Special Interpersonal Relationships in Project-Based Organizations

by

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ABSTRACT

The success or failure of projects is not determined only by procedures, tasks, and technologies, but also by the project team and its effectiveness. In order to lead project teams towards successful outcomes, project managers must maintain high quality relationships in the workplace.

When looking at employees' relationships in the workplace, Social Exchange Theory introduces two types of exchanges: employee-organization and leader-member exchanges. While both types of exchanges focus exclusively on the employee's longitudinal relationships, the interpersonal relationships among the team members are usually overlooked.

This research presents the results of a quantitative study of the interpersonal relationships of 327 project managers and assistant project managers in their workplace. Specifically, the study investigates if the quality of the relationship with particular stakeholders, such as one's immediate supervisor (boss), peers, or subordinates, drives the individual's quality of the relationship with other stakeholders.

Contrary to the expectations, in strictly hierarchical organizations (one direct supervisor), there is no significant correlation between the quality of relationships with the boss and the overall quality of the individual's relationships. However, in the case of matrix organizations (two or three bosses), there are significant correlations between several variables such as the quality of the relationship, perceived importance and the time spent with each stakeholder, as well the inclination of the participant towards leadership actions. The driving relationship in matrix organizations is the one with "the most important peer".

DEDICATION

This doctoral dissertation is dedicated to my wonderful family, particularly my father, my mother and my wife for their purest love and support.

ACKNOWLEDGMENTS

I would like to express my acknowledgement for all who supported me throughout my graduate studies. This would not have been possible without the care and effort generously provided by so many people.

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CHAPTER 1

INTRODUCTION

Overview

For any given project in project-based industries—such as research and development (R&D), construction, and software development—being "successful" is a basically unquestioned good, generally associated with positive performance and outcomes. High quality relationships between the stakeholders associated with the management of projects can positively impact organizational effectiveness and project success. Nevertheless, in seeking success project-based organizations' efforts have been centered on operational role of practice, thus overlooking soft elements associated with project management which would be more of a concern to role of leadership and senior management.

Generally, organizations efforts are directly related to operational aspects of practice (Besner and Hobbs 2006) such as improving technical factors and procedures, choosing which tools and techniques to employ, adopting different project management practices and developing more skillsets. Regardless, the number of unsuccessful projects in project-based industries are fairly high. In the construction industry, for example, more than half of the projects fail to finish within the scheduled time and budget. (PMI 2018, KPMG 2017) See figure 1.1. When looking at factors contributing to project success, early research within project-based industries has revealed that rather than technical factors, there are the so-called people factors that determine the success or failure of projects (Larson and Gobeli 1989; Pinto and Slevin 1989). This reflects the fact that people deliver projects, not processes and systems (Cooke-Davies 2002). Research also

uncovered that project people are the primary contributor to project performance (Lechler 1998; Thoms and Pinto, 1999; Thoms and Greenberger, 1995). Without the project team reaching to the stage in which strong relationships are built and maintained, better performance and ultimately successful delivery of the project are unlikely be achieved (Delisle 2007).

Soft project management skills give project managers (PMs) an understanding of the people factors in the team and enable them to effectively lead teams in executing projects. PMs are primarily responsible for the success or failure of projects, but PMs often have little influence on who will be a member of the project team (Delisle 2007). Given that they are able to impact the relationships in the workplace (Bourne and Walker 2008) it is important to study in detail how PMs and project leaders can impact performances and outcomes by having good relationships.

Although there has been some attempts to study people factors in the project management literature, little quantitative data on these factors have been collected and analyzed. This study attempts to analyze the interpersonal relationships through quantitative data collection from 327 PMs and assistant PMs.

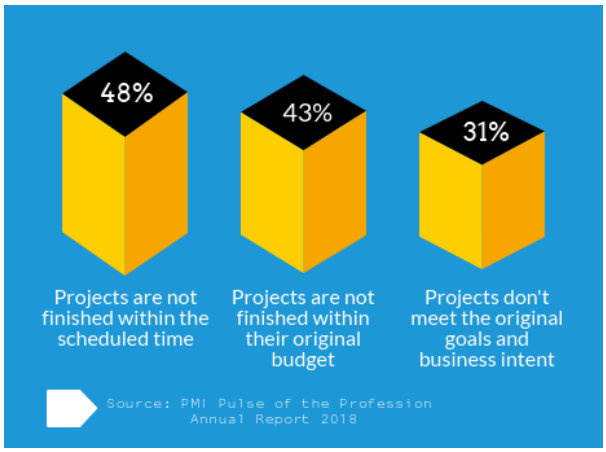

Figure 1.1. Projects meeting planned budgets, schedule and other goals in the US

Initially individuals in an organization interact with each other in a formal way (contractual relationship), but those relationships that reach an informal (social) level are of greater interest to researchers (Dienesch and Linden 1986; Graen and Uhl-Bien 1995). Social Exchange Theory (SET) addresses exchanges between two parties in an organization which go beyond expected roles and duties (Gouldner 1960). These exchanges have the potential to generate high-quality relationships. A wide range of individual and organizational outcomes are derived from these exchanges which will benefit all parties involved in the exchange including the organization (Cropanzano and Mitchell 2005).

Unlike other contemporary knowledge-based organizations, interactions and exchanges between team members in project-based industries have not attracted considerable research attention. While industry practitioners and researchers alike have studied processes, techniques and tools that are of the interest for operational aspects of practice, investigating relationships between the stakeholders associated with the management of projects in which individual's success depends, is missing in the literature.

What makes projects different from manufacturing is that both the teams and the product are new. The purpose of this research is to address this least understood aspect of project management, focusing on the interpersonal relationships of PMs and assistant PMs with their stakeholders working in Engineering, Procurement and Construction (EPC) firms, government, and owner clients in the United States.

Research Hypothesis

Specifically, this research was set to test the following hypotheses:

H1: Among all the people one has a relationship with in the workplace, it is the relationship with the boss (immediate supervisor) which best correlates with the overall quality of the individual's relationships.

H2: The perceived importance of the boss correlates with the quality of relationship with him/her.

Organization of the Report

This research report is organized as follows:

- The Introduction provides a brief explanation of the background, the research objectives, hypotheses, and organization of the report.
- The Literature Review presents the results of a literature search.
- The Methodology chapter provides an in-depth discussion of the approach that was used.
- The Discussion of Data Analysis, Findings, and Applications provides the results of the study.
- The Conclusions include an assessment of the research study objectives and hypothesis, as well as the potential application of the results. A brief discussion of the limitations of this study, as well as follow-on research are also included in this section.

CHAPTER 2

LITERATURE REVIEW

Overview

The literature review focused on the following topics:

- Project Success and Project Teams
- Social Exchanges Theory
- Team Members' Exchanges
- Leader-Member Exchanges

Project Success and Project Teams

Project success is considered to be a complex and multidimensional phenomenon (Dvir et al. 1998). It was often defined in different ways since the early stages of project management research. Furthermore, different stakeholders in the project do not always share similar perceptions of success. (Lim and Mohamed 1999; Morris 1994; Munns and Bjeirmi 1996). It is suggested that the project success should be assessed against indicators such as functionality (Morris 1994), user's expectations (Songer and Molenaar 2002), cost and schedule (Atkinson 1999), product performance (Kloppenborg and Opfer 2002), satisfaction among project people (Baker et al. 2008), and project peer rating (Molenaar et al. 2013). To overcome some deficiencies inherit in the measurements of success, new indicators are also being suggested periodically by the researchers (Din and Gibson 2019; Jiang et al. 2016; Luo et al. 2017; Yussef et al. 2018). Although other success indicators exist, a successful project is widely accepted as a quality project, which is on-time and profitable.

Feasibility studies are conducted to help the project owners in making a "go/no-go" decision before initiating any project. Part of being feasible by definition is to make a profit and projects are never initiated if failure is predicted. Even public projects, which are not necessarily for profit, are carefully watched against being over budget and over schedule. To maximize the chance of project success, different project management practices are often suggested. Many studies investigated the potential contribution of tools and techniques to project success. Project owners make every effort to keep themselves current with the latest software and technologies, increase their employees' skillsets and recruit new talented employees with the highest desired qualifications.

Hence, attentions and efforts in organizations are focused primarily on ''task" and "result'', two of the three aspects of project management suggested by Miller (1988). In contrast, "people factors", the third aspect he suggests, is the least understood aspect of project management by practitioners and has also received little research attention in the area of project management.

Despite the efforts made by organizations, which have been mostly on tasks and results, the number of unsuccessful projects clearly suggests that there is something missing (Morris and Hough, 1987; O'Connor and Reinsborough, 1992; KPMG, 1997; Cooke-Davies, 2001). Therefore, more recent research project management literature called for an increase in the awareness of people issues in managing projects (Cooke-Davies 2002), and pointed to the importance of this often neglected aspect among aspects contributing to project success (Delisle 2007; Kloppenborg and Opfer 2002). While current PM literature provides a handful of attempts to highlight the importance of people

factors (Ruskin and Estes 1986), few have studied in further detail how people factors can be addressed by PMs and project leaders in the industry.

However, people factors have long been believed to be important within the literature on organizational relationships. It is not surprising that over the past few decades, researchers have studied deeply the performance of knowledge workers and offered insight into the kinds of behaviors necessary for success in the "new" world of work (Drucker et al. 1959). Although knowledge is essential for every type of work, knowledge workers distinguish themselves from other types of workers because their main focus is the knowledge itself (Thamhain and Wilemon 1987). Knowledge workers are tasked with continual innovation and creativity, and need a different management approach (Correia de Sousa and van Dierendonck 2010; Davenport 2005). Similarly in project-based industries individuals are primarily tasked with creative thinking. They process non-routine problems on a daily basis as part of a multidisciplinary group (Dekas et al. 2013; Reinhardt et al. 2011).

Therefore, it is expected that if team members better understand the balance between tasks and relationships, it can result in the team delivering a successful product or service. This study contributes to the body of knowledge by studying and analyzing the interpersonal relationships of PMs and assistant PMs with their stakeholders. Both PMs and assistant PMs will be referred to as PMs in the remainder of this document. PMs play an important role in delivering the project. PMs lead project teams and are believed to be the main contributors to the relationships in the workplace (Bourne and Walker 2008).

Social Exchanges Theory (SET)

SET is one of the conceptual theories for understanding organizational behavior, which is used to describe the social interactions that employees encounter within their employing organizations (Cropanzano and Mitchell 2005). Gouldner (1960) introduced the concept of SET and the norm of reciprocity as the starting point for future exchanges. Another conceptualization is by Blau (1964) who differentiates between social exchange and economic exchange. Blau (1964) defines social exchange as relationships that require future obligations. The term relationship refers to the association between two interacting partners, whether individuals or institutions. SET covers exchanges between two parties, which go beyond expected roles and duties (Wayne et al. 1997).

Social exchange involves a series of interactions that generate obligations. For example, when employees feel well supported by the behavior of the supervisor, they feel obligated to do something in return and put in extra effort at work (Gouldner 1960). These exchanges will result in ongoing reciprocal reactions. The outcomes derived from these exchanges will benefit all parties involved in the exchange and have the potential to generate high-quality relationships (Cropanzano and Mitchell 2005).

Team Members' Exchanges

Outcomes in an organization, cannot be achieved based on one's solo effort, rather it is achieved by a combination of everyone's efforts (Cropanzano and Mitchell 2005). Team members play a significant role in project performance (Thoms and Pinto, 1999, Thoms and Greenberger, 1995). An effective project team is believed to be a major factor contributing to project success (Slevin and Pinto 1986). Part of being effective may

be having team members who build and maintain a strong relationship with each other. It is crucial for the PMs to be able to know the behavioral characteristic of the team members and understand how to generate high quality relationships within the project team. This is especially important when the PMs do not select the members of the project team themselves (Delisle 2007). For example, research shows that chances of project success may be increased by understanding and capitalizing on different behavioral styles and developing ways to improve working relationships (Culp and Smith 2001).

Furthermore, social exchange researchers have studied two types of exchanges in the organizations. When looking at different parties involved in the relationship, social exchange theorists pay special attention to the relationships between the employee and the immediate supervisor, referred to as leader-member exchanges (LMX) (Cropanzano and Mitchell 2005; Wayne et al. 1997). Alternatively, the relationships between employees and their organization, referred to as perceived organizational support (POS), have been viewed when social exchange theorists examine employees' relationships within their employing organizations. (Cropanzano and Mitchell 2005; Eisenberger et al. 1986).

Leader-Member Exchanges (LMX)

It is not an uncommon expectation that when an employee has a good relationship with the boss, he/she also will have a good relationships with others in the workplace. It is often argued in the social exchange literature that from the employee perspective, it is the supervisor who represents the organization (Konovsky and Pugh 1994). LMX examines how dyadic relationships are correlated with desired outcomes, such as

employees' performance and satisfaction (Liden and Graen 1980). Different types of relationships develop between immediate supervisor (boss) and employees within the organization, which is the central premise behind LMX according to Liden et al. (1997).

The field of leadership has been under intense academic research during the last century, by both academics and practitioners; however, no generally accepted definition of leadership exists in the literature. While new theories are being produced by scholars, they only address (in the best case) different aspects of leadership; hence, all of them fit into one or a combination of three leadership domains: the leader, the follower, and the relationship. The development of LMX as a social exchange approach to leadership has been of a great interest to researchers, especially in the past two decades. LMX focuses on the dyadic relationship aspect of the leadership by expanding its investigation beyond the leader and the follower. As with other leadership-related literature, the focus of the LMX is on the boss (Bauer and Green 1996; Liden et al. 1993; Wayne et al. 1997) rather than acknowledging that project success often depends on a whole team.

LMX and POS are believed to be empirically related; yet both overlook the interpersonal relationships between the employees, as they focus exclusively on the employee's longitudinal relationships. It is questionable whether employees' relationships with their fellow workers and key project stakeholders are also important for maximizing potential project success.

This dissertation attempts to address this missing information, by studying PMs relationships with their key stakeholders in their workplace while focusing on the relationship with their immediate supervisor.

Studies show that there are many factors that affect one's relationship with the boss. They include length of employee's relationship with the boss (Duarte et al. 1994; Gooty and Yammarino 2011), effect of an employee's confidence and trust in the boss (Scandura 2008), relationship between boss POS and boss-employee LMX (Eisenberger et al. 2014; Frear et al. 2018), to name a few. A few other studies have viewed boss-employee relationship from SET perspective, wherein researchers investigated in detail the impression-management tactic used by the employee, as well as the effects of favor-doing (Konovsky and Pugh 1994; Cropanzano and Mitchell 2005; Shanock and Eisenberger 2006). As with other leadership-related literature, the focus of the LMX is on the boss (Bauer and Green 1996; Wayne et al. 1997) rather than acknowledging that project success often depends on a whole team.

Employee performance is a significant contributor to the quality of relationship between an employee and boss (Breevaart et al. 2015). The exchange between an employee and boss is considered a significant factor in the employee's behavior towards the boss (Wayne et al. 1997; Anand et al. 2018). The boss-employee relationship is seen to impact individual, team, and organizational outcomes in the following ways:

- Overall effect on performance ratings (Kacmar et al. 2003)
- Effect of leaders' differentiation among their members (Shropshire and Kadlec 2012)
- Correlation with employee job satisfaction (Loke 2001) and conflict resolution (Haynie et al. 2019)
- Influence on relationships with coworkers (Sherony and Green 2002)

- Effect of the relationship length on performance ratings compared to actual performance (Avery et al. 2012)

The review of the literature suggests that if one's relationship with the boss is poor, other relationships at work suffer as well, making success harder to achieve. The author first begin with the assumption that if the theories developed so far are plausible, individual's relationships with the boss affects their relationship with all other stakeholders on their molecule. This generates the first hypothesis of the research:

H1: Among all the people one has a relationship with in the workplace, it is the relationship with the boss which best correlates with the overall quality of the individual's relationships.

