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Using the Multidimensional Leadership Questionnaire to Analyse the Relationships Between Urban Leadership and the Attributes of Transactional and Transformational Leadership

Abstract

Objectives: To analyse the relationships between urban leadership and the attributes of transactional leadership and transformational leadership.

Research Design & Methods: The analysis was performed using the Multidimensional Leadership Questionnaire from 6th December, 2020, to 7th June, 2021. The surveyed sample comprised mayors of Polish cities, their deputies, and city secretaries (surveyed population: 111; sample size: 48).

Findings: The findings demonstrate a significant link between the leadership behaviours of the mayors and more objective urban performance indicators as perceived by their direct subordinates. Focusing development efforts and activities on those behaviours that most strongly correlate with a wide range of performance indicators, such as idealised influence or contingent reward, may translate into an improved effectiveness of urban authorities. The study also emphasises the importance of maintaining a balance between a variety of leadership styles.

Implications / Recommendations: Building theoretical models to explore the issue of urban leadership will be critical for future research on urban leadership. Equally essential will be the expanded use of psychometric indicators in the context of meta-analyses and theoretical models revealing the links that exist between leader behaviour and various performance metrics.

Contribution / Value Added: The article's added value is in providing evidence that multifaceted leadership, based on transactional and transformational leadership traits, is required to ensure the quality of management of complex and dynamic systems, such as large cities.

Keywords: urban leadership, transactional leadership, transformational leadership, leaders, performance indicators, complex systems

Article classification: empirical article

JEL classification: H1, H4, H7

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Introduction

The aim of this paper is to analyse transactional and transformational leadership and to assess their theoretical and empirical significance in urban leadership research. In a post-modern, rational society, it turns out that the leader, his/her attributes, professed ideals, and favoured leadership styles still hold the key to urban matters and cannot be replaced by rigid management methods. However, the phenomenon in question still requires in-depth reflection, especially of a theoretical nature. The research findings discussed in this article may significantly contribute to the methodological debate on the fascinating phenomenon of urban leadership. The conclusions presented in the paper are based on the findings of the Multidimensional Leadership Questionnaire, which was used to survey mayors, deputy mayors, and city secretaries in Poland (111 in total).

The paper begins with a discussion of the concept of urban leadership, then goes on to highlight its key traits and to review the post-modern conditions that affect its evolution. This is followed by a synthesis of transactional and transformational leadership, in which their basic assumptions are confronted with the logic of urban leadership. The final section addresses the research findings that will serve as the foundation for future theoretical explorations of the concept in question (in this study, the terms urban leadership and public leadership are used interchangeably).

Literature review

The concepts of transactional and transformational leadership, devised by J. M. Burns (1978), have shaped the perceptions of public leadership for many years (Avolio & Bass, 2002; van Wart, 2003; Vogel & Masal, 2015; Jacobsen & Andersen, 2015; Jensen et al., 2019; Baran & Mazur, 2021). What is also noteworthy is that these approaches are conceptually and methodologically grounded in research on political leadership (Hartley, 2018), which is strongly associated with public leadership and urban leadership¹.

Intellectual interest in transactional and transformational leadership theories is accompanied by a growing research interest in urban issues, including the ways in which leadership roles are fulfilled. Cities and civilisations are undergoing disruptive changes, which invalidate the existing rules of the game (Benington, 2011). Remedies for these challenges are sought in a variety of leadership theories, which offer several catalogues of behaviours and tools for managing complexity (Crosby & Bryson, 2005).

The definition of urban leadership used in this article is based on J. Nye's approach, according to which leadership is a social relationship made up of three closely related components: the leader, the followers, and the environment in which particular interactions can occur (Nye 2010). More in-depth considerations on urban leadership require a general summary of its distinguishing features, which include the following:

- a strong professional identity (Grøn, Bro & Andersen, 2019);
- central influence (authority) (Kwok et al., 2018);
- public accountability for the leadership vision pursued (Haus, 2004);
- promoting norms, ideas, and values, and bringing like-minded people together (Freidson, 2001; Brehm & Gates, 2010; Tummers, 2013; Andersen & Pedersen, 2012);

¹ It should be noted that M. Weber is widely regarded as the father of transactional and transformational leadership, which is owing to his definition of three forms of leadership: charismatic, bureaucratic, and traditional. He thus laid the groundwork for these two theories (cf. Weber, 2002).

