

CHAPTER III

METHODOLOGY

Population

The data for this study were collected in the schools of Karabuk, Turkey. There are 91 public schools in Karabuk that employ five or more full-time teachers. The 1946 teachers employed within these 91 schools were the target population for this study. Teachers in the schools serve 36,415 students. The province is divided into six townships (school districts), each has an appointed superintendent of public schools. A superintendent in a township reports to the superintendent of the province. The province superintendent reports to the governor and to the ministry of education at the capital city, Ankara. The ministry of education appoints teachers to the province. The superintendent of the province reports the vacancies in the province schools to the governor. The governor appoints teachers to schools based on the superintendent's report. Teachers in this population have tenure when they complete the first year of their service.

The province is settled in the valleys and plateaus formed by the Yenice river which is fed by the joining of Araç and Soğanlı streams, in the north-west Black Sea region of Turkey. Approximately, 250,000 people live in the province. Upon the establishment of the steel plant in 1937, the province made its mark on the country's economy. The majority of community is composed of blue-collar workers. The province houses one of the biggest steel plants in the nation. The province is also known for its forests and the historical city of Safranbolu. An overwhelming majority of people migrated to the city from other parts of the country to work at the factory. Unfortunately, the province has been in a severe economic decline for ten years.

Data Collection

Survey instruments and documentary sources were used in the data collection. Data were collected from teachers in 68 of 91 schools having more than 5 full-time teachers. Permission was granted from the governor's office to conduct the research in the province on June 23, 1998. A document showing names of schools in the province, locations of each school, total number of teachers in each school, number of students in each school, and total number of classrooms in

each school was provided by the central office. However, a list of the teachers, phone numbers of schools, and addresses of schools was not provided. Locating some of the schools posed quite a challenge. The central offices of the public instruction at the province send a memo to each school about the research. In the memo, the province superintendent asked the cooperation of school staff. Participation in the study was voluntary. Convenience sampling was used. Instruments were distributed to teachers during school visitations. Three people distributed the instruments. First, schools in the province center and surrounding areas were visited because they were easy to locate. Then schools in remote locations were visited. Since there was no map to use, researchers had to ask people on the streets for directions to schools. Researchers depended heavily on public transportation to arrive at schools. There were times researchers had to walk more than an hour to reach schools in remote areas. Instruments were picked up at a designated time and date from each school. This was the first experience for almost all teachers who received the instruments to participate in a study.

Instruments were distributed to 725 teachers in 68 of 91 schools in Karabuk over the course of 20 days. The number of instruments returned was 512. Cases that had more than three missing responses for any scale were eliminated from the analysis. For the remaining cases, means were substituted for missing values. Twenty-six cases were eliminated from the data. The total number of cases was reduced from 512 to 486. This number (486) is 67% of the 725 teachers to whom survey instruments were distributed. These completed survey instruments were divided randomly into a pilot sample ($N = 162$) and a research sample ($N = 324$). The pilot sample was used for preliminary item analyses, and the research sample was used to answer the research questions using the instruments as revised during the pilot analyses. Although a convenience sampling was used, both pilot sample and the research sample mirror fairly well the population characteristics as shown in Table 3.

