer Service	-1.614	0.601	0.087	-3.36	0.13
Q 16. Recognition of my efforts	Ops & Safety	Driver	-0.857	0.446	0.395	-2.15	0.44
		Dock Worker	-0.877	0.594	0.681	-2.60	0.85
		Sales	-0.786	0.496	0.612	-2.23	0.65
		Customer Service	-1.612*	0.470	0.011	-2.97	-0.25
		Maintenance	-0.661	0.670	0.921	-2.60	1.28
	Driver	Ops & Safety	0.857	0.446	0.395	-0.44	2.15
		Dock Worker	-0.019	0.594	1.000	-1.74	1.70
		Sales	0.071	0.496	1.000	-1.37	1.51
		Customer Service	-0.755	0.470	0.597	-2.12	0.61
		Maintenance	0.196	0.670	1.000	-1.75	2.14
	Dock Worker	Ops & Safety	0.877	0.594	0.681	-0.85	2.60
		Driver	0.019	0.594	1.000	-1.70	1.74
		Sales	0.091	0.633	1.000	-1.74	1.93
		Customer Service	-0.735	0.612	0.836	-2.51	1.04
		Maintenance	0.216	0.776	1.000	-2.03	2.47
	Sales	Ops & Safety	0.786	0.496	0.612	-0.65	2.23
		Driver	-0.071	0.496	1.000	-1.51	1.37

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
		Dock Worker	-0.091	0.633	1.000	-1.93	1.74	
		Customer Service	-0.826	0.518	0.603	-2.33	0.68	
		Maintenance	0.125	0.704	1.000	-1.92	2.17	
	Customer Service	Ops & Safety	1.612*	0.470	0.011	0.25	2.97	
		Driver	0.755	0.470	0.597	-0.61	2.12	
		Dock Worker	0.735	0.612	0.836	-1.04	2.51	
		Sales	0.826	0.518	0.603	-0.68	2.33	
		Maintenance	0.951	0.686	0.735	-1.04	2.94	
	Maintenance	Ops & Safety	0.661	0.670	0.921	-1.28	2.60	
		Driver	-0.196	0.670	1.000	-2.14	1.75	
		Dock Worker	-0.216	0.776	1.000	-2.47	2.03	
		Sales	-0.125	0.704	1.000	-2.17	1.92	
		Customer Service	-0.951	0.686	0.735	-2.94	1.04	
	Q 17. Departmental policies and goals	Ops & Safety	Driver	-0.643	0.293	0.251	-1.49	0.21
			Dock Worker	-1.110	0.391	0.058	-2.24	0.02
Sales			-0.379	0.321	0.847	-1.31	0.55	
Customer Service			-0.838	0.313	0.088	-1.74	0.07	
Maintenance			0.446	0.440	0.912	-0.83	1.72	
Driver		Ops & Safety	0.643	0.293	0.251	-0.21	1.49	
		Dock Worker	-0.468	0.391	0.838	-1.60	0.67	
		Sales	0.264	0.321	0.963	-0.67	1.20	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Customer Service	-0.195	0.313	0.989	-1.10	0.71
		Maintenance	1.089	0.440	0.141	-0.19	2.37
	Dock Worker	Ops & Safety	1.110	0.391	0.058	-0.02	2.24
		Driver	0.468	0.391	0.838	-0.67	1.60
		Sales	0.732	0.412	0.486	-0.46	1.93
		Customer Service	0.273	0.406	0.985	-0.90	1.45
		Maintenance	1.557*	0.510	0.033	0.08	3.04
		Sales	Ops & Safety	0.379	0.321	0.847	-0.55
	Driver		-0.264	0.321	0.963	-1.20	0.67
	Dock Worker		-0.732	0.412	0.486	-1.93	0.46
	Customer Service		-0.459	0.339	0.755	-1.44	0.52
	Maintenance		0.825	0.459	0.473	-0.51	2.16
	Customer Service	Ops & Safety	0.838	0.313	0.088	-0.07	1.74
		Driver	0.195	0.313	0.989	-0.71	1.10
		Dock Worker	-0.273	0.406	0.985	-1.45	0.90
		Sales	0.459	0.339	0.755	-0.52	1.44
		Maintenance	1.284	0.453	0.060	-0.03	2.60
	Maintenance	Ops & Safety	-0.446	0.440	0.912	-1.72	0.83
		Driver	-1.089	0.440	0.141	-2.37	0.19
		Dock Worker	-1.557*	0.510	0.033	-3.04	-0.08
Sales		-0.825	0.459	0.473	-2.16	0.51	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Customer Service	-1.284	0.453	0.060	-2.60	0.03
Q 18. Requirements of my job	Ops & Safety	Driver	-0.571	0.348	0.573	-1.58	0.44
		Dock Worker	-1.344	0.464	0.050	-2.69	0.00
		Sales	-0.121	0.381	1.000	-1.23	0.98
		Customer Service	-1.117*	0.371	0.037	-2.19	-0.04
		Maintenance	-0.321	0.522	0.990	-1.84	1.19
	Driver	Ops & Safety	0.571	0.348	0.573	-0.44	1.58
		Dock Worker	-0.773	0.464	0.557	-2.12	0.57
		Sales	0.450	0.381	0.846	-0.66	1.56
		Customer Service	-0.545	0.371	0.684	-1.62	0.53
		Maintenance	0.250	0.522	0.997	-1.26	1.76
	Dock Worker	Ops & Safety	1.344	0.464	0.050	0.00	2.69
		Driver	0.773	0.464	0.557	-0.57	2.12
		Sales	1.223	0.489	0.133	-0.20	2.64
		Customer Service	0.227	0.481	0.997	-1.17	1.62
		Maintenance	1.023	0.605	0.542	-0.73	2.78
	Sales	Ops & Safety	0.121	0.381	1.000	-0.98	1.23
		Driver	-0.450	0.381	0.846	-1.56	0.66
		Dock Worker	-1.223	0.489	0.133	-2.64	0.20
		Customer Service	-0.995	0.403	0.141	-2.16	0.17
		Maintenance	-0.200	0.545	0.999	-1.78	1.38



Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Customer Service	Ops & Safety	1.117*	0.371	0.037	0.04	2.19
		Driver	0.545	0.371	0.684	-0.53	1.62
		Dock Worker	-0.227	0.481	0.997	-1.62	1.17
		Sales	0.995	0.403	0.141	-0.17	2.16
		Maintenance	0.795	0.538	0.678	-0.76	2.36
	Maintenance	Ops & Safety	0.321	0.522	0.990	-1.19	1.84
		Driver	-0.250	0.522	0.997	-1.76	1.26
		Dock Worker	-1.023	0.605	0.542	-2.78	0.73
		Sales	0.200	0.545	0.999	-1.38	1.78
		Customer Service	-0.795	0.538	0.678	-2.36	0.76
Q 19. Changes in my company	Ops & Safety	Driver	-0.671	0.375	0.478	-1.76	0.42
		Dock Worker	-1.166	0.495	0.181	-2.60	0.27
		Sales	-0.743	0.407	0.454	-1.92	0.44
		Customer Service	-1.415*	0.391	0.006	-2.55	-0.28
		Maintenance	-0.018	0.558	1.000	-1.63	1.60
	Driver	Ops & Safety	0.671	0.375	0.478	-0.42	1.76
		Dock Worker	-0.495	0.497	0.919	-1.94	0.95
		Sales	-0.072	0.410	1.000	-1.26	1.12
		Customer Service	-0.744	0.395	0.417	-1.89	0.40
		Maintenance	0.653	0.560	0.852	-0.97	2.28
		Ops & Safety	1.166	0.495	0.181	-0.27	2.60

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Dock Worker	Driver	0.495	0.497	0.919	-0.95	1.94
		Sales	0.423	0.522	0.965	-1.09	1.94
		Customer Service	-0.249	0.510	0.996	-1.73	1.23
		Maintenance	1.148	0.646	0.485	-0.73	3.02
	Sales	Ops & Safety	0.743	0.407	0.454	-0.44	1.92
		Driver	0.072	0.410	1.000	-1.12	1.26
		Dock Worker	-0.423	0.522	0.965	-1.94	1.09
		Customer Service	-0.672	0.425	0.614	-1.90	0.56
		Maintenance	0.725	0.582	0.813	-0.96	2.41
	Customer Service	Ops & Safety	1.415*	0.391	0.006	0.28	2.55
		Driver	0.744	0.395	0.417	-0.40	1.89
		Dock Worker	0.249	0.510	0.996	-1.23	1.73
		Sales	0.672	0.425	0.614	-0.56	1.90
		Maintenance	1.397	0.571	0.149	-0.26	3.05
	Maintenance	Ops & Safety	0.018	0.558	1.000	-1.60	1.63
		Driver	-0.653	0.560	0.852	-2.28	0.97
		Dock Worker	-1.148	0.646	0.485	-3.02	0.73
		Sales	-0.725	0.582	0.813	-2.41	0.96
		Customer Service	-1.397	0.571	0.149	-3.05	0.26
	Q 20. How problems are being handled	Ops & Safety	Driver	-0.857	0.399	0.270	-2.01
Dock Worker			-1.351	0.531	0.120	-2.89	0.19

Dependent Variable		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
		Sales	-1.014	0.437	0.194	-2.28	0.25
		Customer Service	-1.714*	0.420	0.001	-2.93	-0.50
		Maintenance	0.036	0.598	1.000	-1.70	1.77
	Driver	Ops & Safety	0.857	0.399	0.270	-0.30	2.01
		Dock Worker	-0.494	0.531	0.938	-2.03	1.05
		Sales	-0.157	0.437	0.999	-1.42	1.11
		Customer Service	-0.857	0.420	0.326	-2.07	0.36
		Maintenance	0.893	0.598	0.670	-0.84	2.63
	Dock Worker	Ops & Safety	1.351	0.531	0.120	-0.19	2.89
		Driver	0.494	0.531	0.938	-1.05	2.03
		Sales	0.336	0.560	0.991	-1.29	1.96
		Customer Service	-0.364	0.547	0.985	-1.95	1.22
		Maintenance	1.386	0.693	0.349	-0.62	3.40
	Sales	Ops & Safety	1.014	0.437	0.194	-0.25	2.28
		Driver	0.157	0.437	0.999	-1.11	1.42
		Dock Worker	-0.336	0.560	0.991	-1.96	1.29
		Customer Service	-0.700	0.456	0.643	-2.02	0.62
		Maintenance	1.050	0.624	0.546	-0.76	2.86
	Customer Service	Ops & Safety	1.714*	0.420	0.001	0.50	2.93
		Driver	0.857	0.420	0.326	-0.36	2.07
Dock Worker		0.364	0.547	0.985	-1.22	1.95	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Sales	0.700	0.456	0.643	-0.62	2.02
		Maintenance	1.750	0.612	0.056	-0.03	3.53
	Maintenance	Ops & Safety	-0.036	0.598	1.000	-1.77	1.70
		Driver	-0.893	0.598	0.670	-2.63	0.84
		Dock Worker	-1.386	0.693	0.349	-3.40	0.62
		Sales	-1.050	0.624	0.546	-2.86	0.76
		Customer Service	-1.750	0.612	0.056	-3.53	0.03
Q 21. Pay and benefits	Ops & Safety	Driver	-0.286	0.412	0.982	-1.48	0.91
		Dock Worker	-0.974	0.549	0.486	-2.56	0.62
		Sales	-0.376	0.458	0.963	-1.70	0.95
		Customer Service	-1.385*	0.434	0.022	-2.64	-0.13
		Maintenance	-0.304	0.618	0.996	-2.10	1.49
	Driver	Ops & Safety	0.286	0.412	0.982	-0.91	1.48
		Dock Worker	-0.688	0.549	0.809	-2.28	0.90
		Sales	-0.090	0.458	1.000	-1.42	1.24
		Customer Service	-1.099	0.434	0.123	-2.36	0.16
		Maintenance	-0.018	0.618	1.000	-1.81	1.77
	Dock Worker	Ops & Safety	0.974	0.549	0.486	-0.62	2.56
		Driver	0.688	0.549	0.809	-0.90	2.28
		Sales	0.598	0.584	0.909	-1.10	2.29
		Customer Service	-0.411	0.565	0.978	-2.05	1.23

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
	Sales	Maintenance	0.670	0.716	0.936	-1.41	2.75	
		Ops & Safety	0.376	0.458	0.963	-0.95	1.70	
		Driver	0.090	0.458	1.000	-1.24	1.42	
		Dock Worker	-0.598	0.584	0.909	-2.29	1.10	
		Customer Service	-1.009	0.478	0.289	-2.40	0.38	
		Maintenance	0.072	0.650	1.000	-1.81	1.96	
	Customer Service	Ops & Safety	1.385*	0.434	0.022	0.13	2.64	
		Driver	1.099	0.434	0.123	-0.16	2.36	
		Dock Worker	0.411	0.565	0.978	-1.23	2.05	
		Sales	1.009	0.478	0.289	-0.38	2.40	
		Maintenance	1.082	0.633	0.529	-0.75	2.92	
	Maintenance	Ops & Safety	0.304	0.618	0.996	-1.49	2.10	
		Driver	0.018	0.618	1.000	-1.77	1.81	
		Dock Worker	-0.670	0.716	0.936	-2.75	1.41	
		Sales	-0.072	0.650	1.000	-1.96	1.81	
		Customer Service	-1.082	0.633	0.529	-2.92	0.75	
	Q 22. Company's financial standing	Ops & Safety	Driver	-1.571*	0.340	0.000	-2.56	-0.59
			Dock Worker	-1.643*	0.468	0.008	-3.00	-0.29
			Sales	-0.038	0.378	1.000	-1.13	1.06
			Customer Service	-1.186*	0.358	0.015	-2.22	-0.15
Maintenance			-0.143	0.509	1.000	-1.62	1.33	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Driver	Ops & Safety	1.571*	0.340	0.000	0.59	2.56
		Dock Worker	-0.071	0.468	1.000	-1.43	1.29
		Sales	1.534*	0.378	0.001	0.44	2.63
		Customer Service	0.385	0.358	0.889	-0.65	1.42
		Maintenance	1.429	0.509	0.064	-0.05	2.91
	Dock Worker	Ops & Safety	1.643*	0.468	0.008	0.29	3.00
		Driver	0.071	0.468	1.000	-1.29	1.43
		Sales	1.605*	0.496	0.020	0.17	3.04
		Customer Service	0.457	0.481	0.933	-0.94	1.85
		Maintenance	1.500	0.603	0.136	-0.25	3.25
	Sales	Ops & Safety	0.038	0.378	1.000	-1.06	1.13
		Driver	-1.534*	0.378	0.001	-2.63	-0.44
		Dock Worker	-1.605*	0.496	0.020	-3.04	-0.17
		Customer Service	-1.149*	0.394	0.048	-2.29	-0.01
		Maintenance	-0.105	0.535	1.000	-1.66	1.45
	Customer Service	Ops & Safety	1.186*	0.358	0.015	0.15	2.22
		Driver	-0.385	0.358	0.889	-1.42	0.65
		Dock Worker	-0.457	0.481	0.933	-1.85	0.94
		Sales	1.149*	0.394	0.048	0.01	2.29
		Maintenance	1.043	0.521	0.348	-0.47	2.56
Maintenance	Ops & Safety	0.143	0.509	1.000	-1.33	1.62	
	Driver	-1.429	0.509	0.064	-2.91	0.05	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Dock Worker	-1.500	0.603	0.136	-3.25	0.25
		Sales	0.105	0.535	1.000	-1.45	1.66
		Customer Service	-1.043	0.521	0.348	-2.56	0.47
Q 23. Achievements and failures of the organization	Ops & Safety	Driver	-.964*	0.299	0.020	-1.83	-0.10
		Dock Worker	-1.653*	0.398	0.001	-2.81	-0.50
		Sales	-0.157	0.328	0.997	-1.11	0.79
		Customer Service	-.977*	0.315	0.029	-1.89	-0.06
		Maintenance	-0.107	0.449	1.000	-1.41	1.19
	Driver	Ops & Safety	.964*	0.299	0.020	0.10	1.83
		Dock Worker	-0.688	0.398	0.517	-1.84	0.47
		Sales	0.807	0.328	0.144	-0.14	1.76
		Customer Service	-0.012	0.315	1.000	-0.93	0.90
		Maintenance	0.857	0.449	0.402	-0.44	2.16
	Dock Worker	Ops & Safety	1.653*	0.398	0.001	0.50	2.81
		Driver	0.688	0.398	0.517	-0.47	1.84
		Sales	1.495*	0.420	0.007	0.28	2.71
		Customer Service	0.676	0.410	0.570	-0.51	1.87
		Maintenance	1.545*	0.520	0.041	0.04	3.05
	Sales	Ops & Safety	0.157	0.328	0.997	-0.79	1.11
		Driver	-0.807	0.328	0.144	-1.76	0.14
		Dock Worker	-1.495*	0.420	0.007	-2.71	-0.28