- focus on collective (public) goals;
- professional knowledge (Andersen & Pedersen, 2012);
- attachment to bureaucratic logic (Ouchi, 1980) or managerial logic (Hood, 1991);
- consideration of the interests of the political environment;
- the irreducibility of challenges.

When focusing on the evolving context of public leadership, J. Hartley considered globalisation² to be the source of numerous negative outcomes, such as:

- economic and social inequalities;
- erosion of democracy;
- uncontrolled development of technology;
- low quality of public debate;
- adverse effects of climate change;
- migration;
- adverse changes in the structure of societies;
- unstable economic relations;
- a sense of injustice, anxiety, and mistrust.

Nowadays, city authorities are facing a greater financial burden and responsibility towards their residents than before. With fewer resources at their disposal, they must meet people's increasing expectations in terms of the range and quality of public services to be supplied. Their position is further complicated by increasing networking (transnational neo-pluralism)³ that transcends hierarchical structures, which calls for increasingly sophisticated urban leadership strategies.

Individual types of leadership are usually presented as separable concepts; however, there is a growing recognition of the relationships that exist between them. The first one involves the reinforcement of transactional leadership by transformational leadership, which leads to increased effectiveness (Bass & Avolio, 1994; Howell & Avolio, 1993; Luke, 1998), whereas the second one views transactional leadership as a subset of transformational leadership (Wehrich et al., 2008; Wright et al., 2008).

The figure above specifies the various needs that the recipients of transactional and transformational leadership may have as well as how the two styles may be used in combination. Transactional leadership, which meets the most basic, unique needs of its followers, is thus placed at the bottom of the hierarchy of needs. Transformational leadership, on the other hand, promotes a particular environment's more advanced goals and desires, which are collaborative in nature and deeply anchored in ethics. The most desirable model located at the top of the hierarchy attempts to simultaneously fulfil the needs, over time transformed into expectations and derived from transactional and transformational leadership. This synthesis is not so much a new leadership style or an ideal solution as a space for utilising local resources and competencies in the most adaptive manner under the prevailing conditions. In the context of urban leadership, the institutional capacity to develop and implement action plans includes both agencies and structures. The third essential element in this interpretive scheme is the context, consisting of quantitatively fluid and dynamically changing variables. In an open social system, the context is viewed as both an opportunity and a threat that stimulates the improvement of urban leadership tools and mechanisms. The model discussed above is distinguished by complexity and modality, which permits variable application

² For an extensive analysis of the impact of globalisation on public leadership, see Morse et al., 2007.

³ This expression implies an above-average complexity and transversality of the system (cf. Cerny, 1990, 2010a, 2010b).

of leadership styles taking into consideration the competencies of the leader and the demands of his/her followers, who serve as the system's dual driving force.

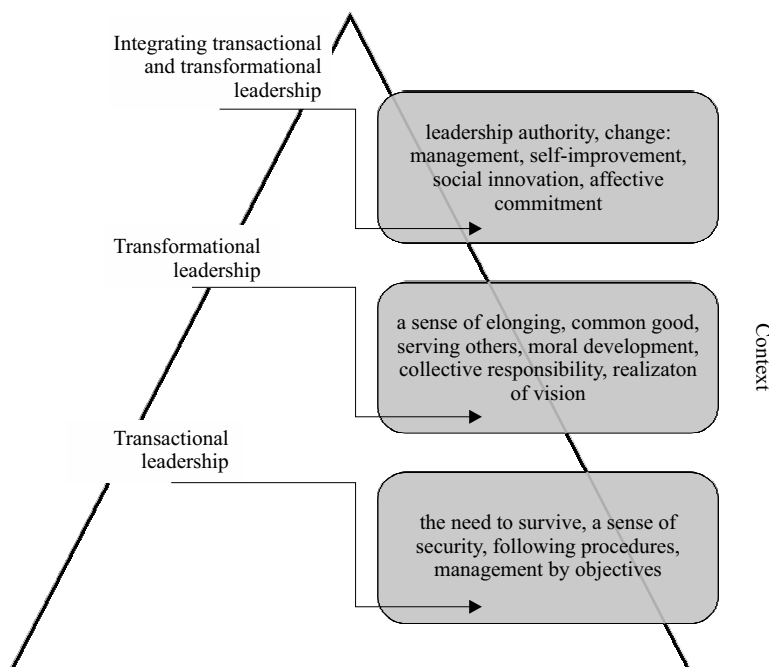


Figure 1. Hierarchy of the needs of the recipients of transactional and transformational leadership

Source: Own elaboration.

