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The Impact of Transformational and Transactional Leadership on Organisational Bureaucracy

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Abstract: The objective of this paper is to empirically investigate through an industry survey, the effect of transformational and transactional leadership on the dimensions of organisational bureaucracy. Results indicate that the leaders who inspire followers to transcend their own self-interests and who are capable of having a profound and extraordinary effect on followers (transformational leadership) tend to impede bureaucracy in organisations. The findings also indicate that the leaders who guide and motivate their followers in the direction of established goals by clarifying role and task requirements (transactional leadership) tend to foster and support the bureaucratic dimensions. Theoretical implications and practical applications of these findings are discussed.

Keywords: Leadership ♦ organisational bureaucracy ♦ transformational ♦ transactional ♦ United Arab Emirates.

1. Introduction

Is bureaucracy dead? Although some bureaucratic characteristics are in decline and bureaucracy is undoubtedly going through change, it is far from dead (Robbins 2003). Virtually all modern organisations are bureaucratic to a degree because bureaucracy is still the most efficient way to organise large-scale activities (Yucel 1999). Since Weber's (1947) theory of 'authority structures' researchers and practitioners have become increasingly interested in studying bureaucracy and its influence on job related attitudes, perceptions and organisational performance. For example, it is argued that bureaucracy can improve worker satisfaction (Michaels, Cron, Dubinsky & Joachimsthaler 1988), increase innovation (Damanpour 1991), reduce role conflict (Senatra 1980), and lessen feelings of alienation (Jackson & Schuler 1985). The negative side however, suggests that bureaucracies frustrate participants (Adler & Borys 1996; Ferguson 1984; Hirschhorn 1997). Moreover, from the practitioners' perspective, Jack Welch in his effort to attack organisational problems has implemented the General Electric's revolutionary method for *busting bureaucracy* (www.rbl.net/). From the management perspective, Manlow (2005) argues that heading a major corporation with a global reach, in a highly competitive and seasonal industry requires a bureaucratic form of administration. On the other hand, it is not possible to contain fashion design, a dynamic enterprise built on innovation, into rigid bureaucratic boundaries.

Although there is an increased interest in studying the influence of bureaucracy on organisational outcomes, this has not, as yet, stimulated many empirical studies examining the leadership effects on the dimensions of organisational bureaucracy, and in particular, the literature linking transformational and transactional leadership to organisational bureaucracy is even smaller. To this end this research started by asking the following questions. To what extent will leaders, who inspire followers and demonstrate friendship, warmth, respect, and mutual trust in the relationship with employees, affect the dimensions of organisational bureaucracy? Which leadership style best supports, and which impedes the bureaucratic characteristics in organisations? What is the degree of organisational bureaucracy in developing countries?

The answers to these questions are some of this paper's objectives. The goal of this study is to empirically examine the relationship between organisational bureaucracy, as established by Hall (1961), and the more 'contemporary' leadership dimensions measured by Bass's (1985) multifactor leadership questionnaire (MLQ). The study involves a questionnaire based survey of members of non-unionised employees from an organisation operating in the United Arab Emirates.

2. Literature review

2.1 Bureaucratic characteristics

According to Robbins (2003: 434) bureaucracy is a "structure with highly routine operating tasks achieved through specialisation, very formalised rules and regulations, tasks that are grouped into functional departments, centralised authority, narrow spans of control, and decision making that follows the chain of command". In other words, bureaucracy is a blueprint for organising human activities for a desired end. It is a social phenomenon that has evolved throughout the history of civilisation and it has been used to build the Parthenon, pyramids, and to invade nations. Although it is an old phenomenon, most discussions on bureaucracy occurred after the classical era of contemporary management practices, viz. Taylor's Scientific Management, Fayol's Administrative Theory, Follett and Bernard's 'Social Man' Theory, and Weber's (1947) Structural Theory. Based on the Weberian theory, earlier researchers believed that all characteristics of bureaucracy must be present to a high degree in an organisation before it can be called a bureaucracy. During the 1960's some researchers started to think that all characteristics of bureaucracy may not be present in an organisation at the same time. Some characteristics, such as hierarchy of authority, can be stronger than others, e.g. formalisation. Characteristics could be independent of each other. Since the 1960s, different and rather inconclusive approaches to measure bureaucracy have been used (Yucel 1999), with Hall (1961) being the first to empirically measure bureaucratic dimensions in organisations.