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
		Customer Service	-0.820	0.342	0.167	-1.81	0.17	
		Maintenance	0.050	0.468	1.000	-1.31	1.41	
	Customer Service	Ops & Safety	.977*	0.315	0.029	0.06	1.89	
		Driver	0.012	0.315	1.000	-0.90	0.93	
		Dock Worker	-0.676	0.410	0.570	-1.87	0.51	
		Sales	0.820	0.342	0.167	-0.17	1.81	
		Maintenance	0.870	0.460	0.412	-0.46	2.20	
	Maintenance	Ops & Safety	0.107	0.449	1.000	-1.19	1.41	
		Driver	-0.857	0.449	0.402	-2.16	0.44	
		Dock Worker	-1.545*	0.520	0.041	-3.05	-0.04	
		Sales	-0.050	0.468	1.000	-1.41	1.31	
		Customer Service	-0.870	0.460	0.412	-2.20	0.46	
	Q 25. Supervisors understand the problems of the workers	Ops & Safety	Driver	-1.429*	0.374	0.003	-2.51	-0.34
			Dock Worker	-1.818*	0.498	0.005	-3.26	-0.37
			Sales	-0.850	0.410	0.309	-2.04	0.34
Customer Service			-2.130*	0.394	0.000	-3.27	-0.99	
Maintenance			-0.500	0.561	0.948	-2.13	1.13	
Driver		Ops & Safety	1.429*	0.374	0.003	0.34	2.51	
		Dock Worker	-0.390	0.498	0.970	-1.83	1.06	
		Sales	0.579	0.410	0.720	-0.61	1.77	
		Customer Service	-0.702	0.394	0.482	-1.84	0.44	



Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Dock Worker	Maintenance	0.929	0.561	0.565	-0.70	2.56
		Ops & Safety	1.818*	0.498	0.005	0.37	3.26
		Driver	0.390	0.498	0.970	-1.06	1.83
		Sales	0.968	0.526	0.444	-0.56	2.49
		Customer Service	-0.312	0.513	0.990	-1.80	1.18
		Maintenance	1.318	0.651	0.335	-0.57	3.21
	Sales	Ops & Safety	0.850	0.410	0.309	-0.34	2.04
		Driver	-0.579	0.410	0.720	-1.77	0.61
		Dock Worker	-0.968	0.526	0.444	-2.49	0.56
		Customer Service	-1.280*	0.428	0.039	-2.52	-0.04
		Maintenance	0.350	0.586	0.991	-1.35	2.05
	Customer Service	Ops & Safety	2.130*	0.394	0.000	0.99	3.27
		Driver	0.702	0.394	0.482	-0.44	1.84
		Dock Worker	0.312	0.513	0.990	-1.18	1.80
		Sales	1.280*	0.428	0.039	0.04	2.52
		Maintenance	1.630	0.575	0.059	-0.04	3.30
	Maintenance	Ops & Safety	0.500	0.561	0.948	-1.13	2.13
		Driver	-0.929	0.561	0.565	-2.56	0.70
		Dock Worker	-1.318	0.651	0.335	-3.21	0.57
		Sales	-0.350	0.586	0.991	-2.05	1.35
Customer Service		-1.630	0.575	0.059	-3.30	0.04	
	Ops & Safety	Driver	-0.893	0.358	0.134	-1.93	0.14

Dependent Variable		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
Q 26. Company's comms motivates me		Dock Worker	-1.364	0.476	0.055	-2.74	0.02
		Sales	-0.750	0.392	0.399	-1.89	0.39
		Customer Service	-1.522*	0.377	0.001	-2.61	-0.43
		Maintenance	0.000	0.537	1.000	-1.56	1.56
	Driver	Ops & Safety	0.893	0.358	0.134	-0.14	1.93
		Dock Worker	-0.471	0.476	0.921	-1.85	0.91
		Sales	0.143	0.392	0.999	-0.99	1.28
		Customer Service	-0.629	0.377	0.555	-1.72	0.46
		Maintenance	0.893	0.537	0.559	-0.66	2.45
	Dock Worker	Ops & Safety	1.364	0.476	0.055	-0.02	2.74
		Driver	0.471	0.476	0.921	-0.91	1.85
		Sales	0.614	0.503	0.826	-0.84	2.07
		Customer Service	-0.158	0.491	1.000	-1.58	1.26
		Maintenance	1.364	0.622	0.250	-0.44	3.17
	Sales	Ops & Safety	0.750	0.392	0.399	-0.39	1.89
		Driver	-0.143	0.392	0.999	-1.28	0.99
		Dock Worker	-0.614	0.503	0.826	-2.07	0.84
		Customer Service	-0.772	0.409	0.416	-1.96	0.42
		Maintenance	0.750	0.560	0.763	-0.87	2.37
	Customer Service	Ops & Safety	1.522*	0.377	0.001	0.43	2.61
Driver		0.629	0.377	0.555	-0.46	1.72	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Dock Worker	0.158	0.491	1.000	-1.26	1.58
		Sales	0.772	0.409	0.416	-0.42	1.96
		Maintenance	1.522	0.549	0.070	-0.07	3.12
	Maintenance	Ops & Safety	0.000	0.537	1.000	-1.56	1.56
		Driver	-0.893	0.537	0.559	-2.45	0.66
		Dock Worker	-1.364	0.622	0.250	-3.17	0.44
		Sales	-0.750	0.560	0.763	-2.37	0.87
		Customer Service	-1.522	0.549	0.070	-3.12	0.07
Q 27. Supervisor listens and pays attention	Ops & Safety	Driver	-1.464*	0.424	0.010	-2.69	-0.24
		Dock Worker	-1.756*	0.564	0.028	-3.39	-0.12
		Sales	-0.693	0.464	0.669	-2.04	0.65
		Customer Service	-1.529*	0.451	0.012	-2.84	-0.22
		Maintenance	-0.518	0.635	0.964	-2.36	1.32
	Driver	Ops & Safety	1.464*	0.424	0.010	0.24	2.69
		Dock Worker	-0.292	0.564	0.995	-1.93	1.34
		Sales	0.771	0.464	0.559	-0.57	2.12
		Customer Service	-0.065	0.451	1.000	-1.37	1.24
		Maintenance	0.946	0.635	0.671	-0.90	2.79
	Dock Worker	Ops & Safety	1.756*	0.564	0.028	0.12	3.39
		Driver	0.292	0.564	0.995	-1.34	1.93
		Sales	1.064	0.595	0.478	-0.66	2.79

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
		Customer Service	0.227	0.585	0.999	-1.47	1.92	
		Maintenance	1.239	0.736	0.546	-0.90	3.37	
	Sales	Ops & Safety	0.693	0.464	0.669	-0.65	2.04	
		Driver	-0.771	0.464	0.559	-2.12	0.57	
		Dock Worker	-1.064	0.595	0.478	-2.79	0.66	
		Customer Service	-0.836	0.490	0.529	-2.26	0.58	
		Maintenance	0.175	0.663	1.000	-1.75	2.10	
		Customer Service	Ops & Safety	1.529*	0.451	0.012	0.22	2.84
	Driver		0.065	0.451	1.000	-1.24	1.37	
	Dock Worker		-0.227	0.585	0.999	-1.92	1.47	
	Sales		0.836	0.490	0.529	-0.58	2.26	
	Maintenance		1.011	0.654	0.636	-0.89	2.91	
	Maintenance	Ops & Safety	0.518	0.635	0.964	-1.32	2.36	
		Driver	-0.946	0.635	0.671	-2.79	0.90	
		Dock Worker	-1.239	0.736	0.546	-3.37	0.90	
		Sales	-0.175	0.663	1.000	-2.10	1.75	
		Customer Service	-1.011	0.654	0.636	-2.91	0.89	
	Q 28. People have the ability to communicate	Ops & Safety	Driver	-1.000	0.386	0.108	-2.12	0.12
			Dock Worker	-0.841	0.514	0.576	-2.33	0.65
			Sales	-0.800	0.423	0.412	-2.03	0.43
Customer Service			-1.402*	0.406	0.010	-2.58	-0.22	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Driver	Maintenance	0.250	0.579	0.998	-1.43	1.93
		Ops & Safety	1.000	0.386	0.108	-0.12	2.12
		Dock Worker	0.159	0.514	1.000	-1.33	1.65
		Sales	0.200	0.423	0.997	-1.03	1.43
		Customer Service	-0.402	0.406	0.920	-1.58	0.78
		Maintenance	1.250	0.579	0.265	-0.43	2.93
	Dock Worker	Ops & Safety	0.841	0.514	0.576	-0.65	2.33
		Driver	-0.159	0.514	1.000	-1.65	1.33
		Sales	0.041	0.542	1.000	-1.53	1.61
		Customer Service	-0.561	0.529	0.896	-2.10	0.97
		Maintenance	1.091	0.671	0.583	-0.85	3.04
	Sales	Ops & Safety	0.800	0.423	0.412	-0.43	2.03
		Driver	-0.200	0.423	0.997	-1.43	1.03
		Dock Worker	-0.041	0.542	1.000	-1.61	1.53
		Customer Service	-0.602	0.442	0.748	-1.88	0.68
		Maintenance	1.050	0.604	0.510	-0.70	2.80
	Customer Service	Ops & Safety	1.402*	0.406	0.010	0.22	2.58
		Driver	0.402	0.406	0.920	-0.78	1.58
		Dock Worker	0.561	0.529	0.896	-0.97	2.10
		Sales	0.602	0.442	0.748	-0.68	1.88
		Maintenance	1.652	0.593	0.067	-0.07	3.37
	Maintenance	Ops & Safety	-0.250	0.579	0.998	-1.93	1.43

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Driver	-1.250	0.579	0.265	-2.93	0.43
		Dock Worker	-1.091	0.671	0.583	-3.04	0.85
		Sales	-1.050	0.604	0.510	-2.80	0.70
		Customer Service	-1.652	0.593	0.067	-3.37	0.07
Q 29. Supervisor offers guidance for solving problems	Ops & Safety	Driver	-1.107	0.407	0.080	-2.29	0.07
		Dock Worker	-1.672*	0.542	0.030	-3.24	-0.10
		Sales	-0.736	0.446	0.568	-2.03	0.56
		Customer Service	-0.992	0.429	0.197	-2.24	0.25
		Maintenance	0.214	0.611	0.999	-1.56	1.99
	Driver	Ops & Safety	1.107	0.407	0.080	-0.07	2.29
		Dock Worker	-0.565	0.542	0.903	-2.14	1.01
		Sales	0.371	0.446	0.961	-0.92	1.66
		Customer Service	0.115	0.429	1.000	-1.13	1.36
		Maintenance	1.321	0.611	0.263	-0.45	3.09
	Dock Worker	Ops & Safety	1.672*	0.542	0.030	0.10	3.24
		Driver	0.565	0.542	0.903	-1.01	2.14
		Sales	0.936	0.572	0.576	-0.72	2.59
		Customer Service	0.680	0.559	0.828	-0.94	2.30
		Maintenance	1.886	0.708	0.091	-0.17	3.94
	Sales	Ops & Safety	0.736	0.446	0.568	-0.56	2.03
		Driver	-0.371	0.446	0.961	-1.66	0.92

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
		Dock Worker	-0.936	0.572	0.576	-2.59	0.72	
		Customer Service	-0.257	0.466	0.994	-1.61	1.09	
		Maintenance	0.950	0.637	0.671	-0.90	2.80	
	Customer Service	Ops & Safety	0.992	0.429	0.197	-0.25	2.24	
		Driver	-0.115	0.429	1.000	-1.36	1.13	
		Dock Worker	-0.680	0.559	0.828	-2.30	0.94	
		Sales	0.257	0.466	0.994	-1.09	1.61	
		Maintenance	1.207	0.625	0.390	-0.61	3.02	
	Maintenance	Ops & Safety	-0.214	0.611	0.999	-1.99	1.56	
		Driver	-1.321	0.611	0.263	-3.09	0.45	
		Dock Worker	-1.886	0.708	0.091	-3.94	0.17	
		Sales	-0.950	0.637	0.671	-2.80	0.90	
		Customer Service	-1.207	0.625	0.390	-3.02	0.61	
	Q 30. Makes me feel like a vital part of the team	Ops & Safety	Driver	-0.897	0.401	0.229	-2.06	0.27
			Dock Worker	-0.968	0.529	0.451	-2.50	0.57
Sales			-0.436	0.435	0.917	-1.70	0.83	
Customer Service			-1.351*	0.418	0.020	-2.56	-0.14	
Maintenance			0.214	0.596	0.999	-1.51	1.94	
Driver		Ops & Safety	0.897	0.401	0.229	-0.27	2.06	
		Dock Worker	-0.071	0.532	1.000	-1.61	1.47	
		Sales	0.461	0.438	0.899	-0.81	1.73	

Dependent Variable		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
		Customer Service	-0.454	0.422	0.890	-1.68	0.77
		Maintenance	1.111	0.598	0.434	-0.62	2.85
	Dock Worker	Ops & Safety	0.968	0.529	0.451	-0.57	2.50
		Driver	0.071	0.532	1.000	-1.47	1.61
		Sales	0.532	0.558	0.931	-1.09	2.15
		Customer Service	-0.383	0.545	0.981	-1.96	1.20
		Maintenance	1.182	0.691	0.527	-0.82	3.18
		Sales	Ops & Safety	0.436	0.435	0.917	-0.83
	Driver		-0.461	0.438	0.899	-1.73	0.81
	Dock Worker		-0.532	0.558	0.931	-2.15	1.09
	Customer Service		-0.915	0.454	0.341	-2.23	0.40
	Maintenance		0.650	0.622	0.901	-1.15	2.45
	Customer Service	Ops & Safety	1.351*	0.418	0.020	0.14	2.56
		Driver	0.454	0.422	0.890	-0.77	1.68
		Dock Worker	0.383	0.545	0.981	-1.20	1.96
		Sales	0.915	0.454	0.341	-0.40	2.23
		Maintenance	1.565	0.610	0.115	-0.20	3.33
	Maintenance	Ops & Safety	-0.214	0.596	0.999	-1.94	1.51
		Driver	-1.111	0.598	0.434	-2.85	0.62
		Dock Worker	-1.182	0.691	0.527	-3.18	0.82
Sales		-0.650	0.622	0.901	-2.45	1.15	



Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Customer Service	-1.565	0.610	0.115	-3.33	0.20
Q 31. Comms are interesting and helpful	Ops & Safety	Driver	-.929*	0.318	0.048	-1.85	-0.01
		Dock Worker	-1.221	0.424	0.052	-2.45	0.01
		Sales	-0.207	0.349	0.991	-1.22	0.80
		Customer Service	-1.248*	0.335	0.004	-2.22	-0.28
		Maintenance	0.018	0.477	1.000	-1.37	1.40
	Driver	Ops & Safety	.929*	0.318	0.048	0.01	1.85
		Dock Worker	-0.292	0.424	0.983	-1.52	0.94
		Sales	0.721	0.349	0.311	-0.29	1.73
		Customer Service	-0.320	0.335	0.931	-1.29	0.65
		Maintenance	0.946	0.477	0.359	-0.44	2.33
	Dock Worker	Ops & Safety	1.221	0.424	0.052	-0.01	2.45
		Driver	0.292	0.424	0.983	-0.94	1.52
		Sales	1.014	0.447	0.216	-0.28	2.31
		Customer Service	-0.028	0.436	1.000	-1.29	1.24
		Maintenance	1.239	0.553	0.228	-0.37	2.84
	Sales	Ops & Safety	0.207	0.349	0.991	-0.80	1.22
		Driver	-0.721	0.349	0.311	-1.73	0.29
		Dock Worker	-1.014	0.447	0.216	-2.31	0.28
		Customer Service	-1.041	0.364	0.055	-2.10	0.01
		Maintenance	0.225	0.498	0.998	-1.22	1.67

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Customer Service	Ops & Safety	1.248*	0.335	0.004	0.28	2.22
		Driver	0.320	0.335	0.931	-0.65	1.29
		Dock Worker	0.028	0.436	1.000	-1.24	1.29
		Sales	1.041	0.364	0.055	-0.01	2.10
		Maintenance	1.266	0.489	0.108	-0.15	2.68
	Maintenance	Ops & Safety	-0.018	0.477	1.000	-1.40	1.37
		Driver	-0.946	0.477	0.359	-2.33	0.44
		Dock Worker	-1.239	0.553	0.228	-2.84	0.37
		Sales	-0.225	0.498	0.998	-1.67	1.22
		Customer Service	-1.266	0.489	0.108	-2.68	0.15
Q 32. My supervisors trust me	Ops & Safety	Driver	-0.786	0.396	0.358	-1.93	0.36
		Dock Worker	-1.057	0.546	0.386	-2.64	0.53
		Sales	-0.057	0.434	1.000	-1.32	1.20
		Customer Service	-1.488*	0.417	0.007	-2.70	-0.28
		Maintenance	-0.107	0.594	1.000	-1.83	1.62
	Driver	Ops & Safety	0.786	0.396	0.358	-0.36	1.93
		Dock Worker	-0.271	0.546	0.996	-1.85	1.31
		Sales	0.729	0.434	0.548	-0.53	1.99
		Customer Service	-0.702	0.417	0.546	-1.91	0.51
		Maintenance	0.679	0.594	0.863	-1.04	2.40
		Ops & Safety	1.057	0.546	0.386	-0.53	2.64

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Dock Worker	Driver	0.271	0.546	0.996	-1.31	1.85
		Sales	1.000	0.574	0.507	-0.66	2.66
		Customer Service	-0.430	0.561	0.972	-2.06	1.20
		Maintenance	0.950	0.703	0.755	-1.09	2.99
	Sales	Ops & Safety	0.057	0.434	1.000	-1.20	1.32
		Driver	-0.729	0.434	0.548	-1.99	0.53
		Dock Worker	-1.000	0.574	0.507	-2.66	0.66
		Customer Service	-1.430*	0.453	0.024	-2.74	-0.12
		Maintenance	-0.050	0.620	1.000	-1.85	1.75
	Customer Service	Ops & Safety	1.488*	0.417	0.007	0.28	2.70
		Driver	0.702	0.417	0.546	-0.51	1.91
		Dock Worker	0.430	0.561	0.972	-1.20	2.06
		Sales	1.430*	0.453	0.024	0.12	2.74
		Maintenance	1.380	0.608	0.215	-0.38	3.14
	Maintenance	Ops & Safety	0.107	0.594	1.000	-1.62	1.83
		Driver	-0.679	0.594	0.863	-2.40	1.04
		Dock Worker	-0.950	0.703	0.755	-2.99	1.09
		Sales	0.050	0.620	1.000	-1.75	1.85
		Customer Service	-1.380	0.608	0.215	-3.14	0.38
	Q 33. Timeliness of information	Ops & Safety	Driver	-1.143*	0.371	0.030	-2.22
Dock Worker			-1.127	0.494	0.210	-2.56	0.31

Dependent Variable		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
		Sales	-0.336	0.406	0.962	-1.51	0.84
		Customer Service	-0.992	0.391	0.121	-2.12	0.14
		Maintenance	-0.036	0.556	1.000	-1.65	1.58
	Driver	Ops & Safety	1.143*	0.371	0.030	0.07	2.22
		Dock Worker	0.016	0.494	1.000	-1.42	1.45
		Sales	0.807	0.406	0.357	-0.37	1.99
		Customer Service	0.151	0.391	0.999	-0.98	1.28
		Maintenance	1.107	0.556	0.355	-0.51	2.72
	Dock Worker	Ops & Safety	1.127	0.494	0.210	-0.31	2.56
		Driver	-0.016	0.494	1.000	-1.45	1.42
		Sales	0.791	0.521	0.653	-0.72	2.30
		Customer Service	0.134	0.509	1.000	-1.34	1.61
		Maintenance	1.091	0.645	0.540	-0.78	2.96
	Sales	Ops & Safety	0.336	0.406	0.962	-0.84	1.51
		Driver	-0.807	0.406	0.357	-1.99	0.37
		Dock Worker	-0.791	0.521	0.653	-2.30	0.72
		Customer Service	-0.657	0.424	0.635	-1.89	0.57
		Maintenance	0.300	0.581	0.995	-1.38	1.98
	Customer Service	Ops & Safety	0.992	0.391	0.121	-0.14	2.12
		Driver	-0.151	0.391	0.999	-1.28	0.98
		Dock Worker	-0.134	0.509	1.000	-1.61	1.34

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Sales	0.657	0.424	0.635	-0.57	1.89
		Maintenance	0.957	0.570	0.548	-0.70	2.61
	Maintenance	Ops & Safety	0.036	0.556	1.000	-1.58	1.65
		Driver	-1.107	0.556	0.355	-2.72	0.51
		Dock Worker	-1.091	0.645	0.540	-2.96	0.78
		Sales	-0.300	0.581	0.995	-1.98	1.38
		Customer Service	-0.957	0.570	0.548	-2.61	0.70
Q 34. Conflicts are handled appropriately	Ops & Safety	Driver	-0.929	0.422	0.246	-2.15	0.30
		Dock Worker	-1.477	0.562	0.099	-3.11	0.15
		Sales	-0.800	0.462	0.515	-2.14	0.54
		Customer Service	-1.446*	0.444	0.018	-2.73	-0.16
		Maintenance	-0.125	0.633	1.000	-1.96	1.71
	Driver	Ops & Safety	0.929	0.422	0.246	-0.30	2.15
		Dock Worker	-0.549	0.562	0.924	-2.18	1.08
		Sales	0.129	0.462	1.000	-1.21	1.47
		Customer Service	-0.517	0.444	0.853	-1.81	0.77
		Maintenance	0.804	0.633	0.801	-1.03	2.64
	Dock Worker	Ops & Safety	1.477	0.562	0.099	-0.15	3.11
		Driver	0.549	0.562	0.924	-1.08	2.18
		Sales	0.677	0.593	0.862	-1.04	2.40
		Customer Service	0.032	0.579	1.000	-1.65	1.71

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
	Sales	Maintenance	1.352	0.734	0.443	-0.78	3.48	
		Ops & Safety	0.800	0.462	0.515	-0.54	2.14	
		Driver	-0.129	0.462	1.000	-1.47	1.21	
		Dock Worker	-0.677	0.593	0.862	-2.40	1.04	
		Customer Service	-0.646	0.483	0.764	-2.05	0.75	
		Maintenance	0.675	0.661	0.910	-1.24	2.59	
	Customer Service	Ops & Safety	1.446*	0.444	0.018	0.16	2.73	
		Driver	0.517	0.444	0.853	-0.77	1.81	
		Dock Worker	-0.032	0.579	1.000	-1.71	1.65	
		Sales	0.646	0.483	0.764	-0.75	2.05	
		Maintenance	1.321	0.648	0.328	-0.56	3.20	
	Maintenance	Ops & Safety	0.125	0.633	1.000	-1.71	1.96	
		Driver	-0.804	0.633	0.801	-2.64	1.03	
		Dock Worker	-1.352	0.734	0.443	-3.48	0.78	
		Sales	-0.675	0.661	0.910	-2.59	1.24	
		Customer Service	-1.321	0.648	0.328	-3.20	0.56	
	Q 35."Grapevine" (informal communication) is active	Ops & Safety	Driver	-0.615	0.376	0.577	-1.71	0.48
			Dock Worker	-0.768	0.499	0.640	-2.21	0.68
			Sales	-0.591	0.418	0.718	-1.80	0.62
			Customer Service	-1.005	0.396	0.122	-2.15	0.14
Maintenance			0.528	0.561	0.935	-1.10	2.16	

Dependent Variable		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
	Driver	Ops & Safety	0.615	0.376	0.577	-0.48	1.71
		Dock Worker	-0.153	0.496	1.000	-1.59	1.29
		Sales	0.024	0.414	1.000	-1.18	1.23
		Customer Service	-0.390	0.392	0.919	-1.53	0.75
		Maintenance	1.143	0.559	0.324	-0.48	2.76
	Dock Worker	Ops & Safety	0.768	0.499	0.640	-0.68	2.21
		Driver	0.153	0.496	1.000	-1.29	1.59
		Sales	0.177	0.528	0.999	-1.36	1.71
		Customer Service	-0.237	0.511	0.997	-1.72	1.25
		Maintenance	1.295	0.648	0.349	-0.58	3.17
	Sales	Ops & Safety	0.591	0.418	0.718	-0.62	1.80
		Driver	-0.024	0.414	1.000	-1.23	1.18
		Dock Worker	-0.177	0.528	0.999	-1.71	1.36
		Customer Service	-0.414	0.432	0.930	-1.67	0.84
		Maintenance	1.118	0.588	0.406	-0.59	2.82
	Customer Service	Ops & Safety	1.005	0.396	0.122	-0.14	2.15
		Driver	0.390	0.392	0.919	-0.75	1.53
		Dock Worker	0.237	0.511	0.997	-1.25	1.72
Sales		0.414	0.432	0.930	-0.84	1.67	
Maintenance		1.533	0.572	0.088	-0.13	3.19	
Maintenance	Ops & Safety	-0.528	0.561	0.935	-2.16	1.10	
	Driver	-1.143	0.559	0.324	-2.76	0.48	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Dock Worker	-1.295	0.648	0.349	-3.17	0.58
		Sales	-1.118	0.588	0.406	-2.82	0.59
		Customer Service	-1.533	0.572	0.088	-3.19	0.13
Q 37. Comms with peers are open and free flowing	Ops & Safety	Driver	-0.679	0.300	0.217	-1.55	0.19
		Dock Worker	-1.253*	0.399	0.026	-2.41	-0.10
		Sales	-0.671	0.328	0.323	-1.62	0.28
		Customer Service	-0.593	0.315	0.419	-1.51	0.32
		Maintenance	0.429	0.449	0.931	-0.87	1.73
	Driver	Ops & Safety	0.679	0.300	0.217	-0.19	1.55
		Dock Worker	-0.575	0.399	0.702	-1.73	0.58
		Sales	0.007	0.328	1.000	-0.94	0.96
		Customer Service	0.085	0.315	1.000	-0.83	1.00
		Maintenance	1.107	0.449	0.144	-0.20	2.41
	Dock Worker	Ops & Safety	1.253*	0.399	0.026	0.10	2.41
		Driver	0.575	0.399	0.702	-0.58	1.73
		Sales	0.582	0.421	0.737	-0.64	1.80
		Customer Service	0.660	0.411	0.596	-0.53	1.85
		Maintenance	1.682*	0.521	0.020	0.17	3.19
	Sales	Ops & Safety	0.671	0.328	0.323	-0.28	1.62
		Driver	-0.007	0.328	1.000	-0.96	0.94
		Dock Worker	-0.582	0.421	0.737	-1.80	0.64



Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
		Customer Service	0.078	0.343	1.000	-0.92	1.07	
		Maintenance	1.100	0.469	0.185	-0.26	2.46	
	Customer Service	Ops & Safety	0.593	0.315	0.419	-0.32	1.51	
		Driver	-0.085	0.315	1.000	-1.00	0.83	
		Dock Worker	-0.660	0.411	0.596	-1.85	0.53	
		Sales	-0.078	0.343	1.000	-1.07	0.92	
		Maintenance	1.022	0.460	0.237	-0.31	2.36	
	Maintenance	Ops & Safety	-0.429	0.449	0.931	-1.73	0.87	
		Driver	-1.107	0.449	0.144	-2.41	0.20	
		Dock Worker	-1.682*	0.521	0.020	-3.19	-0.17	
		Sales	-1.100	0.469	0.185	-2.46	0.26	
		Customer Service	-1.022	0.460	0.237	-2.36	0.31	
	Q 36. Supervisor is open to new ideas	Ops & Safety	Driver	-1.143*	0.364	0.026	-2.20	-0.09
			Dock Worker	-1.542*	0.485	0.023	-2.95	-0.14
			Sales	-0.429	0.399	0.891	-1.59	0.73
Customer Service			-0.874	0.384	0.211	-1.99	0.24	
Maintenance			0.196	0.546	0.999	-1.39	1.78	
Driver		Ops & Safety	1.143*	0.364	0.026	0.09	2.20	
		Dock Worker	-0.399	0.485	0.963	-1.81	1.01	
		Sales	0.714	0.399	0.476	-0.44	1.87	
		Customer Service	0.269	0.384	0.982	-0.84	1.38	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Dock Worker	Maintenance	1.339	0.546	0.148	-0.25	2.92
		Ops & Safety	1.542*	0.485	0.023	0.14	2.95
		Driver	0.399	0.485	0.963	-1.01	1.81
		Sales	1.114	0.512	0.257	-0.37	2.60
		Customer Service	0.668	0.500	0.764	-0.78	2.12
		Maintenance	1.739	0.633	0.074	-0.10	3.58
	Sales	Ops & Safety	0.429	0.399	0.891	-0.73	1.59
		Driver	-0.714	0.399	0.476	-1.87	0.44
		Dock Worker	-1.114	0.512	0.257	-2.60	0.37
		Customer Service	-0.446	0.417	0.893	-1.65	0.76
		Maintenance	0.625	0.570	0.882	-1.03	2.28
	Customer Service	Ops & Safety	0.874	0.384	0.211	-0.24	1.99
		Driver	-0.269	0.384	0.982	-1.38	0.84
		Dock Worker	-0.668	0.500	0.764	-2.12	0.78
		Sales	0.446	0.417	0.893	-0.76	1.65
		Maintenance	1.071	0.560	0.399	-0.55	2.69
	Maintenance	Ops & Safety	-0.196	0.546	0.999	-1.78	1.39
		Driver	-1.339	0.546	0.148	-2.92	0.25
		Dock Worker	-1.739	0.633	0.074	-3.58	0.10
		Sales	-0.625	0.570	0.882	-2.28	1.03
Customer Service		-1.071	0.560	0.399	-2.69	0.55	
	Ops & Safety	Driver	-1.077*	0.309	0.009	-1.97	-0.18

