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Jolanta Babiak[1]
Wrocław University of Technology

Polish Managers' Leadership Styles: Developing and Validating the Managerial Styles of a Leading Questionnaire

Abstract:

This article develops a new measure for assessing leadership styles. A six-factor solution was identified in exploratory factor analysis (n = 139) and then was verified in confirmatory factor analysis (n = 477). The final questionnaire encompasses 51 items grouped into six dimensions: *structuring*, *autocratic*, *participative*, *Machiavellian*, *rewarding*, and *distant*. The scales' internal consistency range from.61 to.79. Internal validity was initially supported by intercorrelations among six leadership styles. External validity was verified through correlation analysis between leadership styles and personality traits of the Costa & McCrae (1995) five-factor model.

Keywords:

leadership styles, managerial behaviours, questionnaire development, factor analysis

Streszczenie:

Niniejszy artykuł przedstawia konstrukcję nowej metody do pomiaru stylów kierowania. W wyniku eksploracyjnej analizy czynnikowej (n =139) zidentyfikowano 6-czynnikowe rozwiązanie, które zostało zweryfikowane po przeprowadzeniu konfirmacyjnej analizy czynnikowej (n = 477). Ostateczna wersja skali obejmuje 51 pozycji zgrupowanych w 6 następujących wymiarach: *strukturyzujący*, *autokratyczny*, *partycypacyjny*, *makiaweliczny*, *nagradzający*, *zdystansowany*. Spójność wewnętrzna skal waha się od.61 do.79. Trafność wewnętrzna została wstępnie potwierdzona w wyniku analizy interkorelacji między sześcioma stylami kierowania. Trafność zewnętrzna została zweryfikowana przeprowadzając analizę korelacji między stylami kierowania a cechami osobowości pięcioczynnikowego modelu Costy i McCrae (1995).

Słowa kluczowe:

style kierowania, zachowania menedżerskie, konstrukcja kwestionariusza, analiza czynnikowa

[1] Jolanta Babiak, Department of Psychology and Ergonomics, Institute of Organization and Management, Wrocław University of Technology, Smoluchowskiego 25, 50-372 Wrocław; jolantababiak@yahoo.com.

Introdution

Systematic research on leadership styles dates back to the democratic/autocratic/*laissez-faire* distinction developed by Lewin, Lippit, and White (1939). One- or two-dimensional leadership models, such as authoritarian-democratic, initiating structure-considerate, and task-oriented/–people-oriented have dominated early works on leadership (see Stogdill, 1974 for review). Since the early 80's research was mainly carried out within the so-called neocharismatic paradigm (House & Aditya, 1997), which resulted in developing new leadership theories, such as charismatic (Shamir, House, & Arthur, 1993), transformational (Bass & Riggio, 2006), and visionary (Kouzes & Posner, 2002). More recently, however, other conceptions have been introduced, which focus primarily on moral aspects of leadership, for example, ethical leadership (Brown, Trevino, & Harrison, 2005), servant leadership (van Dierendonck & Nuijten, 2011), and authentic leadership (Neider & Schriesheim, 2011). Researchers have also examined the "darker side" of leadership (Hogan & Hogan, 2001) focusing on such topics as toxic leadership (Steele, 2011), abusive supervision (Tepper, 2000), and destructive leadership (Einarsen, Aasland, & Skogstad, 2007). In every case, be it the classic approach, charismatic paradigm or destructive-dysfunctional conceptions of leadership, scholars were developing specific tools to measure leadership behaviour in accordance with a particular theory or model. However, there are some important concerns raised in the literature regarding the validity of existing leadership behaviour measures.

To begin with, the general weaknesses in the classic school of thought reside in an overly simplistic approach to measuring leadership styles. In classic models, namely, the autocratic-democratic (Tannenbaum & Schmidt, 1958), task-oriented–relations-oriented (Fiedler, 1971), initiation-consideration (Fleishman, 1953), and performance-oriented–maintenance-oriented (Misumi & Peterson, 1985), leadership is measured along a particular dimension. This two-tier approach to leadership has been criticized mainly for too superficially handling a very complex phenomenon (e.g. House & Aditya, 1997; Tracy, 1987; Yukl, Gordon, & Taber, 2002). To conquer this weakness, researchers introduced multidimensional models of leadership behaviour, most notably the transformational-transactional model validated with the Multifactor Leadership Questionnaire (MLQ) (Bass, 1990). While transformational leadership received substantial empirical support with respect to cognitive and personality correlates, as well as predictive power for performance and effectiveness criteria (see Bass & Riggio, 2006 for review), the structure of the MLQ measure has not been maintained in replication studies (e.g. Den Hartog, Muijen, & Koopman, 1997; Heinitz, Liepmann, & Felfe, 2005; Kanste, Miettunen, & Kyngas, 2006). Other multidimensional measures, such as the Leadership Profile Inventory based on the visionary leadership theory by Kouzes & Posner (2002), or measures

of authentic leadership (Neider & Schriesheim, 2011) have not been widely tested in empirical studies.

