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An empirical study of performance determinants in United States and Taiwanese international joint ventures management

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AN EMPIRICAL STUDY OF PERFORMANCE DETERMINANTS IN UNITED STATES AND TAIWANESE INTERNATIONAL JOINT VENTURES MANAGEMENT

by

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ABSTRACT

AN EMPIRICAL STUDY OF PERFORMANCE DETERMINANTS IN UNITED STATES AND TAIWANESE INTERNATIONAL JOINT VENTURES MANAGEMENT

by
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Advisor: Professor Michael N. Chanin

This dissertation proposes an empirical approach to managing the International Joint Ventures (IJVs) post-phase, the phase which follows conclusion of an IJV agreement. The study centers on performance determinants of International Joint Ventures management, including IJV critical success factors, and presents an IJV management performance model.

A comparative analysis of companies based in Taiwan and the United States in computers and computer-related industries was conducted. Mail questionnaires were sent to IJV child firms' presidents or senior managers. One hundred and sixteen responses were received. The response rate was about twenty four percent. Paired t-test, multiple comparison and contrast (Tukey, Scheffe) tests, Pearson correlation, ANOVA, MANOVA, factor analysis, linear regression models, and multiple regression models were used in the study for statistical analysis.

Seven hypotheses about IJVs were tested. Thus, major relationships between IJV management independent variables and an IJV management

dependent variable were identified. **Autonomy, organizational learning and knowledge, technology, human resources management, and organizational adaptation** were designed as IJV management performance determinants (independent variables) in the IJV empirical model. Return on sales (ROS) was measured as the dependent variable. Except for autonomy, the other four performance determinants have significant relationships with IJV corporate performance.

Based on the factor analysis, the study generated four critical success factors. These key determinants in IJV management are **organizational climate, leaders and leadership, lower costs, and technology level**. From an overall perspective, the organization climate factor, leaders and leadership factor, lower cost factor, and technology level factor are the keys for IJV management in the later stage of IJV development.

Four major human resources problems were also identified in the study. They were: low motivation, ineffective management control, communication blockage, and promotions blockage.

The study emphasizes the performance determinants of IJVs. The results of this study suggest the way to upgrade managerial quality to improve an IJV corporation's performance.

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CHAPTER 1

INTRODUCTION

International Joint Ventures (IJV) are not new phenomena. Over the past decade we have seen an emerging trend in international joint ventures. This has been especially true in industries such as computers, electronics, telecommunications, oil explorations, transportation equipments, and financial services.

IJVs have been found to be powerful tools for entering new foreign markets. More and more firms are realizing that they must enter foreign markets if they wish to enjoy much more growth and prosperity. Thus, we must address proper management of IJVs in order to maximize opportunities presented by international operations.

IJVs were developed in response to the increasing global competitive challenges and demands. IJVs are usually considered merely as a vehicle for pooling resources such as money, technologies, or products. However, maximization of opportunities requires partners' cooperation by ways of commitment of people.

Dispersed geographic distance, varied expectations, cross cultural values, different leadership styles, and diversified human resources management systems cause **complexity** in the management of an international joint venture. Solving the complex problems and making "Joint Ventures" work are really the challenges for both managers and academic researchers.

1.1 PURPOSE OF THE STUDY

This study proposes an analytical approach to managing IJVs following the conclusion of an agreement (post-phase management). The study conjectures that success of an IJV requires a period of adaptation to the environments and partner organizations. Understanding the adaptation process involves identifying and explaining managerial characteristics such as autonomy, organizational learning and knowledge, technology, human resources management and organizational adaptation of IJVs.

This study focuses on some essential phases of IJV management system, i.e. problem phase, factors phase, and performance prediction phase. The major purpose of the study is to identify the IJVs critical success factors. In addition, the study also wants to identify managerial performance determinants of IJVs.

1.2 SIGNIFICANCE OF STUDY

In the 1990's, business is becoming substantially more **international**. Improved transportation, information technology, and business communication are leading to a new era of **international interdependence**. The IJVs are useful strategic means to take advantage of international opportunities which arise from the increase in international interdependence. The IJVs provide company cooperative mechanisms access to substantial new resources, new technologies, specialized expertise, and new markets. The primary impetus for IJVs is to gain more **corporate capability**, and to accumulate both **market power** and **strategic advantage**. This is accomplished through the aggregation of resources as well as the collective actions.

Although the formation of IJVs is a strong trend for businesses, the academic literatures still shows limited evidence of empirical studies in the management of IJVs. So far the major contributors in empirical study of joint ventures are Franko (1971), Killing (1983) , Harrigan (1985), and Lorange + Probst (1987) but these researches focused on joint venture strategies in only developed countries.

The significance of this research is:

1. The study of IJVs between the developing country and developed country

are emphasized. This provides an insight into the behavior of IJVs in the developing country.

2. This research is not limited to strategies implemented by IJVs. This study focuses on management perspective like human resources problems, critical success factors, and IJV performance regression model.
3. Through an empirical study, the major **human resources problems** in IJVs are identified.
4. An effort is made to link the theoretical and pragmatic perspectives. It points out some major performance **relationships** between independent variables and dependent variable related to the success of IJVs.

1.3 RESEARCH PROBLEMS

IJV's management is always a major challenge for a company's chief executive officer. In this study, I address some interesting questions that can contribute to the **success** of international joint ventures management. Also this study is trying to find answers to the following questions:

1. **What are the primary relationships between key management factors and corporate performance in international joint ventures?**
2. **What are the critical success factors in international joint ventures management?**

3. **What are the key problems of human resource management in international joint ventures?**
4. **To what extent do IJV strategic choices such as size and type afect IJVs corporate performance?**

1.4 RESEARCH SCOPE

This study incorporated three major components: IJV critical success factors, IJV performance model (IJV empirical model), and IJV human resources problems. From the empirical study, the study tried to identify the performance determinants in IJV management.

Three characteristics included in the study. They are:

1 International focus:

This study focused on the joint ventures with local partner and international partner.

2 Post-phase management focus:

This study dealt with the post-phase management perspective. The study was not concerned with IJV formation and IJV partner selection.

3. Performance determinants focus:

The study centered on the performance determinants in the IJV management.

1.5 ORGANIZATION OF THE DISSERTATION

In the first chapter the purpose, importance, and focused problems have been introduced. The rest of the dissertation is organized as follows:

The second chapter provides a general overview of international joint ventures. The basic background of joint ventures and the critical approaches to international joint ventures are introduced. Some critical IJV dimensions, i.e., autonomy, organizational learning and knowledge, technology and technical adaptation, human resources management and organizational adaptation are considered.

The third chapter describes the research methodology and research framework. The chapter defines and explains empirical research models. Primary research variables in the empirical model are identified and operationalized.

The fourth chapter describes the research hypotheses. This chapter introduces seven hypotheses of the study.

The fifth chapter provides the Research Design, i.e. it describes how the research was performed. The research procedure, discussion of validity and reliability, and statistical techniques which were used in this research are considered.

The sixth chapter presents the results of this study including the major findings of the empirical study. It describes some major relationships among the variables and the results of the hypotheses testing of the independent variables and dependent variable.

The seventh chapter, explains and discusses the meaning of results. Some issues of results will be elaborated in this chapter.

The eighth chapter summarizes the key issues and findings of the research into eight recommendations. Some implications and future research are proposed.

CHAPTER 2

REVIEW OF LITERATURE

For most companies, developing a joint venture is an innovation, and successfully managing a joint venture represents a relative art work as well as one of the biggest challenges for CEO and senior managers. Companies frequently make the mistake of considering the contract as the **end** of a joint venture instead of being the beginning of joint venture management. When a joint venture fails, companies blame it on faulty IJV formation, not on poor management. Literature can provides some thinking of the management of the IJVs. In addition to overview of joint ventures (JV) and International joint ventures (IJV), the managerial issues in the literatures will be discussed in this chapter.

2.1 OVERVIEW OF JOINT VENTURES

Business expansion in the competitive world of the 1990s, will require increased opportunity recognition, creative marketing, entrepreneurship,

innovative leadership and joint ventures. Joint ventures are powerful tools in gaining the cooperation abroad to sustain and improve the competitive advantage. Regardless of companies' size, using joint ventures, all firms can benefit and compete in varied markets.

2.1.1 Definition of Joint Ventures:

A joint venture can be defined as a new business entity formed by two or more independent business entities. Joint ventures, mergers and acquisitions, and consortium are the primary tools for international strategic alliance. In order to well understand joint ventures, JV characteristics and JV motivations have to be identified.

2.1.2 Characteristics of Joint Ventures:

The central characteristic of a joint venture is that it is an **equity-based** relationship. Each parent has equity in the joint venture and is represented on the Board of Directors. Because they are separate entities, some special management skills needed to be applied to tackle the parents company's structural conflict. Lorange and Probst (1987) suggested that joint ventures are **self-organizing** systems capable of learning, especially learning from their

mistakes. United Nations (1988), in its published paper, East-West Joint Ventures, introduced five essential characteristics of a joint venture to be:

1. an agreement between the parties on common long-term business objectives, such as production, purchasing, sales, maintenance, repair, research co-operation, consultations, financing.
2. a pooling by the parties, for the achievement of the agreed objectives, of assets, such as money, plant, machinery, equipment, management know-how, intellectual property rights and other facilities.
3. a characterization of the pooled assets as capital contributions by the parties.
4. a pursuance of the agreed objectives through management organs which are separate from the management organs of the parties.
5. a sharing between the parties, usually in proportion to their respective capital contributions, of the profits resulting from, and risks associated with, the pursuance of the agreed objectives. The liability of the parties is normally limited to their capital contributions.

2.1.3 Motivations of Joint Ventures:

Originally, Joint ventures have been used for entering foreign markets to avoid foreign ownership restrictions. Today, many companies find many more

functions for joint ventures than simply the issue of government regulations. Hannart (1988) revealed that joint ventures have been seen as achieving four main objectives: (1) taking advantage of economies of scale and diversifying risk; (2) overcoming entry barriers into new markets; (3) pooling complementary bits of knowledge; (4) allaying xenophobic reactions when entering a foreign market.

Regarding motivations for joint venture formation, Harrigan (1985) introduced three motives: internal use, competitive use, and strategic use. Morris (1987) pointed out that most joint ventures were established as a result of one or more of the following reasons:

1. The need or preference to pool and utilize the expertise, skills, and other business resources of more than one entity.
2. The requirement of greater capital investments and other forms of financial support than a single entity is willing or able to provide.
3. The spreading of business risks among more than one entity.
4. The utilization of joint ventures as an "off balance sheet financing" technique.

The reasons for forming a joint venture are quite numerous and extend into all areas of business strategy. From the view of strategic motivations, Wille (1988) divided the motivations for joint ventures into three major categories:

- **Resources-driven joint ventures.**
- **Market-driven joint ventures.**
- **Risk-driven joint ventures.**

Lei and Slocum (1991) suggested some insights of motivation about joint ventures in the United States. They claimed that a powerful motive leading many firms to enter into joint venture was the desire to learn about another firm's technology and proprietary processes or to gain access to its distribution channels in a particular market. They also argued that many of foreign firms entered into joint ventures with their American competitors to gain access to proprietary technologies and innovations which would otherwise be inaccessible to them.

2.1.4 Pitfalls of Joint Ventures:

Despite joint ventures' advantages and potential benefits (such as internal use, competitive use and strategic use), joint ventures inherit some structural problems. Harrigan (1985) declared that dangers in using joint ventures include antitrust problems, sovereignty conflicts, losses of autonomy and control, and a loss of competitive advantage through strategic inflexibility. Harrigan also claimed that some of these drawbacks were due to the relative inexperience of firms in using joint ventures. In addition to the Harrigan's opinions, Wille

(1988) pointed out one major drawback of joint ventures: **the problem of sharing control**. Wille mentioned that effective joint venture management involved balancing two competing needs: (1) providing incentives for the partners to devote the necessary resources to the entity, while (2) persuading them to give up a measure of control over same resources. Because partners did not typically share the same motivation for entering into a joint venture, their interests and requirements frequently came into conflict. Lei and Slocum (1991) mentioned that joint ventures carried risk as well. On the cost phase, Lei and Slocum suggested four costs for joint ventures shown as follows:

1. excessive dependence on partner for skills.
2. deterrent to internal investment.
3. high switching costs.
4. inability to limit partner's access to information.

2.2 OVERVIEW OF INTERNATIONAL JOINT VENTURES

2.2.1 Definition of the IJV

Shenkar and Zeira (1987) suggested a definition for international joint ventures. They proposed the following definition of IJV:

An IJV is a separate legal organizational entity representing the partial holding of two or more parent firms, in which the headquarters of at least one is located outside the country of operation of the joint venture. This entity is subject to the joint control of its parent firms, each of which is economically and legally independent of the other. Multiple ownership and multiple national affiliation are the primary characteristics of international joint ventures.

2.2.2 Benefits of the IJV:

The number of International Joint Ventures increases tremendously during the last fifteen years. This increase of IJV can be largely attributed to factors such as new information and communication technology, technical breakthrough and quick technological change, the globalization of industries, and strong international competition. Auster (1987) suggested seven primary benefits for the IJVs. They are described as follows:

1. to circumvent trade and foreign investment restrictions and to enter new geographic markets.
2. to develop regional know-how and cultural familiarity and expertise.
3. to stimulate inertia laden internal organizational processes.
4. to gain access to better quality or more cost efficient supplier network, raw materials, or natural resources.

5. to develop a labor force that is less costly.
6. to use idle, or under-utilized equipment.
7. to increase economies of scale.

