A Comparative Analysis of the Effect of Technological Change Upon Employee Behavior in a Vietnamese Banking Institution.

Hung Manh Chu

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A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Philosophy

in

The Department of Management

by

Hung Manh Chu

B.S., St. Joseph's College, 1967
M.B.A., Northern Illinois University, 1970
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ABSTRACT

The purpose of this study was twofold. It was designed to test the hypotheses concerning the effect of technological change upon employees' attitudes in a Vietnamese banking institution, and to compare the results of this study with those found in a similar study done in the United States.

In order to achieve the first purpose of this study, the following hypotheses were analyzed:

Hypothesis 1. Acceptance of change is not positively related to the degree of job commitment by employees.

Hypothesis 2. Acceptance of change is not positively related to the job adaptability of employees.

Hypothesis 3. Acceptance of change is not positively related to employees' aspirations for promotion or status, responsibility, and variety in their job.

The results of the test of these hypotheses were compared with those found in a similar study done in this country. The second purpose therefore was met.

Secondary literature was utilized in reviewing selected research related to the effect of technological change. Secondary literature was also used in discussing specific aspects of Vietnamese culture which may influence employee attitudes toward change. Interview, correspondence,
and public documents served as the main sources for the description of the organizational setting of the study. Finally, a questionnaire was used to gather data needed for the hypothesis testing phase of this investigation. The survey instruments consisted of a biographical data sheet and 36 questions. Two hundred and twenty-six non-supervisory employees working at a Vietnamese banking institution participated in this study.

The statistical method used to evaluate the data obtained in this study was the analysis of variance. The chi-square test, which determined the goodness of fit, was utilized when results of the two studies were compared. The "table comparison" method was also used when necessary data were not available.

Results from the test of the hypotheses and the comparison of data obtained in the two studies provided the following conclusions:

1. There was some support for the proposition that the culture does affect employees' attitudes toward change.
2. A positive relationship between employees' formal education and their attitudes toward change existed.
3. A positive assurance that there was a relationship between the degree of submissiveness of employees and their acceptance of change.
4. Employees would show favorable attitudes toward change when the result of change provided a positive response to their need.
Two implications derived from the results of this study were suggested. First, with regard to the management of change in a cross cultural setting, one may expect some resistance from people in the traditional society when new ideas or innovative techniques are introduced. Second, selected effects of change should be emphasized if certain groups of employees are to be motivated to accept the change. This implication may be especially important to Vietnamese managers.

Further research was recommended. Due to the changing nature of human attitudes, it was suggested that similar research should be conducted in other organizations on a recurrent basis. Results may reinforce the findings of this study.
CHAPTER I

INTRODUCTION

Technological change in the form of utilization of the computer in business may be at the maturity stage in the United States today. However, in Vietnam, computer utilization is still at the introductory level. Besides several small scale computer systems used in some private and public organizations in recent years,¹ there are three large scale computer systems operating in South Vietnam today. The first one is located at the headquarters of the Armed Forces of the Republic of Vietnam. This system provides military authority information related to personnel background, unit, and location of more than one million of men and women under arms. The second system, brought in by Pacific Engineers and Architects Corporation, an American company specializing in road and bridge building, is still in operation but its main function now is to provide services to companies which do not have computer facilities. The third system installed in the National Bank of Vietnam is the subject of this investigation and

will be discussed further in the following chapters.

It is believed that most of these computing machines were not ready to operate fully until early Spring of 1970 or at a later time. Information on the effects of this type of technological change therefore is not available.

This research attempts to assess employees' reactions to technological change in the wake of the installation of an IBM 360/20 computer in the National Bank of Vietnam. It will also make a comparative analysis with similar research done in the United States.

PURPOSE OF THE STUDY

In order to carry out this research, two primary purposes were established:

1. To test hypotheses concerning the effects of technological change upon the behavior of employees in the National Bank of Vietnam.

Three preliminary stages were necessary to achieve this purpose:

a) Describe the present role and functions of the computer in the National Bank of Vietnam;

b) Determine and describe the areas affected and unaffected by the computer system; and

c) Develop hypotheses.

2. To compare the results of this study with those
found by other researchers, primarily Trumbo, who have studied similar situations in the United States.

In order to achieve this second purpose, the following conditions were required:

a) The method of study in the two investigations should be as close as possible. Due to the difference of cultures between Vietnam and the United States, some modifications in technique of data collection and questionnaire design were required;

b) Similar techniques of data analysis were also needed if results are to be compared; and

c) Additional tools of data analysis were added to help differentiate the underlying factors affecting individual behavior in this research from those found in similar studies done in the United States.

SCOPE OF THE STUDY

Although this study tries to analyze employees' reactions to technological change in the National Bank of Vietnam, only the departments affected by the IBM 360/20

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computer were part of the study. Affected departments were determined by interviews with officials familiar with the use of the computer at the National Bank. Although the sample of 226 employees that work in the computer affected areas does not truly represent every part of the organization with a total population of 1,600, the diversified backgrounds of these employees in terms of economic needs, education, age, and sex reflect the common characteristics of the workers in the banking unit.

As a direct survey of management was not feasible, this investigation focused on employees only.

LIMITATIONS OF THE STUDY

This research concentrates on the investigation of employees' reactions to the present computer system in the National Bank of Vietnam. Due to the time lapse between the time of the computer installation and the computer being placed in full operation, a significant limitation was the difficulty in determining the actual behavior of employees during that interval. Another limitation associated with a study of this nature is the reliability of information given by employees and possible bias resulting from questionnaires constructed by the researcher, as well as questionnaires duplicated from other researchers. Finally, there is no reliable literature on technological change in Vietnam. As a result, this research should be
considered as somewhat preliminary and exploratory in nature.

JUSTIFICATION OF THE STUDY

It has been recognized that many studies on the effects of technological change have been performed in the United States. A few comparative studies have also taken place, but no research of this type has been conducted in Vietnam.

This unique study not only helps Vietnamese management deal more effectively with their employees in the situation where technological change is needed, but also provides data for a comparison of factors influencing individual behavior toward technological change between different societies. This, of course, will contribute more knowledge to the field of the management of change.

STATEMENT OF HYPOTHESES

Based on a study done by Trumbo, and the effects of cultural factors anticipated in this investigation, the following null hypotheses were developed:

1. Acceptance of change is not positively related
to the degree of job commitment by the employees.

Job commitment\(^5\) includes the length of service, social relationship among members, economic needs of the individual, and the age of employee.

The negative relationship between the job commitment category and the acceptance of change is predicted because of the assumption that persons who have a long record of working in the same department, knowing all procedures and aspects of their jobs, will be strongly against change of any kind. By the same token, if one has good social relationships with his fellow employees, he will not enthusiastically welcome the idea of change for fear of breaking this link. Moreover, an older employee who thinks that he cannot learn new skills which are required by new technology will certainly have unfavorable reactions. Finally, faced with a tight job market, an employee considered to be the main "breadwinner" will be strongly against the change if he thinks the change might lead him to an uncertain future.

2. Acceptance of change is not positively related to the job adaptability of employees.

In Trumbo's study,\(^6\) the job adjustment category

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\(^5\)Don A. Trumbo used the term "job investment" to include employee's identification with the work force, the economic need for the job, and the length of service with the company. Age and sex were used as indicators of difference in job involvement.

includes education level of employee, his test score, and freedom from job anxiety. The term "job adaptability" used in this investigation consists of employee's education and training, concept of authority, and sex. The effects of the employee's sex and his concept of authority are expected to be heavily influenced by the culture.

The positive relationship between job adaptability and the acceptance of change is predicted based on the assumption that persons with high education and additional training might not be so upset with the technological change because of their confidence in their capability to adjust to any situation which arises.

On the other hand, change might not derive much resistance from the people who still identify with certain values such as the absolute obedience and respect for authority and the submissive role of women in the society.

These ideas appear to be unacceptable and unimportant to many scholars whose thoughts are included in this study, but they are crucial in assessing the behavior of employees in the National Bank of Vietnam.

3. Acceptance of change is not positively related to the employees' aspirations for promotion, status, responsibility, and variety in their jobs.7

The positive relationship between job advancement and the acceptance of change is predicted based on the assumption that persons who have ambition for advancement, and desire for more status and responsibility, will consider change as the best opportunity for them to realize their ambitions. Along this line of reasoning, people who are tired of doing repetitious work will be happy to see change occur.

RESEARCH DESIGN

This section is divided into two parts. First, the concepts used are defined; second, the research instruments and methods of data collection are briefly described.

Definitions of Concepts Used

a) Technological change: This concept refers to the technological progress in the use of machinery in industry. In this study, it is the installation of an IBM computer in the National Bank of Vietnam.

b) Behavioral change: This concept indicates a change in individual behavior resulting from the utilization of the computer to affect the job usually done by employees.

c) Culture: This concept refers to the collective name for all behavior patterns socially acquired and socially transmitted by means of symbols. Variables related to any specific culture are knowledge, ideas,
beliefs, values, standards, and sentiment prevalent in the group or society.

Techniques of Data Collection

The primary tools of data collection for this study include library research, interviews, correspondence, and a questionnaire survey. The complete questionnaire survey is presented in Appendix A.

PREVIEW

Library research, mostly in the United States, was used in Chapter II which reviews the previous studies on the effects of technological change. As mentioned in the introductory section, no known study of this type has been conducted in Vietnam, therefore Chapter II covers only important studies done in the United States which are relevant to the present investigation. Because of the anticipated effects upon workers, a description of selected aspects of the Vietnamese culture based on library research is provided in Chapter III. Interviews with officials familiar with the use of the computer at the National Bank, correspondence with the department of administration, and documents provided by the Bank are main sources of the material in Chapter IV. This chapter describes the organizational setting of the investigation. Chapter V presents the results of the test of hypotheses based on the data gathered by questionnaire survey among the employees in
the computer department and computer affected areas. Chapter VI compares and interprets the results found in two investigations. Finally, in Chapter VII, conclusions related to this study and recommendations for further research are offered.
CHAPTER II

REVIEW OF LITERATURE

Technological change and its effects upon employee behavior have been discussed for years. A complete survey of literature is obviously not feasible; instead, a summary of important studies relevant to this investigation is presented.

There are three common assumptions which social scientists have made in their research:

1. Employees resist change primarily because of a lack of confidence in the outcome of the change.

2. Employees resist change due to the inadequate communication and lack of participation in planning and executing the program of change.

3. Employees accept or reject change based on their perception of the results of change with respect to their needs and wants.

Research and literature related to this study are reviewed and grouped according to the assumptions listed above, therefore they are not necessarily in chronological order.
RESISTANCE TO CHANGE DUE TO THE LACK OF CONFIDENCE IN THE OUTCOME OF CHANGE

In discussing the effects of technological change, one often refers to the impacts of the mechanization and automation on office work through the use of computers. In general, the introduction of a new work method, or the installation of a new type of machine, has similar impacts upon employee behavior. Literature reviewed in this chapter therefore can be extended to include important studies related to other kinds of change as well.

There is nothing new about resistance to change or about attempts to explain it. In the early nineteenth century, the British hand loom weavers did their best to resist the introduction of power looms. Those working with machinery in the factories also opposed the installation of new types of machines. This phenomenon has been explained as resulting from fear of unemployment or layoff, a real threat to survival at the time. But today, when various types of fringe benefits are provided, the problem of sheer survival is minimized. However, resistance to technological change still exists, therefore more sophisticated explanations are needed.

According to Sayles and Strauss, besides the fear of unemployment and layoff, the inconvenience, uncertainty,

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and disruption in interpersonal relationships are major effects which employees thought a technological change would bring about. Indeed, these types of concerns in some cases are based on facts, but in others are not true.

As to the problem of unemployment, Earnest Dale reported in a study that since the computer was installed in the subject company, there has been a 3.1 percent gain in white collar employment as a whole and 3.9 percent gain in the clerical portion of white collar employment.

Rejecting the fear that computer application might result in mass unemployment, Hunt and Newell wrote:

... [People seem to] overlook the fact that technology has been traditionally a job creator and thus the fear based upon the computer causing mass unemployment may be largely unfounded.

Turning to the fear of layoffs, findings from a number of studies showed that although Electronic Data Processing makes many employees redundant, there are few layoffs. Several examples of these results follow.

In an attempt to investigate the effects of automation in 20 offices in the San Francisco Bay area, the Bureau of Labor Statistics found that among 2,800 employees

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reported to be affected by change, only 13 have been discharged, and 9 layoffs during the year following the conversion to Electronic Data Processing and the half year preceding it. The normal attrition such as retirements, deaths, leaves of absence, and leaving the job to become housewives or mothers accounted for a great amount of turnover among employees in those offices.

The effects of normal attrition on the problem of employee redundancy is also shown by the results of a study conducted by H. F. Craig. It was found that in the year immediately preceding the conversion to Electronic Data Processing, the rate of clerical turnover in the affected units of an insurance company was 15 percent, and in the year before that, the rate of turnover was 21 percent. It was also reported that over the four year conversion period, the number of jobs in the affected units declined 30 percent from the original total of 529. It is apparent that vacancies resulting from continuously high turnover can be filled by employees whose positions have been eliminated by the computer.

Findings from the study of the consequences of


13Harold F. Craig, Administering a Conversion to Electronic Accounting (Boston: Harvard University, Graduate School of Business Administration, Division of Research, 1955), pp. 24-26.
automation in two banks, two electronics manufacturers, and three warehouses showed that although there were some workers that needed to be relocated within the same company, none were laid off.\textsuperscript{14}

The infrequency of layoff in companies with low rate of turnover may be explained as follows. The adoption of Electronic Data Processing is generally confined to expanding companies, therefore, the new operation can absorb most of the excess personnel. On the other hand, the dual system (the old system operating in parallel with the new) that most companies use during the conversion period requires additional personnel, thus helping to take up much of the slack.\textsuperscript{15}

The optimistic reports on specific effects of technological change could not prevent employees from holding negative attitudes toward computer utilization. The alteration in work routine, increased degree of job control and changes in social relationships may be the fact. Eniar Hardin found that after a computer was introduced into an insurance company, the greatest changes reported by the affected employees were in the amount of work they had to do, 


the variety of their tasks, and the amount of skill and responsibility required.\textsuperscript{16}

Referring to the pressure on employees derived from the computer application, Mann and Williams reported that computerized offices required regular attendance from employees, and imposed specific deadlines and work quotas.\textsuperscript{17} On decision-making and control, these authors also revealed that more and more computers were stripping employees of their sources of pride, the power to make decisions, and were forcing them into almost complete reliance on fewer and higher positions within the company. The result of all this is that employees often complained that they had lost some of their autonomy.

Finally, findings from research done by William E. Reif on the application of a computer in a manufacturing company, a banking system, and a public utilities company revealed that the informal network of communication was severely restricted.\textsuperscript{18} The interpersonal relationships among


\textsuperscript{18}William E. Reif, Computer Technology and Management Organization (Iowa City: Bureau of Business and Economic Research, College of Business Administration, University of Iowa, 1968), p. 111.
groups therefore was broken up. Employees were isolated among the "noisy machines," and many of them developed psychosomatic symptoms because of this stress.  

Taken together, the findings presented in this section show that employees tend to resist these types of change regardless of results which a specific change can produce. Among the various methods that have been designed to help employees to accept or at least to reduce the resistance to change are participation and communication approaches. Research on these approaches is discussed in the next section.

RESISTANCE TO CHANGE DUE TO THE LACK OF PARTICIPATION AND INADEQUATE COMMUNICATION

It has been shown earlier that resistance to technological change in some cases resulted from a real threat, but in the others, it is a product of fantasy. In the first situation, it is believed that an invitation for employees to participate in planning and executing the program of change might help. In the second, a good communication and explanation of the purpose of change would be the best.


A number of studies on the effects of participation in reducing the resistance to change can be cited. The earliest research directly related to this area was done by Lester Coch and John R. P. French at the Harwood Manufacturing Company. The plant, which produced pajamas, employed 500 women and 100 men. The workers showed a marked resistance to any new method of work or any alteration in job. After a change was instituted by management, the workers became very inefficient, restricted output, were hostile to management, and many of them quit.21

In order to find a way to improve the situation, Coch and French set up an experiment. They selected a number of employees and divided them into three groups. The first one, called the control group, was not allowed any participation in planning the new method of stacking clothes. The second representative group had limited participation. The third, the full participation group, was allowed to participate in the designing of new techniques of their job. Results from the experiment showed that the control group (no participation) bitterly resisted the change, and that productivity was heavily reduced. The second group (partial participation) showed a drop in productivity at first but quickly recovered to exceed the level maintained before the change was introduced. The

full participation group had by far the best productivity records. The turnover rate was also reported at 17 percent in the control group but at zero in the second and third groups.

It should be noted that the implicit assumption in most studies went this way: If a positive attitude toward change (acceptance of change) came to exist in employees, then an earnest cooperation with management and an increase in productivity would be expected. On the other hand, absenteeism, withdrawal, turnover, and reduction in productivity would be apparent when workers are unhappy and try to resist the change.

The importance of participation in eliminating the resistance was also emphasized by Theodore Bary. He reported a case in which organizational change was needed to upgrade plant performance and efficiency, but the innovation was temporarily abandoned for the anticipation of resistance from a number of key men whose positions were to be eliminated. Then an invitation came to these people for discussion and participation in planning the program of change. A reorganization plan emerged which was not only very similar to what management had proposed but also included several modifications considered to be of great benefit to the company.22

William F. Whyte and his associates reported that a group of girls who were learning machine-paced work failed to keep up with the required pace. In discussion with their foreman, the girls were allowed to set their own speed. It was discovered that the girls did not keep the constant pace with the time of day, but the average was higher than previously set by engineers.23

These findings allow one to conclude that when people are involved in change programs, there is little resistance to reduce, however, when they are excluded the opposite effect would arise. This statement of course does not imply the practicality of universal application. The participation method would be of maximum benefit if changes are not too technically oriented and employees do have a certain level of education, otherwise the results would not occur as expected.

Communication, however, is always needed for employees to accept changes no matter what kind of change is undertaken. The application of scientific management in selected institutions serves as an example.

