Profiles of Entrepreneurs: Discriminant and Cluster Analyses of the Romans 12 Motivational Gifts and Locus of Control as Predictors of Entrepreneurs

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ABSTRACT: The purpose of this quantitative exploratory research was to conduct discriminant and cluster analyses to see if the Romans 12 motivational gifts and locus of control predict membership in the entrepreneurial member group and consequently discover motivational gift profiles of entrepreneurs. Four hundred business leaders participated. Both hypotheses were supported, revealing all seven motivational gifts predicted those who were entrepreneurial and those who were not. Five distinct entrepreneurial motivational gift mixes/profiles were established.

KEYWORDS: cluster analysis, discriminant analysis, entrepreneurial orientation, entrepreneurship, innovativeness, locus of control, motivational gifts, proactiveness, risk-taking, Romans 12

INTRODUCTION

The purpose of this study was to see if the Romans 12 motivational gifts and locus of control (Brandstätter, 2011; Hansemark, 2003; J. R. Lumpkin, 1985; Mueller & Thomas, 2001; Rauch & Frese, 2007; Rotter, 1966) predict membership in either the entrepreneur or non-entrepreneurial (business leaders) member groups and consequently discover the motivational gift profiles of entrepreneurs. This study continued the exploratory studies of the Romans 12 motivational gifts and its implications related to job fit and job satisfaction for law enforcement employees (McPherson, 2008), college professors (Tomlinson & Winston, 2011), nurses (Tomlinson, 2012), the military (Earnhardt, 2014), and entrepreneurs (Pierce, 2015).

Winston (2009) argued that when people are in positions that match their motivational gift profile, they are not only self-motivated to perform their tasks but also more likely to aid society in the establishment of strong and viable businesses. There are no studies that examine the motivational gifts profiles of entrepreneurs.

Romans 12 Motivational Gifts

When people serve according to their giftedness, they serve competently and bring God's power and presence to others with love and grace (Bugbee, 2005). Motivational gifts appear to characterize fundamental motivations—inherent predispositions that characterize each distinct person by virtue of the Creator's unique workmanship in His creation (Walker, 2002).

The seven motivational gifts of Romans 12 are perceiving, serving, teaching, encouraging, giving, leading, and exhibiting mercy.

Perceiving. According to Dellavecchio and Winston (2015), the motivational gift of perceiving "is the extraor-

dinary ability to discern and proclaim truth" (p. 4). Fortune and Fortune (2009) called it the perceiver gift; we chose this as well to avoid confusion with the 1 Corinthians 12 pericope. The gift of perceiving (prophecy) in Romans 12 stems from the Greek word *propheteia* meaning manifesting, revealing, showing forth, making known, and uncovering vital information essential for spiritual living and development (C. Bryant, 1991; Dellavecchio & Winston, 2015).

Serving. Wagner (1979) remarked the gift of *serving* is the God-given capacity to determine the unmet needs involved in a task and to employ available resources to meet those needs and help achieve the desired goals without concern or desire for recognition or rank; this is not one-to-one, person-centered-like mercy. Rather it is task-oriented (Dellavecchio & Winston, 2015). Strong (1890) reported the Greek word for serving is *diakonia*, meaning to aid.

Teaching. The gift of *teaching* is the exceptional God-given ability to discern, analyze, and clearly communicate information and truth in such a way that others will learn (C. Bryant, 1991; Bugbee et al., 1994; Dellavecchio & Winston, 2015; Flynn, 1974; Kinghorn, 1976; McRae, 1976; Wagner, 1979, p. 127). The Greek word for teaching is *didaskalia*, which means to illuminate, clarify, elucidate, simplify, and illustrate for the purposes of communication and comprehension (C. Bryant, 1991; Strong, 1890).

Encouraging. The gift of *encouraging* is a God-given ability to call forth the best in others by ministering words of encouragement, consolation, and comfort such that others feel helped and healed (Dellavecchio & Winston, 2015; Wagner, 1979). The Greek word for encouraging is *parakaleo* or *paraklesis*; it has two parts—one is a *call*, and the other is *companionship*. Together, they mean to be with and for another, to exhort, edify, and comfort (C. Bryant, 1991, p. 77; Dellavecchio & Winston, 2015; Strong, 1890; Winston, 2009).

Giving. The gift of *giving* is the God-given ability to comprehend the material needs of people and then generously meet those needs (Dellavecchio & Winston, 2015). C. Bryant (1991) remarked, "The ability to manage one's resources of income, time, energy, and skills to exceed what is considered to be a reasonable standard for giving" (p. 85). The Greek word for giving is *metadidomi*, meaning to turn or to give over, transfer, or share (Dellavecchio & Winston, 2015; Strong, 1890).