Dependent Variable		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
Q 38. Practices are adaptable to emergencies		Dock Worker	-1.448*	0.425	0.011	-2.68	-0.22
		Sales	-0.464	0.344	0.756	-1.46	0.53
		Customer Service	-1.148*	0.326	0.008	-2.09	-0.20
		Maintenance	-0.148	0.462	1.000	-1.49	1.19
	Driver	Ops & Safety	1.077*	0.309	0.009	0.18	1.97
		Dock Worker	-0.371	0.423	0.951	-1.60	0.85
		Sales	0.613	0.341	0.472	-0.38	1.60
		Customer Service	-0.071	0.323	1.000	-1.01	0.87
		Maintenance	0.929	0.460	0.338	-0.41	2.26
	Dock Worker	Ops & Safety	1.448*	0.425	0.011	0.22	2.68
		Driver	0.371	0.423	0.951	-0.85	1.60
		Sales	0.984	0.448	0.248	-0.32	2.28
		Customer Service	0.300	0.435	0.983	-0.96	1.56
		Maintenance	1.300	0.544	0.169	-0.28	2.88
	Sales	Ops & Safety	0.464	0.344	0.756	-0.53	1.46
		Driver	-0.613	0.341	0.472	-1.60	0.38
		Dock Worker	-0.984	0.448	0.248	-2.28	0.32
		Customer Service	-0.684	0.356	0.393	-1.72	0.35
		Maintenance	0.316	0.484	0.987	-1.09	1.72
	Customer Service	Ops & Safety	1.148*	0.326	0.008	0.20	2.09
Driver		0.071	0.323	1.000	-0.87	1.01	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Dock Worker	-0.300	0.435	0.983	-1.56	0.96
		Sales	0.684	0.356	0.393	-0.35	1.72
		Maintenance	1.000	0.471	0.283	-0.37	2.37
	Maintenance	Ops & Safety	0.148	0.462	1.000	-1.19	1.49
		Driver	-0.929	0.460	0.338	-2.26	0.41
		Dock Worker	-1.300	0.544	0.169	-2.88	0.28
		Sales	-0.316	0.484	0.987	-1.72	1.09
		Customer Service	-1.000	0.471	0.283	-2.37	0.37
Q 39. Meetings are well organized	Ops & Safety	Driver	-1.071*	0.307	0.009	-1.96	-0.18
		Dock Worker	-1.471*	0.409	0.006	-2.66	-0.29
		Sales	-0.707	0.336	0.293	-1.68	0.27
		Customer Service	-1.325*	0.323	0.001	-2.26	-0.39
		Maintenance	0.018	0.460	1.000	-1.32	1.35
	Driver	Ops & Safety	1.071*	0.307	0.009	0.18	1.96
		Dock Worker	-0.399	0.409	0.924	-1.58	0.79
		Sales	0.364	0.336	0.887	-0.61	1.34
		Customer Service	-0.253	0.323	0.970	-1.19	0.68
		Maintenance	1.089	0.460	0.178	-0.25	2.42
	Dock Worker	Ops & Safety	1.471*	0.409	0.006	0.29	2.66
		Driver	0.399	0.409	0.924	-0.79	1.58
		Sales	0.764	0.431	0.489	-0.49	2.01

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
		Customer Service	0.146	0.421	0.999	-1.07	1.37	
		Maintenance	1.489	0.534	0.067	-0.06	3.04	
	Sales	Ops & Safety	0.707	0.336	0.293	-0.27	1.68	
		Driver	-0.364	0.336	0.887	-1.34	0.61	
		Dock Worker	-0.764	0.431	0.489	-2.01	0.49	
		Customer Service	-0.617	0.351	0.497	-1.64	0.40	
		Maintenance	0.725	0.481	0.659	-0.67	2.12	
		Customer Service	Ops & Safety	1.325*	0.323	0.001	0.39	2.26
	Driver		0.253	0.323	0.970	-0.68	1.19	
	Dock Worker		-0.146	0.421	0.999	-1.37	1.07	
	Sales		0.617	0.351	0.497	-0.40	1.64	
	Maintenance		1.342	0.471	0.057	-0.02	2.71	
	Maintenance	Ops & Safety	-0.018	0.460	1.000	-1.35	1.32	
		Driver	-1.089	0.460	0.178	-2.42	0.25	
		Dock Worker	-1.489	0.534	0.067	-3.04	0.06	
		Sales	-0.725	0.481	0.659	-2.12	0.67	
		Customer Service	-1.342	0.471	0.057	-2.71	0.02	
	Q 40. Amount of supervision	Ops & Safety	Driver	-0.988	0.376	0.099	-2.08	0.10
			Dock Worker	-1.412	0.496	0.057	-2.85	0.02
			Sales	-0.371	0.408	0.943	-1.55	0.81
Customer Service			-1.408*	0.392	0.006	-2.54	-0.27	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Driver	Maintenance	-0.071	0.558	1.000	-1.69	1.55
		Ops & Safety	0.988	0.376	0.099	-0.10	2.08
		Dock Worker	-0.424	0.498	0.957	-1.87	1.02
		Sales	0.617	0.411	0.664	-0.57	1.81
		Customer Service	-0.420	0.395	0.895	-1.57	0.73
		Maintenance	0.917	0.561	0.577	-0.71	2.54
	Dock Worker	Ops & Safety	1.412	0.496	0.057	-0.02	2.85
		Driver	0.424	0.498	0.957	-1.02	1.87
		Sales	1.041	0.523	0.354	-0.48	2.56
		Customer Service	0.004	0.511	1.000	-1.48	1.48
		Maintenance	1.341	0.647	0.309	-0.54	3.22
	Sales	Ops & Safety	0.371	0.408	0.943	-0.81	1.55
		Driver	-0.617	0.411	0.664	-1.81	0.57
		Dock Worker	-1.041	0.523	0.354	-2.56	0.48
		Customer Service	-1.037	0.426	0.153	-2.27	0.20
		Maintenance	0.300	0.583	0.995	-1.39	1.99
	Customer Service	Ops & Safety	1.408*	0.392	0.006	0.27	2.54
		Driver	0.420	0.395	0.895	-0.73	1.57
		Dock Worker	-0.004	0.511	1.000	-1.48	1.48
		Sales	1.037	0.426	0.153	-0.20	2.27
		Maintenance	1.337	0.572	0.188	-0.32	2.99
	Maintenance	Ops & Safety	0.071	0.558	1.000	-1.55	1.69

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Driver	-0.917	0.561	0.577	-2.54	0.71
		Dock Worker	-1.341	0.647	0.309	-3.22	0.54
		Sales	-0.300	0.583	0.995	-1.99	1.39
		Customer Service	-1.337	0.572	0.188	-2.99	0.32
Q 41. Written reports are clear and concise	Ops & Safety	Driver	-1.036*	0.307	0.013	-1.93	-0.14
		Dock Worker	-1.455*	0.409	0.007	-2.64	-0.27
		Sales	-0.300	0.337	0.948	-1.28	0.68
		Customer Service	-1.130*	0.323	0.009	-2.07	-0.19
		Maintenance	-0.250	0.461	0.994	-1.59	1.09
	Driver	Ops & Safety	1.036*	0.307	0.013	0.14	1.93
		Dock Worker	-0.419	0.409	0.909	-1.60	0.77
		Sales	0.736	0.337	0.253	-0.24	1.71
		Customer Service	-0.095	0.323	1.000	-1.03	0.84
		Maintenance	0.786	0.461	0.531	-0.55	2.12
	Dock Worker	Ops & Safety	1.455*	0.409	0.007	0.27	2.64
		Driver	0.419	0.409	0.909	-0.77	1.60
		Sales	1.155	0.432	0.088	-0.10	2.41
		Customer Service	0.324	0.421	0.972	-0.90	1.55
		Maintenance	1.205	0.534	0.222	-0.34	2.75
	Sales	Ops & Safety	0.300	0.337	0.948	-0.68	1.28
		Driver	-0.736	0.337	0.253	-1.71	0.24

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
		Dock Worker	-1.155	0.432	0.088	-2.41	0.10	
		Customer Service	-0.830	0.351	0.179	-1.85	0.19	
		Maintenance	0.050	0.481	1.000	-1.34	1.44	
	Customer Service	Ops & Safety	1.130*	0.323	0.009	0.19	2.07	
		Driver	0.095	0.323	1.000	-0.84	1.03	
		Dock Worker	-0.324	0.421	0.972	-1.55	0.90	
		Sales	0.830	0.351	0.179	-0.19	1.85	
		Maintenance	0.880	0.472	0.428	-0.49	2.25	
	Maintenance	Ops & Safety	0.250	0.461	0.994	-1.09	1.59	
		Driver	-0.786	0.461	0.531	-2.12	0.55	
		Dock Worker	-1.205	0.534	0.222	-2.75	0.34	
		Sales	-0.050	0.481	1.000	-1.44	1.34	
		Customer Service	-0.880	0.472	0.428	-2.25	0.49	
	Q 42. Attitudes in my are healthy	Ops & Safety	Driver	-1.279*	0.405	0.025	-2.46	-0.10
			Dock Worker	-1.542	0.538	0.054	-3.10	0.02
Sales			-0.552	0.450	0.823	-1.86	0.75	
Customer Service			-1.250*	0.427	0.046	-2.49	-0.01	
Maintenance			-0.315	0.605	0.995	-2.07	1.44	
Driver		Ops & Safety	1.279*	0.405	0.025	0.10	2.46	
		Dock Worker	-0.263	0.535	0.996	-1.81	1.29	
		Sales	0.727	0.447	0.582	-0.57	2.02	



Dependent Variable		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
		Customer Service	0.030	0.423	1.000	-1.20	1.26
		Maintenance	0.964	0.603	0.600	-0.78	2.71
	Dock Worker	Ops & Safety	1.542	0.538	0.054	-0.02	3.10
		Driver	0.263	0.535	0.996	-1.29	1.81
		Sales	0.990	0.570	0.509	-0.66	2.64
		Customer Service	0.292	0.551	0.995	-1.31	1.89
		Maintenance	1.227	0.698	0.498	-0.80	3.25
		Sales	Ops & Safety	0.552	0.450	0.823	-0.75
	Driver		-0.727	0.447	0.582	-2.02	0.57
	Dock Worker		-0.990	0.570	0.509	-2.64	0.66
	Customer Service		-0.698	0.466	0.666	-2.05	0.65
	Maintenance		0.237	0.634	0.999	-1.60	2.07
	Customer Service	Ops & Safety	1.250*	0.427	0.046	0.01	2.49
		Driver	-0.030	0.423	1.000	-1.26	1.20
		Dock Worker	-0.292	0.551	0.995	-1.89	1.31
		Sales	0.698	0.466	0.666	-0.65	2.05
		Maintenance	0.935	0.617	0.655	-0.85	2.72
	Maintenance	Ops & Safety	0.315	0.605	0.995	-1.44	2.07
		Driver	-0.964	0.603	0.600	-2.71	0.78
		Dock Worker	-1.227	0.698	0.498	-3.25	0.80
Sales		-0.237	0.634	0.999	-2.07	1.60	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Customer Service	-0.935	0.617	0.655	-2.72	0.85
Q 43. Informal communication active and accurate	Ops & Safety	Driver	-1.036*	0.313	0.016	-1.94	-0.13
		Dock Worker	-1.221*	0.417	0.046	-2.43	-0.01
		Sales	-0.807	0.343	0.182	-1.80	0.19
		Customer Service	-1.075*	0.330	0.018	-2.03	-0.12
		Maintenance	0.018	0.470	1.000	-1.34	1.38
	Driver	Ops & Safety	1.036*	0.313	0.016	0.13	1.94
		Dock Worker	-0.185	0.417	0.998	-1.39	1.02
		Sales	0.229	0.343	0.985	-0.77	1.22
		Customer Service	-0.039	0.330	1.000	-1.00	0.92
		Maintenance	1.054	0.470	0.227	-0.31	2.42
	Dock Worker	Ops & Safety	1.221*	0.417	0.046	0.01	2.43
		Driver	0.185	0.417	0.998	-1.02	1.39
		Sales	0.414	0.440	0.935	-0.86	1.69
		Customer Service	0.146	0.430	0.999	-1.10	1.39
		Maintenance	1.239	0.545	0.213	-0.34	2.82
	Sales	Ops & Safety	0.807	0.343	0.182	-0.19	1.80
		Driver	-0.229	0.343	0.985	-1.22	0.77
		Dock Worker	-0.414	0.440	0.935	-1.69	0.86
		Customer Service	-0.267	0.358	0.976	-1.31	0.77
		Maintenance	0.825	0.490	0.546	-0.60	2.25

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Customer Service	Ops & Safety	1.075*	0.330	0.018	0.12	2.03
		Driver	0.039	0.330	1.000	-0.92	1.00
		Dock Worker	-0.146	0.430	0.999	-1.39	1.10
		Sales	0.267	0.358	0.976	-0.77	1.31
		Maintenance	1.092	0.481	0.215	-0.30	2.49
	Maintenance	Ops & Safety	-0.018	0.470	1.000	-1.38	1.34
		Driver	-1.054	0.470	0.227	-2.42	0.31
		Dock Worker	-1.239	0.545	0.213	-2.82	0.34
		Sales	-0.825	0.490	0.546	-2.25	0.60
		Customer Service	-1.092	0.481	0.215	-2.49	0.30
Q 44. Amount of communication in is about right	Ops & Safety	Driver	-1.107*	0.358	0.029	-2.15	-0.07
		Dock Worker	-0.968	0.477	0.332	-2.35	0.41
		Sales	-0.786	0.392	0.347	-1.92	0.35
		Customer Service	-0.916	0.377	0.155	-2.01	0.18
		Maintenance	-0.161	0.537	1.000	-1.72	1.40
	Driver	Ops & Safety	1.107*	0.358	0.029	0.07	2.15
		Dock Worker	0.140	0.477	1.000	-1.24	1.52
		Sales	0.321	0.392	0.963	-0.82	1.46
		Customer Service	0.191	0.377	0.996	-0.90	1.28
		Maintenance	0.946	0.537	0.494	-0.61	2.50
		Ops & Safety	0.968	0.477	0.332	-0.41	2.35