2.2.3 Research of the IJV:

From 1960s to 1970s, some case studies of the IJVs had been conducted. Stopford and Wells (1972) conducted the statistical analysis of foreign entry decisions by American multinational corporations. Fagre and Wells (1982) in their study, found that the greater the technological, marketing expense, need for intra-firm coordination, and product diversity, the greater the control of the multinational corporation. Another area of research has been the use of joint ventures. Franko (1971) found that joint venture are most unstable. Stopford and Wells (1972) found IJVs to be used less often in the international operations. Hladik (1985) analyzed this indirectly by testing the determinants of whether an overseas venture would entail either R&D or export responsibility. The international business literature also addressed the issue of instability. Kogut (1988) summarized the research on the IJVs over the last two decades. According to Kogut opinion, previous studies on the IJVs show that:

1. Equity share is influenced by the strategic importance of the R&D or market expenditures and product diversity. (Stopford and Wells, 1972; Fagre and Wells, 1982).
2. The choice to enter by a joint venture is considered against other alternatives, and is influenced by the size of the target firm relative to that of the foreign firm by the characteristics of industry, and by the cultural characteristics of the foreign and home countries. (Caves and Mehra, 1986; Kogut 1988).
3. The responsibilities assigned to the joint venture are influenced by the capabilities of the foreign country and of both partners, in addition to possible conflict between the subsidiary and the foreigner. (Stopford and Wells, 1972; Hladik 1985).

2.3 CRITICAL PERSPECTIVES OF THE IJV

Based on the result of the literature review, I proposed a summarization: three critical perspectives. These perspectives such as the political perspective, analytical perspective, and managerial perspective, are relevant to the IJVs management.

2.3.1 Political Perspective:

The joint venture concept probably had its origins as a form of political cooperation when early nation-states formed strategic alliances, as a means of countering external threats to their sovereignty that exceeded their individual resources and capabilities. (Wille 1988). In business history, the earliest joint ventures were in trading and in the exploitation of natural resources, much like the collaborative efforts that are common in the mining and petroleum industries today. From political science perspective, the creation of joint ventures is analogous to **coalition formation**, in which interest groups that are committed to achieving common goals join forces. These factions cooperate when needed and compete otherwise.

Harrigan (1985) revealed homogeneous management teams-those who approach problem solving similarly to potential partners -- to find joint ventures easier to manage. Heterogeneous management teams, on the contrary, will be more prone to political behavior, since their perceptions of problems are more likely to differ. Joint venture formation is a political activity that must serve the aspirations of the dominant coalition of managers. Since it may well cost firms their slack resources in order to explore, establish, and maintain a joint venture, these managers will likely reject the risk associated with joint venture formation if their objectives are not maximized, yet their firm's are often most in need of

the benefits that joint ventures could offer. Coalition formation and political behavior may be predicted to occur in all joint activities, and managers must be aware that politics can stymie the smooth running of joint ventures.

Regarding coalition in the organization, Stevenson, Pearce and Porter (1985) suggested some issues in the study of coalitions. First, a more precise operational definition of a coalition should guide research. Second, consideration of the unique features of the organizational context that distinguishes organizations from other social settings, such as laboratories and legislatures, is required. Third, in order to distinguish coalitions from other types of organizational activity, it is necessary to explicate the process of coalition formation and maintenance. Finally, the impact of coalitional activity on individuals and the organization needs to be addressed.

Lucas (1987) used political-cultural analysis to classify organizational cultures so that comparative analyses of those organization can be conducted. A major contribution of the political approach in the Lucas's study of organization is its unit of analysis--the subgroup, and more specifically, the interest group.

Gray and Ariss (1985) developed some insights about politics and strategic change across organizational life cycle. They claimed that the pre-dominant political tactics needed to manage the organization effectively vary with each stage of the organizational life cycle.

Political factors are important in the IJV formation process. Lorange and Roos (1991) derived two political considerations, i.e. **stakeholder blessing** and **internal support**, which are dominant elements in the venture formation stage. Lorange and Roos also suggested some guidelines to assess the political considerations. The basic idea of the political consideration is how to ensure that the most important external and internal stakeholders will see the general benefits from the ventures and thus sponsor it. Questions that need to be addressed include the following:

1. Are relevant ownership groups convinced that the venture will be desirable from their stockholder viewpoint?
2. What will be the effects on the company's reputation and the response of the stock market?
3. Are key members of the top management team likely to be willing to pursue the venture--by seeing how the venture will not be a threat to their own power and careers?
4. To the extent that the venture could represent a threat to any person or group, how can they be convinced to work toward the venture's subsequent success?
5. How will customers, suppliers, existing alliance partners, financiers, and competitors react?

The essence of second political consideration, **internal support**, which should occur later, during the more intense formation stages, Lorange and Roos saying, involves ensuring that a broad range of people within the organization is committed to and enthusiastic about the venture. This consideration concerns managers in various operational functions who might be actively involved in contributing to the venture. Lorange and Roos (1991) suggested key questions to ask as follows:

1. Has the venture idea been sufficiently explained throughout the organization?
2. Has it been presented with sufficient detail to ensure that everyone sees the tasks ahead and can focus on them as an opportunity and not as a threat?
3. Are relevant specialists motivated to carry out their specific tasks in a cooperative mode?
4. Do the operational staffs have complementary styles to simplify their working contacts with the parent organization?

Thus, in order for the entire organization to be prepared for quick task actions during the venture's implementation, political interaction and concern play the key role result in the success of IJVs management.

2.3.2 Analytical Perspective:

A joint venture occurs when two or more firms pool a portion of their resources within a common legal organization. Two theoretical approaches, i.e. **transaction costs** and **strategic behavior** are relevant in explaining the motivations and choice of joint ventures. In the past, most of the theoretical analyzers and the empirical researchers developed some analyses and empirical findings under the direction of analytical perspective. The following discussions will consider the major approaches under the analytical perspective.

A. Transaction costs:

First approach in analytical perspective is derived from the theory of transaction cost as developed by Williamson (1981). A transaction cost explanation for joint ventures involves the question of how a firm should organize its boundary activities with other firms. Williamson proposed that firms choose how to transact according to the criterion of minimizing the sum of production and transaction costs. A transaction cost theory must explain what discriminates a joint venture from a contract, and in what transactional situations a joint venture is best suited. Two properties are particularly distinctive: joint ownership right and the mutual commitment of resources.

Figure 1 : Categorization of Research on Joint Ventures

Research Focus

Theoretical Perspective	Motives for Joint Venture	Impacts of Joint Venture
Strategic Behavior	Strategic Motives of Parents Maximize ability to offer products or services or compete effectively Empirical study:Duncan (82) Berg & Friedman (1977)	Effectiveness of Joint Ventures Strategies Higher performance with competitive maximization Empirical Study: Harrigan (1988); McConnell & Nantell (1985)
Transaction Cost	Efficient Governance Mechanism Minimize production and coordination costs Empirical Study: Shan (1986); Teece, Pisano & Russo (1987)	Effectiveness of Governance Mechanisms Higher performance with costs minimization No Empirical study

Source: Koh, J. and Venkatraman, N. "Joint Venture Formation and Stock Reactions: An Assessment in The Information Technology Sector", Academy of Management Journal, December 1991, p.870.

B. Strategic behavior:

The second approach of analytical perspective focuses on strategic motivations and consists of a catalogue of formal and qualitative models describing competitive behavior. An alternative explanation for the use of joint ventures stems from the theories on how strategic behavior influences the competitive positioning of the firm.

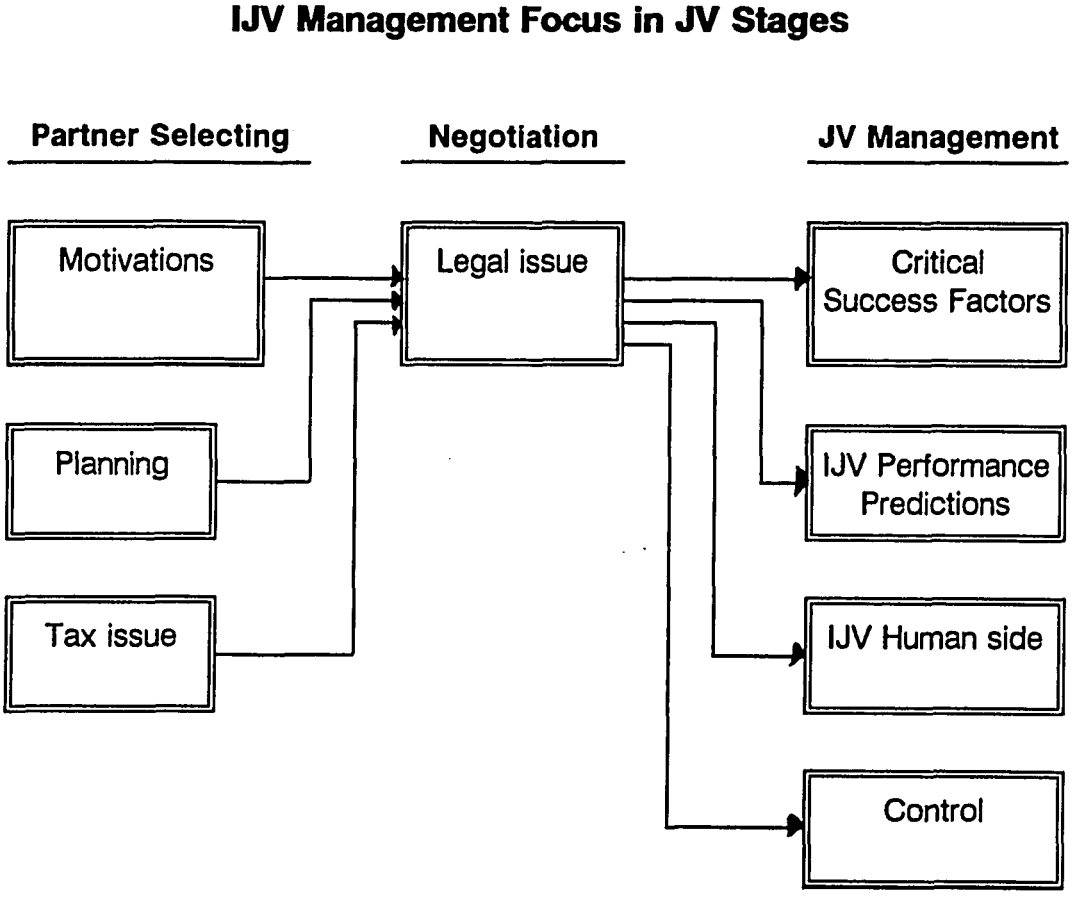
Berg, Duncan and Friedman (1982), Killing (1983), Harrigan (1985) are the researchers who made major contributions to this strategic approach. However, strategic behavior placed joint ventures in the context of competitive rivalry and collusive agreements to enhance market power. Figure 1 summarizes the category of research on joint venture to exhibit two approaches of analytical perspective.

2.3.3 Managerial Perspective:

The main idea of this perspective is to strengthen the post-phase joint ventures management for gaining the organizational efficiency and organizational effectiveness to accomplish the joint ventures objectives. Critical managerial issues such as autonomy, organizational learning and knowledge, technology, human resources management, and organizational adaptation were the focuses in managerial perspective. How to make joint ventures effective

and successful is the center of managerial perspective. It realized the management concerns and tried to take advantage of synergistic effects through a better international joint ventures management. Figure 2 illustrates the management focuses in different stages of the IJVs management.

Figure 2: IJV Managerial Perspective



Source: Fongkang H. Chu dissertation (1993)

2.4 DISCUSSIONS ON MANAGERIAL PERSPECTIVE

This section will discuss the key IJV managerial issues in the literature. It includes the dimensions of success factors, autonomy, organizational learning and knowledge, technology, human resources management, and organizational adaptation.

2.4.1 Success Factors Issue:

Davis and Stetson (1985) examined a number of successful venture-backed companies finding three common characteristics: (1) They are all recognized as leaders in their respective industry with a higher percentage of market share than any of their competitors. (2) They have created long-term values as opposed to short-lived phenomena. (3) They have been pioneers in new markets, attracting other new companies that have tried to copy them.

Lorange and Probst (1987) proposed a key premise of joint venture success: **self organization**. Self-organizing systems are "operationally closed". They argued that all behavior of the system feeds back on itself and becomes the basis for the system's behavior. Operationally closed networks must create and maintain their own boundaries on a continuously evolving basis. Lorange

and Probst also argued that the development of effective adaptive and evolutionary properties for self-organization has been neglected by traditional strategic approaches. They also proposed that for joint ventures to be successful the self-organizing properties, i.e. self-reference, autonomy, and redundancy, must be well developed.

Chowdhury (1989) found six determinants that are common to both success and failure of IJV: (1) international integration and coordination, (2) threats to (security of) asset-advantage, (3) complementarity of contributions, (4) time preference for risk and return, (5) competitive conflicts, and (6) interpartner consensus (or dissension) on the specification of JV's domain. Chowdhury also found the control structure and relationships to be associated only with success.

Duchesneau and Gartner (1990) introduced three types of factors in relation to new venture success and failure. These types of factors are: (1) the characteristics of the lead entrepreneur, (2) start-up processes undertaken during the founding of the firm, (3) firm behaviors after start-up, including management practices and strategic behaviors.

Lorange and Roos (1991) argued that the foundation os a successful strategic alliance was laid during the internal formation process. In search of success, Lorange and Roos suggested four factors: stakeholder blessing, internal support, strategic match, and delineation of strategic plan.

2.4.2 Autonomy Issue:

Raelin (1989) studied the anatomy of autonomy. He claimed that autonomy was best analyzed by considering its three components: strategic autonomy, administrative autonomy, and operational autonomy. By Raelin's definition, strategic autonomy entails the freedom to select the goals and policies guiding the organization. Administrative autonomy constitutes the responsibility for managing the activities of a unit within the organization and coordinating the tasks of that unit with other units in the organization. Operational autonomy is having the freedom, once the goal or problem has been set, to attack it by means determined by oneself but within administrative and strategic constraints.

From the view of organization culture, O'Reilly (1989) described some characteristics of the autonomy such as freedom to act, expectation of action, delegation, decentralized procedures, minimizing the bureaucracy, and quick, flexible decision making.

Yeh (1991) measured four items for job autonomy on five-point scale. These items were making decision without checking, making decision encouraged, making own rules on the job, and leaving to subordinates how things be done.