In addition, a large portion of measurement issues discussed in the literature pertains to the lack of cross-cultural validity of leadership models and their respective instruments (see e.g. Ayman and Korabik, 2010 for discussion). Concerns are raised with respect to methodological problems, ambiguous wording, cross-cultural variations in specific behaviours of generalized leadership styles (Smith, Misumi, Tayeb, Peterson, & Bond, 1989), or, as with MLQ, a lack of structural sustainability across cultures.

Leadership theories and many empirical findings suggest that diversified leadership behaviours often time cluster into general categories of person-oriented and task-oriented leadership styles. In other words, behaviours concerned with maintaining social settings such as consideration (Stogdill, 1974), concern for people (Blake and Mouton, 1982), and relations-oriented behaviours (Fiedler, 1971; Hersey, Blanchard, and Johnson, 2001) are strongly positively intercorrelated (Edwards, Rode, and Ayman, 1989). Similar conclusions hold for leading styles concerned with getting the job done, such as initiating structure (Stogdill, 1974), concern for production (Blake and Mouton, 1982), and task-oriented behaviours (Fiedler, 1971; Hersey et al., 2001). Also, it has been empirically demonstrated that both of these general leadership styles display positive (Jones, James, and Bruni, 1975; Judge, Piccolo, and Illies, 2004; Weissenberg and Kavanagh, 1972) and negative relationships with each other (Edwards et al. 1989). It seems that results about interrealtionships between the two general leadership categories are still inconclusive. These differing results might point to the fact that leaders actively participate in organizational processes via various forms of leading styles (Bass and Bass, 2008), not one particular behavioural pattern. Nevertheless, it is worth investigating further how leadership behaviours relate to each other.

Leadership styles have also been widely studied in relation to various traits within the so-called trait leadership paradigm. It has been suggested that, among many different traits, personality characteristics, such as sociability, conscientiousness, dominance, adaptability, and proactivity (see e.g. Zaccaro, Kemp, & Bader 2004 for review), are predictive of various leadership criteria, namely, leadership styles, group performance, unit effectiveness, employee satisfaction, employee turnover rates, and so on. Among various personality inventories used in leadership studies, NEO-FFI's five-factor model (Costa & McCrae, 1995) for measuring personality (Big Five) has provided considerable explanatory and predictive power for the five different personality leadership style domains. Using the Big Five model, it's been demonstrated that extraversion is positively associated with transformational leadership or its components (e.g. Bono & Judge, 2004; Judge & Bono, 2000; Ployhart, Lim, & Chan, 2001) as measured by the Multifactor

Leadership Questionnaire (Bass, 1990), which encompasses such behaviours as serving as role models, motivating and inspiring followers, encouraging innovation and creativity, and individually considering followers needs and issues (Bass & Riggio, 2006). Openness to Experience has also been found to significantly correlate with transformational leadership components (e.g. Judge & Bono, 2000; Ployhart et al. 2001). Kaiser and Hogan (2011) have provided evidence that adjustment, a concept related to emotional stability, is positively associated with enabling leadership (interpersonally oriented), but was not related to task-oriented behaviours. In the most recent metaanalysis, DeRue and others (2011) demonstrated that agreeableness and extraversion predicted considerate leadership behaviours, which reflected the leader's interpersonal orientation. DeRue and others (2011) have also provided evidence, in agreement with earlier research, that conscientiousness is positively related to task-oriented behaviours. In all, research has suggested varying relationships of particular leadership behaviours with personality traits measured by the five-factor model.

As presented in the above overview of past and current empirical investigations, the researche mainly concentrated on examining leadership behaviour along two grand dimensions of person orientation and task focus. There is insufficiency in conceptualising leadership behaviour as consisting of multiple and diverse behaviours. Also, there are different results as to the direction of relationships between general categories of person-oriented and task-oriented behaviours. In addition, many empirical studies prove that the universality of any leadership styles measure appears to be doubtful. Some agreement has been reached, however, in regards to the predictive power of certain personality traits in relation to managerial behaviour, but these results are not consistent across all studies. Thus, it seems justifiable to develop a new measure and validate it on a sample originating from a specific and distinct culture to address the above-stated problems of dimensionality, descriptive clarity of particular behaviours, and authentic behaviour exploration of current organization leaders outside Western cultures.