Transactional leadership focuses on competent, effective, and efficient management. The incentive system, which is an important part of this style, is exclusively linked to real time and does not take into account strategic thinking about the future.

In practice, transactional leadership leads to:

- attachment to a hierarchy of needs;
- a pursuit of individual interests;
- operating within the boundaries of the existing organisational culture;
- striving for precision;
- creating relationships on the basis of exhaustible replacement;
- making incremental changes to increase efficiency in achieving objectives.

The bureaucratic nature of public administration, characterised by a mechanistic organisational culture, intuitively navigates towards transactional leadership as the most useful one in achieving public tasks. The hierarchical structure of public administration makes this approach an indispensable component of leading a city.

By contrast, transformational leadership⁴ aims to inspire the actors gathered around the leader to achieve higher goals (Robbins & Coulter, 2007). The leader's role is to establish an environment

⁴ Transformational leadership is often equated with charismatic leadership (see: Peters & Austin, 1985; Tichy & Devanna, 1986; Harvey-Jones, 2003).

where team members may continually develop, expand the range of their needs, and raise their level of awareness. Positive change also includes the release of emotions that leads to the consolidation of efforts to achieve the accepted ideas, values, and tasks. This was aptly captured by W. Bennis and B. Nanus (1985), who described transformational leaders as “social architects” of their organisations. Researchers R. Koch and J. Diox divide transformational leaders into “American heroes” (Western democracies) and leaders stuck in a “servant-partner” relationship⁵ (Europe and Great Britain)⁶ (Koch & Diox, 2007).

The most important outcomes of applying transactional leadership include:

- increased motivation;
- the realisation of collective interests;
- the reinforcement of moral values;
- the expression of emotional reactions;
- identification with accepted principles of behaviour;
- managing organisational culture change;
- implementing disruptive change to enhance performance in achieving goals.

When considering the attractiveness of the transformational leader in fulfilling this role in a city, it is important to note the positive correlation between this type of leadership and the achievement of desired outcomes in public institutions (Gabris et al., 2000; Wright et al., 2012; Bellé, 2014; Jacobsen & Andersen, 2015; Vogel & Masal, 2015; Baran, 2019).

From the urban leadership perspective, the notion that transactional leadership focuses on solving problems using the potential found within the structure itself is relevant. When faced with difficulties, transformational leadership, on the other hand, draws not only on its immediate surroundings, but also on the expertise of external stakeholders, forging symbiotic relationships with them in order to seek novel solutions. Another significant difference lies in the superior performance of transactional leadership in crisis situations that require poised and structured action. Conversely, transformational leadership gains the upper hand when it is necessary to respond flexibly and take unconventional decisions informed by a multi-level perception of reality.

A comprehensive comparative study of transactional and transformational leadership embedded in contemporary contextual complexity⁷ was provided by J. Nye (2008), who described their history, impetus, characteristics, and implications. A key aspect of his distinction is charisma, which, by influencing the course of events, either sustains a functioning system or leads to its significant transformation (Burns, 1978). A good example of this was the civilisational leap triggered by economic development and technological transformation, which was abandoned by apologists of transactional leadership, but was successfully exploited by proactive transformational leadership (*status quo* vs. change) (Nye, 2008; Beauregard, 1995). However, regardless of the motivations of leaders and their achievements, the relationship between them and the actors of change or the actors protecting the existing order, the dynamics of social change, and the needs of citizens drives the spectacular evolution of urban leadership (Stewart, 2006).

A valuable contribution to the issue under consideration has been made more recently by A. M. Hochadel (2018), who looked at the role of public agents by examining the transition from

⁵ For more on this subject, see Alimo-Metcalfe & Alban-Metcalfe, 2005, p. 64.

⁶ The former tends to be more distanced, whereas the latter has a close relationship with supporters, seeking to understand and meet their needs. The essence of the role performed by the former is to initiate and mobilise. The role of the latter is to keep supporters active, engaged and gratified in a broad sense.

