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MANAGEMENT | RESEARCH ARTICLE

Development of pastoral administrative leadership scale based on the theories of educational leadership

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Abstract: With increased interest in the concept of leadership, there is a need to examine its various types in terms of scale, necessity, as well as importance. This study thus attempted to measure pastoral administrative leadership with the objective of revealing the necessity and importance of studying this type of leadership in particular, as well as to develop its own measurement scale. To make the survey questionnaire, five key dimensions of pastoral administrative leadership (instructional method, decision-making process, communicative method, church culture, and church structure) were subsequently selected, based on suggestions from scholars in educational leadership. For this study, the population was comprised of full-time senior pastors of churches in South Korea. A total sample of 1,000 was then selected through a convenience sampling of Korean pastors. Through the factor analysis [exploratory factor analysis (EFA) and confirmatory factor analysis (CFA)] results, it was verified that the items of this survey questionnaire were able to measure pastoral administrative leadership. Using these results as the basis, this research developed a measurement scale, the Scale of Pastoral Administrative Leadership (SPAL). As such, this study can be the starting point in measuring administrative-focused pastoral leadership.

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PUBLIC INTEREST STATEMENT

Leadership interests many people as leaders and leadership groups exist in any organization: for example, families are led by parents, schools by principals, and nations by presidents. Likewise, pastors lead churches, who spiritually lead the laity and operate the church. Churches and their members grow under pastoral leadership, which is defined in most churches as spiritual leadership. Although pastors play the role of administrative leaders in developing their respective churches, they often do not recognize themselves as being in that position within their organizations. Therefore, there is a call for more systematic research on the administrative domain of pastoral leadership, which can be measured quantitatively. The purpose of this study is to reveal the necessity of studying pastoral administrative leadership, as well as to develop a measurement scale for examining pastoral administrative leadership. This study contributes to leadership studies and provides

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Subjects: Leadership; Church Management; Church Administration

Keywords: pastoral administrative leadership; educational leadership; measurement scale; church; church administration

1. Introduction

Defined by most churches as spiritual leadership, pastoral leadership has been mainly the basis behind the rapid growth of churches. Aside from providing spiritual leadership, pastors also play administrative leadership roles in the development of their churches, a role that they themselves often fail to recognize within their respective spiritual organizations. The laity also ignores such important roles that their pastors play, which is perhaps rooted from the pastors' belief that they are spiritual leaders and that administrative work is part of the secular domain. This has subsequently resulted with narrowing down definitions of pastoral leadership as well as current research being limited to spiritual aspects, with only a few exceptions (c.f., Kim & You, 2010). A clearer understanding of the administrative aspects of pastoral leadership will provide new insights, and more systematic and quantitative research on its administrative domain is thus needed. Therefore, the objective of this study is to reveal the necessity and importance of studying pastoral administrative leadership, as well as to develop a measurement scale that can examine pastoral administrative leadership, the Scale of Pastoral Administrative Leadership (SPAL).

A limitation of this study is that the survey participants of the survey were all Korean pastors who worked in South Korea. Study results are thus limited to full-Korean pastors, but the measurement scale developed through this study can still apply to other pastors, regardless of nationality, as the profession has common denominators rather than differences in terms of style or culture.

2. Pastoral leadership and educational leadership

2.1. Church

With the Bible as the basis, most pastors understand the concept of the church in terms of a living organism, with a living and breathing body. rather than as an organization that works like a well-oiled machine. For instance, the apostle Paul characterizes a church organically, using the "body of Christ" metaphor:

> "… the body is [a] unit, though it is made up of many parts: and though all its parts are many, they form one body. So it is with Christ…. …now, you are the body of Christ, and each one of you is a part of it," (Corinthians 12:12 and 12:27 New International Version).

Emphasizing the body metaphor, in Colossians 1:18 (New International Version) Paul says that "Jesus is the head of the body, the church"; in Ephesians 4:16 (New International Version), he presents the principles of the church's growth: "From him the whole body, joined and held together by every supporting ligament, grows and builds itself up in love, as each part does its work."

Moreover, many theologians assert that Jesus was interested in organic life instead of organizational or institutional wrangling: his focus was on the ministry of healing and wholeness, which always took precedence over rigid institutional rules and organizational hierarchies. In this sense, many pastors and the laity thus recognize a church as a living organism.

However, a church also needs to be understood as a systematic organization, instead of simply a living organism. In fact, organism and organization have the same etymological origins. Furthermore, as both the constituent unit of "organism" and "organization" refer to the individual person, the concepts of "organism" and "organization" cannot be divided easily. Nevertheless, a number of theologians and pastors, including the laity, misunderstand that a church, as an organism, is a natural community from God, and as an organization, is an artificial community of humans. They recognize that a church, as an organism, is a spiritual institution, but regard it as

a secular institution, as an organization, wherein administrative tasks are emphasized. However, it is essential to recognize that a church is an organization where administrative systems exist, with biblical grounds as the basis. For example, in Exodus 18 (New International Version), Acts 6 (New International Version), and 1 Corinthians 12:28 (New International Version), the ministry of Jesus referenced on the concept of administration. Specifically, in Exodus 18 (New International Version), the father-in-law of Moses suggests that the latter appoint Israelite leaders who would efficiently carry out God's work, a suggestion that Moses subsequently accepted. This shows the importance of personnel administration and the division of labor. In Exodus 18:25–26 (New International Version), the Bible says:

> "He chose capable men from all Israel and made them leaders of the people, officials over thousands, hundreds, fifties and tens. They served as judges for the people at all times. The difficult cases they brought to Moses, but the simple ones they decided themselves"

Second, in Acts 6 (New International Version), the congregations of early church chose seven leaders and assigned them administrative tasks:

> "They chose Stephen, a man full of faith and of the Holy Spirit; also Philip, Procorus, Nicanor, Timon, Parmenas, and Nicolas from Antioch, a convert to Judaism."

Third, in 1 Corinthians 12:28 (New International Version), the congregations of the Corinthian church chose leaders who had professional works:

> "And in the church God has appointed first of all apostles, second prophets, third teachers, then workers of miracles, also those having gifts of healing, those able to help others, those with gifts of administration, and those speaking in different kinds of tongues."

Last, Jesus chose 12 disciples and divided them into three groups for work and movement efficiency. With each disciple having a unique role and task, the community of Jesus and his disciples can be considered a systematic organization (Lee, 2002). In summary, the concepts of an organism and an organization are bound with each other in a church. With this conceptual basis, understanding pastoral leadership from both administrative and spiritual aspects of leadership is not just a possibility but is a must.

