

MODERNIZING AGENTS AND ORGANIZATIONAL ADAP-  
TATION OF FACTORY WORKERS IN THAILAND  
—A Case Study of a Japanese Joint Venture in Chiang Mai—

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INTRODUCTION

**N**EWLY established modern factories in developing countries are reportedly suffering from organizational dysfunction concerning labor management which is shown through counterproductive behavior, such as lack of discipline, low morale, lateness, absenteeism, and high worker turnover.

One explanation for organizational dysfunction is worker maladaptation to factory organization.<sup>1</sup> The modern factory system is hierarchical by nature. As a result it is more likely to have an elaborate internal managerial system than what is found in small-scale indigenous workshops. Workers in modern factories are expected to strictly observe working hours and factory rules and constantly apply themselves to their assignment under the hierarchy of formalized supervision, especially in manufacturing sections. The mode of working life required in modern factories, therefore, differs markedly from that in agriculture or rural household industries which people socialized in traditional societies have been conventionally accustomed to as their places of work.<sup>2</sup> When people from a traditional working milieu start to work in modern factories, they have to adjust themselves to the new circumstances by mastering the attitudes appropriate to the factory system. Worker maladaptation to the factory system gives rise to serious problems in factory organizations. We refer to this attitudinal process as organizational adaptation.<sup>3</sup>

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<sup>1</sup> Another crucial reason for the organizational dysfunction is the lack of personnel with middle-managerial ability in the hierarchy of modern factories during the early stages of industrialization. See Ohno [19], and Ohno and Benja Jirapatpimol [20].

<sup>2</sup> This is expressed best by Landes [13, p. 43]. For workers from traditional societies, "the factory is a new kind of prison; the clock a new kind of jailor" since "factory equals discipline cum supervision." Resistance of the first generation of factory workers to the imposed standardized-clock-time discipline was explored by Thompson [25], Smith [23, Chap. 9], and Adam [1, Chap. 5].

<sup>3</sup> Though conceptually it is analogous to organizational socialization or occupational socialization [17], the term "organizational adaptation" was employed so as to distinguish the socialization process that takes place in industrialized societies from that which takes place in nonindustrialized societies where traditional values and practices coexist with modernity.

Inkeles and Smith [10] empirically demonstrated that “education” and “occupational experience in large-scale factories” make a significant contribution in schooling people in modern attitudes from the viewpoint of individual modernization (a modernization hypothesis).<sup>4</sup> Education and occupational experience in modern factories can be considered as modernizing agents which govern the attitudes of individuals to a considerable extent in industrialized societies.

As the factory system is a core institute in industrialized societies, organizational adaptation to modern factories can be regarded as a fundamental element of individual modernization in that those who have adapted themselves to modern factories have acquired the attitudes appropriate to modern societies. An assertion that the two modernizing agents of education and occupational experience positively affect individual modernization in the long run, *prima facie*, has received universal support. It remains, however, to be proved whether they actually facilitate organizational adaptation to the factory system. Because education and occupational experience are closely interrelated with the reward systems of modern factories, such as wage determination and promotion practices, meticulous care should be taken in measuring their real effects on the attitudes of factory workers.

The purpose of this research is to investigate empirically how the modernizing agents influence organizational adaptation in the early phase of industrialization. To put it differently, my concern is to test the modernizing hypothesis of Inkeles and Smith in the setting of modern factories in developing countries. I approach this question through a case study of a modern manufacturing factory in the northern region of Thailand. An immediate question here is if the same patterns of causality concerning the link between the modernizing agents and organizational adaptation observed in industrialized societies hold true in Thailand. In the course of my discussion, I refer to the findings about this linkage commonly observed in Western industrialized societies in order to show a causality governing the linkage in Thai factories in a comparative manner.

Since worker attitudes are an important determinant of work-related behavior, investigation into this aspect can provide insights into the policies affecting labor management for creating a more organizationally adapted workforce.

## I. RESEARCH SETTING

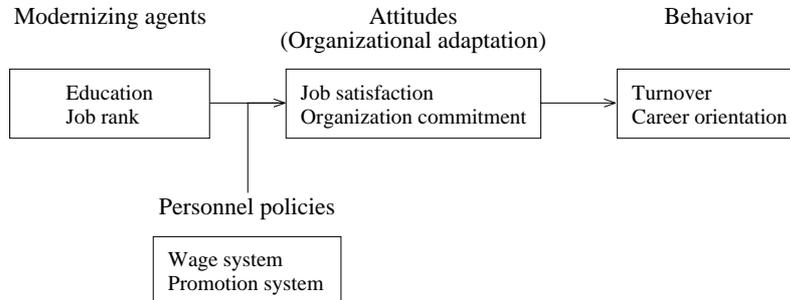
The design of this research is depicted in Figure 1. Because of the exploratory nature of the study, my framework is not presented in the form of testing a single hypothesis.

My key concept of organizational adaptation was analyzed in terms of two attitudinal variables, namely, job satisfaction and organizational commitment,<sup>5</sup> both of which have been investigated as powerful predictors of work-related behavior.

<sup>4</sup> Inkeles and Smith defined individual modernity as a psychological concept which consists of a set of attitudes and beliefs known to be helpful in adaptation of individuals to an urban industrial and technological milieu [10, Chap. 2].

<sup>5</sup> Surveys with the same framework are [4] [6] [21] [22] [26] [27] [28].