⁷ This concept was formulated by R. D. Brunner (1997).

transactional leadership in an administrative-executive perspective to transactional leadership in a legislative-activist perspective. The author's motivation for undertaking this inquiry was her belief that there is a need to combine the potentials derived from locally anchored public leadership with those derived from globalisation processes that transcend national boundaries. J. Johansson (2004) offers a somewhat different perspective that is nonetheless linked to globalisation, contending that transformational leadership in the public sector is a response to the negative repercussions of this particular phenomenon.

Political influence on the form and extent of the application of these two leadership types (Stoker, 1991) tends to be reflected in two approaches. The first one is concerned with the primacy of politics and power strategies in urban governance, whereas the other, in an attempt to move away from the discretionary function of urban leadership, focuses on interactions with other structures at local, national, and global levels (Cerny, 1990, 1997, 2010a, 2010b; Sassen, 2000, 2001; Stoker, 1991). In this sense, the first perspective appears to be closer to transactional leadership, while the second one – to transformational leadership⁸.

A different view of transactional vs. transformational leadership is expressed by the Solace (Society of Local Authority Chief Executives), which, while not undermining the cognitive value of these approaches, highlights their negligible adaptability to the dominant context in which cities operate. Urban leadership is heavily dependent on sensitivity to a unique set of dynamically changing local circumstances, in which the resident is the central variable. Therefore, the response to improving the quality of urban life and the prospects for development lies in interactions within the community, which, contrary to the compact statements cited above, are not sufficiently stimulated by transactional or transformational leadership (Solace, 2013; Rigg & Richards, 2006)⁹.

Material and methods

The MLQ leadership model

This part of the article discusses the findings of a multi-factor analysis of leadership skills of Polish city mayors. It combines a broader theoretical perspective (outlined in Section 1) with an empirical-analytical perspective in order to offer coherent interpretations of the studied phenomena.

The attempt to capture the full spectrum of leadership behaviours in a multidimensional manner was one of the motivations behind the development of the Full Range Leadership Model, which provided the basis for the Multi-factor Leadership Questionnaire (MLQ) (Antonakis et al., 2003; Bass & Avolio 2002). The MLQ consists of 9 scales that measure three leadership styles: *transformational leadership* (5 scales: Idealised Influence [attributes], Idealised Influence [behaviour], Inspirational Motivation, Intellectual Stimulation, Individual Consideration); *transactional leadership* (2 scales: Contingent Reward, Management by Exception [active]); and *passive/avoidant behaviours* (2 scales: management by exception [passive] and *Laissez-faire*). Moreover, the MLQ also has 3 scales measuring leadership outcomes: Extra Effort, Effectiveness, and Satisfaction with the Leadership. The MLQ has two basic versions: (1) designed to self-assess leadership behaviour (Multi-factor Leadership Questionnaire Self Form [MLQ Self] completed

⁸ It is noteworthy that transformational leaders are more likely to be elected when there is growing distrust in central government (cf. also A. M. Hochadel, 2018; Heifetz & Laurie, 2001).

⁹ C. Hobbs (2019) suggests replacing transactional and transformational leadership with contextual leadership skills.

by the leader); and (2) designed to evaluate the leader's behaviour (Multi-factor Leadership Questionnaire Rater Form [MLQ Rater Form] completed by subordinates). The choice of the version to use to evaluate leader behaviour is based on theoretical and empirical research assumptions as well as potential organisational interventions. The section that follows examines the leadership styles of Polish city mayors using the Polish edition of the MLQ.

Methodology

The survey was conducted between 6th December, 2020, and 7th June, 2021, among the mayors of the largest cities in Poland (i.e. with populations over 100 000), their deputies, and city secretaries. The surveyed group (111 persons in total) received MLQ 5X-Short questionnaires: the MLQ Self (37 mayors) and the MLQ Rater (37 deputies and 37 city secretaries). Sample test items for each scale are presented in Table 1 below.