2.2. Pastoral leadership

Commonly, the word "pastoral" is associated with the tasks of a pastor inside a church, but such tasks need to be clearly understood so as to comprehend the concept of pastoral leadership as well. By focusing on the specific tasks of a pastor, many theologians assert that pastoral leadership is pastoral care and part of spiritual work. According to Clebsch and Jaekle (1975): "Pastoral care is directed towards the healing, sustaining, guiding, and reconciling of troubled persons whose troubles arise in the context of ultimate meanings and concerns" (p. 13). In the same vein, they understand pastoral leadership as spiritual guidance based on the New Testament's concept of leadership, wherein certain actions are expected of him. As a spiritual leader, a pastor should lead the laity to follow and obey God through divine authority, purely based on supernatural elements, not secular authority; help the laity strengthen their communication with Jesus through prayers and meditations; show the laity that Jesus is working within him and through his words; teach the laity about the life of Jesus; lead a humble life by serving the laity; and create miracles to solve the spiritual problems of the laity (Lawrence & Hoeldtke, 1980).

Blackaby and Blackaby (2001) explain the pastor's tasks by contrasting spiritual leadership with secular leadership:

> The biggest difference from secular leadership is that spiritual leadership works from God's agenda. Thus, spiritual leaders do not pursue their own agendas; spiritual leaders are not

> interested in their dreams and goals or in building their kingdoms; spiritual leaders pursue God's purpose to turn His people away from their self-centeredness and their sinful desires and to draw them into a relationship with Himself; and spiritual leaders understand and seek God's will, so their task is to lead their people to pursue God's plan (Blackaby & Blackaby, 2001, p. 7).

Seen in this light, pastoral leadership can thus be understood as spiritual abilities and influence to teach the laity how to have deep interactions with God through prayers and meditations, help them find solutions for their inner problems in the Bible, guide them to the right way, lead them to mature their faith in God, as well as encourage them to understand God's purpose, will, and plan.

However, many theologians explain a pastor's tasks from a philosophical, abstract, and fragmentary perspective. As such, they tend to limit the roles of the pastor to spiritual tasks, reducing the area of pastoral leadership to simply spiritual leadership. This is in contrast with what the Bible proclaims: God works in the whole world as well as in churches. As such, "Christian leaders should know [the] secular models of leadership and learn the larger world of leadership that can be applied within churches" (Hobgood, 1998, p. 65). Furthermore, a pastor is a leader of an organization. All leadership activities that pastors conduct occur within a given organizational framework: "a church is an organization that manifests itself in this world through a visible structure for its maintenance, and that requires planning, decision-making, departments, and rules" (Adams, 1979, p. 12).

Based on this understanding, the Council of Baptist Churches in Mississippi presents the following as the specific and practical tasks of a pastor:

- Set a guideline of personal behavior according to the standards the Bible requires.
- Provide administrative abilities for the total church program.
- Lead the Bible study sessions.
- Prepare for and conduct worship services.
- Lead in the observance of the ordinances.
- Lead the church in proclaiming the gospel to the church and community.
- Visit members.
- Supervise other members of the church staff according to staff organization.
- Conduct premarital, vocational, family, bereavement, and counseling sessions as needed.
- Perform wedding ceremonies and conduct funeral services.
- Work with deacons, church officers, and committees in performing assigned responsibilities.
- Cooperate with and lead the church in cooperating with associational, state, and denominational leaders.
- Serve as a representative of the church in civic matters.
- Plan and promote periods of evangelistic emphasis for the unsaved and renewal for the Christians.
- Serve as chairman of the Church Leadership Team (Church Council) in planning, organizing, directing, coordinating, and evaluating the total church program. (Mississippi Baptist Convention Board, 2010).

When analyzing the tasks of a pastor, it is not difficult to see that tasks of spiritual aspects and tasks of administrative aspects intermingle with each other. In other words, spiritual works and administrative works coexist in pastoral tasks, and pastors are thus both spiritual leaders and administrative leaders. Accordingly, pastoral leadership needs to emphasize both administrative and spiritual aspects of leadership. When emphasis is placed equally on both aspects, one can begin to understand pastoral leadership as a process of influence and persuasion occurring in a church with the purpose of accomplishing the tasks of a church, and that such process includes

both spiritual and administrative works, based on God's visions and values. Moreover, pastoral leadership can also be thus understood as a process to satisfy the spiritual, moral, and relational needs of the laity.

2.3. Educational leadership

According to Leithwood et al. (2006), the term "educational leadership" is often used synonymously with "school leadership" and "educational administration" (pp. 16–17), stemming from the assertion that it refers to the process wherein school leaders guide the talents and energies of teachers, students, and parents toward achieving common educational aims. Similarly, Hoy and Hoy (2009) emphasize educational leadership as a process wherein educational leaders "promote the success of all students by advocating, nurturing, and sustaining a school culture and an instructional program conducive to student learning and staff's professional growth" (p. 2).

While Leithwood et al. (2006) and Hoy and Hoy (2009) focus on defining educational leadership as a member-focused process, Thomson (1992) and Cuban (2001) define the term from the opposite end of the spectrum. According to Thomson (1992), educational leadership guide educational leaders "to envision strengthened schools and be able to energize professionals and the community to bring about the conditions that will ensure high-quality educational product" (p. 10). In the same vein, educational leadership is defined by Cuban (2001) as the process that school leaders with specific goals efficiently and systematically operate their schools by doing instructional roles, managerial roles, and political roles.

From these assertions, it can, therefore, be said that educational leadership is a process wherein school leaders efficiently, effectively, and systematically lead, encourage, and help school members—including teachers, staff, students, and parents—attain educational goals in the process of operating their schools.

2.4. Literature review of educational leadership theories

Akin to pastoral leadership, educational leadership has the same organizational goals, which entails discussions of related concepts in terms of method, processes, culture, structure, and so on.

Marzano, Waters, and McNulty (2005) assert that educational leadership is considered to be vital to the successful functioning of many aspects of schooling. They thus presented important aspects of schooling that have been linked to educational leadership in a school building:

- Curriculum and instruction organization
- Classroom management of teachers
- Attitudes of teachers
- Overall climate and culture of the school, as well as the climate and culture in individual classrooms
- Safe and orderly environment

Palestini (1999) asserts the importance of organizational diagnosis in the studies of educational leadership: "an organizational diagnosis requires the educational administrator to systematically analyze the various aspects of the educational institution" (p. 249). In the checklist of organizational diagnosis, organizational structure, organizational culture, communication, and decision-making are included. Specifically, Palestini (1999) presents specific questions for the checklist (see Table 1).

Based on Marzano, Waters, and McNulty and Palestini, the following correlations are thus made:

- "the classroom management of teachers" is related to "decision-making";
- "the attitudes of teachers" is related to "communication";

Table 1.

Organizational structure	Organizational culture	Communication	Decision-making
Is there appropriate division of labor and is it flexible?	Does the organization exhibit a culture of mutual trust and respect?	How effective is the communication process?	What types of decisions are being made?
Is the division of labor conducive to reaching organizational goals?	Do perceptual distortions proliferate?	Is the correct communication style utilized under the proper conditions?	Is the group appropriately involved in decision-making?
Is the structure of the organization well designed?	Does the work force exhibit an internal locus of control?	What barriers to communication exist?	What barriers are there to effective decision-making?
Do work groups operate effectively?	What beliefs and values do the individuals in the organization have?	Is there a climate of mutual trust and respect?	What techniques are being used to overcome these barriers?
Are the best aspects of the classical, social systems and open-systems organizational structures present?	What functional and dysfunctional behaviors result from the individuals' attitude?	Do individuals use assertive, nonassertive, or aggressive communication?	
Does the organization's structure respond to the environmental contingencies?			