Although the primary goal of the "time-study" method was to improve individual earnings through increasing productivity by means of eliminating "soldiering," it was violently resisted at Watertown Arsenal and at the Rock Island

In reflection, Taylor said that workers were not objecting to his time-study and the production bonus, but to the method of introducing the system. The word "method" should mean communication and a clear explanation of the purpose. Taylor did not allow any worker to plan or participate in planning his job but let supervisors devise all steps which employees would then carry out.

On the subject of how to reduce the resistance from a fear of the unknown, Leonard R. Sayles and Georges Strauss had this to say:

... Resistance to change that springs from fear of the unknown can be reduced simply by providing appropriate information. This information should explain not only what is to happen but also why, and should be sent to the whole organization, to those both directly and indirectly involved.

Although the Hawthorne studies were done a number of years ago, their results have been interpreted and used for different ends. Nevertheless there remain valuable contributions to the understanding of the effects of communication on employees' attitudes toward change. The Relay Room experiments were conducted by Elton Mayo and his research team. Two female assemblers were selected and allowed to

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27 Sayles and Strauss, op. cit., p. 314.
choose four others to join them in the test room. The purpose of the study was made known to them. It was to test the effects of place of work, pace and length of rest pause, length of working day, length of work week, method of payment, and a free mid-morning lunch had on productivity. During the experiments, the girls were often consulted, and allowed to express themselves about the change that took place in the experiment. The results showed that each test period yielded higher productivity than the previous one had done.28

This phenomenon would throw anyone who is eager to explain the causes and effects into confusion. Did high productivity result from the rest pause, length of working day and so forth, or from something else? An interview with the girls involved in the experiment revealed that all of them unanimously expressed their preference to work in the test room instead of a regular department. Asked to state the reasons of their choice, among other things, the girls listed supervision as one of the three most important elements in making the option.29

It would not be too difficult to understand why supervision was so important. As one could recall, the researchers who acted as supervisors often consulted with the

29 Ibid., p. 29.
girls and let them express their opinions about the change. Two-way communication was established and reduction of the opposition was achieved.

It should also be noted that it was not the communication, the supervision, or the size of group that caused the girls to accept the change (which was indicated by high productivity), but the fulfillment of certain needs which increased their satisfaction. Thus, different levels of needs will determine how employees will react to the effects of changes.

The next section will be devoted to the review of studies related to the role of needs in affecting employees' attitudes toward change.

RESISTANCE TO CHANGE DUE TO THE UNFULFILLMENT OF CERTAIN NEEDS OF EMPLOYEES

Research on the effect of employees' needs on their attitudes toward change is limited. However, a number of studies on the relationship between personal data and preference for job factors are available. Hopefully, results of these studies can provide some clues for the indirect explanation of why certain types of change and their particular effects were resisted by specific groups of persons.

It has been discussed earlier that technological

change might alter the content of job as job factors referred to by Herzberg, Mausner, Peterson, and Capwell. Whether employees will resist or accept a specific change depends on how important the change in job factors is to them. Herzberg and his associates identified ten major on-the-job factors which are listed in the order according to the number of times each was mentioned in about 150 studies: 1) intrinsic aspects of job, 2) supervision, 3) working condition, 4) wages, 5) opportunity for advancement, 6) security, 7) company and management, 8) social aspects of the job, 9) communication, and 10) benefits. This ranking, according to these authors, was not stable. When the results of 16 studies involving over 11,000 employees were averaged, the order of preference was different. Security, interest, and opportunity for advancement were on top of the list, while social aspects of the job, working condition, communication were at the bottom, and supervision, company and management, and intrinsic aspects of the job were in the middle.31

The inconsistency of ranking between these two summaries of findings suggests that job factors tend to change in order of importance, as worker's job situation and needs change. This complex problem led Herzberg and his

associates to conclude:

... It is very difficult to predict how important these job factors are to any particular individual unless we know the thing that individual needs and wants at the moment.32

In order to determine what employees really want and need, and how the structure of needs comes to incite employees to react to the change, an analysis of the relationship between job factors and personal data is necessary.

The comprehensive review of more than 350 studies related to this area by Herzberg, Mausner, Peterson and Capwell showed that the influence of age is most important on the job factor of security. It was reported that the significance of security increases with the increase in age. Certain aspects of the job such as responsibility, appropriate use of skill, and independence also become more important in the older worker.33

The relationship between sex and specific job factors is also relevant. Working conditions, social aspects, and the ease of work are more important to women. Wage and opportunity for advancement, on the other hand, are more important to men.34 The difference may be attributed to the fact that men tend to have more off-the-job responsibilities than women. In reality, men are usually the

32Herzberg, op. cit., p. 50. 33Ibid., p. 54.
principal income earners of the family. Their success is usually rated on the basis of the amount of money they can bring home. Any change which seems to enhance their opportunity for further promotion or provides more pay will be cordially received.

To women, especially to housewives, working outside their home is, in many cases, only temporary. They would quit when the family budget is sufficiently provided by their husbands, or when they feel they have more interesting things to do at home. Change, therefore, would not represent a big problem provided that their relationship with friends or groups are not disturbed, and their work will not become any harder.

Findings from a number of studies summarized by Herzberg and his associates also indicated that occupation and educational level can be used to determine the difference in the relative importance of job factors. Intrinsic aspects of job and promotional opportunity are of greater importance to office workers, while social aspects are ranked higher by factory workers but less by employees in the office. Individuals with greater education give more attention to the intrinsic aspects of the job, while the less educated people express more concern with security as job factor.

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35 Herzberg, op. cit., p. 54.
Results of Wilkins' study showed that people of higher intelligence tend to emphasize the opportunity for advancement more often than those with less intelligence. Employees with lower I.Q.'s also ranked social aspects and wages as most important factors.36

A consensus seems to be reached among authors that a distinction between the effects of age and length of service on certain job factors is very difficult, but a positive relationship between tenure and promotional opportunity is noticed.37

Other variables such as government and non-government employment, marital status, and number of dependents are not found to have great impacts on employees in determining their preference for specific job factors.38

In light of the findings presented, one can conclude that different levels of needs and wants associated with specific groups of employees might be detected and partly satisfied if certain job factors preferred by the group are also identified. Thus, any change which could produce favorable effects to satisfy the needs of employees will be more readily accepted; otherwise, it is bound to be opposed.

In summary, based on the evidence provided by the

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37Herzberg, op. cit., p. 56. 38Ibid.
research reviewed in this chapter, it may be concluded that besides the fear of an unfavorable outcome of change, resistance to technological change might be the result of inadequate communication and lack of participation. In addition, different levels of needs may turn out to be the source of resistance, if the effects of change are not compatible with what employees expected.

As indicated by one of the purposes of this study, certain effects of technological change presented in this chapter will be used to compare with those which are to be found in this research. The expected differences are assumed to be a result of the cultural factors which are to be investigated in the next chapter.
CHAPTER III

CULTURAL BACKGROUND

The effects of technological change upon employee behavior discussed in Chapter II are from studies conducted in the United States, an economically advanced country. It is believed that people in less economically advanced lands are usually reluctant or unable to accept change with the same ease as those in more economically advanced countries. According to Foster, this is due to the "wisdom of tradition" which has been regarded by people in the traditional society as the "safest road to travel." The notion of a "new" or "better way" puts them on guard rather than stimulates their desire to experiment. 39

James Joyce, in discussing the cultural effects of a society upon its members, has this to say:

We are immersed in a sea, it is warm, comfortable, supportive and protective. The sea is our culture. Most of us act, think, and dream in terms of the norms and standards we have absorbed from the culture in which we are reared. What our culture values, we value, what our culture abhors, we abhor. 40


Ruth Benedict offers this interesting observation:

From the moment the man is born, the customs of his society start shaping his experience and behavior. By the time he is grown and is able to take part in some activities with the members of his society, his habit is society's habit, his belief, its.

These assertions in general are correct; however, some cautions still must be taken. A culture may provide some degree of influence upon its society members, but it never could produce identical behavior for all individuals in a group or organization. Each person has a unique personality, and this personality together with his life experiences acquired in a cultural setting will determine the specific behavior which one has in a certain situation.

Recognizing the importance of culture upon the behavior of people, this chapter attempts to present an outline of sources of influence on the Vietnamese culture, and examine some traditional aspects of this culture that may affect the attitudes of employees at the National Bank toward technological change.

**SOURCES OF INFLUENCE ON THE VIETNAMESE CULTURE**

It has been said that the Vietnamese culture is influenced by China and India, as well as by Western countries. From China, the philosophy of Confucius and doctrine of Lao Tzu were imported and took deep root during

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the period of Chinese domination from the second century B.C. to the tenth century A.D. From India, Buddha's philosophy was brought to Vietnam by Chinese monks as early as the second century B.C. Finally, Christianity and its teachings were introduced into the country along with the arrival of a continuous stream of Catholic missionaries from France, Spain, and Portugal in the sixteenth century.

For many years, students of Vietnamese history have assumed that the social structure of Vietnam is solidly based on Confucianism which emphasizes social hierarchy and family loyalty, but the basis of the society has also been greatly affected by the doctrine of two other religions or philosophies, namely Taoism and Buddhism. The presence of foreign troops in the country's recent history and the war between North and South since 1960 have had a tremendous impact on the society. From the nineteenth century to the early 1950's, the arrival of the French on the scene had created a turbulent period in terms of political, economic, and social changes. The occupation by the Japanese Imperial Army in 1945, though it was a short time, provided a shock to a country with much experience of foreign

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domination. Finally, the massive buildup of American forces during the 1960's and the continuous assistance of the American people to Vietnam under different forms certainly added a new dimension to the latter's culture and further advanced the cultural blending of East and West.

The destruction, death, and separation that arose from those events may have altered some basic values which at one time were considered to be very important in guiding behavior and the attitude of individuals in the society. Thus, the assumptions about the Vietnamese people held by many scholars of yesteryear may not be correct today, and the basic values which one used to rely on in order to predict the behavior of people in certain circumstances may no longer be valid. An analysis of selected aspects of the Vietnamese culture is still important. It enables one to distinguish the attitude toward technological change of the employees who are still attached to the traditional values from those who are ready to adopt a new pattern of behavior.

SELECTED ASPECTS OF TRADITIONAL VIETNAMESE CULTURE

It is believed that by discussing the traditional attitudes of the Vietnamese along various dimensions, a foundation will be provided for possible explanations of reactions of the employees of the National Bank to technological change. In this regard, those aspects of the traditional Vietnamese culture which seem to be relevant to
the hypotheses presented in Chapter I will be considered.

Traditional Cultural Aspects
Related to Hypothesis 1

It is the assumption of this researcher that there is a close relationship between family loyalty and group solidarity. If one can satisfy his social needs by associating himself with the members of his (extended) family, then his need to join other social groups would be reduced. This reasoning leads one to the discussion of family loyalty in the traditional Vietnamese society.

Family Loyalty. According to Confucian teachings, the family is the fundamental unit of the society, and a man should identify himself exclusively with his particular family rather than with a community, occupational group, or other social organization. It is because of this influence that the concept of informal groups could never claim to have a prominent position in the life of any Vietnamese. Thus a person could satisfy his material needs and derive all social satisfactions from his family alone. The traditional Vietnamese family consists not only of the immediate members but also the distant kin. A group of people tracing descent from a common ancestor can claim

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themselves to be members of the same extended family called "toc," or the lineage. They are expected to assist one another in times of need or provide counsel in case of personal crisis. Mutual assistance among members of the clan is also advocated because in the opinion of the Vietnamese, "a bitter relative is still a relative, a sweet stranger is still a stranger," and "a drop of red blood [kinship] is worth more than a pond of plain water."\textsuperscript{45}

In order to encourage one to practice this moral obligation, some benefits are mentioned: "If some member of the (extended) family is successful in his work, the whole family will benefit from it," but mutual responsibility is also emphasized: "If one does something wrong, the whole family will bear the disgrace of his deeds." These same principles are strictly observed and applied to the closest members of the family. Duties of each person are clearly defined and reflected in the popular dictum: "The young rely on their fathers, the old on their children," and that "if the father borrows [money], his child must pay his debts; if the child behaves wrongly, the parents must bear the consequences." The mutual dependence among brothers and sisters is also stressed and compared with "hands and feet" or "lips and teeth," "if the lips are broken, the

\textsuperscript{45}Unless otherwise noted, the Vietnamese proverbs translated and used in this chapter are adopted from Nguyen Quoc Tri, "Culture and Technical Assistance in Public Administration, A Study of What Can Be Transferred from the United States" (unpublished Ph.D. Dissertation, University of Southern California, 1970).
teeth will be cold." In concrete terms, this concept is also expressed as follows: "When the older sister falls the younger sister must pick her up, when the younger sister falls the older sister will do likewise."

The responsibility of one to another taught by Confucius and practiced by many Vietnamese serves as a bond which ties people in the same clan together and reinforces the family solidarity. The concern which a Vietnamese has for his cousins and friends is also described by some foreign observers in the following paragraph:

Throughout his life, the individual was caught up with the activities of a multitude of relatives. Members of the same household lived together, worked together, and on frequent occasions, met together with a wider circle of kinsmen for marriages, funerals, lunar New Year celebrations and rituals marking the anniversaries of an ancestor's death.46

It is interesting to note that the traditional Vietnamese household includes not only the senior couple and their unmarried children but also their married sons with their wives and children, all living under the same roof. This extended type of family seems to exist mostly in rural areas where it operates as a unit of production. On the other hand, the nuclear family consisting of parents and their children is more common among educated and urbanized groups.

It has been argued that traditional values described

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46 American University, op. cit., p. 106.
here belong to the old generation; the young people may have more practical approaches to life and different ideas on how to assist their cousins and relatives. This may be due to the fact that many events have taken place during the past twenty years. The partitioning of the country in 1954 shook the foundation of family solidarity when nearly a million refugees from the North left their homes, their loved ones, and their villages to head for the South. And again during the period between 1965-1966, the South Vietnamese government, in an effort to deny its enemies their source of supply, forced nearly two million people living in the countryside to move to the cities.\textsuperscript{47} In this process, members of the family sometimes were separated from one another and could not convene for the rites and celebrations which traditionally reinforced family solidarity. Finally, many young men, because of their political loyalties, left their homes to join the army of the other side of conflict. In some instances this set one kinsman against another.

In short, the hardship arising directly out of the war, the ideological differences, and the impact of Western civilization in recent years may play an important role in changing the outlook of the Vietnamese. According to some American anthropologists, the ordinary Vietnamese

\textsuperscript{47}American University, \textit{op. cit.}, p. 105.
today seems to be preoccupied primarily with the idea of how to earn a livelihood and to protect his immediate family rather than being too much concerned about his cousins and relatives. This observation theoretically may be correct, but practically one can still argue the other way. Despite many years of war, Vietnamese people have endured, their family system has persisted, and their sense of identity is not completely broken down. This may also be attributed to the influence of Lao Tzu's doctrine on material well-being or economic need which was mentioned in Hypothesis 1, which will be discussed in the following section.

Material Well-Being. It has been said that besides Confucianism, Vietnamese culture is also influenced by Taoism, a doctrine of Lao Tzu which teaches the participation of man in the universal order. According to this philosopher, a man not only should refrain from disturbing the natural order but he must also conform to it in every circumstance. A Taoist maxim says: "Do nothing and everything will be accomplished simultaneously." These conceptions of life and universe certainly have an impact on the Vietnamese. Some Vietnamese mandarins induced by this doctrine of passivity and absence of

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48 American University, op. cit., p. 119.
49 An Introduction to Vietnam, p. 54.
50 Ibid.
care have given up their power and fortunes by resigning from their posts in order to go back to the countryside for retreat and contemplation. The disdain of wealth and preference for esthetic matters are also observed in ordinary men. Numerous examples can be found in Vietnamese proverbs which usually reflect the attitude of the majority of people. The Vietnamese has been warned "never to take pride in his wealth, never to look down on the poor," because "fine wood is better than a refined coat of paint." Man with the goodness of character commands more respect and admiration than those who have great worldly possessions, but lack virtue. An ideal man is one who tries to keep his reputation intact despite the fact that he might not be rich and might even be poor.

It is believed that the traditional Vietnamese is more esthetically oriented than materially bound. He is influenced by Confucianism, Taoism, and Buddhism, the three different philosophies which share the same common feature, which is the quest for inner peace. According to Ton That Thien, a Vietnamese scholar, this inner peace is called Tinh-Tam (Serenity) by Confucius, An-Lac (Nirvada) by Buddha, and Tinh (Rest) by Lao Tzu. The search for

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51 This is translated by the writer from the Vietnamese proverb "Tot Go Hon Tot Nuoc Son."

inner peace must be the result of an intense intellectual and personal effort. One cannot achieve this if he does not try to liberate himself from the material world as well as from the inner uneasiness. Those who could arrive at this stage are called "Quan-Tu" or the virtuous man who does not care for material comfort and economic gain. To the Vietnamese, he is a living example which everybody tries to imitate. However, in reality, reaching this stage is impractical and sometimes impossible.

The hardship of the war, the stress of the economy, and the influence of the West in recent years may change the attitude of the Vietnamese toward these traditional values. Smith and his associates seem to agree with this observation when they said:

In the modern period, the Vietnamese has become [even] more practical in his outlook. While focusing on survival he hopes for a better life, social and legal justice, more land, more material comforts and better schools for his children.\(^{53}\)

Whether these attitudes are applicable to any group of employees at the National Bank of Vietnam is a question remaining to be answered. The outcome of the investigation at this point is not clear, but a continuous discussion of selected aspects of traditional Vietnamese culture relevant to Hypothesis 2 is still needed. It may help one to understand why some Vietnamese might react to the same kind of

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\(^{53}\)American University, _op. cit._, p. 197.
change differently from their counterparts in the United States.

**Traditional Cultural Aspects Related to Hypothesis 2**

This section will be directed to the discussion of traditional Vietnamese attitudes toward education, the role of the woman in the family as well as in society, and the concept of authority.

*Education.* There is a common belief among the Vietnamese that education is the essential stepping stone to profitable jobs and social prestige. This attitude may be a relic of ancient society which pays high regard to scholars. It might also be a result of the French educational system whose purpose is to produce candidates for civil service jobs at the lower levels in the colonial administrative machinery.