In an attempt to respond to the existing measurement ambiguities in assessing leadership styles, this study aimed at empirically substantiating the current state of leadership behaviours among Polish organizational leaders. I used classical and contemporary theories that is, autocratic, democratic, Machiavellian, charismatic, transformational, transactional, and *laissez-faire* (see e.g. Bass & Bass, 2008 for a review of leadership theories) as a theoretical framework for developing items in the new questionnaire to measure leadership styles among Polish managers. I believe that an attempt to operationalise leadership styles upon items drawn from well-established leadership theories will demonstrate to some degree the actual and current behavioural patterns among Polish managers. Since items were written specifically to reflect each of the six underlying

leadership theories, a multiscale measure is expected. It is important to emphasize that my intention was to explore the most salient leading styles of Polish managers using well-established leadership theories as a platform. Specifically, I wanted to move away from confining leadership behaviours into one using existing leadership models. Rather, I concentrated on exploring active managers' genuine responses. This, I believe, will allow us to make preliminary appraisals of Polish leaders' behavioural orientation in demonstrating their prevailing leadership styles.

In sum, the primary goal of our study was to identify patterns of behaviours of Polish organizational leaders and to organize these behaviours into more general leadership category styles. To achieve this goal, I first conducted an exploratory factor analysis on newly generated items. This made it possible to identify a factor structure of the new measure. Next, confirmatory factor analysis was applied to verify the measure's structure. Also, descriptive, reliability, internal validity, and external validity analyses were carried out to present psychometric properties of the new instrument.

Study 1: Identifying the Factor Structure of the Managerial Styles in the Leading Questionnaire[2]

Development of Items

Preparation for drawing a pool of items for the questionnaire started with analysing thoroughly the classical and contemporary leadership patterns of behaviour, namely, the autocratic, democratic, Machiavellian, charismatic, transformational, transactional, and *laissez-faire* conceptions (see e.g. Bass & Bass, 2008 for review). Items were formulated to reflect different leading styles encompassed by the above-leadership models. They were written as present-tense statements, with each one referring to a specific leadership behaviour. The questionnaire was assumed as a self-assessment form to be filled out by the managers.

Twelve judges, six psychologists and six management professionals, evaluated the initial pool of 125 items in terms of language clarity and relevance to organizational leadership practices. It was decided to rephrase 20 items to attain better certainty in understanding. Also, words which seemed vague or too complex were substituted with synonyms so that they presented no difficulty in understanding. This way the items adequate face-validity was established. Lastly, Gunning's fog index was calculated and its score 9.21 indicated that the items could be understood by a wide audience.

[2] Managerial Styles of Leading and its acronym MSL is an English translation of the original Polish title: Style Kierowania Menedżerów (SKM). The questionnaire's English title will be used throughout this article.

The questionnaire starts with a brief introduction of its purpose and respondents are asked to provide information about their age, gender, professional tenure, tenure at their current managerial position, and type of current business entity (foreign, local, own company, not-for-profit, government institution). Then they are instructed to decide whether a specific behavioural item applies to their leading style. A five-point Likert-type scale – from 5 - 'definitely applies to me' to 1 - 'doesn't apply to me' – was used.

Method for Study 1

Participants and procedure

Data using a 125-item preliminary version of the measure were obtained in 2008 from 139 Polish managers working at different hierarchical levels in various organizations. Study participants were enrolled in the executive MBA program at one of the private business academies in Warsaw. A majority of the participants were men (79.1%), 21.9% were women. Forty managers (28.8%) were top executives and managing directors. There were 39 middle-level managers (28.0%) and 60 first-line managers (43.2%). Mean work experience of participating managers was 11.67 years (*SD* = 4.39). The mean age in the sample was 36.44 years (*SD* = 11.38).

Exploratory factor analysis

In order to identify the factor structure of leadership behaviours, exploratory factor analysis using SPSS application was applied in the first step. This allowed us to examine groups of items (factors) underlying separate leadership style dimensions. The oblique (promax) method of rotation was selected since correlations between factors were expected. This is in line with a general argument by Costello and Osborne (2005), which advises social science researchers to use non-orthogonal rotations, for the sake of not losing valuable information if the factors are correlated.

Results for Study 1

Factor selection and item reduction

Factor selection was based on a scree plot criterion as well as on examining the content of each item (interpretability criterion) within a given factor (Worthington & Whittaker, 2006). As a result, six factors were retained with factor loadings greater than.4. The first factor accounted for 8.77% of the variance, second – 8.42%, third – 3.88%, fourth – 3.59%, fifth – 2.80%, and sixth – 2.72%.

The six-factor solution comprised 68 items and the variance explained was 30.18%. The modest amount of variance accounted for by the six factors is most probably results from a relatively large number of measured items in relation to the size of the initial sample. The six extracted factors were considered for further analysis.

Additionally, to refine the factor content, all items comprising individual factors were analysed with an aim to noticing any possible mixed content of an item or redundancy in items (see e.g. Worthington & Whittaker, 2006 on criteria for item deletion or retention). This analysis resulted in dropping 10 items, so that 58 items were retained for further verification of the measure's structure. Since confirmation of the identified factor structure was planned as the next step in the measure's development, I decided to define particular leadership styles after CFA analysis had been carried out and the individual items per scale finally accepted.