Fig. 1. Design of Research



In this framework more satisfied and committed workers are regarded as better organizationally adapted workers. If the attitudes-behavior link were found irrelevant, the practical meaning of the investigation into the effects of the modernizing agents on worker attitudes would be largely lost. Therefore, the linkage between organizational adaptation and work-related behavior needed to be confirmed, and then the association between the modernizing agents and organizational adaptation was examined.

In this study, in addition to educational level, job rank was examined as a modernizing agent in lieu of occupational experience in modern factories, since job rank is a main feature of modern factories which are hierarchical by nature.<sup>6</sup>

The data for the study were collected from a sample of workers at a Thai-Japanese joint venture producing capacitors in Chiang Mai (hereafter Z factory). The factory, founded in 1980, employed 1,005 workers, excluding five Japanese staff members at the time of my survey. It was the largest factory in the region at the time the research was conducted in December 1989. Chiang Mai is an isolated local town with a population of roughly 200,000. Until recently there were no modern factories in this town and its environs except for Z factory. Because the region has been engulfed in the wave of industrialization since around the start of this decade, one may safely state that the two modernizing agents of "education" and "job rank" have recently appeared as social elements affecting worker attitudes in northern Thailand. Z factory is, therefore, an appropriate subject for investigating the effects of education and job rank on the attitudes of a newly emerging industrial workforce.

Workers were grouped into two major job ranks in the hierarchy of Z factory, salaried workers (154 persons) and (daily) wageworkers (851 persons). The salaried workers category included clerical workers (mainly females) and mechanics

<sup>6</sup> In addition, for my study, occupational experience in modern factories had no substantial meaning, because (1) no workers had prior experience in other modern factories, (2) the length of service in the present factory was too short to analyze its effects as occupational experience since the studied factory was recently established, and (3) the comparison between factory workers and non-factory workers was not the concern of this study.

(only two females). The wageworkers category included unskilled workers and unit leaders. All of the unit leaders were females promoted from the unskilled class. Among unskilled workers, female workers engaged in manual work and males in machine operations. Although the male workers operated machines, the skill requirements for them were not as high as those for mechanics.

Based on the list of employees, excluding the Japanese and managerial staff, the informants were sampled using stratified random sampling procedures. Structured interviews were conducted with 166 workers out of the 180 sampled workers. The total sample comprised 53 males and 113 females; in terms of job rank, it included 103 wageworkers and 63 salaried workers. As detailed analysis during my research found that gender and marital status had no significant association to organizational adaptation, their effects were not elaborated on in this paper.

## II. CONSTRUCTS AND MEASURES

### A. *Modernizing Agents*

Educational level and job rank were treated here as dichotomous variables. Regarding educational level, certificates of primary school, junior high school, and lower vocational school graduation were combined into the category of the lower educational level. Senior high school, higher vocational school, and university graduates were placed into the higher educational level. Though clerical workers and mechanics engaged in different work assignments, both job categories required high educational attainments, and they received almost the same level of incomes which were definitely higher than that of wageworkers. In addition, promotion from the wage class to the salaried class was nearly unknown.<sup>7</sup>

My sample consisted of 109 workers in the lower educational level and 57 workers in the higher level. Consequently, the following four groups were obtained: less-educated wageworkers (86); less-educated salaried workers (23); highly educated salaried workers (40); and highly educated wageworkers (17).

Highly educated workers comprised 63.5 per cent of the salaried workers, while only 16.5 per cent of the wageworkers came from this group. Since a  $\chi^2$ -test on independence revealed significant intercorrelations between education and job rank ( $\chi^2 = 36.22, p < 0.01$ ),<sup>8</sup> it is necessary to use caution in interpreting the effects of the modernizing agents on worker attitudes.

<sup>7</sup> Discriminant analysis for clerical workers and mechanics with respect to major items used in the analysis suggested that there were few significant items differentiating them. Therefore the two groups are safely assumed to form one homogeneous group of salaried workers. Unskilled workers and unit leaders in the wage class are also regarded as one group of wageworkers by the same results of discriminant analysis. These results are not shown here for lack of space.

<sup>8</sup> For the  $2 \times 2$  contingency tables, there are two methods of interpretation, namely, hypotheses of independence and homogeneity. However, the test statistics (the  $\chi^2$  distribution) are generally identical. For details, see Freeman [5].

### B. *Organizational Adaptation*

Both job satisfaction and organizational commitment assume a congruence between employee work values (expectations) and organizational rewards (realities). Though many studies have found a positive relationship between them, in the attitudinal paradigm they are posited to be distinct constructs in that the former is a passive response to the tangible aspects of the job itself, while the latter represents an active response to the organization as a whole [11] [15] [27]. In other words, job satisfaction is an attitude toward the job itself, while organizational commitment is an attitude toward one's future vis-à-vis the organization. Job satisfaction appears as the more immediate consequence of one's perception toward the job. In contrast, it takes time to engender organizational commitment. Hence organizational commitment is often viewed as a future-oriented attitude and a time-lagged consequence of job satisfaction [16].

*Job satisfaction.* Job satisfaction was measured in my study using the seven items concerning the specific job facets. The items selected from the relevant literature on job satisfaction [8] [26] were: (a) the boss's recognition of the importance of (my) work (RECOGNITION); (b) the factory rules (RULES); (c) promotion opportunities (PROMOTION); (d) the chance to use skills and abilities (ABILITY); (e) adequacy of wage level (WAGES); (f) monotonous work (BOREDOM); and (g) supervisor (SUPERVISION). Words in the parentheses are used as keywords. Each item was rated on a two-point scale with the labels: (a) satisfied (= 1) and (b) dissatisfied (= -1). The often used Likert scoring system consisting of multi-categories of agreement/disagreement was not applied to my case because in the Thai language the usage of strongly agree/disagree is not common. Ratings were combined to form a single index whose possible range was -7 to +7. A high score indicates higher job satisfaction. A Kuder-Richardson's alpha yielded a high reliability coefficient of 0.944.