It should be noted that in ancient Vietnam, society was loosely divided into four classes based on the career with which one was associated. On top of the social structure were the scholars who could pass the mandarinal examinations and were appointed by the king to hold specific state jobs depending on the level of examination taken.\(^{54}\)

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Next in line were farmers who work hard to provide food for everyone. The farmers, even though uneducated, were re­spected and loved because they were honest and always con­formed to nature. Directly below the farmers were artisans who had to use the skill of their hands in order to earn a living. They were inferior because of their lack of edu­cation and other qualifications. At the bottom of the social scale were the merchants who were sometimes referred to as "troc-phu" or "barehead rich" (rich but uneducated, i.e., without cap and gown). These men were often looked down upon by the Vietnamese. In the opinion of the people, the merchants got rich by cheating their customers, therefore they did not deserve a higher rank.

It may be added that the class system of Vietnamese society was based on "function rather than on birth."

Anybody could reach the rank of scholar provided that his culture and merits enable him to win in the triennial liter­acy competition. In practice, only sons of the mandarins and high officials could afford to get enough education to pass the examination which admitted them into the scholarly rank.

The introduction of the French educational system (1868-1954) and the abolition of the mandarinal examina­tion (1915 in the North, and 1918 in Central Vietnam) have

certainly added other meanings to education. Scholar-
ship for its own sake which sometimes was advocated in the
past is no longer wanted by Vietnamese. Financial reward
plus social prestige became the ultimate goals of education.
If one wanted to get a civil service job in the colonial
administration, he had to pass a national examination which
required the knowledge of the French language, classic dis-
cipline, and other French educational methods.

This recruiting device was not much different from
the democratic way of selecting civil service employees in
ancient Vietnam. However, some modifications are noticed:

1. When the number of positions to be filled were less
than the number of candidates (academic degree
holders) another examination was given. Those who
could score the highest would likely have the oppor-
tunity to get the first job available; the priority
was established by these scores.

2. In some cases, academic degree holders at certain
levels were required to take an examination in order
to get into the training program. At the end of the
study cycle they had to take another test in order
to graduate. If passed, they would be appointed to
different positions based on the score made on the
test.

These methods of recruiting personnel are still widely used
in South Vietnam, especially in selecting employees for
government jobs such as those at the National Bank.

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56 Nguyen Lan Man, op. cit., p. 18.

57 Ann Cadwell Crawford, Customs and Culture of Viet-
man (Rutland, Vt.: Charles E. Tuttle Co., Inc., 1966),
p. 98.
Role of Women. In the traditional society of Vietnam, women have been treated as the unequal partners of men in the family as well as in society. They are not only relegated to a position of legal inferiority, but also condemned to an inferior education as well.

Since childhood, girls were given a more confined upbringing than boys, and they were constantly reminded of the importance of obedience to the opposite sex. This is reinforced by the Confucius Code of Conduct which requires women to conform to the three obediences at all times: "Obedience to her father until she is married, obedience to her husband after she leaves her father's house, and obedience to her eldest son should she be widowed." In addition, a model woman should also possess the four essential virtues: "Skill with her hands, agreeable appearance, prudence in speech, and exemplary conduct."  

Observing the humble role of women in the past, a Vietnamese scholar has this to say:

Everywhere the Vietnamese woman had been pushed aside to the background. At home, she was inferior to her husband, and in the social life, she could not take part in public affairs. She had more duties than rights and in such a family of the Confucian type as the old Vietnamese, her most important duty was to bear her husband a male child to perpetuate his family.

This picture of a woman could be found everywhere in

58 An Introduction to Vietnam, p. 50.  
59 Ibid.  
ancient Vietnam, but today due to the influence of Western civilization, change in the legislation, and especially the effects of the war, the position of the Vietnamese woman in the society as well as in the family has been changed. Many of them now are actively engaging in welfare, education, journalism, professions, and government.

Based on these factors, a crucial question is being raised as to whether Vietnamese women today have abandoned the traditional values which were fervently adhered to by their sisters of the past. The answer is still not clear, but one can assume that a tradition which has been with the people of a country for almost 2,000 years will not easily fade away. Its influence on the Vietnamese is expected to continue, however, the degree of importance seems to depend on age, profession, and education, as well as on family background.

**Concept of Authority.** As a result of Chinese domination for almost 1,000 years, the Vietnamese social structure is deeply influenced by the teachings of the Chinese philosopher Confucius. It is a society characterized by the emphasis on family loyalty and respect for authority. A Vietnamese, at every stage of his existence, has been taught to accept authority. As a child, he must learn to understand the importance of the willing

61 American University, *op. cit.*, p. 111.
62 Ibid., p. 140.
submission to his parents' and his teacher's authority. As a grown man, he is told to respect the authority of his elders and government officials. This practice may be based on Confucius' conception of the Cosmos which is built on the hierarchical principle or on the law of inequality. The harmony of the celestial system in fact is a result of the hierarchical order of things. The heaven, for instance, is above the earth, the sun is brighter than the moon, the moon than stars. Similarly, harmony among men should also come from the hierarchical principle, for example, king is superior to subjects, male to female, husband to wife, father to son, and teacher to student. Everyone should know his position in the social organization and behave accordingly. Thus, a subordinate is supposed to obey his superior whose authority is taken for granted. A child is expected to carry out his parents' orders without questioning, and a good student would never challenge or doubt his teacher's authority and knowledge.

These formal relationships between members of the society represent the characteristics of an autocratic leadership style which allows no employees to participate in the process of decision making. Thus, in contrast to the belief of many social scientists in the West on the role of communication and participation in motivating

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64 Nguyen Quoc Tri, op. cit., p. 150.
employees, the usefulness of these practices in a society such as Vietnam remains to be seen. Those techniques which aim at providing employees with jobs of more status but less variety, and at reducing horizontal mobility to the minimum level seem to fit the traditional Vietnamese. These aspects of the job, which were mentioned in Hypothesis 3 of Chapter I, will be discussed in the following section.

Traditional Cultural Aspects Related to Hypothesis 3

It has been said that man is conditioned by his culture. Whenever he thinks or acts, he does so under the influence of the culture. This assumption leads the researcher to attempt to establish a basis for the explanation of the traditional Vietnamese attitude toward job status and change.

Aspiration for Status. In a society where relationship between its members is based on hierarchical principle such as Vietnam, status consciousness should be very strong. A Vietnamese expects to receive appropriate treatment according to his status in the social hierarchy. In a meeting, for example, everyone must be properly seated according to his social position. There are patterned ways of speech and greeting between superiors and subordinates, old and young, father and son, brother and sister, and even among equals. One should not call another by his first
name but always address as Mr., Mrs., or Miss. Beggars on the street are also respectfully called "Mr. the beggar," if his age deserves this rank.

A Vietnamese may be willing to yield to someone for the sake of keeping the harmony, but never lets anyone humiliate him or make him "lose his face." The importance of status to a man is reflected in such popular sayings as "a piece of meat taken at the communal house is worth more than a basketful of meat taken in the corner of the kitchen," or "in the communal house [it is an honor] to sit in the front row and eat at the upper table." One may accept a job with less pay but he would not stay in a position which has less status than before in the eyes of his peers. This observation will certainly help the manager deal effectively with his employees if a change is instituted in the organization.

It has been said that in the ancient days of Vietnam people were not allowed to wear clothes of the royal color (yellow) or to build a house which was taller than the royal palace or government building. To do so was to commit the crime of "contempt for the Emperor." The concern for external signs indicating one's status and prestige still exists in modern Vietnam. According to Nguyen Quoc Tri, Ph.D., from the University of Southern California, and presently director of the Vietnamese National Institute of Administration, the conflict between the late president
Diem and the Buddhists which lead to the former's overthrow originated with such a question of face or etiquette. It should also be mentioned that the Buddhists wanted their flag to fly at the same level as the national flag, which in president Diem's opinion should always be at a higher one. To raise the Buddhist flag as high as the national flag, or to remove the national flag from the pagodas as some Buddhists actually did, was understood by Diem as a sign of rebellion. The national flag was the symbol of his authority and represented the prestige of his presidency as well.

These examples lead one to believe that the Vietnamese people are mindful of status. This seems to contradict the traditional societal attitude toward mobility, but apparently there is no such conflict. People in a traditional society such as Vietnam do not want a horizontal mobility, but always welcome a vertical mobility. A promotion or transfer which increases one's salary or brings more status to his position is usually favored. This specific aspect of the culture together with the traditional attitude toward change are to be considered in the upcoming section.

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65 Nguyen Quoc Tri, op. cit., p. 152.
Change Versus No Change. There seems to be a consensus among foreign observers that until very recently many Vietnamese would not willingly leave their villages to move to another area even when more opportunities were to be expected. This fact can be attributed to the influence of Confucian doctrine of being loyal to one's family and wishing to live and die on the ancestor's land. The attachment to one's family and to the village where one was born and where one's ancestors were buried is very strong. It is expressed in such popular sayings as "our life also depends on our ancestors' tombs, not merely on foods."

The strong link between the individual and his natal village is reported by Paul Mus in a story describing how the French recruited Vietnamese labor to work on rubber plantations in the South. By advancing an attractive amount of money, the French in the 1930's succeeded in hiring a group of volunteers from the North to work in the South. After settling in the villages built around the plantations in the South, these people seemed to be better off economically. But at the end of the contract term, most of them left for their homes in the North.66

Results of a joint study conducted by a Michigan State University team and the Vietnamese National Institute

of Administration in the late 1950's at Khanh Hau village, thirty miles from Saigon, also revealed a strong attachment of people to their villages. Asked if they were willing to leave their villages, 60 percent of household heads at Khanh Hau answered "No." Those who said "Yes" always thought of their move as temporary. On the other hand, due to unforeseen circumstances, if one must leave his village, he should still remember the anniversaries of his forebears' deaths and all occasions of his family sorrow or joy, to try to return home for a reunion with his extended family's members. And finally, if one thought that he might die in a strange land, his last wish may be to have his body returned to his father's land and be buried near the tombs of his ancestors. This tradition still exists and is expressed in the following adage: "The leaves when falling from the branches lie dying at the root of the tree."

The attachment to family and village, and the concern for harmony lead the Vietnamese to cherish the status quo. They tend to consider change as a disruption of the existing harmonious order of things rather than as an advancement or progress. The future in their opinions is an extension of the past. Experiences which have proved to work will be closely followed. Change in habit of doing

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things is to be avoided.

These practices lead one to believe that variety in the job, considered to be a good motivational technique in the West, may be an undesirable approach if used in a traditional society such as Vietnam.

In short, being born and raised in the traditional society, most Vietnamese are expected to have a strong link to their families and villages. They used to pay more respect to the elders and were ready to submit themselves to the authority of their superiors. Traditional Vietnamese were also mindful of status, as they preferred vertical mobility rather than horizontal mobility. To them, variety in the job was also assumed not to be desired.

It is uncertain at this point to what extent these cultural aspects influence the employees at the National Bank of Vietnam. Results of this research, especially when compared with results obtained in the United States, may be explained by the degree of influence the traditional society has upon the employees of National Bank. Nevertheless, it seems necessary that before assessing the attitude of employees of National Bank toward technological change, one needs to have some general orientation concerning the organization which serves as the setting of the investigation. This will be done in Chapter IV.
CHAPTER IV

ORGANIZATIONAL SETTING

This chapter aims at providing a general knowledge of the organization where this study was conducted. First, a brief history of the National Bank, along with its objectives, organization, and functions is presented. Second, the IBM department where the technological change took place, and the selected departments which were affected by this technological change are described. Third, the relationship between these affected departments and the IBM department is discussed.

NATIONAL BANK OF VIETNAM

Establishment, Objectives, and Organization

The National Bank of Vietnam (Banque National du Vietnam or Ngan-Hang Quoc-Gia Vietnam), located at 17 Ben Chuong-Duong, Saigon, South Vietnam, is the country's central bank. It was established in 1955 following the passage of Republic Ordinance No. 48 of December 31, 1954. The new bank replaced the previous bank-note issuing

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authority (Institut d'Emission) for Vietnam, Cambodia, and Laos which had been set up when these countries still belonged to one federation called Indochina.

After twelve years of operation, the National Bank Ordinance was substantially amended by Decree Law No. 20/SLU, September 3, 1966. The main objectives of the National Bank are as follows:

A. On the domestic front:

1. Establish an appropriate monetary system within the limits of national constitution and other laws;

2. Contribute to the economic stability and export development. In order to achieve this purpose, the National Bank is to set up and pursue appropriate monetary and credit policies; take all necessary measures to prevent or to correct the inflationary or speculative trends which are harmful to lasting interests of the national economy;

3. Devise and apply all necessary measures to insure that commercial banking system has enough liquid and convertible assets in order to distribute credits for the purpose of expanding national economy at the maximum level;

4. Act as government's agency in disbursing and receiving payments when these functions are delegated according to the agreement between the National Bank and the Ministry of Finance; and

5. Accept deposits from the National Treasury, other government agencies, banking and financial institutions.

B. On the foreign front:

1. Maintain the value of Vietnamese piaster in the international monetary market, and perform all foreign exchange operations;

2. Conserve and manage international reserves (either in gold or in foreign currency) in a way to reduce the influences of the unbalance in national incomes and expenditures which are
detrimental to monetary volume and credit as well as other economic activities;

3. Maintain or re-establish the conditions leading to the equilibrium in national economy and international trade; and

4. Perform transactions prescribed by the agreements between Vietnam and other monetary institutions such as World Bank or other foreign banks. The National Bank also acts as a representative of the Vietnamese government to these institutions. 69

As with most central banks in less developed countries, the National Bank of Vietnam's ultimate goal is to contribute to the development of national economy and to maintain the value of Vietnamese currency in the international monetary market. In pursuing these goals, National Bank is placed under the direction of a ten man council of administration. The governor and deputy governor of the bank serve as president and vice-president of the council respectively. Four of the members are to be competent in economic and financial matters, and the other four are to be experienced in the fields of agriculture, commerce, and industry. The selection procedure of the National Bank's council of administration is as follows:

Eight members [of the council] are appointed by presidential decree for four years upon the recommendations of the Minister of Finance and the advice of the Minister of Economy and the Governor of the National Bank. A nonvoting participant in the council's meeting is the Cenceur who exercises general surveillance over the bank's operations, advises the bank and also serves as an external auditor of the bank. Both the governor and deputy governor are appointed by presidential decree based on the recommendation of the

69 Decree Law No. 020/SLU, p. 5.
central executive committee after due consideration of the matter by the council of ministers. Both are appointed for a term of five years. They are to be persons of great integrity and experience in banking and monetary matters. 70

In order to perform its daily activities, the National Bank employs a staff of about 1,600 people who are working in 16 departments. These are Issue, Cash, Foreign Relations, Foreign Aids, Credits, Research, Statistics and National Income, Transfer, Foreign Exchange Control, Training and Research, Administration, Social Welfare and Retirement, Administration-Budget and Accounting-Auditing, IBM, Legal, Post Auditing and Statistics, the Bank Examination Staff, and two groups of Internal Auditors. These departments, in turn, are grouped into five divisions and are headed by the director general of banking operations, director general of foreign exchange, the secretary general of the bank, the controller, and the inspector general. The internal structure of the National Bank can be presented in Figure 1.

National Bank has no branches, as the two branches at Hue and Dalat that were inherited from the Institut d'Emission were closed in 1956. It is believed that National Bank has great influence on the formation of monetary policy of the state, but it is also subject to some

FIGURE 1. National Bank of Vietnam Organizational Chart

Source: Department of Administration, Organization (Saigon: National Bank of Vietnam, 1974), p. 3.
restraints in its decision making powers. Important decisions made by the governor are to be submitted to the council of administration. Major monetary policies are to be forwarded to the council on economy and finance, a cabinet-level group, for discussion. The council's decisions are presented to the government for final approval. The chairman of the council is the prime minister. Other members include the minister of finance, the governor of National Bank, the directorate general of the budget, and the respective ministers of economy, defense, communication and post-office, public works, agriculture, labor, planning and national development, and the secretary of state.\footnote{Bulletin Economique, No. 05-06 (Saigon: National Bank of Vietnam, 1973), p. 7.}

As with other expanding financial institutions, National Bank of Vietnam has experienced a rapid increase in its assets, especially in its capital. From the original amount of VN $67 million which came from Vietnam's share of the capital of the Institut d'Emission in 1955, the National Bank's capital grew to a high level of VN $13,490 million in 1974.\footnote{Bulletin Economique, No. 03-04 (Saigon: National Bank of Vietnam, 1974), p. 81.} This consists of VN $400 million paid-in capital, the rest is reserves and other capital accounts.