Table 3 Comparisons of Characteristics of the Population and Samples

School Type	Number of teachers*		
	POPULATION	PILOT	RESEARCH
ELEMENTARY N (%)	746 (38)	77 (48)	156 (48)
MIDDLE N (%)	439 (23)	33 (20)	60 (19)
HIGH N (%)	761 (39)	52 (32)	108 (33)
URBAN N (%)	584 (30)	41 (25)	62 (19)
SUBURBAN N (%)	915 (47)	87 (54)	188 (58)
RURAL N (%)	447 (23)	34 (21)	74 (23)
ONE SESSION N (%)	1093 (56)	84 (52)	165 (51)
TWO SESSIONS N (%)	853 (44)	78 (48)	159 (49)
TOTAL N (%)	1946 (100)	162 (100)	324 (100)
School Type	Student-teacher ratio*		
	POPULATION	PILOT	RESEARCH
ELEMENTARY Mean	20	23	21
MIDDLE Mean	21	19	20
HIGH Mean	14	14	14
URBAN Mean	22	23	20
SUBURBAN Mean	18	19	19
RURAL Mean	18	16	18
ONE SESSION Mean	17	16	16
TWO SESSIONS Mean	22	22	23
Grand mean	19	19	19
School Type	Class size*		
	POPULATION	PILOT	RESEARCH
ELEMENTARY Mean	35	43	40
MIDDLE Mean	44	44	45
HIGH Mean	36	37	37
URBAN Mean	53	54	53
SUBURBAN Mean	40	44	44
RURAL Mean	26	26	26
ONE SESSION Mean	27	31	29
TWO SESSIONS Mean	53	55	55
Grand mean	39	42	41
School Type	Number of schools*		
	POPULATION	PILOT	RESEARCH
ELEMENTARY N (%)	52 (57)	27 (46)	26 (51)
MIDDLE N (%)	19 (21)	15 (25)	11 (22)
HIGH N (%)	20 (22)	17 (29)	14 (27)
URBAN N (%)	15 (16)	13 (22)	9 (18)
SUBURBAN N (%)	41 (45)	30 (51)	28 (55)
RURAL N (%)	35 (39)	16 (27)	14 (27)
ONE SESSION N (%)	57 (63)	33 (56)	28 (55)
TWO SESSIONS N (%)	34 (37)	26 (44)	23 (45)
TOTAL N (%)	91 (100)	59 (100)	51(100)

(table continues)

Table 3 (continued) Comparisons of Characteristics of the Population and Samples

School Type	Number of classrooms*		
	POPULATION	PILOT	RESEARCH
ELEMENTARY N (%)	423 (46)	253 (37)	227 (40)
MIDDLE N (%)	208 (23)	168 (25)	111 (19)
HIGH N (%)	285 (31)	260 (38)	235 (41)
URBAN N (%)	216 (24)	195 (29)	147 (26)
SUBURBAN N (%)	402 (44)	330 (49)	291 (51)
RURAL N (%)	298 (32)	156 (23)	135 (24)
ONE SESSION N (%)	575 (63)	406 (60)	324 (56)
TWO SESSIONS N (%)	341 (37)	275 (40)	249 (44)
TOTAL N (%)	916 (100)	681 (100)	573 (100)
School Type	Number of students*		
	POPULATION	PILOT	RESEARCH
ELEMENTARY N (%)	16123 (44)	11439 (39)	10036 (41)
MIDDLE N (%)	9218 (25)	7312 (25)	5146 (21)
HIGH N (%)	11074 (31)	10369 (36)	9626 (38)
URBAN N (%)	10972 (30)	10141 (35)	7396 (30)
SUBURBAN N (%)	17076 (47)	14705 (51)	13318 (53)
RURAL N (%)	8367 (23)	4274 (15)	4094 (17)
ONE SESSION N (%)	17119 (47)	13207 (45)	10424 (42)
TWO SESSIONS N (%)	19296 (53)	15913 (55)	14384 (58)
TOTAL N (%)	36415 (100)	29120 (100)	24808 (100)

Note. * The counts for the pilot and research sample often exceed the counts for the population because teachers from the same school were selected into the pilot and research samples.

Analysis

Analysis of Pilot sample Data

Analysis of Items in Bureaucratic Dimensions

From the literature, items measuring Hall's six bureaucratic dimensions were extracted. Items from six researchers' instruments were selected. Items were categorized by dimensions, and items used by each researcher to measure a specific dimension of bureaucracy were identified. Table 4 displays the complete list of items included in the instruments, each identified by the author of item. The pool of items and the last names of researchers who used the item were provided in Table 4. If a researcher used an item, an "X" mark was placed in the cell associated with the name of the researcher and the item.

For each of the six researchers, responses of teachers to items identified under the same dimension by the particular researcher were added together and divided by the number of items used by the researcher to measure the dimension. This procedure generated six different scores for the same dimension, because there were six researchers. In other words, each of the six dimensions had six different scores because all of six researchers have attempted to measure all of Hall's six dimensions of bureaucracy. In addition to these six, a seventh score for each bureaucratic dimension was computed by averaging the responses to all items identified under the same dimension, regardless of authorship of items. In other words, every dimension had seven scores, one based on all items across all authors and a separate score for the items of each of the six authors.