*Organizational commitment.* According to Porter et al. [21], organizational commitment is conceptualized as the relative strength of an individual's identification with and involvement in a particular organization. For Porter et al., organizational commitment consists of three dimensions: (1) identification—a belief in and acceptance of the values and goals of the organization; (2) altruism—devotion and willingness to exert effort on behalf of the organization; and (3) intention to stay—a desire to remain a member of the organization. Organizational commitment has been posited as an effective predictor of turnover. However, Porter's questionnaire includes items which directly assess the individual's desire to maintain organizational membership. To avoid this conceptual redundancy, items consisting of the dimension of willingness to stay were excluded from my items of organizational commitment.

The four items selected to construct commitment scores were: (a) I am proud of being a worker of Z factory (PRIDE); (b) I like a job in which I can make decisions (DECISION); (c) I feel depressed when I fail at something connected with my job (DEPRESSION); and (d) I usually avoid taking extra duties and responsibilities in my work (AVOIDANCE). (a) and (b) covered the dimension of identification

while (c) and (d) covered that of altruism. Following the same procedures used with regard to job satisfaction, organizational commitment scores were worked out, with a possible range of  $-4$  to  $+4$ . A high total score represents the highly committed end of the scale. A reliability test of the scale yielded a Kuder-Richardson's alpha of 0.863, which showed a high internal consistency.

### C. Behavior

Turnover intentions and career orientation were studied as consequent behaviors of organizational adaptation.

*Turnover intentions.* The use of propensity to leave as a surrogate measure for actual turnover for diagnostic purpose is a practice commonly endorsed in current literature [2] [24]. Turnover intentions were assessed using a single item: What do you think of leaving this factory? (a) I have not thought of quitting this factory ( $= -1$ ), (b) I am thinking of quitting, but currently not looking for another job ( $= 0$ ), and (c) I am seriously looking for another job ( $= 1$ ). The higher score denotes stronger intentions toward turnover.

*Career orientation.* Career-oriented workers were identified as those who answered "yes" to the question, "Are you eager to be promoted?" and non-career-oriented workers were considered those who answered "no."<sup>9</sup>

## III. RESULTS

### A. Adaptation-Behavior Linkage

*Turnover intentions.* The respondents held rather positive attitudes toward voluntary turnover (Table I). Actually, 50.6 per cent of them had working experience (mostly in the informal sector) before the present job. These proportions were more or less the same across groups classified according to educational level, job rank, and gender. Table II indicates the results of the mean tests of the two adapta-

TABLE I  
ATTITUDES TOWARD JOB-HOPPERS

	APPROVAL	UNDERSTANDABLE	DISLOYAL	Total
Male	66.0 (35)	20.8 (11)	13.2 ( 7)	100.0 ( 53)
Female	54.0 (61)	32.7 (37)	13.3 (15)	100.0 (113)
Average	57.8 (96)	28.9 (48)	13.3 (22)	100.0 (166)

Source: Questionnaire.

Notes: 1. Respondents were asked: "What do you think of a worker who leaves the factory for another job?": (a) I would do the same if I had the chance (APPROVAL), (b) I can understand the worker's behavior (UNDERSTANDABLE), and (c) the worker's behavior is disloyal (DISLOYAL).

2. Figures in parentheses indicate the number of respondents.

<sup>9</sup> A survey with the same framework is Wright [28].

TABLE II  
 TURNOVER INTENTIONS AND ORGANIZATIONAL ADAPTATION: MEANS,  
 STANDARD DEVIATIONS (*S.D.*), AND SIGNIFICANCE TESTS

## A. Turnover Intentions and Job Satisfaction Scores

Turnover Intentions	Number	Mean	<i>S.D.</i>
(1) Not quitting	50	0.43	2.35
(2) Thinking of quitting	88	-0.91	2.37
(3) Looking for another job	28	-4.84	2.20

## Result of Significance Tests

Group Pair	<i>t</i> -Value
(1) with (2)	3.18**
(1) with (3)	3.02**
(2) with (3)	0.60

## B. Turnover Intentions and Organizational Commitment Scores

Turnover Intentions	Number	Mean	<i>S.D.</i>
(1) Not quitting	50	1.90	1.28
(2) Thinking of quitting	88	1.52	1.48
(3) Looking for another job	28	0.75	1.48

## Result of Significance Tests

Group Pair	<i>t</i> -Value
(1) with (2)	1.51
(1) with (3)	3.58**
(2) with (3)	2.39*

Source: Same as Table I.

Notes: 1. For the item categories of turnover intentions, see the text.

2. \*\*  $p < 0.01$ , \*  $p < 0.05$  (two-tail test).

TABLE III  
 ASSOCIATION BETWEEN TURNOVER INTENTIONS AND THE ITEMS OF ORGANIZATIONAL ADAPTATION  
 (%)

Job Satisfaction		Organizational Commitment	
RECOGNITION	2.49	PRIDE	0.01
PROMOTION	0.42	DECISION	14.40
WAGES	0.15	DEPRESSION	6.27
BOREDOM	15.42	AVOIDANCE	92.25
RULES	44.55		
ABILITY	33.95		
SUPERVISION	6.42		

Source: Same as Table I.