The increase in total assets and liabilities, as shown in Figure 2, also indicates the important role
<table>
<thead>
<tr>
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<tbody>
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<td>Assets, Total</td>
<td>19,225</td>
<td>21,578</td>
<td>25,463</td>
<td>30,224</td>
<td>51,190</td>
<td>79,769</td>
<td>109,370</td>
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<td>10,681</td>
<td>10,681</td>
<td>10,681</td>
<td>10,681</td>
<td>10,681</td>
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<td>Advance to the Government</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Temporary</td>
<td>600</td>
<td>2,020</td>
<td>4,650</td>
<td>10,950</td>
<td>28,100</td>
<td>33,423</td>
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<td>750</td>
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<td>331</td>
<td>205</td>
<td>147</td>
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<td>170</td>
<td>174</td>
<td>175</td>
<td>183</td>
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<td>678</td>
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<td>2,713</td>
<td>5,298</td>
<td>5,669</td>
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<td>30,224</td>
<td>51,190</td>
<td>79,769</td>
<td>109,370</td>
</tr>
<tr>
<td>Notes in circulation</td>
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<td>14,107</td>
<td>16,644</td>
<td>20,422</td>
<td>36,106</td>
<td>48,921</td>
<td>67,099</td>
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<tr>
<td>Deposits</td>
<td>2,940</td>
<td>2,888</td>
<td>4,557</td>
<td>5,878</td>
<td>9,845</td>
<td>16,805</td>
<td>15,940</td>
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<td>Miscellaneous creditors</td>
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<td>3,461</td>
<td>2,936</td>
<td>2,340</td>
<td>3,276</td>
<td>11,152</td>
<td>22,179</td>
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<td>Provisions and reserves</td>
<td>959</td>
<td>1,110</td>
<td>1,313</td>
<td>1,313</td>
<td>1,574</td>
<td>1,870</td>
<td>1,986</td>
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<tr>
<td>Other liabilities</td>
<td>435</td>
<td>12</td>
<td>13</td>
<td>271</td>
<td>389</td>
<td>1,021</td>
<td>2,166</td>
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</table>


(in million piasters)

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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets, Total</strong></td>
<td>157,539</td>
<td>196,791</td>
<td>249,654</td>
<td>335,165</td>
<td>365,178</td>
<td>473,314</td>
<td>482,255</td>
</tr>
<tr>
<td>Gold and foreign exchange</td>
<td>26,078</td>
<td>21,241</td>
<td>17,611</td>
<td>18,892</td>
<td>105,970</td>
<td>101,670</td>
<td>103,333</td>
</tr>
<tr>
<td>Consolidated debt of Government</td>
<td>10,681</td>
<td>10,681</td>
<td>10,681</td>
<td>10,681</td>
<td>10,681</td>
<td>10,681</td>
<td>10,681</td>
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<tr>
<td>Advance to the Government</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temporary</td>
<td>93,278</td>
<td>122,996</td>
<td>160,096</td>
<td>209,303</td>
<td>209,685</td>
<td>291,709</td>
<td>297,081</td>
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<tr>
<td>Special</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Advances to banks</td>
<td>984</td>
<td>1,912</td>
<td>2,596</td>
<td>1,166</td>
<td>8,531</td>
<td>16,455</td>
<td>14,848</td>
</tr>
<tr>
<td>Fixed assets</td>
<td>773</td>
<td>801</td>
<td>1,093</td>
<td>1,156</td>
<td>1,475</td>
<td>1,850</td>
<td>2,298</td>
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<tr>
<td>Other assets</td>
<td>25,745</td>
<td>39,160</td>
<td>56,552</td>
<td>92,411</td>
<td>50,949</td>
<td>53,994</td>
<td></td>
</tr>
<tr>
<td><strong>Liabilities, Total</strong></td>
<td>157,539</td>
<td>196,791</td>
<td>249,650</td>
<td>335,165</td>
<td>385,178</td>
<td>473,314</td>
<td>482,255</td>
</tr>
<tr>
<td>Notes in circulation</td>
<td>99,618</td>
<td>114,113</td>
<td>131,953</td>
<td>174,414</td>
<td>196,073</td>
<td>224,405</td>
<td>253,404</td>
</tr>
<tr>
<td>Deposits</td>
<td>17,675</td>
<td>27,189</td>
<td>30,432</td>
<td>31,535</td>
<td>88,197</td>
<td>96,252</td>
<td>106,769</td>
</tr>
<tr>
<td>Miscellaneous creditors</td>
<td>34,952</td>
<td>48,889</td>
<td>80,513</td>
<td>121,522</td>
<td>85,986</td>
<td>134,084</td>
<td>105,259</td>
</tr>
<tr>
<td>Provisions and reserves</td>
<td>2,924</td>
<td>4,031</td>
<td>4,589</td>
<td>4,885</td>
<td>7,118</td>
<td>9,397</td>
<td>13,490</td>
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<tr>
<td>Other liabilities</td>
<td>2,370</td>
<td>2,569</td>
<td>2,169</td>
<td>2,809</td>
<td>7,701</td>
<td>9,176</td>
<td>3,333</td>
</tr>
</tbody>
</table>

played by National Bank in controlling and channeling credit operations.

As a central bank, National Bank of Vietnam has to supervise and control the activities of all commercial banks operating in the country in a way so that the general monetary policy of the state can be promoted. In order to fulfill this function, National Bank has used different instruments which are to be discussed in the following section.

Monetary and Credit Control

The National Bank is vested with the power to use a wide variety of monetary controls upon the private commercial banks and other financial institutions. The measures usually taken include the use of cash-reserve requirements, security-reserve requirements, qualitative controls on rediscounts, graduated rediscount rates, control on the level of interest rate for loans and deposits, control on inter-bank borrowing, advance import deposit requirements, and moral suasion. Between the period of 1955 and 1964, the change in cash-reserve requirements was used by the National Bank as the main instrument in monetary and credit control. But since 1965, the security-reserve requirements, qualitative rediscounting, and penalty rediscount rates were also employed.

This list of measures taken by the National Bank as described is comprehensive, but not exhaustive. Other
tools used to carry out the National Bank's regulatory and supervisory functions are discussed below.

**Regulatory Powers and Supervision**

The National Bank has vast regulatory powers which include bank supervision, examination, and approval of new banks, new branches, change in location, change in capital and name, and bank merger. For the establishment of new banks, the approval of the ministry of finance is also needed. The National Bank's supervisory function is carried out by the inspector general and his staff. About every two years, each of the 32 banks\(^7\) operating in the country is examined. In addition, a bank can be examined at any time deemed necessary. Monthly reports submitted by the banks are also required and are examined by the bank inspector and his staff.

Other functions performed by the National Bank include issuing of bank notes and coins, serving as fiscal agent for the government, handling gold and foreign exchange operations and controls, maintaining accounts for foreign governments, embassies, consulates and aid missions, handling government security issues, assisting the development of certain financial institutions, and advising the government on economic and financial matters.

The functions of the National Bank, together with

its objectives, organization, and establishment presented, provides one with some basic knowledge of the environment within which the selected departments operate.

THE IBM AND THE AFFECTED DEPARTMENTS

This section will attempt to delineate the IBM and a number of affected departments within the National Bank. In pursuing this purpose, a historical sketch of these departments along with their functions and organization are presented. In addition, the relationship between the IBM department and the affected departments is also discussed.

IBM Department

Established in 1966, the IBM department acts as an automatic data processing center and a main accounting section. It has been said that 80 percent of the IBM department's time has been reserved for the services of other affected departments of the National Bank.

The Accounting Section was established in 1955 when National Bank was founded. Its main duty was to collect data and accounting records related to all banking transactions and manually process them. After two years in operation this section acquired some accounting machines, and was then renamed Mechanized Accounting Section.

In order to respond to the growth of the National Bank, and to alleviate the complexity of its operations, in 1966 most of the important sections of the National Bank
were elevated to the rank of department, and the IBM depart-
ment was officially established. Regardless of the name
it had, this department did not have any computing machines
to work with. But in 1968, the IBM 360/20 computer was
introduced, replacing the old accounting machines. In
addition, several IBM/026 card punches, two or three
IBM/056 verifiers, one IBM/082 card reader, one IBM/514
duplicator, and two IBM/421 printers were added. After
1968, more machines were purchased. By the end of 1970,
the input devices included an IBM 2501/A02 card reader,
an IBM 2415/2 magnetic tape unit and control, and an
IBM 2311/11 disk storage drive. In addition, an IBM
1403/NI printer was also added as an output device.74

Although the IBM 360/20 computer currently used at
the National Bank is not as fast as the latest models used
elsewhere, its significance in this environment should not
be underestimated. The IBM 360/20 computer can satisfy
the broadest system of users from very small to very
large; scientific, commercial systems and real-time; single
user to large multiprocessor serving many concurrent users.
With the assistance of the computer, the IBM department
was able to accomplish many tasks as prescribed by its
functions. According to Decision No. 0311/NV/1304/318-C,
the functions of the IBM department can be specified as
follows:

74Department of Administration, op. cit., pp. 4-5.
1. Perform the bookkeeping for all departments and sections of the National Bank, establish daily records, general accounting, balance sheet, and annual income statement;

2. Perform accounting and statistical work for government agencies and public or semi-public corporations upon the permission of the governor of the National Bank;

3. Study and computerize all complex activities of National Bank's departments and sections so that the statistical and accounting works are done satisfactorily; and

4. Upon the instructions of the comptroller of the National Bank, devise appropriate statistical and accounting systems for National Bank's departments and sections, and suggest necessary changes for those systems.75

In order to accomplish these functions and carry out its daily tasks more effectively, the IBM department is divided into sections, bureaus and units. The organizational structure can be seen in Figure 3.

As indicated by its functions, the IBM department has to work closely with a number of departments. Therefore, as the installation of the computer was a technological change in the IBM department, several client or user departments were likewise directly affected by this technological change. A brief description of these affected departments follows.

FIGURE 3. IBM Department Organizational Chart

Source: Department of Administration, op. cit., p. 6.
**Computer Affected Departments**

This section describes the selected departments where the subjects of the survey worked, and how the operation of these departments was affected by the technological change. In an effort to keep the names of these departments anonymous, letters are used when these departments are mentioned.

It is believed that when a change took place in one part of the organization, its influence may permeate throughout the others. An interview with officials familiar with technological change at the National Bank revealed that the installation of the IBM 360/20 computer may have affected nearly every section of the bank. Due to the time and space limitations, only the most affected departments will be included in this research. The volume of work done by computer for each department may be used as criteria in distinguishing the most affected from the least affected departments.  

There are four departments considered to be the most affected by this technological change. Under the disguised names, they are called department A, B, C, and D respectively. Based on the fact that the internal structure of these departments is not much different from that of the IBM department, a presentation of an organizational chart

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for each department is not needed. However, a sketch of each department's functions and how each is related to the computer are to be described.

The first to be described is department A. Its main function is to advance credits to commercial banks as well as to central government and other public agencies, and to keep appropriate officials of the National Bank informed of the credit situation of these customers. For this purpose, the department provides respective officials with the periodic statistical reports on the matter. This job requires cooperation between department A and the IBM department. The staff of department A collects the data, codes and forwards them to the IBM department where these data are to be keypunched, stored, and processed. Results are sent back to department A. Whenever new data arrive, this cycle will be started all over again. The procedure described may be applied to other departments as well.

Department B, on the other hand, is in charge of all import transactions which are paid by American dollars under the economic aid program. All documents and records related to these matters are computerized. The process would be the same as described in department A.

The main function of department C is to handle all transactions related to the purchase or sale of foreign currencies for import, export and transfer. In this respect, the computer is used to prepare the report on the situation of foreign exchange as well as to furnish
information for the preparation of National Bank's balance of receipts and payments derived from these transactions.

The responsibility of department D is to supervise the reserve divisions of all commercial banks, and to control the amount of physical cash available in the National Bank. This involves a great volume of data, the assistance of a computer therefore is needed.

Other departments may also be affected by the technological change, but the degree of influence seems not to be so substantive. Therefore, they are not included in this survey, and need not be discussed.

In summary, the introduction of the IBM 360/20 computer into National Bank has affected the operation of a number of departments at the bank. This effect in turn may have influenced the attitudes of its employees. The upcoming chapter provides the results indicating the reaction of employees at the National Bank to this type of technological change.
CHAPTER V

PRESENTATION AND ANALYSIS OF RESULTS

This chapter is divided into two parts. First, sampling procedure and sample characteristics are discussed. Second, results of the investigation are presented and analyzed.

SAMPLING PROCEDURE AND SAMPLE CHARACTERISTICS

Three hundred non-supervisory employees working in five departments of the National Bank of Vietnam and living in Saigon and the Cholon area of South Vietnam were selected as subjects for the study. A questionnaire about general change and the specific change resulting from the computer installation was distributed to those employees. The questionnaire survey used in this research appears in Appendix A. Questionnaire materials employed in the study were mostly drawn from similar research done in the United States with the hope of obtaining favorable conditions for later comparison.\footnote{Don A. Trumbo, "Analysis of Attitudes Toward Change Among the Employees of an Insurance Company" (unpublished Ph.D. Dissertation, Michigan State University, 1958), Appendix B, pp. 203-225.}

Care was taken in translating and constructing the questionnaire so that prospective respondents
would not have any problem in understanding and completing it.

Fifteen Vietnamese students at various education and age levels at Louisiana State University, Baton Rouge campus, were used for the pre-test. It took them from 15 to 20 minutes to read the instructions and answer the questions. When the pre-test session was completed, the participants were asked to comment. They indicated that in general they did not have any difficulty in terms of understanding and completing the questionnaire, but some minor modifications in the wording were recommended. Based on these suggestions, corrections were made before the survey instrument was sent to Vietnam and distributed to the sample group.

To collect the data, three Vietnamese students at Saigon University who had had some experience in conducting surveys were asked to assist the writer. These student workers were instructed to emphasize to the participants the academic purpose of this study, and the confidentiality of the results. The questionnaire was delivered to their residences by the student workers. The completed questionnaire was put in an envelope provided, sealed, and picked up the next evening by the same person.

The preliminary results showed that out of the three hundred employees that received the questionnaire, two hundred and twenty-six answered. Among those who
replied, 50.89 percent were female and 49.11 percent were male. The average age of the sample was 32. The length of time in which a respondent reported to be associated with a specific department was a median of 88 months. When asked about their education, 79 percent said that they finished high school, 20 percent did not. Among those who had already earned a high school diploma, 20 percent indicated that they had some college education, and 10 percent said they were college graduates. In terms of training received, 20 percent reported that they had some, but the kind of training was not specified, while 80 percent said they did not. The importance of these various aspects upon employee behavior toward technological change will be analyzed in this chapter.

RESULTS FROM THE INVESTIGATION

This section describes the procedure used in evaluating items used to form the index of change. It also presents the results found on the basis of the hypotheses presented in Chapter I. The primary statistical method used to evaluate the data obtained was the analysis of variance.  

To serve as a dependent variable in assessing the employee's attitude toward change, a set of Likert-type

78 The statistical method used in this study was taken from Wilfred J. Dixon and Frank J. Massey, Jr., *Introduction to Statistical Analysis* (New York: McGraw-Hill Book Company, 1957).
scales consisting of nine items which was designed by Trumbo was utilized (see Appendix A). The responses to these items were combined to form an index of change. A scale score from 1 to 5 was assigned to each alternative of the items. A score of 1 indicates a negative response, 2 a negative-neutral response, 3 a neutral response, 4 a positive-neutral response, and 5 a positive response to change. The responses to these items were coded and key-punched on IBM cards together with other personal data. Scores for all of these items were added to yield an individual change scale score. It should be noted that in order to use these items as an index of change, the consistency and validity among them should be tested.

Validation of the Index of Change

To determine the logical validity of the index of change, the relationship between individual item and total scores was assessed.79 This was done by comparing the item scores of upper and lower groups selected from the distribution of change scores by employee. For each item, the mean scores for the upper 25 percent and the lower 25 percent of the sample were computed and compared. A "t" test was used to evaluate the significance in the difference

between items means associated with each group. These nine items can be seen in Appendix A. Table 1 presents the average item scores computed for each group and the differences of the means tested for statistical significance.

Table 1

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean Item Scores</th>
<th>t Statistic&lt;sup&gt;a&lt;/sup&gt;</th>
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<tbody>
<tr>
<td></td>
<td>Upper 25% (&lt;i&gt;N_1 = 56&lt;/i&gt;)</td>
<td>Lower 25% (&lt;i&gt;N_2 = 56&lt;/i&gt;)</td>
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<tr>
<td>1</td>
<td>4.26</td>
<td>3.77</td>
</tr>
<tr>
<td>2</td>
<td>2.45</td>
<td>1.89</td>
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<tr>
<td>3</td>
<td>4.09</td>
<td>3.60</td>
</tr>
<tr>
<td>4</td>
<td>4.23</td>
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<td>8</td>
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<td>3.29</td>
</tr>
<tr>
<td>9</td>
<td>4.07</td>
<td>3.17</td>
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</tbody>
</table>

<sup>a</sup>All are significant at the .05 level.

Results presented in Table 1 show a statistically significant difference between item means associated with upper and lower groups. This indicates the existence of a degree of internal consistency among the items which make up the index of change. Since the combination of these items serves as the index of change, the responses to these items may provide some meaning for the explanation
of employee attitudes toward change. Responses to the items that make up the index of change can be seen in Table 2.

Table 2
RESPONSES TO THE INDEX OF CHANGE
(In frequency)

<table>
<thead>
<tr>
<th>Alternative</th>
<th>A Positive</th>
<th>B Positive-Neutral</th>
<th>C Neutral</th>
<th>D Negative-Neutral</th>
<th>E Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Items</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>15</td>
<td>192</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>37</td>
<td>171</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>2</td>
<td>13</td>
<td>196</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>210</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>24</td>
<td>26</td>
<td>168</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>28</td>
<td>162</td>
<td>7</td>
<td>28</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>0</td>
<td>40</td>
<td>35</td>
<td>146</td>
<td>25</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>18</td>
<td>10</td>
<td>177</td>
<td>20</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>40</td>
<td>54</td>
<td>122</td>
<td>9</td>
</tr>
</tbody>
</table>

By reviewing Table 2, one may notice a great concentration of the response on alternatives "B" and "D". This indicates an attitude of less than complete willingness to change among the subjects.

It has been assumed that the employee who favored the change should obtain a high score on his change scale. Consequently, those who are ready for change, as indicated by their change scores, should respond more favorably to a specific change occurring in their work routines. Such a
change occurred as a result of the installation of the IBM 360/20 computer in the National Bank of Vietnam. Question 10 asked employees to indicate if any change had taken place in their job due to the technological change (see Appendix A). Frequency of employees responding to each alternative of this question is presented in Table 3.

Table 3
RESPONSES TO QUESTION 10
(In frequency)

<table>
<thead>
<tr>
<th>ALT Item</th>
<th>A Promoted</th>
<th>B Transferred</th>
<th>C Greatly Changed</th>
<th>D Noticeably Changed</th>
<th>E Slightly Changed</th>
<th>F Not Changed</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>35</td>
<td>37</td>
<td>5</td>
<td>57</td>
<td>81</td>
<td>11</td>
</tr>
</tbody>
</table>

A follow-up question was used to find out how the employees reacted to the change or lack of change perceived in their job (see Appendix A). Results can be seen in Table 4.

Table 4
RESPONSES TO QUESTION 11
(In frequency)

<table>
<thead>
<tr>
<th>ALT Item</th>
<th>A Like Very Much</th>
<th>B Like</th>
<th>C Indifference</th>
<th>D Dislike</th>
<th>E Dislike Very Much</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>0</td>
<td>22</td>
<td>14</td>
<td>159</td>
<td>31</td>
</tr>
</tbody>
</table>
Data in Table 3 indicate that the majority of employees perceived little or no change in their job (alternatives D, E, F). Table 4, however, suggests that most of them were unfavorable to the change or lack of change (alternatives D and E). In other words, those subjects who responded "dislike" or "dislike very much" in question 11 might have indicated a change or no change in question 10. Based on this information, one can make a comparison of mean change scores among the subgroups included in two major classifications: change and no change. It is believed that if the index of change can be used to measure employees' attitudes toward technological change as well, then the following hypothesis may be formulated: employees who perceived change in their jobs as a result of the technological development, and responded favorably to this change, should have a higher score on the change scale than those who were indifferent or disliked the change.