Lorange and Probst (1987) introduced "autonomy" as the one major characteristic of joint ventures self-organizing system. Autonomy in a matter of controlling sufficient resources to act and react independently, thus, becomes

a factor for survival (Peters and Waterman, 1982, Gomez and Probst 1984). Autonomy is the extent of managerial freedom with some sense of free-standing and self-regulating. Lorange and Probst suggested that autonomy is another important source for making joint ventures more successful.

2.4.3 Organizational Learning and Knowledge Issue:

Organizational learning is an ability to transfer and synthesize knowledge and expertise developed in different organizational components. A joint venture is expected to learn the skills and knowledge in different macro and operating environments and to use these skills plus knowledge as a basis for adaptation.

Ghoshal (1987) suggested organizational learning to be one of the strategic objectives in the organizational global strategy. Ghoshal declared that the organization must consider learning as an **explicit** objective, and must create mechanisms and systems for such learning to take place. In the absence of explicit intention and appropriate mechanisms, the learning potential may be unutilized.

Lyles (1987) claimed that organizational learning is not synonymous with change. Rather, it involves organizational adjustment triggered by an impetus or force for change or continuity. Part of learning is unlearning and reframing past behavior that are no longer appropriate. Lyles suggested that if unlearning occurred, one must look for environmental jolts, **mistakes**, failures, critical

incidents, or changes in the standard methods for managing the operations of joint ventures.

Pucik (1988a) pointed out that the organization capability to learn is the key to protect competitive advantage in competitive collaboration and to control the strategic direction of the cooperative venture. The learning ability of an organization depends on its ability to accumulate invisible assets. Invisible assets are embodied in people and policies regarding human resources which are critical to organizational learning. Moreover, Pucik depicted the key obstacles to organizational learning in IJV management. The major **obstacles** are:

- low priority of learning activities.
- poor climate for transfer of learning.
- no encouragement of learning.
- limited incentives for transfer of know-how.
- responsibility for learning not clear.
- fragmentation of the learning process.

Pucik (1988a) suggested some human resources guidelines to enhance the organizational learning. (1) Early involvement of the HR function, (2) Build learning into the partnership agreement, (3) Maintain HR input into the partnership, (4) Set up learning-driven career plans, (5) Use training to stimulate the learning process, (6) Reward learning activities.

Pucik (1988a) also suggested some specific agenda points for organizational learning and knowledge:

1. Build learning into the partnership agreement.
2. Communicate strategic intent.
3. Staff to learn.
4. Set up learning-driven career plans.
5. Use training to stimulate the learning process.
6. Responsibility for learning should be specified.
7. Reward learning activities.

Kogut (1988) declared that there is a third rational explanation for joint ventures which does not rest on either transaction cost or strategic behavior motivations. This explanation views joint ventures as a means by which firms learn or seek to retain their capabilities. If we carefully examine the IJV, we can find that a joint venture is a good vehicle by which organizational knowledge is exchanged and imitated.

Hamel, Doz and Prahalad (1989) mentioned the importance of enhancing the capability to learn. Learning begins at the top. However, operating employees not only represent the front line in an effective defense but also play a vital role in acquiring knowledge. Thus, no matter what level you are, everyone working in the IJV company has responsibility to learn and must want to learn.

From the point of process of learning, Walsh and Ungson (1991) introduced the concept of organizational memory. They suggested three phases involved in the organizational memory. They are shown as follows:

phase 1: assessing the structure of organizational memory.

phase 2: parsing the information acquisition, retention, and retrieval processes.

phase 3: assessing the consequences of organizational memory.

Organizational memory is the static state of organizational knowledge. If we have well-structure design or effective data base modules for organizational memory, it provides good foundation for the organizational knowledge and organizational learning.

2.4.4 Technology Issue:

Joint ventures enable firms to exploit technologies that their own organizations have underutilized. Technology transferring is a key issue in the technology management of international joint ventures. Harvey (1984) divided the technology transferring of international business into three stages: internal analysis stage, competitor analysis stage, and recipient country appraisal stage. In essence, technology introduces the potential for competitive instability, providing an opportunity for company to create a dynamic advantage.

Applying technology most effectively requires a smart business strategy. However, applying technology is the key to the future for IJV management. Ansoff (1987) mentioned that the key success factors of technology management are both keeping incremental product improvement and maintaining products incorporating advanced technology. The objective of technology transfer is to get the leading competitive position for the IJV. Essentially, the process of technology transfer is composed of the transfer of technical information, skills, rights and services between a technical supplier company and technical recipient company. Kedia and Bhagat (1988) claimed that the effectiveness of technology transfer is moderated by variations in societal culture-based differences and receptivity to technology change in terms of the absorptive capacity of the recipient organization. Harrigan (1986) concluded that joint ventures can act as technological change agents. Moreover, in the IJV technical management, we have to do better managing to solve technological problems, protect technological assets, and transfer knowledge.

2.4.5 Human Resources Issue:

There are two parts, i.e. IJV human resources problems and IJV human resources management, included in this section.

A. IJV Human resources problems:

Shenkar and Zeira (1987), based on the literature, summarized seventeen human resources problems in IJV. Human resources problems are stated as follows:

1 Gap between present and desired staffing of IJV.

2 Blocked promotions in IJV.

3 Blocked promotions in HQ.

4 Difficulties of reentry to HQ.

5 Conflict of loyalty to the IJV vs. HQ.

6 Limited delegation of authority from parents to IJV.

7 Screening of information.

8 Compensation gaps between employee groups.

9 Unfamiliarity with environment of the host country.

10 Unfamiliarity with organizational procedures of other parent.

11 Difficulties in adapting to host country.

12 Exile syndrome of expatriates.

13 Communication blockages in IJV.

14 Communication blockages between IJVs and their parents and between parents themselves.

15 Complexity of decision-making processes.

16 Difficulties in performance evaluation of IJV staff.

17 Lack of training for functioning in IJV structure.

B. IJV Human resources management:

Schweiger, Ivancevich and Power (1987) mentioned five major employee concerns in the post-phase of strategic alliance. These employee's concerns are: loss of identity, lack of information and anxiety, survival becomes an obsession, lost talent, and family repercussions. Human resources management's effectiveness depends on its **fit** with the organization's stage of development. As the organization grows and develops, human resources management programs, practices, and procedures must change and develop to meet its needs.

Baird and Meshoulam (1988) developed two fits for strategic human resources management: external fit and internal fit. In their case study, they proposed six findings as follows:

1. The human resources management activities of a firm pass through five stages of development: initiation, functional growth, controlled growth, functional integration and strategic integration.
2. The human resources management activities move through the stages in sequence in response to increasing complexity in the parent organization. Each stage incorporates and builds on the previous stages.
3. The human resources management activities are most effective when their stage of development matches the stage of development of the parent organization.

4. If human resources management activities skip a stage, they will be ineffective. It will be necessary to revisit the earlier stage for the unit to regain its effectiveness.
5. New leadership is required at each development stage of human resources management.
6. The human resources management unit functions best when all six strategic components are at the same stage of development.

International joint ventures offer companies unique opportunities to expand and develop. Shenkar and Zeira (1990) suggested:

"For the HR manager who is ill prepared, entering an IJV can be like walking onto a minefield: unexpected dangers abound. But for the HR manager who understands the complexities of the IJV and its diverse workforce, the venture can be exciting and satisfying."

In their paper, Shenkar and Zeira also suggested some guidelines which are useful for IJV human resources management. These suggestions are described as follows:

1. **Division of labor:**

   Many successful IJVs reduce friction among parents, and between HQ and the parents, by dividing functional responsibilities. Under such an arrangement, a host parent typically would be in charge of recruiting and marketing functions, and the foreign parent would control finance and/or engineering.

2. **Involvement in negotiations:**

   HR managers should take an active part in contract negotiations, because the terms of the contract will have a major impact on the daily management policies of the venture--including those affecting the HR function.

3. **Recognition of potential conflicts:**

   Many IJV problems arise when parent firms have conflicting objectives. The contract negotiations phase is the best time to identify each party's objectives for the IJV--and to design HR policies that represents the best possible compromise.

Frayne and Geringer (1990) introduced the concept of the strategic use of human resources management practice as control mechanisms in IJVs. Although there are a variety of ways for IJV controlling purpose, the basic and effective way is utilizing human resources as control mechanism. Frayne and Geringer focused on the use of four dimensions of human resources management practices as IJV control mechanism; namely, recruitment and staffing, training and development, performance appraisal, and compensation & reward strategies.

Milliman, Glinow and Nathan (1991) studied international human resources management in multinational companies. Their conclusions can be used as a reference for the IJV human resources management. Their major findings are described as follows:

1. An analysis of strategic international human resources management practices in multinational corporations indicates that their focus on **fit** and **flexibility** will vary by organizational life cycle stage.
2. Applying congruence theory to the complex MNC corporate-foreign subsidiary relationship clarifies a need for the flexibility concept as complementary to that of fit.
3. An in-depth analysis of the MNC reveals that the concept of fit in human resources should expanded from two types, as suggested by Baird and Meshoulam (1988), to four types:

   (1) fit between the international human resources management functions and the organization life cycle stage, (2) fit internally within various human resources functions, (3) fit between the human resources practices and the firm's cross-national and cross-cultural environment, and (4) fit between the human resource function of the corporate and foreign subsidiary levels.

2.4.6 Structural Adaptation Issue:

From the view of structural adaptation, Yasai-Ardekani (1986) highlighted eight salient points: First, perceptions are critical to structural adaptation. Second, individuals' characteristics and organizational structures influence how managers perceive their environments. Third, unitary measures fail to represent

environments adequately. Fourth, conceptual models of industrial economists provide broader bases for conceptualizing environments along a number of dimensions. Fifth, such models help explain linkages between objective environments and managers' perceptions. Sixth, the use of objective and perceptual environments in a single framework allows assessments of factors influencing perceptual distortions. Seventh, a multi-dimensional view of perceptions allows explanations for different structural forms adopted in response to the same environmental stimuli suggested by current models, Finally, managerial choice and organizational slacks influence structural adaptations independently of managers' perceptions about their environments.

Harrigan (1986) claimed that if synergies were created through joint ventures, they accrued from vertical relationship between owner and venture or from resources shared among them. The usefulness of joint ventures as a means of adapting to changing competitive conditions can be gained due to joint ventures accelerated competitive response and remaining flexible.

Also a general belief in the business is that the more the company capability to organizational adaptation, the higher is its probability for success.

2.5 SUMMARY

"The joint venture is an increasingly common form of business organization both within the United States and elsewhere around the world. It is a vehicle

that even many of the largest and most sophisticated organizations find useful in launching new businesses, acquiring new technologies, or entering new markets." mentioned by C.S. Hartz (1988), a partner and senior member of Price waterhouse. Besides, joint ventures have received a great deal of attention from managers and researchers over the last few years, primarily because of their importance as a **strategic alternatives**.

From the view of management, I believe that two components are important to ensure the success of international joint ventures. These components are IJV mistakes avoidance and IJV strategic process focus.

2.5.1 Avoid Mistakes in IJV:

One of the major reasons of firms' formation of international joint ventures is reducing risks and minimizing the probability of making mistakes in uncertain environments. Lyles (1987) claimed that by sharing resources and information, firms attempted to eliminate the risk of making a mistake in achieving their strategic goals. The efforts in IJV management for avoiding mistakes is the first and important lesson for IJV managers. Lyles summarized the frequent mistakes in the IJV management shown as follows:

1. Mistakes in technology:
   - Licensing
   - Pricing

- Transfer

2. Mistakes in human resources:

   - Career paths

   - Turnover

3. Mistakes in negotiations:

   - Building in future conflicts

   - Ambiguous terminology

4. Mistakes in Partner rapport:

   - Maintaining trust

   - Partner choice

   - Equity decision

5. Mistakes in goals/objectives:

   - "Pinched shoe" effect

   - Acquisition of partner

2.5.2 IJV Strategic Process Focus:

Lorange and Probst (1987) argued the IJV research stated as follows:

"Much discussion has been focused on how to make joint ventures more successful. Typically, these discussions have been focused on developing traditional substantive competitive strategies directed at both the parent and child. A second set of approaches for delineating

strategic success has focused on how to apply more appropriate management processes to the joint venture, with particular emphasis on how to delineate plans, how to control the joint venture, how to come up with appropriate human resource management processes, etc.

Appropriately conceived strategic processes can represent an important compliment to well delineated strategies--strategic content and process go hand-in-hand."

Fornell, Lorange and Roos (1990) also claimed that the managerial process of actually forming the cooperative venture had received very little attention in the literature.

International joint venture is not only a strategic behavior issue. In addition to contents of IJV, IJV still possess a attribute of managerial process. The IJV is a dynamic process, continually operating, fitting, and accomplishing its objectives. Thus, in the management of IJV, we have to review the effectiveness of managerial contents of IJV. At the same time, we also have to examine the efficiency of IJV managerial process.

CHAPTER 3

RESEARCH MODEL AND VARIABLES

This chapter describes the IJV empirical model and variables. Variables including dependent variable and independent variables are operationally defined.

3.1 IJV EMPIRICAL MODEL:

From the empirical study, we can find some interesting facts and true values. Figure 3 shows the empirical model of international joint ventures management. The empirical model was comprised of two primary components, i.e. dependent variable and independent variables. In the study organizational performance is the dependent variable. I used the return on sales (ROS) as the organization performance index. Independent variables component consists of two kinds of independent variables: strategic choices in the pre-phase joint ventures and IJV management independent variables in the post-phase joint ventures. Size and type are the strategic variables in the pre-phase joint venture. Autonomy, organizational learning and knowledge, technology, human resources management and organizational adaptation are the key IJV management independent variables in the empirical model.