Hall (1961) has developed a 62-item survey instrument to measure the degree of bureaucratisation in organisations. His research has identified six dimensions of bureaucracy, namely, *hierarchy of authority*; *rules and regulations*; *impersonality*; *technical competence*; *procedural specifications*; and *division of labour or specialisation*. The definitions of these dimensions are shown in the Appendix. But the introduction of rules and regulations and the centralisation of authority by management provide the foundation to prescribe or restrict the behaviour of organisational members (Dalton, et al. 1980). Review of the literature suggests that in centralised organisations the main decisions are made by senior management, where little authority is passed down the organisation. On the other hand, in decentralised organisations decisions are made by junior management as authority is passed down the organisation, thereby accepting less uniformity in how things are done (Robbins 2003).

All in all the review of the literature suggests that leadership is a crucial variable contributing to the degree of centralisation and formalisation within organisations (Kerr & Jermier 1978; Mills & Posner 1982; Robbins 2003), and hence to the degree of bureaucratisation (Sackney 1976). Therefore, there must be a dynamic interaction between leadership and bureaucratisation in a way of creating conservative and rigid formal structures that could impede creativity and productivity or creating a consultative work environment whereby decision-making authority is exercised equally by every member of the organisation.

2.2 Specific leader behaviours and bureaucracy

Leadership is defined broadly as influence processes affecting the choice of objectives of the group or organisation and the perceptions of followers (Yukl 1981). Various theories of leadership have emerged over the past fifty years. The most noticeable are the classical Ohio Studies of initiating structure and consideration (Stogdill 1974); the task-orientation and relationship-orientation leadership (Blake & Mouton 1964); the participative leadership (Vroom & Yetton 1973); and the transformational and transactional leadership (Bass 1985).

A review of the literature suggests that neither the classic Ohio two-factor leadership model, nor the Blake and Mouton's (1964) relationship-orientation and task-orientation leadership, can clearly explain the extent to which leadership attitudes affect the degree of bureaucratic characteristics as defined by Hall (1961). Moreover, it is argued that managers who are characterised by friendship, and mutual trust and encourage participative decision-making (democratic attitudes towards leadership) tend to be more successful in flat (less bureaucratic) organisations, and less successful in tall organisations (Ghiselli & Siegel 1972).

But democratic leadership style seems to have much in common with Bass's (1985) transformational leadership (Bowers & Seashore 1966; Politis 2001). It is thus, reasonable to assume that the leadership style that focuses on techniques, such as, involving employees in the decision-making process, empowering and enabling them to think about old problems in new ways (Burns 1978; Bass 1985, 1990), is an important variable to the degree of bureaucratisation in organisations. The leadership style focusing on such specific techniques is known as 'transformational' leadership. Consequently, the dimensions of transformational and transactional leadership were employed to predict the characteristics of bureaucracy in this study.

2.2.1 Transformational and transactional leadership

The dimensions of transformational and transactional leadership were derived from Bass's (1985) theory and research. Bass (1985) developed the multifactor leadership questionnaire (MLQ-Form 5), which measures five leadership factors. These are *attributed charisma*, *individualised consideration* and *intellectual stimulation* forming the transformational leadership dimension. *Contingent reward* and *management-by-exception* forming the transactional leadership dimension. The following definitions are taken from Hater and Bass (1988: 696).

1. Transformational leadership:

- *Attributed charisma*: "the leader instills pride, faith, and respect, has a gift for seeing what is really important, and transmits a sense of mission".
- *Individualised consideration*: "the leader delegates projects to stimulate learning experiences, provides coaching and teaching, and treats each follower as individual".
- *Intellectual stimulation*: "the leader arouses followers to think in new ways and emphasises problem solving and the use of reasoning before taking action".

2. Transactional leadership:

- *Contingent reward*: "the leader provides rewards if followers perform in accordance with contracts or expend the necessary effort".
- *Management-by-exception*: "the leader avoids giving directions if the old ways are working and allows followers to continue doing their jobs as always if performance goals are met".