To test this hypothesis, subjects responding to question 10 were dichotomized into two groups, those who perceived change (alternatives A, B, C, D, E), and those who did not (alternative F). These two groups, in turn, were divided into "like" (alternatives D, E), "indifferent" (alternative C), and "dislike" (alternatives A, B) on the basis of responses to question 11. The mean change scores were computed for these subgroups, and the analysis of variance was performed. Results are shown in Table 5.
Table 5
COMPARISON OF MEAN CHANGE SCORES FOR SUBGROUPS
FORMED ON THE BASIS OF QUESTIONS 10 AND 11

<table>
<thead>
<tr>
<th>Group Variable</th>
<th>Change (Alt. A,B,C,D,E)</th>
<th>No Change (Alt. F)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Like</td>
<td>Indifferent</td>
</tr>
<tr>
<td>N</td>
<td>21</td>
<td>165</td>
</tr>
<tr>
<td>Mean Change Score</td>
<td>33.60</td>
<td>32.00</td>
</tr>
<tr>
<td>Test Statistic$^a$</td>
<td>$F = 12.10$</td>
<td>$t = 1.63$</td>
</tr>
</tbody>
</table>

$^a$Level of significance: .05

It is evident that employees who perceived change and responded favorably to it had a mean change score higher than those who said they were "indifferent" or "disliked" the change. An "F" ratio of 12.10 indicates a statistical significance at the .05 level. The null hypothesis of no difference in means among the groups who perceived change was rejected.

Since only one subject responded "dislike" in the category of "no change," the difference in mean change scores between "like" and "indifferent" groups is not significant at the .05 level with a "t" value of 1.63. Results under consideration are inconclusive. Differences in responses to the lack of change may be unrelated to a general attitude toward change. Nevertheless, the index of change can be used to test the hypotheses related to employees' attitudes toward technological change.
RESULTS OF THE TEST OF HYPOTHESES

The three major hypotheses that appeared in Chapter I were tested and results are presented below.

Results of the Test of Hypothesis 1

Hypothesis 1 assumed a relationship between the acceptance of change and the degree of job commitment by the employee. Job commitment includes the length of service or tenure, social relationship among members, economic need of the individual, and the age of employee. The influence of these aspects upon employee's attitude toward change was evaluated; results are discussed in the order mentioned.

Tenure. It was predicted that there would be a negative relationship between employee's tenure and his reaction to change. In order to test this hypothesis, subjects were asked to indicate how long they had been working in the present department. The instrument used to obtain the data needed is included in the biographical data sheet shown in Appendix A. The length of time an employee was associated with a specific department was converted into months. Respondents were divided into two groups of long and short tenure. The median of 88 months was used to differentiate these groups. Mean change scores were computed for each group, and a "t" test was performed which yielded a value of .37. Based on this result, the null hypothesis
of no difference between two means was accepted at the .05 level of significance. Table 6 summarizes data resulting from the test.

Table 6

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>Mean Change Scores</th>
<th>Test Statistic&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long Tenure</td>
<td>132</td>
<td>30.64</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(88+ months)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenure</td>
<td>Short Tenure</td>
<td>94</td>
<td>30.51</td>
<td>&lt;sup&gt;t&lt;/sup&gt; = .37</td>
</tr>
<tr>
<td></td>
<td>(88- months)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Level of significance: .05

Group Cohesiveness. With regard to the effect of the cohesiveness variable upon employee attitude toward change, it was hypothesized that employee acceptance of change was negatively related to the degree of cohesiveness existing in his work group. To measure the degree of cohesiveness which one might have, five items originally designed by Seashore and used by Trumbo were included in the questionnaire survey.<sup>80</sup> A scale ranging from 1 to 6 was used. A value of 1 indicated a negative response, and 6 indicated a positive response. By summing the item

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scores, an index of cohesiveness was obtained. Thus a high score represented a high degree of cohesiveness, and a low score indicated less cohesiveness. Frequency of employees' responses to these items can be seen in Table 7.

Table 7
RESPONSES TO INDEX OF COHESIVENESS
(In frequency)

<table>
<thead>
<tr>
<th>ALT</th>
<th>Item</th>
<th>A Agree</th>
<th>B Agree</th>
<th>C Agree</th>
<th>D Disagree</th>
<th>E Disagree</th>
<th>F Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Very Much</td>
<td>on the Whole</td>
<td>a Little</td>
<td>on the Whole</td>
<td>Very Much</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>0</td>
<td></td>
<td>65</td>
<td>79</td>
<td>72</td>
<td>10</td>
<td>--</td>
</tr>
<tr>
<td>30</td>
<td>0</td>
<td></td>
<td>6</td>
<td>21</td>
<td>80</td>
<td>105</td>
<td>14</td>
</tr>
<tr>
<td>31</td>
<td>27</td>
<td></td>
<td>19</td>
<td>152</td>
<td>28</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>32</td>
<td>28</td>
<td></td>
<td>19</td>
<td>155</td>
<td>24</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>33</td>
<td>28</td>
<td></td>
<td>19</td>
<td>153</td>
<td>26</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

A review of Table 7 shows that the majority of responses was to alternatives B, C, and D which indicated a low degree of cohesiveness existing among the subjects.

Intercorrelations among the items are presented in Appendix B. They are of sufficient magnitude to justify their combination as an index of cohesiveness. These coefficients are very similar to those obtained by Seashore.

In order to test the hypothesis relating to the

81Trumbo, op. cit., p. 120.
effect of cohesiveness group upon employee attitude toward change, subjects were divided into low and high groups on the basis of their score obtained from the index of cohesiveness. The differentiation was based on the median value. A mean change score was computed for each group, and the "t" test was used. Results are shown in Table 8.

Table 8

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>Mean Change Scores</th>
<th>Test Statistic^a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohesive Group</td>
<td>High Cohesiveness</td>
<td>70</td>
<td>30.15</td>
<td>t = -1.51</td>
</tr>
<tr>
<td></td>
<td>Low Cohesiveness</td>
<td>156</td>
<td>30.78</td>
<td></td>
</tr>
</tbody>
</table>

^a Level of significance: .05

Data presented do not support the prediction of negative relationship between group cohesiveness and employee attitude toward change. The null hypothesis therefore was accepted at the .05 level of significance.

**Economic Need.** It was predicted that the higher the degree of economic need one might have, the more ready he is for change. To determine the degree of economic need associated with each employee, an economic need index consisting of three items, as shown in Appendix A, was
formulated. The score of 1 was assigned to the first category of response "yes", and 2 to response "no". To determine the existence of homogeneity and consistency among these items, a correlation test was made. The coefficients were of sufficient magnitude, therefore, these items can be combined to serve as an index of economic need (see Appendix C). The score of economic need index was obtained by summing the scores of these items. Distribution of the score of the economic need index ranged from 3 to 6. The median was used to distinguish the high from the low group. Low scores indicate a high degree of economic need, and high scores indicate low economic need. The mean change scores were computed for these groups, a "t" test was used. Results can be seen in Table 9.

Table 9

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>Mean Change Scores</th>
<th>Test Statistica</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Need</td>
<td>High Economic Need</td>
<td>83</td>
<td>2.71</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low Economic Need</td>
<td>143</td>
<td>2.41</td>
<td>( t = .83 )</td>
</tr>
</tbody>
</table>

aLevel of significance: .05

82 Items 34 and 35 as parts of the economic need index were drawn from Trumbo's index of job involvement. Trumbo, op. cit., p. 103.
Based on the test, the null hypothesis of no difference between the two means was accepted at the .05 level of significance. The prediction of a positive relationship between one's economic need and his attitude toward change was not supported by the data.

**Employee Age.** It was hypothesized that there is a negative relationship between employee age and employee attitude toward change. In order to test this hypothesis, five age groups were formed on the basis of birth date provided by employees on the biographical data sheet. Those who were between 21 and 25 years of age were classified as group 1; between 26 and 29, group 2; between 30 and 34, group 3; between 35 and 44, group 4; 45 and over, group 5. The mean change score was computed for each group. The "F" test was used and the results are shown in Table 10.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>Mean Change Scores</th>
<th>Test Statistic&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (in years)</td>
<td>21-25</td>
<td>53</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td></td>
<td>26-30</td>
<td>69</td>
<td>30.54</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31-35</td>
<td>32</td>
<td>30.50</td>
<td>F = .87</td>
</tr>
<tr>
<td></td>
<td>36-45</td>
<td>41</td>
<td>30.05</td>
<td></td>
</tr>
<tr>
<td></td>
<td>45+</td>
<td>31</td>
<td>30.77</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Level of significance: .05
An "F" statistic of .87 indicates significance in the difference between the mean change scores of age groups at the .05 level. The prediction of a negative relationship between age of employee and his attitude toward change therefore was not accepted.

In summary, the prediction of a relationship between certain variables specified in Hypothesis 1, and employee attitude toward change was not supported by the data. The following section will present the findings and analyze the results from the test of Hypothesis 2.

Results from the Test of Hypothesis 2

Hypothesis 2 predicted a relationship between an employee's job adaptability and his attitude toward change. Variables included in job adaptability are education level, training, concept of authority, and sex. The effects of these variables upon employee attitude toward change were evaluated. Results are presented according to the order specified.

Education. To obtain information needed to test the hypothesis of a relationship between an employee's education level and his attitude toward change, subjects were asked to indicate the years of formal education received. The instrument used to collect the data was included in Appendix A.

Employees were divided into four groups: less than
high school as group 1; high school, group 2; some college, group 3; college, group 4. The mean change scores were computed for these groups. An "F" test for the difference in means among these groups was made. Results can be seen in Table 11.

Table 11
COMPARISON OF MEAN CHANGE SCORES FOR DIFFERENT EDUCATION GROUPS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>Mean Change Scores</th>
<th>Test Statistic&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>Less than High School</td>
<td>50</td>
<td>30.74</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High School</td>
<td>105</td>
<td>31.07</td>
<td>F = 5.02</td>
</tr>
<tr>
<td></td>
<td>Less than College</td>
<td>38</td>
<td>29.30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>College</td>
<td>32</td>
<td>30.37</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Level of significance: .05

With an "F" ratio of 5.02, the null hypothesis of no difference between the means associated with educational level groups was rejected at the .05 level of significance. It should be noted that the direction of mean change scores among these groups is not consistent, i.e., the mean change score does not decrease as educational level increases or vice versa. The "t" tests between the difference in means of groups 1 and 2, groups 3 and 4, and groups 4 and 1 indicate that they were not significant at the .05 level. However, comparison of the means of groups
2 and 3 yielded a "t" value of 4.05 which was significant at the .05 level. Interpretation for the inconsistency appearing among the means of educational level groups is discussed in Chapter VI.

**Training.** It was predicted that there is a positive relationship between an employee's training and his attitude toward change. To obtain information needed for the test of this hypothesis, subjects were asked to indicate if they had had any training before or during the period in which the computer was installed (see biographical data sheet, Appendix A). On the basis of responses received, two groups were formed: those with some training and those without. The mean change score for each group was computed and the "t" test was made. Results can be seen in Table 12.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>Mean Change Scores</th>
<th>Test Statistic&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training</td>
<td>With Training</td>
<td>46</td>
<td>30.74</td>
<td>t = 1.82</td>
</tr>
<tr>
<td></td>
<td>Without Training</td>
<td>180</td>
<td>29.98</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Level of significance: .05

Data show a statistical significance at the .05 level, therefore the contention of a relationship between
an employee's training and his acceptance of change was not supported.

**Dogmatism.** With regard to this variable, it was predicted that the more submissive one is the less resistant he is. To determine the degree of submission associated with a subject, the dogmatism scale designed by Rokeach was utilized. This scale consists of 40 Likert-type items. Due to the limitation of time and purpose of this study, application of the entire 40 item scale seemed to be impractical. An abbreviated dogmatism scale consisting of 14 items was formed (see Appendix A). A scale ranging from 1 to 6 was assigned to the alternatives of each item. The alternatives ranged from "agree very much" to "disagree very much." Abbreviated dogmatism scores were simple summations of the 14 item scores. Two criteria were employed in selecting items from the larger dogmatism scale. First, items considered to be relevant to the purpose of this study were selected. Second, items selected could not arouse any undue suspicion about the purpose of the questionnaire.

The internal consistency among the items forming the abbreviated dogmatism scale was tested. The upper 25 percent and the lower 25 percent of the sample were formed

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based on the distribution of employees' scores. Mean item scores were obtained for each group. The "t" test was used to determine if the difference in mean item scores associated with each group was significant. Table 13 presents the results.

Table 13

ITEM ANALYSIS DATA FOR THE FOURTEEN TRIAL ITEMS DESIGNED FOR INCLUSION IN THE ABBREVIATED DOGMATISM SCALE

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean Change Score</th>
<th></th>
<th></th>
<th>t Statistic^a</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Upper 25%</td>
<td>Lower 25%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(N_1 = 56)</td>
<td>(N_2 = 56)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>4.62</td>
<td>2.93</td>
<td>13.60</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>3.66</td>
<td>2.52</td>
<td>5.06</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>4.10</td>
<td>3.70</td>
<td>5.60</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>4.69</td>
<td>3.79</td>
<td>5.96</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>4.50</td>
<td>2.62</td>
<td>12.00</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>4.40</td>
<td>2.88</td>
<td>8.85</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>4.90</td>
<td>3.62</td>
<td>10.84</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>4.84</td>
<td>3.44</td>
<td>11.52</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>3.09</td>
<td>2.50</td>
<td>2.47</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>3.70</td>
<td>2.52</td>
<td>4.50</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>4.64</td>
<td>2.50</td>
<td>13.50</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>5.58</td>
<td>4.72</td>
<td>8.36</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>2.56</td>
<td>1.08</td>
<td>8.44</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>2.72</td>
<td>1.06</td>
<td>4.68</td>
<td></td>
</tr>
</tbody>
</table>

^aAll are significant at the .05 level.

Data presented indicate that the null hypothesis of no difference between item mean scores was rejected at the
.05 level of significance. A degree of internal consistency among these items therefore exists. The contention that the 14 selected items may be combined into the abbreviated dogmatism index was accepted.

In order to test the effect of the concept of authority or the submissive character associated with the employee and his attitude toward change, high and low dogmatism groups were utilized. The median value was used to differentiate the scores associated with subjects in each group. The mean change scores were computed for each group. A "t" test was made and the results can be seen in Table 14.

Table 14

COMPARISON OF MEAN CHANGE SCORES FOR LOW AND HIGH DOGMATISM GROUPS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>Mean Change Scores</th>
<th>Test Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogmatism</td>
<td>High Dogmatism Group</td>
<td>83</td>
<td>31.72</td>
<td>t = 5.50</td>
</tr>
<tr>
<td></td>
<td>Low Dogmatism Group</td>
<td>143</td>
<td>29.92</td>
<td></td>
</tr>
</tbody>
</table>

aN Level of significance: .05

With a "t" value of 5.50, the null hypothesis of no difference in mean change scores among two dogmatism groups was rejected at the .05 level of significance. The prediction of a positive relationship between the concept of
authority and employee acceptance of change therefore was supported by the data.

**Sex.** Due to the cultural difference, this study assumed a relationship between sex and attitude toward change. To test the prediction, respondents were divided into two groups on the basis of sex. Information on sex of employees was obtained from the question included in the biographical data sheet. The mean change score was computed for each group, and a "t" test was applied. Table 15 presents the results.

Table 15

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>Mean Change Scores</th>
<th>Test Statistic&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Male</td>
<td>111</td>
<td>30.27</td>
<td>t = -1.80</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>115</td>
<td>30.88</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Level of significance: .05

With a "t" value of -1.80, no statistical significance in difference between the means of the two groups existed at the .05 level. The null hypothesis of no difference in attitude toward change among male and female employees therefore was accepted.

Based on the results from the test of Hypothesis 2, one may conclude that employee education level and concept
of authority had some degree of relationship with his acceptance of change. The prediction of a relationship between other variables, namely training and sex, and employee acceptance of change was rejected.

The effects of other variables included in Hypothesis 3 are discussed in the following section.

Results from the Test of Hypothesis 3

It should be noted that the analysis thus far has basically dealt with change as a generic term. It is uncertain that an employee who favored change in general would be ready for a specific change regardless of its effects. The relationship between the effects of the technological change upon different needs of the employee and his attitude toward change therefore was predicted. These needs include the employee's aspirations for status or his chance for promotion, job responsibility or self-expression, and the degree of job variety.

Effect of Technological Change upon Promotion Opportunity. It was hypothesized that there would be a relationship between employee aspirations for status or promotion and his reaction to change as a result of technological development. To collect the data needed, employes were asked to indicate if there was any change in their promotion opportunity since the computer was introduced. The alternatives of responses ranged from "very much change"
to "much less change." They were assigned a scale of scores from 1 to 5. A follow-up question was designed to find out how subjects reacted to this change or the lack of change (see questions 12A and 12B, Appendix A).

It was hypothesized that among those employees who said their promotion opportunity had improved, those who responded most favorably had a higher mean change score than those who replied less favorably. Among those who indicated their chance for promotion had not changed or had decreased, those who responded "dislike" and "dislike very much" were more favorable to change than those who replied "like very much" and "like." The mean change score for each subgroup was computed. The results of an analysis of variance can be seen in Table 16.