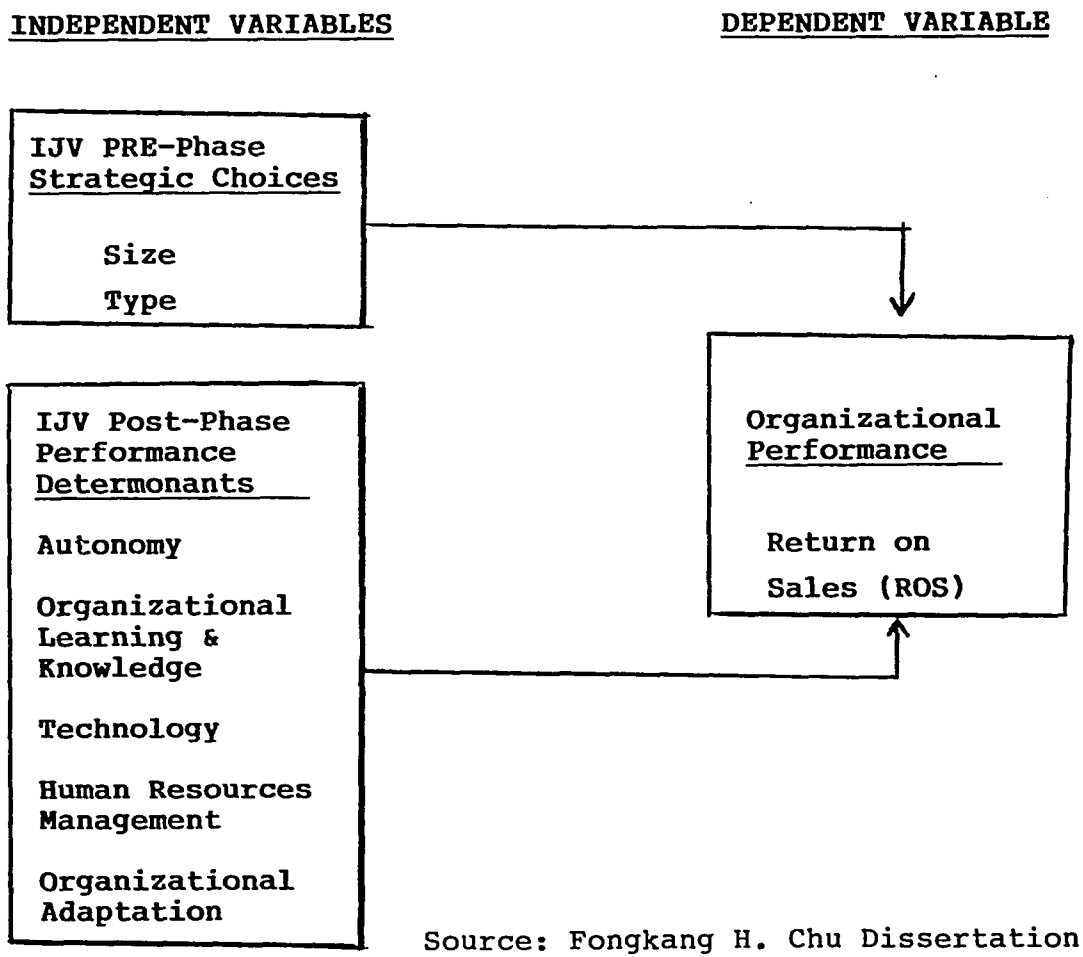
3.2 MODEL SPECIFICATIONS OF IJV EMPIRICAL MODEL

The purpose of the empirical model is to identify the relationship between the dependent variable and the independent variables. The operationalized definition of dependent variable and independent variables are discussed below:

3.2.1 Dependent Variable of IJV Empirical Model:

The evaluating index of corporate performance can be either "hard" measures (such as profit, sales, or market share) or "soft" measures (such as job satisfaction or social responsibility). Friedlander and Pickle (1968) suggested components of organization effectiveness including societal components, owner components, and employees component. Robinson (1983) claimed that only profitability and growth are required as surrogate measures of the firm's performance especially for small size firms. Return on sales is selected over return on investment which is a traditional measure of firm's performance because investment is not consistently and meticulously monitored and it has proven difficult to measure accurately in many small firms. Based on the pilot study of this empirical research, it was found that most of target samples were small size companies. Thus, the study chose the return on sales (ROS) as the dependent variable for reflecting organizational performance.

Figure 3: Empirical Model of International Joint Ventures Management



Source: Fongkang H. Chu Dissertation

3.2.2 Independent Variables of IJV Empirical model:

Independent managerial variables of IJV empirical model were composed of autonomy, organizational learning and knowledge, technology, human resources management and organizational adaptation. Size and type are strategic variables that are decided before the closing of joint ventures agreement. Size and type can be treated as start-up variables in the IJV management.

1. **Size:**

   Size is defined as 'the scale of the firm'. The feasible measurements are number of employees, volume of sales, and the paid-in capital. Measurements of sales and capital in IJVs are complicated in the case of IJV because there are two monetary systems involved. Thus, the number of employees is selected as the primary measurement to represent the size variable. (see Appendix 2: question No.I)

2. **Type:**

   Different motivations are the driving force of different types of international joint ventures. Wille (1988) suggested that the strategic motivations can be broadly divided into three major categories: resources-driven joint ventures, market-driven joint ventures and risk-driven joint ventures. I have

developed six alternative types of IJVs characterized by the primary motivation of their IJV formation. The six types of IJVs considered in this study are: (see Appendix 2: question No.V)

1. resources driven type.
2. market driven type.
3. technology driven type.
4. risk driven type.
5. resources plus market driven type.
6. technology plus market driven type.

3. **Autonomy**:

Yeh (1991) in his comparative empirical study used the job autonomy variable to assess the extent of delegation. Raelin (1989) suggested three components in the autonomy measure: strategic autonomy, administrative autonomy, and operational autonomy. I used two components, i.e. strategic autonomy and administrative autonomy in the empirical study. The operational definition of autonomy is "the degree of control over the major activities in the IJV management." In this category, senior managers were asked to provide the degree of power in making functional decisions (such as marketing, finance, production, personnel,and R&D), strategic decision making, and long term investment. (see Appendix 2: question No.VII)

4. **Organizational learning and knowledge:**

The operational definition of organizational learning and knowledge is the accumulation of knowledge and intelligence in the joint ventures management. I designed three categories of questions to identify the extent of organizational learning and knowledge. The first category includes questions about the support provided by parent companies to the joint venture unit. From the responses provided a score for parent companies support be determined. The second category had questions to check the training of respondents in the IJVs management. From the response provided a score for IJV training be determined. The third category of questions deal with the knowledge development, transfer, dissemination, and a climate for learning. From the response provided a average score for IJV knowledge climate be determined. Through trial and error of weighing process, twenty five percent weight were assigned to the score of parent companies support, twenty five percent weight were assigned to the score of IJV management training, and fifty percent weight were assigned to the score of corporate knowledge climate. This allows us to generate a significantly better index representing the organizational learning and knowledge. (see Appendix 2: questions No.X.; No.XI; No. XII)

5. **Technology:**

The operational definition of the independent variable -- "technology" is the potential and current use of technology and the capability of technical adaptation in the IJV management. The average R&D to sales ratio was the first measure we wanted to know. The second set of questions were designed to determine the state of the company's technological achievements in terms of leadership in new product introduction, products improvement, process improvement, advancement of technical knowledge and basic design. Based on the opinions and experience of respondents, twenty percent weight were assigned to R&D to sales ratio, eighty percent weight were assigned to the scores of company's technological achievement. This formula was used to generate a significantly better index representing the independent variable--technology. (see Appendix 2: question No.XIII; No. XIV)

6. **Human Resources Management:**

Based upon the basic human resources elements involved in the human resources management, nine human resources questions were designed to evaluate the implementation and the current human resources practices in target company. These questions were included in the questionnaire. A five-point scale was used from "very good" (5) to "very poor" (1). These questions covered the major issues of human resources practices such as

compensation, selection, training, promotion, appraisal and fringe benefits in IJVs. (see Appendix 2: question No. XVIII)

7. **Organizational adaptation:**

The operational definition of the independent variable--organizational adaptation, is the response and adjusting behavior to change and events triggered by the environment, in the IJV management. I used five questions designed by Harris and Moran (1987) to identify the adaptive capability and actions in the IJV management. (see Appendix 2: question No.XIX)

CHAPTER 4

RESEARCH HYPOTHESES

Seven hypotheses were developed in the study to identify the relationship between IJV determinants and their corporate performance in the IJV management. Since previous data do not exist to support any directions in the hypotheses, all of these hypotheses were formulated as null hypotheses. These hypotheses are described as follows:

4.1 IJV SIZE--PERFORMANCE DETERMINANT HYPOTHESIS:

Based on the literature review, previous research did not test the effect of size on the IJV management. Beatty (1990) used size as a performance determinant in the mergers and acquisitions. Since there is some similarity between the IJV and mergers & acquisitions, this study tests the effect of the IJV size on IJV performance.

Hypothesis 1: **There is no significant relationship between the IJVs companies' size and their organization's performance.**

H0: B = 0

H1: B is not equal to zero

where B is the linear slope of size with respect to corporate performance.

4.2 IJV TYPE--PERFORMANCE DETERMINANT HYPOTHESIS:

Earlier research did not consider the effect of IJV type on IJV management. Beatty (1990) used type as a performance determinant in the mergers & acquisitions. Since IJV and mergers & acquisitions are both strategic alliances, they are similar. Thus, this study identifies the effect of IJV type on IJV performance.

Hypothesis 2: **There is no significant relationship between the IJVs companies' type and their organization's performance.**

H0: B = 0

H1: B is not equal to zero

where B is the linear slope of type with respect to corporate performance.

4.3 IJV AUTONOMY--PERFORMANCE DETERMINANT HYPOTHESIS:

Killing (1983) identified that limited autonomy was a factor with negative outcomes for the decision making process in the IJV. Lorange and Probst

(1987) suggested that autonomy is an important determinant for joint venture success. Therefore, this study tries to confirm the effect of IJV autonomy on its performance.

Hypothesis 3: **There is no significant relationship between the degree of IJVs companies' autonomy and their organization's performance.**

H0: B = 0

H1: B is not equal to zero

where B is the linear slope of autonomy with respect to corporate performance.

4.4 IJV ORGANIZATIONAL LEARNING & KNOWLEDGE--PERFORMANCE DETERMINANT HYPOTHESIS:

Ghoshal (1987) suggested that organizational learning is one of the strategic objectives in the organizational global strategy. Pucik (1988) pointed out that the organization capability to learn is the key to protect its competitive advantage. Hamel, Doz and Prahalad (1989) mentioned the importance of enhancing the capability to learn. In order to identify the effect of 'organizational learning and knowledge' on IJV performance, the following hypothesis was proposed.

Hypothesis 4: **There is no significant relationship between the levels of IJVs companies' learning & knowledge and their organization's performance.**

H0: B = 0

H1: B is not equal to zero

where B is the linear slope of organizational learning & knowledge with respect to corporate performance.

4.5 IJV TECHNOLOGY--PERFORMANCE DETERMINANT HYPOTHESIS:

Technology transfer is a key issue in the technology management of IJVs. The objective of technology transfer in IJVs is to achieve the position of a leader with respect to its competition. Ansoff (1987) mentioned that the key success factors of technology management are frequent incremental product improvement and maintenance of products incorporating advanced technology. Hypothesis five was developed to test the effect of technology on IJV performance.

Hypothesis 5: **There is no significant relationship between the extent of IJVs companies' technology and their organization's performance.**

H0: B = 0

H1: B is not equal to zero

where B is the linear slope of technology with respect to corporate performance.

4.6 IJV HUMAN RESOURCES MANAGEMENT--PERFORMANCE DETERMINANT HYPOTHESIS:

Frayne and Geringer (1990) suggested the strategic use of human resources management as a control mechanism in IJVs. Most issues related to IJV human resources management such as staffing, promotion, loyalty, communication and compensation have already been identified in the literature. But, few studies have been conducted to test the effect of overall human resources management on the IJV performance. Hypothesis six was proposed to identify the effect of IJV human resources management on IJV performance.

Hypothesis 6: **There is no significant relationship between the degree of IJVs companies' human resources implementation and their organization's performance.**

H0: B = 0

H1: B is not equal to zero

where B is the linear slope of human resources management with respect to corporate performance.

4.7 IJV ORGANIZATIONAL ADAPTATION--PERFORMANCE DETERMINANT HYPOTHESIS:

The usefulness of joint ventures as a means of adapting to changing competitive conditions can be attained by the ability of joint ventures to provide accelerated competitive response and flexibility. Few studies have been conducted to determine the effect of organizational adaptation on IJV performance. Hypothesis seven was proposed to identify the effect of organizational adaptation on its performance.

Hypothesis 7: **There is no significant relationship between the extent of IJVs companies' organizational adaptation and their organization's performance.**

H0: B = 0

H1: B is not equal to zero

where B is the linear slope of organizational adaptation with respect to corporate performance.

CHAPTER 5

RESEARCH DESIGN

This chapter will present a detailed description of research procedures, reliability and validity, and structure of the questionnaire. Some technical issues in the study will also be discussed.

5.1 RESEARCH PROCEDURES

Based on the general survey procedures, this section discusses the sampling design, selection criteria, instrumentation, data collection, and data processing.

5.1.1 Sampling:

Stratified sampling was used in the study. According to Dillion, Madden and Firtle's (1987) definition, "stratified sampling" involves partitioning the entire population of elements into subpopulations and then selecting elements separately from each population.

Generally, stratified sampling includes the following three steps:

1. Based upon some classification variable, (the study used the geographic region), entire population of sample units is divided into distinct subpopulations called strata.
2. Within each stratum, a separate sample of elements is selected from all of the elements composing that stratum, usually by simple random sampling.
3. For each separate sample, an estimate of the characteristic of interest is calculated and properly weighted and then added to obtain a combined estimate for the entire population.

Stratified random sampling provides both the simplicity and the potentially significant precision. At the same time, the disadvantage of stratified random sampling is its cost.