(Source: Palestini, 1999, pp. 249–251).

- "the overall climate and culture of the school and the climate and culture in individual classrooms," is related to "organizational culture"; and
- "safe and orderly environment" is related to "organizational structure."

Similar to the previously mentioned studies, Gorton (1980) also presents decision-making, communication, and group culture as major concepts in educational leadership. In addition, Hoy and Miskel (2013) present a structure in a school setting as a social system, which is one of the major studies in educational leadership.

Meanwhile, Thomson (1992) emphasizes instructional leadership studies in educational leadership: "school administrators are expected by the general public to be active leaders of the instructional program; the general public law anticipates that all pupils will master the tools of learning and apply those skills for knowledge acquisition" (p. 9). In the same vein, Piltch and Quinn (2011), Hoy and Hoy (2009), and Greenfield (1987) also emphasize the role of the school leader as the instructional leader.

Based on these previous researches, it can thus be said that major studies in educational leadership include:

(1) Instructional method
(2) Decision-making process
(3) Communicative method
(4) School culture
(5) School structure

Furthermore, each sector of the educational leadership studies can be divided into subparts, following suggestions from scholars in educational leadership introduced above (see Table 2).

Table 2.

Instructional method	Decision-making process	Communicative methods	School cultures	School structures
Authoritarian	Principal-driven decision-making	One-way	Culture of control	Authoritarian structure
Critical	Cooperative decision-making shared between principal and teacher	Two-way	Culture of collegiality	Weberian structure (the intermediate stage between authoritarian structure and professional structure)
Empirical	Teacher-driven decision-making			Professional structure

2.5. Pastoral administrative leadership based on the educational leadership theories

2.5.1. Instructional method

As for a pastor, preaching sermons is the most important instruction. Selby (2006) asserts that the apostle Paul links preaching and teaching in 1 Timothy 2:7 (New American Standard Bible Version) and 5:17 (New International Version): "For this I was appointed *a preacher* and an apostle as *a teacher* of the Gentiles in faith and truth" and "The elders who direct the affairs of the church well are worthy of double honor, especially those whose work is *preaching and teaching*." Thus, unlike a teacher, instructional methods for a pastor is more focused on efficient, effective, and systematic delivery of sermons with the Bible as educational contents.

Pastors who use authoritarian methods unilaterally deliver sermons and force laypersons to believe the content that they teach without any doubt or question. On the other hand, pastors who use the critical method respect the opinions and thoughts of laypersons, allowing them to view concepts from various perspectives by thinking critically in the process of understanding the contents of pastors' sermons. Moreover, some pastors emphasize interaction with the laity in an empirical learning method. In this method, pastors do not unilaterally deliver sermons to the laity; instead, pastors and laypersons approach God's truth based on mutual respect. For example, the Holy Communion is a representative empirical method in churches. According to the Protestant theology, pastors and the laity are equal participants of the Holy Communion in churches, and they experience God's truth and love through the Holy Communion (Ka, 2009).

2.5.2. Decision-making process

Pastors need the process of decision-making to establish policies, plans, projects, and programs for the church. Krejcir (2005) asserts that pastors should make "healthy decisions based on the Bible and character of Jesus Christ and not on personal agendas and political power trips" (p. 309). This is necessary if "pastors are to effectively establish unifying goals, to anticipate and adapt to change, to encourage leadership initiatives, and to ensure that budget allocations are in accord with ministry priorities" (Krejcir, 2005, p. 309).

In the process of pastor-driven decision-making, pastors have church data, such as revenue and expenditure, and do not open the data to church leaders (elders and deacons) or laypersons. Pastors unilaterally make decisions with the data, only notifying church leaders of their decisions. Then, they subsequently deliver the pastors' decisions to the laypersons. On the other hand, in the process of cooperative decision-making shared between pastor and laity, laity leaders play active roles in participating in the decision-making process. Pastors periodically hold meetings and share church data with laity leaders. During this type of meetings, pastors and laity leaders discuss issues of the church, share good ideas to develop the church, and make decisions together. Finally,

in the process of laity-driven decision-making, pastors give the laity the right to decide on church policies, programs, projects, and plans. Pastors encourage the laity to establish a layperson council wherein laity-led decision-making is implemented.

2.5.3. Communicative method

Krejcir (2005) asserts that "miscommunication is a sad fact of the church, so effective means of communication need to be established in order to connect the church's purpose with the leader's intentions" (p. 309). In churches, some pastors pursue a one-way communication strategy when interacting with the laity; they emphasize the efficiency of communication for attaining goals. On the other hand, pastors who use a two-way communication strategy strive to listen to the laity's thoughts, opinions, hopes, and needs. Furthermore, some pastors use counseling techniques for more effective utilization of two-way communication.

2.5.4. Church culture

Church culture should be mature and healthy. One of the key values that nurture a healthy, mature culture is a spirit of unity (Rivera, 2010). In Romans 15:5 (New International Version) and Ephesians 4:3 (New International Version), the apostle Paul emphasizes the importance of a spirit of unity: "May the God who gives endurance and encouragement give you a spirit of unity among yourselves as you follow Christ Jesus" and "Make every effort to keep the unity of the Spirit through the bond of peace."

In a culture of control, hierarchy between pastor and laypersons and among laypersons exits. The laity follows the decisions of their pastor, without question, with the belief that the decision of the pastor is the will of God. Among laypersons, controlling power is formed in accordance with the positions and roles. For example, the power of elders in the Korean *Jangro* is highly significant among laypersons; even seats for elders are reserved at the front of the chapel. On the other hand, in a collegial culture, pastors and laypersons are equal before God. In this culture, pastors encourage laypersons to respect their talents and expertise, as well as to share their knowledge and skills based on mutual trust with each other.

2.5.5. Church structure

Church structure is based on the purpose of the church. It develops a way for a group to organize its activities and to pursue its purpose. Thus, the church structure should provide an effective and efficient way for a church to pursue its mission. It should support the purposes and missions of a church, provide a way for congregations to belong, as well as provide a way for participation in tasks (Parish Life and Leadership Ministry Team of Local Church Ministries, 2005).

In an authoritarian structure, pastors select church leaders such as elders and deacons. Church leaders operate departments of the church according to the orders and commands of pastors. On the other hand, in a Weberian structure, pastors create a church structure wherein collaboration between pastors and laity leaders can take place. In a professional structure, pastors guarantee the autonomy of each department, as much as possible, by respecting the leaders' expertise, abilities, and talents of each department.

3. Methodology

3.1. Research design

To examine pastoral administrative leadership, five key dimensions of pastoral administrative leadership, based on suggestions from the research of Marzano et al. (2005), Palestini (1999), Gorton (1980), Hoy and Miskel (2013), Thomson (1992), Piltch and Quinn (2011), Hoy and Hoy (2009), and Greenfield (1987) in educational leadership, were selected. These were instructional method, decision-making process, communicative method, church culture, and church structure.