Note: % of significance based on a  $\chi^2$  homogeneity test.

TABLE IV  
CAREER ORIENTATION AND ORGANIZATIONAL ADAPTATION

## A. Career Orientation

	Mean	S.D.	t-Value
JS scores:			
Career-oriented	-0.57	2.36	0.04
Non-career-oriented	-0.55	2.56	
OC scores:			
Career-oriented	1.77	1.84	3.82***
Non-career-oriented	0.86	2.29	

## B. Organizational Commitment along with Modernizing Agents

## 1. Job rank

	Mean	S.D.	t-Value
Wage class:			
Career-oriented	1.90	1.33	2.10* (69.6%)
Non-career-oriented	1.29	1.94	
Salaried class:			
Career-oriented	1.56	1.38	3.70*** (71.0%)
Non-career-oriented	0.11	1.45	

## 2. Educational level

	Mean	S.D.	t-Value
Low-educational level:			
Career-oriented	1.89	1.27	1.79 <sup>†</sup> (70.1%)
Non-career-oriented	1.40	1.34	
Higher-educational level:			
Career-oriented	1.55	1.50	4.14*** (70.2%)
Non-career-oriented	-0.18	1.29	

Source: Same as Table I.

Notes: 1. JS and OC denote job satisfaction and organizational commitment, respectively.

2. Figures in parentheses indicate the ratio of career-oriented workers within the corresponding groups.

3. \*\*\*  $p < 0.001$ , \*  $p < 0.05$ , <sup>†</sup>  $p < 0.10$  (two-tail test).

tion scores for the workers grouped by the three-item categories of turnover intentions. Both job satisfaction and organizational commitment proved to be significant predictors of turnover intentions.

A more detailed analysis was obtained by scrutinizing the individual association of each item consisting of the two organizational adaptation constructs of job satisfaction and organizational commitment. Table III shows the items which were found to have a significant association with turnover intentions based on a  $\chi^2$ -test on homogeneity. Of the facets of job satisfaction, WAGES and PROMOTION were most significantly associated with turnover intentions. This allows us to presume that wage and promotion systems can be effective devices for reducing turnover by increasing job satisfaction.

TABLE V  
ASSOCIATION BETWEEN CAREER ORIENTATION AND ORGANIZATIONAL ADAPTATION BY ITEM

Job Satisfaction		Organizational Commitment	
RECOGNITION	65.64	PRIDE	1.26
PROMOTION	56.65	DECISION	83.80
WAGES	94.03	DEPRESSION	9.52
BOREDOM	93.04	AVOIDANCE	8.47
RULES	99.61		
ABILITY	53.71		
SUPERVISION	60.33		

Source: Same as Table I.

Note: % of significance based on a  $\chi^2$  homogeneity test.

*Career orientation.* Table IV-A shows the results of the mean tests for the career-oriented and non-career-oriented workers. Whether workers were career-oriented or not had no effect on the levels of job satisfaction, while the career-oriented workers showed significantly higher scores of organizational commitment. This was confirmed even when the scores were controlled using education and job rank (Table IV-B).

A more detailed account of the effects of promotion on organizational adaptation can be seen by referring to the association of career orientation with each item consisting of the two organizational adaptation constructs (Table V). While no items of job satisfaction were related to career orientation, three out of four items of organizational commitment, namely, PRIDE, DEPRESSION, and AVOIDANCE, were significantly associated with career orientation.

A significant linkage between organizational adaptation and work-related behavior was confirmed. Organizationally adapted workers showed higher intentions to stay and were more career-oriented. My findings made it clear that the establishment of a promotion system enhances organizational adaptation through an increase in organizational commitment. This clearly contrasts with the effects of wage increases which enhance organizational adaptation by increasing job satisfaction. Short-term incentives that effect the levels of job satisfaction proved to be ineffective in expediting career orientation. I shall return to this point later.

#### B. *Modernizing Agents and Organizational Adaptation*

A *t*-test was used to see the differences in the two adaptation scores for education and job rank. Table VI-A represents the mean scores, standard deviations, and *t*-values for the groups. Wagerworkers and less-educated workers showed significantly higher adaptation than corresponding salaried workers and highly educated workers. When classified into four groups by education and job rank, similar results were obtained (Table VI-B). In conclusion, less-educated waggerworkers mani-

TABLE VI  
ORGANIZATIONAL ADAPTATION AND MODERNIZING AGENTS: MEANS,  
STANDARD DEVIATIONS (*S.D.*), AND SIGNIFICANCE TESTS

A.

	Number	Mean	<i>S.D.</i>	<i>t</i> -Value
Job satisfaction:				
Less-educated workers	109	-0.14	2.46	3.26***
Highly educated workers	57	-1.39	2.10	
Wageworkers				
Salaried workers	103	-0.02	2.50	3.84***
	63	-1.44	1.98	
Organizational commitment:				
Less-educated workers	109	1.75	1.30	3.06**
Highly educated workers	57	1.04	1.64	
Wageworkers				
Salaried workers	103	1.89	1.37	2.46*
	63	2.39	1.55	

B.

Groups	Job Satisfaction		Organizational Commitment	
	Mean	<i>S.D.</i>	Mean	<i>S.D.</i>
LW	0.12	2.50	1.80	1.24
HW	-0.75	2.41	1.29	1.90
LS	-1.09	2.04	1.56	1.54
HS	-1.65	1.94	0.92	1.53

Source: Same as Table I.