A **comparative study** is conducted to compare JVs in Taiwan and JVs in the United States in this research. The target of this study is the computer and the computer-related industries, i.e. telecommunication industry and electronic components suppliers industry. Computer and computer related industries were chosen because of operational feasibility considerations. The Directory of Taiwanese companies in U.S.A. (1991-1992 edition), shows that over sixty per cent of Taiwanese manufacturers in U.S.A. are involved in computer and computer-related industries.

The complete population in these two target strata was studied by using mail questionnaires. The two target populations were:

1. **United States Group: Taiwanese Joint Ventures in U.S.A.**

   This group includes joint ventures between a Taiwanese company and a U.S.A. company, in which the JV is located in the U.S.A. The population of this group is 240 companies.

2. **Taiwan Group: American Joint Ventures in Taiwan**

   This group includes joint ventures between a U.S.A. company and a Taiwanese company, in which the JV is located in Taiwan. A number of JV considered in this group are companies set up by American Taiwanese mostly located in science-based industrial parks. The population of this group is 250 companies.

5.1.2 Selection Criteria:

Two criteria were used to choose target firms for inclusion in the study. First, each firm should be a new entity as a result of the joint venture agreement between two parent companies. Second, each firm should be organized as a single business unit rather than as a multidivisional structure. Since this research focused on the management issues of international joint ventures, the initial contact person for each company was its president. If the president was not available, the other senior managers were contacted in the target company.

5.1.3 Instruments:

In the pilot study, 17 executives of the target firms were asked to fill out the survey questionnaire and to give feedback of the appropriateness of its length and format. To avoid a translation bias, the pilot study also checked the acceptance of the English questionnaire. Fortunately, most of the presidents and senior managers had formal education in America and therefore were fluent in English. Thus, this study used only the English version of the questionnaire. On the basis of comments from the pilot study and reliability analysis, the questionnaire was modified only slightly for the study. The study used the Likert scales plus some ratio scales to identify the opinions of presidents or senior managers. The structure of the questionnaire is discussed at the end of this chapter.

5.1.4 Data Collection:

This study uses a mail questionnaire to collect data. Personal interviews and telephone confirmations were used to enhance the response rate and to fill in some missing data. Many personal interviews were conducted with the Taiwanese group to get some insights into management practice of IJVs. Due to geographic distance, telephone interviews instead of personal interviews were conducted to support data collection in the United States group.

5.1.5 Data Processing:

Check-in procedure was used to check all questionnaires for completeness. In the regression model, weighted data transformation was used to generate better indicators for the 'autonomy' (0.25, 0.25, 0.50) and 'technology' variables (0.2, 0.8).

SAS package on the mainframe was used to analyze the data. Paired T test, multiple comparison and contrast--Scheffe test, Tukey test-- were applied to make a comparison. Pearson correlation was used to identify the relationships among the variables. ANOVA and MANOVA were used to test the analysis of variance. Advance statistical techniques such as Multiple regression and Factor analysis were also used to determine the statistical results and statistical inferences.

5.2 VALIDITY AND RELIABILITY

5.2.1 Validity:

There are two major goals in conducting this study: (1) to draw valid conclusions about the effects of IJV's independent variables. and (2) to make valid generalizations about the international joint ventures management.

An effort was made to get true values and to reach valid conclusions. First, the questionnaire was used to obtain maximum accuracy and precision. Second, some cross-checking questions were designed in the questionnaire to check the accuracy of the respondent's answer. Third, based upon secondary sources of information, both publications and computer databases, the study checked the validity of the dependent variable, i.e. return on sales. Fourth, through the literature review and interview, the scale was analyzed to determine whether it adequately covered the entire domain of the construct under study. In other words, an effort was made to ensure a better content validity and construct validity.

5.2.2 Reliability

Reliability is the extent to which measures are free from random error and yield consistent results. The general approach for assessing reliability is to determine the proportion of systematic variation in a measurement scale.

This study emphasizes the checking of the internal consistency reliability. Cronbach's alpha was used to indicate the status of internal consistency reliability. Cronbach's alpha is the most commonly accepted formula for assessing the internal consistency of a multi-item measurement scale. Computationally, alpha is given by

$$= (k / k\text{-}1) * [1 - (\Sigma \sigma_i^2 / \sigma^2)]$$

where

k = the number of items in the measurement scale

σ_i^2 = variance of the ith item

σ^2 = variance of the entire measurement scale (Cronbach, 1951)

The estimation of Cronbach alpha for the independent variables (i.e. autonomy alpha = 0.86; organizational learning alpha = 0.75; technology alpha=0.83; human resources management alpha = 0.80; organizational adaptation alpha = 0.84) was greater than seventy percent, suggesting the acceptability of internal consistency reliability.

5.3 THE SAMPLE

Sixty eight samples were gathered in Taiwan from business presidents or senior managers of U.S.-base joint ventures in Taiwan. Total IJV populations in the computer and computer related industries of Taiwan is two hundred and fifty companies. Thus, in the Taiwanese group, the response rate is 27.2 percent.

Forty eight valid respondents' questionnaires were collected from Taiwanese companies joint ventures in United States out of a group population of two hundred and forty companies. The response rate in the United States

group is twenty percent. A total number of questionnaires-- one hundred and sixteen-- were collected in the study. The overall target population comprised of four hundred and ninety international joint ventures companies. Therefore, the overall response rate is 23.7 percent.

5.4 THE QUESTIONNAIRE'S STRUCTURE

Itemized questions were the major response format in the study's questionnaire. No open-ended questions were included. In the construction of the questionnaire, logic flow and a consistent layout were considered. There are six pages in the questionnaire (see Appendix 2). Questions No.I to No.IV measured the dependent variable information and some basic corporate information. Questions No.V to No.VI looked into the joint ventures types and success factors. The rest of the questions (No.VII to No.XIX) gathered five independent variables information plus joint ventures human resources problems information.

CHAPTER 6

RESULTS

In this chapter, the major results in the empirical study including descriptive results and performance determinants results are presented.

6.1 DESCRIPTIVE RESULTS

6.1.1 Overall Descriptive Statistics of IJV:

A typical IJV company in the computer and computer related industries from Taiwan and the United States, on average, is ten years in the business and employs 277 persons. The company, on average, has an annual sales of around 40 million US dollars (1991), enjoy high growth rates (42.4%) , and has a rate of return on sales (ROS) about 9.7 percent.

With regards to joint ventures experience and training, most of the senior mangers have one or less joint venture practice in their history, around two years work experience (if they have IJV individual practice history) in IJV management; and have had only moderate training for joint ventures management.

IJV companies in the computer industry and computer related industries, spend 4.63 percent of sales dollar value, on average, for research and development during the past three years. The average employees turnover rate is 10.9 percent. Based on the respondents' opinions, this turnover rate is reasonable and acceptable.

In comparing of the overall descriptive statistics for the two groups (United States group and Taiwanese group), i.e. return on sales, sales, growth, JV practice years, JV experience, JV managers training, R&D ratio, and turnover rate, shows that there are no significant differences between two groups. The t test reveals that the two groups significantly differ only in numbers of employees (mean of Taiwan=392; mean of the United States=122), and company age (mean of Taiwan=12.4 years; mean of the United States=8.7 years). Table 1 and Table 2 shows the descriptive statistics of the study.

6.1.2 IJV Dependent Variable Statistics:

Return on sales (ROS) was used as the indicator of the dependent variable in the study. (The reason I chose ROS as the measurement has been discussed in the chapter 3). In terms of organizational performance, on average, IJV companies have 9.73 percent of the overall return on sales. The return on sales in the Taiwanese group is 10.56 percent. And, the return on sales in the United States group is 8.56 percent. This is a little bit lower than the Taiwanese

Table 1:

Descriptive Statistics of Total Sample

Itms	N	Mean	SD
ROS[a]	116	9.73	9.09
Employee	113	277.12	494.46
Sales[b]	114	39717.27	78913.67
Sales Growth[a]	112	42.37	128.97
Firm Age	116	10.83	9.39
JV Experience Year	116	2.23	4.48
JV Training[c]	115	2.48	1.13
R&D to Sales[a] Ratio	116	4.63	6.38
Employees Turnover Rate[a]	116	10.95	13.14

A: Unit is per centage.

B: Sales is measured in thousand of U.S. dollar.

C: Five-point scale statistics.

Table 2:

Descriptive Statistics of Total Sample--

A Comparison Between the United States and Taiwan

Items	Taiwan N	Taiwan Mean	Taiwan SD	U.S.A. N	U.S.A. Mean	U.S.A. SD	T-Value
ROS	68	10.6	10.4	48	8.6	6.8	1.25
Sales Growth	64	28.0	64.2	48	61.5	181.9	-1.22
Firm Age	68	12.4	9.9	48	8.7	8.2	2.11*
JV Experience Year	68	2.1	4.9	48	2.4	3.8	-0.33
JV Training	67	2.6	1.0	48	2.3	1.2	1.68
R&D to Sales Ratio	68	4.9	7.4	48	4.3	4.7	0.55
Employee Turnover Rate	68	11.5	11.8	48	10.2	14.9	-0.55
Employee	65	392	559	48	122	338	3.19**
Sales	66	50968	89821	48	24248	58234	1.92

*: $p<0.10$; **: $p<0.05$

group. According to the t test, there is no significant difference in the return on sales variable between two groups. Table 3 reveals the simple univariate statistics of total sample. Table 4 illustrate the pie chart of IJV companies' return on sales. Appendix Table A1 and A2 shows return on sales of the groups and types separately. Appendix Table A3 illustrates the frequency and bar chart of return on sales.

6.1.3 IJV Size Results:

Size can be measured by number of employees, amount of sales, amount of fixed assets, amount of investment and level of capacity. The pilot study has indicated that most of the research targets comprised of small size companies. The number of employees was treated as a criterion for determining size. According to Small Business Administration (SBA) standard relating to the computer industry, a firm with employees less than one thousand is considered to be a small business. Based on the results of the study, on average, the mean value of employees in total samples is 277 employees. In the Taiwanese group, IJV companies employ on average 392 persons; in the United States group, IJV companies employ on average 122 persons. Appendix Table B1 through Table B4 reveals group and type size results. The statistics analysis determined the following three main results:

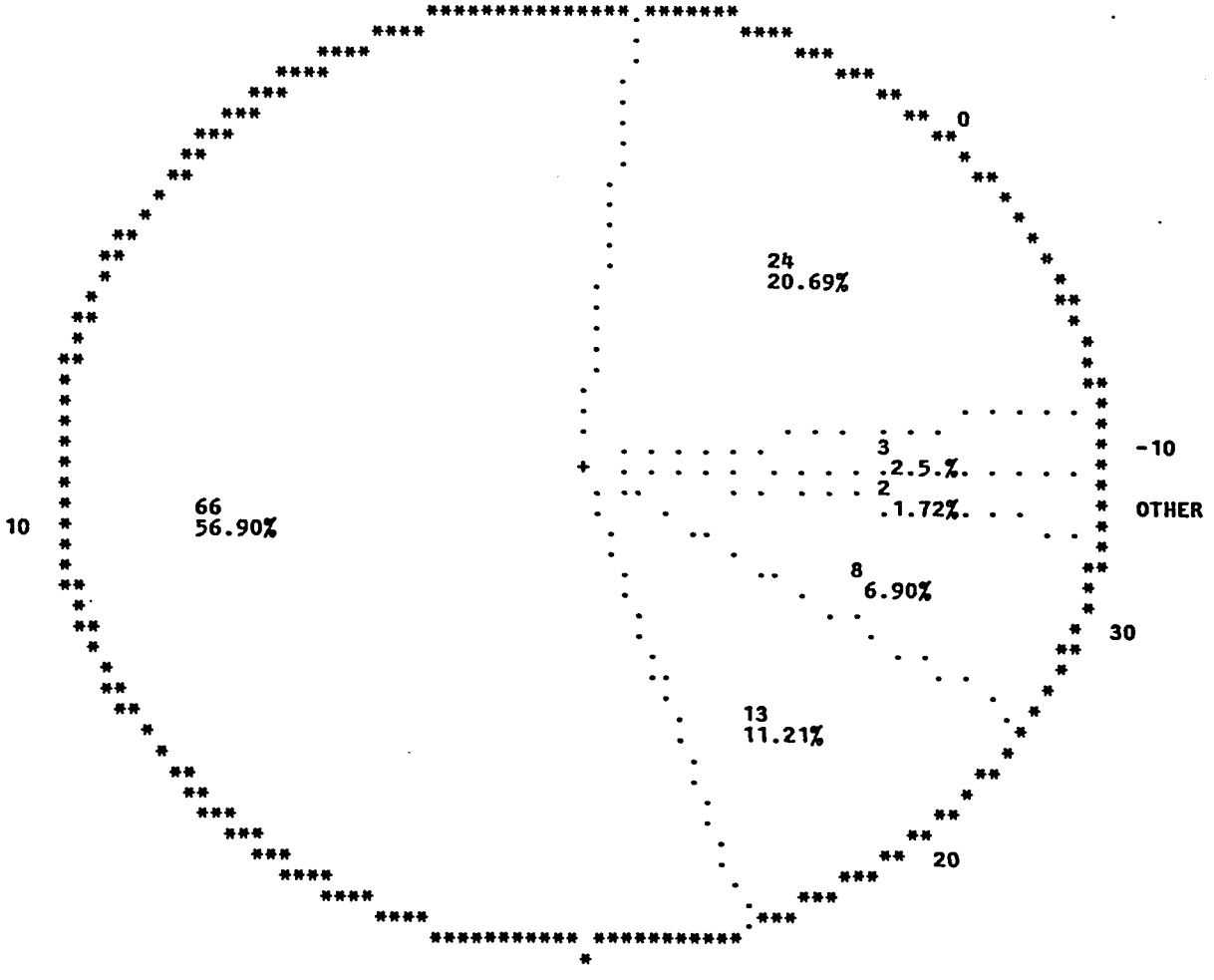
Table 3 :

Simple Univerate Statistics of Total Samples

Variables	N	Mean	SD
Return on Sales (ROS)	116	9.73	9.09
Autonomy	116	3.70	0.87
Organizational Learning & Knowledge (OL)	115	3.15	0.62
Technology (TECH)	116	3.58	1.56
Organizational Adaptation (ADAPT)	116	4.64	0.96
Human Resources Management (HRM)	116	3.35	0.54
Employee	113	277	494

Table 4:

FREQ PIE CHART OF ROS



First, Ninety percent of the IJV companies in the study are considered small businesses.