Researchers in social psychology (Raven 2008) refer to six sources of influence. They are the powers of Reward, Coercion, Legitimate, Expertise, Informational and Referent. Leadership theories frequently group these powers into three categories: power of authority (reward, coercion, and legitimate), power of expertise (expertise and information), and power of relationship (referent). One would expect that the boss' power of authority would drive the quality of the relationship as well, i.e., the more important the boss is, the more the employee will try to develop a better relationship with him/her. Hence, the second hypothesis of this research is generated:

H2: The perceived importance of the boss correlates with the quality of relationship of the employee with the boss (immediate supervisor).

CHAPTER 3

METHODOLOGY

Sample and Data Collection

To accomplish the goals of this research, one-day leadership seminars were held at the training facilities of 16 participating Construction Industry Institute companies in the US. Data were collected from all 327 PMs and assistant PMs. 83% of the participants were male and 93% held an undergraduate degree or higher. The average years of experience was 19 with an average of 9 years in their current role. Mean number of stakeholders with whom the individuals encounter daily was 12. The participating companies were Engineering, Procurement and Construction (EPC) firms, and the government and owner clients in the United States. PMs reported to spend an average of 49 hours per week at work.

The 327 participants yielded 282 (86%) completed and usable datasets. For the purpose of this research, a complete dataset consists of individuals who reported to have at least one boss.

Workplace relationships were collected by a self-analysis and reflection tool called "Who's on Your Molecule?" (WOYM). The WOYM was one of the different lectures and activities, which participants attended during the leadership seminars. The seminars were administered by facilitators who were trained in collecting data. WOYM places individuals in the center of their own molecule and requires them to identify the key people (stakeholders) who are essential for their success (Badger, 2011). The Basic "Molecule" Diagram is shown in Figure 3.1. Through this self-evaluation exercise, individuals assess their relationships with the people who surround them in their environment. They also analyze the time they spend on each relationship. The responses

to WOYM helps evaluators understand if they know all the essential people with whom they should be interacting (Badger, 2011).

Figure 3.1.The Basic "Molecule" Diagram

The WOYM is a unique data collection method which enables the researchers to obtain revealed data instead of declared data. This was due to concerns in human behavior research about participants providing responses intentionally or unintentionally that they believe the researchers expect, or that researchers design the surveys and questionnaires to get desirable responses. Also, today many researchers examine different rewarding approaches to convince participants to spend their time and energy on surveys or questionnaires because they only benefit the researchers, not the participant. This exercise was designed and conducted in such a way that provides a win-win situation for participants, companies and the researchers. The win-win construct of the exercise will result in participants avoiding overstating and over-reporting their relationships.

By participating in the WOYM seminar, PMs were introduced to the concept of WOYM. They learned what skills are needed to build positive relationships and how to manage the time allocated to stakeholders. Participants got the immediate result of the

exercise (the individual analysis results) by doing the self-analysis and reflection on their relationships. This will help them know where they need to focus their efforts so that they can achieve positive relationships. The overall relationship score, easily derived from the average of relationships, allowed the participant to recognize the need for improvement. WOYM is recommended to be retaken periodically. Individuals will also benefit from these results in the future to see and evaluate change on their relationships.

The individual level analysis was, in fact, valuable only to the participants by showing how well the individual is doing on his/her relationships. Second level of analysis was provided by the research team to the benefit of each participating company which revealed the hidden issues in the workplace and to better understand the complexity of the organization structure that the PMs deal with in their daily activities. The companies also could use the self-evaluation as a framework for energetic peer discussions about PM issues and collecting feedback for the company. The research team, however, was only interested in analyzing the trends present in the responses of the whole pool of participants. An example of the WOYM sheet is shown in Appendix C.

Measures

Using a six-step evaluation, WOYM measures the quality and the importance of the relationships, and the time they spend with their stakeholders. First, PMs and assistant PMs were asked to list people *(stakeholders)* whom they spend time with individually, whether in person, on the phone, email, etc, and identify their functions. Stakeholders, are the people on whose activity the respondents' success depends on. They can be internal (e.g. bosses, peers, subordinates) or external (e.g. clients, contractors, vendors) to their

organizations. Stakeholders should fall into one of the following categories: *Boss*, *Mentor*, *Peer*, *Direct Report*, *External Customer*, *Vendor*, *Subcontractor*, *Other Employee* (e.g., HR, Accounts). Next, respondents were asked to estimate the time they spend with each stakeholder one-on-one (in hours), in a typical work week. Assessment of time was required for those with whom the respondents spend an hour or more in a typical work week. They were then required to measure the importance of each stakeholder to their success. The perceived importance or weight (W) was scaled from 1-10, where 1 = a stakeholder of negligible importance, 10 = very important stakeholder. Some relationships may be of equal importance to the employee and therefore can have the same weight. Finally, PMs were requested to assess the quality of the relationship (R) with each stakeholder, and calculate the average scores for quality of relationships with all their stakeholders (on a scale of 1-10, where 1 = very bad relationship and 10 = very good relationship). For someone to score R = 10, it was expected this person would know a lot of personal information about the stakeholder—such as where they are from, names of family members, family events, hobbies, etc. Additionally, an overall relationship score was also generated, which is the average of all the individual R scores (R_Avg).

A large spreadsheet of collected data was generated. R, W, and T were captured for each member of each group. The initial finding from the data set suggests the total number of stakeholders ranged from 4 to 30, with a median of 11.99. The number of internal stakeholders ranged from 2 to 30, with a median of 9.40. The number of external stakeholders ranged from 0 to 15, with a median of 2.54. Table 3.1 presents the descriptive statistics of the number stakeholders.

	Variables (n=282)	Min	Max	Median	S.D.
1	No. Bosses	1	5	1.74	1.08
2	No. Direct Reports	0	10	3.40	2.42
3	No. Ext Cust	0	7	2.39	1.51
4	No. Mentors	0	3	1.13	0.40
5	No. Others	0	19	3.98	4.49
6	No. Peers	0	11	2.76	0.40
7	No. Subs	0	7	1.46	1.04
8	No. Vendors	0	4	1.39	0.74
9	No. Total	4	30	11.99	3.96
10	No. Internal	2	30	2.54	2.28
11	No. External	0	15	9.40	3.91

Table 3.1. Descriptive Statistics of the Number Stakeholders

The median and standard deviations (S.D.) of all variables of the collected samples for each group are summarized in Table 3.2.

	Variables (n=282)	Median	S.D.
1	R-Score Boss	7.84	1.86
2	Important Boss	8.34	1.98
3	Time Boss	3.22	3.79
4	R-Score Mentor	8.44	1.47
5	Important Mentor	6.96	2.26
6	Time Mentor	2.43	3.15
7	R-Score Peer	7.63	1.79
8	Important Peer	6.01	2.02
9	Time Peer	3.55	3.77
10	R-Score Direct Report	7.74	1.61
11	Important Direct Report	7.16	1.90
12	Time Direct Report	5.00	5.09
13	R-Score External Customer	7.61	1.81
14	Important External Customer	8.15	1.86
15	Time External Customer	3.39	2.88
16	R-Score Subcontractor	8.87	2.09
17	Important Subcontractor	6.14	2.48
18	Time Subcontractor	6.20	7.92
19	R-Score Vendor	7.19	2.06
20	Important Vendor	6.41	2.33
21	Time Vendor	2.90	2.91
22	R-Score Others	6.93	2.37
23	Important Others	6.39	3.29
24	Time Others	3.98	4.49
25	R-Avg	7.54	1.02

Table 3.2. Median and Standard Deviations of the Measures

The author was interested in identifying the three highest scores in the molecule for each relationship characteristic (W, R and T) because this will reflect how the whole pool of people were doing on their relationships (See Table 3.3).

Rank	Rank in Importance	S.D.	Median	Rank in Relationship	Rank in Time Spent
1	Boss	1.98	8.34	3	6
2	External Customer	1.86	8.15	6	5
3	Direct Report	1.90	7.16	4	2
Rank	**Rank in Relationship**	**S.D.**	**Median**	**Rank in Importance**	**Rank in Time Spent**
1	Subcontractor	2.09	8.87	7	1
2	Mentor	1.47	8.44	4	8
3	Boss	1.86	7.84	1	6
Rank	**Rank in Time Spent**	**S.D.**	**Median**	**Rank in Importance**	**Rank in Relationship**
1	Subcontractor	7.92	6.20	7	1
2	Direct Report	5.09	5.00	4	3
3	Others	4.49	3.98	6	8

Table 3.3. Three Highest W, R and T of the Whole Pool of People

The results of Table 3.3 suggest there are relationships which are important but people are not spending enough time on those, therefore, good relationships are not built. Also individuals are spending most of their time with those are less important to them.

Although R_Avg is an aggregated variable, The Author decided to include it in the spreadsheet and to further evaluate which variable would predict the average quality of the relationship for employees.

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CHAPTER 4

DATA ANALYSIS AND RESULTS

Data Analysis

The two hypothesis set for this study were as follows:

- H1: Among all the people one has a relationship with in the workplace, it is the relationship with the boss which best correlates with the overall quality of the individual's relationships.
- H2: The perceived importance of the boss correlates with the quality of relationship of the employee with the boss (immediate supervisor).

To test the hypotheses, the author first performed ordinary least square (OLS) regression analyses on the data set consisting of 282 individuals that had one or more bosses. The number of bosses in the data set ranged from one to five, so in the first iteration, the author took the average of the quality of relationships with all the bosses of an individual (R_Bosses). The other variable measured in the OLS data analysis was the average quality of relationships one had with all other stakeholders (R_AllOthers).

To explore whether the average quality of relationships with non-boss stakeholders is associated with R_Bosses, The author conducted a linear regression analysis. As shown in Figure 4.1, the result was a slope of 0.17 and R2 of 0.07. In terms of Pearson's correlation, this is equivalent to $r = 0.26$, which is deemed to be insignificant. This means that, contrary to our expectations, H1 did not prove to be true, and R_AllOthers may be predicted (if at all) by some other factor other than R_Bosses.

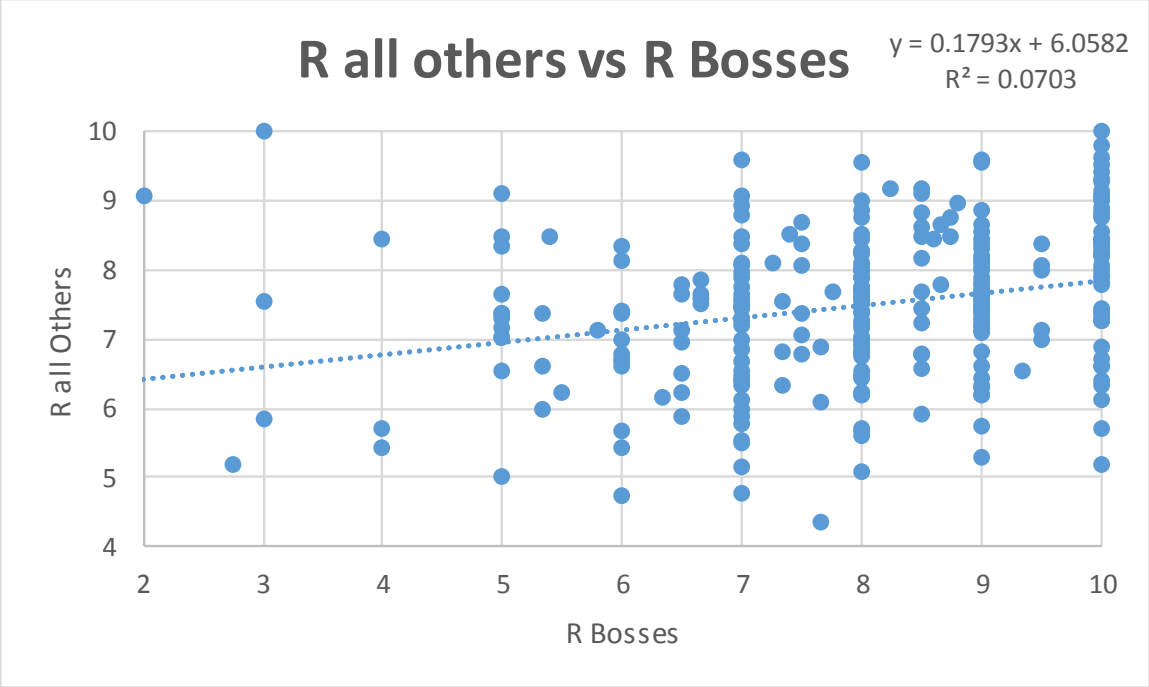

Figure 4.1. OLS of R_AllOthers vs. R_Bosses

Next, the author hypothesized that the number of bosses one has is a relevant factor to consider. Could it be that H1 is not true in hierarchical organizations, where an employee has only one boss, but is true in matrix organizations, where a person reports to two or more bosses? When looking at bosses separately, and conducting the same linear regression analysis for R_AllOthers, as shown in Figure 4.2, to Figure 4.5, the results were a slope of .23 and R2 of .16 for one boss (n = 282), slope of .23 and R2 of .19 for two bosses (n = 125), slope of .30 and R2 of .35 for three bosses (n = 53), and slope of .52 and a R2 .41 for four bosses (n = 28). While the slopes vary between 23% and 52% (depending on the number of bosses) even the largest slope (0.52 for four bosses) proved not to be statistically significant due to the small number of data points. This means that even when the author split the cases by number of bosses (one, two, three or four bosses), R_AllOthers is influenced more by something other than R_Bosses. H1 did not prove to be true in this case either.