Study 2: Confirming the MSL Factor Structure

Method for Study 2

Participants and procedure

Data for this study were collected throughout 13 months starting in January 2009 and ending February 2010. Four hundred-and-seventy-seven organizational leaders (n = 477) took part in the survey. There were 332 men (69.6%) and 145 women (30.4%) in the sample. The organizations' upper echelon hierarchy (presidents, vice-presidents, managing directors) was represented by 140 (29.4%) managers, with 110 (23%) being middle-level managers, and 227 (47.6%) first-line managers. Mean work experience of participating managers was 15.11 years (SD = 8.56), and mean tenure at the managerial position was 6.08 years (SD = 5.62). The participants' mean age was 40.39 (SD = 10.03).

The questionnaires were administered at prearranged meetings with managers, during which any questions about the research study were answered. In most cases, the questionnaires were filled out at the time of administration. Any questionnaires that were completed at a later date were delivered to the researcher by registered mail.

Confirmatory factor analysis

In order to verify the MSL measure, SPSS AMOS 17.0 software was used to run the confirmatory factor analysis (CFA).

CFA is used when a researcher tests for a validity of a postulated model based on theory and/or empirical research (Byrne, 2001). Thus, the main focus is on determining the measurement impact of items on separate factors (latent variables), which is represented by the values of loading coefficients (path coefficients). Also, a researcher is interested in how well the entire model fits to the empirical data, which is tested by various fit indices (see e.g. Brown, 2006 for review on different indices assessing quality of fit used in specific measurement cases).

Results for Study 2

Current CFA model parameters were estimated based on the maximum likelihood (ML) estimation method. First, I tested the stability of the six-factor model with a 58-item exploratory factor analysis model. Six items with the weakest path coefficient and one item that cross-loaded on two factors were removed, thus shortening the measure to 51. The fit indices in the six-factor solution indicated an overall well fitting model ($\chi 2$ = 2287.993, $\chi 2/df$ = 1.986, RMSEA =.05, GFI =.83, AGFI =.82). Also tested were a one-factor model where all items were loaded onto one leadership factor, and a two-factor model with all items loading onto two leadership factors. For the one-factor model the following fit parameters were obtained: $\chi 2$ = 2912.288, $\chi 2/df$ = 2.435, RMSEA =.07, GFI =.75, AGFI =.71. For the two-factor model fit parameters were $\chi 2$ = 2410.725, $\chi 2/df$ = 2.06, RMSEA =.05, GFI =.82, AGFI =.80. Even though the two-factor model and the six-factor model demonstrated a comparable fit to the data, theoretical criticism and empirical investigations (see Introduction) supported the multidimensionality of leadership styles. Thus, the six-factor solution for the MSL questionnaire was selected for further investigation. Table 1 presents standardized values for 51 path coefficient items in the six-factor solution along with the names of latent variables, that is, with the resulting leadership styles.

Table 1. CFA factor loadings for the MSL.

	Factor loadings					
Factor label and respective items	1	2	3	4	5	6
1: Structuring						
I frequently ask followers about tasks currently in progress	.57					
I demand followers to carefully analyse their tasks	.53					
I personally provide feedback to followers about their job	.52					
I clarify complex tasks so that they are completely understood by followers	.49					
I correct followers errors before a problem occurs	.49					
I prevent making mistakes by followers	.49					
I explain in detail what my followers should be doing	.47					
I assign tasks according to followers' skills and competences	.46					
I know who needs my help while working on tasks	.44					
I can foresee followers' mistakes	.43					
I do not tolerate mistakes at work, hence I hold on to the principle: "better to prevent than remedy"	.40					
I support taking on demanding tasks by followers	.38					

	Factor loadings					
2: Autocratic						
I make sure that at work followers stick to my directives		.62				
I believe that it is imperative to utilize well-tested methods in a work environment		.52				
I believe that exemplary punishment disciplines staff		.48				
My authority is a result of the formal position I hold within the organization		.47				
I provide followers with "step by step" instructions on how to accomplish tasks		.46				
I discuss followers' individual mistakes during departmental meetings		.45				
My followers realize that lack of goal attainment may result in being expelled from the department		.31				
3: Participative						
I make my decisions together with followers			.60			
It matters to me that followers support my ideas			.56			
Any of my decisions are preceded by a debate with followers			.54			
I encourage followers to come up with their own solutions			.42			
My followers identify with me			.34			
My followers are as close to me as a family			.33			
4: Machiavellian						
I manipulate my image				.62		
I lie if it's necessary to reach a goal				.59		
Not many people know what I truly think				.57		
I intentionally behave in unpredictable ways				.52		
My frequent achievements are the result of my cleverness				.50		
I can manage to hide my true intentions				.49		
There is always someone to blame				.49		
I'm convinced that the objectives of followers and those of superiors are different, but only I know this				.45		
I turn a blind eye, when my followers act "unethically", as long as they attain their goals				.42		
I impose my will on followers				.40		
I don't consult followers in regard to work matters				.22		
5. Rewarding						
I reward followers' efforts					.71	
My followers know that they will be rewarded for their achievements					.69	