Table 16
COMPARISON OF MEAN CHANGE SCORES FOR SUBGROUPS RESPONDING TO THE PROMOTION OPPORTUNITY

<table>
<thead>
<tr>
<th>How have your chances for promotion to a better job changed since the computer was introduced?</th>
<th>Increase</th>
<th>No Change or Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do you feel about this?</td>
<td>Like Very Much</td>
<td>Like Don't Care or Dislike</td>
</tr>
<tr>
<td>N</td>
<td>55</td>
<td>0</td>
</tr>
<tr>
<td>Mean Change Score</td>
<td>29.66</td>
<td>0</td>
</tr>
<tr>
<td>Test Statistic&lt;sup&gt;a&lt;/sup&gt;</td>
<td>t = 4.62</td>
<td>F = 18.85</td>
</tr>
</tbody>
</table>

<sup>a</sup>Level of significance: .05
The "t" value of 4.62 indicates that the difference in mean change scores among subgroups in the "increase" category was significant at the .05 level. The null hypothesis of no difference between the two subgroups' means was not accepted. It may be concluded that those who aspired for more status, thereby favoring an increase in promotion opportunity, were more ready for change than those who responded "don't care" or "dislike."

For the "no change" or "decrease" category, the difference was in the predicted direction. Those who responded least favorably had a higher mean change score than those who said "like" or "don't care." The analysis of variance made for the means of these groups yielded an "F" ratio of 18.85 which indicates that the difference was significant at the .05 level. However, there was an inconsistency between the means of "dislike" and "like" groups. The "t" test for various pairs of means therefore was performed. With a "t" value of .83, the difference in means between "like" and "dislike" groups was not statistically significant. But the analysis of variance made for the means of "don't care" and "dislike" groups yielded a "t" value of 2.88 which was significant at the .05 level. The null hypothesis of no difference in means between "like" and "dislike" subgroups therefore was rejected. An explanation for this inconsistency may be found in Chapter VI.
Effect of Technological Change Upon Job Responsibility. It was predicted that those who were eager to fulfill their need for achievement or self-expression were more ready to accept the change which provided them with more job responsibility. On the basis of this assumption, one may hypothesize that among those who indicated that the responsibility demanded by their jobs had increased, those who responded favorably to the change had a mean change score higher than those who did not like such a change. Among those subjects who felt "no change" or "decrease" in the amount of responsibility, those who responded "dislike" had a mean change score higher than those who replied "like" or "don't care." Results of the test of hypothesis are presented in Table 17.

Table 17

COMPARISON OF MEAN CHANGE SCORES FOR SUBGROUPS RESPONDING TO CHANGE IN JOB RESPONSIBILITY

<table>
<thead>
<tr>
<th>How has the amount of responsibility demanded by your job changed since the computer was introduced?</th>
<th>Increase</th>
<th>Decrease or No Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do you feel about this?</td>
<td>Like Very Much</td>
<td>Like</td>
</tr>
<tr>
<td>N</td>
<td>7</td>
<td>110</td>
</tr>
<tr>
<td>Mean Change Score</td>
<td>32.87</td>
<td>29.50</td>
</tr>
<tr>
<td>Test Statistic&lt;sup&gt;a&lt;/sup&gt;</td>
<td>F = 5.77</td>
<td>F = 2.84</td>
</tr>
</tbody>
</table>

<sup>a</sup>Level of significance: .05
With an "F" statistic of 5.77, the hypothesis of no difference among the groups' means included in the "increase" category was rejected at the .05 level of significance. Since the mean change scores of the subgroups included in this category differed significantly and consistently, the following conclusion may be stated. Employees who liked the increase in their job responsibility had more favorable attitudes toward change than those who disliked it.

The analysis of variance made for the second category provided an "F" ratio of 2.84 which indicated no statistically significant difference in means among the subgroups at the .05 level. The hypothesis also predicted a significant difference in mean change scores among the two extreme subgroups. However, at the .05 level of significance the "t" value of 1.26 did not support the contention.

It may be concluded that those employees who disliked the decrease in their job responsibility as a result of the technological change, may not respond to the change differently from those who liked it. Explanations on employee attitude in these categories are offered in Chapter VI.

Effect of Technological Change Upon Job Variety. It was hypothesized that those employees who were tired of doing repetitious work would be favorable to an increase in their job variety. On the basis of this hypothesis, one
may suggest that among those employees who felt the amount of variety in their jobs had increased, those who responded more favorably had a higher mean change score than those who responded less favorably. Among those who indicated that the variety in their job had remained the same or had decreased, those who said "dislike" had a mean change score higher than those who said "don't care" or "like." Data derived from the comparison of mean change scores among the subgroups in two categories are presented in Table 18.

Table 18

<table>
<thead>
<tr>
<th>How has the degree of variety in your job changed since the computer was introduced?</th>
<th>Increase</th>
<th>Decrease or No Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do you feel about this?</td>
<td>Like</td>
<td>Like</td>
</tr>
<tr>
<td></td>
<td>Very Much</td>
<td>Don't Care or Dislike</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Mean Change Score</td>
<td>32.28</td>
<td>30.60</td>
</tr>
<tr>
<td>Test Statistic</td>
<td>F = 1.81</td>
<td>F = 1.91</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Like &amp;</th>
<th>Don't Care</th>
<th>Dislike &amp; Dislike</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Like</td>
<td>Very Much</td>
<td>Don't Care Very Much</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td>125</td>
</tr>
<tr>
<td>Mean Change Score</td>
<td>32.00</td>
<td>30.58</td>
<td>32.25</td>
</tr>
</tbody>
</table>

aLevel of significance: .05

Table 18 suggests an increasing trend in mean change scores among the subgroups of employees who are in the "increase" category. However, with an "F" statistic of 1.81,
the null hypothesis of no difference in mean change scores among these subgroups was accepted.

The analysis of variance made for the means of the subgroups existing in the second category yielded an "F" ratio of 1.91. A "t" test for difference in means among the two extreme subgroups provided a value of .75 which indicated that the null hypothesis of no statistical difference in mean change scores among these subgroups was accepted at the .05 level of significance.

In summary, findings from the test of the effect of technological change upon the variety aspect of the job indicated that employee reaction to change was not related to the need for an increase or decrease in the variety of the work comprising the job.

On the basis of the results found from the test of Hypothesis 3, the following tentative conclusion may be reached. With regard to promotion opportunity, employees seemed to show a favorable attitude toward change when they said they liked the increase in their chance for promotion and disliked the decrease in their opportunity for advancement. In terms of responsibility or self-expression, the reaction of employees was in the predicted direction. Those who said they liked the change had a favorable attitude toward the "increase" in their job responsibility, and those who said they disliked the "decrease" or "no change" showed an unfavorable attitude toward it. The
change in the variety of job, however, had a reverse effect upon employee attitude. In both categories, "increase" and "decrease," the attitude toward change among two extreme subgroups was not different.

Based on the results found in this chapter, the following conclusions may be stated. Although Hypotheses 1 and 2 dealt with change in a general sense, the findings provided evidence for an assessment of the employee reaction to the computer installation at the National Bank of Vietnam. Results from the test of Hypothesis 3 revealed that employee attitude toward change was based on the relationship between the effects of the change and the fulfillment of employee needs.

Comparison of these results with those found by Trumbo in a study done in the United States are presented in Chapter VI. Interpretations for the findings of this study and for the results of the comparison are also offered.
CHAPTER VI

COMPARISON AND INTERPRETATION OF THE RESULTS

The purpose of this chapter is to compare the results of this study with those found by Trumbo in a study done in the United States. Although these studies were conducted in different environments and at different time periods, their research instruments were similar.

In order to compare the results of the studies, two methods were used. First, the chi-square test was used to test the goodness of fit whenever data were available. Second, a simple comparison of the results derived from the test of hypotheses in the two studies was made.

It should be noted that despite the researcher's effort to provide favorable conditions for the comparison, some differences exist. With regard to the time lag between the time of the computer being placed in full operation and the time the research was actually conducted, the inequalities between the two investigations are significant. Trumbo's research began on the third month after the computer was in operation, while this study was done approximately three years later. In terms of the subjects

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84Trumbo, op. cit., p. 21.
selected for the study, the other research includes all employees and levels of supervision up to the vice-president and board of directors level. This investigation focused upon the employees in the IBM and computer affected departments only. The conditions existing between the two studies therefore were not exactly the same. These differences, nevertheless, should not be considered great obstacles for the comparison.

An attempt was made to compare the index of change between the two studies. Results from the test of hypotheses included in both investigations are then analyzed and interpretations are also offered.

RESULTS FOR THE COMPARISON OF RESPONSES TO THE INDEX OF CHANGE

It was hypothesized that due to the cultural difference, responses to the items forming the index of change would be different among the subjects in the two studies. To test this hypothesis, the observed frequencies which consist of responses to the index of change by subjects of this study were compared with those expected. To obtain the expected frequencies, the percentage of responses to the alternatives of items forming the index of change used in the other study was multiplied by 226 or the sample size of the present investigation.\textsuperscript{85} A chi-square

\textsuperscript{85}Trumbo, op. cit., pp. 25-27.
statistic, which was computed for each item, determines the goodness of fit. Results can be seen in Table 19.

Table 19
COMPARISON OF RESPONSES TO THE INDEX OF CHANGE BETWEEN THE TWO STUDIES

<table>
<thead>
<tr>
<th>Items</th>
<th>Alt.</th>
<th>O (Observed Freq.)</th>
<th>E (Expected Freq.)</th>
<th>$\frac{\sum (O - E)^2}{E}$</th>
<th>d.f.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>16</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>192</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>15</td>
<td>99</td>
<td>1981.40</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>2</td>
<td>63</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>1</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>1</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>11</td>
<td>55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>C</td>
<td>6</td>
<td>60</td>
<td>663.71</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>171</td>
<td>34</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>37</td>
<td>51</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>9</td>
<td>57</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>196</td>
<td>59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>C</td>
<td>13</td>
<td>28</td>
<td>433.69</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>2</td>
<td>47</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>6</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>15</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>210</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>C</td>
<td>0</td>
<td>56</td>
<td>494.31</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>1</td>
<td>47</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>0</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>8</td>
<td>64</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>168</td>
<td>57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>C</td>
<td>26</td>
<td>36</td>
<td>302.03</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>24</td>
<td>44</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>0</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>1</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>28</td>
<td>55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>C</td>
<td>7</td>
<td>64</td>
<td>435.01</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>162</td>
<td>43</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>28</td>
<td>22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*aAll are significant at .001 level of significance.*
It is evident that there is a discrepancy in responses to the items from the subjects of the two studies. The values of the chi-square statistic computed for each item indicate that the null hypothesis of no difference in frequencies among two groups of subjects was rejected at the .001 level of significance. The conclusion that the fit is good for all items cannot be attained. The discrepancy in responses to the items shown above may be attributed to the diversity in cultural background of subjects in the two studies. Americans, in general, are characterized as dynamic; the Vietnamese are known as

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passive. Responses to the index of change may reflect the effect of one's culture upon his attitude toward change.

RESULTS FOR THE COMPARISON OF EFFECT OF CERTAIN VARIABLES IN HYPOTHESIS 1

There are four variables included in Hypothesis 1. They are job tenure, group cohesiveness, economic need, and age. The relationship between these variables and employee attitude toward change was evaluated. Results found in the two studies are compared in the order given above.

Job Tenure. The common assumption related to this variable existing in both investigations was that the longer the job tenure of each employee, the greater the resistance to change would be. Results found by Trumbo showed that there was no significant difference in attitude toward change among the long and short tenure personnel. This conclusion was also reached in the present study, on the basis of evidence shown in Chapter V. Results from the test of this variable in the two studies can be seen in Table 20.

87 Mus, op. cit., pp. 103-113.
88 Trumbo, op. cit., p. 100.
Table 20

COMPARISON OF RESULTS FROM THE TEST OF JOB TENURE

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group (a,b)</th>
<th>Samplea (I,II)</th>
<th>N</th>
<th>Mean Change Score</th>
<th>Test Statisticb</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>aI</td>
<td>Ia1</td>
<td>95</td>
<td>28.59</td>
<td></td>
</tr>
<tr>
<td>Tenure</td>
<td></td>
<td></td>
<td></td>
<td>°</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a2</td>
<td>Ia2</td>
<td>116</td>
<td>27.73</td>
<td>°</td>
</tr>
<tr>
<td></td>
<td>bI</td>
<td>Iib1</td>
<td>132</td>
<td>30.64</td>
<td>°</td>
</tr>
<tr>
<td></td>
<td>b2</td>
<td>Iib2</td>
<td>94</td>
<td>30.51</td>
<td></td>
</tr>
</tbody>
</table>

"Sample I: Trumbo's study; Sample II: this study.

Level of significance: .05

The "t" values obtained from both studies indicate that regardless of how long employees have been associated with the company, their attitude toward change is not statistically significant. It may also imply that despite the difference in the culture, the subjects in both studies seem to have similar reaction to change when effect of job tenure is taken into account.

Index of Cohesiveness. As mentioned previously, Trumbo's study includes employees as well as supervisors. His work-groups, therefore, were classified on the basis of number of employees reporting to the same supervisor.
The present research, however, excluded the supervisory level. Employees were dichotomized into subgroups based on low and high degree of cohesiveness. Comparison of the results among group cohesiveness for the two studies, therefore, is not feasible. The availability of data, however, permits a comparison of responses based on the index of cohesiveness among the subjects of the two studies. The chi-square test was used to test the goodness of fit. The procedure is the same as described earlier. Results are presented in Table 21.

At the .001 level, the chi-square statistic computed for each item was highly significant. It indicates a difference in responses to the index of group cohesiveness among the subjects of the two studies. Employees in the other study may be characterized as more cohesive, while those who are included in this study were less cohesive. A tentative interpretation for this suggestive finding is that American people are more group oriented; Vietnamese on the other hand are influenced by the concept of family loyalty. The interpretation of the Vietnamese employee behavior appears to be consistent with the analysis of traditional cultural aspects of the Vietnamese offered in Chapter III. For the behavior of Americans, the support of this explanation comes from Francis L. K. Hsu:

The lack of permanent human relations, the idea of complete equality among men, the contact principle, and the need for definite affiliation to achieve
Table 21
COMPARISON OF RESPONSES TO THE INDEX OF GROUP COHESIVENESS

<table>
<thead>
<tr>
<th>Items</th>
<th>Alt.</th>
<th>O (Observed Freq.)</th>
<th>E (Expected Freq.)</th>
<th>$\sum \frac{(O - E)^2}{E}$</th>
<th>d.f.</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>A</td>
<td>10</td>
<td>138</td>
<td>273</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>72</td>
<td>53</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>79</td>
<td>23</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>65</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>0</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>A</td>
<td>6</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>21</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>80</td>
<td>54</td>
<td>40.7</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>105</td>
<td>114</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>14</td>
<td>38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>A</td>
<td>27</td>
<td>89</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>152</td>
<td>117</td>
<td>246.3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>19</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>27</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>A</td>
<td>24</td>
<td>57</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>155</td>
<td>143</td>
<td>228</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>19</td>
<td>23</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>28</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>A</td>
<td>263</td>
<td>83</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>153</td>
<td>122</td>
<td>255</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>19</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>28</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*aAll are significant at the .001 level.*
sociability, security, and status combine and generate a situation in which club life is the essence of the existence.  

It is interesting to note that by dividing his subjects into 21 subgroups, Trumbo found a negative relationship between group cohesiveness and attitude toward change. The results found appear to be consistent with the responses to the questionnaire items that compose the index of cohesiveness. Further research in which similar conditions for the comparison prevail may provide one with better evaluation of the effect of group cohesiveness upon employee attitude toward change between the two studies.

Age. As the economic need variable was not included in Trumbo's investigation, a comparison between the studies was not possible. The effect of age upon employee attitude toward change, however, was tested in both studies. Unfortunately, detailed data were not available in the other study, therefore, the "table comparison" method was used. Results are presented in Table 22.

At the .05 level of significance, the relationship between age and employee attitude toward change was found not significant in both studies. A review of Table 22

---

suggests that the greatest disparity in mean change scores among the subjects included in the two studies exists for the age group of 45 and over. The least difference is in the age group ranging between 26 and 29. A re-examination of the data reveals that the difference in mean change scores was at a minimum when the difference in the number between two group sizes was greatest. Nevertheless, when the two group sizes were approximately equal, the difference in mean change scores was at a maximum.

Table 22
COMPARISON OF THE RESULTS FOR THE TEST OF THE EFFECT OF AGE

<table>
<thead>
<tr>
<th>Variable</th>
<th>Age Group</th>
<th>Samplea (I,II)</th>
<th>N (N₁, N₂)</th>
<th>Mean Change Score (M₁, M₂)</th>
<th>D Difference (M₁ - M₂)</th>
<th>Test Statisticb</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a (17-20)</td>
<td>I₁a₁</td>
<td>31</td>
<td>26.60</td>
<td>26.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>II₁a₂</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b (21-25)</td>
<td>I₁b₁</td>
<td>58</td>
<td>28.98</td>
<td>-2.02</td>
<td>F₁ = 1.41</td>
</tr>
<tr>
<td></td>
<td></td>
<td>II₁b₂</td>
<td>53</td>
<td>31.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c (26-29)</td>
<td>I₁c₁</td>
<td>28</td>
<td>30.57</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>II₁c₂</td>
<td>69</td>
<td>30.54</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>d (30-34)</td>
<td>I₁d₁</td>
<td>36</td>
<td>28.00</td>
<td>-2.00</td>
<td>F₁₁ = 1.87</td>
</tr>
<tr>
<td></td>
<td></td>
<td>II₁d₂</td>
<td>32</td>
<td>30.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>e (35-44)</td>
<td>I₁e₁</td>
<td>34</td>
<td>27.62</td>
<td>2.43</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>II₁e₂</td>
<td>41</td>
<td>30.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>f (45+)</td>
<td>I₁f₁</td>
<td>31</td>
<td>26.13</td>
<td>4.64</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>II₁f₂</td>
<td>30</td>
<td>31.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

aSample I: Trumbo's study; Sample II: this study.
bLevel of significance: .05
A tentative explanation may be offered on the basis of data obtained from the comparison of responses to the items that make up the index of change. Table 19 indicates that generally there was an opposite direction between the observed and expected responses within each of the items forming the index of change. This was because subjects in the other study seemed to favor the change. Employees in this investigation, on the other hand, indicated a reluctance in their attitude toward change. Given these conditions, a smaller group of subjects in Trumbo's research may produce a mean change score as high as that of a larger group in this study.