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Dock Worker	Driver	-0.140	0.477	1.000	-1.52	1.24
		Sales	0.182	0.503	0.999	-1.28	1.64
		Customer Service	0.051	0.491	1.000	-1.37	1.48
		Maintenance	0.807	0.622	0.786	-1.00	2.61
	Sales	Ops & Safety	0.786	0.392	0.347	-0.35	1.92
		Driver	-0.321	0.392	0.963	-1.46	0.82
		Dock Worker	-0.182	0.503	0.999	-1.64	1.28
		Customer Service	-0.130	0.410	1.000	-1.32	1.06
		Maintenance	0.625	0.560	0.874	-1.00	2.25
	Customer Service	Ops & Safety	0.916	0.377	0.155	-0.18	2.01
		Driver	-0.191	0.377	0.996	-1.28	0.90
		Dock Worker	-0.051	0.491	1.000	-1.48	1.37
		Sales	0.130	0.410	1.000	-1.06	1.32
		Maintenance	0.755	0.550	0.742	-0.84	2.35
	Maintenance	Ops & Safety	0.161	0.537	1.000	-1.40	1.72
		Driver	-0.946	0.537	0.494	-2.50	0.61
		Dock Worker	-0.807	0.622	0.786	-2.61	1.00
		Sales	-0.625	0.560	0.874	-2.25	1.00
		Customer Service	-0.755	0.550	0.742	-2.35	0.84
	Q 46. Rate your productivity	Ops & Safety	Driver	0.393	0.337	0.851	-0.58
Dock Worker			0.847	0.448	0.413	-0.45	2.15

Dependent Variable		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
		Sales	-0.007	0.369	1.000	-1.08	1.06
		Customer Service	0.262	0.354	0.976	-0.77	1.29
		Maintenance	0.268	0.505	0.995	-1.20	1.73
	Driver	Ops & Safety	-0.393	0.337	0.851	-1.37	0.58
		Dock Worker	0.455	0.448	0.912	-0.85	1.75
		Sales	-0.400	0.369	0.887	-1.47	0.67
		Customer Service	-0.130	0.354	0.999	-1.16	0.90
		Maintenance	-0.125	0.505	1.000	-1.59	1.34
	Dock Worker	Ops & Safety	-0.847	0.448	0.413	-2.15	0.45
		Driver	-0.455	0.448	0.912	-1.75	0.85
		Sales	-0.855	0.473	0.465	-2.23	0.52
		Customer Service	-0.585	0.462	0.802	-1.92	0.75
		Maintenance	-0.580	0.585	0.920	-2.28	1.12
	Sales	Ops & Safety	0.007	0.369	1.000	-1.06	1.08
		Driver	0.400	0.369	0.887	-0.67	1.47
		Dock Worker	0.855	0.473	0.465	-0.52	2.23
		Customer Service	0.270	0.385	0.982	-0.85	1.39
		Maintenance	0.275	0.527	0.995	-1.25	1.80
	Customer Service	Ops & Safety	-0.262	0.354	0.976	-1.29	0.77
		Driver	0.130	0.354	0.999	-0.90	1.16
Dock Worker		0.585	0.462	0.802	-0.75	1.92	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		Sales	-0.270	0.385	0.982	-1.39	0.85
		Maintenance	0.005	0.517	1.000	-1.49	1.50
	Maintenance	Ops & Safety	-0.268	0.505	0.995	-1.73	1.20
		Driver	0.125	0.505	1.000	-1.34	1.59
		Dock Worker	0.580	0.585	0.920	-1.12	2.28
		Sales	-0.275	0.527	0.995	-1.80	1.25
		Customer Service	-0.005	0.517	1.000	-1.50	1.49
Q 47. Productivity changed	Ops & Safety	Driver	-0.321	0.191	0.547	-0.88	0.23
		Dock Worker	-0.315	0.255	0.818	-1.05	0.42
		Sales	-0.429	0.210	0.324	-1.04	0.18
		Customer Service	-0.244	0.201	0.831	-0.83	0.34
		Maintenance	0.196	0.287	0.983	-0.64	1.03
	Driver	Ops & Safety	0.321	0.191	0.547	-0.23	0.88
		Dock Worker	0.006	0.255	1.000	-0.73	0.74
		Sales	-0.107	0.210	0.996	-0.71	0.50
		Customer Service	0.078	0.201	0.999	-0.51	0.66
		Maintenance	0.518	0.287	0.467	-0.31	1.35
	Dock Worker	Ops & Safety	0.315	0.255	0.818	-0.42	1.05
		Driver	-0.006	0.255	1.000	-0.74	0.73
		Sales	-0.114	0.269	0.998	-0.89	0.67
		Customer Service	0.071	0.262	1.000	-0.69	0.83

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Sales	Maintenance	0.511	0.333	0.641	-0.45	1.48
		Ops & Safety	0.429	0.210	0.324	-0.18	1.04
		Driver	0.107	0.210	0.996	-0.50	0.71
		Dock Worker	0.114	0.269	0.998	-0.67	0.89
		Customer Service	0.185	0.219	0.958	-0.45	0.82
		Maintenance	0.625	0.299	0.301	-0.24	1.49
	Customer Service	Ops & Safety	0.244	0.201	0.831	-0.34	0.83
		Driver	-0.078	0.201	0.999	-0.66	0.51
		Dock Worker	-0.071	0.262	1.000	-0.83	0.69
		Sales	-0.185	0.219	0.958	-0.82	0.45
		Maintenance	0.440	0.294	0.666	-0.41	1.29
	Maintenance	Ops & Safety	-0.196	0.287	0.983	-1.03	0.64
		Driver	-0.518	0.287	0.467	-1.35	0.31
		Dock Worker	-0.511	0.333	0.641	-1.48	0.45
		Sales	-0.625	0.299	0.301	-1.49	0.24
		Customer Service	-0.440	0.294	0.666	-1.29	0.41

\*. The mean difference is significant at the 0.05 level.

**APPENDIX G. TUKEY POST HOC MULTIPLE COMPARISONS BY AGE, ALL  
QUESTIONS**

Dependent Variable		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
Q 11. Progress in my job	18-29	30-39	0.739	0.353	0.162	-0.18	1.66
		40-49	0.064	0.401	0.999	-0.98	1.11
		50+	0.267	0.300	0.810	-0.52	1.05
	30-39	18-29	-0.739	0.353	0.162	-1.66	0.18
		40-49	-0.675	0.394	0.322	-1.70	0.35
		50+	-0.471	0.291	0.372	-1.23	0.29
	40-49	18-29	-0.064	0.401	0.999	-1.11	0.98
		30-39	0.675	0.394	0.322	-0.35	1.70
		50+	0.204	0.347	0.936	-0.70	1.11
	50+	18-29	-0.267	0.300	0.810	-1.05	0.52
		30-39	0.471	0.291	0.372	-0.29	1.23
		40-49	-0.204	0.347	0.936	-1.11	0.70
Q 12. Personnel news	18-29	30-39	0.688	0.336	0.178	-0.19	1.56
		40-49	0.085	0.378	0.996	-0.90	1.07
		50+	0.011	0.283	1.000	-0.73	0.75
	30-39	18-29	-0.688	0.336	0.178	-1.56	0.19
		40-49	-0.603	0.374	0.377	-1.58	0.37
		50+	-0.677	0.279	0.077	-1.40	0.05
	40-49	18-29	-0.085	0.378	0.996	-1.07	0.90
		30-39	0.603	0.374	0.377	-0.37	1.58
		50+	-0.074	0.327	0.996	-0.93	0.78
	50+	18-29	-0.011	0.283	1.000	-0.75	0.73
30-39		0.677	0.279	0.077	-0.05	1.40	



Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
		40-49	0.074	0.327	0.996	-0.78	0.93	
Q 13. Company's policies and goals	18-29	30-39	0.545	0.388	0.499	-0.47	1.56	
		40-49	-0.030	0.431	1.000	-1.15	1.09	
		50+	0.356	0.323	0.690	-0.49	1.20	
	30-39	18-29	-0.545	0.388	0.499	-1.56	0.47	
		40-49	-0.576	0.431	0.543	-1.70	0.55	
		50+	-0.190	0.323	0.936	-1.03	0.65	
	40-49	18-29	0.030	0.431	1.000	-1.09	1.15	
		30-39	0.576	0.431	0.543	-0.55	1.70	
		50+	0.386	0.374	0.731	-0.59	1.36	
	50+	18-29	-0.356	0.323	0.690	-1.20	0.49	
		30-39	0.190	0.323	0.936	-0.65	1.03	
		40-49	-0.386	0.374	0.731	-1.36	0.59	
	Q 14. Job compares to others	18-29	30-39	0.780	0.442	0.296	-0.37	1.93
			40-49	0.038	0.500	1.000	-1.27	1.34
			50+	0.185	0.378	0.962	-0.80	1.17
30-39		18-29	-0.780	0.442	0.296	-1.93	0.37	
		40-49	-0.742	0.487	0.427	-2.01	0.53	
		50+	-0.595	0.361	0.355	-1.54	0.35	
40-49		18-29	-0.038	0.500	1.000	-1.34	1.27	
		30-39	0.742	0.487	0.427	-0.53	2.01	
		50+	0.146	0.430	0.986	-0.98	1.27	
50+		18-29	-0.185	0.378	0.962	-1.17	0.80	
		30-39	0.595	0.361	0.355	-0.35	1.54	
		40-49	-0.146	0.430	0.986	-1.27	0.98	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Q 15. Performance is assessed	18-29	30-39	0.822	0.463	0.291	-0.39	2.03
		40-49	0.149	0.537	0.992	-1.25	1.55
		50+	0.504	0.394	0.578	-0.52	1.53
	30-39	18-29	-0.822	0.463	0.291	-2.03	0.39
		40-49	-0.673	0.528	0.581	-2.05	0.70
		50+	-0.318	0.382	0.839	-1.31	0.68
	40-49	18-29	-0.149	0.537	0.992	-1.55	1.25
		30-39	0.673	0.528	0.581	-0.70	2.05
		50+	0.355	0.468	0.873	-0.87	1.58
	50+	18-29	-0.504	0.394	0.578	-1.53	0.52
		30-39	0.318	0.382	0.839	-0.68	1.31
		40-49	-0.355	0.468	0.873	-1.58	0.87
Q 16. Recognition of my efforts	18-29	30-39	0.936	0.502	0.250	-0.37	2.25
		40-49	-0.130	0.582	0.996	-1.65	1.39
		50+	0.122	0.427	0.992	-0.99	1.24
	30-39	18-29	-0.936	0.502	0.250	-2.25	0.37
		40-49	-1.065	0.572	0.251	-2.56	0.43
		50+	-0.814	0.414	0.208	-1.89	0.27
	40-49	18-29	0.130	0.582	0.996	-1.39	1.65
		30-39	1.065	0.572	0.251	-0.43	2.56
		50+	0.252	0.508	0.960	-1.07	1.58
	50+	18-29	-0.122	0.427	0.992	-1.24	0.99
		30-39	0.814	0.414	0.208	-0.27	1.89
		40-49	-0.252	0.508	0.960	-1.58	1.07
	18-29	30-39	0.468	0.340	0.516	-0.42	1.36

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Q 17. Departmental policies and goals		40-49	-0.294	0.382	0.868	-1.29	0.70
		50+	0.404	0.286	0.494	-0.34	1.15
	30-39	18-29	-0.468	0.340	0.516	-1.36	0.42
		40-49	-0.762	0.378	0.189	-1.75	0.22
		50+	-0.064	0.282	0.996	-0.80	0.67
	40-49	18-29	0.294	0.382	0.868	-0.70	1.29
		30-39	0.762	0.378	0.189	-0.22	1.75
		50+	0.698	0.331	0.156	-0.16	1.56
	50+	18-29	-0.404	0.286	0.494	-1.15	0.34
		30-39	0.064	0.282	0.996	-0.67	0.80
		40-49	-0.698	0.331	0.156	-1.56	0.16
	Q 18. Requirements of my job	18-29	30-39	0.820	0.395	0.167	-0.21
40-49			-0.270	0.444	0.929	-1.43	0.89
50+			0.600	0.333	0.276	-0.27	1.47
30-39		18-29	-0.820	0.395	0.167	-1.85	0.21
		40-49	-1.090	0.440	0.069	-2.24	0.06
		50+	-0.220	0.327	0.908	-1.07	0.63
40-49		18-29	0.270	0.444	0.929	-0.89	1.43
		30-39	1.090	0.440	0.069	-0.06	2.24
		50+	0.870	0.384	0.113	-0.13	1.87
50+		18-29	-0.600	0.333	0.276	-1.47	0.27
		30-39	0.220	0.327	0.908	-0.63	1.07
		40-49	-0.870	0.384	0.113	-1.87	0.13
Q 19. Changes in my company	18-29	30-39	0.932	0.426	0.133	-0.18	2.04
		40-49	0.248	0.483	0.956	-1.01	1.51

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
	30-39	50+	0.378	0.363	0.726	-0.57	1.33	
		18-29	-0.932	0.426	0.133	-2.04	0.18	
		40-49	-0.683	0.475	0.479	-1.92	0.56	
	40-49	50+	-0.554	0.352	0.399	-1.47	0.36	
		18-29	-0.248	0.483	0.956	-1.51	1.01	
		30-39	0.683	0.475	0.479	-0.56	1.92	
	50+	50+	0.130	0.420	0.990	-0.96	1.22	
		18-29	-0.378	0.363	0.726	-1.33	0.57	
		30-39	0.554	0.352	0.399	-0.36	1.47	
	Q 20. How problems are being handled	18-29	30-39	0.693	0.460	0.438	-0.51	1.89
			40-49	-0.682	0.522	0.561	-2.04	0.68
			50+	0.301	0.392	0.869	-0.72	1.32
30-39		18-29	-0.693	0.460	0.438	-1.89	0.51	
		40-49	-1.375*	0.513	0.042	-2.71	-0.04	
		50+	-0.393	0.380	0.730	-1.38	0.60	
40-49		18-29	0.682	0.522	0.561	-0.68	2.04	
		30-39	1.375*	0.513	0.042	0.04	2.71	
		50+	0.982	0.453	0.138	-0.20	2.16	
50+		18-29	-0.301	0.392	0.869	-1.32	0.72	
		30-39	0.393	0.380	0.730	-0.60	1.38	
		40-49	-0.982	0.453	0.138	-2.16	0.20	
Q 21. Pay and benefits	18-29	30-39	0.576	0.472	0.616	-0.66	1.81	
		40-49	0.209	0.535	0.980	-1.19	1.61	
		50+	0.373	0.402	0.790	-0.68	1.42	

Dependent Variable		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
	30-39	18-29	-0.576	0.472	0.616	-1.81	0.66
		40-49	-0.367	0.526	0.898	-1.74	1.01
		50+	-0.202	0.390	0.954	-1.22	0.82
	40-49	18-29	-0.209	0.535	0.980	-1.61	1.19
		30-39	0.367	0.526	0.898	-1.01	1.74
		50+	0.164	0.465	0.985	-1.05	1.38
	50+	18-29	-0.373	0.402	0.790	-1.42	0.68
		30-39	0.202	0.390	0.954	-0.82	1.22
		40-49	-0.164	0.465	0.985	-1.38	1.05
Q 22. Company's financial standing	18-29	30-39	0.798	0.427	0.248	-0.32	1.91
		40-49	0.648	0.483	0.540	-0.61	1.91
		50+	0.351	0.366	0.772	-0.60	1.31
	30-39	18-29	-0.798	0.427	0.248	-1.91	0.32
		40-49	-0.150	0.471	0.989	-1.38	1.08
		50+	-0.446	0.349	0.578	-1.36	0.46
	40-49	18-29	-0.648	0.483	0.540	-1.91	0.61
		30-39	0.150	0.471	0.989	-1.08	1.38
		50+	-0.296	0.416	0.892	-1.38	0.79
	50+	18-29	-0.351	0.366	0.772	-1.31	0.60
		30-39	0.446	0.349	0.578	-0.46	1.36
		40-49	0.296	0.416	0.892	-0.79	1.38
Q 23. Achievements and failures of the organization	18-29	30-39	0.780	0.359	0.136	-0.15	1.72
		40-49	0.264	0.407	0.916	-0.80	1.32
		50+	0.355	0.305	0.651	-0.44	1.15
	30-39	18-29	-0.780	0.359	0.136	-1.72	0.15

