

Supervisory Power Bases and Job Satisfaction: Influence of Organization Size, Age Difference and Job Tenure

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The study examined the relationships between the superiors' bases of power on satisfaction with supervision in industrial settings. Influence of organizational size, superior-subordinate age difference and job tenure were also investigated. Data from 210 technical staff of manufacturing companies revealed that supervision of industrial people were most acceptable through the exercise of non-coercive power bases (referent, expert, reward and legitimate). Among the power bases, referent power was most correlated with satisfaction with supervision. The perception of expertise that fosters supervisory satisfaction was found to be associated more with superior and subordinate age difference rather than their job tenure. Organization size was found to be associated with coercive power, statistically implicating that the exercise of coercive power may be as results of the contingent effect of size.

Field of Keywords: Social Power, Satisfaction with Supervision, Organizational Size, Age Differential, Job Tenure

1. Introduction

The aim of this work is to study the consequence of superior's exercise of power upon subordinates' satisfaction with supervision and how these relationships are influenced by organizational size, superior-subordinate age difference and job tenure. The study of relationships forms a part of the vast study of the determinant of human behaviour (Cartwright, 1965). It is important for managers to be aware of the multiple sources of power in work settings and how they affect the employees' satisfaction.

There are two major sources of power in the organization (Bass, 1990). The first is related to one's position (positional power) to influence others who are lower in status. The other source is associated with the extent to which the wielder of power can bestow affection, consideration, sympathy, recognition and secure relationships to others (personal power) which are normally acquired through personal attributes such as expertise, abilities, charisma or contacts the person might possess.

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Although intuitively logical, organizational size has rarely been linked as antecedents of power. Also, little attention has been given in relating to the types of power applications to superior-subordinate age difference and job tenure. Acquiring the knowledge on how organizational size, age and job tenure influence superior power bases will allow the superior to be aware of and make use of the knowledge of contingent power factors affecting the exercise of power.

2. Literature Review

The Bases of Power

A number of classifications have been used in differentiating bases of social power in organizations (Peabody, 1961; Etzioni 1964; Patchen, 1974; Twomey, 1978; Kipnis, Schmidt and Wilkinson, 1980; Shukla, 1982; Rahim, 1989). Bases of power typology suggested by French and Raven (1959) are among the most popularly applied in research (Cobb, 1980; Frost and Stahelski, 1988; Rahim, 1989; Rahim, Antonioni, Krumov, and Illieva, 2000). Several researchers (Raven, 1992; Raven, Schwarzwald and Koslowsky, 1998) tried to include "information", and other power bases, but "these alleged power sources appear to be already captured by the French and Raven frameworkand it has held up well in extensive empirical usage over the years" Gaski (1986, p.62-63). Empirical evidence of this framework was provided by Pearce and Robinson (1987), Rahim (1988), Hinkin and Schriesheim (1989, 1990), Aguinis, Nestler, Quigley, Lee and Tedeschi (1996). French and Raven defined bases of power as (a) Coercive power which involves the concept of influence based upon subordinates' expectation of punishment for failure to conform to an influence attempt, (b) Expert power is based on subordinates' belief that their superior has particular areas of expertise, (c) Reward power is derived from the perception of subordinates that a superior can reward them for desired outcomes, (d) Referent power is defined as subordinates' desire to associate with a superior because of their personal liking of the superior, (e) Legitimate power is dependent upon the belief of subordinates that superior has the right to prescribe and control their behaviour.

Organization Size

Organization size is simply defined as the total number of employees in a firm (Kimberly, 1976). Much cited research by Aston Group reported that an increased in organizational size was associated with higher specialization and formalization, which further emphasized on standardization (Pugh, Hickson, Hinings and Turner, 1969). Child and Mansfield (1972) replicated the findings and concluded that organizational size was positively associated to specialization and formalization but negatively associated to centralization. Further comparison with Blau (1970) ascertained that "larger organizations are more specialized, have more rules, more documentation, more hierarchies and a greater decentralization of decision making further down such

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hierarchies" (Child, 1973). As such organizational size may have implication of power exercise.