3.2. Study population and sample

The study population was comprised of full-time senior pastors of churches in South Korea. Even though there was no statistical data on the number of pastors, the total number of churches in South Korea was 77,966 in 2013 (Park, 2013).

A total sample of 1,000 was selected through a convenience sampling of Korean pastors, and the type of sampling frame available was the e-mail address information found on the Facebook club of Korean churches. The research is approved by the University of Florida Institutional Review Board (IRB02) UFIRB # 2014-U-0063.

3.3. Instrumentation

The data collection instrument used was a survey questionnaire containing 33 questions and composed of two sections. The first section consisted of 29 pastoral administrative leadership questions following the format of a seven-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = neutral, 5 = somewhat agree, 6 = agree, 7 = strongly agree). The second section consisted of four questions related to demographic information of pastors and institutional characteristics of the church wherein the participants work.

A preliminary version of the questionnaire was presented to an expert panel of five pastors for evaluation: two Korean pastors who work in South Korea; one Korean pastor who works in a Korean immigrant church in the US; one Korean–American pastor who works in an American church; and one American pastor who works in an American church. The diverse background of panel members may enhance the reliability and validity of the fairly new measurement scale through strict evaluation and concerted revision. The panel of five pastors was asked to review and remark on the instructions, content, and format of the questionnaire. They were also asked to review the relevance, clarity, and content validity. All of them agreed that the survey was too long. They suggested eliminating some ambiguous questions, combining some questions, and clarifying the intent of questions. Their suggestions and opinions were incorporated into the revised questionnaire. As a result, the numbers of questions were reduced from 59 to 33 questions (Appendix B and C). Through these processes, a five-factor measurement scale, the Scale of Pastoral Administrative Leadership (SPAL), was thus developed.

3.4. Variables

3.4.1. Dependent variables

To examine pastoral administrative leadership, the following five key dimensions of pastoral administrative leadership—instructional method, decision-making process, communicative method, church culture, and church structure—were thus selected. These dimensions were based on the researches of Marzano et al. (2005), Palestini (1999), Gorton (1980), Hoy and Miskel (2013), Thomson (1992), Piltch and Quinn (2011), Hoy and Hoy (2009), and Greenfield (1987) on educational leadership.

(1) Instructional method (Factor 1)

Factor 1 was measured by six questions (questions 1, 5, 7, 8, 12, and 16; see Appendix A) related to the instructional method. This variable measured whether participants emphasized authoritarian methods of teaching or not, as for a pastor, preaching sermons is the most important instruction.

(2) Decision-making process (Factor 2)

Factor 2 was defined by six questions (questions 4, 10, 11, 13, 19, and 26; see Appendix A). This variable ascertained whether the decision-making process in pastoral administrative leadership was focused on the pastor or the laity.

(3) Communicative method (Factor 3)

Factor 3 was measured by six questions (questions 14, 15, 21, 22, 28, and 29; see Appendix A). This variable measured whether participants used the method of one-way communication or two-way communication.

(4) Church culture (Factor 4)

Factor 4 was defined by six questions (questions 17, 18, 20, 24, 25 and 27; see Appendix A). This variable measured whether participants tried to foster a culture of control or culture of collegiality.

(5) Church structure (Factor 5)

Factor 5 was measured by 5 questions (questions 2, 3, 6, 9, and 23; see Appendix A). This variable measured whether participants pursued an authoritarian structure or a professional structure.

3.4.2. Independent variables

Four independent variables (church location, church size, years of ministry, and age) were examined for this study. Church location examined which city the church of a participant was in; church size examined the number of church members; years of ministry looked into how many years a participant had worked; and age measured the physical age of the participant. After conducting a survey, the independent variables were categorized on the basis of the distribution of participants.

(1) Church location

This variable was categorized as:

(1) Large city
(2) Medium city
(3) Small city

In the Korean context, a large city is normally understood as the capital (Seoul) or any of the six metropolitan cities (Busan, Incheon, Kwangju, Daejeon, Ulsan, and Daegu); a medium city refers to most cities (*Si*) in South Korea; and a small city (*Gun, Myun, or Li*) includes rural towns.

(2) Church size

This variable was classified as:

(1) Small church (1–100)
(2) Medium church (101–700)
(3) Large church (over 700)

(3) Years of ministry

This variable was categorized as:

(1) 1–5 years
(2) 6–10 years,
(3) Over 10 years

(4) Age

This variable was coded as:

(1) Under 45 years old
(2) 45–55 years old
(3) Over 55 years old

3.5. Data collection and analysis procedures

The researcher joined the Facebook club of Korean churches to be able to send messages to each pastor, obtain their e-mail addresses, and announce and promote this survey. For the main survey, the researcher sent messages to pastors on the Facebook club of Korean churches and requested their e-mail addresses. The researcher sent the pastors who had sent their e-mail addresses to him an e-mail survey. For the pastors who did not provide the researcher with their e-mail addresses, a survey questionnaire was made through Survey Monkey, a cloud-based online survey software, was sent and linked via Facebook message.

The data collected from the surveys were analyzed by the Statistical Package for the Social Sciences (SPSS), Version 18.0 and the SPSS Amos. Factor analysis was conducted for the purpose of improving the construct validity of the instrument. According to Gable (1986), the purposes of factor analysis are "to empirically examine the interrelationships between the questions and to identify clusters of items that share sufficient variation to justify their existence as a factor or construct to be measured by the instrument" (p. 85).

The researcher surveyed 1,000 Korean pastors with the survey questionnaire. Based on the response rate, it was found that 404 pastors (40.4%) participated in this survey.

4. Data analysis

Demographic and institutional information was obtained from the collected data. First, with regard to church location, 28.4% (n = 115) worked in large cities, 36.4% (n = 147) worked in medium cities, and 35.2% (n = 142) worked in small cities. Second, with regard to church size, 38.6% (n = 156) ministered in small churches, 24.8% (n = 100) ministered in medium churches, and 36.6% (n = 148) ministered in large churches. Third, regarding years of ministry, about half of the participants (48.7%, n = 197) were within the 1- to 5-year range, 21.1% (n = 85) were within the 6- to 10-year range, and 30.2% (n = 122) were over 10 years. Finally, with regard to the age of the pastor, 34.7% (n = 140) were under 45 years of age, 36.4% (n = 147) were within 45 to 55 years old, and 28.9% (n = 117) were over 55 years old.

In order to empirically examine the interrelationships between the questions as well as to identify clusters of items that share sufficient variation to justify their existence as a factor or construct to be measured by the instrument, factor analysis was conducted (Gable, 1986, p. 85). Exploratory factor analysis (EFA) in the SPSS and confirmatory factor analysis (CFA) in the SPSS Amos were used. EFA is not an a priori specification of the number of latent factors underlying the data. In EFA, the analysis results are used to explore the number and nature of the underlying latent factors. On the other hand, CFA is an a priori specification of the number and nature of latent factors underlying the data; in CFA, the analysis results determine if the a priori specification is confirmed by the data (Raykov & Marcoulides, 2011).