Item/total score correlations were computed for each item using each of the seven scores as the criterion. This procedure generated seven correlation coefficients for an item in a dimension. If three or more of these seven correlation coefficients were higher than .35, the item was kept for further analyses. If not, the item was eliminated from further consideration.

Items surviving the procedure explained above were subjected to reliability analyses. A separate reliability analysis for items in each dimension was carried out. The "corrected item total correlation" and the "alpha if item deleted" statistics in the reliability analysis of SPSS program were examined for each item. If, for an item, the corrected item-total correlation was

Table 4 .Pool of Items Measuring Six Bureaucratic Dimensions by Author

Dimension and item	Author					
	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
1.I feel that I am my own boss in most matters		X	X			
2.Even small matters have to be referred to some one higher up for a final answer.		X	X	X	X	
3.A person can make his own decisions without checking with any one else		X	X	X	X	
4.I have to check with the boss before I do almost anything.	X	X	X	X	X	X
5.A person who wants to make his own decisions would quickly become discouraged in this school	X	X	X		X	
6.People can get supplies without clearing it with their superiors	X	X	X	X		
7.Everyone here has one superior to whom he regularly reports.	X	X	X	X	X	
8.There can be little action until an administrator approves a decision.	X	X	X	X	X	X
9.People here get their orders from different person all the time	X	X				
10.Any decision I make (do not) have to have the boss's approval	X	X		X	X	
11.How things are done in the classroom is left pretty much up to the individual teacher	X	X	X			
12.Staff members of this school always get their orders from higher up.				X	X	
13.People here allowed to do almost as they please	X	X	X	X	X	
14.In the final analysis, the principal, of this school has a lot of authority over me.						X
15.When my interests conflict with the interests of those who run the school, they make the final decision.						X
16.There are people in this school who are empowered to give me orders and they often do.						X
17.I get approval for decision I make.			X			
18.Only administrators can decide how things are to be done.	X					

(table continues)

Table 4. (Continued). Pool of Items Measuring Six Bureaucratic Dimensions by Author

Dimension and item	Author					
	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
1. One-thing teachers like in this school is the variety of work.	X	X	X			
2. Most jobs have something-different happening from day to day.	X	X				
3. People teaching in this school usually find their job to be very monotonous.	X	X				
4. We usually work under the same circumstances from day to day.	X					
5. Everyone has a specific job to do.	X					
6. This organization is characterized by a complex division of labor.	X					
7. No two days are ever the same in this job	X	X				
8. Every employee has a specific function, which he has to perform.	X					
9. Most jobs in this organization involve a variety of different kinds of activities	X					
10. Standardized classroom methods and procedures are used by all staff-members.		X	X	X		
11. The instructional program is departmentalized into specific subject areas with specific teachers assigned.		X	X	X	X	
12. When an unusual problem arises the teacher must refer the matter to a definite person within the school organization		X				
13. We are expected to teach in more than one subject area		X	X		X	X
14. Few people here find their work challenging.	X	X				
15. Teaching in this school involves a variety of tasks and responsibilities from day to day		X				
16. Teachers receive help from the custodial staff in setting up audio-visual equipment.			X	X	X	X
17. Instead of one general program there are several specialized programs of instruction in this school.						X
18. I have certain duties and responsibilities that few other people in this school perform.						X
19. We do a lot of paper work, which could be done by a school office staff				X	X	X
20. Discipline problems are referred to a definite person within the school.			X			

(table continues)

Table 4 (Continued). Pool of Items Measuring Six Bureaucratic Dimensions by Author