Age and Job Tenure

Age and job tenure were evaluated to enhance understanding of the manner in which the physiological and psychological changing of aging influence human behaviour and perception. A stream of research in organizational behaviour literature (Gibson and Klien, 1970; Hunt and Saul, 1975; Schwab and Heneman, 1977; Churchill, Ford and Walker, 1976; Busch, 1980) provided the basis for developing and testing hypotheses on the effects of age and job tenure as they relate to the bases of social power. As with satisfaction, tenure can be a confound, and controlling for it tends to reduce or eliminate age-related differences. Researchers (Labouvie-Vief and Chandler, 1978; McEvoy and Cascio, 1989; Waldman and Avolio, 1991) have suggested a further investigation on contextual approach to study the effects of age. Although age and job tenure are potential confounding variables, still, research on age is weakened by inconsistent use of control variables such as job tenure when testing for age effects (Welford, 1985).

Satisfaction with Supervision

Numerous research findings suggest that bases of power were related to various aspects of employee satisfaction are of interest and represent an important extension to the job satisfaction literature (Johnson, 1993; Locke, 1976; Rahim, 1989; Bachman, 1968; Bachman, Smith and Slesinger, 1966; Bachman, Bowers and Marcus, 1968; Burke and Wilcox, 1971). Smith, Kendall, and Hulin (1969), in their Cornell JDI (Cornell Job Descriptive Index) described five areas of satisfaction: the work itself, the supervision, the co-workers, the pay, and the opportunities for promotion on the job. Since the theme of the present study is on the superior-subordinate relationships, the job-facet satisfaction is most relevant to satisfaction with supervision.

The use of non coercive power in supervision of subordinates can have a positive impact on the subordinates' attitude towards work (Rahim, 1989, Rahim and Buntzman, 1989). Many studies recorded that supervision to the extent that the superior exercises coercive power is found to have a negative impact on the subordinates' satisfaction (Bachman, 1968; Bachman, Bowers and Marcus, 1968; Busch, 1980).

Hypotheses to Be Tested

Supervisory power researchers (e.g. Rahim, 1989; Rahim and Buntzman, 1989; Yukl and Falbe 1991; Rahim and Afza, 2001,) generally assert that superior who exhibits expert, referent, reward and legitimate power are more prone to foster a cordial dyadic relationships among superiors and subordinates. Several studies on the expert, referent, reward and legitimate power bases show consistent results in satisfaction with supervision (Rahim and Buntzman, 1989). Conversely, other studies recorded that superior's use of coercive power is linked to negative effect on subordinates' satisfaction (Bachman, Smith and Slesinger, 1966; Busch, 1980; Elangovan and Xie, 2000). Thus, it can be hypothesized that:

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- H1a: Superiors' non-coercive bases of social power (expert, referent, reward and legitimate) are positively associated with the subordinates' satisfaction with supervision
- H1b: Superiors' coercive base of social power is negatively associated with the subordinates' satisfaction with supervision.

As organization size and structural dimensions of complexity and formalization were related (Hall, Haas and Johnson, 1967; Meyer, 1972; Robbins, 1989), an increase in size will lead to an increase in specialization and formalization. This implies that more rules and regulations would be applied in organization where its structure is more formalized. Thus, superior would expect to exhibit coercive power to elicit compliance to rules and procedures. The following hypothesis was formulated as:

- H2: Organizational size is positively related to the exercise of coercive power.

The longer the person works for an organization, the more work experience he/she gained through employment (Hassell and Perrew, 1995). Thus, older superior with more experience will be seen to demonstrate more expertise power. Conversely, the perception of superior's expertise is expected to be negated in the circumstances where the subordinate has long job tenure. This lead to the following hypothesis that:

- H3a: Superior job tenure is positively related to expert power while subordinate job tenure is negatively associated with expert power.

Holding to the above presupposition, it can be further advance that the age difference between the superior and subordinate rather than their respective age that promotes the exercise of certain power bases (Rhodes, 1983). Thus, the next hypothesis is:

- H3b: Superior-subordinate age difference is positively related to expert and referent bases of social power.