4.1. Results of the exploratory factor analysis (EFA)

The results of the factor analysis are as follows (Appendix D and E): a principal component factor analysis with varimax rotation from item 1 to item 29 was conducted to examine the psychometric property of the pastoral administrative leadership scale (dependent variables). The results of the factor analysis showed that five of the factors explained 86.050% of the variation in pastoral administrative leadership. The eigenvalues for each factor was greater than 1.00, indicating that the amount of variance explained by each of the factors was statistically significant.

A Cronbach's alpha reliability procedure was used to determine the internal consistency of the questions (1–29). The overall alpha coefficient of .901 reflected a high degree of internal consistency in the questions (Dooley, 2000).

Looking closely at the result of each factor, Factor 1 (instructional method) explained 18.452% of the variation of the instructional method in pastoral administrative leadership with an eigenvalue

of 5.351. A Cronbach's alpha coefficient of .965 on Factor 1 indicated a high degree of reliability. Factor 2 (decision-making process) indicated 33.011% of the variation of the decision-making process in pastoral administrative leadership with an eigenvalue of 9.573. A Cronbach's alpha coefficient of .971 on Factor 2 showed a high degree of internal consistency. Factor 3 (communicative method) explained 15.123% of the variation of the communicative method in pastoral administrative leadership with an eigenvalue of 4.386. A Cronbach's alpha coefficient of .965 on Factor 3 indicated a high degree of reliability. Factor 4 (church culture) accounted for 10.832% of the variation of the church culture in pastoral administrative leadership with an eigenvalue of 3.141. A Cronbach's alpha coefficient of .964 on Factor 4 showed a high degree of internal consistency. Factor 5 (church structure) indicated 8.632% of the variation of the church structure in pastoral administrative leadership with an eigenvalue of 2.503. A Cronbach's alpha coefficient of .957 on Factor 5 indicated a high degree of reliability.

4.2. Results of the confirmatory factor analysis (CFA)

In order to confirm the factor structure of the pastoral administrative leadership scale, the items and factors were entered into the SPSS Amos. Based on the results of the CFA, the reliability and validity of the measurement scale were assessed whether it fits the measurement model, and both convergent and discriminant validity were subsequently examined. To test the overall fit, χ2 goodness-of-fit, root mean square error of approximation (RMSEA), comparative fit index (CFI), Tucker-Lewis index (TLI), and standardized root mean square residual (SRMR) were used.

The first order measurement model included 29 items representing 5 factors, which achieved a good fit to the data (χ^2/df = 664.022/367 = 1.809, RMSEA = .063 < 90 % CI: 056, .071>, CFI = .967, TLI = .966, SRMR = .069). In addition, the second order CFA generally achieved a good fit to the data (χ2/df = 681.296/372 = 1.831, RMSEA = .064 < 90 % CI: 057, .072>, CFI = .966, TLI = .966, SRMR = .125). The first order measurement model outperformed the second order measurement model based on SRMR.

Factor loadings ranged from .88 to .97. All factor loadings were greater than a conservative threshold of .70 (Hair, Black, Babin, & Anderson, 2009; see Table 3). Good CFA model fit and high factor loadings provided empirical evidence of convergent validity of the measures in each construct (Anderson & Gerbing, 1988). The reliability estimates were investigated using reliability coefficients, construct reliability, and average variance extracted (AVE) for each factor. Reliability coefficients ranged from .962 (communicative method) to .984 (decision-making process; see Table 3). The construct reliability ranged from .961 (communicative method) to .983 (decision-making process). All AVE measures were greater than the .50 standard (Hair et al., 2009), ranged from .807 (communicative method) to .908 (decision-making process; see Table 3). The results indicated that the items used in this study showed high reliability in measuring key constructs.

Additionally, AVE values for all constructs were greater than the corresponding squared inter-factor correlations (Fornell & Larcker, 1981). Correlations among research variables ranged from .050 to .548. All factor correlations were below .70, indicating discriminant validity among the study measures (Kline, 2005; see Table 4). Table 5 shows the correlations between items. Taken together, the results provided strong support for the reliability and convergent and discriminant validity of the measurement scales (Hair, Anderson, Tatham, & Black, 1998).

5. Conclusion

The purpose of this study was to develop a measurement scale to examine pastoral administrative leadership by recognizing that pastoral leadership has been defined narrowly, and research on pastoral leadership has been limited to its spiritual aspects. Thus, the focus of this study, designed as a quantitative study, was on the administrative domains of pastoral leadership. Furthermore, administration-focused pastoral leadership can be measured quantitatively, while spiritual-focused pastoral leadership is difficult to measure through quantitative research. Such kind of

Table 3. Factor loadings, reliability coefficients, construct reliability, and AVE

Factors and items	Γ	A	CR	AVE
Instructional method		.981	.981	.899
I like preaching sermons to the laity unilaterally.	.93			
I enjoy using an authoritarian method of delivering sermons.	.96			
I like explaining the content of my sermons to the laity.	.96			
I recognize myself as a teacher and the laity as my students.	.96			
I believe that the laity must accept my sermons without any doubt.	.95			
I feel uncomfortable when the laity discusses my sermons.	.93			
Decision-making process				
I like the laity being involved in the church's decision-making process.	.95	.984	.983	.908
The laity leads to the development of programs, policies, and projects for my church.	.95			
I share information on current issues in the church with the laity.	.97			
I delegate the right of decision-making to the laity rather than having it myself.	.95			
Final decisions for the church are reached by the laity.	.94			
I trust the laity's opinions.	.96			
Communicative method		.962	.961	.807
I use counseling techniques when I talk with the laity.	.89			
I allow the laity to openly express their complaints.	.92			
I like listening to the laity's words.	.93			
I strive to empathize with the laity's words.	.88			
I do not use commanding words.	.88			
I easily speak words of cheer and praise to the laity.	.89			
Church culture		.977	.976	.874
The laity trusts each other.	.94			
When a new church member joins, the laity sincerely welcomes him or her.	.95			
The laity is eager to help other laypersons who are in a difficult situation.	.95			
The laity cooperatively does church work.	.94			
The laity's ideas are valued by the other laity.	.92			
The laity equally treats each other, regardless of church position and years of attendance.	.91			
Church structure		.972	.973	.880
I strive to guarantee autonomy among church departments.	.91			
I cannot easily control all departments in the church structure.	.94			
All church departments have their unique roles and professional tasks.	.95			
All departments of my church are cooperatively linked to one another.	.96			
There is no hierarchy among departments in my church structure.	.93			

Table 4. Factor correlation matrix for pastoral administrative leadership factors

	1	2	3	4	5
Instructional method	1				
Decision-making	.115	1			
Communicative method	.104	.203	1		
Church culture	.186	.346	.372	1	
Church structure	.050	.548	.271	.380	1