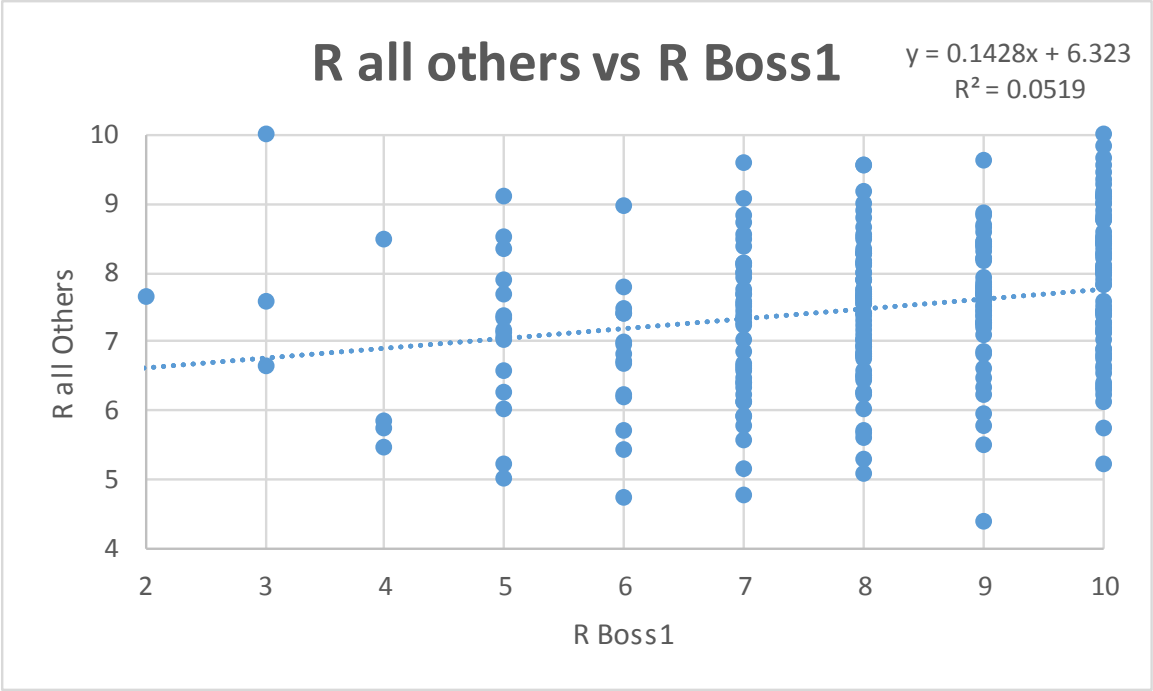

Figure 4.2. OLS of R_AllOthers vs. R_Boss 1

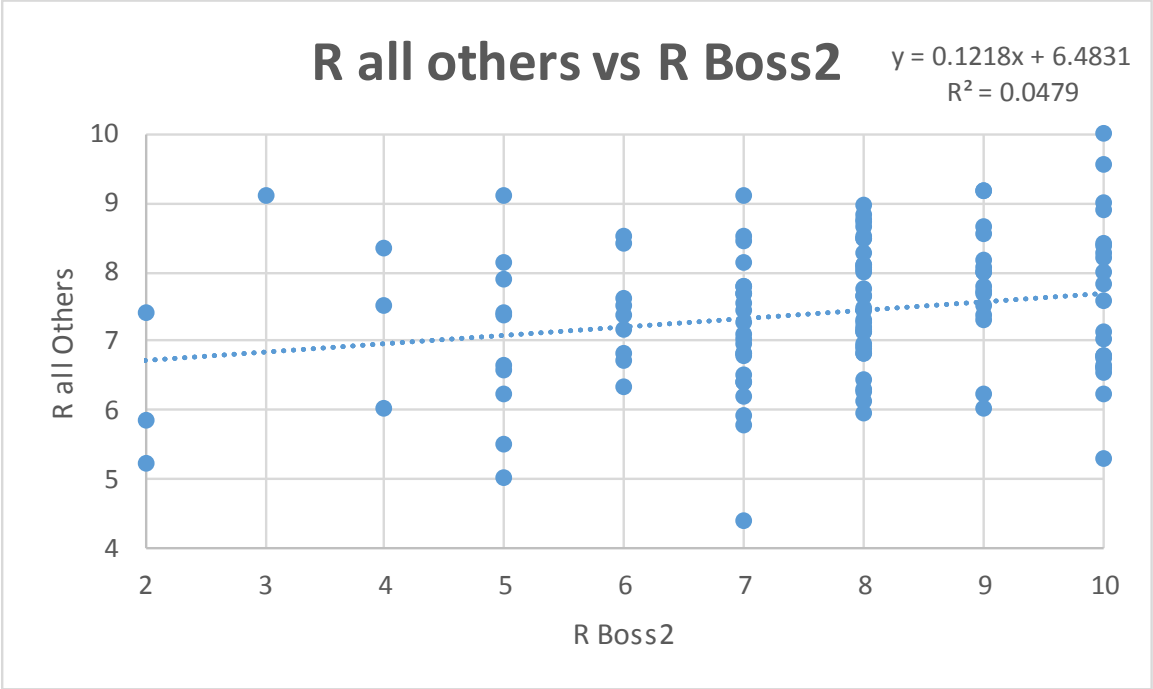

Figure 4.3. OLS of R_AllOthers vs. R_Boss 2

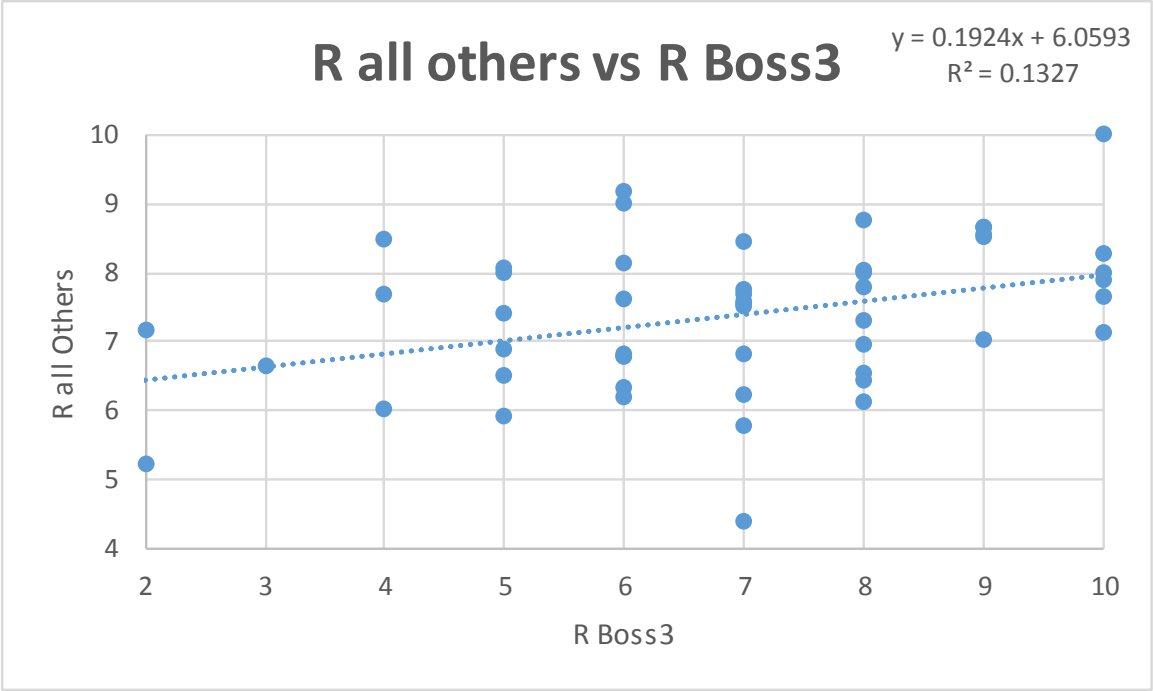

Figure 4.4. OLS of R_AllOthers vs. R_Boss 3

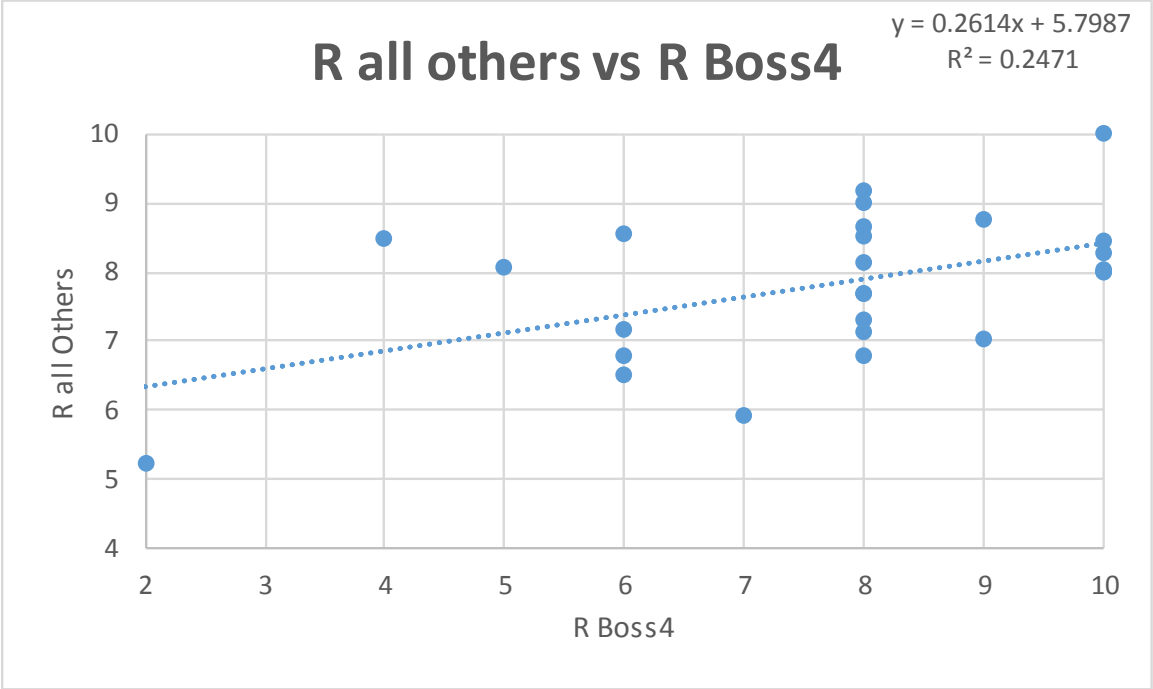

Figure 4.5. OLS of R_AllOthers vs. R_Boss 4

While the OLS may not have proved the validity of H1, it may be that there are other correlations that OLS is unable to identify. This shifted the research from a confirmatory approach, to an exploratory approach. The new research question then became:

Is there any variable among the ones collected that has a statistically significant correlation with R_Avg?

This new research question required generating a Pearson correlations table among all the variables.

Results

Table 4.1 presents the median and standard deviations for the variables with statistically significant Pearson correlations. These variables are: Time Boss No.1, Time Boss No.2, Time Boss No.3, R-Score Boss No.2, R-Score Boss No.3, R-Score Peer No.1, R-Score Others, W Boss No.1, W Boss No.2, W Boss No.3, and R-Avg. For the sake of consistency, bosses (1, 2, 3) were ranked first by order of importance (Boss 1 most important), and then (second criterion) by the quality of their relationship.

When one has two bosses, importance of Boss No.1 (W Boss No.1) and importance of Boss No.2 (W Boss No.2) had a statistically significant positive correlation with each other ($r = 0.46$ - line #9 in Table 4.1).

		Only Two Bosses			Only Three Bosses				
No.	Variables	*Median*	*S.D.*	*Correlation(s)*	*Median*	*S.D.*	*Correlation(s)*		
1	Time Boss No.1	2.88	2.72		4.23	5.25	W Boss No.2 (r=-0.40)		
2	Time Boss No.2	2.00	2.05		2.42	2.80	Time Boss No.3 (r=0.76)		
3	Time Boss No.3	N/A	N/A		7.93	1.70	Time Boss No.2 (r=0.76)		
4	R-Score Boss No.2	7.50	1.80		7.52	1.69	W Boss No.2 (r=0.65)		
5	R-Score Boss No.3	N/A	N/A		6.96	1.65	R-Avg (r=0.54)		
6	R-Score Peer No.1	7.69	1.80	R-Avg (r=0.45)	6.83	1.98			
7	R-Score Others	6.16	3.02		7.42	1.21	R-Avg (r=0.43)		
8	W Boss No.1	8.90	1.80	W Boss No.2 (r=0.46)	8.32	1.82	W Boss No.2 (r=0.55)	W Boss No.3 (r=0.47)	
9	W Boss No.2	8.30	1.80	W Boss No.1 (r=0.46)	7.88	1.99	W Boss No.1 (r=0.55)	W Boss No.3 (r=0.45)	R-Score Boss No.2 (r=0.65)
10	W Boss No.3	N/A	N/A		7.64	2.02	W Boss No.1 (r=0.47)	W Boss No.2 (r=0.45)	
11	R-Avg	7.50	0.90	R-Score Peer No.1 (r=0.45)	7.03	0.78	W Boss No.2 (r=0.49)	R-Score Boss No.3 (r=0.54)	R-Score Others (r=0.43)

Table 4.1. Results of Pearson Correlations, Median and Standard Deviations of the Measures

When one has three bosses, importance of Boss No.1 (W Boss No.1) and importance of Boss No.2 (W Boss No.2) had a statistically significant positive correlation with each other (r = 0.55 - line #8 in Table 4.1). Importance of Boss No.1 (W Boss No.1) and importance of Boss No.3 (W Boss No.3) had a statistically significant positive correlation with each other (r = 0.47- line #8 in Table 4.1). Importance of Boss No.2 (W Boss No.2) and importance of Boss No.3 (W Boss No.3) also showed a statistically significant positive correlation with each other (r = 0.45 - line #9 in Table 4.1).

Importance of Boss No.2 (W of Boss No.2 out of 3 bosses) is positively correlated with R-Score Boss No.2 (r = 0.65 - line #9 in Table 4.1), but is negatively correlated with the time spent with Boss No.1 (Time Boss No.1) (r = -0.40 - line #1 in Table 4.1). Of greater interest, however, was that importance of Boss No.2 (W of Boss No.2 out of 3 bosses) had a statistically significant positive correlation with one's average quality of relationships with all stakeholders (R-Avg) (r = 0.49 - line #11 in Table 4.1). This confirms hypothesis 2 (H2), but only for Boss 2 in 3D organizations. Note that H1 is not confirmed.

When one has two bosses, the quality of relationship with Peer No. 1 (R-Score Peer No.1) and one's average quality of relationships with all stakeholders (R-Avg) had a statistically significant positive correlation with each other (r = 0.45 - line #6 in Table 4.1). In the case of one with three bosses, quality of the relationship with Boss No.3 (R-Score Boss No.3) and quality of the relationship with those stakeholders categorized as others, such as HR, Accounts, etc. (R-Score Others), were the two other variables which had statistically significant positive correlation with one's average quality of relationships with all stakeholders (R-Avg) (r = 0.54 and r = 0.43 - line #11 in Table 4.1). The time

spent with Boss No.2 (Time Boss No.2) and the time spent with Boss No.3 (Time Boss No.3) also had a statistically significant positive correlation with each other (r = 0.76 - line #2 in Table 4.1).

CHAPTER 5

CONCLUSION

Interpretation of the Results and Conclusion

The boss-employee relationship was generally believed to be a driving factor in the success of the employee. However, the statement "H1: The overall quality of the individual's relationships is influenced more by the relationship with the boss compared with other stakeholders one has a relationship with in the workplace (i.e., relationships with others)" proved to be untrue.

The results indicate that it is not Boss No.1 who has the most influence on the overall quality of the individual's relationships. This observation applies to individuals who have either one or more bosses. The author reminds the reader that Boss No.1 is the boss with the highest importance. For individuals with two bosses, the overall relationship score (R_Avg) correlates with the importance of Boss No.2 (W Boss No.2) (r=0.49), and with the quality of relationship with Peer No.1 (R-Score Peer No.1) (r = 0.45). For individuals with three bosses, overall relationship score (R_Avg) correlates with R-Score Peer No.1 (r=0.45), W Boss No.2 (r=0.49), R-Score Boss No.3 (r=0.54), and R-Score Others (r=0.43).

Also, it is noteworthy that while the results do show a correlation between quality of the relationship with Boss No.2 (R-Score Boss No.2) and importance of Boss No.2 (W Boss No.2), they do not show a correlation between the importance and quality of relationship with Boss No.1 (W Boss No.1 and R-Score Boss No.1) and between the importance and quality of relationship with Boss No.3 (W Boss No.3 and R-Score Boss No.3). This means that our second hypothesis (H2) also proved to be untrue. The

hypothesis that the importance of the boss drives the quality of the relationship (H2) is only true for Boss No.2 in instances where an individual had exactly three bosses but not true for two bosses. The author suspects that this last conclusion is true only for the particular data set that the author analyzed. After all, if one works with a statistical validation of p=5%, there still is a 1 to 20 chance that the author analyzed the one data set.