3. Methodology and Research Design

Sampling Design

The sample was selected from only factories having more than 25 employees. The factories that met the above criteria were selected from the master list of factories registered with the Federation of Malaysian Manufacturers. Data was obtained through survey questionnaires.

Research Instruments

Measures of relevant constructs were taken from previous studies. Each is discussed here.

Bases of Supervisory Power

The five French-Raven bases of supervisory power were measured by using the Rahim Leader Power Inventory (RLPI) (Rahim, 1988). Several researchers have reported that RLPI has sufficient psychometric properties (Hess and Wagner, 1999; Lam, 1977; Rahim and Magner, 1996). This multi-item instrument uses a 5-point Likert scale to measure perceptions of subordinates regarding their superiors' bases of power. The instrument comprises of 29 items; 5 items for measuring coercive power and 6 items each for measuring expert power, referent power, reward power, and legitimate power.

Satisfaction with Supervision

The instrument used to measure satisfaction with supervision is the updated version of the original Job Descriptive Index (JDI; Smith, Kendall and Hulin, 1969) which was later revised by Roznowski (1989). The instrument is made up of 18 items.

Demographic and Organizational Variables

The demographic and organizational variables measured were age, job tenure and organizational size. Age was measured by self report of respondents. Job tenure was measured by the number of years respondents had been worked in their present position. Organizational size was operationalized as the number of people employed full time in the organization.

Data Analysis Procedure

Reliability and factor analysis was used to check the consistency and dimensionality of the scale items. Multiple regression analysis is performed to check the criterion-related validity of the scale items (result not shown). Pearson Intercorrelation was used to measure the associations among the social power bases, satisfaction with supervision, organizational size, age difference and job tenure.

4. Discussion of Findings

Data from 230 respondents were received out of total 1432 questionnaires sent. Only 210 data were usable. The highest number of respondents is from Chinese ethnic group. A mere 7% female respondent reflects the male domination in the industrial sector. More than 60% of the respondents were from factories located in the Klang Valley. The highest proportion of respondents fell into the 31-40 years age group. On the whole, the education level of the respondents was high. This was reflected in the position or the type of occupation held by the majority of the respondents. The average

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salary of the respondents was higher than the population's average. On average, the respondents had worked in the present company for 7 years.

The survey also revealed the information about the respondent's superiors. Almost all of the superiors reported in the survey were males. A majority of them were holding medium to high management positions. On average, the superiors had worked in the organization for 11 years – far longer than the subordinates' average. Most of the superiors were holding high positions in the company with 36% of them in the first hierarchical level. Their educational level was also strikingly high, with 70% of them having had tertiary education in technical fields.

Reliability of Scales

The mean, standard deviation and standardized Cronbach Alpha for each subscale is summarized in Table 1. The internal consistency reliability coefficients for all the scales were satisfactory (Nunnally, 1978). All the scales had coefficient Cronbach Alpha greater than .70.

Table 1
Summary of Scales Items and Measure of
Scale Reliabilities

Scales	No. of Items	M	SD	Cronbach Alpha
Expert	6	3.45	.76	.84
Reward	5	3.82	.75	.85
Referent	5	3.56	.77	.84
Coercive	5	3.71	.71	.76
Legitimate	6	3.88	.53	.73
Satisfaction with Supervision	18	13.10	4.30	.86

Factor analysis was performed to check the dimensionality of the scale items (result not shown). Considering that the result as a whole supported the a priori grouping of items, it can be concluded that the power scale developed by Rahim (1988) was suitable for application to the present data although some purification was necessary to improve its accuracy. The indices of the five power bases were computed by averaging the samples responses to the items in each factor. This resulted in a creation of five continuous subscales.