Review of the literature suggests that top leaders of large and complex organisations are in favour of "bureaucratic structures with specialised jobs, standardisation, rules and regulations, and centralised decision-making" (Bass 1990: 580). Ghiselli and Siegel (1972) tend to confirm that managers in tall and hence more bureaucratic organisations are more successful if they had authoritarian, transactional type of attitudes towards leadership. In an empirical study of 91 public schools in Turkey Yucel (1999) found that teachers tend to report a low specialisation in their schools if they work under older and more experienced principals. Yucel (1999) also found that teachers who "work in authoritarian schools feel most alienated" (p. 118) compared to those who work in collegial schools. Moreover, Sackney (1976) suggested that schools led by older and more experience administrators (e.g. traditional/transactional leaders) tend to be more bureaucratic and less professional than schools led by young principals (e.g. contemporary/more democratic leaders). It is thus plausible to predict that the factors representing the transactional leadership style will be more strongly and more positively related with the characteristics of bureaucracy, than the factors representing the transformational leadership style. The assumed connectedness between transactional leadership and the determinants of bureaucracy is expressed in Hypothesis 1.

Hypothesis 1: Correlations of the bureaucracy factors with the transactional leadership factors will be stronger, and more positive, than those with the transformational leadership factors.

The literature also suggests that as the level of complexity and specialisation increases makes it more difficult to coordinate and control decision activities (Lawrence & Lorsch 1967), and hence managers share a significant degree of decision-making power with subordinates (Robbins 2003). In other words, managers tend to embark onto participative management techniques. A review of

the literature revealed that when tasks are ambiguous and complex (e.g. there is a high level of task complexity), then participative leadership is required (Delbecq 1965) to allow those who know the most to contribute towards better decisions. Yet, when workflow uncertainty and task uncertainty are high, self-supervision resulting from transformational leadership also will be high (Slocum & Sims 1980; Sussman 1976). Moreover, Hall (1968) has shown that self-regulating behaviour of professional employees reduces the need for rigid structuring by organisations. It is thus reasonable to hypothesise that the factors representing the characteristics of bureaucracy will be negatively related with the factors of transformational leadership, than the factors representing the transactional leadership style. The assumed connectedness between transformational leadership and the determinants of bureaucracy is expressed in Hypothesis 2.

Hypothesis 2: Correlations of the bureaucracy factors with transformational leadership factors will be negative, and not as strong as those with the transactional leadership factors.

3. Subjects and procedure

3.1 Sample

The sample was drawn from a public utilities organisation operating in the United Arab Emirates. The sample consisted of members of non-unionised employees closely linked to operations and included operators of simple equipment, maintenance engineers, industrial engineers and planners, customer assistants, clerical staff, accountants, field assessors and first-line supervisors. All respondents were full-time employees and volunteered to participate in the study. Respondents have known their immediate leader for at least 6 months. Questionnaires containing items measuring the dimensions of transformational and transactional leadership and the characteristics of bureaucracy were distributed to 122 employees. A total of 97 employees (79.5 per cent response rate) returned usable questionnaires. Six incomplete questionnaires were excluded from the final sample.

The final sample consisted of 2.6% females and 97.4% males. Approximately one quarter of the sample had attained a college degree and almost one half had received technical school qualifications or equivalent technical training in the English language, and all had knowledge in many diverse areas.

3.2 Analytical procedure

The proposed hypotheses were tested using covariance structure analysis. Covariance-based structures are exemplified by software packages such as LISREL, EQS and AMOS. The analysis of moment structures (AMOS, version 5) software (Arbuckle 2003) was used for the factor analysis (measurement model) and for the regression analysis (structural model). The combination of factor analysis and regression analysis is known as causal modelling (Hair, Anderson, Tathan & Black 1995) or structural equation modelling (SEM). Following the recommendations of Sommer, Bae and Luthans (1995), a measurement model was developed and then, with this held, a structural model. Using confirmatory factor analysis (CFA) the factorial validity of the measurement models was assessed. Given adequate validity coefficients of those measures, the number of indicators in the model was reduced by creating a composite scale for each latent variable (see Politis 2001).