	Factor loadings					
Successful accomplishment of assignments is associated with my acknowledgment					.45	
I often let my followers know that they are great					.34	
I often explain company's vision of development to followers					.34	
I spend time educating followers about the organization's vision and mission					.27	
6. Distant						
I see mistakes only after followers have completed the task						.49
I intervene only when a problem has already occurred						.46
I accept any result of the followers' work						.45
I only recognize followers' accomplishments						.45
I don't get preoccupied with followers' mistakes						.43
I consider working meetings as a waste of time						.39
I usually agree with the majority during decision making						.36
I am interested in the end-result of a task as opposed to its progress						.34
My daily communication with followers is "short and to the point"						.16

Note: Items are an English translation of the Polish version of the questionnaire. All parameter estimates shown are standardized and statistically significant at p <.001.

Two of the fit indices, $\chi 2$/df, RMSEA, indicate an excellent fit. It needs to be noted however, that, according to some authors, the GFI index, in order to reveal a good fit, should achieve a value of.90 or be even closer to 1.00 (see e.g. Byrne, 2001 for discussion). Others (e.g. Cole, 1987) suggest that an adjusted GFI value greater than.80 usually indicates a good fit. In this model the GFI value is.83, which can probably be attributed to the model's complexity, that is, the relation of the sample size to the large number of parameters that needed to be estimated. Overall, the presented fit indices indicate a good fit of the six-factor MSL model to the empirical data.

Descriptive statistics for the six-factor outcome of CFA are displayed in Table 2.

Table 2. Descriptive statistics for MSL scales.

Scales	1	2	3	4	5	6
M	49.17	22.28	21.49	27.71	23.53	22.54
SD	5.66	4.73	3.54	6.98	3.62	5.10
Skew	-.29	-.03	-.55	.38	-.64	.43
Kurt	.05	-.37	.49	-.11	.69	.75

Note. n = 477. 1 = Structuring; 2 = Autocratic; 3 = Participative; 4 = Machiavellian; 5 = Rewarding; 6 = Distant.

As shown in Table 2 the values of symmetry coefficients, skewness and kurtosis, show that all parameters are between – 1 and 1. This indicates that the data are univariately normally distributed.

Reliability

Subscale reliabilities (see Table 3) weres estimated using Cronbach's α coefficient of internal consistency (Cronbach, 1951). These estimates are presented for the CFA outcome of six individual factors encompassing 51 items.

Table 3. Cronbach's α estimates of MSL scales.

Scale	α CFA (n = 477)
Structuring	.79
Autocratic	.68
Participative	.62
Machiavellian	.74
Rewarding	.64
Distant	.61

The scale score internal consistency coefficients range from.61 to.79 and reveal an acceptable level of internal consistency for individual factors. Nevertheless, internal consistency coefficients of four factors, namely, *autocratic*, *participative*, *rewarding*, and *distant* are lower than.70, a level regarded as good or adequate (Nunnally, 1978 as cited in Kanste et al., 2006). As suggested by Loewenthal (1996), however, reliability of.60 may be regarded as acceptable for scales with fewer than ten items, as is the case with the mentioned factors. The internal consistency coefficient represents and informs about the homogeneity of a given scale. In the cases of the four-mentioned scales, it appears that the corresponding measured construct is heterogeneous in nature.

Defining Leadership Styles

The CFA outcome is a 51-item measure consisting of six dimensions. These dimensions are the general leadership styles, which encompass the managers' diverse behavioural patterns. They were assigned names, or better said, labels, since one-word names given to a cluster of items is merely a tag, which differentiates one group of specific behavioural patterns from another. In order to get complete insight into a specific leadership style, it shall be examined with reference to all items comprising the style. The leadership styles' names and the resulting definition are the following:

Structuring leadership style embraces clarifying tasks, focusing on flawless execution of work, demanding careful task and duty analyses, and addressing high quality results; it also shows a close monitoring of, and good orientation about, the followers' professional capabilities.

The autocratic leadership style represents controlling and maintaining a high work discipline, focusing on task implementation, emphasizing power and authority, demanding compliance with standards, and demonstrates punitive behaviours.

Participative leadership style indicates supporting the followers' participation in decision-making processes, encourages proposing new solutions and ideas, emphasizes the importance of strong commitment, and also maintains close relationships with followers.

The Machiavellian leadership style denotes focusing on self-presentation techniques, manipulating information, demonstrating and accepting low standards of ethical and moral conduct, authoritatively communicating with followers, and imposing one's own will on others.

Rewarding leadership style focuses on recognition for achievements, praising, frequent rewarding, communicating vision, mission and organizational goals, sharing expert knowledge.

Distant leadership style represents low commitment to followers' work processes, focusing merely on work outcomes, ignoring importance of quality of work processes, evasive approach to meetings with followers, delegating all issues concerning work processes to followers.