Dimension and item	Author					
	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
21. Teachers do their own preparation of stencils for classroom use			X		X	
22. Teachers are required to sponsor extra-curricular activities for which they have no suitable background			X	X	X	
23. Assignment of teaching duties is made without regard for the teacher's experience or training			X	X	X	
24. There is an overlap in the job responsibilities of the principal and vice principal			X	X	X	
Rules and Regulations	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
1. The school has a manual of rules and regulations to be followed.	X	X		X	X	
2. Smoking is permitted only in certain designated places.	X	X	X			X
3. There really are no specific rules, but the employees understand how they shall act	X					
4. The teachers are constantly being checked upon for rule violations.	X	X		X	X	
5. It seems as though there is a rule for everything here.	X					
6. Nothing is said if you come to work late occasionally	X	X	X	X	X	
7. Teachers know the rules of the school	X					
8. People here make their own rules on the job	X	X	X			
9. Teachers are rarely supervised to see that they follow the rules						
10. Employees are expected to follow written orders without questioning them.	X	X	X	X	X	
11. Teachers do not leave their classroom unless they have permission.	X	X	X	X		
12. The time for informal get-togethers during the school day is strictly regulated.		X	X	X	X	
13. Staff members feel as though they are constantly being watched to see that they obey all the rules.	X	X				
14. Rules govern the style and type of clothing, which I wear to school.						X

(table continues)

Table 4. (Continued). Pool of Items Measuring Six Bureaucratic Dimensions by Author

Dimension and item	Author					
	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
Rules and regulations						
15.I am careful not to violate school rules regarding my relationships with others.						X
16.I follow rules stating when I am to arrive and/or depart from the school.			X	X	X	X
17.I obey a lot of rules regarding my personal behavior in and around the school.						X
18.I follow school rules, which regulate my attendance.						X
19.Teachers are aware of rules regarding their behavior in and around the school.			X			X
20.Teachers are careful not to violate the rules in this school.			X			X
21.The rules set for this school are questioned by teachers			X			
22.Teachers abide by the spirit of rules rather than stick to the letter of rules			X	X	X	
23.Written orders from higher up are followed unquestioningly.	X	X	X	X	X	
Procedural specifications	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
1.Standard procedures are to be followed in almost all situations.	X					
2.We are encouraged to "cut red tape" in order to get the job done	X					
3.Red tape often is a problem in getting a job done	X	X	X	X	X	
4.The organization stresses following the established procedures.	X		X			
5.Employees are often left to their own judgement as to how to handle most problems	X	X	X		X	
6.We are to follow strict operating procedures at all times.	X	X	X	X	X	
7.Most of us are encouraged to use our own judgement	X	X				
8.Going through the proper channels is seen as more important than doing our job.	X	X	X	X	X	
9.Whatever situation arises, we have procedures to follow in dealing with most matters.	X	X	X		X	X
10.The same procedure is used in different situations				X		
11.There is only one way to do the job-the principal's way.	X	X		X	X	
12.The same procedures are to be followed in most situations.		X	X			
13.Standard forms are used for sick leaves						X

(table continues)

Table 4. (Continued). Pool of Items Measuring Six Bureaucratic Dimensions by Author

Dimension and item	Author					
	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
Procedural specifications						
14. Rules regulate where I sit in relation to the students.						X
15. Teachers' experiment with procedures for classroom teaching and other school work			X			
16. Teachers follow clearly specified procedures for doing the job here.			X			
17. Whenever we have a problem, we are supposed to go to the same person for an answer.	X	X	X	X	X	
18. Going through the proper channels is constantly stressed.	X	X		X	X	
19. Standardized classroom methods and procedures are used by all staff-members.		X	X	X		
Impersonality	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
1. No matter how serious a person's problems are, he is to be treated the same as anyone else.	X	X	X	X	X	
2. Everyone who calls the organization from outside is treated in exactly the same manner.	X	X				
3. The organization is always sponsoring employee get-togethers	X	X	X	X	X	
4. A Person gets the chance to develop good friends here	X					
5. People are to be treated within the rules, no matter how serious a problem they may have.	X	X	X	X		
6. A very friendly atmosphere is evident to everyone who works here	X					
7. We are expected to be courteous, but reserved, at all times.	X	X	X	X	X	
8. The administration here sticks pretty much to themselves.	X	X			X	
9. No one here calls his superior by his first name.	X					
10. The relationship in this organization is really very impersonal.	X					
11. People who have contact with parents and other citizens are instructed in proper procedures for greeting and talking with them.		X		X	X	
12. The administration does not like staff get-togethers if it is not for official matters.		X			X	
13. A lot of people get together over weekends	X	X			X	
14. The organization is always sponsoring employee social -get-togethers	X	X	X	X	X	

(table continues)