As a test of the measurement and the structural models, a mixture of fit-indices was employed to assess model fit. The ratio of chi-square to degrees of freedom (χ^2/df) has been computed, with ratios of less than 2.0 indicating a good fit. However, since absolute indices can be adversely affected by sample size (Loehlin 1992), four other relative indices, the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), the comparative fit index (CFI), and the Tucker and Lewis index (TLI) were computed to provide a more robust evaluation of model fit (Tanaka 1984; Tucker & Lewis 1973). For GFI, AGFI, CFI and TLI, coefficients closer to unity indicate a good fit, with acceptable levels of fit being above 0.90 (Marsh, Balla & McDonald 1988). For root mean square residual (RMR) and root mean square error approximation (RMSEA), evidence of good fit is considered to be values less than 0.05; values from 0.05 to 0.10 are indicative of moderate fit and

values greater than 0.10 are taken to be evidence of a poorly fitting model (Browne & Cudeck 1993).

4. Results

4.1 Measurement models

The variables that we measure on the survey are: transformational and transactional leadership, and the characteristics (dimensions) of bureaucracy.

4.1.1 Independent variables

Transformational and *transactional* leadership measures were assessed using Bass's (1985) 73-item multifactor leadership questionnaire (MLQ-Form 5). The MLQ-5 questionnaire employs a 5-point response scale (0 = not at all; 4 = frequently if not always) and consists of five subscales: three subscales forming the transformational leadership (i.e. attributed charisma, individualised consideration, and intellectual stimulation), and two subscales forming the transactional leadership (i.e. contingent reward and management-by-exception). We conducted CFA of all MLQ items in order to check for construct independence. We first fit a five-factor model to the data, corresponding to that proposed by Bass. The fit indices of CFI, AGFI, CFI, TLI, RMR, and RMSEA were 0.95, 0.97, 0.94, 0.91, 0.05, and 0.07, respectively, suggesting that the five factor model provides a good fit. Thus, the data supported the independence of five factors, namely, attributed charisma ($\alpha = 0.90$); individualised consideration ($\alpha = 0.87$); intellectual stimulation ($\alpha = 0.79$); contingent reward ($\alpha = 0.85$); and management-by-exception ($\alpha = 0.85$). Ten items of the MLQ were dropped due to cross loading and/or poor loading of the order of, or less than 0.10.

4.1.2 Dependent variables

Bureaucracy made up of six subcategories, namely, hierarchy of authority; rules and regulations; impersonality; technical competence; procedural specifications; and division of labour or specialisation. These categories were assessed using Hall's (1961) 62-item instrument. All categories have 10 items except for hierarchy of authority, which has 12 items. The instrument employs a 5-point response scale (1 = strongly disagree; 5 = strongly agree). We conducted CFA of all items measuring bureaucracy in order to check for construct independence. We first fit a six-factor model to the data, corresponding to that proposed by Hall. The fit indices of CFI, AGFI, CFI, TLI, RMR, and RMSEA were 0.82, 0.85, 0.88, 0.79, 0.12, and 0.16, respectively, suggesting a poor model fit. It appears that certain factors should be combined and solutions examined with fewer factors. A series of CFAs were therefore performed by considering a hierarchy of competing models, from a simple null model of zero common factors through to from one-, two-, three-, four-, and five-factor solutions. Substantial gains in model fit were obtained by moving from a four-factor to five-factor solution. The data supported the independence of five factors, the first being the factor of 'authority and regulations' (17 items, $\alpha = 0.84$), which consists of the original factors of hierarchy of authority, rules and regulations, and the factors of impersonality (10 items, $\alpha = 0.96$), technical competence (8 items, $\alpha = 0.76$), procedural specifications (8 items, $\alpha = 0.79$), and division of labour or specialisation (9 items, $\alpha = 0.74$). Ten items of the bureaucratic instrument were dropped due to cross loading and/or poor loading of the order of, or less than 0.12.

As a result of the CFAs, the theoretical model to be tested contains three transformational and two transactional leadership dimensions, and five dimensions of organisational bureaucracy, as shown in Figure 1.