Summarizing results of Study 2, the initial six-factor model the was tested with confirmatory analysis. The CFA results showed a very good fit of the six-factor MSL model to the empirical data. Thus, support was found for the factor structure from the exploratory phase in confirmatory analysis with a new sample of organizational leaders.

Validating the Managerial Styles of Leading Questionnaire

Internal validity

For the first phase of validation I used data from confirmatory factor analysis of n = 477 managers. Internal MSL validity was assessed by examining intercorrelations between subscales, which are presented in Table 4. As discussed in the Introduction, theoretical and empirical findings suggest that leadership styles are interrelated depending on the underlying general behavioural pattern. Thus, positive correlations were expected between MSL dimensions representing orientation towards maintaining social settings (person orientation), that is, among *structuring*, *participative* and *rewarding* leadership

styles. Also, positive relationships were expected between dimensions representing task orientation, namely, among *structuring*, *autocratic* and *Machiavellian* styles. In addition, I foresaw that person orientation behaviours of *participative* and *rewarding* leadership styles and task orientation behaviours of *autocratic* and *Machiavellian*, as well as *distant* leadership styles would correlate negatively. Results of this analysis are presented in Table 4.

Table 4. Intercorrelations among MSL scales (n = 477).

Scales	1	2	3	4	5	6	
1.	Structuring	–					
2.	Autocratic	.47** (.61)	–				
3.	Participative	.26** (.35)	.09	–			
4.	Machiavellian	.14**	.32**(.36)	-.11* (-.19)	–		
5.	Rewarding	.37** (.38)	.17**	.39** (.39)	-.01	–	
6.	Distant	-.14** (-.33)	.23** (.24)	.06	.31** (.40)	-.08	–

Note. ** p <.01, two-tailed. * p <.05, two-tailed. Correlations between latent factors are presented in parentheses.

Results

As expected, *structuring* leadership style revealed positive significant relationships with *participative* (r =.26), *rewarding* (r =.37), *autocratic* (r =.47), and *Machiavellian* styles (r =.14). Also, *structuring* behaviours negatively significantly correlated with the *distant* leadership style (r = -.14). As predicted, significant relationships were found for the *participative* leadership style and *rewarding* (r =.39), and for the *participative* relationship with the *Machiavellian* (r = -.11) style. Results in Table 4 are consistent with expectations regarding positive significant correlation of the *autocratic* and *Machiavellian* (r =.32) behaviours. Surprisingly, the *autocratic* leadership style was positively related to *distant* (r =.23) and *rewarding* (r =.17) leadership styles and did not relate significantly to the *participative* (r =.09) style. *Machiavellian* leadership positively significantly correlated with *distant* (r =.31) behaviours. Also, the *rewarding* style displayed negative correlation with the *distant* leadership style, but the relationship was weak and not significant (r = -.08).

In sum, correlations between variables displayed in Table 4 are consistent with expectations of the relationships between MSL leadership styles. This is in line with earlier theoretical claims and empirical findings (e.g. Judge, Piccolo, & Illies 2004) that different leadership behaviours will show tendencies to cluster via intercorrelations into task-oriented and people-oriented behaviours.

External validity: personality correlates of MSL leadership styles

As presented in the Introduction, the NEO-FFI five-factor personality model (Costa & McCrae, 1995) has provided considerable evidence to explain and predict the five personality domains for different leadership styles (e.g. Bono & Judge, 2004; DeRue et al. 2011; Judge & Bono, 2000; Ployhart et al. 2001).

Thus, to ascertain the MSL measure's external validity, the relationships between six MSL leadership styles and the Big Five personality dimensions (Costa & McCrae, 1995) were examined. According to the findings I expected positive relationships between interpersonally-oriented behaviours reflected in *structuring, participative and rewarding* leadership styles and extraverted personality traits – openness to experience, agreeableness and emotional stability. Moreover, I expected that conscientiousness would be positively related to task-oriented behaviours of *structuring*, *autocratic* and also *Machiavellian* leadership styles. Also, I expected that *distant* leadership style would be negatively associated with extraversion, openness to experience, agreeableness, and conscientiousness, and positively related to neuroticism.

Method for Study 3

Participants and measures

For this phase, data were gathered together with the above-presented CFA study (see Study 2). Thus, along with the MSL questionnaire, 333 managers filled out a 60-item Polish adaptation of NEO-FFI (Costa & McCrae, 1995) by Zawadzki, Strelau, Szczepaniak, & Śliwińska (1998). In this sample 218 (65.5%) were men and 115 (34.5%) were women. Ninety-nine managers in the sample were executives and managing directors (29.7%). There were 70 middle-level managers (21%) and 164 first-line managers (49.20%). Mean work experience of the managers was 16.54 years (*SD* = 8.82). The mean age of the participants was 41.53 (*SD* = 10.29).

Results for Study 3

Table 5 presents correlations between personality traits and leadership styles, Cronbach's α estimates for MSL and NEO-FFI measures, and descriptive statistics for the current sample.