Second, In terms of size, there is a significant difference between the Taiwanese group and the United States group.

Third, Linear regression analysis disowned that there is no significant linear relationship between the size and organizational performance.

6.1.4 IJV Types Results:

This study used the IJV primary formation motivations as the basis to categorize the types of international joint ventures. The respondents were asked to report the major reasons for establishing the IJV companies. From the pilot study, I selected the primary combinations of motivations as the basis of IJV types. The questionnaire suggested six types of IJVs to the respondents, namely, resources driven, market driven, technology driven, risk driven, resources plus market driven, and technology plus market driven. Appendix Table C1 illustrates the paired T-test statistics of organizational performance among the IJV types. Three interesting results were found:

First, in the Taiwanese group, technology plus market driven (26%), resources driven (24%), and resources plus market driven (19%) joint ventures are the three major types. The United States group had different

motivations in forming IJV. Market driven (31%), resources plus marketing driven (31%), and technology plus market driven (29%) dominated the IJV formation types in the United States.

Second, in the United States group, no firms claimed that their joint ventures belonged to either technology driven joint ventures or risk driven joint ventures in the IJVs formation.

Third, based upon the fifteen paired T-test results, there is no significant difference in the relationship between type of JVs and its organizational performance.

6.2 IJV HUMAN RESOURCES PROBLEMS RESULTS

From the literature (Shenkar and Zeira, 1987), I summarized eight essential questions to ask respondents to rank (from one to ten) the human resources problems of the respondent's company. In this problem phase, I would like to identify the specific problems (i.e. human resources problems) in IJVs management.

One assumption was made that the rank in the questionnaire is round off integers. It means that we can calculate the arithmetic operations on these ranks. The primary results are shown in Table 5. Other detailed results

(MANOVA, Tukey test) are shown in Appendix Table D1 through Table D6. The findings are described as follows:

First, five major problems were identified in the human resources area, i.e. weak motivation (5.20), ineffective management control (4.86), communication blockage (4.78), promotion blockage (4.58), and difficulties in performance evaluation (4.57).

Second, the sequence of the top five major human resources problems in the United States is different from the sequence in Taiwan. But, both groups agree that "weak motivation" is the biggest problem in IJV human resources.

Third, regarding other human resources problems, such as "compensation gaps between employee groups" and "difficulties in adapting to the host country", there is a significant difference between the Taiwanese group and the United States group.

Fourth, in regard to overall group effect, multiple analysis of variance (MANOVA) test shows that there is no significant difference between the Taiwanese group and the United States group in terms of human resources problems.

Table 5:

IJV Human Resources Problems--

A Comparison Between United States and Taiwan

Problems	Total Mean (114)	SD	U.S. Mean (48)	Taiwan Mean (66)	T-Values
1. Weak Motivations	5.20	2.29	5.40	5.06	-0.77
2. Ineffective Management Control	4.86	2.39	5.10	4.68	-0.93
3. Communication Blockage	4.78	2.58	5.13	4.53	-1.21
4. Promotions be Blocked	4.58	2.26	4.67	4.52	-0.37
5. Difficulties in Performance Evaluation	4.57	2.25	4.50	4.62	0.28
6. Poor Employee's Satisfaction	4.38	2.19	4.31	4.42	0.27
7. Compensation Gaps between Employee Group	4.11	2.18	4.65	3.71	-2.30**
8. Difficulty of Adapting to Host Country	3.83	2.41	4.48	3.36	-2.50**

**: $p < 0.05$

6.3 IJV CRITICAL SUCCESS FACTORS RESULTS

Based on the literature review and the opinions of IJV senior managers, a seven-scale (seven representing the most important factor and one representing the least important factor) was designed in the IJV management factors section. The study asked the respondents to rank the important factors for the successful joint ventures management. The purpose of the factor phase questions was to identify the critical success factors. Table 6 through Table 8 show the results of IJV critical success factors. The secondary information about critical success factors were shown in Appendix Table E1 through Table E5. Three primary results were found and are discussed as follows:

First, by rotated factor analysis, fifteen essential factors were reduced to four critical dimensions which can explain sixty four percent of the variance in performance of IJVs.

Second, the four critical success factors are organizational climate factor, leader and leadership factor, lower cost factor, and technology factor.

Third, on an individual basis, the following three items were shown important. These items are "experienced managerial personnel", "appropriate leadership", and "marketing or distribution system".

Table 6:

IJV Critical Success Factors

Rotated Factor Pattern

	Factor1	Factor2	Factor3	Factor4
QA1: Experienced managerial person	0.04	0.71	0.01	0.16
QA2: Technical Skilled employees	-.03	0.13	0.01	0.48
QA3: Advancement in technology	0.30	-.12	-.02	0.94
QA6: Low per-unit cost	0.03	0.07	0.99	0.09
QA7: Trademarks or reputation of parent firms	0.59	0.01	-.05	0.11
QA8: Marketing or Distributing	0.35	0.43	0.23	-.04
QA9:Low price to customers	0.06	0.04	0.46	-.02
QA10 Superioity in strategy	0.67	0.45	0.05	0.07
QA11: Patents, licences or proprietary	0.44	0.05	0.06	0.23
QA12:Appropriate leadership	0.33	0.60	0.22	-.09
QA13:Supportive culture	0.59	0.30	0.18	-.03
QA14: Full line of products or services	0.50	0.08	0.21	-.03
QA15: Organization adaptation	0.58	0.28	0.11	-.00
Eigenvalues	**4.34**	**3.21**	**1.08**	**1.05**
Variance explained proportional	**0.29**	**0.21**	**0.07**	**0.07**
Cumulative	**0.29**	**0.50**	**0.57**	**0.64**

Table 7:

IJV Critical Success Factors

Factor 1 : Organizational climate factor:

QA 10: Superiority in strategy
QA 13: Supportive culture
QA 7: Trademarks or reputation of parent firms
QA 15: Organization adaptation
QA 14: Full line of products or services
QA 11: Patents, licenses or other proprietary knokledge.

Factor 2: Leaders & Leadership factor:

QA 1: Experienced managerial personnel.
QA 12: Appropriate leadership.
QA 10: Superiority in strategy.
QA 8: Marketing or distribution systems.

Factor 3: Lower cost factor:

QA 6: Low per-unit cost
QA 9: Low price to customers.

Factor 4: Technology factor:

QA 3: Advancement in technology.
QA 2: Technical skilled employees.

Table 8:

IJV Critical Success Factors --

A Comparison Between the United States and Taiwan

Factors	Taiwan (68) Mean	SD	U.S.A. (48) Mean	SD	T-Value
1. Experienced managerial personnel	6.06	1.18	6.10	1.06	-0.21
2. Appropriate leadership	5.37	1.40	5.63	0.94	-1.18
3. Marketing or distribution systems	5.25	1.34	5.75	1.10	-2.12*
4. Strong financial resources	5.15	1.40	5.52	1.62	-1.33
5. Technical skilled employees	5.25	1.35	5.04	1.22	0.85
6. Superiority in strategy	5.09	1.41	5.17	1.34	-0.30
7. Advancement in technology	5.19	1.42	4.46	1.30	2.82**
8. Full line of products or services	4.82	1.28	4.92	1.50	-0.36
9. Low per-unit cost	4.63	1.52	5.13	1.55	-1.70
10. Organization adaptation	4.82	1.37	4.60	1.20	0.89
11. Trademarks or reputation of parent firm	4.71	1.46	4.52	1.54	0.66
12. Supportive culture	4.65	1.48	4.50	1.58	0.51
13. Patents, licenses or other proprietary knowledge	4.76	1.52	4.25	1.44	1.84
14. Low price to customers	4.04	1.57	4.75	1.52	-2.42*
15. Location of joint venture facilities	4.03	1.28	4.21	1.37	-0.72

*: $p<0.05$; ** $p<0.01$

6.4 IJV EMPIRICAL MODEL RESULTS

This section discussed the results of the IJV regression models including the results of independent variables and model itself.

6.4.1 Results of the performance determinants of the IJV Empirical Model:

This section discusses the results of the impact of the performance determinants (independent variables) on the dependent variable. The sequence of performance determinants that will be followed is: autonomy, organizational learning and knowledge, technology, human resources management, and organizational adaptation.

AUTONOMY. IJV senior managers have more power to make decisions in the areas of marketing, personnel, and strategy making. They have less power to make finance, production, and R&D decisions (see Table 9). Comparatively speaking, IJV senior managers have the least power in the decision of long term investments. T tests showed that there are significant differences between the Taiwanese group and the United States group in terms of decisions such as marketing, R&D, Personnel, and strategy making. Regarding the overall group effect, there is a significant difference between the Taiwanese group and the United States group in IJV companies' autonomy dimension (see Table 10).

Some reference information were shown in Appendix Table F1 through Table F4.

ORGANIZATIONAL LEARNING AND KNOWLEDGE. Organizational learning and knowledge was primarily measured by both the extent of support from the parent companies and by the degree of corporate knowledge. Organizational learning and knowledge results are shown in Table 10 through Table 12. From the results shown, IJV companies received more resources support and technical support, and less management support and channel support from the parent companies. However, regarding the overall group effect, there is no significant difference between the Taiwanese group and the United States group in IJV companies learning and knowledge. Similarly, there is no significant difference among IJV types in the organizational learning and knowledge. Some reference information were shown in Appendix Table G1 through Table G4.

TECHNOLOGY. Technology was measured both by the technology potential (R&D to sales ratio) and by the current technology achievement. Technology results are shown from Table 13 through Table 14. To some extent, IJV companies prefer more products improvement and new products introduction than basic design and basic technology knowledge. Pertaining to group effect and type effect, no significant difference was found either between groups or among IJV types in the IJV companies technology. (see Appendix Table H1

Table 9:

IJV Autonomy Components-- Power of Management Decisions
A Comparison Between the United States and Taiwan

Components	Taiwan (68) Mean	SD	U.S.A. (48) Mean	SD	T-Value
1. Marketing decisions	3.71	1.19	4.27	0.92	-2.77**
2. Finance decisions	3.37	1.35	3.85	1.32	-1.93
3. Production decisions	3.50	1.37	3.75	0.98	-1.15
4. Research & development	3.34	1.31	3.88	1.04	-2.36*
5. Personnel decisions	3.71	1.19	4.23	0.78	-2.87**
6. Strategy making	3.78	1.10	4.23	0.78	-2.57**
7. Long term investment	3.31	1.31	3.38	1.18	-0.28

*: $p<0.05$; **: $p<0.01$

Table 10:

IJV Autonomy of Groups

Group	N	Mean	SD	Variance	T	Prob.
Taiwan	68	3.53	0.95	Unequal**	-2.70	0.008*
United States	48	3.94	0.69			

* Two groups' autonomy are significantly different.

** H0: Variances are equal, F'=1.91;
Prob > F'= 0.021, thus reject H0, variances are unequal.

Table 11:

IJV Organizational Learning & Knowledge
-- Components of supporting & Knowledge Climate
(N=116)

Components		Mean	SD
Part A:	Supporting from Parents' firms:		
1.	Resources support	3.29	1.26
2.	Technical support	3.24	1.15
3.	Management support	3.00	1.12
4.	Channel support	2.94	1.23
Part B:	Knowledge climate:		
1.	Knowledge can be imitated	3.26	0.82
2.	Knowledge can be exchanged or shared	3.55	0.90
3.	There is a climate of learning	3.49	0.96
4.	Innovative ideas are encouraged	3.70	1.09

Table 12:

IJV Organizational Learning & Knowledge Components--
A Comparison Between the United States and Taiwan

Components	Taiwan (68) Mean	SD	U.S.A. (48) Mean	SD	T-Value
A. Parent firm's supporting:					
1. Resources support	3.26	1.19	3.33	1.36	-0.29
2. Technical support	3.18	1.12	3.33	1.21	-0.72
3. Management support	3.04	1.15	2.94	1.08	0.50
4. Channel support	3.03	1.11	2.81	1.38	0.94
B. Knowledge climate:					
1. Knowledge can be imitated	3.24	0.88	3.29	0.74	-0.36
2. Knowledge can be exchanged or shared	3.50	0.91	3.63	0.89	-0.74
3. There is a climate for learning	3.51	1.03	3.46	0.87	0.31
4. Innovative ideas are encouraged	3.69	1.21	3.71	0.90	-0.11

Table 13:

IJV Technology --

Components of Firm's Technology Achievement

(N=116)

Components	Mean	SD
1. Advancement of basic & technological knowledge	3.03	0.89
2. Leader in new products introduction	3.43	0.96
3. Leader in products improvement	3.59	0.89
4. Leader in process improvement	3.32	0.98
5. Leader in design and prototype development	3.23	0.99

through Table H4)

HUMAN RESOURCES MANAGEMENT. As shown in from Table 15 through Table 16, human resources implementations of IJV companies were evaluated. Nine questions were raised, including human resources compensation, selection, evaluation, fringe benefits, and working conditions, to appraise the practices of IJV companies human resources. The results show that the IJV companies did a good job in terms of working conditions.

In terms of matching rewards to performance, there is a significant difference between the United States group and the Taiwanese group.