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
		40-49	-0.517	0.400	0.570	-1.56	0.53	
		50+	-0.425	0.296	0.478	-1.20	0.35	
	40-49	18-29	-0.264	0.407	0.916	-1.32	0.80	
		30-39	0.517	0.400	0.570	-0.53	1.56	
		50+	0.091	0.353	0.994	-0.83	1.01	
	50+	18-29	-0.355	0.305	0.651	-1.15	0.44	
		30-39	0.425	0.296	0.478	-0.35	1.20	
		40-49	-0.091	0.353	0.994	-1.01	0.83	
	Q 25. Supervisors understand the problems of the workers	18-29	30-39	0.443	0.468	0.780	-0.78	1.66
			40-49	-0.082	0.531	0.999	-1.47	1.30
			50+	0.283	0.398	0.893	-0.76	1.32
		30-39	18-29	-0.443	0.468	0.780	-1.66	0.78
40-49			-0.525	0.522	0.747	-1.89	0.84	
50+			-0.160	0.386	0.976	-1.17	0.85	
40-49		18-29	0.082	0.531	0.999	-1.30	1.47	
		30-39	0.525	0.522	0.747	-0.84	1.89	
		50+	0.365	0.460	0.858	-0.84	1.57	
50+		18-29	-0.283	0.398	0.893	-1.32	0.76	
		30-39	0.160	0.386	0.976	-0.85	1.17	
		40-49	-0.365	0.460	0.858	-1.57	0.84	
Q 26. Company's comms motivates me		18-29	30-39	1.064	0.413	0.054	-0.01	2.14
			40-49	0.073	0.468	0.999	-1.15	1.29
			50+	0.589	0.351	0.341	-0.33	1.50
	30-39	18-29	-1.064	0.413	0.054	-2.14	0.01	
		40-49	-0.992	0.460	0.143	-2.19	0.21	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
	40-49	50+	-0.476	0.340	0.503	-1.36	0.41	
		18-29	-0.073	0.468	0.999	-1.29	1.15	
		30-39	0.992	0.460	0.143	-0.21	2.19	
	50+	50+	0.516	0.406	0.583	-0.54	1.57	
		18-29	-0.589	0.351	0.341	-1.50	0.33	
		30-39	0.476	0.340	0.503	-0.41	1.36	
	Q 27. Supervisor listens and pays attention	18-29	30-39	1.045	0.492	0.152	-0.24	2.33
			40-49	0.117	0.570	0.997	-1.37	1.60
			50+	0.519	0.418	0.602	-0.57	1.61
30-39		18-29	-1.045	0.492	0.152	-2.33	0.24	
		40-49	-0.929	0.561	0.352	-2.39	0.53	
		50+	-0.526	0.406	0.567	-1.58	0.53	
40-49		18-29	-0.117	0.570	0.997	-1.60	1.37	
		30-39	0.929	0.561	0.352	-0.53	2.39	
		50+	0.402	0.497	0.850	-0.89	1.70	
50+	18-29	-0.519	0.418	0.602	-1.61	0.57		
	30-39	0.526	0.406	0.567	-0.53	1.58		
	40-49	-0.402	0.497	0.850	-1.70	0.89		
Q 28. People have the ability to communicate	18-29	30-39	1.072	0.436	0.072	-0.06	2.21	
		40-49	-0.236	0.494	0.964	-1.52	1.05	
		50+	0.451	0.370	0.616	-0.51	1.42	
	30-39	18-29	-1.072	0.436	0.072	-2.21	0.06	
		40-49	-1.308*	0.486	0.040	-2.57	-0.04	
		50+	-0.621	0.359	0.314	-1.56	0.32	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
	40-49	18-29	0.236	0.494	0.964	-1.05	1.52	
		30-39	1.308*	0.486	0.040	0.04	2.57	
		50+	0.688	0.428	0.379	-0.43	1.80	
	50+	18-29	-0.451	0.370	0.616	-1.42	0.51	
		30-39	0.621	0.359	0.314	-0.32	1.56	
		40-49	-0.688	0.428	0.379	-1.80	0.43	
	Q 29. Supervisor offers guidance for solving problems	18-29	30-39	1.083	0.456	0.087	-0.11	2.27
			40-49	-0.467	0.517	0.804	-1.81	0.88
			50+	0.316	0.388	0.847	-0.69	1.33
30-39		18-29	-1.083	0.456	0.087	-2.27	0.11	
		40-49	-1.550*	0.508	0.015	-2.88	-0.22	
		50+	-0.768	0.376	0.179	-1.75	0.21	
40-49		18-29	0.467	0.517	0.804	-0.88	1.81	
		30-39	1.550*	0.508	0.015	0.22	2.88	
		50+	0.782	0.448	0.305	-0.39	1.95	
50+		18-29	-0.316	0.388	0.847	-1.33	0.69	
		30-39	0.768	0.376	0.179	-0.21	1.75	
		40-49	-0.782	0.448	0.305	-1.95	0.39	
Q 30. Makes me feel like a vital part of the team	18-29	30-39	1.159	0.446	0.051	0.00	2.32	
		40-49	0.076	0.506	0.999	-1.24	1.40	
		50+	0.677	0.380	0.288	-0.31	1.67	
	30-39	18-29	-1.159	0.446	0.051	-2.32	0.00	
		40-49	-1.083	0.497	0.136	-2.38	0.21	
		50+	-0.482	0.369	0.560	-1.44	0.48	
	40-49	18-29	-0.076	0.506	0.999	-1.40	1.24	



Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
		30-39	1.083	0.497	0.136	-0.21	2.38	
		50+	0.601	0.439	0.522	-0.54	1.75	
	50+	18-29	-0.677	0.380	0.288	-1.67	0.31	
		30-39	0.482	0.369	0.560	-0.48	1.44	
		40-49	-0.601	0.439	0.522	-1.75	0.54	
Q 31. Comms are interesting and helpful	18-29	30-39	0.625	0.374	0.343	-0.35	1.60	
		40-49	-0.267	0.424	0.923	-1.37	0.84	
		50+	0.316	0.318	0.753	-0.51	1.14	
	30-39	18-29	-0.625	0.374	0.343	-1.60	0.35	
		40-49	-0.892	0.417	0.147	-1.98	0.20	
		50+	-0.309	0.308	0.748	-1.11	0.49	
	40-49	18-29	0.267	0.424	0.923	-0.84	1.37	
		30-39	0.892	0.417	0.147	-0.20	1.98	
		50+	0.582	0.368	0.391	-0.38	1.54	
	50+	18-29	-0.316	0.318	0.753	-1.14	0.51	
		30-39	0.309	0.308	0.748	-0.49	1.11	
		40-49	-0.582	0.368	0.391	-1.54	0.38	
	Q 32. My supervisors trust me	18-29	30-39	0.696	0.467	0.447	-0.52	1.92
			40-49	0.105	0.529	0.997	-1.27	1.48
			50+	0.378	0.399	0.779	-0.66	1.42
30-39		18-29	-0.696	0.467	0.447	-1.92	0.52	
		40-49	-0.592	0.515	0.660	-1.93	0.75	
		50+	-0.318	0.381	0.837	-1.31	0.67	
40-49		18-29	-0.105	0.529	0.997	-1.48	1.27	
	30-39	0.592	0.515	0.660	-0.75	1.93		

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
	50+	50+	0.274	0.454	0.931	-0.91	1.46	
		18-29	18-29	-0.378	0.399	0.779	-1.42	0.66
			30-39	0.318	0.381	0.837	-0.67	1.31
			40-49	-0.274	0.454	0.931	-1.46	0.91
Q 33. Timeliness of information	18-29	30-39	0.545	0.419	0.564	-0.55	1.64	
		40-49	-0.655	0.475	0.516	-1.89	0.58	
		50+	-0.156	0.356	0.972	-1.09	0.77	
	30-39	18-29	-0.545	0.419	0.564	-1.64	0.55	
		40-49	-1.200	0.467	0.055	-2.42	0.02	
		50+	-0.702	0.345	0.183	-1.60	0.20	
	40-49	18-29	0.655	0.475	0.516	-0.58	1.89	
		30-39	1.200	0.467	0.055	-0.02	2.42	
		50+	0.498	0.412	0.622	-0.58	1.57	
	50+	18-29	0.156	0.356	0.972	-0.77	1.09	
		30-39	0.702	0.345	0.183	-0.20	1.60	
		40-49	-0.498	0.412	0.622	-1.57	0.58	
Q 34. Conflicts are handled appropriately	18-29	30-39	1.254*	0.473	0.045	0.02	2.49	
		40-49	0.012	0.537	1.000	-1.39	1.41	
		50+	0.528	0.402	0.557	-0.52	1.58	
	30-39	18-29	-1.254*	0.473	0.045	-2.49	-0.02	
		40-49	-1.242	0.528	0.092	-2.62	0.13	
		50+	-0.726	0.390	0.251	-1.74	0.29	
	40-49	18-29	-0.012	0.537	1.000	-1.41	1.39	
		30-39	1.242	0.528	0.092	-0.13	2.62	
		50+	0.516	0.465	0.685	-0.70	1.73	

Dependent Variable		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
	50+	18-29	-0.528	0.402	0.557	-1.58	0.52
		30-39	0.726	0.390	0.251	-0.29	1.74
		40-49	-0.516	0.465	0.685	-1.73	0.70
Q 35."Grapevine" (informal communication) is active	18-29	30-39	1.000	0.413	0.078	-0.08	2.08
		40-49	0.033	0.468	1.000	-1.19	1.25
		50+	0.064	0.353	0.998	-0.86	0.98
	30-39	18-29	-1.000	0.413	0.078	-2.08	0.08
		40-49	-0.967	0.460	0.159	-2.17	0.23
		50+	-.936*	0.342	0.036	-1.83	-0.04
	40-49	18-29	-0.033	0.468	1.000	-1.25	1.19
		30-39	0.967	0.460	0.159	-0.23	2.17
		50+	0.030	0.407	1.000	-1.03	1.09
	50+	18-29	-0.064	0.353	0.998	-0.98	0.86
		30-39	.936*	0.342	0.036	0.04	1.83
		40-49	-0.030	0.407	1.000	-1.09	1.03
Q 37. Comms with peers are open and free flowing	18-29	30-39	0.621	0.338	0.261	-0.26	1.50
		40-49	0.255	0.383	0.910	-0.75	1.25
		50+	-0.230	0.287	0.855	-0.98	0.52
	30-39	18-29	-0.621	0.338	0.261	-1.50	0.26
		40-49	-0.367	0.377	0.765	-1.35	0.62
		50+	-.851*	0.279	0.015	-1.58	-0.12
	40-49	18-29	-0.255	0.383	0.910	-1.25	0.75
		30-39	0.367	0.377	0.765	-0.62	1.35
		50+	-0.484	0.332	0.467	-1.35	0.38
	50+	18-29	0.230	0.287	0.855	-0.52	0.98

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		30-39	.851*	0.279	0.015	0.12	1.58
		40-49	0.484	0.332	0.467	-0.38	1.35
Q 36. Supervisor is open to new ideas	18-29	30-39	1.174*	0.416	0.028	0.09	2.26
		40-49	0.424	0.472	0.806	-0.81	1.66
		50+	0.687	0.354	0.216	-0.24	1.61
	30-39	18-29	-1.174*	0.416	0.028	-2.26	-0.09
		40-49	-0.750	0.464	0.374	-1.96	0.46
		50+	-0.487	0.343	0.490	-1.38	0.41
	40-49	18-29	-0.424	0.472	0.806	-1.66	0.81
		30-39	0.750	0.464	0.374	-0.46	1.96
		50+	0.263	0.409	0.918	-0.80	1.33
	50+	18-29	-0.687	0.354	0.216	-1.61	0.24
		30-39	0.487	0.343	0.490	-0.41	1.38
		40-49	-0.263	0.409	0.918	-1.33	0.80
Q 38. Practices are adaptable to emergencies	18-29	30-39	0.545	0.373	0.465	-0.43	1.52
		40-49	-0.105	0.418	0.994	-1.19	0.98
		50+	0.226	0.316	0.891	-0.60	1.05
	30-39	18-29	-0.545	0.373	0.465	-1.52	0.43
		40-49	-0.649	0.410	0.392	-1.72	0.42
		50+	-0.318	0.306	0.726	-1.12	0.48
	40-49	18-29	0.105	0.418	0.994	-0.98	1.19
		30-39	0.649	0.410	0.392	-0.42	1.72
		50+	0.331	0.359	0.793	-0.61	1.27
	50+	18-29	-0.226	0.316	0.891	-1.05	0.60
		30-39	0.318	0.306	0.726	-0.48	1.12

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		40-49	-0.331	0.359	0.793	-1.27	0.61
Q 39. Meetings are well organized	18-29	30-39	0.489	0.369	0.549	-0.47	1.45
		40-49	-0.270	0.418	0.917	-1.36	0.82
		50+	0.285	0.313	0.801	-0.53	1.10
	30-39	18-29	-0.489	0.369	0.549	-1.45	0.47
		40-49	-0.758	0.411	0.258	-1.83	0.31
		50+	-0.204	0.304	0.908	-1.00	0.59
	40-49	18-29	0.270	0.418	0.917	-0.82	1.36
		30-39	0.758	0.411	0.258	-0.31	1.83
		50+	0.554	0.362	0.423	-0.39	1.50
	50+	18-29	-0.285	0.313	0.801	-1.10	0.53
		30-39	0.204	0.304	0.908	-0.59	1.00
		40-49	-0.554	0.362	0.423	-1.50	0.39
Q 40. Amount of supervision	18-29	30-39	1.208*	0.433	0.031	0.08	2.34
		40-49	0.600	0.490	0.612	-0.68	1.88
		50+	0.596	0.370	0.376	-0.37	1.56
	30-39	18-29	-1.208*	0.433	0.031	-2.34	-0.08
		40-49	-0.608	0.477	0.580	-1.85	0.64
		50+	-0.612	0.353	0.310	-1.53	0.31
	40-49	18-29	-0.600	0.490	0.612	-1.88	0.68
		30-39	0.608	0.477	0.580	-0.64	1.85
		50+	-0.004	0.421	1.000	-1.10	1.09
	50+	18-29	-0.596	0.370	0.376	-1.56	0.37
		30-39	0.612	0.353	0.310	-0.31	1.53
		40-49	0.004	0.421	1.000	-1.09	1.10