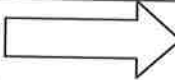
Transformational/transactional	Leadership dimensions	Dimensions of bureaucracy
Transformational & Transactional Leadership (Bass 1985)		Characteristics of Bureaucracy (Hall 1961)
Transformational Leadership		Authority and regulations
Attributed charisma		Impersonality
Individualised consideration		Technical competence
Intellectual stimulation		Procedural specifications
Transactional Leadership		Division of labour or specialization
Contingent reward		
Management-by-exception		

Figure 1: Summary of variables used in the paper

4.2 Path modelling

Using the analytical procedure outlined in Politis's (2001: 358-359) study, the computation of the parameters λ and θ was performed. These parameters are used in the path model. Table 1 contains the means, standard deviations, reliability estimates, the regression coefficient λ and measurement error θ estimates.

Once these parameters (regression coefficients (λ s) which reflect the regression of each composite variable on its latent variable and the measurement error variances (θ s) associated with each composite variable) are calculated, we build this information into the path model to examine the relationships among the latent variables.

Table 1: Descriptive statistics, reliabilities, λ and θ estimates

Variable	Mean	SD (σ)	Reliability estimate Cronbach alpha (α)	Loading $\lambda = \sigma * \sqrt{\alpha}$	Error Variance $\theta = \sigma^2 * 1 - \alpha$
Transformational Leadership					
Attributed charisma	1.85	1.06	.90	1.01	.112
Individualised consideration	2.04	0.99	.87	0.92	.127
Intellectual stimulation	2.00	0.98	.79	0.87	.202
Transactional leadership					
Contingent reward	1.84	0.99	.85	0.91	.147
Management by exception	2.46	0.59	.85	0.54	.052
Dimensions of bureaucracy					
Authority and regulations	3.19	0.63	.84	0.58	.064
Impersonality	3.31	0.68	.96	0.67	.018
Technical competence	3.27	0.65	.76	0.57	.101
Procedural specification	3.12	0.64	.79	0.57	.086
Division of labour/specialisation	2.96	0.69	.74	0.59	.124

Note: λ has been rounded to two decimal places

The model of Figure 2 contains three transformational leadership dimensions: attributed charisma, individualised consideration and intellectual stimulation; two transactional leadership dimensions: contingent reward and management-by-exception; and five variables of bureaucracy: authority and regulations, impersonality, technical competence, procedural specification and division of labour or specialisation.

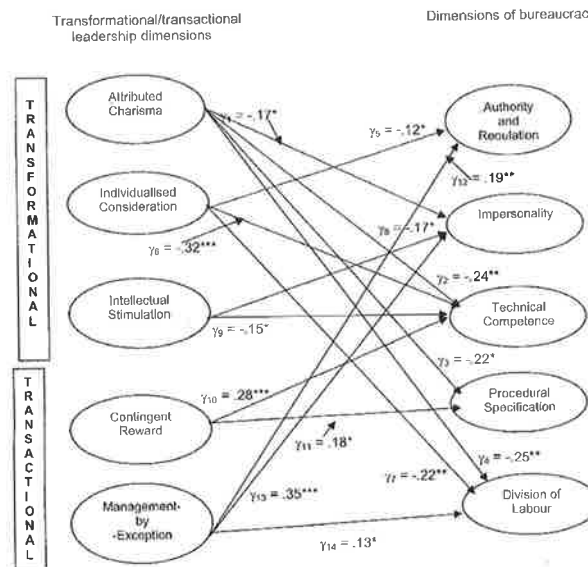


Figure 2: Structural estimates of hypothesised model^a

Note: ^a Standardised path coefficient; N = 97

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The analysis revealed that the structural model of Figure 2 fits the data well, with $\chi^2/df = 1.72$; GFI = 0.94; AGFI = 0.91; CFI = 0.95; TLI = 0.89; RMR = .045; and RMSEA = 0.087. Figure 2 displays results of hypotheses testing using SEM. Standardised path estimates (γ s) are provided to facilitate comparison of regression coefficients. It should be noted that only significant regression coefficients are reported.