Table 1. Sample items used in the MLQ (MLQ Rater)

Style	Scale	Sample item
Transformational leadership	Idealised Influence (attributes)	Working with him/her makes me feel proud
	Idealised Influence (behaviours)	He/she talks about his/her most important values and beliefs
	Inspirational Motivation	Speaks enthusiastically about what should be achieved
	Intellectual Stimulation	Seeks different perspectives when solving problems
	Individual Consideration	Takes the time to teach and develop staff skills
Transactional leadership	Award conditioning	Gives me support in return for my input and commitment
	Management by Exception (active)	Draws attention to irregularities, errors, exceptions and deviations from standards
Passive leadership	Management by Exception (passive)	Does not get involved in a problem until it becomes serious
	<i>Laissez-faire</i>	Avoids involvement when important problems arise
Leadership outcomes	Extra Effort	Makes me do more than expected of myself
	Perceived Effectiveness	Can effectively meet the needs and expectations that arise in the organisation
	Satisfaction with the Leadership	Uses rewarding leadership methods

Source: Own elaboration.

Our analysis takes into account cities where the questionnaire was completed by the mayor, his/her deputy, and the city secretary. A total of 48 questionnaires were returned from 16 participating cities.

The analysis assessed the leadership behaviours of 16 individuals. Of all the mayoral office holders who participated in the study, 15 (94%) were men and only one was a woman. Their mean age was 54 years. The most common educational profile in the sample was the humanities (37%) and technical studies (31%). Only three persons had a degree in economics, and two completed

a university course in an administration-related field. As regards work experience, 44% mentioned the public sector, 37% – business, and 19% – other kinds of experience.

Characteristics of the MLQ

The MLQ proved useful in diagnosing the leadership styles of mayors of Polish cities. In the internal consistency test using Cronbach's alpha (presented in Table 2), several scales proved to be unreliable (Transformational leadership: Idealised Influence [attributes] and Transformational leadership: Individual Consideration, Management by Exception [passive]), but most others achieved acceptable or satisfactory scores. However, in order to maintain the integrity of the tool and given that the MLQ was found highly reliable by a number of independent studies using larger international samples (Tejeda et al., 2001), all the subsidiary variables were included in the study.

Table 2. Reliability indices of the scales used in the study

MLQ scale	Cronbach's alpha	Number of test items
Transformational: Idealised Influence (attributes)	0.34	4
Transformational: Idealised Influence (behaviours)	0.57	4
Transformational: Inspirational Motivation	0.72	4
Transformational: Intellectual Stimulation	0.60	4
Transformational: Individual Consideration	0.51	4
Transactional: Contingent Reward	0.59	4
Transactional: Management by Exception (active)	0.71	4
Passive: Management by Exception (passive)	0.30	4
Passive: <i>Laissez-faire</i>	0.60	4
Extra Effort	0.75	3
Perceived Effectiveness	0.58	4
Satisfaction with the Leadership	0.80	2

Source: Own elaboration.

Furthermore, the intercorrelation analysis between the several aspects of the MLQ confirms its utility in the study of local government leadership. The correlations between the scales, as shown in Table 3, follow the predicted direction: there is a negative correlation between passive leadership scales (Management by Exception [passive] and *Laissez-faire*) and most of the scales of transformational and transactional leadership. At the same time, the other leadership scales, while correlated, exhibit significant independence.

One of the most important and interesting issues in this study is the degree of concordance in the assessment of leadership behaviours between the person occupying the mayoral position and his/her deputies and secretaries, as this determines the validity of the assessment and whether our discussion of leadership styles should include self-assessment or external assessment only.

Kendall's W statistic was used to assess the concordance of responses on leadership styles between the mayor and his/her deputies, and between the deputies themselves. It takes values from 0 to 1, where 0 represents a complete disagreement in the assessment, and 1 – a complete

Table 3. Intercorrelation coefficients between MLQ leadership scales (Pearson's r). Shading indicates statistically significant coefficients ($p < 0,01$)¹⁰