Additional Findings

Another interpretation of the results is given in figure 4.1. In the figure among all the variables those which generated statistically significant Pearson correlations are shown. As the author addressed earlier, for someone with multiple bosses, the general importance of the bosses is positively significant. This shows that if the importance is low it is low for all bosses and vice versa.

As far as the quality of the relationships goes and contrary to the expectations, bosses do not drive relationships. Someone's good relationship with the boss does not guarantee a good relationship with everybody else. However, it is interesting that Peer No.1 and Others are related to R-Avg. This is mainly as a result of mathematical calculation which means if everybody has the same weight in the relationship, someone with a better relationship with Peer No.1 and Others will have a better overall relationship.

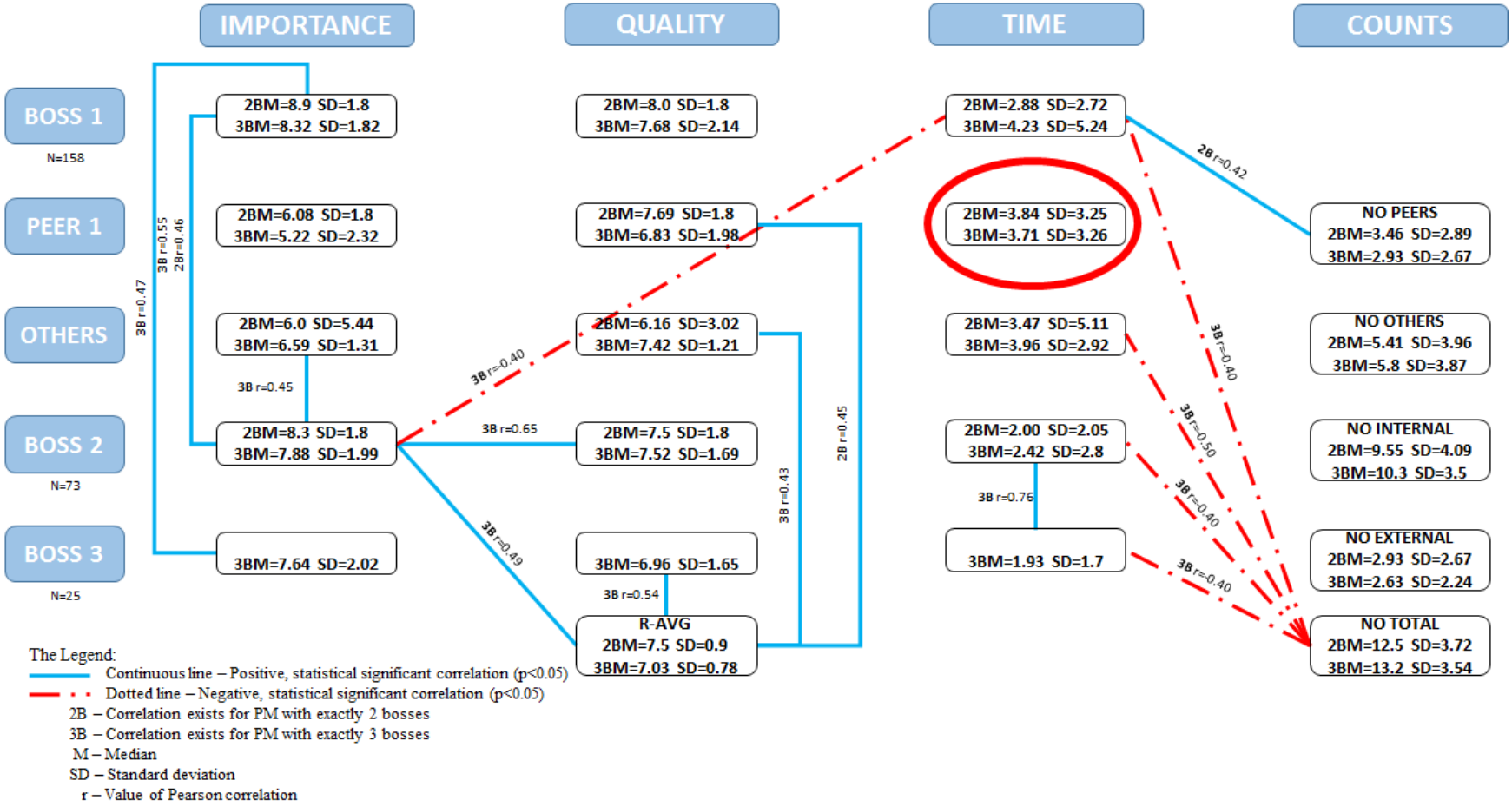

Figure 4.1. Statistically significant Pearson correlations

Limitations of the Study

Limitations of this study are described as followings:

1. This study was limited to the context of Engineering, Procurement and Construction (EPC) firms, and the government and owner clients organizations and the results may consequently only be considered valid within this context.
2. The results are based on a sample of 16 U.S.-based companies. Since this is a relatively small convenient sample, the numbers presented herein should not be assumed to be representative of the whole Engineering, Procurement and Construction (EPC) firms, and the government and owner clients organizations.
3. Data for this research was collected from 327 project managers and assistant project managers of the companies participated. These individuals do not represent all project managers and assistant project managers in construction industry. However, 327 participants provide a rich and diverse set of experiences to help quantify and understand, for the first time, working relationships with all their stakeholders, in project-based industries.
4. This study was implemented with a relatively small sample size of people who reported to have exactly three bosses (25 participants); therefore, the conclusion that the importance of the boss drives the quality of the relationship (H2) may only be applicable for the particular data set that the author analyzed.

Recommendations for Further Research

There are three types of organizations (one boss, two and three bosses). In a hierarchical organization an employee has only one boss. In a matrix organization, an employee has two bosses (one for each direction of the matrix). Finally, there are people who have three or more bosses. For this reason, the author calls for further investigation to see if there would be a difference between the influence of the bosses among all three types of organizations. For each organization structure, the author expect a different set of rules. Future research should also examine the optimal organization structure in which a particular project-team can have the best results.

The author further recommends future researchers to take into the account the effect of the duration of the relationship in the study of the interpersonal relationships within the project-based industries.

Research Synopsis

Note: In this research, the term Boss means direct supervisor; stakeholders are people who are important to the professional success of the employee.

From the point of view of interpersonal relationships, there are three different types of organizations:

1. Hierarchical Organization (one person has only one direct supervisor)
2. Matrix Organization (one person has two direct supervisors)
3. 3D Organization (one person has three direct supervisors).

In matrix organizations and 3D organizations, the bosses are ranked in the order of their importance to the success of the employee, as perceived by that employee. Most important boss is Boss 1, followed by Boss 2 and Boss 3. The same rule applies to other positions as well, such as, for instance, peers.

Findings:

1. Hierarchical Organizations
   - What to watch for: N/A. There are no distinguishable characteristics of the relationships in hierarchical organizations. No particular position or group have any influence on the relationship with others.
   - Contrary to expectations, the relationship with the boss does not correlate with any other relationships, time spent with people, or importance of relationships.
2. Matrix Organizations
   - What to watch for: quality of relationship with Peer 1. While not recognized by the employees (i.e. not given high importance), the quality

of the relationship with Peer 1 is an indicator of the general quality of the relationships a person has in the organization (r=0.45)

- The importance of Boss 1 correlates with importance of Boss 2, meaning that they are either both important or both unimportant. (r=0.46)
- The time spent with Boss 1 (but not with Boss 2!) increases as the number of peers increases (r=0.42)

3. 3D Organizations

- What to watch for: importance of Boss 2. Importance of Boss 2 (but not Boss 1 or Boss 3) correlates with the quality of the relationship with Boss 2 (r=0.65) and with the general quality of the relationships a person has in the organizations (r=0.49)
- While the time spent with each stakeholder decreases as the number of stakeholders increases, the time spent with Peer 1 does not change as a function of the number of stakeholders. .

Conclusion in one sentence:

In 3D organizations, the role of Peer 1 is taken by Boss 2.

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APPENDIX A:

PM EXPERIENCE FORM

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Your alias: _____

SECTION 1: BACKGROUND & EXPERIENCE

1. What is your gender? ☐ Male ☐ Female

2. How would you define the culture in which you were raised?
   ☐ North American ☐ African ☐ Asian ☐ Western European
   ☐ Eastern European ☐ Hispanic ☐ Mediterranean
   ☐ Other, please specify _____

3. What is the highest degree or level of school you have completed?
   ☐ High school graduate/GED ☐ Associate degree ☐ Bachelor's degree
   ☐ Master's degree ☐ Professional degree (ex: MD, JD)
   ☐ Doctorate degree (ex: PhD, EdD)

4. What is your experience prior to becoming a PM (mark all that apply)?
   ☐ Designer/Engineer/Architect ☐ Accounting/Finance ☐ Project Controls ☐ Procurement
   ☐ Construction Management ☐ Contracts/Legal ☐ QA/QC ☐ Safety
   ☐ Other, please specify _____

5. How many total years of EPC Industry experience do you have?
   ☐ 0 – 5 years ☐ 6 – 10 years ☐11 – 15 years ☐16 – 20 years
   ☐ 21 – 25 years ☐ 25 – 30 years ☐ 31 – 35 years ☐ 36 years or more, please specify ____

6. How many years have you worked as a Project Manager?
   ☐ 0 – 5 years ☐ 6 – 10 years ☐ 11 – 15 years ☐ 16 – 20 years
   ☐ 21 – 25 years ☐ 26 years or more, please specify _____

7. How many projects have you led as Project Manager during your career?
   ☐ 0 – 5 ☐ 6 – 10 ☐ 11 – 15 ☐ 16 – 20 ☐ 21 – 25
   ☐ 26 or more, please specify _____

8. The role of the organization you work for is: ☐ Owner ☐ Contractor ☐ Both

9. The organization you currently work for is in which of the following:
   ☐ Public sector (federal, state, or local/municipal government)
   ☐ Private (for profit) sector

10. As a Project Manager, where are the projects you have worked located? (mark all that apply)
    ☐ Domestic United States ☐ Canada ☐ Latin America/South America
    ☐ Caribbean Islands ☐ Africa ☐ Europe
    ☐ Middle East ☐ Asia/Australia ☐ Arctic/Antarctic

11. As a Project Manager, what industries have your projects represented? (mark all that apply)
    ☐ Building ☐ Energy ☐ Refining ☐ Chemicals & Pharmaceuticals
    ☐ Manufacturing ☐ Water & Sewer ☐ Transportation ☐ Hazardous Waste
    ☐ Power ☐ Telecommunications ☐ Other, please specify _____

12. How many more years do you plan to work before retiring? _____ years

Figure A (a) PM Experience Form (Page 1 of 2)

Your alias: _____

SECTION 2: CURRENT/MOST RECENT PROJECT EXPERIENCE

1. How many projects do you currently manage simultaneously?
   ☐ 1 ☐ more than 1, please specify _____

2. What is the scope of your most recent project or current project(s)?
   ☐ Engineering only ☐ Engineering and Procurement ☐ EPC
   ☐ EPC, Commissioning, & Start-up ☐ Maintenance only ☐ O&M
   ☐ Other, please specify _____

3. What is the type of contract on your most recent or current project(s)?
   ☐ Cost reimbursable ☐ Lump sum ☐ Guaranteed maximum
   ☐ Cost plus fixed fee ☐ Other, please specify _____

4. Where is your most recent or current project(s) located?
   ☐ Domestic United States ☐ Canada ☐ Latin America/South America
   ☐ Caribbean Islands ☐ Africa ☐ Europe
   ☐ Middle East ☐ Asia/Australia ☐ Arctic/Antarctic

5. Your most recent or current project is for the benefit of the:
   ☐ Public sector (federal, state, or local/municipal government)
   ☐ Private (for profit) sector

6. Does your most recent or current project involve multiple engineering office locations?
   ☐ No ☐ Yes, please specify the number of offices _____

7. Does your most recent or current project(s) involve offsite prefabrication? ☐ Yes ☐ No

8. What is the planned duration of your most recent project or current project? (If you manage multiple projects, what is the average/typical duration of a project?)
   ☐ 0 – 6 months ☐ 7 – 12 months ☐ 1 year ☐ 2 years ☐ 3 years
   ☐ more than 3 years, please specify _____

9. How many employees does your organization have on your most recent or current project? (If you manage multiple projects, what is the sum total of persons employed on all?)
   ☐ 0 – 10 ☐ 10 – 20 ☐ 20 – 50 ☐ 50 – 100
   ☐ 100 – 500, please specify _____ ☐ 500 or more, please specify _____

10. What is the size (Total Installed Cost-US$) of <u>your</u> contract scope for your most recent project or current project? (If you manage multiple projects, what is the sum total of all of your projects?)
    ☐ $0 - $50,000 ☐ $50,000 - $100,000 ☐ $100,000 - $500,000
    ☐ $500,000 - $1M ☐ $1M - $5M ☐ $5M - $10M ☐ $10M - $50M
    ☐ $50M - $100M ☐ $100M - $500M ☐ $500M - $1Billion ☐ more than $1Billion

11. Do you have other responsibilities concurrent to your PM role?
    ☐ No ☐ Yes, please specify your additional responsibilities _____

12. How many (average) hours do you work per week? _____ hours

Figure A (b) PM Experience Form (Page 2 of 2)

APPENDIX B:

"WHO'S ON YOUR MOLECULE?" EXERCISE FORM

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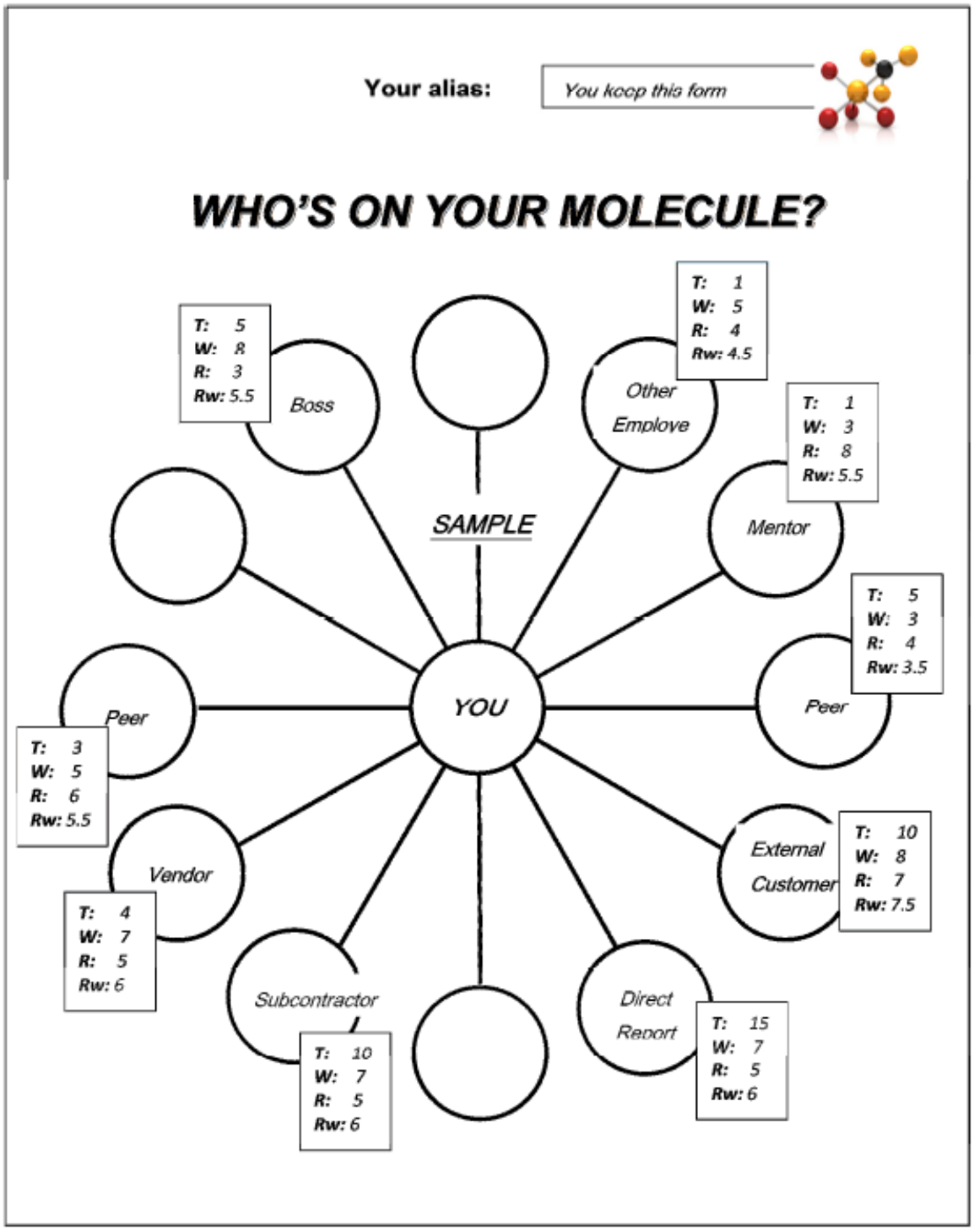
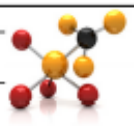