Notes: 1. LW = less-educated wageworker; HW = highly educated wageworkers; LS = less-educated salaried workers; and HS = highly educated salaried workers.

2. \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ .

TABLE VII  
ANALYSIS OF VARIANCE RESULTS FOR ORGANIZATIONAL ADAPTATION BY MODERNIZING AGENTS

	Sum of Squares	<i>D.F.</i>	<i>F</i> -Value	<i>p</i> < (%)
Job satisfaction:				
Main effects	86.25	2	8.08	0.15
Education	14.33	1	2.69	10.32
Job rank	31.02	1	5.82	1.70
Two-way effects	0.64	1	0.12	72.85
Organizational Commitment:				
Main effects	21.43	2	5.24	0.63
Education	8.99	1	4.40	3.76
Job rank	2.76	1	1.35	24.74
Two-way effects	0.09	1	0.05	83.14

Source: Same as Table I.

fested the highest level of adaptation, while highly educated salaried workers showed the lowest level.

A more in-depth examination using an analysis of variance (ANOVA) was done. Table VII indicates the ANOVA results for the two scores of organizational adaptation according to education and job rank. Though both education and job rank negatively affected organizational adaptation, job rank was a more powerful predictor of job satisfaction than education. In contrast education affected organizational commitment more than job rank.

In conclusion, the results of my investigation do not lend support to the modernization hypothesis in the context of a modern factory in Thailand; on the contrary education and job rank were revealed to have adverse effects on organizational adaptation of workers to modern factories.

#### IV. DISCUSSION

The negative association of education and job rank on organizational adaptation is a reflection of the imbalance between worker expectations and the realities of work rewards. Firstly, I examine the negative association giving particular consideration to the socioeconomic conditions characterizing (1) the economy in the early stages of industrialization and (2) Thai culture. Secondly, the probable effects of wage and promotion systems on organizational adaptation are discussed with reference to the incentive system of Z factory.

##### A. *Interpretation of the Negative Association*

The levels of organizational adaptation, job satisfaction and organizational commitment are determined by the balance between employee work values (expectations) and organizational rewards (realities). This balance is seen through job satisfaction concerning the short-term attitudes toward the specific facets of job conditions, and through organizational commitment concerning the long-term attitudes toward an organization. Taking the effects of education on job satisfaction as an example, there are contradictory hypotheses. One view insists that education may enhance job satisfaction by increasing work rewards (an indirect positive effect), while the other view asserts that education may reduce job satisfaction by raising worker expectations that are left unfulfilled (a direct negative effect) [3]. A similar logic may hold true about organizational commitment in the long run. The point to be clarified, therefore, is the socioeconomic conditions which determine the balance between expectations and realities.

As to my respondents, educational levels were negatively associated with both job satisfaction and organizational commitment. This implies that the expectations of highly educated workers exceeded their realized inducements more than in the case for less-educated workers. Such a situation is likely to be common in the developing economies where the low proportion of educated workers leads people to perceive educational attainments as an ascribed status. This effect is strengthened by the predominance of educated workers in high status occupations that are segregated from the occupations mainly for less-educated workers. Therefore, the

educated group tends to form a distinct social strata in such societies.<sup>10</sup> The entitlement to higher job rank also enhances the pretensions of educated workers. Actual work rewards are, however, determined basically according to individual work performance without evaluating the perceived ascribed status of those with education. This causes the disparity between the assessment of labor in the market and the self-assessment of educated workers, and hence eventuates dissatisfaction toward the job.

The negative effects of job rank on organizational adaptation can be explained along similar lines. According to Lincoln and Kalleberg, "job rank in the organizational authority hierarchy should produce attitudes favorable to the firm, and this is a nearly universal finding that should not surprise anyone" [14, p. 750]. This view concurs with the modernization hypothesis.

My findings, however, did not lend support to their idea. The positive effects of job rank on organizational adaptation can be realized by finely graded hierarchies which create the internal labor market. On the condition that promotion is obtained based on unbiased evaluation of work performance, promotional opportunities could foster organizational adaptation. In Z factory such alleged effects of job rank were imperceptible. Actually, educational attainment was a major screening factor in allocating the workers to the two job ranks at the time of employment. Promotional opportunities to the salaried class from the wage class were limited. Limited opportunities for promotions from the wage class to the salaried class led salaried workers to perceive job rank as an ascribed status related to educational attainments, not as an achieved status based on their work competence. Ascribed status raises worker expectations, while achieved status which is a result of individual competence in the work leads to work fulfillment. Job rank, when it is perceived as an ascribed status, increases expectations for inducements and hence, *ceteris paribus*, attenuates the levels of organizational adaptation.

Information segregation is another factor accounting for negative association. For example, information on alternative job opportunities for salaried workers was exclusively available to salaried workers, because, in addition to educational attainments, occupational experience as a salaried worker was an important screening factor in the labor market for them. Under these circumstances, relatively favorable market conditions for salaried workers augmented their expectations of inducements, and hence decreased their levels of organizational adaptation.

In addition, wage and salaried workers are clearly differentiated by Thai workers themselves. Salaried workers are called "*kamakorn*" or "*rapchan*," while wageworkers are called "*lok chang*" with a nuance of contempt.<sup>11</sup> Such emotions are strengthened by the cultural traits of Thai society.<sup>12</sup> Furthermore, status seeking

<sup>10</sup> For a study on Thailand, see Mulder [18].