	Idealised Influence (attributes)	Idealised Influence (behaviours)	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Award conditioning	Management by Exception (active)	Management by Exception (passive)	Laissez-faire
Idealised Influence (attributes)	1.00	0.42	0.37	-0.14	-0.12	-0.13	-0.03	-0.32	0.11
Idealised Influence (behaviours)	0.42	1.00	0.41	0.64	0.22	0.34	0.25	-0.58	0.01
Inspirational Motivation	0.37	0.41	1.00	0.42	0.00	0.26	0.42	-0.56	-0.13
Intellectual Stimulation	-0.14	0.64	0.42	1.00	0.27	0.70	0.61	-0.34	0.01
Individual Consideration	-0.12	0.22	0.00	0.27	1.00	0.29	-0.19	0.00	-0.15
Award conditioning	-0.13	0.34	0.26	0.70	0.29	1.00	0.67	-0.18	-0.20
Management by Exception (active)	-0.03	0.25	0.42	0.61	-0.19	0.67	1.00	-0.20	0.29
Management by Exception (passive)	-0.32	-0.58	-0.56	-0.34	0.00	-0.18	-0.20	1.00	0.00
Laissez-faire	0.11	0.01	-0.13	0.01	-0.15	-0.20	0.29	0.00	1.00

Source: Own elaboration.

¹⁰ Since the study is based on population-wide surveys, statistical significance measures should not be evaluated using inferential statistics; rather, they should only be used to identify the coefficients that need more attention.

agreement between the respondents. This was critical in deciding how to analyse the mayors' leadership styles: if the mayors' and deputies' assessments were equivalent, the MLQ scales could be calculated based on their own individual opinions; if not, more confidence would need to be placed in the external assessment results.

Indeed, the mean values of Kendall's W for the leadership behaviours as assessed by the deputies and secretaries turned out to be significantly higher than when assessed by the three interviewees from each municipal office (0.53 vs. 0.74). This provided an additional argument (i.e. apart from the theoretical one) in favour of assessing the leadership style of mayors solely on the basis of the external evaluation – the findings are presented in the following section.

Results and discussion

In order to explore the relationship between the leaders' behaviours and performance indicators as perceived by their subordinates, a simple analysis of correlation coefficients was conducted (see Table 4).

Table 4. Correlation coefficients between the MLQ leadership scales and three performance measures. Shading indicates statistically significant coefficients ($p < 0,01$)¹¹

MLQ scale	Extra Effort	Perceived Effectiveness	Satisfaction with the Leadership
Idealised Influence (attributes)	0.28	0.27	0.21
Idealised Influence (behaviours)	0.69	0.47	0.38
Inspirational Motivation	0.39	0.24	0.21
Intellectual Stimulation	0.72	0.41	0.54
Individual Consideration	0.08	0.47	0.27
Award conditioning	0.61	0.49	0.67
Management by Exception (active)	0.54	0.05	0.21
Management by Exception (passive)	-0.21	-0.17	0.03
Passive: <i>Laissez-faire</i>	0.08	-0.27	-0.32

Source: Own elaboration.

Table 4 above reveals an interesting pattern. First, none of the correlation coefficients between leadership scales and perceived leader effectiveness exceeded 0,5¹². Second, contrary to frequent claims – apart from passive leadership, which is universally considered to be neutral or negative in terms of performance – it is difficult to unequivocally indicate the best leadership style. Thus, both transformational (Idealised Influence [behaviour], Intellectual Stimulation) and transactional (Contingent Reward, Management by Exception [active]) leadership scales correlate with Extra Effort, which is generally believed to be one of the most important aspects of effectiveness in the leadership model used in the study. The situation is similar for satisfaction with leadership,

¹¹ See the footnote above.

¹² The correlation coefficients provided in this chapter should be approached with caution due to the common method bias, or the potential overestimation of correlation between variables when measuring dependent and independent variables using the same tool.

which exhibits a strong correlation for both Intellectual Stimulation (transformational behaviours) and Active management by exception (transactional behaviours).

A preliminary look at the findings presented in Table 4 seems to support both those who argue that transformational as well as transactional leadership elements are necessary for effective leadership (Judge & Piccolo, 2004), and the advocates of ambidextrous leadership. According to the latter idea (Zacher & Rosing, 2015), leaders who rely on styles aimed at structuring (such as transactional leadership) and inspiring creativity (such as transformational leadership) make their teams and organisations more effective, especially in terms of innovation and the capacity to develop novel solutions.

It is also interesting to see what the analysis of correlation coefficients reveals regarding the variables that are unrelated to leadership performance items. It turns out, for example, that Individual Consideration is unrelated to Extra Effort and only marginally related to Satisfaction with the Leadership. This may be due to the characteristics of the group that evaluated the mayors – the deputies and city secretaries work closely with their superiors; hence, it is possible that there was little variance in the results in this respect.