Testing of Hypotheses

H1a & H1b: Power Bases and Supervisory Satisfaction

The correlational results in Table 2 provided good support for H1a. The non-coercive bases of social power (i.e. expert, referent, reward and legitimate) showed positive relationships with satisfaction with supervision. Referent power ranked highest among other power exercises (coefficient .64). This was followed by expert power and reward

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power which both had coefficients of correlation of 0.47. The ranking of intercorrelation was somewhat similar to the study of Rahim and Buntzman (1989) conducted on respondents with post graduate working experiences. It was expected that referent and expert power represent a high level of internalization or inner acceptance. As Raven (1974) found out, the exercise of referent power tends to foster a more satisfied, cooperative and prolonged relationships between superiors and subordinates.

Expert power benefits from a protection of authority which may go beyond superiors' specialized skills. Among technical staff, expertise emerges as a very important cue for acceptance and recognition of the superiors' direction as reflected in the present result. It most likely gains their compliance and least likely to provoke their resistance (Podsakoff and Schriesheim, 1985).

Table 2
Pearson Intercorrelations of Main Variables of Interest

	Variables	1	2	3	4	5	6	7	8	9	10
1	Expert Power	1.00	.41	.48	.07	.33	.47	-.06	.11	-.17	.20
2	Reward Power		1.00	.53	.21	.21	.47	-.01	.04	-.15	.08
3	Referent Power			1.00	.14	.20	.64	.04	.04	-.08	.11
4	Coercive Power				1.00	.16	.09	.11	.10	.19	-.06
5	Legitimate Power					1.00	.15	.03	.00	-.02	.04
6	Satisfaction with supervision						1.00	.02	.10	.00	.03
7	Organizational Size							1.00	.17	.19	-.11
8	Superiors' Job Tenure								1.00	.49	.14
9	Subordinates' Job Tenure									1.00	-.26
10	Superior-subordinate Age Difference										1.00

Note: $r's > .11$ is significant at $p < .05$
 $r's > .21$ is significant at $p < .001$

Both referent and expert power were labelled by Yukl (1981), Yukl and Falbe (1991) and Rahim (1989) as "personal" form of power. The present results supported the general view that "personal" power has a positive effect on the leader-subordinate relationship. The high degree of intercorrelations among the referent, expert and reward power bases served to temper the previous discussions and tended to suggest that while referent power emerged as the dominant explanatory power base, its

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effective utilization might be tied, to some extent, to the superiors' exercise of a combination of other power bases such as expert and reward power.

Although earlier findings (Warren, 1968) acknowledged that reward power shows less inner acceptance, the present correlational results indicated a high level of satisfaction with supervision. Schopler and Layton (1974) held that the use of reward power is likely to increase the attraction between the manager and subordinates while coercive power is likely to decrease it.

The legitimate power showed relatively lower correlation with the satisfaction with supervision. In the exercise of legitimate power, subordinates' responses tended to be dependent on the normative acceptance of the position and prerogatives of the organization at large including its leadership. The present result concurred with the conclusion made by Yukl (1981) that "position" power such as legitimate and coercive are less effective means of influence attempt.

The result for coercive power was not exactly consistent with hypotheses H1b. The study indicated that the amount of coercive power perceived to be held by a superior was not associated with supervisory satisfaction when it was earlier hypothesized to have negative association. However, the result failed to reach statistical significance. Past researchers also had mixed results with regard to this correlation. For example, Rahim and Buntzman (1988) – weak positive; Busch (1980), Hinkin and Schriesheim (1989) – negative. Thus, hypothesis H1b is not supported.

H2: Power Bases and Organizational Size

The relationship as appeared in Table 2 between the perceptions of supervisory power bases and organizational size given was only significant in the case of coercive power ($r = .11$). As organizational size increase, more rules and formalization in place required superior to exercise coercive power to ensure compliance. Organization size necessitates standardization in work; hence, it enhances superior uses of coercive power to control the organization. The present result pointed to the conclusion that superiors who were perceived to exercise coercive power would tend to exercise more rigid management control, possibly by utilization of autocratic techniques (Beyer and Trice, 1979). From the above result, it may be surmised that the choice of coercive power may be due to the contingent effect of organizational size. The exercise of such power though was not necessarily resulted in dissatisfaction with superior's supervision ($r = .09$).