<sup>11</sup> Smith [23, Chap. 10] argued the same about the disdained status of the first generation of daily-wage factory workers in Japan.

<sup>12</sup> Mulder pointed out a bifurcation in the Thai social system, namely that between the common people who are powerless and the privileged who have power. In Thai society it is not direct control of the means of production, but status which causes exploitation of those who have the means of production [18, Chap. 1].

is socially approved. The abolished *sakdina* system which allocated hierarchical ranks to Thai people still justifies this idea. In modern societies, on the other hand, job rank is characterized by an achieved status realized by an individual's competence in the work.

As is often pointed out, in the process of transition from traditional societies to modern societies, acquisition of status comes to be realized by means of the individual's competence, rather than from personal attributes such as hereditary status. Viewed from this standpoint, job rank in Thailand is still marked by ascribed status, rather than by achieved status. This cultural trait of Thai society works as an impediment to the growth of organizational adaptation in modern hierarchical organizations.

It seems reasonable that less-educated workers in the salaried class may indicate higher levels of adaptation than their counterparts in the wage class, because less-educated workers in the salaried class can enjoy higher inducements irrespective of their low educational attainments. Nevertheless, my results were counterintuitively opposite (see Table VI-B). In a similar way, it seems plausible to expect that highly educated workers in the wage class may feel a greater discrepancy between expectations and inducements, which leads to the attenuation of adaptation. However, my results revealed that the highly educated in the wage class showed higher levels of organizational adaptation than their counterparts in the salaried class. Let me stress again that ascribed status augments expectations, while achieved status engenders fulfillment. Hence my findings revealed that the workers of Z factory perceived job rank as an ascribed status. The fact that there was no significant difference in the levels of adaptation between unskilled workers and unit leaders also can be explained by the fact that they were in the same class of wageworkers.

These facts account for the negative effects of education and job rank on organizational adaptation in Thailand.

#### B. *Incentive Systems*

To design effective managerial policies that enhance workers' organizational adaptation in Z factory, the negative association between the modernizing agents and organizational adaptation need to be considered. For this purpose I discuss the likely responses of the employees to work incentives, confining my attention to wage and promotion systems. Wage and promotion systems traditionally have been used by organizations to foster organizational adaptation of their workforce. Wages are supposed to provide short-term effects especially when a seniority wage system is not employed, while promotion opportunities usually provide long-term incentives.

*The wage system.* Table VIII provides the wage functions of the two job ranks. Though the coefficients of the length of service were significantly positive for both job ranks, the salaried class had a relatively larger coefficient than the wageworkers. However, the rate of annual increase reached only 1 to 2 per cent of the monthly income even for the salaried workers. Accordingly, a seniority wage system was not found to be a strong determinant of wage differentials.

TABLE VIII  
WAGE FUNCTION

		(Bahts/month)
Salaried worker		
$Y^S = 2,450.22 + 36.74^{**}LS + 487.64^{**}ED + 276.41^{**}MF,$		
	(3.13)	(2.84)
		$R^2 = 0.52^{**}.$
Wage worker		
$Y^W = 1,438.37 + 22.85^{**}LS + 26.34ED + 136.29^{*}MF + 1.28^{**}UU,$		
	(6.46)	(2.31)
		$R^2 = 0.67^{**}.$

Source: Same as Table I.

Notes: 1.  $R^2$  is adjusted by the degree of freedom.

2. Figures in parentheses are  $t$ -values.

3.  $Y$  = monthly income; income levels of the waged workers were obtained by multiplying the daily wage rate by average working days per month (twenty-five days). Apprentices were excluded.

4.  $LS$  = length of service;  $ED$  = educational level;  $MF$  = gender dummy (male = 0, female = 1); and  $UU$  = unskilled-unit leader dummy (unit leaders = 0, unskilled workers = 1).

5.  $^{**} p < 0.01$ ,  $^{*} p < 0.05$ .

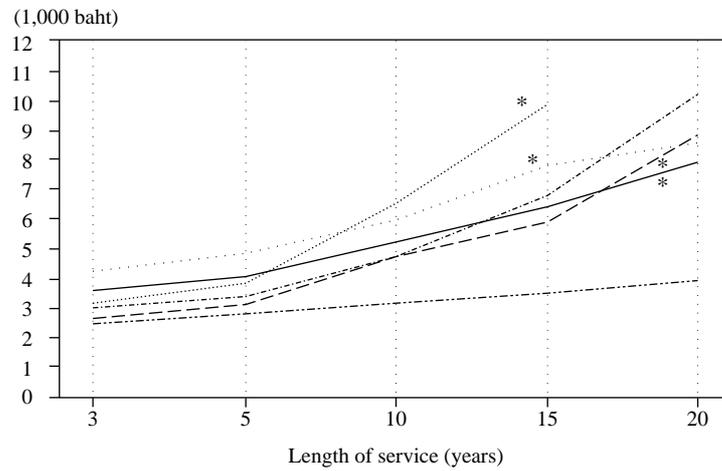
In Z factory 80 per cent of wage increases used to be allocated on the basis of seniority and the remaining 20 per cent on the basis of a worker's competence as evaluated by on-the-job performance. In early 1989, before my research was conducted, this proportion was reversed. Z factory introduced a meritocratic wage system in place of a wage system which stressed seniority.<sup>13</sup> Worker's competence in the work came to be the dominant factor determining 80 per cent of wage increases. The manager remarked that this shift occurred because the workers had not responded positively to the seniority system. A question asking workers about their preference for work assessments in wage determination revealed that "mainly worker's competence" was the first preference (47.3 per cent). "Seniority and competence equally" came next (28.3 per cent), "mainly seniority" was selected by only 15.1 per cent of the workers, and the remaining 10 per cent preferred either seniority or competence only. This confirmed the statement of the manager.