Figure B (a) "Who's on Your Molecule?" Exercise Form (page 1 of 7)

Your alias: *You keep this form*



SAMPLE
WHO'S ON YOUR MOLECULE?
DATA SHEET

DETACH HERE **DETACH HERE**

For your records *Hand in to the Trainer*

	NAME	A CATEGORY	INTERNAL	EXTERNAL	B TIME	C WEIGHT	D R-SCORE	F Rw
1	Bill	Boss	✓		5	8	3	5.5
2	Fred	Mentor	✓		1	3	8	5.5
3	Sue	Peer	✓		5	3	4	3.5
4	Megan	Ext. customer		✓	10	8	7	7.5
5	John	Direct report	✓		15	7	5	6
6	George	Vendor		✓	4	7	5	6
7	Mark	Subcontractor		✓	10	7	5	6
8	Stan	Peer	✓		3	5	6	5.5
9	Charlie	Other employee	✓		1	5	4	4.5
10								
SUM:							47	R_w = (C+D)/2

Calculate R_{avg} = 5.2

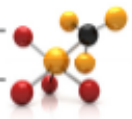
Ravg=Sum of R-Scores/Total number of Stakeholders=47/9=5.2

You keep this side of the page

Detach and hand this page in to the Trainer.

Figure B (b) "Who's on Your Molecule?" Exercise Form (page 2 of 7)

Your alias: *You keep this form*



WHO'S ON YOUR MOLECULE?

DATA SHEET INSTRUCTIONS

Step		Action
1	***WHO*** Column A	***Identify your stakeholders by name (first names only are fine), and category.*** <u>CATEGORIES:</u> Boss — Internal Customer Mentor — External Customer Peer — Vendor Direct report — Thought Provider Other employee — Others (please be specific)
2	***TIME*** Column B	***Estimate the time you spend (in hours) with each stakeholder.***
3	***WEIGHT*** Column C	***Determine the WEIGHT (importance of the relationship) with each stakeholder.*** Using a 1 to 10 scale, determine how important each stakeholder is with 10 equaling a very important stakeholder and 1 for a less important stakeholder.
4	***R SCORE*** Column D	***Evaluate the quality of the relationship.*** Using a 1 to 10 scale, determine how good or bad the relationship is with each stakeholder, with 10 equaling a very good relationship and 1 for a very bad relationship.
5	***SUMs***	***Total all the R scores and count the total number of stakeholders.***
	R_{avg} Column E	***Calculate the R average score.*** Divide the Total R-score by the number of stakeholders.
	R_W Column F	***Calculate the R weighted score.*** R_w = individual R-score plus W (weight) divided by 2 for each stakeholder. Do not average all of your Rw scores.
6	***Evaluation***	***Complete the Evaluation Form.***

Figure B (c) "Who's on Your Molecule?" Exercise Form (page 3 of 7)

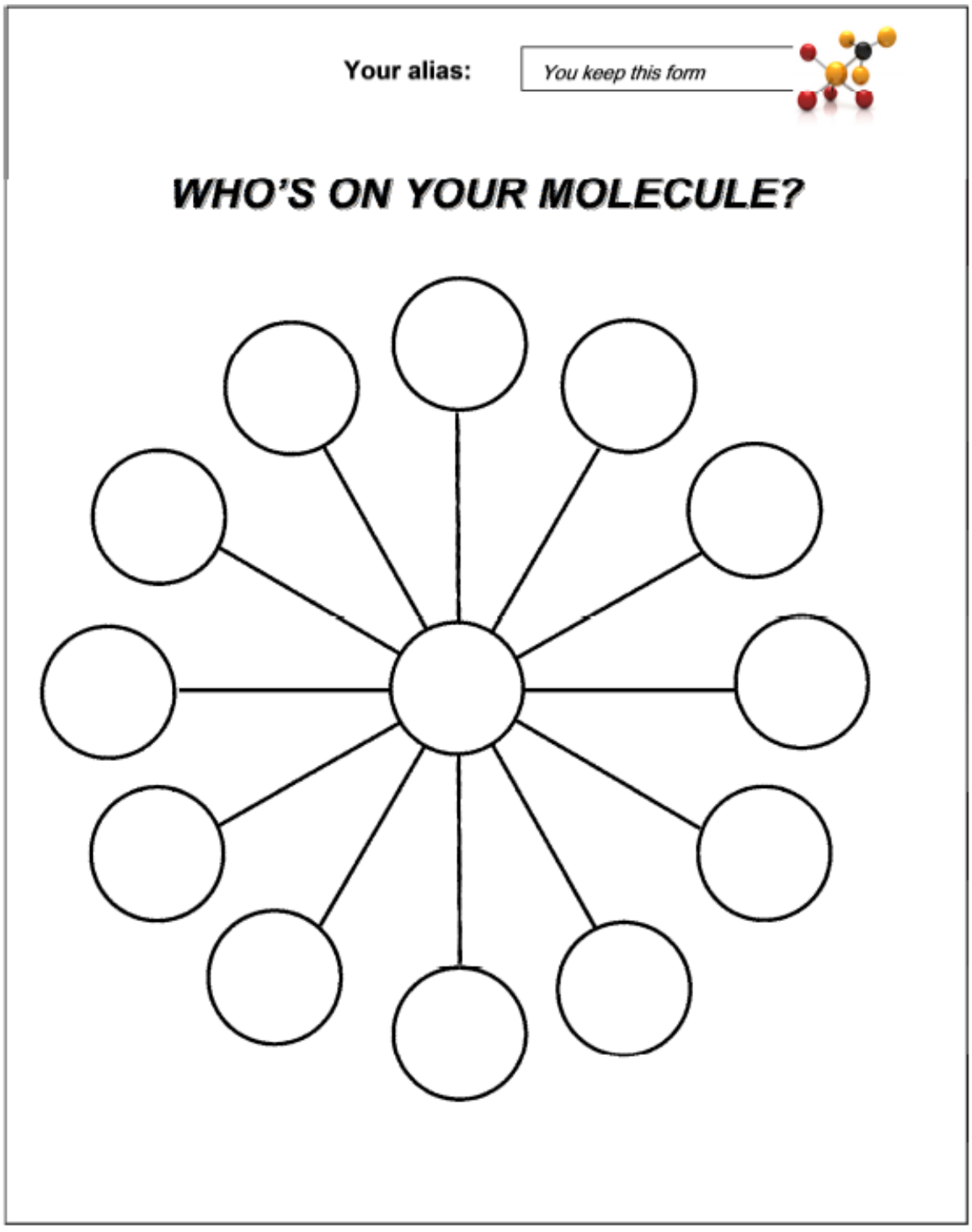
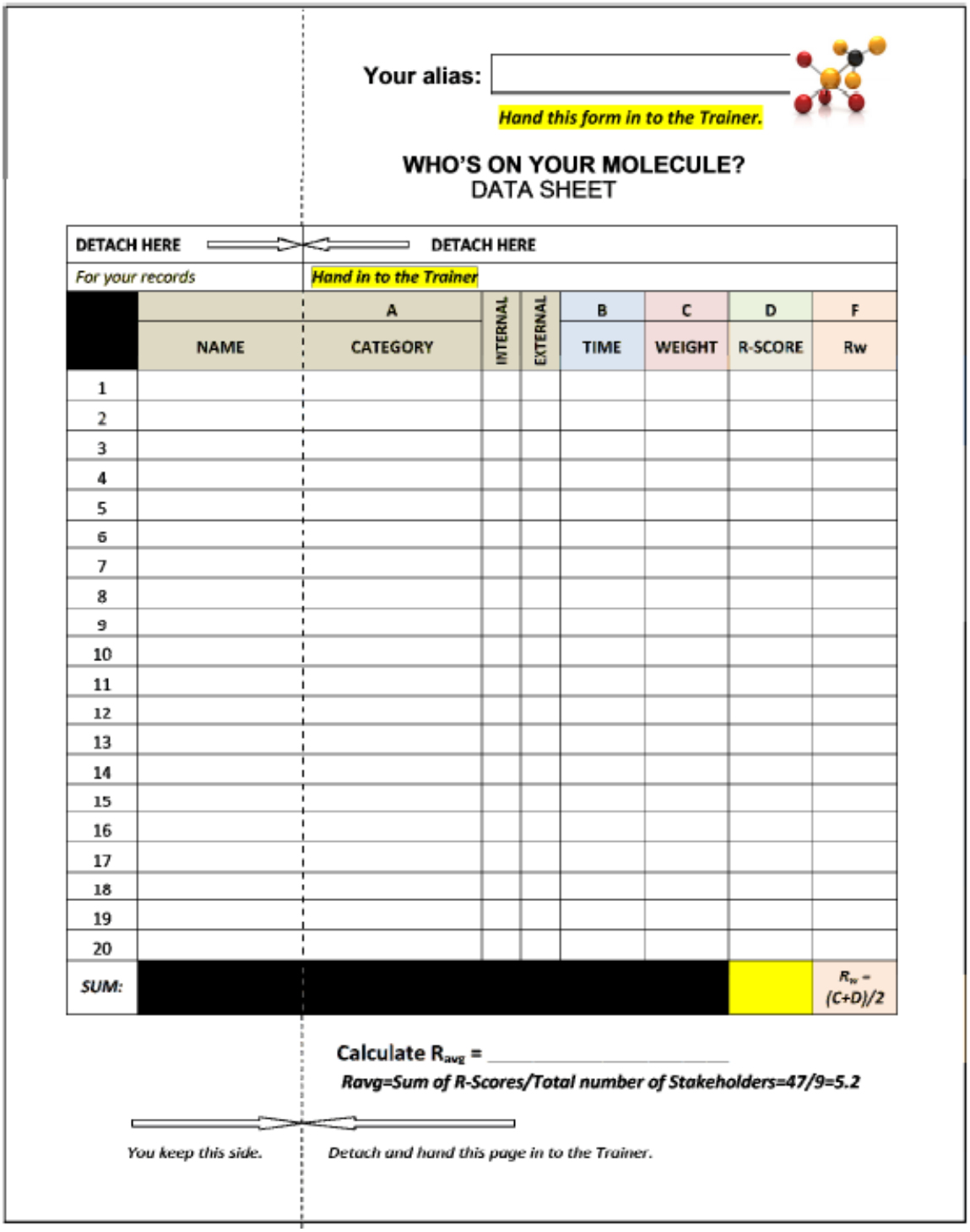


Figure B (d) "Who's on Your Molecule?" Exercise Form (page 4 of 7)



Your alias: _____

Hand this form in to the Trainer.

WHO'S ON YOUR MOLECULE?
DATA SHEET

DETACH HERE ⇐⇒ **DETACH HERE**

For your records | *Hand in to the Trainer*

	NAME	A CATEGORY	INTERNAL	EXTERNAL	B TIME	C WEIGHT	D R-SCORE	F Rw
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
SUM:								$R_w = (C+D)/2$

Calculate R_{avg} = _____

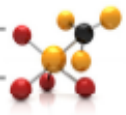
Ravg=Sum of R-Scores/Total number of Stakeholders=47/9=5.2

⇐⇒

You keep this side. *Detach and hand this page in to the Trainer.*

Figure B (e) "Who's on Your Molecule?" Exercise Form (page 5 of 7)

Your alias: *You keep this form*



WHO'S ON YOUR MOLECULE?
Evaluation Form

_____ ***Overall R_{avg} score?***
_____ ***How many stakeholders did you have?***

What is your highest R-score & stakeholder? Why is it the highest?

What is your highest Rw score & stakeholder? Why is it the highest?

What is your highest Weight & stakeholder? Why is it the highest?

What is your highest Time Stakeholder? Why is it the highest?

What is your lowest R-scores & Stakeholder? Why is it the lowest?

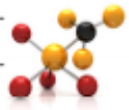
What is your lowest Rw score & stakeholder? Why is it the lowest?

What is your lowest Weight scores & stakeholder? Why is it the lowest?

What is your lowest Times & Stakeholder? Why is it the lowest?

Figure B (f) "Who's on Your Molecule?" Exercise Form (page 6 of 7)

Your alias: _____



Hand this form in to the Trainer.