Ruling. Dellavecchio and Winston (2015) asserted, "The gift of ruling is the God-given ability to set goals in accordance with God's purpose for the future and to communicate these goals to others in a way they harmoniously work together for the glory of God" (p. 5). The Greek word for ruling is *proistemi*, which means to stand over and place over and is translated as *rule* (Dellavecchio & Winston, 2015; Strong, 1890).

Mercy. The gift of *mercy* is the God-given, extraordinary ability to feel genuine empathy and compassion for those who suffer distressing mental, physical, emotional, social, and spiritual pain (C. Bryant, 1991, p. 114; Dellavecchio & Winston, 2015) and to translate that compassion into deeds done cheerfully (Dellavecchio & Winston, 2015; Wagner, 1979, p. 223). The Greek word for mercy is *eleeo*, which translated means *have compassion on* (Dellavecchio & Winston, 2015; Strong, 1890).

Gift Mix

Wagner (1979) suspected most or perhaps all Christians have what one would call a Gift Mix (p. 40). Like Dellavecchio and Winston's study, the current research focuses on the gifts of Romans 12 and suggests that the Romans 12 gifts exist as a mix or pattern of all seven gifts. This study's research method consists of conducting discriminant and cluster analyses of the Romans 12 motivational gifts and locus of control as predictors of the entrepreneur and non-entrepreneurial member groups.

Entrepreneurship and Entrepreneur

Darling and Beebe (2007) described successful entrepreneurship as a process of leading through direct involvement and example; it generates value for organizational stakeholders by collecting altogether a product or service innovation and package of resources to respond to an identified opportunity. Bennett (2014) declared the entrepreneur is viewed as a strategic entity significantly influencing the fruitful launch, sustainment, and expansion of new ventures and generating a great number of benefits for the community. G. T. Lumpkin and Dess (1996) suggested entrepreneurs "don't 'see' the risks that others see, or, alternatively, they see non-entrepreneurial behavior as far [riskier]" (p. 164).

Zhao, Seibert, and Lumpkin (2010) remarked, "Failure as an entrepreneur can be costly to society in terms of missed opportunities and lost resources and can

be devastating to the individual entrepreneur in terms of its financial and psychological impacts" (p. 399). Therefore, our study provides a useful focus on individuals called *entrepreneurs* to uncover their motivational gift cluster profile and explore the correlations of each motivational gift in relationship to their IEO, believing this will help not only individuals and their potential for success but also leaders of governments, firms, and the academy who are seeking to find individuals within their organizations who are a good match for participation in entrepreneurial projects and endeavors.

Entrepreneurial Orientation

Fritz (2006) declared EO has been established as an overall strategic gestalt purposive in assessing business performance. He asserted firms have rapidly been seeking ways to become more adaptive and innovative to compete in the growing dynamic global economy and affirmed undoubtedly the EO construct with its accentuation on innovativeness, risk-taking, and proactiveness is a current and prevalent strategic option broadly being discussed (G. T. Lumpkin & Dess, 1996; Lyon, Lumpkin, & Dess, 2000).

G. T. Lumpkin and Dess (1996) reported the key dimensions that characterize an EO consist of a disposition to act autonomously, a willingness to innovate and take risks, and a propensity to be aggressive toward competitors and proactive in relation to marketplace opportunities (p. 137). They believed the EO construct represents the process facet of entrepreneurship (p. 165). Bolton and Lane (2012) articulated although EO and traits have been evaluated for "university students in some academic research (Gurol [&] Atsan, 2006; Levenburg [&] Schwarz, 2008; Raposo et al., 2008), there has never been a thorough assessment and validation of the EO construct at the individual level" (p. 220). Yet according to numerous empirical studies (see Rauch, Wiklund, & Lumpkin, 2009, for a summary), EO is a key causal factor in the success of organizations. Thus, they created a validated measure for individuals rather than organizations (p. 220).

Individual Entrepreneurial Orientation

D. W. Bryant (2015) argued since current research focuses on the individual rather than the firm, it is logical to incorporate a validated measure for individuals rather than firms. He asserted based on the entrepreneurial work of G. T. Lumpkin and Dess (1996), Bolton and Lane (2012) designed, validated, and tested the IEO instrument (D. W. Bryant, 2015). Stevenson and Jarillo (1990) posited, "The plethora of studies on entrepreneurship can be divided in three main categories: *what* happens when entrepreneurs act, *why* they act, and *how* they act" (p. 18). Their work offers a favorable emphasis on the entrepreneur as an individual and on the notion that "individual human beings—with their background, environment, goals, values, and motivations—are the real objects of analysis" (p. 18).