Data presented in Table 22 show another interesting point. Both the youngest and the oldest employees in the other research appear to be less ready for change in their work than the middle age group. In this study, however, the youngest group displays an attitude more favorable to change than that of others. Trumbo explained his findings as follows:

The youngest employees are not yet secure in their roles as members of the work force. At the same time the greater resistance to change on the part of older employees could reflect a greater need for security.90

The favorable attitude toward change of the youngest group in this study may be attributed to a greater

---

90 Trumbo, op. cit., pp. 97-98.
liberalism existing among the younger generation of Vietnamese today. 91

In summary, despite some dissimilarities in conditions existing between the two studies, a comparison of the findings from the test of certain variables as shown in Hypothesis 1 is possible. Results are as follows:

a) Both studies reject the hypothesis of a relationship between job tenure and the acceptance of change.

b) Responses to the index of change and index of cohesiveness by subjects included in both studies are in the opposite direction.

c) The hypothesis of a relationship between age group and the acceptance of change was rejected.

RESULTS FOR THE COMPARISON OF EFFECTS OF CERTAIN VARIABLES IN HYPOTHESIS 2

The variables tested in the other study which can be used to compare with those in Hypothesis 2 of this research include education, training, and the sex of employees.

Education. With regard to this variable, both researchers predicted a positive relationship between employee education level and acceptance of change. Findings

91 Frequent contacts with foreigners in recent years may change the traditional attitude of the young people as discussed in Chapter III.
from both studies support the hypothesis. Table 23 presents the results.

Table 23

COMPARISON OF MEAN CHANGE SCORES OF EMPLOYEES AT FOUR LEVELS OF FORMAL EDUCATIONa

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Sampleb</th>
<th>N</th>
<th>Mean Change Score (M1 - M2)</th>
<th>Test Statisticc</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(I,II)</td>
<td>(N1, N2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Ia1</td>
<td>17</td>
<td>26.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than</td>
<td>IIa2</td>
<td>50</td>
<td>30.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>high school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Ib1</td>
<td>126</td>
<td>27.0</td>
<td></td>
<td>F1 = 6.94</td>
</tr>
<tr>
<td>High school</td>
<td>Iib2</td>
<td>105</td>
<td>31.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>Ic1</td>
<td>57</td>
<td>27.7</td>
<td></td>
<td>F11 = 5.03</td>
</tr>
<tr>
<td>Some college</td>
<td>Iic2</td>
<td>38</td>
<td>29.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>Id1</td>
<td>23</td>
<td>33.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College</td>
<td>IId2</td>
<td>32</td>
<td>30.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>graduate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

aThe "D" column, which refers to the difference between the Mean Change Scores (M1 - M2), was omitted due to the fact that no relevant information could be derived from it.

bSample I: Trumbo's study; Sample II: this study.

cLevel of significance: .01

A review of Table 23 reveals an inconsistency among the mean change scores of four education level groups in this study. On the basis of data presented in Table 22, Figure 4 describes the directions of difference in mean
change scores among four groups classified in the two studies.

![Graph](image)

<table>
<thead>
<tr>
<th></th>
<th>Less than high school</th>
<th>high school</th>
<th>Some college</th>
<th>College graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>$N_1^b$</td>
<td>17</td>
<td>126</td>
<td>57</td>
<td>23</td>
</tr>
<tr>
<td>$N_2^c$</td>
<td>50</td>
<td>105</td>
<td>38</td>
<td>32</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mean Change Score</th>
<th>$M_1$</th>
<th>$M_2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>26.8</td>
<td>27.0</td>
</tr>
<tr>
<td></td>
<td>27.7</td>
<td>31.0</td>
</tr>
</tbody>
</table>

**Figure 4**

**COMPARISON OF MEAN CHANGE SCORES OF EMPLOYEES AT FOUR LEVELS OF EDUCATION IN TWO STUDIES**

$^a$Line "t" describes the direction of mean change scores from Trumbo's study. Line "c" describes the direction of mean change scores from this study.

$^b$Indicates group size from Trumbo's study.

$^c$Indicates group size from this study.
It is clear that the direction of the mean change scores in the other study was consistent. Line "t" indicates a moderate increase in the direction of mean change scores associated with education levels in the other study. Line "c", however, suggests a more complicated situation for the analysis of results. It may be noted that there was a great gap in mean change scores among the subjects who reported having a high school diploma or not having one, and those who obtained some college education or finished college. Among the first category, employees completing a high school education have a mean change score higher than those who did not. Among the second, the mean change score associated with "college graduate" group was higher than that of "some college." The relatively high mean change scores found among the "less than college" category may be explained as the reaction of employees at the lower social class associated with their education level. They favored change in hope that their financial need as well as their status aspiration somehow could be improved.

A lower mean change score among the "college" category may be tentatively interpreted as the reaction of "established" employees who fear that change might alter their status quo. This interpretation could become more meaningful if the assumption of a social barrier between the two categories of education level can be supported.
In reality, social classes based on education still exist in Vietnam. People of lower education still look up to the well educated with respect and admiration. They seldom mingle together in social functions. This situation may be used to interpret the extreme reaction existing among "high school" and "some college" groups. On the basis of this reasoning, the upward trend of mean change scores among groups in each category may be understood. Regardless of the difference in mean change scores between two categories, higher level of education group may feel more secure and have a more favorable attitude toward change than lower group in the same category.

Training. A common hypothesis related to the training variable in both studies was that employees with training were more ready to accept the change than those without it. Results from the other study showed that the prediction was correct. Findings from this investigation, however, did not strongly support this contention. Results from both studies are presented in Table 24.

Data presented in Table 23 show a clear significance in the difference between the training and no training group in Trumbo's study. Data also indicate an increasing trend in mean change scores among two groups specified in this study, however, the difference between these means was not significant.
Table 24

COMPARISON OF MEAN CHANGE SCORES OF EMPLOYEES WITH TRAINING AND THOSE WITHOUT

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group (a,b)</th>
<th>Sample (I,II)</th>
<th>N (N₁ N₂)</th>
<th>Mean Change Score (M₁ M₂)</th>
<th>Test Statistic b</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Ia₁</td>
<td>22</td>
<td></td>
<td>31.04</td>
<td>t₁ = 4.04</td>
</tr>
<tr>
<td></td>
<td>IIA₂</td>
<td>46</td>
<td></td>
<td>30.07</td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Ib₁</td>
<td>208</td>
<td></td>
<td>27.58</td>
<td>t₁I = 1.82</td>
</tr>
<tr>
<td></td>
<td>IIb₂</td>
<td>180</td>
<td></td>
<td>29.98</td>
<td></td>
</tr>
</tbody>
</table>

aSample I: Trumbo's study; Sample II: this study.
bLevel of significance: .05

It should be pointed out that the term "training" used in both studies was general and unrelated to any technical aspect. One may speculate about the difference between the mean change scores of those employees who have a technical training such as computer programming, computer operator, and others, and those who undertook non-technical training. Further study on this may provide a better answer.

Sex. It was predicted by both researchers that there was a relationship between sex of employee and his/her attitude toward change. Data derived from Trumbo's study supported the prediction. This investigation, however, did not confirm the existence of such a relationship. Results
from both studies can be seen in Table 25.

Table 25
COMPARISON OF MEAN CHANGE SCORES OF MALE AND FEMALE EMPLOYEES IN BOTH STUDIES

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group (a,b)</th>
<th>Samplea (I,II)</th>
<th>N (N1 N2)</th>
<th>Mean Change Score (M1 M2)</th>
<th>Test Statisticb</th>
</tr>
</thead>
<tbody>
<tr>
<td>a male</td>
<td>Ia1</td>
<td>47</td>
<td>31.40</td>
<td>t1 = 3.98</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IIa2</td>
<td>111</td>
<td>30.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b female</td>
<td>Ib1</td>
<td>185</td>
<td>27.10</td>
<td>tII = -1.80</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IIb2</td>
<td>115</td>
<td>30.88</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

aSample I: Trumbo's study; Sample II: this study.
bLevel of significance: .05

It should be mentioned that results from Trumbo's study as shown in Table 25 agreed with the findings from previous studies on the role of social groupings upon the attitude of female employees in regard to change. It has been said that female employees are more resistant to change than male counterparts. If true, this attitude may be attributed to the fact that the sentimental link between females and their peers in the work group is stronger than that of men. On the other hand, the present study suggests a slight increase in mean change score among the

92Herzberg and others, op. cit., p. 21.
The effect of change upon specific aspect of the
job and attitude toward change found in the two studies are compared in the next section.

RESULTS FOR THE COMPARISON OF FINDINGS FROM THE TEST OF CERTAIN VARIABLES INCLUDED IN BOTH STUDIES AS SPECIFIED BY HYPOTHESIS 3

Hypothesis 3 of this research predicted a relationship between employee reaction to change and the effect of change upon the fulfillment of needs. The three comparable effects of change upon one's job that existed between the two studies include employee aspirations for promotion or status, responsibility, and variety.

Although data are available in the other study, a test of the goodness of fit was not needed because it would not provide any meaningful explanation. The "table comparison" method used previously therefore was applied.

Effect upon Promotion or Status Need. There was a common hypothesis for both studies in regard to the promotion or status need of the employees. It was predicted that the more the employees aspire for promotion, the more they are willing to accept the change. Results from both studies can be seen in Table 26.

It is evident in both studies that there was a significant difference in mean change scores between the groups of employees who responded that their change for promotion was improved. Those who reported they "like very much" have a mean change score higher than those who said
"like" or "dislike." Results from both studies also indicated that the direction of mean change scores was consistent. It should be noted that no subject in this study reported "dislike" when promotion opportunity was improved. The finding seems to be consistent with the character of the traditional Vietnamese discussed in Chapter III. Although the Vietnamese people are described as latent or immobile, they are very much status oriented. The high mean change score associated with the group who reported they liked the increase in their promotion opportunity is understandable. Results from both studies suggest that when the effect of change corresponded to one's need for status or advancement, then change was easy to accept, regardless of the cultural background a person may have.

Table 26

<table>
<thead>
<tr>
<th>Response</th>
<th>Increase</th>
<th></th>
<th></th>
<th>No Change or Decrease</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Like Very Much</td>
<td>Like</td>
<td>Don't Care or Dislike</td>
<td>Like &amp; Like Very Much</td>
<td>Don't Care</td>
<td>Dislike &amp; Dislike Very Much</td>
</tr>
<tr>
<td>N1</td>
<td>32</td>
<td>37</td>
<td>4</td>
<td>40</td>
<td>34</td>
<td>59</td>
</tr>
<tr>
<td>N2</td>
<td>51</td>
<td>10</td>
<td>0</td>
<td>24</td>
<td>126</td>
<td>11</td>
</tr>
<tr>
<td>M1 Mean Change Scores</td>
<td>31.30</td>
<td>29</td>
<td>25</td>
<td>26.60</td>
<td>25</td>
<td>29.70</td>
</tr>
<tr>
<td>M2 Mean Change Scores</td>
<td>29.66</td>
<td>26.10</td>
<td>0</td>
<td>32.18</td>
<td>30.44</td>
<td>33</td>
</tr>
</tbody>
</table>

Test Statistic

\[ F_1 = 1.99 \quad t_2 = 4.62 \quad F_1 = 6.56 \quad F_2 = 18.85 \]

*aLevel of significance: .05*
With regard to those employees who reported that their promotion opportunity decreased or did not change, both studies found a higher mean change score associated with the "dislike" group. The directions of mean change scores in these studies, however, were inconsistent. In Trumbo's research, the inconsistency existed between the means of the "like" and "don't care" subgroups. In this investigation, the inconsistency existed between the means of the "like" and "don't care" subgroups. In this investigation, the inconsistency was between the two subgroups of "like" and "dislike." The "t" tests made for the various pairs of means indicate that in the other study the difference between the "like" group and the other two was significant, but the difference between the "like" and "don't care" groups was not.94

On the contrary, the "t" test made for this study shows that there was a significant difference between the pair "dislike" versus "don't care" subgroups and "like" versus "don't care." However, no significant difference was found between "like" and "dislike" subgroups. The inconsistency of the direction of means existing in both studies suggests an evaluation of the meaning of responses to the index of change.

It should be recalled that scores obtained from the

94Trumbo, op. cit., pp. 56-57.
responses among the two groups of employees to the index of change indicated that subjects in the other study were much more ready to accept change than those in this research. As a result, those employees, who disliked the "no change" as classified in Trumbo's study, have a higher mean change score than those who liked. On the other hand, subjects in this study were much less ready for change. The status oriented character attributed to the Vietnamese may be used to interpret this attitude. A change which can provide employees with more promotion opportunity is more easily accepted. Consequently, those employees who disliked the "no change," had a mean change score as high as those who liked.

Effect upon Responsibility or Achievement Need. A common prediction was made in both studies with regard to the responsibility variable. It was stated that if a specific change could result in increasing the amount of responsibility needed by employees, then change would be accepted more easily. Findings from both studies supported the prediction. Data derived from the tests conducted by both researchers are presented in Table 27.

Data from Table 27 show that among those employees who reported an increase in the degree of responsibility in their jobs, those who said they liked very much the change in their job responsibility had the highest score on the mean change scale. The direction of mean change
scores in both studies was consistent. The "don't care" or "dislike" group had the lowest mean change score; the "like" group had a moderate, and the "like very much" group had the highest score of all. The results permit one to conclude that despite the difference in culture, employees in the two studies tended to accept a specific change if its effect could satisfy their needs.

Table 27

COMPARISON OF FINDINGS FROM THE TEST OF THE EFFECT OF CHANGE UPON RESPONSIBILITY NEED

<table>
<thead>
<tr>
<th>Response</th>
<th>Increase</th>
<th>No Change or Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Like</td>
<td>Don't Care or Dislike</td>
</tr>
<tr>
<td></td>
<td>Very Much</td>
<td>Like</td>
</tr>
<tr>
<td>N</td>
<td>N_1</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>N_2</td>
<td>7</td>
</tr>
<tr>
<td>M</td>
<td>M_1</td>
<td>32</td>
</tr>
<tr>
<td>Mean Change Scores</td>
<td>M_2</td>
<td>32.80</td>
</tr>
</tbody>
</table>

Test Statistic^a  \( F_1 = 6.29 \)  \( F_2 = 5.77 \)  \( F_1 = 7.18 \)  \( F_2 = 2.84 \)

^aLevel of significance: .05

With regard to those employees who indicated that responsibility in their job did not increase or decrease, the results of the two studies were not the same. There was a significant difference in mean change scores between the subgroups included in the other study. The difference
in mean change scores of the subgroups in this investigation, however, was not statistically significant. The results found seem to be consistent with the general attitude of traditional Vietnamese (partly indicated by subjects' responses to the index of change). They had an unfavorable attitude toward change regardless of how they answered the question.

**Effect Upon Job Variety.** With regard to the variety aspect of the job, the following assumptions persisted in both studies. When the result of a specific change was an increase in the degree of job variety needed by employees, those who said they liked change had more favorable attitudes toward change than those who said they disliked. On the other hand, when results of change was a decrease in the job variety, those who said they disliked the "no change" would have more favorable attitudes toward change than those who said they liked or did not care. Results from the test of these hypotheses conducted by both researchers can be seen in Table 28.

A review of Table 28 suggests that the null hypothesis of no difference in mean change scores among the subgroups within the two major classifications was accepted by both studies. However, the employees' attitudes toward change as shown by mean change scores found by both researchers in the "increase" category were in the predicted direction. The difference in means between two extreme
subgroups was significant in the other research, but insignificant in the present study.

Table 28

COMPARISON OF FINDINGS FROM THE TEST OF THE EFFECT OF CHANGE UPON THE NEED FOR VARIETY

<table>
<thead>
<tr>
<th>Response</th>
<th>Increase</th>
<th></th>
<th>No Change or Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Like</td>
<td>Like</td>
<td>Dislike</td>
</tr>
<tr>
<td></td>
<td>Very Much</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N1</td>
<td>29</td>
<td>61</td>
<td>10</td>
</tr>
<tr>
<td>N2</td>
<td>7</td>
<td>5</td>
<td>79</td>
</tr>
<tr>
<td>M Mean</td>
<td>30.80</td>
<td>29.00</td>
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<tr>
<td>Change Scores M2</td>
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<td>30.60</td>
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</tr>
<tr>
<td>Test Statistica</td>
<td>F1 = 2.40</td>
<td>t1 = 2.39</td>
<td>F1 = 2.39</td>
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<tr>
<td></td>
<td>F2 = 1.81</td>
<td>t2 = 1.52</td>
<td>F2 = 1.91</td>
</tr>
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</table>

*aLevel of significance: .05

With regard to the "no change" or "decrease" classification, the difference in means among two extreme subgroups in the other study was also significant, but again the difference was not significant in this investigation. Reactions of employees to these situations as presented in both studies deserve an interpretation. It should be recalled that when responses to the index of change were compared, subjects from the study done in the United States showed a more favorable attitude toward change than their Vietnamese counterparts.
Difference in reactions of employees to the job variety existing in both studies seemed to be consistent with employees' attitudes shown in the responses to the index of change. It has been said that Americans are characterized as mobile people while Vietnamese are attached to the ancestor's land. In general, mobile people who tend to look forward to the future, stress the acceptance of change. People who cherish the past want to keep their status quo.

In view of the findings from the comparison between two studies on the test of variables included in Hypothesis 3, the following results were found:

a) When the result of change was an increase in employees' promotion opportunities, their attitude toward change was favorable. On the other hand, when change did not provide opportunity for promotion or decreased the chance for advancement, employees were more resistant to it. In both studies, reactions of employees to these situations were similar, regardless of their cultural background.

b) With regard to the increase in job responsibilities as a result of change, those employees who said they liked the change very much showed a more favorable attitude.

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toward change than those who said they liked or did not care. On the contrary, when result of change was a decrease, or no-change, in employees' job responsibilities, they showed a favorable attitude toward the change. Subjects in this study, however, seemed not to favor the change whether they responded "like" or "dislike."

c) Employees' reactions to change in the way of doing their job may reflect the influence of the predominant character associated with the culture in which one was born and raised. Thus, subjects in the other study showed a favorable attitude toward change which increased the variety in their jobs, while participants of this investigation are more resistant to the change whose effect was an increase in their job variety.

In light of the results presented in this chapter, a tentative conclusion may be reached. It is suggested that by keeping the limitations previously mentioned in mind, one may find some similarities in the attitude toward change among the subjects of two studies. The dissimilarities in employees' reactions to change were also perceived. These incongruities may be attributed to the difference in culture between two groups of employees.