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Q 41. Written reports are clear and concise	18-29	30-39	0.913	0.355	0.054	-0.01	1.84
		40-49	-0.245	0.402	0.929	-1.29	0.80
		50+	0.270	0.302	0.807	-0.52	1.06
	30-39	18-29	-0.913	0.355	0.054	-1.84	0.01
		40-49	-1.158*	0.396	0.021	-2.19	-0.13
		50+	-0.643	0.292	0.130	-1.40	0.12
	40-49	18-29	0.245	0.402	0.929	-0.80	1.29
		30-39	1.158*	0.396	0.021	0.13	2.19
		50+	0.516	0.349	0.453	-0.39	1.43
	50+	18-29	-0.270	0.302	0.807	-1.06	0.52
		30-39	0.643	0.292	0.130	-0.12	1.40
		40-49	-0.516	0.349	0.453	-1.43	0.39
Q 42. Attitudes in my are healthy	18-29	30-39	1.339*	0.459	0.022	0.14	2.54
		40-49	0.381	0.519	0.883	-0.97	1.73
		50+	0.804	0.393	0.177	-0.22	1.83
	30-39	18-29	-1.339*	0.459	0.022	-2.54	-0.14
		40-49	-0.958	0.505	0.235	-2.28	0.36
		50+	-0.536	0.374	0.483	-1.51	0.44
	40-49	18-29	-0.381	0.519	0.883	-1.73	0.97
		30-39	0.958	0.505	0.235	-0.36	2.28
		50+	0.423	0.446	0.779	-0.74	1.59
	50+	18-29	-0.804	0.393	0.177	-1.83	0.22
		30-39	0.536	0.374	0.483	-0.44	1.51
		40-49	-0.423	0.446	0.779	-1.59	0.74
	18-29	30-39	0.784	0.354	0.125	-0.14	1.71

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Q 43. Informal communication active and accurate		40-49	0.109	0.401	0.993	-0.94	1.16
		50+	-0.231	0.301	0.868	-1.02	0.55
	30-39	18-29	-0.784	0.354	0.125	-1.71	0.14
		40-49	-0.675	0.394	0.323	-1.70	0.35
		50+	-1.015*	0.292	0.004	-1.78	-0.26
	40-49	18-29	-0.109	0.401	0.993	-1.16	0.94
		30-39	0.675	0.394	0.323	-0.35	1.70
		50+	-0.340	0.348	0.762	-1.25	0.57
	50+	18-29	0.231	0.301	0.868	-0.55	1.02
		30-39	1.015*	0.292	0.004	0.26	1.78
		40-49	0.340	0.348	0.762	-0.57	1.25
	Q 44. Amount of communication in is about right	18-29	30-39	0.655	0.398	0.358	-0.38
40-49			-0.470	0.452	0.727	-1.65	0.71
50+			-0.207	0.339	0.929	-1.09	0.68
30-39		18-29	-0.655	0.398	0.358	-1.69	0.38
		40-49	-1.125	0.444	0.060	-2.28	0.03
		50+	-.862*	0.328	0.048	-1.72	-0.01
40-49		18-29	0.470	0.452	0.727	-0.71	1.65
		30-39	1.125	0.444	0.060	-0.03	2.28
		50+	0.263	0.392	0.907	-0.76	1.28
50+		18-29	0.207	0.339	0.929	-0.68	1.09
		30-39	.862*	0.328	0.048	0.01	1.72
		40-49	-0.263	0.392	0.907	-1.28	0.76
Q 46. Rate your productivity	18-29	30-39	-0.235	0.374	0.923	-1.21	0.74
		40-49	0.048	0.424	0.999	-1.06	1.15

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval			
						Lower Bound	Upper Bound		
	50+	18-29	0.147	0.318	0.967	-0.68	0.98		
		30-39	18-29	0.235	0.374	0.923	-0.74	1.21	
			40-49	0.283	0.417	0.905	-0.80	1.37	
	40-49	50+	0.382	0.308	0.604	-0.42	1.18		
		18-29	18-29	-0.048	0.424	0.999	-1.15	1.06	
			30-39	-0.283	0.417	0.905	-1.37	0.80	
	50+	50+	0.098	0.367	0.993	-0.86	1.06		
		18-29	18-29	-0.147	0.318	0.967	-0.98	0.68	
			30-39	-0.382	0.308	0.604	-1.18	0.42	
	40-49	40-49	-0.098	0.367	0.993	-1.06	0.86		
		Q 47. Productivity changed	18-29	30-39	-0.152	0.205	0.881	-0.69	0.38
				40-49	-.685*	0.233	0.020	-1.29	-0.08
50+	-.485*			0.174	0.032	-0.94	-0.03		
30-39	18-29	18-29	0.152	0.205	0.881	-0.38	0.69		
		40-49	-0.533	0.229	0.097	-1.13	0.06		
		50+	-0.333	0.169	0.205	-0.77	0.11		
40-49	18-29	18-29	.685*	0.233	0.020	0.08	1.29		
		30-39	0.533	0.229	0.097	-0.06	1.13		
		50+	0.200	0.202	0.754	-0.33	0.73		
50+	18-29	18-29	.485*	0.174	0.032	0.03	0.94		
		30-39	0.333	0.169	0.205	-0.11	0.77		
		40-49	-0.200	0.202	0.754	-0.73	0.33		
Q 51M. Workers are responsive to direction	18-29	30-39	0.000	0.332	1.000	-0.89	0.89		
		40-49	-0.083	0.350	0.995	-1.02	0.85		
		50+	-0.135	0.291	0.967	-0.91	0.65		



Dependent Variable		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
	30-39	18-29	0.000	0.332	1.000	-0.89	0.89
		40-49	-0.083	0.293	0.992	-0.87	0.70
		50+	-0.135	0.219	0.927	-0.72	0.45
	40-49	18-29	0.083	0.350	0.995	-0.85	1.02
		30-39	0.083	0.293	0.992	-0.70	0.87
		50+	-0.051	0.245	0.997	-0.71	0.61
	50+	18-29	0.135	0.291	0.967	-0.65	0.91
		30-39	0.135	0.219	0.927	-0.45	0.72
		40-49	0.051	0.245	0.997	-0.61	0.71
Q 52M. Workers anticipate my needs for information	18-29	30-39	-0.125	0.330	0.981	-1.01	0.76
		40-49	-0.250	0.348	0.889	-1.18	0.68
		50+	-0.250	0.290	0.824	-1.03	0.53
	30-39	18-29	0.125	0.330	0.981	-0.76	1.01
		40-49	-0.125	0.291	0.973	-0.91	0.66
		50+	-0.125	0.218	0.939	-0.71	0.46
	40-49	18-29	0.250	0.348	0.889	-0.68	1.18
		30-39	0.125	0.291	0.973	-0.66	0.91
		50+	0.000	0.244	1.000	-0.65	0.65
	50+	18-29	0.250	0.290	0.824	-0.53	1.03
		30-39	0.125	0.218	0.939	-0.46	0.71
		40-49	0.000	0.244	1.000	-0.65	0.65
Q 53M. I can avoid information overload	18-29	30-39	0.250	0.633	0.979	-1.45	1.95
		40-49	0.083	0.667	0.999	-1.70	1.87
		50+	-0.019	0.555	1.000	-1.51	1.47
	30-39	18-29	-0.250	0.633	0.979	-1.95	1.45

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
		40-49	-0.167	0.558	0.991	-1.66	1.33	
		50+	-0.269	0.418	0.917	-1.39	0.85	
	40-49	18-29	-0.083	0.667	0.999	-1.87	1.70	
		30-39	0.167	0.558	0.991	-1.33	1.66	
		50+	-0.103	0.468	0.996	-1.36	1.15	
	50+	18-29	0.019	0.555	1.000	-1.47	1.51	
		30-39	0.269	0.418	0.917	-0.85	1.39	
		40-49	0.103	0.468	0.996	-1.15	1.36	
	Q 54M. Workers are receptive to evaluation, suggestions and criticism	18-29	30-39	-0.500	0.777	0.917	-2.58	1.58
			40-49	-0.500	0.819	0.928	-2.70	1.70
			50+	-0.038	0.682	1.000	-1.87	1.79
		30-39	18-29	0.500	0.777	0.917	-1.58	2.58
40-49			0.000	0.686	1.000	-1.84	1.84	
50+			0.462	0.513	0.805	-0.91	1.84	
40-49		18-29	0.500	0.819	0.928	-1.70	2.70	
		30-39	0.000	0.686	1.000	-1.84	1.84	
		50+	0.462	0.575	0.853	-1.08	2.00	
50+		18-29	0.038	0.682	1.000	-1.79	1.87	
		30-39	-0.462	0.513	0.805	-1.84	0.91	
		40-49	-0.462	0.575	0.853	-2.00	1.08	
Q 55M. Workers initiate accurate upward communication		18-29	30-39	0.000	0.517	1.000	-1.38	1.38
			40-49	-0.417	0.545	0.870	-1.88	1.04
			50+	-0.404	0.453	0.809	-1.62	0.81
	30-39	18-29	0.000	0.517	1.000	-1.38	1.38	
		40-49	-0.417	0.456	0.797	-1.64	0.80	

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	50+		-0.404	0.341	0.640	-1.32	0.51
	40-49	18-29	0.417	0.545	0.870	-1.04	1.88
		30-39	0.417	0.456	0.797	-0.80	1.64
		50+	0.013	0.382	1.000	-1.01	1.04
	50+	18-29	0.404	0.453	0.809	-0.81	1.62
		30-39	0.404	0.341	0.640	-0.51	1.32
		40-49	-0.013	0.382	1.000	-1.04	1.01

\*. The mean difference is significant at the 0.05 level.

**APPENDIX H. T-TEST STATISTIC BY GENDER, ALL QUESTIONS**

Question		F	Sig.	t	df	Sig. (2-tail)	Mean Diff.	Std. Error Diff.	Low	Upp.
Q 11. Progress in my job	= VAR Assumed	2.75	0.10	-1.41	116.00	0.16	-0.36	0.25	-0.85	0.14
	=VAR Not Assumed			-1.25	43.34	0.22	-0.36	0.28	-0.93	0.22
Q 12. Personnel news	= VAR Assumed	0.29	0.59	0.00	115.00	1.00	0.00	0.24	-0.48	0.48
	=VAR Not Assumed			0.00	47.44	1.00	0.00	0.25	-0.51	0.51
Q 13. Company's policies and goals	= VAR Assumed	1.21	0.27	-0.19	114.00	0.85	-0.05	0.27	-0.59	0.49
	=VAR Not Assumed			-0.17	45.28	0.86	-0.05	0.29	-0.64	0.54
Q 14. Job compares to others	= VAR Assumed	3.67	0.06	-2.87	114.00	0.00	-0.88	0.31	-1.48	-0.27
	=VAR Not Assumed			-2.55	42.00	0.01	-0.88	0.34	-1.57	-0.18
Q 15. Performance is assessed	= VAR Assumed	2.49	0.12	-2.19	115.00	0.03	-0.72	0.33	-1.37	-0.07
	=VAR Not Assumed			-2.03	44.41	0.05	-0.72	0.35	-1.43	-0.01
Q 16. Recognition of my efforts	= VAR Assumed	6.73	0.01	-1.63	115.00	0.11	-0.58	0.36	-1.29	0.13
	=VAR Not Assumed			-1.43	43.07	0.16	-0.58	0.41	-1.40	0.24
Q 17. Departmental	= VAR Assumed	1.05	0.31	-0.80	115.00	0.43	-0.20	0.25	-0.68	0.29

Question		F	Sig.	t	df	Sig. (2-tail)	Mean Diff.	Std. Error Diff.	Low	Upp.
policies and goals	=VAR Not Assumed			-0.76	46.64	0.45	-0.20	0.26	-0.71	0.32
Q 18. Requirements of my job	= VAR Assumed	0.19	0.67	-1.35	115.00	0.18	-0.39	0.29	-0.96	0.18
	=VAR Not Assumed			-1.32	48.13	0.19	-0.39	0.30	-0.98	0.20
Q 19. Changes in my company	= VAR Assumed	2.73	0.10	-2.33	115.00	0.02	-0.70	0.30	-1.29	-0.10
	=VAR Not Assumed			-2.16	46.81	0.04	-0.70	0.32	-1.35	-0.05
Q 20. How problems are being handled	= VAR Assumed	1.71	0.19	-2.04	116.00	0.04	-0.67	0.33	-1.32	-0.02
	=VAR Not Assumed			-1.92	47.43	0.06	-0.67	0.35	-1.37	0.03
Q 21. Pay and benefits	= VAR Assumed	3.16	0.08	-2.76	115.00	0.01	-0.89	0.32	-1.53	-0.25
	=VAR Not Assumed			-2.52	45.55	0.02	-0.89	0.35	-1.61	-0.18
Q 22. Company's financial standing	= VAR Assumed	1.42	0.24	-0.07	114.00	0.94	-0.02	0.30	-0.62	0.58
	=VAR Not Assumed			-0.08	63.54	0.94	-0.02	0.28	-0.58	0.53
Q 23. Achievements and failures of the organization	= VAR Assumed	1.49	0.22	-0.43	116.00	0.67	-0.11	0.26	-0.62	0.40
	=VAR Not Assumed			-0.46	61.35	0.65	-0.11	0.24	-0.59	0.37
Q 25. Supervisors	= VAR Assumed	9.31	0.00	-2.85	116.00	0.01	-0.91	0.32	-1.55	-0.28

Question		F	Sig.	t	df	Sig. (2-tail)	Mean Diff.	Std. Error Diff.	Low	Upp.
understand the problems of the workers	=VAR Not Assumed			-2.51	43.18	0.02	-0.91	0.36	-1.64	-0.18
Q 26. Company's comms motivates me	= VAR Assumed	4.69	0.03	-2.44	116.00	0.02	-0.72	0.29	-1.30	-0.14
	=VAR Not Assumed			-2.20	44.41	0.03	-0.72	0.33	-1.37	-0.06
Q 27. Supervisor listens and pays attention	= VAR Assumed	4.18	0.04	-1.40	115.00	0.16	-0.50	0.35	-1.20	0.21
	=VAR Not Assumed			-1.24	41.72	0.22	-0.50	0.40	-1.31	0.31
Q 28. People have the ability to communicate	= VAR Assumed	0.67	0.42	-1.86	116.00	0.07	-0.58	0.31	-1.20	0.04
	=VAR Not Assumed			-1.77	48.84	0.08	-0.58	0.33	-1.24	0.08
Q 29. Supervisor offers guidance for solving problems	= VAR Assumed	2.59	0.11	-1.01	116.00	0.31	-0.34	0.33	-1.00	0.32
	=VAR Not Assumed			-0.91	44.03	0.37	-0.34	0.37	-1.09	0.41
Q 30. Makes me feel like a vital part of the team	= VAR Assumed	1.02	0.32	-2.06	115.00	0.04	-0.66	0.32	-1.29	-0.03
	=VAR Not Assumed			-1.95	48.14	0.06	-0.66	0.34	-1.34	0.02
Q 31. Comms are interesting and helpful	= VAR Assumed	1.14	0.29	-1.41	116.00	0.16	-0.38	0.27	-0.91	0.15
	=VAR Not Assumed			-1.45	55.50	0.15	-0.38	0.26	-0.90	0.14
	= VAR Assumed	11.82	0.00	-2.59	115.00	0.01	-0.83	0.32	-1.46	-0.19