Bolton and Lane (2012) argued comprehending EO at the individual level "could also be valuable to future business owners, to business incubators and to potential investors who are considering supporting business proposals" (p. 220). Therefore, the current authors researched the EO of individuals and built on the notion that researching individual human beings, specifically in the area of their motivational gifts and EO, fills an important gap in the research.

Dimensions of Individual Entrepreneurial Orientation

Utilizing exploratory factor analysis, Bolton and Lane (2012) revealed three of five distinct dimensions of EO demonstrating reliability and validity: innovativeness, risk-taking, and proactiveness (p. 219, 229; D. W. Bryant, 2015). Likewise, Rauch, et al. (2009) asserted, "Based on Miller's (1983) conceptualization, three dimensions of EO have been identified and used consistently in the literature: innovativeness, risk-taking, and proactiveness" (p. 763). According to Bolton and Lane, utilization of the measurement of IEO may indicate how successful individuals might be as entrepreneurs (p. 223). Thus, the current research uses the IEO measurement to conduct discriminant and cluster analyses on the Romans 12 motivational gift clusters and locus of control (Brandstätter, 2011; Hansemark, 2003; J. R. Lumpkin, 1985; Mueller & Thomas, 2001; Rauch & Frese, 2007; Rotter, 1966) as predictors of membership in either the entrepreneur or non-entrepreneurial (business leaders) member groups as well as a canonical correlation analysis of the seven motivational gifts and three dimensions of IEO (Bolton & Lane, 2012; D. W. Bryant, 2015).

Locus of Control

Dorsa (2007) indicated entrepreneurs and intrapreneurs are frequently self-directed individuals with one of

their inclinations to act being intently related to locus of control, self-efficacy, learned optimism, drive, and the need to achieve. Bennett (2014) shared, "The entrepreneur leader possesses an internal locus of control and self-efficacy with an orientation that is innovative, proactive, and able to sense opportunity" (p. 6).

D. Miller noted several investigators (D. Miller, Kets de Vries, & Toulouse, 1982; Shapero, 1975) have maintained entrepreneurial behavior such as innovation, risk-taking, and proactiveness are strongly associated with locus of control (p. 778).

Rotter (1966) asserted when individuals view an event as contingent upon their own behavior or their own relatively permanent characteristics, it is termed as a belief in internal control; those who experience having control over occurrences have an internal locus of control. In this present study, we conducted a discriminant analysis of the Romans 12 motivational gifts and locus of control to see if we could predict membership into an entrepreneurial group, as determined using the IEO.

Research Questions and Hypotheses

Following are the research questions under investigation in this study:

RQ_1: Can we use the Romans 12 motivational gifts to predict entrepreneurs?

RQ_2: Can we use locus of control to predict entrepreneurs?

RQ_3: What is the motivational gift profile of entrepreneurs?

Following are the hypotheses under investigation in this study:

H_1: Discriminant analysis using the seven motivational gifts of perceiver, server, teacher, encourager, giver, ruler, and mercy predict membership in the entrepreneurial group as identified by a score above the median in each of the three dimensions of the IEO—innovativeness, risk taking, and proactiveness.

H_2: The motivational gift clusters of entrepreneurs reveal several entrepreneurial gift mixes/profiles.

METHOD

A near equal number of entrepreneur and non-entrepreneur participants were sought primarily using the business social media platform LinkedIn. The sample population for this study was business leaders and managers of profit, nonprofit, government, and education organizations.

Castelli, Egleston, and Marx (2013) stated social media has become a prominent source for connecting with others globally. An international character of a researcher sample population is particularly needed today with scholars' and practitioners' emphasis on skills, developments, and requirements for competent global leadership (Castelli et al., 2013). Castelli et al. argued the use of SMN offers sound methods for accessing and gaining potential participants for research studies; it also improves the credibility and quality of survey results from international professionals with real-world experience.

The data in this study were collected via an online SurveyMonkey survey using various SMNs. The first step to enlisting participants on LinkedIn was to connect with the lead author's 1,050 personal LinkedIn connections. The snowball method was also utilized to gain an even broader reach than the author's direct connections. Castelli et al. (2013) described a snowball sample as one in which investigators collect data on the few members of the target population they can locate and then asks those participants to provide information needed to locate other members of that population whom they know. Additionally, the lead author joined business leader and entrepreneurial groups on LinkedIn as a crucial aspect of connecting with others and cultivating relationships. LinkedIn makes this process quite user-friendly (Castelli et al., 2013).