WHO'S ON YOUR MOLECULE?
Reflections Form

1. How much discretionary time do you have?
   _____ hours per week

2. How much institutionally imposed time must you deal with each week?
   _____ hours per week

3. How much time do spend each week working on the computer (excluding emails)?
   _____ hours per week

4. How much time do you spend each week answering emails?
   _____ hours per week

5. How much time do you spend each week dealing with technical questions on your project?
   _____ hours per week

Looking ahead 10 years:

6. How many stakeholders do you think that the person in your [PM] position will have?
   _____ stakeholders

7. What skills will be needed to build positive relationships?

   _____

   _____

   _____

   _____

   _____

Figure B (g) "Who's on Your Molecule?" Exercise Form (page 7 of 7)

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APPENDIX C:

OUTPUT FROM "WHO'S ON YOUR MOLECULE?" EXERCISES

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	Name	Function	Internal	External	Time Hours	Relationship Importance 1-10	Relationship Quality (R-score) 1-10
1	Andrew	Boss	1		5	10	10
2	Bill	Mentor	1		1	8	7
3	Cathy	Peer	1		8	5	7
4	David	External Customer		1	2	5	7
5	Elizabeth	Supplier		1	1	10	7
6	Frank	Vendor		1	1	10	10
7	George	Subcontractor	1		2	10	10
8	Henry	Peer	1		5	8	8
9	Iris	Design	1		2	8	3
10	Jerry	VP	1		1	8	5
11	Kate	HR Rep	1		1	9	6
12	Lance	General Manager	1		2	6	6
13	Mary	General Manager	1		2	3	9
14	Noe	Contractor	1		1	3	9
15	Otis	Specialty Vendor		1	1	3	5
16	Paula	Legal		1	2	9	5
17	Raul	Architect		1	2	9	5
18	Susan	Direct Report	1		5	9	8
19	Tony	CM		1	2	6	8
20	Veronica	Interior Designer		1	1	8	6
21	Walter	Direct Report	1		5	7	8
22	Yusif	Peer	1		1	7	8
23	Zoe	Finance	1		1	2	4
24	Barb	Internal Customer	1		1	2	3
25	Charlie	Code Compliance		1	0	1	10
	Summary		**16**	**9**	**55**	**166**	**174**
	Average					**6.64**	**6.96**

Figure C Output from “Who’s on Your Molecule?” Exercises

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APPENDIX D:

LIST OF ALL THE VARIABLES THAT WERE PART OF THE CORRELATION MATRIX

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No.	Name		No.	Name
1	No. Total		44	R-Avg
2	No. External		45	RW Boss No.1
3	No. Internal		46	RW Boss No.2
4	No. Bosses		47	RW Boss No.3
5	No. Mentors		48	RW Boss No.4
6	No. Peers		49	RW Boss No.5
7	No. Dir. Reports		50	RW Mentor 1
8	No. Ext. Customer		51	RW Mentor 2
9	No. Subs		52	RW Mentor 3
10	No. Vendors		53	RW Peer No.1
11	No. Others		54	RW Peer No.2
12	R-Score Boss No.1		55	RW Peer No.3
13	R-Score Boss No.2		56	RW Peer No.4
14	R-Score Boss No.3		57	RW Peer No.5
15	R-Score Boss No.4		58	RW DR No.1
16	R-Score Boss No.5		59	RW DR No.2
17	R-Score Mentor 1		60	RW DR No.3
18	R-Score Mentor 2		61	RW DR No.4
19	R-Score Mentor 3		62	RW DR No.5
20	R-Score Peer No.1		63	RW Ext. Cus 1
21	R-Score Peer No.2		64	RW Ext. Cus 2
22	R-Score Peer No.3		65	RW Ext. Cus 3
23	R-Score Peer No.4		66	RW Ext. Cus 4
24	R-Score Peer No.5		67	RW Ext. Cus 5
25	R-Score DR No.1		68	RW Sub 1
26	R-Score DR No.2		69	RW Sub 2
27	R-Score DR No.3		70	RW Sub 3
28	R-Score DR No.4		71	RW Sub 4
29	R-Score DR No.5		72	RW Vendor 1
30	R-Score Ext. Cus 1		73	RW Vendor 2
31	R-Score Ext. Cus 2		74	RW Vendor 3
32	R-Score Ext. Cus 3		75	RW Vendor 4
33	R-Score Ext. Cus 4		76	RW Others
34	R-Score Ext. Cus 5		77	R_avg no Boss No.1
35	R-Score Sub 1		78	R_avg no Boss No.2
36	R-Score Sub 2		79	R_avg no Boss No.3
37	R-Score Sub 3		80	R_avg no Boss No.4
38	R-Score Sub 4		81	R_avg no Boss No.5
39	R-Score Vendor 1		82	R_avg no Mentor 1
40	R-Score Vendor 2		83	R_avg no Mentor 2
41	R-Score Vendor 3		84	R_avg no Mentor 3
42	R-Score Vendor 4		85	R_avg no Peer No.1
43	R-Score Others		86	R_avg no Peer No.2

Table D (a) List of all the Variables (Page 1 of 2)

No.	Name		No.	Name
87	R_avg no Peer No.3		130	Time Ext. Cus. 4
88	R_avg no Peer No.4		131	Time Ext. Cus. 5
89	R_avg no Peer No.5		132	Time Sub 1
90	R_avg no DR No.1		133	Time Sub 2
91	R_avg no DR No.2		134	Time Sub 3
92	R_avg no DR No.3		135	Time Sub 4
93	R_avg no DR No.4		136	Time Vendor 1
94	R_avg no DR No.5		137	Time Vendor 2
95	R_avg no Ext. Cus 1		138	Time Vendor 3
96	R_avg no Ext. Cus 2		139	Time Vendor 4
97	R_avg no Ext. Cus 3		140	Time Others
98	R_avg no Ext. Cus 4		141	Importance Boss No.1
99	R_avg no Ext. Cus 5		142	Importance Boss No.2
100	R_avg no Sub 1		143	Importance Boss No.3
101	R_avg no Sub 2		144	Importance Boss No.4
102	R_avg no Sub 3		145	Importance Boss No.5
103	R_avg no Sub 4		146	Importance Mentor 1
104	R_avg no Vendor 1		147	Importance Mentor 2
105	R_avg no Vendor 2		148	Importance Mentor 3
106	R_avg no Vendor 3		149	Importance Peer No.1
107	R_avg no Vendor 4		150	Importance Peer No.2
108	R_avg no Others		151	Importance Peer No.3
109	Time Boss No.1		152	Importance Peer No.4
110	Time Boss No.2		153	Importance Peer No.5
111	Time Boss No.3		154	Importance DR No.1
112	Time Boss No.4		155	Importance DR No.2
113	Time Boss No.5		156	Importance DR No.3
114	Time Mentor 1		157	Importance DR No.4
115	Time Mentor 2		158	Importance DR No.5
116	Time Mentor 3		159	Importance Ext. Cus. 1
117	Time Peer No.1		160	Importance Ext. Cus. 2
118	Time Peer No.2		161	Importance Ext. Cus. 3
119	Time Peer No.3		162	Importance Ext. Cus. 4
120	Time Peer No.4		163	Importance Ext. Cus. 5
121	Time Peer No.5		164	Importance Sub 1
122	Time DR No.1		165	Importance Sub 2
123	Time DR No.2		166	Importance Sub 3
124	Time DR No.3		167	Importance Sub 4
125	Time DR No.4		168	Importance Vendor 1
126	Time DR No.5		169	Importance Vendor 2
127	Time Ext. Cus. 1		170	Importance Vendor 3
128	Time Ext. Cus. 2		171	Importance Vendor 4
129	Time Ext. Cus. 3		172	Importance Others

Table D (b) List of all the Variables (Page 2 of 2)

APPENDIX E:

CORRELATION MATRICES

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EXACTLY ONE BOSSES (1B)

SECTIONS

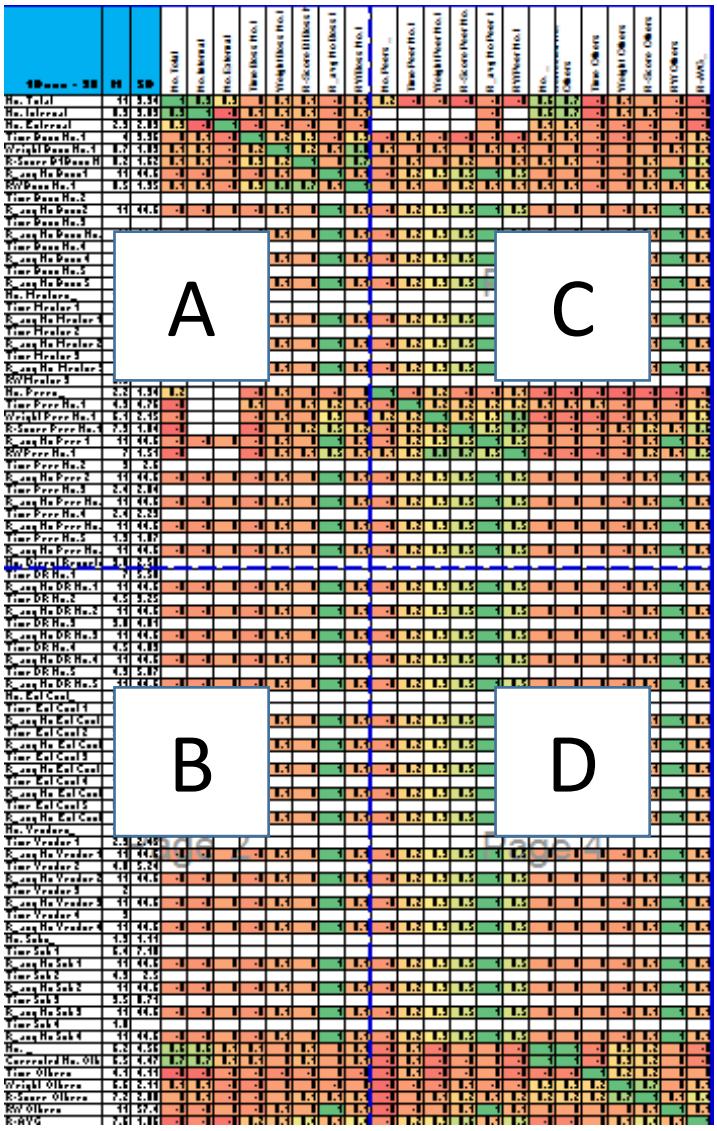

Figure E (a) Correlation Matrix Exactly One Bosses (1B) Sections

1B SECTION A

1Boss - 30	M	SD	No. Total	No. Internal	No. External	Time Boss No.1	Weight Boss No.1	R-Score B1Boss No.1	R_avg No Boss1	RWBoss No.1
No. Total	11.3	3.94	1	0.86	0.29	0.01	0.1	0.08	-0	0.06
No. Internal	8.92	3.83	0.86	1	-0.2	0.09	0.13	0.12	-0	0.11
No. External	2.28	2.03	0.29	-0.2	1	-0.1	-0	-0	0.02	-0
Time Boss No.1	4.04	3.96	0.01	0.09	-0.1	1	0.15	0.25	-0	0.27
Weight Boss No.1	8.74	1.83	0.1	0.13	-0	0.15	1	0.23	0.06	0.76
R-Score B1Boss No.1	8.2	1.62	0.08	0.12	-0	0.25	0.23	1	0.05	0.74
R_avg No Boss1	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
RWBoss No.1	8.47	1.35	0.06	0.11	-0	0.27	0.76	0.74	0.07	1
Time Boss No.2										
R_avg No Boss2	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Boss No.3										
R_avg No Boss No.3	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Boss No.4										
R_avg No Boss 4	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Boss No.5										
R_avg No Boss 5	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
No. Mentors _	1.15	0.46								
Time Mentor 1	2.13	1.5								
R_avg No Mentor 1	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Mentor 2	2	1.73								
R_avg No Mentor 2	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Mentor 3	0.5									
R_avg No Mentor 3	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
RWMentor 3	6.5									
No. Peers _	2.15	1.34	0.24			-0.1	0.1	0.01	-0	0.05
Time Peer No.1	4.88	4.76	-0.2			0.12	0.01	0.1	0.22	0.09
Weight Peer No.1	6.1	2.15	-0.1			-0	0.08	0.02	0.33	0.02
R-Score Peer No.1	7.92	1.84	-0.2			-0.2	0.04	0.16	0.5	0.21
R_avg No Peer 1	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
RWPeer No.1	7.05	1.51	-0.2			-0.1	0.08	0.06	0.5	0.12
Time Peer No.2	3.02	2.6								
R_avg No Peer 2	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Peer No.3	2.35	2.04								
R_avg No Peer No.3	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Peer No.4	2.43	2.29								
R_avg No Peer No.4	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07

Figure E (b) Correlation Matrix Exactly One Bosses (1B) Sections A

1B SECTION B

Time DR No.1	7	5.58								
R_avg No DR No.1	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time DR No.2	4.5	3.25								
R_avg No DR No.2	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time DR No.3	3.84	4.01								
R_avg No DR No.3	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time DR No.4	4.48	4.83								
R_avg No DR No.4	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time DR No.5	4.32	5.87								
R_avg No DR No.5	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
No. Ext Cust_	2.28	1.52								
Time Ext Cust 1	4.3	3.26								
R_avg No Ext Cust 1	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Ext Cust 2	3.33	2.4								
R_avg No Ext Cust 2	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Ext Cust 3	2.83	2.18								
R_avg No Ext Cust 3	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Ext Cust 4	1.91	1.38								
R_avg No Ext Cust 4	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Ext Cust 5	0.82	0.5								
R_avg No Ext Cust 5	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
No. Vendors_	1.29	0.64								
Time Vendor 1	2.94	2.45								
R_avg No Vendor 1	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Vendor 2	4.79	5.24								
R_avg No Vendor 2	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Vendor 3	2									
R_avg No Vendor 3	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Vendor 4	3									
R_avg No Vendor 4	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
No. Subs_	1.34	1.11								
Time Sub 1	6.37	7.18								
R_avg No Sub 1	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Sub 2	4.25	2.5								
R_avg No Sub 2	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Sub 3	3.5	0.71								
R_avg No Sub 3	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
Time Sub 4	1.75									
R_avg No Sub 4	10.9	44.6	-0	-0	0.02	-0	0.06	0.05	1	0.07
No. _	6.18	4.56	0.64	0.59	0.12	0.06	0.02	0.1	0.01	0.08
Corrected No. Others	6.5	4.47	0.73	0.67	0.15	0.07	0.02	0.12	0.01	0.07
Time Others	4.12	4.11	-0.2	-0.2	-0	-0	-0.1	-0	0.02	-0.1
Weight Others	6.58	2.11	0.05	0.1	-0.1	-0.1	0	0	-0	0.01
R-Score Others	7.17	2.08	0.04	0.08	-0	-0	0.04	0.13	0.06	0.1
RW Others	11.4	57.4	-0	-0	0.03	-0	0.06	0.04	1	0.07
R-AVG_	7.59	1.06	-0.2	-0.1	-0.2	0.17	0.13	0.41	0.1	0.35

Figure E (c) Correlation Matrix Exactly One Bosses (1B) Section B

No. Peers _	Time Peer No.1	Weight Peer No.1	R-Score Peer No.1	R_avg No Peer 1	RWPeer No.1	No. _	Corrected No. Others	Time Others	Weight Others	R-Score Others	RW Others	R-AVG_
0.24	-0.2	-0.1	-0.2	-0	-0.2	0.64	0.73	-0.2	0.05	0.04	-0	-0.2
				-0		0.59	0.67	-0.2	0.1	0.08	-0	-0.1
				0.02		0.12	0.15	-0	-0.1	-0	0.03	-0.2
-0.1	0.12	-0	-0.2	-0	-0.1	0.06	0.07	-0	-0.1	-0	-0	0.17
0.1	0.01	0.08	0.04	0.06	0.08	0.02	0.02	-0.1	0	0.04	0.06	0.13
0.01	0.1	0.02	0.16	0.05	0.06	0.1	0.12	-0	0	0.13	0.04	0.41
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
0.05	0.09	0.02	0.21	0.07	0.12	0.08	0.07	-0.1	0.01	0.1	0.07	0.35
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
1	-0.1	0.2	-0.1	-0	0.13	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1
-0.1	1	0.2	0.18	0.22	0.25	0.11	0.05	0.1	-0	0.01	-0	0.24
0.2	0.2	1	0.21	0.33	0.81	-0.1	-0.1	-0.2	-0.1	0.06	0.01	0.31
-0.1	0.18	0.21	1	0.5	0.72	0.03	-0	-0	0.06	0.23	0.12	0.57
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
0.13	0.25	0.81	0.72	0.5	1	-0.1	-0.1	-0.1	-0	0.16	0.07	0.52
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1