Both hypotheses are supported by this data, for at least some dimensions of bureaucracy. As predicted, fifty percent of the relationships between transactional leadership and bureaucracy factors are consistent with Hypothesis 1. Specifically, contingent reward is significantly and positively related to technical competence ($\gamma_{10} = 0.28$, $p < 0.001$), and procedural specification ($\gamma_{11} = 0.18$, $p < 0.05$). Moreover, management-by-exception is strongly and positively related to authority and regulation ($\gamma_{12} = 0.19$, $p < 0.01$), impersonality ($\gamma_{13} = 0.35$, $p < 0.001$), and division of labour ($\gamma_{14} = 0.13$, $p < 0.05$).

Hypothesis 2 proposed that correlations of the bureaucracy factors with transformational leadership factors will be negative, and not as strong as those with the transactional leadership factors. This hypothesis was supported by the data of this study in that attributed charisma is significantly and negatively related to impersonality ($\gamma_1 = -0.17$, $p < 0.05$), technical competence ($\gamma_2 = -0.24$, $p < 0.01$), procedural specifications ($\gamma_3 = -0.22$, $p < 0.05$), and division of labour ($\gamma_4 = -0.25$, $p < 0.01$). Yet, individualised consideration had a significant, negative effect on authority and regulation ($\gamma_5 = -0.12$, $p < 0.05$), technical competence ($\gamma_6 = -0.32$, $p < 0.001$), and division of labour ($\gamma_7 = -0.22$, $p < 0.01$). Finally, intellectual stimulation had a significant, negative effect on impersonality ($\gamma_8 = -0.17$, $p < 0.05$), and technical competence ($\gamma_9 = -0.15$, $p < 0.05$). No other paths were significant. Alternative models were also examined with either paths added, reversed or removed, but all led to significantly worse model fit.

5. Discussion

The aim of this study was (i) to extend the field of leadership research by investigating the effect of transformational and transactional leadership on the dimensions of organisational bureaucracy, and (ii) to find the degree of organisational bureaucracy in developing countries. The overall pattern of relationships between independent and dependent variables in the structural equation model is

consistent with our hypotheses. Of the 25 paths tested between independent and dependent variables, 14 were significant. The key finding of this study is that leaders who inspire followers to transcend their own self-interests and who are capable of having a profound and extraordinary effect on followers (transformational leadership) tend to impede the bureaucratic characteristics (dimensions) in the public utilities organisation. Specifically, attributed charisma had a significant, negative effect on four of the five bureaucratic dimensions. Moreover, individualised consideration had a significant, negative effect on three of the five bureaucratic dimensions. On the other hand, those leaders who guide and motivate their followers in the direction of established goals by clarifying role and task requirements (transactional leadership) tend to foster and support the dimensions of bureaucracy.

It is implied in these results that organisations that employ leaders who inspire pride, faith, respect, and transmit a sense of mission might be able to create the type of work environment in which the process of participative management is energised and decision-making is exercised equally by all employees of the organisation. Moreover, the results advocate that organisations that employ leaders who set goals, structure how a task is to be performed, and closely monitor the performance of employees tend to create internal friction, conservatism and rigid, formal management structures (i.e. increased bureaucracy). It is also suggested that a leader with a hierarchical attitude and behaviour (diametrically opposite to the self-management leader) will create an organisational structure and work environment which reinforce power-based relationships and one-way monologue, thus blocking dialogue, freedom and learning, and hence decreasing creativity and productivity.

The data reported here indicate that practitioners that have democratic attitudes towards leadership could result to less bureaucratic organisation, while practitioners who demonstrate authoritarian attitudes towards leadership could result to more bureaucracy. Thus, organisations should develop and deliver training programs aimed at equipping and allowing managers to apply transformational leadership strategies at work in order to reduce bureaucratisation.

Finally, the results of this research have shown that average mean score of bureaucratisation is equal to 3.17 indicating that the mean scores lying between the high end of "neutral" to the lower end of "agree". In other words, it is obvious that bureaucracy is far from dead in the public utilities organisation, although bureaucracy is undoubtedly going through change as some of the bureaucratic characteristics are in decline (e.g. division of labour mean score = 2.96).

5.1 Limitations and directions for future research

Although from the analytical perspective structural equations modelling has a number of advantages in testing statistical causal relationships, actual causality cannot be tested directly. So ideally future research must test causality using experimental or longitudinal data for more definite results. Finally, the cross-sectional nature of the study renders it vulnerable to problems typically associated with survey research (common method variance). To account for the common method variance problems, it would have been advantageous for future researchers to gather data from multiple sources.