Based on the collected data, is it thus possible to accurately predict the performance of the mayor as perceived by his/her subordinates? To further explore the relationship between leadership behaviours and effectiveness, two stepwise linear regression analyses were conducted for the dependent variables identified in the correlation table analysis as potentially related to the types of leadership behaviours diagnosed by the MLQ.

The regression analysis for the dependent variable Satisfaction with the Leadership produced a model explaining approximately 40% of the variance in the dependent variable with the presence of only one independent variable, namely Contingent Reward (the other coefficients did not significantly improve the quality of the model and were therefore not included). The beta coefficient for this model was 0.67 and was the same as Pearson's *r* correlation coefficient. The situation was different for the model with Extra Effort as the dependent variable. The regression analysis produced a model that explains more than 60% of the variance in the dependent variable by including two independent variables related to transformational leadership: Intellectual Stimulation and Idealised Influence. Details of the model are presented in Table 5.

Table 5. Linear regression model for Extra Effort as the dependent variable

Model parameters	B	SE	Beta	T	Significance
(Constant)	-0.163	0.685		-0.238	0.815
Transformational: Intellectual Stimulation	0.73	0.151	0.778	4.841	< 0.001
Transformational: Idealised Influence (attributes)	0.354	0.146	0.39	2.427	0.031
Dependent variable: Extra Effort					
Adjusted R ² : 0,62					

Source: Own elaboration.

The results suggest that Intellectual Stimulation and Idealised Influence have an independent significant impact on Extra Effort on the part of subordinates. Beyond these two variables, behaviours associated with other scales do not significantly explain performance in this area.

Leadership behaviour as a predictor of local government performance

One of the most significant challenges associated with the perceived correlations in the area of leadership in the public sector discussed above is the so-called common method bias, i.e. the risk of identifying correlations that arise not from the actual performance of individual aspects of leadership styles, but from using the same tool to measure the dependent and independent variables. Furthermore, in both public and academic debate, objective indicators of leadership performance rather than the employees' subjective opinions are of special relevance in terms of their implications for local government actions.

To that end, we analysed the correlation between various leadership behaviours and the key outcomes of local government initiatives. We focused on two factors that appear to be particularly strongly related to leadership behaviour: citizen involvement in political life (measured as election turnout) and the accomplishment of goals pertaining to creating sustainable cities (Shmelev & Shmeleva, 2009; measured as the length of bus lanes per 100 000 residents; the number of kindergarten places per 100 000 residents; and the share of green space in urban areas). Table 6 below summarises the findings of the regression analysis using the input technique for the six models, which included all behaviour categories assessed by the MLQ and budget expenditure per resident (controlled variable) as independent variables.

Table 6. Summary of basic parameters of linear regression models for selected dependent variables

Dependent variable Parameters of the model	Length of bus lanes per 100K residents	Number of kindergarten places per 100K residents	Share of parks, greenery, and residential green areas in total city area	Turnout in the 2019 Senate elections	Turnout in the 2019 parliamentary elections	Turnout in the 2020 mayoral election
Transformational: Idealised Influence (attributes)	-1.01	-0.60	-0.53	-0.15	-0.16	-0.19
Transformational: Idealised Influence (behaviours)	1.52	0.76	1.33	0.96	0.97	0.99
Transformational: Inspirational Motivation	0.55	0.31	0.62	-0.14	-0.14	0.08
Transformational: Intellectual Stimulation	-1.74	-1.56	-1.10	-0.32	-0.33	-0.45
Transformational: Individual Consideration	0.43	0.14	0.03	-0.20	-0.20	-0.31
Transactional: Award conditioning	-0.39	-0.13	0.19	-0.38	-0.38	-0.11
Transactional: Management by Exception (active)	1.13	0.79	0.03	0.30	0.30	0.04
Passive: Management by Exception (passive)	0.57	-0.10	0.30	0.69	0.69	0.79
Passive: <i>Laissez-faire</i>	-0.48	-0.39	-0.23	-0.50	-0.50	-0.18
Total budget expenditure	0.27	0.81	0.29	0.27	0.27	0.29
Adjusted R2	0.70	0.74	0.40	0.60	0.61	0.52
Model significance	0.06	0.04	0.23	0.10	0.10	0.15

Shading: green – statistical significance $p < 0.05$; yellow – statistical significance $p < 0,10^{13}$.