The three data collection instruments used in this study were: (a) the Motivational Gift Test (Dellavecchio & Winston, 2015), (b) the Brief Locus of Control instrument (J. R. Lumpkin, 1985), and (c) the IEO instrument (Bolton & Lane, 2012).

The 29 items of the motivational gifts test used a scale of 0-5 (0 = *no behavior occurs* to 5 = *the behavior occurs all the time*) (Dellavecchio & Winston, 2015). The current research utilizes Bolton and Lane's (2012) IEO instrument, for three of the dimensions (i.e., innovativeness, risk-taking, and proactiveness), which statistically correlated with measures of entrepreneurial intention (Bolton & Lane, 2012). "Cronbach's [alphas] on all three dimensions meet Nunally and Bernstein's (1994) standard for scale development studies of 0.7" (Bolton & Lane, 2012, p. 228). Item reduction and scale purification, along with

the results of the factor analysis, resulted in a 10-item measurement with the three subscales that propose a measure of IEO that is content valid and reliable with construct validity (p. 228). Items are measured using a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*) (Bolton & Lane, 2012, p. 226).

J. R. Lumpkin (1985) argued of the many scales proposed to measure locus of control, the majority were too long to use efficiently in survey research in which locus of control is not the primary focus; thus, he created a six-item scale from Rotter's (1966) scale using a 5-point Likert format advocated by Levenson (1974). The scale has a Cronbach's alpha of .68 that compared "favorably with the range of .65 to .79 documented by Rotter (1966).

Demographic information of the current study's participants were collected in the demographic profile of the online survey questionnaire and included age, educational level, continent lived in, gender, cultural region identification, current position or role, length of work service, business leader field (government, education, for-profit, non-profit), years worked in current job or role, annual compensation, religious affiliation, entrepreneurial belief, number of years as an entrepreneur, and number of entrepreneurial endeavors.

Data Analysis Procedure

First, frequencies summarized the characteristics of the research participants. Second, we converted responses to the Romans 12 motivational gifts into a percentage score instead of the total raw score. Each respondent was graded on a 100-point scale for each motivational gift, which was then used for cluster analysis, which identifies homogeneous subgroups of cases in a population when the investigator does not know the number of groups ahead of time yet wants to determine groups and then analyze group membership (Tomlinson, 2012). Third, a discriminant analysis was conducted on the seven motivational gifts and locus of control for all participants to predict membership in either of the two entrepreneurial groups. A dummy variable indicated the absence or presence of IEO (entrepreneur or non-entrepreneurial member). Fourth, results of the cluster analysis revealed the motivational gift profiles of entrepreneurs. Lastly, results were assessed as to the generalizability of the Romans 12 gifts as predictors of entrepreneurs for both Christian and non-Christian business leaders alike.

Discriminant Analysis. Rovai, Baker, and Ponton (2014) posited that discriminant analysis is a parametric operation that depicts or predicts membership in two or more mutually exclusive groups from a set of predictors when there is no innate ordering on the groups. It is much like multiple regression with the chief difference being that in discriminant analysis the DV is categorical rather than continuous (p. 548). Discriminant function analysis predicted a categorical dependent variable (entrepreneur vs. Non-entrepreneurial member), called a grouping variable, by one or more continuous or binary independent variables (seven Rom 12 motivational gifts) called predictor variables. Hair, Black, Babin, and Anderson (2010) explained the technique for two classifications entails a two-group discriminant analysis and necessitates extracting a variate. "The discriminant variety is the linear combination of the two (or more) independent variables that will discriminate best between the objects (persons, firms, etc.) in the groups defined a priori" (p. 239).

Hair et al. (2010) elaborated that discrimination is accomplished by calculating the variate's weights for each separate independent variable to magnify the differences between the groups (e.g., the between-group variance relative to the within-group variance). The discriminant score for each object in the analysis was a summation of the values gained by multiplying each distinct independent variable by its discriminant weight. The average discriminant scores for all the individuals within a specific group was the mean that is called a centroid. When an analysis entails two groups, there are two centroids; with three groups, three centroids; and so on. The centroids showed the most typical location of any member from a specific group, and a comparison of the group centroids demonstrated how far apart the groups were with regard to that discriminant function (Hair et al., 2010, pp. 239-240).

RESULTS

Table 1 illustrates the demographics reported by the 422 respondents. The demographic profile showed that 68% were 46+ years of age, 95% were Christian, 80% were Anglo culture, 67% worked in business, and 62% were owners or middle-managers. Table 2 shows the Cronbach's Alpha scores for the measurement scales.