Table 5. Item correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
I1	1														
I2	.88 1	1													
I3	.892	.93	1												
I4	.881	.918	.925	1											
I5	.895	.901	.914	.914 1	1										
I6	.860	.902	.873	.887	.894	1									
D1	.199	.132	.224	.169	.158	.097	1								
D2	.122	.064	.158	.105	.103	.048	.915	1							
D3	.141	.062	.168	.118	.125	.044	.935	.921	1						
D4	.073	.008	.109	.075	.063	.006	.886	.906	.919	1					
D52	.113	.043	.139	.120	.104	.050	.874	.889	.905	.930	1				
D63	.144	.064	.162	.125	.129	.0400	.915	.901	.935	.921	.923	1			
C1	.076	.083	.132	.136	.077	.117	.206	.202	.219	.233	.205	.217	1		
C2	.089	.081	.133	.139	.097	.100	.198	.199	.213	.224	.203	.216	.881	1	
C3	.105	.107	.147	.160	.130	.131	.199	.191	.207	.216	.197	.212	.830	.853	1
C4	.058	.041	.087	.106	.046	.056	.157	.133	.154	.152	.155	.150	.731	.788	.839
C5	.003	.005	.037	.059	.017	.027	.157	.166	.183	.199	.169	.166	.781	.784	.800
C6	.090	.100	.120	.149	.118	.1211	.110	.138	.133	.139	.118	.109	.782	.792	.841
U1	.213	.170	.186	.207	.216	.159	.295	.337	.277	.294	.306	.303	.332	.352	.393
U2	.211	.155	.184	.186	.202	.162	.305	.341	.303	.316	.339	.320	.324	.322	.354
U3	.191	.168	.162	.183	.190	.151	.297	.326	.298	.280	.281	.298	.315	.313	.337
U4	.176	.105	.135	.149	.169	.129	.325	.366	.334	.330	.315	.327	.306	.308	.358
U5	.201	.144	.167	.182	.190	.142	.303	.354	.313	.319	.327	.336	.320	.327	.336
U6	.173	.118	.148	.165	.168	.125	.310	345	.304	.319	.318	.328	.356	.3677	.397
S1	.108	.010	.058	.024	.064	.031	.506	.505	.508	.447	.475	.513	.220	.226	.205

(*Continued*)

Table 5. (*Continued*)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
S2	.039	.035	.003	.030	.014	.020	.487	.531	.496	.450	.473	.508	.278	.293	.257
S3	.101	.034	.085	.055	.076	.074	.499	.526	.525	.478	.500	.521	.292	.276	.231
S4	.095	.037	.078	.051	.078	.074	.507	.552	.531	.480	.506	.515	.269	.238	.231
S5	.057	.014	.049	.045	.064	.046	.480	.525	.519	.472	.497	.504	.305	.298	.258
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
I1															
I2															
I3															
I4															
I5															
I6															
D1															
D2															
D3															
D4															
D52															
D6 3															
C1															
C3															
C4	1														
C5	.834	1													
C6	.794	.814	1												
U1	.337	.312	.351	1											
U2	.289	.307	.317	.915	1										

(*Continued*)

Table 5. (*Continued*)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
U3	.276	.273	.309	.899	.898	1									
U4	.282	.290	.297	.814	.905	.912	1								
U5	.258	.275	.282	.868	.869	.86	.880	1							
U6	.334	.343	.346	.870	.852	.856	.857	.864	1						
S1	.116	.176	.175	.278	.30	.280	.307	.295	.305	1					
S2	.197	.249	.244	.319	.318	.314	.336	.312	.342	.891	1				
S3	.172	.252	.256	.317	.350	.334	.366	.345	.377	.859	.880	1			
S4	.156	.241	.249	.363	.390	.374	.398	.364	.409	.857	.890	.926	1		
S5	.201	.257	.267	.353	.356	.368	.370	.349	.394	.830	.867	.885	.888	1	

administration-focused research on pastoral leadership that can be measured quantitatively, with the support of theories and practices on educational leadership, can definitely help with understanding a pastor's practical tasks in a church.

SPAL, developed for this study, with five factors (instructional method, decision-making process, communicative method, church culture, and church structure) has a high level of reliability and validity, following the factor analyses (EFA and CFA) results. This means that SPAL can show the characteristics of pastoral administrative leadership and can be used in the pastoral leadership studies that are focused on the administrative aspects of leadership.

With these, this study can be the starting point to perform an interdisciplinary study between pastoral administrative leadership and educational leadership, as well as to measure pastoral leadership focused on administrative aspects of leadership. This study will serve as a momentum to remind pastors, theologians, and laypersons of the "pastor" as an administrative leader, and that further studies on diverse kinds of leadership in organizations (companies, hospitals, NGOs, etc.) as well as pastoral administrative leadership in churches will be performed by administration and management scholars and educators for the development of various types of measurement scale to examine leadership.

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Appendix A

Questions According to Each Factor

Description of Factor 1

Factor 1. Instructional method

1. I like preaching sermons to the laity unilaterally.
5. I enjoy using an authoritarian method of delivering sermons.
7. I like explaining the content of my sermons to the laity.
8. I recognize myself as a teacher and the laity as my students.
12. I believe that the laity must accept my sermons without any doubt.
16. I feel uncomfortable when the laity discusses my sermons.

(Deleted Questions)
I do not allow the laity to make comments and suggestions for my teaching.
I do not ask questions to the laity in my teaching.
I do not approach the truth on the basis of interdependent relationships with the laity in the process of teaching.
I dislike using experience learning activities in my teaching.
I do not try to learn from the laity's experiences, thoughts, and opinions.

Description of Factor 2

Factor 2. The process of decision-making

4. I like the laity being involved in the church's decision-making process.
10. The laity leads to the development of programs, policies, and projects for my church.
11. I share information on current issues in the church with the laity.
13. I delegate the right of decision-making to the laity rather than having it myself.
19. Final decisions for the church are reached by the laity.
26. I trust the laity's opinions.

(Deleted Questions)
I encourage the laity to present new ideas, thoughts, and opinions.
I trust the laity's judgments.
I use the laity's opinions in operating the church.
I share church data with the laity.
I present the visions for the church to the laity.
The visions for the church reflect the interest of the laity.

Description of Factor 3

Factor 3. Communicative method

14. I use counseling techniques when I talk with the laity.
15. I allow the laity to openly express their complaints.
21. I like listening to the laity's words.
22. I strive to empathize with the laity's words.

(Deleted Questions)
I verbally praise the laity when they carry out church tasks well.
I can talk with the laity comfortably.
I feel very close with the laity.
I do not scold the laity when they make a mistake.
The laity opens their secret to me.

Description of Factor 4

Factor 4. Church culture

17. The laity trusts each other.
18. When a new church member joins, the laity sincerely welcomes him or her.
20. The laity is eager to help other laypersons who are in a difficult situation.
24. The laity cooperatively does church work.
25. The laity's ideas are valued by other laity.
27. The laity equally treats each other, regardless of church position and years of attendance.