Figure E (d) Correlation Matrix Exactly One Bosses (1B) Section C

-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0	0.22	0.33	0.5	1	0.5	0.01	0.01	0.02	-0	0.06	1	0.1
-0.2	0.11	-0.1	0.03	0.01	-0.1	1	0.96	-0.1	0.26	0.21	0.02	-0.1
-0.2	0.05	-0.1	-0	0.01	-0.1	0.96	1	-0.1	0.25	0.22	0.02	-0.1
-0.2	0.1	-0.2	-0	0.02	-0.1	-0.1	-0.1	1	0.23	0.2	0.03	0.03
-0.2	-0	-0.1	0.06	-0	-0	0.26	0.25	0.23	1	0.69	0.01	0.14
-0.2	0.01	0.06	0.23	0.06	0.16	0.21	0.22	0.2	0.69	1	0.09	0.42
-0.2	-0	0.01	0.12	1	0.07	0.02	0.02	0.03	0.01	0.09	1	0.09
-0.1	0.24	0.31	0.57	0.1	0.52	-0.1	-0.1	0.03	0.14	0.42	0.09	1

Figure E (e) Correlation Matrix Exactly One Bosses (1B) Section D

EXACTLY TWO BOSSES (2B)

SECTIONS

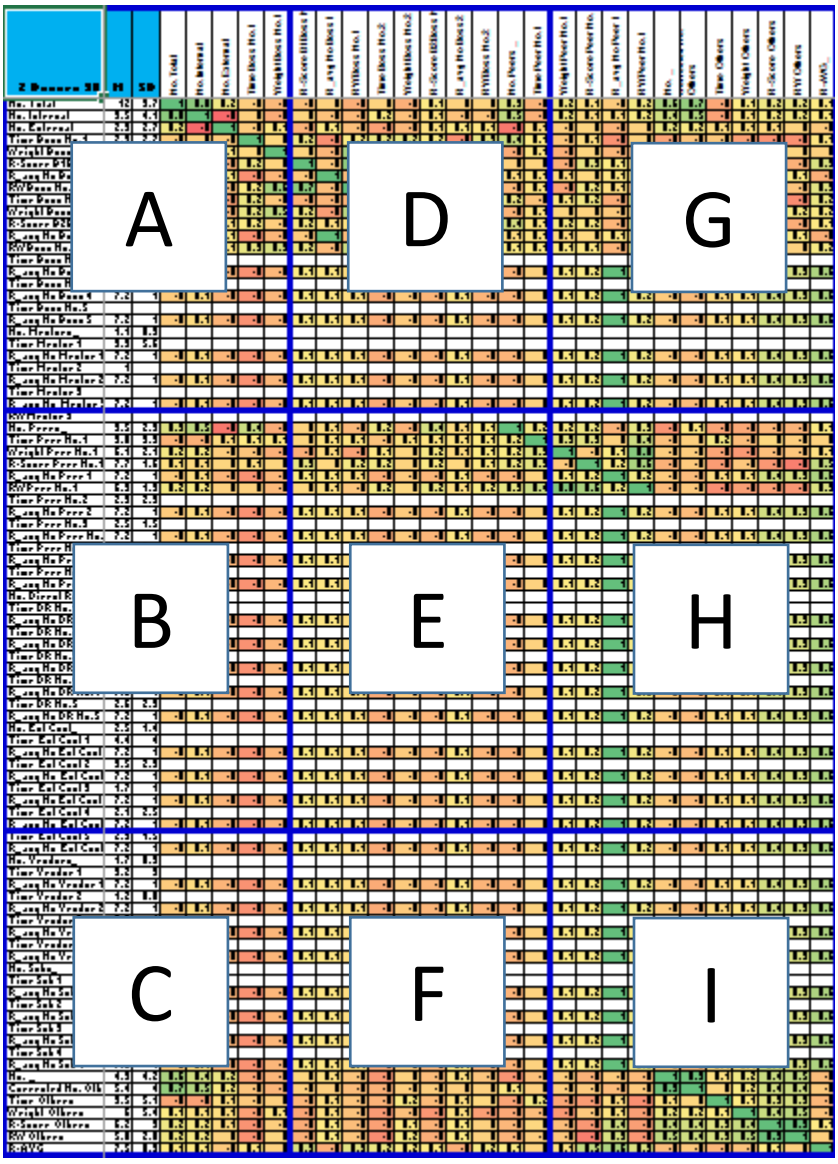

Figure E (f) Correlation Matrix Exactly Two Bosses (2B) Sections

2B SECTION A

2 Bosses 30	M	SD	No. Total	No. Internal	No. External	Time Boss No.1	Weight Boss No.1
No. Total	12.5	3.72	1	0.77	0.21	-0	-0.1
No. Internal	9.55	4.09	0.77	1	-0.5	0	-0.2
No. External	2.93	2.67	0.21	-0.5	1	-0	0.11
Time Boss No.1	2.88	2.72	-0	0	-0	1	0.05
Weight Boss No.1	8.92	1.76	-0.1	-0.2	0.11	0.05	1
R-Score B1Boss No.1	7.97	1.83	-0.1	0.03	-0.1	0.21	0.03
R_avg No Boss1	7.16	1	0.02	-0.1	0.12	-0.3	-0.1
RWBoss No.1	8.48	1.33	-0.1	-0.1	-0.1	0.16	0.61
Time Boss No.2	2	2.05	0.02	0.15	-0.2	0.23	-0
Weight Boss No.2	8.29	1.75	-0.1	-0.1	-0.1	0.24	0.46
R-Score B2Boss No.2	7.46	1.91	0.15	0.08	0.09	0.15	-0
R_avg No Boss2	7.16	1	0.02	-0.1	0.12	-0.3	-0.1
RWBoss No.2	7.88	1.36	0.03	-0	0.1	0.26	0.34
Time Boss No.3							
R_avg No Boss No.3	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Boss No.4							
R_avg No Boss 4	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Boss No.5							
R_avg No Boss 5	7.16	1	-0	0.06	-0.1	-0.3	-0.1
No. Mentors _	1.07	0.27					
Time Mentor 1	3.25	5.6					
R_avg No Mentor 1	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Mentor 2	1						
R_avg No Mentor 2	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Mentor 3							
R_avg No Mentor 3	7.16	1	-0	0.06	-0.1	-0.3	-0.1

Figure E (g) Correlation Matrix Exactly Two Bosses (2B) Section A

2B SECTION B

RWMentor 3							
No. Peers _	3.46	2.89	0.31	0.47	-0.4	0.42	-0.2
Time Peer No.1	3.84	3.25	-0.1	-0.1	0.06	0.13	0.1
Weight Peer No.1	6.08	2.1	0.19	0.17	-0	-0	-0.1
R-Score Peer No.1	7.69	1.57	0.08	0.05	0.03	0.07	0.03
R_avg No Peer 1	7.16	1	-0	0.06	-0.1	-0.3	-0.1
RWPeer No.1	6.89	1.32	0.19	0.16	0.01	0.01	-0.1
Time Peer No.2	2.91	2.32					
R_avg No Peer 2	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Peer No.3	2.46	1.55					
R_avg No Peer No.3	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Peer No.4	2.75	2.39					
R_avg No Peer No.4	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Peer No.5	1.81	1.13					
R_avg No Peer No.5	7.16	1	-0	0.06	-0.1	-0.3	-0.1
No. Direct Reports_	3.31	2.48					
Time DR No.1	5.24	3.42					
R_avg No DR No.1	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time DR No.2	3.67	2.22					
R_avg No DR No.2	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time DR No.3	2.3	1.62					
R_avg No DR No.3	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time DR No.4	2.5	1.8					
R_avg No DR No.4	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time DR No.5	2.57	2.27					
R_avg No DR No.5	7.16	1	-0	0.06	-0.1	-0.3	-0.1
No. Ext Cust_	2.5	1.42					
Time Ext Cust 1	4.41	4.01					
R_avg No Ext Cust 1	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Ext Cust 2	3.54	2.9					
R_avg No Ext Cust 2	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Ext Cust 3	1.71	0.99					
R_avg No Ext Cust 3	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Ext Cust 4	2.06	2.51					
R_avg No Ext Cust 4	7.16	1	-0	0.06	-0.1	-0.3	-0.1

Figure E (h) Correlation Matrix Exactly Two Bosses (2B) Section B

2B SECTION C

Time Ext Cust 5	2.33	1.53					
R_avg No Ext Cust 5	7.16	1	-0	0.06	-0.1	-0.3	-0.1
No. Vendors_	1.69	0.95					
Time Vendor 1	3.22	3.01					
R_avg No Vendor 1	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Vendor 2	1.21	0.81					
R_avg No Vendor 2	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Vendor 3	0.83	1.04					
R_avg No Vendor 3	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Vendor 4	1						
R_avg No Vendor 4	7.16	1	-0	0.06	-0.1	-0.3	-0.1
No. Subs_	1.5	0.52					
Time Sub 1	7.63	13.6					
R_avg No Sub 1	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Sub 2	3.83	3.66					
R_avg No Sub 2	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Sub 3							
R_avg No Sub 3	7.16	1	-0	0.06	-0.1	-0.3	-0.1
Time Sub 4							
R_avg No Sub 4	7.16	1	-0	0.06	-0.1	-0.3	-0.1
No. _	4.89	4.21	0.6	0.38	0.25	-0.2	-0.1
Corrected No. Others	5.41	3.96	0.72	0.55	0.17	-0	-0.1
Time Others	3.47	5.11	-0.2	-0.2	0.06	-0	0
Weight Others	6	5.44	0.14	0.08	0.07	-0.2	0.09
R-Score Others	6.16	3.02	0.22	0.17	0.05	-0.3	-0
RW Others	5.82	2.78	0.22	0.19	0.02	-0.3	0.03
R-AVG_	7.5	0.9	0.12	0.13	-0	0.1	0.01

Figure E (i) Correlation Matrix Exactly Two Bosses (2B) Section C

2B SECTION D

R-Score B1Boss No.1	R_avg No Boss1	RWBoss No.1	Time Boss No.2	Weight Boss No.2	R-Score B2Boss No.2	R_avg No Boss2	RWBoss No.2	No. Peers _	Time Peer No.1
-0.1	0.02	-0.1	0.02	-0.1	0.15	0.02	0.03	0.31	-0.1
0.03	-0.1	-0.1	0.15	-0.1	0.08	-0.1	-0	0.47	-0.1
-0.1	0.12	-0.1	-0.2	-0.1	0.09	0.12	0.1	-0.4	0.06
0.21	-0.3	0.16	0.23	0.24	0.15	-0.3	0.26	0.42	0.13
0.03	-0.1	0.61	-0	0.46	-0	-0.1	0.34	-0.2	0.1
1	-0	0.75	-0.1	0.19	0.19	-0	0.23	0.02	0.03
-0	1	-0.1	-0.1	-0.2	0.07	1	-0.1	0.06	0.09
0.75	-0.1	1	-0.1	0.5	0.09	-0.1	0.4	-0.1	0.09
-0.1	-0.1	-0.1	1	-0	0.33	-0.1	0.2	0.21	-0.1
0.19	-0.2	0.5	-0	1	0.03	-0.2	0.7	-0.1	0.08
0.19	0.07	0.09	0.33	0.03	1	0.07	0.71	0.36	0.1
-0	1	-0.1	-0.1	-0.2	0.07	1	-0.1	0.06	0.09
0.23	-0.1	0.4	0.2	0.7	0.71	-0.1	1	0.14	0.12
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02

Figure E (j) Correlation Matrix Exactly Two Bosses (2B) Section D

0.02	0.06	-0.1	0.21	-0.1	0.36	0.06	0.14	1	0.19
0.03	0.09	0.09	-0.1	0.08	0.1	0.09	0.12	0.19	1
-0.1	0.05	-0.2	0.11	0.03	0.17	0.05	0.13	0.16	0.28
0.25	0.04	0.19	0.2	0.02	0.16	0.04	0.12	0.21	0.27
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.04	0.08	-0	0.2	0.04	0.23	0.08	0.18	0.26	0.41
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02

Figure E (k) Correlation Matrix Exactly Two Bosses (2B) Section E

2B SECTION F

0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.15	0.1	0.06	-0.2	-0	-0.1	0.1	-0.1	-0.1	0.02
0.03	0.08	-0	-0.2	0.02	-0.1	0.08	-0	-0.3	-0.1
-0	0	-0.1	-0.1	-0	-0	0	0.01	0.11	0
-0.1	0.07	-0	-0.1	0.16	-0.1	0.07	0.05	-0.2	0.18
-0.2	0.07	-0.1	-0.2	-0.1	-0.3	0.07	-0.2	-0.2	-0.1
-0.2	0.13	-0.1	-0.2	0.13	-0.1	0.13	0.01	-0.1	0.04
-0.1	0.14	-0	-0.3	0.17	-0.1	0.14	0.02	-0.1	-0
0.34	-0.1	0.29	0.24	0.15	0.12	-0.1	0.17	0.15	0.02

Figure E (l) Correlation Matrix Exactly Two Bosses (2B) Section F

2B SECTION G

Weight Peer No.1	R-Score Peer No.1	R_avg No Peer 1	RW Peer No.1	No. _	Corrected No. Others	Time Others	Weight Others	R-Score Others	RW Others	R-AVG_
0.19	0.08	-0	0.19	0.6	0.72	-0.2	0.14	0.22	0.22	0.12
0.17	0.05	0.06	0.16	0.38	0.55	-0.2	0.08	0.17	0.19	0.13
-0	0.03	-0.1	0.01	0.25	0.17	0.06	0.07	0.05	0.02	-0
-0	0.07	-0.3	0.01	-0.2	-0	-0	-0.2	-0.3	-0.3	0.1
-0.1	0.03	-0.1	-0.1	-0.1	-0.1	0	0.09	-0	0.03	0.01
-0.1	0.25	0.15	0.04	0.03	-0	-0.1	-0.2	-0.2	-0.1	0.34
0.05	0.04	0.1	0.08	0.08	0	0.07	0.07	0.13	0.14	-0.1
-0.2	0.19	0.06	-0	-0	-0.1	-0	-0.1	-0.1	-0	0.29
0.11	0.2	-0.2	0.2	-0.2	-0.1	-0.1	-0.2	-0.2	-0.3	0.24
0.03	0.02	-0	0.04	0.02	-0	0.16	-0.1	0.13	0.17	0.15
0.17	0.16	-0.1	0.23	-0.1	-0	-0.1	-0.3	-0.1	-0.1	0.12
0.05	0.04	0.1	0.08	0.08	0	0.07	0.07	0.13	0.14	-0.1
0.13	0.12	-0.1	0.18	-0	0.01	0.05	-0.2	0.01	0.02	0.17
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58

Figure E (m) Correlation Matrix Exactly Two Bosses (2B) Section G

2B SECTION H

0.16	0.21	-0.1	0.26	-0.3	0.11	-0.2	-0.2	-0.1	-0.1	0.15
0.28	0.27	0.02	0.41	-0.1	0	0.18	-0.1	0.04	-0	0.02
1	-0	0.14	0.8	-0	-0	-0.2	-0.2	-0.1	-0	0.09
-0	1	0.15	0.59	-0.1	-0	-0.2	-0	-0.2	-0.4	0.45
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.8	0.59	0.2	1	-0.1	-0	-0.3	-0.2	-0.2	-0.3	0.33
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58

Figure E (n) Correlation Matrix Exactly Two Bosses (2B) Section H

0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
0.14	0.15	1	0.2	-0	-0.1	0.06	0.09	0.38	0.34	0.58
-0	-0.1	-0	-0.1	1	0.93	0.09	0.22	0.43	0.47	-0.1
-0	-0	-0.1	-0	0.93	1	0.04	0.17	0.38	0.4	-0
-0.2	-0.2	0.06	-0.3	0.09	0.04	1	0.13	0.29	0.34	-0.1
-0.2	-0	0.09	-0.2	0.22	0.17	0.13	1	0.43	0.49	-0.1
-0.1	-0.2	0.38	-0.2	0.43	0.38	0.29	0.43	1	0.95	0.13
-0	-0.4	0.34	-0.3	0.47	0.4	0.34	0.49	0.95	1	0
0.09	0.45	0.58	0.33	-0.1	-0	-0.1	-0.1	0.13	0	1