Table 1: Demographics

Variable	Frequency	%	Cum. %
Age			
18-25	9	2.1	2.2
26-35	45	10.7	12.9
36-45	76	18.0	31.2
46-55	152	36.0	67.6
55+	135	32.0	100.0
Total	417	98.8	
Education level			
High school	14	3.3	3.4
Some college	82	19.4	23.0
Bachelor's degree	130	30.8	54.2
Master's degree	134	31.8	86.3
Doctoral/Professional degree	57	13.5	100.00
Total	417	98.8	
Gender			
Male	179	42.4	43.1
Female	236	55.9	100.00
Total	415	98.3	
Continent where one lives			
Europe	3	0.7	0.7
Asia	5	1.2	1.9
Africa	5	1.2	3.1
North America	401	95.0	99.5
South America	1	0.2	99.8
Australia and Oceania	1	0.2	100.0
Total	416	98.6	
Cultural region identification			
Latin America	14	3.3	3.4
Middle East	1	0.2	3.6
Nordic Europe	9	2.1	5.8
Anglo	339	80.3	88.1
Sub-Saharan Africa	8	1.9	90.0
Eastern Europe	4	0.9	91.0
Latin Europe	6	1.4	92.5
Confucian Asia	14	3.3	95.9
Southern Asia	3	0.7	96.6
Germanic Europe	14	3.3	100.0
Total	412	97.6	
Business leader field			
For profit	159	37.7	38.5
Nonprofit	121	28.7	67.8
Government	18	4.3	72.2
Education	115	27.3	100.0

Table 1: Demographics (*continued*)

Variable	Frequency	%	Cum. %
Total	413	97.9	
Tradition or beliefs			
Buddhism	2	0.5	0.5
Christianity	395	93.6	95.4
Judaism	3	0.7	96.2
Other	4	0.9	97.1
None	12	2.8	100.0
Total	416	98.6	
Current position or role			
Entry-level management	62	14.7	15.2
Middle management	116	27.5	43.6
Executive leader/Senior director	80	19.0	63.2
Vice president	35	8.3	71.8
Owner/President/CEO	102	24.2	96.8
Board of directors	13	3.1	100.0
Total	408	96.7	
Length of work service			
< 1 year	32	7.6	7.8
1-2 years	50	11.8	20.0
3-5 years	72	17.1	37.5
6-10 years	84	19.9	57.9
11 15 years	59	14.0	72.3
16-20 years	33	7.8	80.3
20+ years	81	19.2	100.0
Total	411	97.4	
Annual income level			
$0-$25,000	34	8.1	8.4
$25,001-$50,000	78	18.5	27.6
$50,001 $75,000	93	22.0	50.5
$75,001-$100,000	70	16.6	67.7
$100,001-$125,000	43	10.2	78.3
$125,001-$150,000	30	7.1	85.7
$150,001-$175,000	12	2.8	88.7
$175,001-$200,000	12	2.8	91.6
$200,001+	34	8.1	100.0
Total	406	96.2	
Years as an entrepreneur			
0-3 years	33	7.8	15.6
3-6 years	21	5.0	25.6
6-9 years	19	4.5	34.6
10+ years	138	32.7	100.0
Total	211	50.0	
Entrepreneurial endeavors			
0	92	21.8	25.9

Table 1: Demographics (*continued*)

Variable	Frequency	%	Cum. %
1	63	14.9	43.7
2 3	111	27.0	75.8
4	20	4.7	81.4
5+	66	15.6	100.0
Total	355	84.1	

Table 2: Reliability Results

Variable	*Number of Items*	Cronbach's *a*
Motivational gift: Perceiver	4	.71
Motivational gift: Server	4	.56
Motivational gift: Teacher	4	.64
Motivational gift: Encourager	4	.76
Motivational gift. Giver	4	.66
Motivational gift: Ruler	4	.71
Motivational gift: Mercy	5	.84
Internal locus of control	3	.49
External locus of control	3	.42
IEO: Risk taking	3	.76
IEO. Innovativeness	4	.77
IEO: Proactiveness	3	.69

Discriminant Analysis

Hypothesis 1 stated discriminant analysis using the seven motivational gifts of perceiver, server, teacher, encourager, giver, ruler, and mercy predicts membership in the entrepreneurial group as identified by a score above the median in each of the three dimensions of the IEO—innovativeness, risk-taking, and proactiveness. This method of classification has been used in social science studies (Bem, 1974; Gottfredson, 2009; Horowitz, et al., 1997) but has lost favor because of the reduction of statistical power when used for independent variables (MacCallum, Zhang, Preacher, & Rucker, 2002), but since this method was used to categorize the dependent variable, we used it here in that it does not impact statistical power analysis. A discriminant analysis was conducted by SPSS Version 23 on the seven motivational gifts to predict membership in either the entrepreneur or non-entrepreneurial member groups.