(Deleted Questions)
The laity shares a large portion of their lives with each other.
When one of the church members leaves the church, others miss him or her.
The laity respects others' expertise in doing church work.
The laity is willing to try new things and take risks.
The laity comfortably participates in family events with each other.

Description of Factor 5

Factor 5. Church structure

2. I strive to guarantee autonomy among church departments.
3. I cannot easily control all departments in the church structure.
6. All church departments have their unique roles and professional tasks.
9. All departments of my church are cooperatively linked to one another.
23. There is no hierarchy among departments in my church structure.

(Deleted Questions)
All departments of my church have equal authority and power in the same level.
I want a relation-oriented structure.
The leaders of each department in my church are selected by the laity.
Small group gatherings are emphasized in my church.
The church structure reflects the interest of the laity.

Appendix B

Survey Questionnaire

To what extent do you disagree or agree with the following statements?
Please place an X in the appropriate box to rate each statement on the following scale:
1 = Strongly disagree 2 = Disagree 3 = Somewhat disagree 4 = Neutral
5 = Somewhat agree 6 = Agree 7 = Strongly Agree

Question	①	②	③	④	⑤	⑥	⑦
1. I like preaching sermons to the laity unilaterally.							
2. I strive to guarantee autonomy among church departments.							
3. I cannot easily control all departments in the church structure.							
4. I like the laity being involved in the church's decision-making process.							
5. I enjoy using an authoritarian method of delivering sermons.							
6. All church departments have their unique roles and professional tasks.							
7. I like explaining the content of my sermons to the laity.							
8. I recognize myself as a teacher and the laity as my students.							
9. All departments of my church are cooperatively linked to one another.							
10. The laity leads to the development of programs, policies, and projects for my church.							
11. I share information on current issues in the church with the laity.							
12. I believe that the laity must accept my sermons without any doubt.							
13. I delegate the right of decision-making to the laity rather than having it myself.							
14. I use counseling techniques when I talk with the laity.							
15. I allow the laity to openly express their complaints.							
16. I feel uncomfortable when the laity discusses my sermons.							
17. The laity trusts each other.							
18. When a new church member joins, the laity sincerely welcomes him or her.							
19. Final decisions for the church are reached by the laity.							
20. The laity is eager to help other laypersons who are in a difficult situation.							
21. I like listening to the laity's words.							
22. I strive to empathize with the laity's words.							
23. There is no hierarchy among departments in my church structure							

(*Continued*)

24. The laity cooperatively does church work.							
25. The laity's ideas are valued by other laity.							
26. I trust the laity's opinions.							
27. The laity equally treats each other regardless of church position and years of attendance.							
28. I do not use commanding words.							
29. I easily speak words of cheer and praise to the laity.							

Demographic & Institutional Information

1. Where is your church located? ( )

(1) Large City (2) Medium City (3) Small City

2. How many church members do you have? ( )

3. How many years have you worked in your church? ( )

4. What is your age? ( )

Appendix C

Survey Questionnaire (Including Deleted Questions)

To what extent do you disagree or agree with the following statements?
Please place an X in the appropriate box to rate each statement on the following scale:
1 = Strongly disagree 2 = Disagree 3 = Somewhat disagree 4 = Neutral
5 = Somewhat agree 6 = Agree 7 = Strongly Agree

Question	①	②	③	④	⑤	⑥	⑦
1. I like explaining the content of my sermons to the laity.							
2. I do not try to learn from the laity's experiences, thoughts, and opinions.							
3. I feel uncomfortable when the laity discusses my sermons.							
4. I feel very close with the laity.							
5. All departments of my church are cooperatively linked to one another.							
6. I strive to guarantee autonomy among church departments.							
7. I enjoy using an authoritarian method of delivering sermons.							
8. I verbally praise the laity when they carry out church tasks well.							
9. I like the laity being involved in the church's decision-making process.							
10. I use the laity's opinions in operating the church.							

(*Continued*)

(Continued)							
11. I believe that the laity must accept my sermons without any doubt.							
12. I recognize myself as a teacher and the laity as my students							
13. I like preaching sermons to the laity unilaterally.							
14. I trust the laity's opinions.							
15. I share information on current issues in the church with the laity.							
16. I do not ask questions to the laity in my teaching.							
17. The visions for the church reflect the interest of the laity.							
18. I present the visions for the church to the laity.							
19. I allow the laity to openly express their complaints.							
20. I encourage the laity to present new ideas, thoughts, and opinions.							
21. I do not approach the truth on the basis of interdependent relationships with the laity in the process of teaching.							
22. I use counseling techniques when I talk with the laity.							
23. The laity leads to the development of programs, policies, and projects for my church.							
24. Small group gatherings are emphasized in my church.							
25. I like listening to the laity's words.							
26. When one of the church members leaves the church, others miss him or her.							
27. I dislike using experience learning activities in my teaching.							
28. The laity trusts each other.							
29. I strive to empathize with the laity's words.							
30. I want to relation-oriented structure.							
31. I do not allow the laity to make comments and suggestion for my teaching.							
32. I trust the laity's judgments.							
33. I do not use commanding words.							
34. I delegate the right of decision-making to the laity rather than having it myself.							
35. Final decisions for the church are reached by the laity.							
36. The laity equally treats each other regardless of church position and years of attendance.							
37. I easily speak words of cheer and praise to the laity.							
38. The laity opens their secret to me.							
39. The laity cooperatively does church work.							
40. There is no hierarchy among departments in the church structure.							
41. I do not scold the laity when they make a mistake.							
42. The laity is willing to try new things and take risks.							
43. I can talk with the laity comfortably.							
44. When a new church member joins, the laity sincerely welcomes him or her.							
45. The laity comfortably participates in family events with each other.							

(*Continued*)

46. The laity shares a large portion of their lives with each other.							
47. The laity respects others' expertise in doing church work.							
48. I cannot easily control all departments in the church structure.							
49. The church structure reflects the interest of the laity.							
50. The leaders of each department in my church are selected by the laity.							
51. All church departments have their unique roles and professional tasks.							
52. The laity's ideas are valued by other laity.							
53. The laity is eager to help other laypersons who are in a difficult situation							
54. I share church data with the laity.							
55. All departments of my church have equal authority and power in the same level.							

Demographic & Institutional Information

1. Where is your church located? ( )

(1) Large City (2) Medium City (3) Small City

2. How many church members do you have? ( )

3. How many years have you worked in your church? ( )

4. What is your age? ( )

Appendix D

Exploratory Factor Analysis in the Results

Communalities

Communalities		
	Initial	**Extraction**
Item1	1.000	.893
Item2	1.000	.821
Item3	1.000	.874
Item4	1.000	.894
Item5	1.000	.694
Item6	1.000	.874

(*Continued*)

(Continued)

Communalities		
	Initial	**Extraction**
Item7	1.000	.894
Item8	1.000	.904
Item9	1.000	.888
Item10	1.000	.853
Item11	1.000	.887
Item12	1.000	.890
Item13	1.000	.854
Item14	1.000	.766
Item15	1.000	.868
Item16	1.000	.878
Item17	1.000	.839
Item18	1.000	.871
Item19	1.000	.881
Item20	1.000	.860
Item21	1.000	.901
Item22	1.000	.904
Item23	1.000	.829
Item24	1.000	.905
Item25	1.000	.868
Item26	1.000	.896
Item27	1.000	.770
Item28	1.000	.857
Item29	1.000	.842
Extraction Method: Principal Component Analysis.		