Figure E (o) Correlation Matrix Exactly Two Bosses (2B) Section I

EXACTELY THREE BOSSES (3B)

SECTIONS

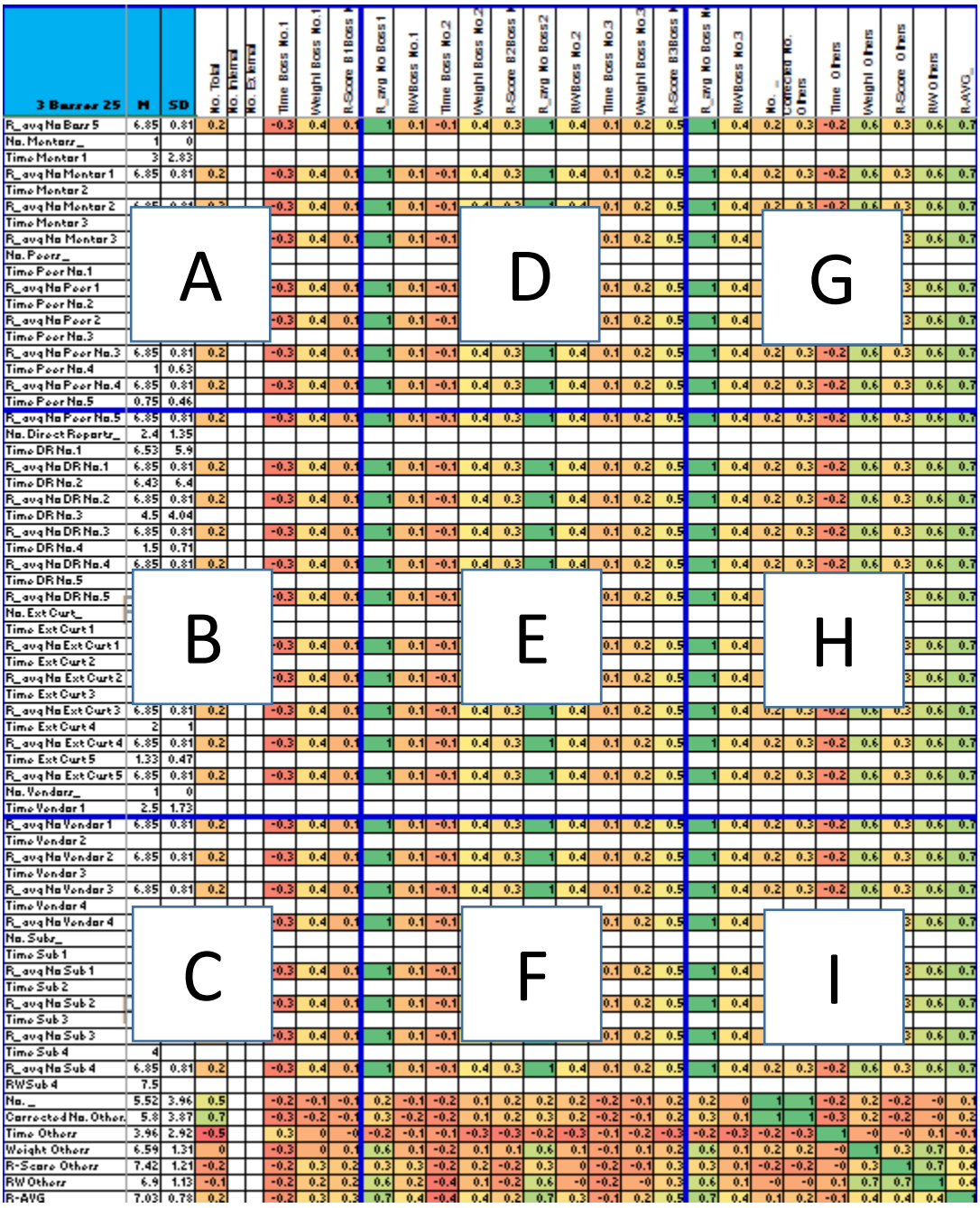

Figure E (p) Correlation Matrix Exactly Three Bosses (3B) Sections

3 Bosses 25	M	SD	No. Total	No. Internal	No. External	Time Boss No.1	Weight Boss No.1	R-Score B1Boss No.1
No. Total	13.2	3.54	1			-0.4	-0.1	-0.1
No. Internal	10.3	3.5						
No. External	2.63	2.24						
Time Boss No.1	4.23	5.24	-0.4			1	-0.2	0.27
Weight Boss No.1	8.32	1.82	-0.1			-0.2	1	0.08
R-Score B1Boss No.1	7.68	2.14	-0.1			0.27	0.08	1
R_avg No Boss1	6.85	0.81	0.17			-0.3	0.36	0.06
RWBoss No.1	8	1.51	-0.2			0.16	0.45	0.91
Time Boss No.2	2.42	2.8	-0.4			0.07	-0.1	-0.2
Weight Boss No.2	7.88	1.99	0.17			-0.4	0.55	0.04
R-Score B2Boss No.2	7.52	1.69	0.32			-0.2	0.16	-0
R_avg No Boss2	6.85	0.81	0.17			-0.3	0.36	0.06
RWBoss No.2	7.7	1.68	0.26			-0.4	0.42	0.02
Time Boss No.3	1.93	1.7	-0.4			0.26	0.06	-0
Weight Boss No.3	7.64	2.02	0.2			-0.3	0.47	-0.1
R-Score B3Boss No.3	6.96	1.65	0.38			-0.2	0.23	0.19
R_avg No Boss No.3	6.85	0.81	0.17			-0.3	0.36	0.06
RWBoss No.3	7.42	1.38	0.38			-0.3	0.4	0.08
Time Boss No.4								
R_avg No Boss 4	6.85	0.81	0.17			-0.3	0.36	0.06
Time Boss No.5								
R_avg No Boss 5	6.85	0.81	0.17			-0.3	0.36	0.06
No. Mentors _	1	0						
Time Mentor 1	3	2.83						
R_avg No Mentor 1	6.85	0.81	0.17			-0.3	0.36	0.06
Time Mentor 2								

Figure E (q) Correlation Matrix Exactly Three Bosses (3B) Section A

3B SECTION B

R_avg No Mentor 2	6.85	0.81	0.17			-0.3	0.36	0.06
Time Mentor 3								
R_avg No Mentor 3	6.85	0.81	0.17			-0.3	0.36	0.06
No. Peers _	2.83	2.07						
Time Peer No.1	3.71	3.26						
R_avg No Peer 1	6.85	0.81	0.17			-0.3	0.36	0.06
Time Peer No.2	2.85	2.77						
R_avg No Peer 2	6.85	0.81	0.17			-0.3	0.36	0.06
Time Peer No.3	2.96	3.67						
R_avg No Peer No.3	6.85	0.81	0.17			-0.3	0.36	0.06
Time Peer No.4	1	0.63						
R_avg No Peer No.4	6.85	0.81	0.17			-0.3	0.36	0.06
Time Peer No.5	0.75	0.46						
R_avg No Peer No.5	6.85	0.81	0.17			-0.3	0.36	0.06
No. Direct Reports_	2.4	1.35						
Time DR No.1	6.53	5.9						
R_avg No DR No.1	6.85	0.81	0.17			-0.3	0.36	0.06
Time DR No.2	6.43	6.4						
R_avg No DR No.2	6.85	0.81	0.17			-0.3	0.36	0.06
Time DR No.3	4.5	4.04						
R_avg No DR No.3	6.85	0.81	0.17			-0.3	0.36	0.06
Time DR No.4	1.5	0.71						
R_avg No DR No.4	6.85	0.81	0.17			-0.3	0.36	0.06
Time DR No.5	3							
R_avg No DR No.5	6.85	0.81	0.17			-0.3	0.36	0.06
No. Ext Cust_	3	2						
Time Ext Cust 1	4.94	3.21						
R_avg No Ext Cust 1	6.85	0.81	0.17			-0.3	0.36	0.06
Time Ext Cust 2	3.29	1.8						
R_avg No Ext Cust 2	6.85	0.81	0.17			-0.3	0.36	0.06
Time Ext Cust 3	1.88	1.55						
R_avg No Ext Cust 3	6.85	0.81	0.17			-0.3	0.36	0.06
Time Ext Cust 4	2	1						

Figure E (r) Correlation Matrix Exactly Three Bosses (3B) Section B

3B SECTION C

R_avg No Ext Cust 4	6.85	0.81	0.17			-0.3	0.36	0.06
Time Ext Cust 5	1.33	0.47						
R_avg No Ext Cust 5	6.85	0.81	0.17			-0.3	0.36	0.06
No. Vendors_	1	0						
Time Vendor 1	2.5	1.73						
R_avg No Vendor 1	6.85	0.81	0.17			-0.3	0.36	0.06
Time Vendor 2								
R_avg No Vendor 2	6.85	0.81	0.17			-0.3	0.36	0.06
Time Vendor 3								
R_avg No Vendor 3	6.85	0.81	0.17			-0.3	0.36	0.06
Time Vendor 4								
R_avg No Vendor 4	6.85	0.81	0.17			-0.3	0.36	0.06
No. Subs_	2.33	1.53						
Time Sub 1	7.33	4.16						
R_avg No Sub 1	6.85	0.81	0.17			-0.3	0.36	0.06
Time Sub 2	4.5	4.95						
R_avg No Sub 2	6.85	0.81	0.17			-0.3	0.36	0.06
Time Sub 3	16							
R_avg No Sub 3	6.85	0.81	0.17			-0.3	0.36	0.06
Time Sub 4	4							
R_avg No Sub 4	6.85	0.81	0.17			-0.3	0.36	0.06
RWSub 4	7.5							
No. _	5.52	3.96	0.54			-0.2	-0.1	-0.1
Corrected No. Others	5.8	3.87	0.66			-0.3	-0.2	-0.1
Time Others	3.96	2.92	-0.5			0.34	0.03	-0
Weight Others	6.59	1.31	0.03			-0.3	0.01	0.07
R-Score Others	7.42	1.21	-0.2			-0.2	0.33	0.22
RW Others	6.9	1.13	-0.1			-0.2	0.2	0.16
R-AVG_	7.03	0.78	0.2			-0.2	0.33	0.32

Figure E (s) Correlation Matrix Exactly Three Bosses (3B) Section C

3B SECTION D

R_avg No Boss1	RWBoss No.1	Time Boss No.2	Weight Boss No.2	R-Score B2Boss No.2	R_avg No Boss2	RWBoss No.2	Time Boss No.3	Weight Boss No.3	R-Score B3Boss No.3
0.17	-0.2	-0.4	0.17	0.32	0.17	0.26	-0.4	0.2	0.38
-0.3	0.16	0.07	-0.4	-0.2	-0.3	-0.4	0.26	-0.3	-0.2
0.36	0.45	-0.1	0.55	0.16	0.36	0.42	0.06	0.47	0.23
0.06	0.91	-0.2	0.04	-0	0.06	0.02	-0	-0.1	0.19
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
0.14	1	-0.2	0.24	0.05	0.14	0.17	-0	0.19	0.26
-0.1	-0.2	1	0.07	0.37	-0.1	0.22	0.76	-0.1	-0.1
0.45	0.24	0.07	1	0.65	0.45	0.93	0.3	0.45	0.49
0.33	0.05	0.37	0.65	1	0.33	0.89	0.31	0.25	0.3
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
0.44	0.17	0.22	0.93	0.89	0.44	1	0.34	0.4	0.45
0.12	-0	0.76	0.3	0.31	0.12	0.34	1	0.01	0.18
0.22	0.19	-0.1	0.45	0.25	0.22	0.4	0.01	1	0.31
0.48	0.26	-0.1	0.49	0.3	0.48	0.45	0.18	0.31	1
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
0.41	0.26	-0.2	0.55	0.35	0.41	0.51	0.11	0.81	0.79
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48

Figure E (t) Correlation Matrix Exactly Three Bosses (3B) Section D

1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48

Figure E (u) Correlation Matrix Exactly Three Bosses (3B) Section E

3B SECTION F

1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
1	0.14	-0.1	0.45	0.33	1	0.44	0.12	0.22	0.48
0.22	-0.1	-0.2	0.12	0.16	0.22	0.15	-0.2	-0.1	0.15
0.29	-0.2	-0.2	0.15	0.19	0.29	0.18	-0.2	-0.1	0.22
-0.2	-0.1	-0.1	-0.3	-0.3	-0.2	-0.3	-0.1	-0.2	-0.3
0.64	0.05	-0.2	0.07	0.09	0.64	0.09	-0.1	0.06	0.16
0.32	0.29	-0.2	0.15	-0.2	0.32	0.02	-0.2	-0.1	0.31
0.62	0.19	-0.4	0.1	-0.2	0.62	-0	-0.2	-0	0.26
0.72	0.38	-0.4	0.4	0.21	0.72	0.35	-0.1	0.2	0.54

Figure E (v) Correlation Matrix Exactly Three Bosses (3B) Section F

3B SECTION G

R_avg No Boss No.3	RWBoss No.3	No. _	Corrected No. Others	Time Others	Weight Others	R-Score Others	RW Others	R-AVG_
0.17	0.38	0.54	0.66	-0.5	0.03	-0.2	-0.1	0.2
-0.3	-0.3	-0.2	-0.3	0.34	-0.3	-0.2	-0.2	-0.2
0.36	0.4	-0.1	-0.2	0.03	0.01	0.33	0.2	0.33
0.06	0.08	-0.1	-0.1	-0	0.07	0.22	0.16	0.32
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
0.14	0.26	-0.1	-0.2	-0.1	0.05	0.29	0.19	0.38
-0.1	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2	-0.4	-0.4
0.45	0.55	0.12	0.15	-0.3	0.07	0.15	0.1	0.4
0.33	0.35	0.16	0.19	-0.3	0.09	-0.2	-0.2	0.21
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
0.44	0.51	0.15	0.18	-0.3	0.09	0.02	-0	0.35
0.12	0.11	-0.2	-0.2	-0.1	-0.1	-0.2	-0.2	-0.1
0.22	0.81	-0.1	-0.1	-0.2	0.06	-0.1	-0	0.2
0.48	0.79	0.15	0.22	-0.3	0.16	0.31	0.26	0.54
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
0.41	1	0.05	0.11	-0.3	0.13	0.07	0.14	0.43
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72

Figure E (w) Correlation Matrix Exactly Three Bosses (3B) Section G

3B SECTION H

1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72

Figure E (x) Correlation Matrix Exactly Three Bosses (3B) Section H

3B SECTION I

1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
1	0.41	0.22	0.29	-0.2	0.64	0.32	0.62	0.72
0.22	0.05	1	0.96	-0.2	0.18	-0.2	-0	0.14
0.29	0.11	0.96	1	-0.3	0.19	-0.2	-0	0.18
-0.2	-0.3	-0.2	-0.3	1	-0	-0	0.06	-0.1
0.64	0.13	0.18	0.19	-0	1	0.29	0.67	0.37
0.32	0.07	-0.2	-0.2	-0	0.29	1	0.7	0.43
0.62	0.14	-0	-0	0.06	0.67	0.7	1	0.44
0.72	0.43	0.14	0.18	-0.1	0.37	0.43	0.44	1

Figure E (y) Correlation Matrix Exactly Three Bosses (3B) Section I