According to Scheffe test, three pairs of types have significant difference. (i.e. pair of risk driven in Taiwan with technology plus market driven in Taiwan; pair of risk driven in Taiwan with market driven in U.S.; pair of risk driven in Taiwan with technology plus market driven in U.S.) (see Appendix Table J1 to Table J3)

ORGANIZATIONAL ADAPTATION. Organizational adaptation results are shown from Table 17 through Table 18. Generally speaking, IJV companies have a good understanding of the adaptation process to fit the changes from both the external and internal environments. With regards to overall group effect, there is no significant difference between the Taiwanese group and the United States group in the IJV companies organizational adaptation (see Appendix Table K1

Table 14:

IJV Technology Components--

A Comparison Between the United States and Taiwan

Components	Taiwan (68) Mean	SD	U.S.A. (48) Mean	SD	T-Value
1. Advancement of basic & technology knowledge	3.12	0.87	2.90	0.90	1.33
2. Leader in new products introduction	3.40	1.09	3.48	0.74	-.48
3. Leader in products improvement	3.56	0.95	3.65	0.81	-.51
4. Leader in process improvement	3.35	1.02	3.27	0.94	0.44
5. Leader in design and prototype development	3.16	0.99	3.33	1.00	-.92

Table 15:
IJV Human Resources Management
(N=116)

Items	Mean	SD
1. Established career path	3.14	0.89
2. Equipped employees with job related skills	3.56	0.85
3. Equipped managers with improved skills	2.85	1.08
4. Compensation packages	3.47	0.81
5. Methods of selection	3.17	0.82
6. Match rewards to performance	3.42	0.80
7. Employees' appraisal methods	3.39	0.85
8. Working conditions	3.68	0.81
9. Fringe benefits	3.50	0.82

Table 16:

IJV Human Resources Management --

A Comparison Between the United States and Taiwan

Items	Taiwan (68) Mean	SD	U.S.A. (47) Mean	SD	T-Value
1. Established career path	3.14	0.94	3.13	0.82	0.10
2. Equipped employees with job related skills	3.55	0.83	3.57	0.87	-0.15
3. Equipped managers with improved skills	3.84	0.96	2.87	1.24	-0.15
4. Compensation packages	3.45	0.81	3.51	0.80	-0.40
5. Methods of selection	3.14	0.90	3.21	0.69	-0.44
6. Match rewards to performance	3.29	0.88	3.62	0.64	-2.31*
7. Employees' appraisal methods	3.38	0.86	3.40	0.85	-0.17
8. Working conditions	3.57	0.83	3.85	0.75	-1.89
9. Fringe benefits	3.41	0.81	3.64	0.82	-1.51

*: $p<0.05$

Table 17:

IJV Organizational Adaptation

(N=116)

Items	Mean	SD
1. The organization can adapt to the dramatic shifts and changes underway in society and the larger culture.	4.57	1.19
2. The organization can handle the new demands made upon it as a result of the changes in top administration and management emphasis.	4.87	1.17
3. The organization can deal effectively with the new kind of person coming into your workforce and management.	4.69	1.21
4. The organization has changed its management priorities and approaches with regard to scarce resources as well as environmental & ecological concern.	4.47	1.31
5. The organization is innovative in finding ways to improve the institutional environment.	4.62	1.30

Table 18:

IJV Organizational Adaptation --
A Comparison Between the United States and Taiwan

Items	Taiwan (68) Mean	SD	U.S.A. (47) Mean	SD	T-Value
1.The organization can adapt to the dramatic shifts and changes under -way in society.	4.45	1.16	4.74	1.22	-1.32
2.The organization can handle the new demands made upon it as a result of the changes in top administration and management emphasis.	5.00	1.12	4.68	1.22	1.45
3.The organization can deal effectively with the new kind of person coming into your workforce & management.	4.71	1.15	4.66	1.31	0.22
4.The organization has changed its management priorities and approach with regard to scarce resources as well as environmental & ecological concern.	4.45	1.23	4.51	1.43	-0.25
5.The organization is innovative in finding ways to improve the institutional environment.	4.65	1.26	4.57	1.36	0.32

through Table K3). Regarding the type effect, only type 2 (market driven JV in Taiwan) with type 7 (resources driven JV in U.S.A.) had a significant difference.

6.4.2 Results of Regression Models:

Simple regression models and multiple regression models were used to identify the association relationships among the dependent variable and independent variables, (i.e. autonomy, organizational learning and knowledge, technology, human resources management, and organizational adaptation). The Pearson correlations among the independent variables were calculated, and are shown in Table 19. Based on the Pearson correlations result, several correlation coefficients were significantly different from zero. This result raised the concern of multicollinearity in the multiple regression model. One of the possible indicator of multicollinearity is **Variance Inflation Factor (VIF)** which can be obtained from an option statement of SAS regression procedure. The results indicated that the problem of multicollinearity is not severe and consequently we may ignored it in the multiple regression analysis. Detailed discussions on multicollinearity issue can be found in Belsley, Kuh and Welsch (1980).

A linear regression model was applied to each independent variable, which are shown in Tables 20 through 24. The F test was used in each linear

Table 19:

Pearson Correlations Among Autonomy, Organizational Learning & Knowledge, Technology, Human Resources Management and Organizational Adaptation, and Descriptive Statistics of Total Samples (N=116)

Variables	Means	SD	1	2	3	4	5
1. Autonomy	3.70	0.87	-				
2. Organizational Learning & Knowledge	3.15	0.62	0.13	-			
3. Technology	3.58	1.56	0.07	0.20**	-		
4. Human Resources Management	3.35	0.54	0.21**	0.27***	0.17*	-	
5. Organizational Adaptation	4.64	0.97	0.24**	0.25***	0.18**	0.53***	-

Note: *: P<0.10; **: p< 0.05; ***: p<0.01

Table 20: Linear Regression Model with Performance Determinant--Autonomy

Model:

ROS = 8.2247 + 0.4073 * (AUTONOMY)

Source	Sum of Squares	D.F.	Mean Square	F-ratio	Prob.
Regression	14.56	1	14.56	0.17	0.667
Residual	9493.1	114	83.27		
Total	9507.7	115			

Coefficient of Determination = 0.0015

Table 21: Linear Regression Model with Performance Determinant--Organizational Learning and Knowledge

Model:

ROS = 0.8355 + 2.8097 * (Organizational Learning & Knowledge)

Source	Sum of Squares	D.F.	Mean Square	F-Ratio	Prob.
Regression	348.15	1	348.15	4.31	0.042*
Residual	9131.51	113	80.81		
Total	9479.66	114			

Coefficient of Determination = 0.0037

* There is a significant relationship between organizational learning and knowledge and IJV performance.

Table 22: Linear Regression Model with Performance Determinant--Technology

Model:

ROS = 5.7087 + 1.1229 * (Technology)

Source	Sum of Squares	D.F.	Mean Square	F-Ratio	Prob.
Regression	352.2	1	352.2	4.39	0.038*
Residual	9155.4	114	80.3		
Total	9507.6	115			

Coefficient of Determination = 0.037

* There is a significant relationship between technology and IJV performance.

Table 23: Linear Regression Model with Performance Determinant--Human Resources Management

Model:

ROS = (-3.3987) + 3.9144 * (Human Resources Management)

Source	Sum of Squares	D.F.	Mean Square	F-Ratio	Prob.
Regression	507.7	1	507.7	6.43	0.013*
Residual	8999.9	114	78.9		
Total	9507.6	115			

Coefficient of Determination = 0.053

*** There is a significant relationship between human resources management and IJV performance.**

Table 24: Linear Regression Model with Performance Determinant--Organizational Adaptation

Model:

ROS = (-3.427) + 2.833 * (Organizational Adaptation)

Source	Sum of Squares	D.F.	Mean Square	F-Ratio	Prob.
Regression	863.7	1	863.7	11.39	0.001*
Residual	8643.9	114	75.82		
Total	9507.6	115			

Coefficient of Determination = 0.091

* There is a significant relationship between organizational adaptation and IJV performance.

regression model to test the acceptance of the slope item. The null hypothesis was:

H0: B = 0.

Except for the "autonomy" independent variable, all four independent variables have significant F value. It leads to the conclusion that we reject the null hypothesis. It means that in each linear regression equation, we can really use the independent variables (organizational learning & knowledge; technology; human resources management; and organizational adaptation) in the study to predict the organizational performance. Quadratic item also applied into each independent variable, but only minor improvement can be expected.

A multiple regression model (See Table 25) was applied including all the independent variables. Because the multiple regression model used more variables, it provided better prediction power than the linear regression model. The F test was used to test the acceptance of the multiple slopes. The null hypothesis was:

H0: B1 = B2 = B3 = B4 = B5 = 0

The F test results lead to the conclusion that we reject the null hypothesis. In other words, it means at least one coefficient of slopes is not equal to zero.

The multiple regression algebra expression is shown as follows:

Table 25:
IJV Multiple Regression

A. Regression Model:

Estimated parameter	Coefficient	t	Significant Level
Intercept	-9.95	-1.56	0.1210
Autonomy	-0.55	-0.57	0.5685
OL	1.38	0.99	0.3241
TECH	0.76	1.41	0.1606
HRM	1.51	0.82	0.4141
ADAPT	2.05	2.01	0.0464

R-Square=0.129

B. Analysis of Variance:

Source	Sum of Squares	D.F.	Mean Square	F-ratio	Prob.
Regression	1222.6	5	244.5	3.228	0.0094
Residual	8257.1	109	75.8		
Total	9479.7	114			

ROS = (-9.95) - 0.55 (AUTONOMY) + 1.38 (ORGANIZATION LEARNING) + 0.76 (TECHNOLOGY) + 1.51 (HUMAN RESOURCES MANAGEMENT) + 2.05 (ADAPTATION)

The basic results of the IJV regression models had already been presented in this section. The next chapter will discuss stepwise multiple regression. Table 26 will show the summary results of regression analysis of IJV management.

6.5 RESULTS OF STATISTICAL HYPOTHESES TEST

Analysis of Variance (ANOVA) was used to test the acceptance of the hypotheses. Hypothesis one and hypothesis two are the hypotheses testing for the IJV companies strategic determinants which were decided in pre-phase of the formation of international joint ventures. Hypotheses three through seven are hypotheses testing for relationships between the IJV managerial independent determinants and dependent variable. The following section describes the results of seven hypotheses in the study.

Hypothesis 1: There is no significant relationship between the IJVs companies' size and their organizational performance.

Table 26:

Summary Results of Regression Analysis of IJV Management

(n=116)

Variables	Equation 1		Equation 2		Equation 3		Equation 4		Equation 5		Equation 6	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Constant	8.22**	3.70	0.84	4.34	5.71***	2.09	-3.40	5.24	-3.43	3.98	-9.95	6.37
Autonomy	0.41	0.97									-0.55	0.96
Organizational Learning & Knowledge			2.81**	1.35							1.38	1.39
Technology					1.12**	0.54					0.76	0.54
Human Resources Management							3.91**	1.54			1.51	1.84
Organizational Adaptation									2.83***	0.84	2.05**	1.01
R^2	0.01		0.04		0.04		0.05		0.09		0.129	
F	0.17		4.31**		4.39**		6.43**		11.39***		0.009***	

**: $p < 0.05$; ***: $p < 0.01$

ANOVA SUMMARY TABLE

SOURCE	SUM OF SQUARE	DF	MEAN SQUARE	F	Prob.
Model	2.22	1	2.22		
Error	7334.9	111	66.1	0.03	0.86

At the 0.05 level of significance, the null hypothesis is accepted. The P value of this ANOVA is 0.86. Thus, we can conclude that there is no significant relationship between the IJV's companies size and their organizational performance. Another issue is that most of the IJV companies in this study, on average, employed 277 persons. They are all small business. Thus, in the IJVs of computer industry, size is not a performance determinant which influences the company's performance.

Hypothesis 2: ***There is no significant relationship between the IJVs companies' type and their organizational performance.***

Due to technical problems of the existence of multiple IJV types in the study, we used the paired t test to verify the hypothesis instead of ANOVA. Based on Appendix Table C1's results, we can observe that there is no significant difference between the types. Thus, we accept the null hypothesis. It means that there is no significant relationship between the IJV's companies type and their organizational performance.

Hypothesis 3: *There is no significant relationship between the degree of IJVs companies' autonomy and their organizational performance.*

ANOVA SUMMARY TABLE

SOURCE	SUM OF SQUARE	DF	MEAN SQUARE	F	Prob.
Model	14.56	1	14.56		
Error	9493.1	114	83.27	0.17	0.68

At the 0.05 level of significance, the null hypothesis is accepted. The P value is 0.677. Thus, it means that there is no significant relationship between the degree of IJV's companies autonomy and their organizational performance.

Hypothesis 4: *There is no significant relationship between the levels of IJVs companies' learning and knowledge and their organizational performance.*

ANOVA SUMMARY TABLE

SOURCE	SUM OF SQUARE	DF	MEAN SQUARE	F	Prob.
Model	348.15	1	348.15		
Error	9131.51	113	80.81	4.31	0.04

With a p value of 0.042, the null hypothesis is rejected. It means that there is a **significant relationship** between the levels of IJV's companies learning and knowledge and their organizational performance.

Hypothesis 5: ***There is no significant relationship between the extent of IJVs companies' technology and their organizational performance.***

ANOVA SUMMARY TABLE

SOURCE	SUM OF SQUARE	DF	MEAN SQUARE	F	Prob.
Model	352.2	1	352.2		
Error	9155.4	114	80.3	4.39	0.04

With the p value of 0.038, the null hypothesis is rejected. The slope value of technology is 1.12. Thus, it means that there is a significant relationship between the extent of IJV's companies technology and their organizational performance.

Hypothesis 6: ***There is no significant relationship between the extent of IJVs companies' human resources implementation and their organizational performance.***

ANOVA SUMMARY TABLE

SOURCE	SUM OF SQUARE	DF	MEAN SQUARE	F	Prob.
Model	507.7	1	507.7		
Error	8999.9	114	78.9	6.43	0.01

With a p value of 0.013, the null hypothesis is rejected. The slope coefficient is 3.9144. Thus, it means that there is a significant relationship between the levels of IJV's companies human resources management and their organizational performance.