Discrimination was accomplished by calculating the variate's weights for each separate independent variable to magnify the between-group variance relative to the within-group variance. The average discriminant scores for all the individuals within the entrepreneur group was the mean called a centroid (Hair et al., 2010, pp. 239-240). A two-step Wilks' lambda was utilized to test if the discriminant model as a whole was significant and evaluated each of the seven motivational gifts (i.e., independent variables) to ascertain which differed significantly in mean by group (Rovai et al., 2014, p. 431). The cutting points

Table 3: Means, Standard Deviations, and *N*

Variable	0 ($N = 346$)	1 ($N = 76$)	Total ($N = 422$)
Motivational gift: Perceiver	.61 (.16)	.69 (.15)	.62 (.16)
Motivational gift: Server	.65 (.13)	.64 (.13)	.64 (.13)
Motivational gift: Teacher	.62 (.16)	.74 (.16)	.64 (.17)
Motivational gift: Encourager	.60 (.18)	.68 (.19)	.61 (.18)
Motivational gift: Giver	.56 (.17)	.61 (.19)	.57 (.18)
Motivational gift: Ruler	.66 (.15)	.78 (.13)	.68 (.15)
Motivational gift: Mercy	.53 (.19)	.55 (.20)	.53 (.19)

Note. Standard deviations are in parentheses. 0 = Nonentrepreneur; 1 = Entrepreneur.

Table 4: Classification Results[b,c]

		Entrepreneurial	Predicted group membership		
			0	1	Total
Original	Count	No	251	95	346
		Yes	22	54	76
	%	No	72.5	27.5	100
		Yes	28.9	71.1	100
Cross-validated[a]	Count	No	251	95	346
		Yes	24	52	76
	%	No	72.5	27.5	100
		Yes	31.6	68.4	100

[a]Cross-validation is done only for those cases in the analysis. In cross-validation, each case is classified by the functions derived from all cases other than that case.
[b]Of original grouped cases, 72.3% correctly classified.
[c]Of cross-validated grouped cases, 71.8% correctly classified.

set ranges of the discriminant score to classify cases into each category of dependent variable—entrepreneur or non-entrepreneur group. If the discriminant score of the function was less than or equal to the cutoff, the case was classed as 0 (non-entrepreneurial) or, if above, it was classed as 1 (entrepreneur) (Rovai et al., 2014, p. 437).

The motivational gifts above the centroid of all three IEO scales (1) were perceiver, teacher, encourager, giver, and ruler, predicting entrepreneurial members, while the motivational gifts below the centroid of all three IEO scales (0) were server and mercy, predicting non-entrepreneurial members. The classification analysis in Table 4 reveals 72% of the cases were successful at classifying entrepreneurial and non-entrepreneurial members.

Hypothesis 1 was supported. The first research question asked if we can use the Romans 12 motivational gifts to predict entrepreneurs. Discriminant analysis was utilized to test Hypothesis 1 and revealed five of seven motivational gifts (perceiver, teacher, encourager, giver, and ruler) predicted entrepreneurial members (76) while two motivational gifts (server and mercy) predicted non-entrepreneurial members (346).

Cluster Analysis Results: Profiles of the Romans 12 Gifts and Entrepreneurs

Hypothesis 2 stated the motivational gift clusters of entrepreneurs will reveal several entrepreneurial gift mixes/profiles. Cluster analysis was run to extend the

Table 5: Final Cluster Centers

Variable	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Perceiving%	61.67	70.71	62.75	92.50	74.44
Serving%	61.67	55.00	64.50	80.83	67.22
Teaching%	72.22	56.43	75.25	99.17	78.89
Encouraging%	58.61	80.00	51.00	85.00	82.22
Giving%	38.61	54.64	72.75	82.50	66.39
Ruling%	73.06	76.07	75.00	95.83	82.50
Mercy%	30.67	48.00	58.80	80.00	70.22