Source: Own elaboration.

¹³ See the footnote above.

An interesting picture emerges from the analysis of these regression models. The only type of behaviour that positively predicts all the outcomes of local government activities is Idealised Influence manifested in behaviours. At the same time, in the case of urban sustainability indicators, behaviours related to Intellectual Stimulation and perceived characteristics of Idealised Influence have a negative impact, whereas those related to Management by Exception (active; especially in the case of the variable length of cycle paths per 100 000 residents) have a positive impact. In the case of variables related to voter turnout, an extra positive influence can be observed in the case of Management by Exception (passive). All these relationships were controlled for the key variable of per capita budget expenditure.

How to interpret these patterns? Undoubtedly, Idealised Influence comes closest to the traditional definitions of charisma, so once again we find that charismatic leaders are capable of achieving very tangible outcomes beyond subjective performance measures (Antonakis & Day, 2017). What is somewhat surprising in this light is the negative correlation between Idealised Influence (attributes) and urban sustainability indicators. Also noteworthy is the data that suggests that the passive attitude of mayors (Management by Exception) is offset by increased voter participation.

Conclusion

The issue of urban leadership is becoming increasingly important at least for two reasons. The first one has to do with its practical relevance to the quality of management of large cities, which are complex, comprehensive, and adaptive systems. In a post-modern, rational society saturated with formal institutions and advanced procedures, it turns out that the leader, his/her attributes, professed ideals, and favoured leadership styles still hold the key to urban matters and cannot be replaced by rigid management methods. The third reason stems from the relatively superficial reflection on urban leadership among leadership scholars in recent decades. The situation began to change dramatically when researchers became aware of the importance of this issue for understanding and conceptualising a range of approaches to urban management. Along with this, both the number of studies and publications devoted to this issue began to increase. However, the phenomenon in question still requires in-depth reflection, especially of a theoretical nature.

The MLQ used to prepare this paper proved to be useful. Its psychometric indices demonstrated strong adherence to theoretical and methodological assumptions. Furthermore, the study's findings tying specific leadership characteristics to leader effectiveness are consistent with meta-analyses and models illustrating the relationship between leader behaviours and validated performance indicators.

Particularly interesting findings from this application of the MLQ include the correlation between the leadership behaviours of mayors and their performance as perceived by their subordinates and captured by objective city performance indices. These insights are worth exploring in more detail.

Devising a typology of this phenomenon and developing theoretical models to explain it should be a priority in future studies on urban leadership. Last but not least, there is a good case for making more extensive use of psychometric indicators to study leadership scales in relation to leader effectiveness in the context of meta-analyses and theoretical models revealing associations between leader behaviours and performance indicators.

A number of observations support the use of the MLQ for studying leadership in local government. Firstly, the appropriate psychometric indicators, including the reliability of the scales

and the intercorrelations between the dimensions measured by the MLQ, are mostly consistent with the theoretical and methodological assumptions. Secondly, the study's findings that tie specific leadership characteristics to leader performance are consistent with meta-analyses and theoretical models demonstrating correlations between leader behaviours and numerous performance measures. And, thirdly, the wealth of practical suggestions that can be obtained from the application of the tool for the study of leadership in local government units cannot be overstated.

What pragmatic conclusions can be drawn from the analyses conducted in this chapter? It turns out that there is a significant correlation between the leadership behaviour of mayors, their evaluation by subordinates, and more objective urban performance indicators. Focusing development efforts and activities on behaviours that are most visibly linked to a wide range of performance measures, such as Idealised Influence or Contingent Reward, may translate into an improved effectiveness of municipal offices. The study also makes a compelling case for maintaining a balance between leadership behaviours that represent a variety of styles. In terms of the future research on leaders in local government units, it may be useful to explore which dependent variables other than those reported in this paper correlate with objective urban performance indicators.

The research findings discussed in this article may significantly contribute to the methodological debate on the fascinating phenomenon of urban leadership. By improving the quality of research in this area, it may serve as the foundation for the development of more theoretically-advanced exploratory models.

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