In order for one to speak with a degree of surety, another investigation with parallel conditions may be needed. Chapter VII, therefore, proposes the directions further research may follow. More conclusions for the present investigation are also reported.
CHAPTER VII

CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

As indicated in Chapter I, the primary purpose of this study was twofold. It was to test the hypotheses of the effect of technological change upon employees' attitudes in a Vietnamese banking institution and to compare the results of this study with those found by Trumbo in his research done in the United States. Findings from the test of hypotheses included in this investigation were reported in Chapter V. Results from the comparison were presented in Chapter VI.

In this chapter, a summary of the hypotheses existing in both studies, and results found by the two researchers is made, and conclusions are drawn. Recommendations for the application of this study and for future research are also offered.

SUMMARY OF THE HYPOTHESES

Due to the cultural differences, certain variables were added to the propositions of this study; nevertheless, the major hypotheses existing in the two studies were similar. They may be restated as follows:

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1. Attitude toward change is related to the degree of job commitment by the employee;
2. Attitude toward change is related to the job adaptability of the employee; and
3. Attitude toward change is related to the employee aspiration for promotion or status, job responsibility, and some degree of job variety.

These major hypotheses were tested in two different cultural settings. A summary of the results is reported in the following section.

SUMMARY OF THE RESULTS FROM THE TEST OF HYPOTHESES

On the basis of the data presented in Chapter V and Chapter VI, results may be summarized as follows:

1. With regard to Hypothesis 1, certain variables such as age and job tenure seemed not to affect employee attitude toward change, regardless of cultural background. Employee responses expressed as the index of change and the index of cohesiveness, however, were in the opposite direction when the two studies were compared.

2. With regard to Hypothesis 2, the results obtained in both studies were not always consistent. In terms of employee years of formal education and attitude toward change, both studies found some degree of relationship. However, the effects of employee sex and training on attitude toward change were not the same. In the other
study, the influence of these variables existed, but in this study, the same influence was not perceived.

3. With regard to Hypothesis 3, subjects in both studies showed a positive attitude toward change whose effect was an increase in employee chance for promotion and more job responsibility. However, an increase in job variety as a result of the technological change had a different effect on the attitude of employees participating in the two studies. Trumbo reported a positive relationship between job variety and employee attitude toward change. This researcher did not find such a relationship existing among the subjects used for this research.

The selected results reported suggest some tentative conclusions. They are discussed in the next section.

CONCLUSIONS

It should be noted that findings from this research, and the results from the comparison, are limited by several factors.

First, with regard to this study, there was a time lag between the time in which the computer was installed and the time in which the research was conducted. The attitude of employees toward change, therefore, may not be entirely interpreted as a result of the technological development, but of other factors as well.

Second, the disparity between the time at which the
technological change took place and the time at which re­search was carried out by the two researchers was signifi­cant. This may not be regarded as an optimum condition for the comparison.

Finally, the subjects selected for this study did not include the supervisory level. The classification of groups on the basis of employees reporting to the same supervisor therefore could not be made. A comparison of the effect of group cohesiveness upon employee behavior was not feasible.

Within the parameters set by these limitations, the results presented in this study do make possible the follow­ing conclusions.

First, there is some indication for the existence of the influence of culture upon employee attitude toward change. This conclusion is based on the results from the comparison of the index of change and the index of cohe­siveness by the subjects of the two studies. The conclu­sion is reinforced by the finding that employee attitude toward an increase in job variety (as a result of the tech­nological change) was not agreeable when the two studies were compared. In addition, the incongruity in the rela­tionship between employee sex and attitude toward change found in the two studies may also be attributed to the difference in cultures.

Findings from the test of the hypothesis of a
relationship between employee formal education and acceptance of change provided evidence for the second conclusion. This conclusion is that there is some degree of relationship between employee educational level and attitude toward change.

The third conclusion is the existence of a relationship between the submissive characteristic associated with individual employees and their acceptance of change. The statistical significant difference in mean change scores among high and low dogmatism groups in this study supports the conclusion.

The final conclusion derived from the data reported in Chapter V and Chapter VI is the employee's favorable attitude toward change when the result of the change is a response to his need. This conclusion is supported by the fact that when subjects in both studies responded similarly to the increase in their chance for promotion and the increase in their job responsibility, they showed a favorable attitude toward change.

Although conclusions drawn from the results of this study are tentative, some possible implications for the management may be expected.
IMPLICATIONS FOR MANAGEMENT

With regard to the influence of the culture upon employee attitudes toward change, an implication may be made for the management of change in a cross cultural setting. When new ideas or innovative techniques are hastily introduced, they are expected to be strongly rejected by people in the traditional society. On the other hand, if the predominant needs of people in an organization can be determined, a change whose effect is a response to these needs is supposed to be favorably received, regardless of one's cultural background.

The results of this study also suggest some application for Vietnamese managers in the management of change. With regard to age groups, education levels, and the sex of employees, a manager may use different techniques to motivate employees to accept the change. For example, to the higher education level group and the group of male employees of older age, an emphasis on the promotion opportunity and more job responsibility (as a result of change) may be helpful in reducing their unfavorable attitudes. However, to the younger group, lower educated people, and female employees, an explanation of the benefit of change may be enough to incite them to accept the change.

More implications may be made if certain limitations previously mentioned could be overcome. Under the circumstances of this study, however, it was not possible. Some
directions leading to further research, therefore, are proposed.

RECOMMENDATIONS FOR FURTHER RESEARCH

As a by-product of the results obtained from this study, an additional test of the relationship between the concept of authority and age groups, education level groups, and male and female groups are suggested. Results of the test may reinforce the findings of the existence of the relationship between high dogmatism group and the acceptance of change.

On the other hand, the limitations discussed in this study also provide some direction for further research. First, by including the supervisory level among the subjects of this study, the hypothesis of the relationship between group cohesiveness (based on the number of employees reporting to the same supervisor), and the employee's acceptance of change may be evaluated and compared. The difference in the effect of group cohesiveness upon employee attitude toward change in the two studies may be correctly assessed.

With regard to the incongruity between the time of the computer installation and the time of the research conducted in two studies, a similar research with the parallel of time is recommended. Findings from such a research may provide more meaningful data for the
comparison.

On the other hand, specific aspects of training such as computer programming, computer operating, keypunching, and the like, should be included in the research instrument along with other non-technical aspects. Data obtained may allow one to assess the difference in attitude toward technological change between training and no-training groups more accurately.

Finally, it should be noted that this study dealt mainly with the employee's behavior in a Vietnamese banking institution. Since human behavior or attitude is bound to change, similar research conducted in other organizations on a recurrent basis is proposed. Results may be used to strengthen the findings of this research. Tentative conclusions previously presented then may be justified. Applications for management therefore will be generalized to some extent.
SELECTED BIBLIOGRAPHY

Books


Craig, Harold F. Administering a Conversion to Electronic Accounting. Boston, Mass.: Harvard University Graduate School of Business Administration, 1955.


The Impact of Electronic Accounting Equipment on the White Collar Worker in a Public Utility Company. New Haven, Conn.: Yale University Technology Project, 1956.


Reif, William E. *Computer Technology and Management Organization.* Iowa City, Iowa: The University of Iowa, Bureau of Business and Economic Research, College of Business Administration, 1968.


Periodicals and Articles


Unpublished Materials


Public Documents


APPENDICES
APPENDIX A

THE RESEARCH INSTRUMENT

BIOGRAPHICAL DATA SHEET

1. Age_____
2. Sex: M____ F____
3. Education:
   Years in high school____
   Years in university____
   Degree________________
   Training: Yes____ No____
4. Marital status (single or married, other status; please specify):
   ______________________
5. Number of children____
6. Length of service:
   Worked in this department from: month____ year____
7. Monthly salary: VN$________/month
8. Monthly income of your family (this income includes your salary and your wife's salary if she also works)
   VN$________/month
There are no right or wrong answers to the following questions. All of these questions have to do with your attitude and opinions. Go through these questions quickly. Choose the one answer that comes closest to the way you feel. Place a check mark (✓) in the space in front of your choice. Please try to answer every question.

1. The job that you consider ideal for you would be one where the way you do your work:
   ___ A. Is always the same
   ___ B. Changes very little
   ___ C. Changes somewhat
   ___ D. Changes quite a bit
   ___ E. Changes a great deal

2. If I could do as I please, I would change the kind of work I do every few months.
   ___ A. I strongly agree
   ___ B. I agree a little
   ___ C. I neither agree nor disagree
   ___ D. I disagree a little
   ___ E. I strongly disagree

3. One can never feel at ease on a job where the ways of doing things are always being changed.
   ___ A. I strongly agree
   ___ B. I agree a little
   ___ C. I neither agree nor disagree
   ___ D. I disagree a little
   ___ E. I strongly disagree

4. The trouble with most jobs is that you just get used to doing things in one way, then they want you to do them differently.
   ___ A. I strongly agree
   ___ B. I agree a little
   ___ C. I neither agree nor disagree
   ___ D. I disagree a little
   ___ E. I strongly disagree
5. I would prefer to stay with a job I know I can handle than to change to one where most things would be new to me.
   ___A. I strongly agree
   ___B. I agree a little
   ___C. I neither agree nor disagree
   ___D. I disagree a little
   ___E. I strongly disagree

6. The trouble with many people is that when they find a job they can do well they don't stick with it.
   ___A. I strongly agree
   ___B. I agree a little
   ___C. I neither agree nor disagree
   ___D. I disagree a little
   ___E. I strongly disagree

7. I like a job where I know that I will be doing my work about the same way from one week to the next.
   ___A. I strongly agree
   ___B. I agree a little
   ___C. I neither agree nor disagree
   ___D. I disagree a little
   ___E. I strongly disagree

8. When I get used to doing things in one way it is disturbing to have to change to a new method.
   ___A. I strongly agree
   ___B. I agree a little
   ___C. I neither agree nor disagree
   ___D. I disagree a little
   ___E. I strongly disagree
9. It would take a sizable raise in pay to get me to voluntarily transfer to another job.
   ___ A. I strongly agree
   ___ B. I agree a little
   ___ C. I neither agree nor disagree
   ___ D. I disagree a little
   ___ E. I strongly disagree

As you probably know, a large machine for computing data (IBM 360/20 computer) was installed in the National Bank within the past several years. The following questions are about the effects of this computer in general and on your job as you see them.

10. What effect did the change-over to the computer have on your job?
   ___ A. I was promoted
   ___ B. I was transferred
   ___ C. I kept the same job, but the work was greatly changed
   ___ D. I kept the same job, but the work was noticeably changed
   ___ E. I kept the same job, but the work was only slightly changed
   ___ F. I kept the same job, and the work was not changed

11. How did you feel about this?
   ___ A. I dislike it very much
   ___ B. I dislike it
   ___ C. It made no difference to me
   ___ D. I like it
   ___ E. I like it very much

Notice: In the next part, you will find a number of statements about your job. Read each statement, then place a check mark (✓) in one of the spaces under question A to indicate how this aspect of your job has changed in the past several years. Check "no change" if you feel none has occurred. Then check a space under question B to indicate how you feel about whether or not this aspect of your job has changed.
### Answer questions A and B for each of these statements:

<table>
<thead>
<tr>
<th>QUESTION A</th>
<th>QUESTION B</th>
</tr>
</thead>
<tbody>
<tr>
<td>How has this aspect of your job changed due to the installation of the computer?</td>
<td>How do you feel about this change or lack of change in your job?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Since the introduction of the computer into the Bank:</th>
<th>much change</th>
<th>change</th>
<th>no change</th>
<th>less change</th>
<th>much less change</th>
<th>like a lot</th>
<th>like</th>
<th>don't like</th>
<th>dislike</th>
<th>dislike a lot</th>
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</thead>
<tbody>
<tr>
<td>12. My chance for promotion to a better job</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>13. The amount of responsibility demanded by this job</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>14. The amount of variety in my work</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

15. It is only natural that a person would have much better acquaintance with ideas he believes in than with ideas he opposes.

   A. I disagree very much  
   B. I disagree on the whole  
   C. I disagree a little  
   D. I agree a little  
   E. I agree on the whole  
   F. I agree very much

16. In this complicated world of ours, the only way we can know what is going on is to rely on leaders or experts who can be trusted.

   A. I disagree very much  
   B. I disagree on the whole  
   C. I disagree a little  
   D. I agree a little  
   E. I agree on the whole  
   F. I agree very much
17. The present is all too often full of unhappiness. It is only the future that counts.
   ___ A. I agree very much
   ___ B. I agree on the whole
   ___ C. I agree a little
   ___ D. I disagree a little
   ___ E. I disagree on the whole
   ___ F. I disagree very much

18. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.
   ___ A. I agree very much
   ___ B. I agree on the whole
   ___ C. I agree a little
   ___ D. I disagree a little
   ___ E. I disagree on the whole
   ___ F. I disagree very much

19. There are two kinds of people in the world: those who are for the truth and those who are against the truth.
   ___ A. I disagree very much
   ___ B. I disagree on the whole
   ___ C. I disagree a little
   ___ D. I agree a little
   ___ E. I agree on the whole
   ___ F. I agree very much

20. Man on his own is a helpless and miserable creature.
   ___ A. I disagree very much
   ___ B. I disagree on the whole
   ___ C. I disagree a little
   ___ D. I agree a little
   ___ E. I agree on the whole
   ___ F. I agree very much
21. It is only natural for a person to be rather fearful of the future.
   ___A. I agree very much
   ___B. I agree on the whole
   ___C. I agree a little
   ___D. I disagree a little
   ___E. I disagree on the whole
   ___F. I disagree very much

22. It is better to be a dead hero than a live coward.
   ___A. I agree very much
   ___B. I agree on the whole
   ___C. I agree a little
   ___D. I disagree a little
   ___E. I disagree on the whole
   ___F. I disagree very much

23. The main thing in life is for a person to want to do something important.
   ___A. I agree very much
   ___B. I agree on the whole
   ___C. I agree a little
   ___D. I disagree a little
   ___E. I disagree on the whole
   ___F. I disagree very much

24. If something grows up over a long time, there will always be much wisdom in it.
   ___A. I agree very much
   ___B. I agree on the whole
   ___C. I agree a little
   ___D. I disagree a little
   ___E. I disagree on the whole
   ___F. I disagree very much
25. Young people would be a lot better off if they all received strict discipline from their parents.
   A. I agree very much
   B. I agree on the whole
   C. I agree a little
   D. I disagree a little
   E. I disagree on the whole
   F. I disagree very much

26. A well-ordered way of life with regular hours and an established routine is the best way for my kind of temperament.
   A. I agree very much
   B. I agree on the whole
   C. I agree a little
   D. I disagree a little
   E. I disagree on the whole
   F. I disagree very much

27. It bothers me when something unexpected interrupts my daily routine.
   A. I agree very much
   B. I agree on the whole
   C. I agree a little
   D. I disagree a little
   E. I disagree on the whole
   F. I disagree very much

28. Bosses should say just what is to be done and exactly how to do it if they expect us to do a good job.
   A. I agree very much
   B. I agree on the whole
   C. I agree a little
   D. I disagree a little
   E. I disagree on the whole
   F. I disagree very much
In most companies people work together in groups of 5 to 10 persons whose work is related. The following questions are about the group of people with whom you work.

29. Do you feel that you are really a part of your work group?
   ___ A. I am really a part of my work group
   ___ B. I am included in most ways
   ___ C. I am included in some ways, but not in others
   ___ D. I don't feel I really belong
   ___ E. I don't work with any one group of people

30. If you had a chance to do the same kind of work for the same pay in another work group, how would you feel about moving?
   ___ A. I would want very much to move
   ___ B. I would rather move than stay where I am
   ___ C. It would make no difference to me
   ___ D. I would rather stay where I am than move
   ___ E. I would want very much to stay where I am
   ___ F. I don't work with any one group of people

How does your work group compare with other groups in the National Bank on each of the following points:

31. The way members get along together:
   ___ A. Better than most
   ___ B. About the same as most
   ___ C. Not as well as most.
   ___ D. I don't work with any one group of people

32. The way members stick together:
   ___ A. Better than most
   ___ B. About the same as most
   ___ C. Not as well as most
   ___ D. I don't work with any one group of people
33. The way members help each other:
   ___A. Better than most
   ___B. About the same as most
   ___C. Not as well as most
   ___D. I don't work with any one group of people

The following questions deal with economic situations; please answer by placing a check mark (✓) in front of "Yes" or "No".

34. Are you the main wage earner in your household?
   ___Yes        ___No

35. Could your household live adequately if you were not working?
   ___Yes        ___No

36. Do you think the job situation at the present time is very tight?
   ___Yes        ___No
APPENDIX B

RESULTS OF THE INTERCORRELATION TEST FOR THE INDEX OF COHESIVENESS

<table>
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\[a\text{See Appendix A for items forming the Index of Cohesiveness.}\]
APPENDIX C

RESULTS OF THE INTERCORRELATION TEST FOR THE INDEX OF ECONOMIC NEED

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*See Appendix A for items forming the Index of Economic Need.*
VITA

Chu Manh Hung was born in Nghe An, North Vietnam, on October 23, 1944, the son of Chu Van Hoa and Dang Thi Trieu. From 1962 to 1964, he attended St. Sulpice Major Seminary, Hue, and took correspondence courses at Saigon University, South Vietnam.

He was awarded a scholarship from St. Joseph's College, Rensselaer, Indiana, and enrolled at that school in the Spring Semester, 1965. In June, 1967, he received the degree of Bachelor of Science in Business Administration. In September, 1967, he enrolled in the Graduate School of Northern Illinois University where he served as a graduate teaching assistant, and in January, 1970, received the Master of Business Administration degree. From September, 1970, until May, 1975, he enrolled in the Graduate School of Louisiana State University. During the Spring Semester, 1975, he served as a graduate teaching assistant in the Department of Management at Louisiana State University.

Chu Manh Hung was married to Nguyen Tiet Hien on August 19, 1972, in New York City.
Candidate: Chu, Hung Manh

Major Field: Management

Title of Thesis: A Comparative Analysis of the Effect of Technological Change Upon Employee Behavior in a Vietnamese Banking Institution

Approved:

Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

Date of Examination:

April 21, 1975