Table 6: ANOVA Romans 12 Motivational Gifts Between Clusters

Variable	Cluster		Error		*F*	Sig.
	MS	*df*	*MS*	*Df*		
Perceiving%	1409.24	4	154.91	71	9.10	.00
Serving%	781.01	4	135.59	71	5.76	.00
Teaching%	2159.63	4	155.00	71	13.93	.00
Encouraging%	3688.45	4	151.85	71	24.29	.00
Giving%	3908.33	4	156.55	71	24.97	.00
Ruling%	735.73	4	138.72	71	5.30	.00
Mercy%	4884.16	4	134.00	71	36.45	.00

scholarly work of Dellavecchio and Winston (2004, 2015), Earnhardt (2014), McPherson (2008), Pierce (2015), Tomlinson and Winston (2011), and Winston's (2009) Romans 12 motivational gifts to identify profiles of entrepreneurs from the seven-scale instrument created to measure the Romans 12 motivational gifts. The purpose of the cluster analysis was to establish a set of clusters (or groups of motivational gifts) minimizing within-group variation while also maximizing between-group variation. Following Dellavecchio and Winston's research and subsequent established methods (Earnhardt, 2014; McPherson, 2008; Pierce, 2015; Tomlinson, 2012; Tomlinson & Winston, 2011), preliminary data analysis of the tallied results was essential, particularly related to transforming the total raw score of responses to the Romans 12 motivational gifts into a percentage score to avoid any statistical errors in light of unequal item numbers across the seven motivational gifts (Earnhardt, 2014; Pierce, 2015).

A two-step approach was used starting with hierarchical cluster analysis and squared Euclidean distance metric, then Ward's (1963) minimum variance clustering algorithm established initial cluster centroids; subsequent statistical testing was run with iterative partitioning K-means cluster analysis (Aldenderfer & Blashfield, 1984; McPherson, 2008; Pierce, 2015; Tomlinson, 2012). Five entrepreneurial cluster groups emerged from the two-step cluster analysis (see Table 5) and were confirmed by statis-

Table 7: Independent-Sample *t* Test Mean and Standard Deviation Group Statistics of the Entrepreneur and Non-Entrepreneur Groups

Variable	Entrepreneurial	*N*	*M*	*SD*	*SEM*
Perceiving%	No	346	60.45	16.18	.87
	Yes	76	69.08	14.89	1.71
Serving%	No	346	64.51	12.91	.69
	Yes	76	64.01	13.04	1.50
Teaching%	No	346	61.91	15.90	.86
	Yes	76	73.82	16.18	1.86
Encouraging%	No	346	59.65	17.66	0.95
	Yes	76	68.22	18.45	2.12
Giving%	No	346	56.26	17.10	.92
	Yes	76	60.59	18.89	2.17
Ruling%	No	346	66.10	14.72	.79
	Yes	76	78.15	13.06	1.50
Mercy%	No	346	53.11	18.54	0.97
	Yes	76	54.53	19.68	2.26

Table 8: Cluster Centers of Motivational Gifts Scales Using High, Medium, and Low

Variable	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
	N = 18	*N* = 14	*N* = 20	*N* = 6	*N* = 18
Perceiver	Medium	High	Medium	High	High
Server	Medium	Medium	Medium	High	High
Teacher	High	Medium	High	High	High
Encourager	Medium	High	Medium	High	High
Giver	Medium	Medium	High	High	Medium
Ruler	High	High	High	High	High
Mercy	Low	Medium	Medium	High	High

tically strong analysis of variance (ANOVA) scores of .00 for all seven motivational gift scales (see Table 6).

A *t* test between the entrepreneur and non-entrepreneur groups was run for the seven motivational gifts determining mean percentages (see Table 7).

Based on Dellavecchio and Winston's (2015) research, means and standard deviations were determined, calculated by a percentage score, and converted and labeled into three categories: high (above 67%), medium (above 33% but less than 67%), and low (less than 33%). This was done to follow the analysis process of prior studies by DellaVechio and Winston (2015), McPherson (2008), Tomlinson and Winston (2011), Tomlinson (2012), and Earnhardt (2014). Three levels of each gift produce 3^7, or 2,187, possible clusters compared to using the percentage score that would be 100^7, or 100 trillion possible clusters. Table 8 demonstrates five distinct entrepreneurial cluster groups/profiles. Of the 76 respondents classified as entrepreneurial, 18 were assigned to Cluster 1, 14 to Cluster 2, 20 to Cluster 3, 6 to Cluster 4, and 18 to Cluster 5, answering Research Question 3 by demonstrating five distinct profiles of entrepreneurs.

Cluster 1 confirmed high levels in teacher and ruler scales; medium in perceiver, server, encourager, and giver scales; and low in the mercy scale. Cluster 2 confirmed high levels in perceiver, encourager, and ruler scales and a profile of medium in the remaining scales (server, teacher, giver, and mercy). Cluster 3 confirmed high levels

in teacher, giver, and ruler scales and medium levels in perceiver, server, encourager, and mercy scales. Cluster 4 confirmed a profile of high levels in all seven scales. Cluster 5 confirmed a profile of high levels in all scales with only one scale, giver, at the medium level.