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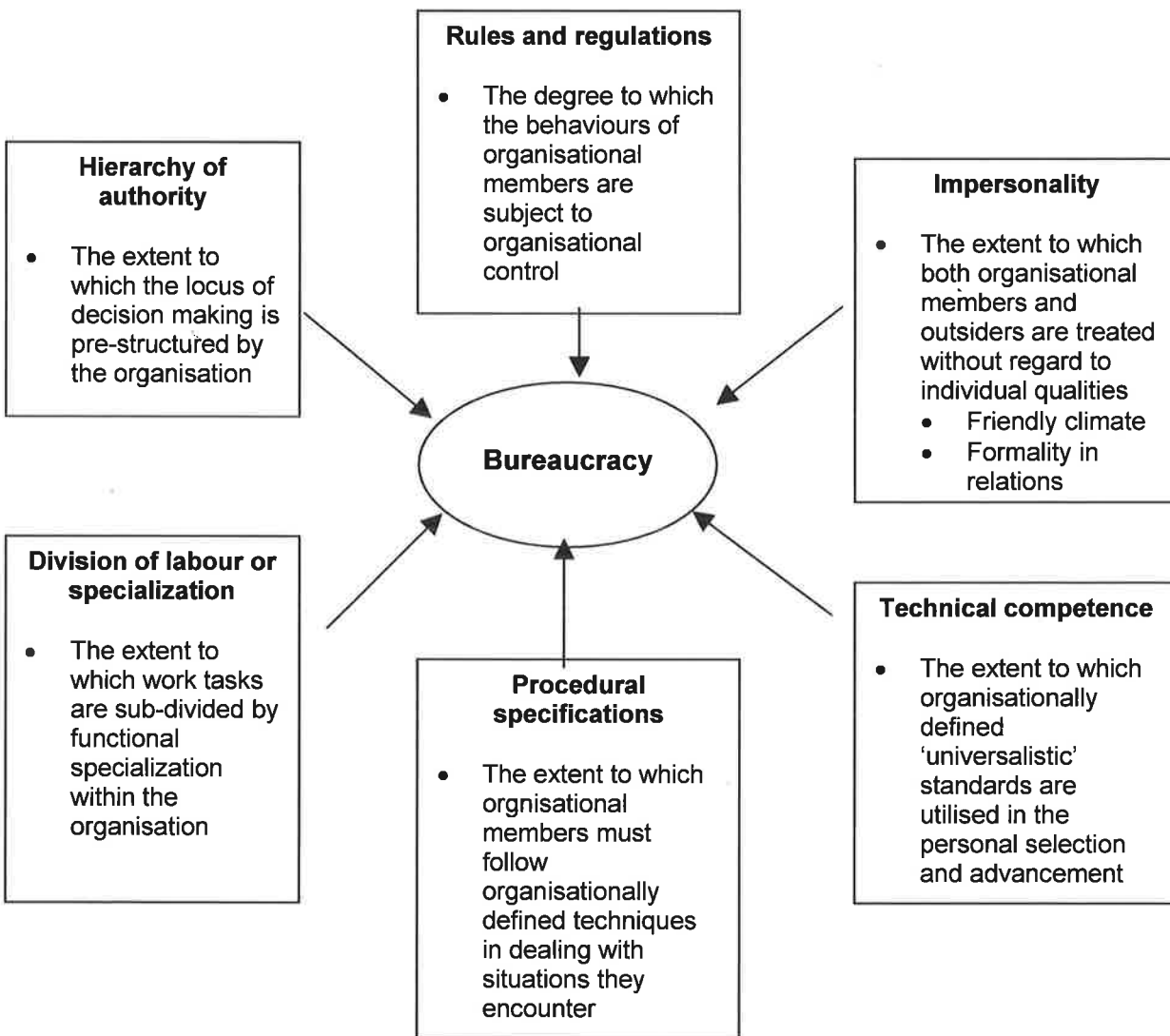
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Characteristics (dimensions) of bureaucracy



Adapted from Hall (1968: 95)