Table 4. (Continued). Pool of Items Measuring Six Bureaucratic Dimensions by Author

Dimension and item	Author					
	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
Impersonality						
15.The relations between teachers and students are friendly and warm						X
16.The Personal relations which exist between teachers and administrators are friendly						X
17.I address the school administrators formally.						X
18.My relations with other teachers are formal and impersonal.			X			X
19.Teachers' closest friends are other staff members at this school			X			
20.Staff meetings proceed in a formal manner.			X			
Technical competence	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
1.Employees are periodically evaluated to see how well they do their job.	X	X	X		X	X
2.All the executives have experience qualifying them for the job.	X					
3.People aren't promoted simply because they have a "pull."	X	X				
4.Promotions are based on merit in this organization.	X	X	X			X
5.Some teachers are kept on the payroll even though they are not good teachers	X					
6.People here are given raises according to how well they are liked rather than how well they do their job	X	X	X	X	X	X
7.There is little chance for a promotion unless you are "in" with the boss	X	X	X	X	X	
8.There is really no systematic procedure for promotions	X					
9.In order to get a promotion, you have to "know somebody"		X		X	X	
10.Staff members must possess above-average qualifications before they are hired in this school.		X	X	X	X	X
11.Assessment of teaching performance is based on objective standards, not on personal performances.			X	X	X	X
12.Past teaching experience plays a large part in the assignment of a teacher to this school.		X		X	X	
13.A record of every staff member's job performance is kept.		X	X		X	
14.If you do not support administration, how well you do your job is not important					X	

negative or lower than .20 and the elimination of the item improved the alpha coefficient of the scale more than .02 points, the item was considered for elimination.

Items that survived the procedure explained above were subjected to a factor analysis with an oblique rotation using the oblimin procedure of the SPSS program. Items that had a factor loading lower than a .10 or evidenced factorial complexity were considered for elimination. If an item loaded highly on more than one factor, that item had a factorial complexity.

Analysis of Items in Sense of Power Scale

From the literature, items measuring sense of power were extracted. The pool of items and the last names of researchers who used these items are provided in table 5. The table was organized dimension by dimension. If a researcher used an item, an "X" mark was placed in the cell associated with the name of the researcher and the item. Items were subjected to a reliability analysis. The "corrected item total correlation" and the "alpha if item deleted" statistics in the reliability analysis of SPSS program were examined for each item. If, for an item, the corrected item total correlation was negative or lower than .20 and the elimination of the item improved the alpha coefficient of the scale more than .02 points, the item was considered for elimination. Items surviving this procedure were subjected to a factor analysis with an oblique oblimin rotation using the SPSS program. Items that had a loading score lower than a .10 or those evidenced factorial complexities were considered for elimination.

Analysis of Research Sample Data

Replication of the Factor Structure of Items using the Research Sample Data

The items that survive the item analyses conducted using the pilot data were subjected a factor analysis conducted using the research sample data. A principal axis factoring with an oblique oblimin rotation was used to extract factors. The factor structure resulting from the pilot sample data and in the research sample data were compared. Items that converged under the same factor in both analyses were judged to represent a dimension of bureaucracy. A score on each dimension was calculated for each respondent by adding the teacher's responses to items grouped under each factor. This score was divided by the number of items in the dimension. This

Table 5. Pool of Items Measuring Sense of Power Scale by Author

Item	Author	
	ISHERWOOD	MOELLER
1.SP1. I do things at this school that I would not do if it were up to me (Reversed).	X	
2.SP2. When things get rough in my school, I just have to take it the way it is(Reversed)..	X	
3.SP3. Administrators are open to my ideas on school matters	X	
4.SP4. I have been given enough authority to do my job well.	X	
5.SP5. I am just a cog in the machinery of this school (Reversed).	X	
6.SP6. There are lots of things I can't do although I know they are right (Reversed).		
7.SP7. If only I could do my job more independently (Reversed).		
8.SP8. I believe I have some control over what textbooks and supplementary resources will be used in the classroom.		X
9.SP9. I am given chance to contribute to important decisions made about the school.		X
10.SP10. I have little to say over what teachers will work with me on my job (Reversed).		X
11.SP11. If I really want, I can force the changes in rules.		X
12.SP12. I feel that I do not know what is going on in the upper levels of administration (Reversed).		X

procedure yielded a score on each dimension for each teacher.