The wage profiles of Japanese enterprises in Thailand are displayed in Figure 2 for the electrical manufacturing and textile industries which are likely to adopt a labor-intensive technology like Z factory. The seniority wage system played a comparatively stronger role for clerical workers and mechanics than for unskilled (daily) waged workers. This is mainly because the labor markets for clerical workers and mechanics were in relatively short supply and on-the-job training was required. This induced the establishment of an internal labor market for these workers. In contrast, there was not a strong demand in the market for unskilled

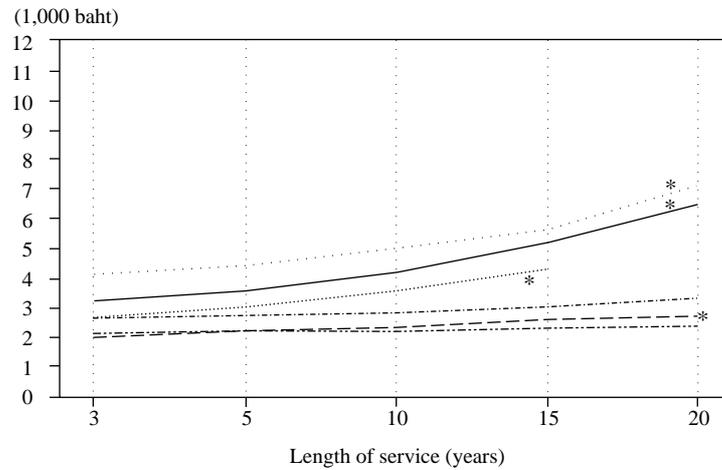
<sup>13</sup> Shifting the wage system from a seniority mode to a meritocratic one in developing Asian countries was reported by Imaoka [9], and Koike and Inoki [12].

Fig. 2. Wage Profiles of Japanese

## A. Clerical Workers



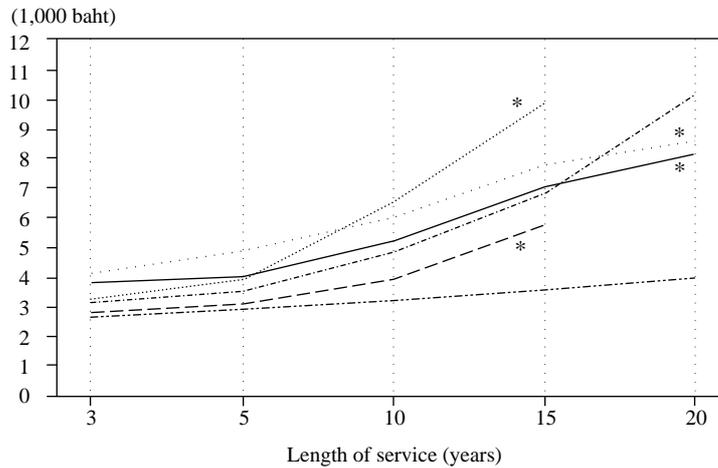
## C. Unskilled Workers



wageworkers. In Z factory, on the other hand, the policy of shifting the wage system from a seniority mode to a meritocratic one had already been established not only for the daily wageworkers but also for the salaried workers. This could be done because in Chiang Mai factories still enjoyed a surplus of labor even for educated workers unlike in Bangkok where most of the modern factories of Thailand are concentrated.

Enterprises in Thailand

## B. Mechanics



Source: Japan Chamber of Commerce, Bangkok, "Chingin rōmu jittai chōsa hōkokusho" [Survey of wages and personnel practices], mimeographed (Bangkok, 1987).

- Notes: 1. Profiles with \* are for electrical manufacturing enterprises; those without are for textile enterprises.  
 2. Profiles of clerical workers and mechanics are for lower vocational school graduates. Those of waged workers are for junior high school graduates.

Emphasis on short-term incentives in Z factory could be seen in some other labor practices. Implementation of incentive wages was a notable example. In its typical form, this system was applied to unskilled workers whose individual productivity could be easily assessed by the number of capacitors produced. In Z factory the top 10 per cent of the workers was divided into thirds based on productivity. The top third received a bonus equivalent to two days' pay, the second third one day's pay, and the bottom third half a day's pay extra every month. A board in the workshop listed the number of capacitors produced by each individual worker, and also showed the worker's deviation from the average productivity of all workers. This practice was designed to induce other workers to improve productivity. Preservation of the daily waged worker system was another illustration of the same point. Although waged workers were paid on a time-rate basis, the same as salaried workers, the number of days attended was directly connected to the amount of payment. Therefore, a daily wage system had a similar function as the piece-rate wage in eliciting short-term work motivation.

I concluded that the labor management policies of Z factory emphasized short-term incentives such as wage increases and incentive wages rather than long-term

ones such as promotion and a seniority wage system, taking the workers' responses to work incentives into account.