Table 5. Correlations between personality traits (NEO-FFI) and leadership styles (MSL), Cronbach's α estimates and descriptive statistics for MSL and NEO-FFI (n = 333).

Measure	N	E	O	A	C	
	a	.82	.72	.65	.66	.77

Structuring	.77	-.11	.24**	.05	.03	.39**
Autocratic	.62	.20**	-.03	-.26**	-.14*	.16**
Participative	.57	-.01	.32**	.12*	.16**	.20**
Machiavellian	.74	.23**	-.01	-.13*	-.41**	-.06
Rewarding	.59	-.16	.34**	.22**	.08	.25**
Distant	.60	.33**	-.15**	-.29**	-.08	-.18**
M	26.51	45.33	40.24	43.25	47.75	
SD	8.12	5.96	6.62	5.71	5.10	

Note. n = 333. N = Neuroticism; E = Extraversion; O = Openness; A = Agreeableness; C = Conscientiousness; * p <.5, two-tailed. ** p <.01, two-tailed.

Consistent with the expectations, interpersonally oriented behaviours i.e. *structuring, participative and rewarding* leadership styles positively significantly correlated with extraversion (r =.24; r =.32; r =.39, respectively). As expected *participative* leading style was positively significantly related to openness to experience (r =.12) and agreeableness (r =.16); however, it was not related to neuroticism (r = -.01). *Rewarding* leadership style was, according to expectations, positively significantly correlated with openness to experience (r =.22), and negatively, not significantly with neuroticism (r = -.16). However, *rewarding* displayed a virtually nonexistent relationship with agreeableness (r =.08). Also, as expected, task-oriented behaviours of *structuring* and *autocratic* leadership styles positively significantly correlated with conscientiousness (r =.39; r =.16, respectively). Contrary to expectations, though, *Machiavellian* behaviours did not correlate positively with conscientiousness (r = -.06). *Distant* leadership style was, as predicted, positively significantly related to neuroticism (r =.33) and negatively significantly to extraversion (r = -.15), openness (r = -.29) and conscientiousness (r = -.18); it was, however, virtually not related to agreeableness (r = -.08).

In sum, consistent with other empirical findings, Study 3 shows that interpersonally-oriented behaviours defined by MSL dimensions of *structuring*, *participative* and *rewarding* leadership styles were positively related to the Big Five traits of extraversion, openness to experience, emotional stability and agreeableness. Task-oriented behaviours, that is, *structuring* and *autocratic* styles were positively related to conscientiousness. *Laissez-faire* behaviours, reflected by the *distant* leadership style in MSL terms, exhibited a positive relationship with neuroticism and negative relationships with extraversion, openness

and conscientiousness. Thus, the above-presented results suggest that the MSL questionnaire has external validity.

Discussion

The purpose of this research was to present the development, factorial structure, and internal and external validity of the Managerial Styles of Leading (MSL). Having gathered 477 self-assessments from Polish managers working at different hierarchical levels, a preliminary version of the managerial leadership styles questionnaire was successfully developed. An assumption was made (see Bass & Bass, 2008 for review) for the multidimensionality leadership behavioural patterns. Six factors were identified in exploratory factor analysis and the six-factor model was supported by confirmatory factor analysis. Internal consistency estimates were acceptable; however, their values indicate that four factors are heterogeneous. Internal validity of the MSL leadership styles supports the notion that diversified leadership behaviours stem from two fundamental leadership responsibilities, that is, they focus on task completion and on maintaining positive relations with followers. Correlating the MSL dimensions with personality traits measured by NEO-FFI provide initial confirmation that the MSL questionnaire is externally valid. Considering the above, it may be concluded that MSL holds promise as a valid and reliable measure of leadership styles.

The MSL leadership styles - *structuring*, *autocratic*, *participative*, *Machiavellian*, *rewarding*, and *distant* - represent diversified behaviours of Polish organizational leaders captured by scaled items. Theoretically this research makes an important contribution. Polish organizational leaders' self-assessment has yielded unique leadership behaviours. These leading styles are different from the charismatic, transforming, servant or mentoring types, which are currently predominant in the literature. Obviously it would require a separate empirical investigation to determine the causes for the specific behaviours yielded in this research. However, it may be carefully implied that the identified styles reflect current and very specific organizational circumstances of leadership in Poland. It seems that leaders' self-assessed behaviours seem to mirror their adjustment to present economic and operating demands. Thus, this research has made a first attempt at empirically identifying unique managerial behaviours, different in nature from the ubiquitous charismatic-transformational orientation. However, factors that display particular behaviours of Polish organizational leaders need to be substantiated in a separate empirical investigation.