Research Question I

After calculating a score for each respondent for each dimension identified in the principal axis factor analysis, the inter-correlations among dimension were calculated. Intercorrelations among dimension scores were subjected a second order factor analysis with an oblique rotation. In addition to the factor structure of dimensions, a two dimensional scatter plot of loadings was examined to clarify clustering of dimensions. The "Y" axis was assigned the loading scores of all dimensions on the first factor. The "X" axis was assigned the loading scores of all dimensions on the second factor. Then, intercepts (coordinates) for each of the six dimension were marked. This plot provided a visual display for the locations of dimensions relative to each other in two-dimensional space. The closer the coordinates of dimensions, the higher the correlation among the dimensions. This plot also provided a visual inspection of groupings among dimensions. According to theory, dimensions were expected to group under two clusters. If the responses of teachers in this sample are similar to what has been reported for teachers in the U.S. and Canada, bureaucratic dimensions are expected to create two higher order dimensions. These two higher-order dimensions were named control and expertise.

Bureaucratic dimension scores within each cluster were averaged to arrive at a single measure of each higher-order dimension for each respondent. Scores on these higher order factors were next subjected to a k-mean cluster analysis using SPSS. The purpose of this analysis was to identify relatively homogeneous groups of teachers based on their scores on the higher-order dimensions (control & expertise). K-mean cluster procedure is used when there is a theory concerning the number of clusters regarding cases or variables. The literature implies four distinct bureaucratic clusters: Weberian, authoritarian, collegial, and chaotic. The program was forced to create exactly 4 clusters that were to be as distinct as possible. The procedure is similar to analysis of variance in which the program minimizes the variability within clusters and maximizes the variability between clusters.

The procedure provided means for each cluster on both control and expertise higher-order dimensions. Each cluster had a mean score for control and a mean score for expertise. The mean score of control for a cluster, for example, was calculated by averaging the control higher-order

dimension scores of all teachers within the cluster. If a cluster's mean score was *high* on control relative to other clusters' mean scores on control and if the cluster's mean score was *high* on the expertise relative to other clusters' mean scores on expertise, this cluster was named Weberian. If a cluster's mean score was *high* on control relative to other clusters' mean scores on control and if the cluster's mean score was *low* on the expertise relative to other clusters' mean scores on expertise, this cluster was named authoritarian. If a cluster's mean score was *low* on control relative to other clusters' mean scores on control and if the cluster's mean score was *low* on the expertise relative to other clusters' mean scores on expertise, this cluster was named chaotic. If a cluster's mean score was *low* on control relative to other clusters' mean scores on control and if the cluster's mean score was *high* on the expertise relative to other clusters' mean scores on expertise, this cluster was named collegial.

Research Question II

Relationships between bureaucratic dimensions and other variables were explored using a variety of statistics. The categorical variables served as independent variables in a series of ANOVAs. In these ANOVAs, bureaucratic dimensions served as continuous dependent variables. The continuous variables served as dependent variables in a series of ANOVAs when each bureaucratic typology was the categorical independent variable. A series of chi-square test were run between categorical variables and the bureaucratic typologies. A series of Pearson correlation coefficients were computed between bureaucratic dimensions and continuous variables. In all analyses, the significance level was .05. A Tukey post-hoc multiple comparison was applied for following significant ANOVAs having more than two levels. *Only significant results were reported in the body of the text for all analyses.*

Research Question III

Relationships between bureaucratic dimensions and sense of power were explored using a variety of statistics. The sense of power scale score served as the dependent variable in a series of ANOVAs. A Tukey a post-hoc multiple comparison was applied for significant ANOVAs having more than two levels. Only significant results were reported for all ANOVAs.

Pearson correlation coefficients were computed between bureaucratic dimensions and sense of power and regression analyses were run using sense of power as the dependent variable and six bureaucratic dimensions as independent variables. Other continuous variables were used as control variables in the regression analyses. Another set of regression analyses was run using sense of power as the dependent variable and the higher order dimensions as the independent variables. Other continuous variables, again, were used as control variables in regression analyses.