Total Variance Explained

Total Variance Explained									
Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	9.573	33.011	33.011	9.573	33.011	33.011	5.265	18.155	18.155
2	5.351	18.452	51.463	5.351	18.452	51.463	5.179	17.859	36.015
3	4.386	15.123	66.586	4.386	15.123	66.586	5.164	17.808	53.822
4	3.141	10.832	77.418	3.141	10.832	77.418	5.124	17.670	71.492
5	2.503	8.632	86.050	2.503	8.632	86.050	4.222	14.558	86.050
6	.405	1.398	87.448						
7	.392	1.351	88.799						
8	.373	1.286	90.085						
9	.290	.998	91.083						
10	.270	.930	92.013						
11	.244	.841	92.854						
12	.209	.720	93.575						
13	.183	.630	94.205						
14	.168	.579	94.783						
15	.158	.546	95.330						
16	.148	.512	95.842						
17	.143	.494	96.336						
18	.130	.449	96.785						
19	.115	.395	97.180						

(*Continued*)

(Continued)

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
20	.113	.391	97.571						
21	.105	.363	97.934						
22	.098	.339	98.273						
23	.093	.319	98.592						
24	.090	.311	98.903						
25	.071	.243	99.147						
26	.069	.236	99.383						
27	.066	.228	99.611						
28	.061	.212	99.823						
29	.051	.177	100.000						

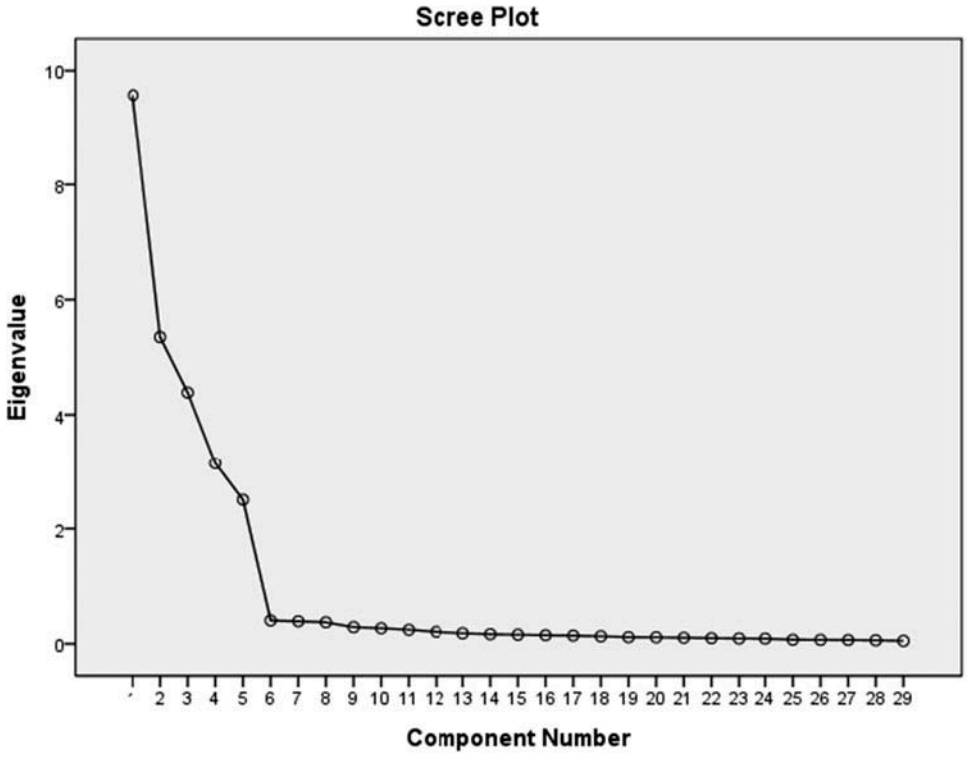
Extraction Method: Principal Component Analysis.

Rotated Component Matrix

Rotated Component Matrix[a]					
	Component				
	1	2	3	4	5
Item4	.918	−.082	.080	.077	.177
Item11	.907	−.098	.097	.159	.145
Item19	.899	−.025	.048	.174	.202
Item26	.897	−.035	.115	.162	.224
Item10	.894	−.019	.035	.168	.155
Item13	.887	−.109	.048	.168	.157
Item8	−.008	.947	−.005	.002	−.087
Item7	−.030	.939	−.015	.015	−.109
Item12	−.055	.937	−.033	.079	−.042
Item1	−.093	.936	−.005	.042	−.075
Item16	−.003	.932	−.045	.039	−.076
Item5	−.144	.813	−.013	−.032	−.108
Item22	.060	.012	.941	.109	.050
Item21	.034	−.010	.936	.135	.067
Item15	.070	−.050	.919	.095	.082
Item28	.080	−.065	.915	.034	.093
Item29	.055	−.032	.899	.124	.123
Item14	.087	.024	.862	.114	.044
Item24	.159	.019	.175	.910	.146
Item25	.130	.098	.096	.904	.123
Item18	.153	.013	.152	.900	.118
Item17	.144	−.038	.056	.893	.128
Item20	.192	.001	.085	.886	.173
Item27	.108	.059	.090	.851	.151
Item6	.201	−.066	.039	.169	.894
Item9	.195	−.089	.096	.205	.889
Item3	.200	−.182	.091	.124	.881
Item23	.226	−.090	.106	.164	.855
Item2	.190	−.106	.139	.160	.854

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Scree Plot



Appendix E

Reliability Analysis in the Results

Factor 1

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.965	.965	6

Factor 2

Inter-Item Correlation Matrix						
	Item1	Item5	Item7	Item8	Item12	Item16
Item1	1.000	.731	.876	.888	.872	.856
Item5	.731	1.000	.744	.715	.729	.700
Item7	.876	.744	1.000	.885	.856	.868
Item8	.888	.715	.885	1.000	.880	.877
Item12	.872	.729	.856	.880	1.000	.868
Item16	.856	.700	.868	.877	.868	1.000

Factor 3

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.971	.971	6

Factor 4

Inter-Item Correlation Matrix						
	Item4	Item10	Item11	Item13	Item19	Item26
Item4	1.000	.818	.882	.857	.840	.884
Item10	.818	1.000	.842	.785	.890	.829
Item11	.882	.842	1.000	.853	.832	.867
Item13	.857	.785	.853	1.000	.830	.853
Item19	.840	.890	.832	.830	1.000	.865
Item26	.884	.829	.867	.853	.865	1.000

Factor 5

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.957	.957	5

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