Overall, the present data supported hypothesis H2a. However, the present result should be used with caution as the measurement of both construct was not based on the objective measurement but on individual perceptions. Individual differences such as desire for power equalization, inner motivation, etc might intervene in the relationship between power and organizational size.

H3a & H3b: Power Bases, Age Difference and Job Tenure

The relationship between power bases and job tenure indicated that superior with longer job tenure was perceived to use expert power ($r = .11$) but in contrary, such mode of influence is not prevalent when the subordinate is having a longer job tenure ($r = -.17$). The result can be explained from the attendant effect of job tenure that

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heightened the perception of experience and expertise. It is clear that the effective use of power is contingent upon and as result of the interplay of individual resource advantage. In overall, the hypothesis H3a was supported.

The relationship between power bases and superior-subordinate age difference were significant in the case of expert ($r = .20$) and referent power ($r = .11$). This was probably due to the fact that age differential is related to knowledge or expertise differential. Thus, the aura of power is seen in the expertise differential context. Superior's accumulated knowledge and specialized skills are always favored by the subordinates and can be readily used as an influence agent. It is important to reemphasize here that the effectiveness of these power exercise is contingent upon the age differential rather than their respective age (Rhodes, 1983). Comparing with the result in H3a, it was noted that stronger correlation of expert power with age difference exists compared with the job tenure. Thus, the present data supported the hypothesis H3b.

5. Conclusion

In general, the results of this study in relation to the administration of industrial people were quite consistent with our hypotheses based upon other organizational studies involving qualified and professional people. The instruments used in the study were tested and found to be applicable to our work environment. The results provided some tentative, but hopefully useful guidance for industrial administrators.

Intercorrelations among the five power bases showed that French and Raven (1959) power bases are not mutually exclusive. Reward and referent power bases were the most closely related followed by expert and referent power bases. The results revealed that referent power, expert power and to some degree reward power and legitimate power are found to be in association with each form of power. On the other hand, coercive power was the least correlated with all other power bases and most often stands alone. Among all of the power bases, coercive power was most related to reward power (Podsakoff and Schriesheim, 1985). It indicates that reward and coercive power tend to be used interchangeably. Though not considered as a serious disadvantage, notable intercorrelations among the five power bases denote the difficulty of finding power typology which is both exhaustive and conceptually distinct.

In assessing the effectiveness of the various influence attempts, the results suggested that referent, expert and reward power should be emphasized to ensure subordinate acceptance. The position of legitimate power was the lowest among the non-coercive power bases in influencing subordinates' behaviour for the case of management of technical and professional staff. Comparative studies revealed an interesting difference in the rank ordering of bases of the superiors' influence attempts. While the present study and Rahim and Buntzman (1989) study ranked referent and expert power as the most favourable and legitimate power the lowest among the non-coercive power bases in eliciting subordinates' acceptance, results of another survey conducted on account executives, office managers and public administrators by Bachman, Smith and Slesinger (1966) considered legitimate power as the most prominent or second in place.

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Viewing from the context of organizational size, it seems plausible to suggest that the exercise of coercive power is necessitated by the need of greater control in a large organization. More formalization and standardization of rules and regulations in an organization arise because of growth in size (Meyer, 1972). The manner in which control over individual's conduct of work lives was found in bigger organization as compared to smaller one serves also to influence the individual's perception of the source of control which was supported by the present study. In term of the outcome, the present study did not support the assertion that coercive power leads to a more dissatisfied employee. The results suggested a notion that the effectiveness of power influence does relate to the situation and context of the work environment.

Evidently, the superior's tenure in the job inflates the perception of expertise and consequently encourages the superior to use them as a mode of influence. Similar power exercise seems to be less effective when the subordinates' tenure in office is longer. This study also highlights an important effect of age differential between superior and subordinate in determining what bases of power are more favourable. Higher age differential seems to foster the use of expert and reference power. The perception of expertise is exaggerated by the advantage of biological age which is related to accumulated experience in work life.

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