In general, the MSL measure indicates that *structuring* leadership style, in other words, an active leading style orientated towards achieving organizational goals, correlates

with other leadership behaviours concerned with both task completion (*autocratic* and *Machiavellian* behaviours) and with development of constructive, professional relationships with followers (*participative* and *rewarding* behaviours). In fact, *structuring* leadership style represents behaviours, which encompass attitudes and activities mainly corresponding to concern for task completion, but also, to a lesser extent, though, concern for people – the two dimensions well known from classical work on leadership styles (Stogdill, 1974). These preliminary findings parallel Bass and Bass's (2008) conclusion that leaders rarely manage *via* one particular, unchangeable style. Rather they may choose from an array of behaviours, which fall into two general categories of person- and task-oriented managing styles depending on the situation. Thus, the MSL internal inventory presented in this research supports the existing conclusion that leadership is manifested through behaviours facilitating authentic interpersonal relations as well as goal focused and structuring style of managing.

In leadership literature, primary attention is paid to leader traits, among which personality has been the major and ever-current focus (e.g. DeRue et al. 2011; Kaiser & Hogan 2011). Assessing correlations between six MSL leadership factors and five personality dimensions (the Big Five model) has provided preliminary support for external validity of the MSL questionnaire. Agreeableness and conscientiousness exhibited the strongest significant correlations with MSL leadership styles, followed by extraversion and neuroticism. Results of this analysis show some similarities to what has been found in other studies so far. In the current research agreeableness demonstrated the strongest negative correlation with *Machiavellian* leadership style, that is, manipulative, authoritarian, yet task-oriented behaviours. In meta-analysis by Judge, Bono, Ilies, and Gerhardt (2002) agreeableness exhibited the weakest relationship to the aggregate leadership index comprised of leadership emergence and leadership effectiveness. In a longitudinal study by Ployhart, Holtz, and Bliese (2002) agreeableness demonstrated a somewhat stronger relationship with displays of leadership adaptability. On the other hand, the most recent metaanalysis by DeRue and colleagues (2011) has demonstrated positive relationships of agreeableness with consideration and transformational leadership styles and the strongest relationship, in comparison to other personality traits, with contingent rewards. It may be thus inferred that in the Polish sample agreeableness is a managerial attribute manifesting itself in cooperative, trustworthy, and empathetic behavioural patterns. In addition, this research study, similarly to numerous other studies (DeRue et al. 2011), has demonstrated positive relationships of consciousness and extraversion with fundamental leadership behaviours oriented towards achieving goals and maintaining a good social environment among followers. Although causal inferences cannot be made, it might be assumed that, among Polish leaders, cooperative (high in agreeableness),

sociable (high in extraversion) and well organized, disciplined individuals (high in conscientiousness) engage in constructive leadership behaviours, labelled here *structuring* leadership style. These relationships have been well documented in metaanlysis by Judge and others (2002) where extraversion exhibited the strongest relationship to aggregate index of leadership and by the latest metaaanlysis by DeRue and others. (2011), which concluded that conscientiousness is the most consistent predictor of leadership.

The practical implication gained from the current study is such, that, given future validation studies of the MSL questionnaire, leadership assessment styles for selection and/or advancement may be based on the most current, culturally adjusted leadership style questionnaire. Particular leadership styles, especially *distant* and perhaps *Machiavellian*, may not be desirable in most leadership situations. Such early diagnosed tendencies would reduce the possibility of selecting or promoting individuals with potentially destructive behavioural tendencies. Also, it seems essential to repeatedly verify managerial leadership behaviours, for they are changing and becoming more diversified along with external conditions influencing leadership.

In sum, Managerial Styles of Leading is a new measure, which assesses representative Polish managerial leadership styles. Its psychometric properties support the multidimensionality notion of organizational leadership behaviours.

Limitations

Although MSL holds promise as a good measure of leadership styles, further research is needed to conquer this study's several limitations.

First, convergent and discriminant MSL validity should be examined by assessing relationships between MSL scales and well established leadership styles, like initiating leadership structure consideration, transformational leadership, servant leadership and destructive leadership behaviours. Also, future research should be directed at conducting criterion-related validity studies to relate the identified leadership styles with criteria of leadership performance and effectiveness.

Second, stability of the six-factor structure with a questionnaire rating form should be examined. It should be noted again that the current research approach was based on managers' assessment of their own leadership styles. Leadership, however, does not lie only within the person holding a leadership position but also in the followers' minds (Lord & Emrich, 2000), making it necessary to focus on followers' leadership behaviour perceptions in future research.

New research is required with items added or altered in the four scales – *autocratic*, *participative*, *rewarding*, and *distant* – to improve their internal consistency values. Also,

temporal validity of the scales needs to be assessed. It would provide evidence for managerial behaviour stability over time as self-assessed and rated.

At last, in order to empirically replicate the structure of the questionnaire, a larger and more diverse sample is required in future studies. The aim here was to generate current, genuine responses to behavioural items with no attempt to enclose them into a presupposed scheme of charismatic, transformational, transactional or any other leadership behaviour structure provided by existing leadership measures. Since this is merely preliminary research to empirically examine leadership styles based on the leader's own perception, interpretations should be done with caution.

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