Question		F	Sig.	t	df	Sig. (2-tail)	Mean Diff.	Std. Error Diff.	Low	Upp.
Q 32. My supervisors trust me	=VAR Not Assumed			-2.11	39.14	0.04	-0.83	0.39	-1.62	-0.04
Q 33. Timeliness of information	= VAR Assumed	0.00	0.95	-0.52	116.00	0.60	-0.16	0.30	-0.76	0.44
	=VAR Not Assumed			-0.53	54.25	0.60	-0.16	0.30	-0.76	0.44
Q 34. Conflicts are handled appropriately	= VAR Assumed	0.32	0.57	-1.66	116.00	0.10	-0.57	0.34	-1.24	0.11
	=VAR Not Assumed			-1.61	50.02	0.11	-0.57	0.35	-1.27	0.14
Q 35. "Grapevine" (informal communication) is active	= VAR Assumed	3.14	0.08	-1.77	114.00	0.08	-0.53	0.30	-1.12	0.06
	=VAR Not Assumed			-1.62	45.74	0.11	-0.53	0.33	-1.18	0.13
Q 37. Comms with peers are open and free flowing	= VAR Assumed	1.15	0.29	-0.25	116.00	0.81	-0.06	0.25	-0.55	0.43
	=VAR Not Assumed			-0.23	45.99	0.82	-0.06	0.27	-0.60	0.48
Q 36. Supervisor is open to new ideas	= VAR Assumed	0.07	0.79	-0.95	116.00	0.34	-0.29	0.30	-0.88	0.31
	=VAR Not Assumed			-0.90	48.38	0.37	-0.29	0.32	-0.92	0.35
Q 38. Practices are adaptable to emergencies	= VAR Assumed	0.00	0.97	-1.15	113.00	0.25	-0.30	0.26	-0.81	0.22
	=VAR Not Assumed			-1.14	52.45	0.26	-0.30	0.26	-0.82	0.23
	= VAR Assumed	0.64	0.42	-1.25	116.00	0.21	-0.33	0.26	-0.85	0.19

Question		F	Sig.	t	df	Sig. (2-tail)	Mean Diff.	Std. Error Diff.	Low	Upp.
Q 39. Meetings are well organized	=VAR Not Assumed			-1.22	50.58	0.23	-0.33	0.27	-0.87	0.21
Q 40. Amount of supervision	= VAR Assumed	6.14	0.01	-2.02	115.00	0.05	-0.62	0.31	-1.22	-0.01
	=VAR Not Assumed			-1.73	41.55	0.09	-0.62	0.36	-1.34	0.10
Q 41. Written reports are clear and concise	= VAR Assumed	2.24	0.14	-0.88	116.00	0.38	-0.23	0.26	-0.74	0.28
	=VAR Not Assumed			-0.97	63.71	0.34	-0.23	0.24	-0.70	0.24
Q 42. Attitudes in my are healthy	= VAR Assumed	0.29	0.59	-1.61	114.00	0.11	-0.53	0.33	-1.18	0.12
	=VAR Not Assumed			-1.64	55.30	0.11	-0.53	0.32	-1.17	0.12
Q 43. Informal communication active and accurate	= VAR Assumed	0.71	0.40	-1.65	116.00	0.10	-0.43	0.26	-0.94	0.09
	=VAR Not Assumed			-1.52	46.14	0.14	-0.43	0.28	-0.99	0.14
Q 44. Amount of communication in is about right	= VAR Assumed	0.82	0.37	-0.82	116.00	0.41	-0.24	0.29	-0.81	0.34
	=VAR Not Assumed			-0.87	59.10	0.39	-0.24	0.27	-0.78	0.31
Q 46. Rate your productivity	= VAR Assumed	1.12	0.29	-0.21	116.00	0.83	-0.06	0.26	-0.58	0.47
	=VAR Not Assumed			-0.23	64.36	0.82	-0.06	0.24	-0.53	0.42
	= VAR Assumed	3.38	0.07	0.45	116.00	0.66	0.07	0.15	-0.23	0.37



Question		F	Sig.	t	df	Sig. (2-tail)	Mean Diff.	Std. Error Diff.	Low	Upp.
Q 47. Productivity changed	=VAR Not Assumed			0.40	44.30	0.69	0.07	0.17	-0.27	0.41
Q 51M. Workers are responsive to direction	= VAR Assumed	0.25	0.62	0.87	42.00	0.39	0.20	0.23	-0.27	0.67
	=VAR Not Assumed			0.89	6.77	0.41	0.20	0.23	-0.34	0.74
Q 52M. Workers anticipate my needs for information	= VAR Assumed	0.02	0.88	0.60	42.00	0.55	0.14	0.23	-0.33	0.61
	=VAR Not Assumed			0.74	8.12	0.48	0.14	0.19	-0.29	0.57
Q 53M. I can avoid information overload	= VAR Assumed	0.32	0.58	-0.34	42.00	0.74	-0.15	0.44	-1.05	0.75
	=VAR Not Assumed			-0.26	5.80	0.81	-0.15	0.58	-1.58	1.28
Q 54M. Workers are receptive to evaluation, suggestions and criticism	= VAR Assumed	2.81	0.10	0.38	42.00	0.70	0.21	0.55	-0.90	1.32
	=VAR Not Assumed			0.63	13.37	0.54	0.21	0.34	-0.51	0.93
Q 55M. Workers initiate accurate upward communication	= VAR Assumed	0.12	0.73	0.67	42.00	0.51	0.25	0.37	-0.50	0.99
	=VAR Not Assumed			0.73	7.18	0.49	0.25	0.34	-0.55	1.04

**APPENDIX I. T-TEST STATISTIC BY MANAGEMENT, ALL QUESTIONS**

Question		F	Sig.	t	df	Sig. (2-tail)	Mean Diff.	Std. Error Diff.	Low	Upp.
Q 11. Progress in my job	= VAR Assumed	5.5	0.0	-2.4	115.0	0.0	-0.6	0.2	-1.0	-0.1
	= VAR Not Assumed			-2.5	93.4	0.0	-0.6	0.2	-1.0	-0.1
Q 12. Personnel news	= VAR Assumed	1.6	0.2	-2.7	114.0	0.0	-0.6	0.2	-1.0	-0.1
	= VAR Not Assumed			-2.7	94.4	0.0	-0.6	0.2	-1.0	-0.2
Q 13. Company's policies and goals	= VAR Assumed	11.7	0.0	-3.5	113.0	0.0	-0.8	0.2	-1.3	-0.4
	= VAR Not Assumed			-3.9	113.0	0.0	-0.8	0.2	-1.2	-0.4
Q 14. Job compares to others	= VAR Assumed	0.4	0.5	-3.0	113.0	0.0	-0.8	0.3	-1.4	-0.3
	= VAR Not Assumed			-3.0	90.3	0.0	-0.8	0.3	-1.4	-0.3
Q 15. Performance is assessed	= VAR Assumed	8.9	0.0	-3.9	114.0	0.0	-1.1	0.3	-1.7	-0.5
	= VAR Not Assumed			-4.2	106.9	0.0	-1.1	0.3	-1.6	-0.6
Q 16. Recognition of my efforts	= VAR Assumed	2.8	0.1	-2.8	114.0	0.0	-0.9	0.3	-1.6	-0.3
	= VAR Not Assumed			-3.0	97.3	0.0	-0.9	0.3	-1.5	-0.3
	= VAR Assumed	6.8	0.0	-4.1	114.0	0.0	-0.9	0.2	-1.3	-0.4

Question		F	Sig.	t	df	Sig. (2-tail)	Mean Diff.	Std. Error Diff.	Low	Upp.
Q 17. Departmental policies and goals	= VAR Not Assumed			-4.3	103.3	0.0	-0.9	0.2	-1.3	-0.5
Q 18. Requirements of my job	= VAR Assumed	7.6	0.0	-3.6	114.0	0.0	-0.9	0.3	-1.4	-0.4
	= VAR Not Assumed			-3.8	106.8	0.0	-0.9	0.2	-1.4	-0.4
Q 19. Changes in my company	= VAR Assumed	2.6	0.1	-3.6	114.0	0.0	-1.0	0.3	-1.5	-0.4
	= VAR Not Assumed			-3.8	100.8	0.0	-1.0	0.3	-1.5	-0.5
Q 20. How problems are being handled	= VAR Assumed	2.2	0.1	-4.3	115.0	0.0	-1.2	0.3	-1.8	-0.7
	= VAR Not Assumed			-4.4	99.2	0.0	-1.2	0.3	-1.8	-0.7
Q 21. Pay and benefits	= VAR Assumed	0.7	0.4	-2.6	114.0	0.0	-0.8	0.3	-1.4	-0.2
	= VAR Not Assumed			-2.6	95.0	0.0	-0.8	0.3	-1.3	-0.2
Q 22. Company's financial standing	= VAR Assumed	9.0	0.0	-4.6	113.0	0.0	-1.2	0.3	-1.7	-0.7
	= VAR Not Assumed			-5.0	109.1	0.0	-1.2	0.2	-1.7	-0.7
Q 23. Achievements and failures of the organization	= VAR Assumed	5.7	0.0	-3.8	115.0	0.0	-0.9	0.2	-1.3	-0.4
	= VAR Not Assumed			-4.1	105.6	0.0	-0.9	0.2	-1.3	-0.4
Q 25. Supervisors understand the	= VAR Assumed	19.3	0.0	-5.8	115.0	0.0	-1.6	0.3	-2.1	-1.0

Question		F	Sig.	t	df	Sig. (2-tail)	Mean Diff.	Std. Error Diff.	Low	Upp.
problems of the workers	= VAR Not Assumed			-6.4	112.4	0.0	-1.6	0.2	-2.0	-1.1
Q 26. Company's comms motivates me	= VAR Assumed	11.1	0.0	-4.2	115.0	0.0	-1.1	0.3	-1.6	-0.6
	= VAR Not Assumed			-4.7	113.3	0.0	-1.1	0.2	-1.5	-0.6
Q 27. Supervisor listens and pays attention	= VAR Assumed	7.3	0.0	-3.9	114.0	0.0	-1.2	0.3	-1.8	-0.6
	= VAR Not Assumed			-4.2	107.8	0.0	-1.2	0.3	-1.8	-0.6
Q 28. People have the ability to communicate	= VAR Assumed	0.8	0.4	-3.6	115.0	0.0	-1.0	0.3	-1.5	-0.4
	= VAR Not Assumed			-3.7	96.5	0.0	-1.0	0.3	-1.5	-0.5
Q 29. Supervisor offers guidance for solving problems	= VAR Assumed	6.2	0.0	-3.3	115.0	0.0	-1.0	0.3	-1.6	-0.4
	= VAR Not Assumed			-3.5	105.1	0.0	-1.0	0.3	-1.5	-0.4
Q 30. Makes me feel like a vital part of the team	= VAR Assumed	2.2	0.1	-3.1	114.0	0.0	-0.9	0.3	-1.5	-0.3
	= VAR Not Assumed			-3.2	98.1	0.0	-0.9	0.3	-1.4	-0.3
Q 31. Comms are interesting and helpful	= VAR Assumed	2.1	0.2	-4.0	115.0	0.0	-0.9	0.2	-1.4	-0.5
	= VAR Not Assumed			-4.2	101.2	0.0	-0.9	0.2	-1.4	-0.5
	= VAR Assumed	10.3	0.0	-3.0	114.0	0.0	-0.9	0.3	-1.5	-0.3

Question		F	Sig.	t	df	Sig. (2-tail)	Mean Diff.	Std. Error Diff.	Low	Upp.
Q 32. My supervisors trust me	= VAR Not Assumed			-3.4	112.9	0.0	-0.9	0.3	-1.4	-0.4
Q 33. Timeliness of information	= VAR Assumed	20.1	0.0	-3.8	115.0	0.0	-1.0	0.3	-1.5	-0.5
	= VAR Not Assumed			-4.2	111.9	0.0	-1.0	0.2	-1.5	-0.5
Q 34. Conflicts are handled appropriately	= VAR Assumed	5.5	0.0	-4.2	115.0	0.0	-1.2	0.3	-1.8	-0.6
	= VAR Not Assumed			-4.4	104.7	0.0	-1.2	0.3	-1.8	-0.7
Q 35. "Grapevine" (informal communication) is active	= VAR Assumed	0.7	0.4	-2.5	113.0	0.0	-0.7	0.3	-1.2	-0.1
	= VAR Not Assumed			-2.4	77.6	0.0	-0.7	0.3	-1.2	-0.1
Q 37. Comms with peers are open and free flowing	= VAR Assumed	2.0	0.2	-3.4	115.0	0.0	-0.7	0.2	-1.2	-0.3
	= VAR Not Assumed			-3.5	93.3	0.0	-0.7	0.2	-1.2	-0.3
Q 36. Supervisor is open to new ideas	= VAR Assumed	9.3	0.0	-4.1	115.0	0.0	-1.1	0.3	-1.6	-0.5
	= VAR Not Assumed			-4.5	112.8	0.0	-1.1	0.2	-1.5	-0.6
Q 38. Practices are adaptable to emergencies	= VAR Assumed	6.3	0.0	-4.6	112.0	0.0	-1.0	0.2	-1.5	-0.6
	= VAR Not Assumed			-4.9	103.2	0.0	-1.0	0.2	-1.4	-0.6
Q 39. Meetings are well organized	= VAR Assumed	9.0	0.0	-4.9	115.0	0.0	-1.1	0.2	-1.5	-0.6

Question		F	Sig.	t	df	Sig. (2- tail)	Mean Diff.	Std. Error Diff.	Low	Upp.
	= VAR Not Assumed			-5.3	109.8	0.0	-1.1	0.2	-1.5	-0.7
Q 40. Amount of supervision	= VAR Assumed	8.3	0.0	-3.4	114.0	0.0	-0.9	0.3	-1.5	-0.4
	= VAR Not Assumed			-3.8	111.4	0.0	-0.9	0.2	-1.4	-0.4
Q 41. Written reports are clear and concise	= VAR Assumed	2.2	0.1	-3.9	115.0	0.0	-0.9	0.2	-1.3	-0.4
	= VAR Not Assumed			-4.0	95.8	0.0	-0.9	0.2	-1.3	-0.4
Q 42. Attitudes in my are healthy	= VAR Assumed	12.4	0.0	-4.3	113.0	0.0	-1.2	0.3	-1.8	-0.7
	= VAR Not Assumed			-4.8	109.8	0.0	-1.2	0.3	-1.7	-0.7
Q 43. Informal communication active and accurate	= VAR Assumed	0.2	0.6	-3.6	115.0	0.0	-0.8	0.2	-1.3	-0.4
	= VAR Not Assumed			-3.7	93.9	0.0	-0.8	0.2	-1.3	-0.4
Q 44. Amount of communication in is about right	= VAR Assumed	2.4	0.1	-3.2	115.0	0.0	-0.8	0.3	-1.3	-0.3
	= VAR Not Assumed			-3.4	101.5	0.0	-0.8	0.2	-1.3	-0.3
Q 46. Rate your productivity	= VAR Assumed	3.0	0.1	1.7	115.0	0.1	0.4	0.2	-0.1	0.9
	= VAR Not Assumed			1.6	74.3	0.1	0.4	0.3	-0.1	0.9
	= VAR Assumed	2.6	0.1	-2.1	115.0	0.0	-0.3	0.1	-0.6	0.0

Question		F	Sig.	t	df	Sig. (2-tail)	Mean Diff.	Std. Error Diff.	Low	Upp.
Q 47. Productivity changed	= VAR Not Assumed			-2.0	77.6	0.0	-0.3	0.1	-0.6	0.0