*The promotion system.* As I have noted, the management had not established an inter-rank promotion system which would generate long-term incentives. Some scholars have noted that in Thailand internal promotional practices are not common.<sup>14</sup> Vacancies among the skilled staff are generally filled through recruitment from the outside job market. This usually leads to a high turnover rate, and the rate in Z factory was not an exception.<sup>15</sup>

The promotion system within the two job ranks in Z factory was as follows. Unskilled female workers could be promoted to unit leaders after two to three years of service. However, they could not be promoted to the salaried ranks. There were three sub-ranks among both the mechanics and clerical workers. Taking the mechanics as an example, the workers trained in Japan were promoted to superior mechanics, and at the top were chief engineers. According to the factory manager, these sub-ranks were instituted to alleviate the dissatisfaction of salaried workers, who, from the manager's point of view, seemed to be more dissatisfied than waged workers. His perceptions were confirmed by my results on the different levels of job satisfaction between wage and salaried workers. The manager added that this system of sub-ranks produced better results since it provides tangible status rewards that are perceptible to their co-workers in comparison with invisible wage increases. This is related to the aforementioned high status seeking proclivity of the Thai and their interest in a public display of their status. However, as promotions were an infrequent experience in Z factory, their overall incentive effects are questionable. Moreover, inter-rank promotion practices were limited.

Underlying changes, however, have emerged since the appreciation of the yen following the Plaza Accord of 1985. Rapid industrialization and the construction boom in Chiang Mai have brought the economy of this region to the stage where the supply of labor has become limited. The establishment in the late 1980s of an industrial estate in Lamphoon (the northern region industrial estate) about 20 km from the center of Chiang Mai City tightened the labor market in the region, especially the market for mechanics. These changes in the labor market are likely to attenuate the levels of organizational adaptation by increasing worker expectations according to the logic I have discussed. At the time of this survey in 1989, the factory manager remarked that there were no serious labor problems in the factory. However, on the second visit in February 1991, he admitted that labor was in short supply and absenteeism had started to rise. To cope with these issues, a pension system and a special allowance for regular attendance were under consideration.

Possible reduction of organizational adaptation caused by ongoing changes in the labor market has to be dealt with not only through a wage hike, but also through

<sup>14</sup> See Hara [7].

<sup>15</sup> The annual turnover rate in 1989 amounted to more than 30 per cent. On the other hand the rate of absenteeism was as low as 1 per cent, which was lower than the rate in the parent corporation in Japan. Prima facie contradictory behaviors of the workers corresponded to the labor management policies of Z factory that emphasized short-term rather than long-term incentives.

manipulation of promotion practices. The latter practice is conceivably an effective measure for enhancing organizational adaptation, considering the high proportion of career-oriented workers (around 70 per cent of any group classified by the modernizing agents indicated in Table IV). In fact, Z factory had gradually instituted inter-rank promotion practices. Two or three wagedworkers a year (male only) were promoted to mechanics. The factory manager stated that this promotional path was opened in response to the short supply of mechanics. He added that Z factory planned to increase this practice in the wake of recent industrialization in the areas.

The point that should not be forgotten here is the fact that a promotion system is a double-edged sword for organizational adaptation in Thailand. While perceived promotional opportunities will increase organizational adaptation, the workers once promoted may show lower levels of adaptation as long as they regard higher job rank as an ascribed status. It follows that the establishment of a promotion system threatens to be followed by the attenuation of organizational adaptation. It is imperative for the smooth operation of any promotion system that the idea of job rank as an achieved status be inculcated among the workers, otherwise the entrenchment of a promotion system is likely to result in the enervation of organizational adaptation in the Thai context.

## VI. CONCLUSION

The main findings of my investigation show that the two modernizing agents of education and job rank negatively effect organizational adaptation in the modern factory studied in northern Thailand, contrary to the expected manner widely observed in industrialized societies. Such a contrast can be attributed to the importance attached to the modernizing agents of education and job rank in the context of (1) an economy in the early stages of industrialization and (2) the cultural traits of Thai society, both of which are markedly different from those in industrialized societies.

My conclusion, however, would not refute the overall positive effects of the modernizing agents on individual modernization as expressed in the modernization hypothesis. In the setting of modern factories, however, they effect both worker expectations and inducements through the reward systems with which the modernizing agents are closely associated. This will indirectly effect organizational adaptation which can be either positive or negative depending on the balance. My research suggests that in Thailand, education and job rank negatively affected organizational adaptation. The modernizing agents of education and job rank when perceived as an ascribed status increase worker expectations, but inducements are largely determined in the market without taking augmented expectations into account. This imbalance consequently attenuated organizational adaptation of the factory workers studied.

In Z factory, relatively speaking, incentive systems were so designed to enhance organizational adaptation through an increase in job satisfaction, by emphasizing short-range incentives rather than long-term ones such as promotion and a senior-

ity wage system. The seniority wage system and promotions from within are well known as distinctive personnel practices of so-called Japanese management, especially among large companies. These practices provide long-term incentives for workers through an increase in organizational commitment. The personnel policies of Z factory, though it is a Japanese joint venture, emphasized short-term incentives (although a seniority wage system had once been implemented in Z factory, but was discarded as inappropriate). This does not imply, however, that Z factory failed to introduce Japanese management into Thailand. In an economy where labor is in excessive supply, in-company education with promotions from within is not indispensable, especially for factories using a relatively simple technology.

Z factory, however, now seems to be at a crossroad in its labor policies as it copes with a new situation of a labor shortage. Opening an inter-rank promotion path which offers long-term incentives is a typical institutional change in personnel policy. In developing a more organizationally adapted workforce, it is imperative that the management maintain balance between worker expectations and organizational rewards while taking the implications of education and job rank specific to Thai society into account.

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