Hypothesis 2 was supported. Cluster analysis was utilized to test Hypothesis 2 and revealed five distinct entrepreneurial gift mixes/profiles.

DISCUSSION

The purpose of this quantitative exploratory research was to conduct discriminant and cluster analyses to see if the Romans 12 motivational gifts and locus of control (Brandstätter, 2011; Hansemark, 2003; J. R. Lumpkin, 1985; Mueller & Thomas, 2001; Rauch & Frese, 2007; Rotter, 1966) predict membership in the entrepreneurial member group and consequently discover the gift profiles of entrepreneurs (Dellavecchio & Winston, 2015; Pierce, 2015).

This research contributes to and extends empirical research; fills intriguing gaps in the literature; has significant implications in the advancement of entrepreneurial leadership theory; and serves as a chief building block for future research in motivational gifts, leadership, and entrepreneurial studies. First, for the field of leadership and study of motivational gifts, this research responded to Winston's (2009) call to examine a particular group of employees—in this instance, business leaders—to look for motivational gift patterns of entrepreneurs. This research confirmed entrepreneurs have unique motivational gift clusters different from other professions previously studied. Findings from this study support Dellavecchio and Winston's (2015) inaugural research by exploring the seven Romans 12 motivational gifts in the population of business leaders who were empirically tested as entrepreneurs.

Second, for the field of entrepreneurship, findings from this study support the psychological/sociological approach founded by McClelland (1961) and Collins and Moore (1964), offering a useful focus on the individual and on the notion that individual human beings with their background, environment, goals, values, and motivations, are important objects of analysis.

Limitations

Several limitations are associated with the research methodology presented in this research. First, this investigation utilized self-report measures vulnerable to common method variance susceptible to influence by social desirability biases when respondents desire to present themselves in the most positive and favorable light (McPherson, 2008; Podsakoff & Organ, 1986). For instance, when collecting data, the investigators asked individuals to go further than merely reporting a specific fact or finite event and to engage in a cognitive, higher-order process, "a process involving not only recall but weighting, inference, prediction, interpretation, and evaluation" (Podsakoff & Organ, 1986, p. 533; Tomlinson, 2012, p. 85).

Second, the examinations of the relationships between primary variables of the seven Romans 12 motivational gifts and the three behaviors of IEO through a cross-sectional survey did not allow us to make definitive causal inferences. Specifically, the observed statistically significant positive relationships must be interpreted as correlational, not causal, in nature; the nature of the relationship observed serves as a baseline for future investigation or replication of the study (D. W. Bryant, 2015).

Third, because of the cross-sectional nature of this study, we were limited to discovering the Romans 12 motivational gifts and IEO for a designated time point; therefore, the results cannot be used to generalize future results. Fourth, results of the reliability test for the Brief Locus of Control Scale did not support scale reliability. Lastly, there were limitations in the sample demographics of this research. Although the results can be generalized to a Christian population in North America due to a high percentage of Christian respondents, there were not enough non-Christian respondents from throughout the globe to generalize to non-Christian populations or enough respondents outside of North America to generalize to other continents around the globe.

Recommendations for Future Research

Future testing is suggested with diverse populations to achieve generalizability. Although the investigator intentionally and actively sought a diverse population through LinkedIn and the snowball method, respondents in this study were predominantly Christian business leaders in North America. To generalize the results to non-Christians from throughout the globe, future examiners must test the Romans 12 motivational gifts in other continents and on a non-Christian population.

CONCLUSION

This quantitative, exploratory research extended the scholarly work of Dellavecchio and Winston (2004, 2015), Earnhardt (2014), McPherson (2008), Pierce (2015), Tomlinson and Winston (2011), and Winston's (2009) Romans 12 motivational gifts profiles by addressing the seven Romans 12 motivational gifts in a new population—entrepreneurs (as tested by the IEO instrument). Further, the purpose of this study was to conduct discriminant and cluster analyses to see if the Romans 12 motivational gifts and locus of control (Brandstätter, 2011; Hansemark, 2003; J. R. Lumpkin, 1985; Mueller & Thomas, 2001; Rauch & Frese, 2007; Rotter, 1966) predict membership in the entrepreneurial member group and consequently provide the means to discover the gift profiles of entrepreneurs (Dellavecchio & Winston, 2015; Pierce, 2015). Both hypotheses were supported offering academic implications in leadership and entrepreneurial theories, motivational gift studies, as well as practical implications in government, for-profit and nonprofit business, and education fields. In general, this study shifted the focus of entrepreneurial activity from firms' EO to individuals' EO.

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