Hypothesis 7: ***There is no significant relationship between the extent of IJVs companies' organizational adaptation and their organizational performance.***

ANOVA SUMMARY TABLE

SOURCE	SUM OF SQUARE	DF	MEAN SQUARE	F	Prob.
Model	863.7	1	863.7		
Error	8643.9	114	75.8	11.39	0.001

With a P value of 0.001, the null hypothesis is rejected. The slope coefficient is 2.833. Thus, we can conclude that there is a significant positive relationship between the extent of IJV's companies organizational adaptation and their organizational performance.

CHAPTER 7

SUMMARY AND DISCUSSION

This chapter describes the summary. Some key issues discussion and limitation of the study are also included.

7.1 SUMMARY

The study comprised two parts. Part 1 addressed in general aspect, the major components of (1)human resources problems; (2) critical success factors. Part 2 concerned itself with regression analysis including five performance determinants.

These five performance determinants were (1) amount of autonomy given by the parent firms to the IJV companies; (2) the extent of the organization's learning ability; (3) the level of technology possessed by the IJV companies; (4) the human resources practices of the IJV companies; and (5) the IJV's organizational adaptation capability. The results of this study provide support to test seven hypotheses which stated in chapter 4. Perhaps the most significant contribution of this study is the introduction of regression models to predict the corporate performance of an IJV.

The results of the study imply that IJV companies which enhance the quality of their management will improve their overall corporate performance. **The present results show that organizational learning and knowledge, technology, human *resources* management, and organizational adaptation have significant relationships to companies performance of an IJV.** The results suggest that in the operations of IJV companies management, IJV companies management has to emphasize the performance determinants, namely, organizational learning and knowledge, technology, human resources management and organizational adaptation. Based on the factor analysis, the study also identified four critical success factors, namely, organization climate, leaders & leadership, technology, and cost. We can treated these critical success factors as **strategic performance determinants**. From an overall perspective, the organization climate factor, leaders and leadership factor, lower cost factor, and technology level factor are the keys for IJV management in later stage of IJV development.

7.2 DISCUSSION OF MAJOR ISSUES:

Human Resources Problems. The results show that weak motivation, ineffective management control, communication blockage, promotion blockage, and performance evaluation difficulties are the top five major problems in IJV

companies human resources management. "**Weak motivation**" is the main problem according to rankings of the two study groups.

Communication blockage and promotion blockage are the problems mentioned most frequently in the literature. Promotion blockage is attributed to reservation of top positions for expatriates managers of the host parent (Bivens & Lovell, 1966).

Although interpersonal relations are important in all geographically dispersed businesses, they are especially important in managing an IJV.

Difference between the objectives of an IJV and its parents (Killing, 1980), cultural differences, (Wright, 1979) and multiparenthood (Peterson & Schwind, 1977) are also cited as potential sources of communication problems in IJV companies. Weak motivation, ineffective management control, and difficulties in performance evaluation are the major human resources problems in IJV daughter company.

The study looked at "compensation gaps between employee groups" and "difficulty in adapting to host country". Interestingly, significant differences were found between the Taiwanese group and the United States group.

IJV Critical Success Factors. Unlike previous research, the present results show that organizational climate, leaders and leadership, lower cost, and technology level are the critical success factors. Based on factor analysis, sixty four percent of the variance is explained by these factors (see chapter 6).

Chowdhury (1989) found six common determinants to both the success and the failure of IJVs from the viewpoint of parent firms. Chowdhury and this study have different focuses. Chowdhury emphasized the view of parent companies while this study examined the issue from the view point of the IJV child companies. This is one reason for different results. Duchesneau and Gartner (1990), indicated that the characteristics of the lead entrepreneur to be the most important factor in success of new ventures. The results of this study also indicated that "**leader and leadership**" is a critical success factor although not the only one.

In relation to the critical success factors, the study results indicated that "strong financial resources" and "location of joint ventures facilities" are relatively unimportant issues in success of the IJV companies management. This phenomenon might be related to development stage of the IJV. That is, "strong financial resources" and "location of IJV facilities", played important roles only in early stage of IJV development. In later stage, these two factors are not as important. **From an overall perspective, the organizational climate factor, leader and leadership factor, lower cost factor, and technology level factor are the keys for IJV management in later stage of IJV development.**

Size. Number of employees is the suggesting criterion by the Small Business Administration (SBA). The results of this study show that, on the average, the

mean value of employees is 277 persons. In other words, most of observations from the population are small size business. Taiwanese group employed more persons than the United States group did. Comparatively speaking, there is a significant difference between the Taiwanese group and the United States group.

Unlike Beatty's (1990) study in the mergers and acquisitions case, this study show that there is no significant relationship between the size and its organizational performance. Further research is needed to generalize this result to other industries.

Type. Small amount of research has been conducted to identify the relationship between IJV type and IJV performance. In the study, I used the IJV essential formation motivations as the basis to categorize the IJV types. Based on the feedback of a pilot study, I selected six types to ask respondents to choose. Interestingly, the United States group revealed only four IJV types, namely, resources driven, market driven, resources plus market driven, and technology plus market driven. Taiwanese group comprised of all six IJV types. Contrary to the Beatty's (1990) mergers and acquisition case, the results of paired T-test indicated that there is no significant difference in the relationship between IJV type and its organizational performance. This is a pioneer study result. Further research is needed to generalize this relationship to other businesses.

Autonomy. Lorange and Probst (1987) indicated that "autonomy" is one major characteristic for any self-organizing system specifically, IJVS. They also suggested that autonomy is important source for success of joint ventures. Killing (1983) identified limited delegation (for example giving an IJV's autonomy) as a factor in negative outcomes. Kabayashi (1967) concluded that excessive dependence of an IJV on its parent companies is unproductive.

Contrary to previous studies, the results of this study indicated that there is no significant relationship between the degree of autonomy of an IJV and its organizational performance. The study indicated that receiving the support from the parent firms in the form as trademarks, reputation of parent firms, patents, licenses, or other proprietary knowledge, improves the IJV's competitive capability.

From the management standpoint, an IJV need to maintain a **balance between its own autonomy of IJV firms and control by its parent firms**. Additional knowledge and experience is needed to determine : first, what is the balance point, second, how to reach that balance point. Theory of role conflict can be applied here to explain why extreme autonomy or extreme control cannot work well in IJV companies management.

Organizational learning and knowledge. Pucik (1988) pointed out that an organization's capability for learning is the key in protecting its competitive advantage, and controlling the strategic direction of the cooperative venture.

This results of this study **supports** Pucik's arguments. The results show that there is a **significant relationship** between the level of IJV's learning and knowledge and their organizational performance.

This study introduces the application of the concept "Organizational learning and knowledge" to an empirical model of IJVs. More empirical studies are needed to further generalize the concept to those which are industries other than computer and computer-related industries.

Technology. Harrigan (1986) indicated that joint ventures can act as technological change agents. Technology-transfer is a key issue in the technology management of IJV companies. The objective of technology-transfer is to gain a leading competitive position for the IJV companies. Practitioners strongly believe that advanced technology can generate high performance. The results of this study **support** that belief. Our results show that there is a significant relationship between the level of an IJV's technology and its organizational performance.

Human resources management. Pucik (1988) pointed out that a good human resources system can enhance organizational learning. Frayne and Geringer (1990) concurred that strategic use of human resources management can be a control mechanism in an IJV. Throughout the literature, most of the issues related to human resources in IJVs were found, for example, staffing,

promotion, loyalty, delegation, decision making, communication, information, and compensation. However, a few studies have been conducted on the relationship between total human resources management and corporate performance.

This study identified the relationship. The results showed that there is a significant relationship between general IJV's human resources management and its organizational performance. More research is needed to generalize the relationship to other businesses.

Organizational adaptation. Few research has been conducted on the relationship between organizational adaptation and the IJV company's performance. Practitioners believe that the greater organizational adaptation, results in better performance. The results of this study support this belief. It shows that there is a significant relationship between the extent of an IJV's organizational adaptation and its organizational performance.

Regression Model. Because technology variable had used the numerical numbers (R&D to sales ratio) in the transformation to generate the indicator of technology, standardization of regression model cannot be applied in this research. Backward and forward stepwise multiple analyses were used to determine the best regression models for predicting IJVs performance. Two criteria (R-square and Cp) were used to choose the best multiple regression

model. The R-square criterion involves the comparison of the coefficient of determination for all possible multiple regression models.

Cp criterion developed by Mallows measures the total squared error (TSE) of a regression model with P* parameters. The TSE consists of a bias component and a random error component.

Appendix Table L1 shows the values of R-square and Cp among the regression models used to choose the optimal regression model. Based on the Cp criterion, the decision rule is to choose Cp equal to or closer to p* (number of parameters). The optimal regression models based on using one variable, two variables, or three variables are suggested in the following regression equations:

1 Linear regression model:

ROS = (- 3.44) + 2.83 * (Organizational Adaptation)

coefficient of determination = 0.091

2 Multiple regression model with two variables:

ROS = (- 5.38) + 0.87 * (Technology) + 2.57 * (Org. Adaptation)

coefficient of determination = 0.112

3 Multiple regression model with three variables:

ROS = (- 8.75) + 1.49 * (Organizational Learning) + 0.78 * (Technology) + 2.35 * (Org. adaptation)

coefficient of determination = 0.122

The forward stepwise multiple regression suggested that the best multiple regression model included four independent variables. The model was shown below:

ROS = (- 11.13) + 1.33 * (Organizational Learning) + 0.76 * (Technology) + 1.41 * (Human Resources Management) + 1.97 * (Organizational Adaptation)

coefficient of determination = 0.126

This equation is different from the one on p.100 becase the variable of autonomy was not included.

7.3 LIMITATION OF THE STUDY:

There are two kinds of limitations inherent in the study: limitations due to the empirical method and limitations due to technical issues.

A. **Empirical study limitations**:

Due to time and resource constraints, the research design does not reflect longitudinal effects. The study is cross-sectional focusing on

the key issues of management. The research is targeted towards some special targets having the following attributes:

1. International emphasis:

   Observations center on the international joint ventures instead of domestic joint ventures. The study is interesting in the behavior of the IJVs management.

2. Post-phase of joint ventures:

   The analysis concentrates on the post-phase of joint venture management. (The phase which follows the conclusion of an IJV agreement). Partner selection as well as negotiation process are ignored.

B. **Technical limitations**:

The primary method applied in this empirical study is mailed questionnaire survey. Respondents self-opinions are reported. Choosing qualified respondents, and obtaining their cooperation promptly and properly are a challenge. One hundred percent response and cooperation cannot normally be expected. Biases in the study were eliminated through random sampling, interview techniques, cross data checking and statistical efficiency to reduce the possible artificial errors and to enhance the accuracy of the study in terms of validity and reliability.

Moreover, the regression analysis has more technical limitations: First, a good regression equation needs a good set of data of independent variables to get a best fit. Secondly, the assumptions requirements in using regression analysis should be met:

Error terms should be independent and normally distributed, and the variance of error term should remain the same.

CHAPTER 8

IMPLICATIONS AND RECOMMENDATIONS

8.1 IMPLICATIONS

There are two types of implications in this study: implications for research and implications for practitioners. They are discussed below:

8.1.1 Implications for Research

The main findings of this study were that IJV size and IJV type have no significant relationships with the IJV company's performance. Neither did IJV autonomy. Four managerial variables (i.e. organizational learning and knowledge, technology, human resources management, and organizational adaptation), were found to have significant relationship with IJV company performance. This contrast with the finding of Beatty (1990) that size and type were predictive factors for performance of acquired companies. More research should be conducted regarding size and type of company relative to M&A and IJV performance.

A second implication for researchers is that an IJV analytical approach already contributes tremendously in terms of transaction costs, strategic behavior, and IJV formation. (Berg, Duncan, and Friedman, 1982; Killing, 1983; Harrigan, 1985; Hladik, 1985; Kogut, 1988; Lorange, 1988). Fornell, Lorange and Roos (1991) suggested a process emphasis in the formation of cooperative venture. This is another research area relative to IJVs.

In addition the traditional IJV process approach, additional ingredients such as dynamic concepts, acculturation, and acclimatization can be added to the theory of IJV process approach.

8.1.2 Implications for Practitioners

The study implies that practitioners need to grasp the key factors of IJV effectiveness. Establishing the best organizational climate, hiring experienced management personnel, lowering the costs, and advancing in technology are the most important determinants of success for IJVs.

In addition, human resources management plays an important role in IJVs management. As previously indicated, weak motivations, communication blockage, promotion blockage, and ineffective management control are major problems in IJV human resources management. Practitioners have to put top priority in resolving these human resources problems to ensure success of IJV management.

8.2 RECOMMENDATIONS

I summarized the major results and issues into the following recommendations. Eight recommendations were included in this section.

RECOMMENDATION 1: Identify the major problems and concentrate on solving these problems in the IJV management.

In the study, five main human resource problems were identified. These problems are "weak motivation", "ineffective management control", "communication blockage", "promotion blockage", and "difficulties in performance evaluation".

Senior managers need to address these human resource problems which limit employee productivity. Human resource practice is a key part of managing an IJV. The study showed that "weak motivation" factor is the greatest problem for IJVs managers. Thus, the IJVs managers should develop an effective method to deal with this problem.

RECOMMENDATION 2: Concentrate on the critical success factors in the IJVs management.

In the study, four critical success factors of the IJVs management were found. These key factors are organizational climate, leaders and leadership, lower cost, and technology. The IJVs managers have to apply these key factors to establish a strong basis for success. Based on the study results, "experienced managerial personnel" is the highest scoring individual item of the critical success factors study. This means that choosing a qualified leader and selecting experienced managerial personnel are the vital determinants and are challenges to the management of IJVs.

RECOMMENDATION 3: Search for balance between the IJV's autonomy and parent firm control.

There is a belief that the more autonomy an IJV company has, the better performance they achieve. However, this empirical study did not find a significant relationship between the level of autonomy and organizational performance. Trademarks and the reputation of the parent firm are important factors for the IJVs management. If an IJV firm receives support from the parent company, in such areas as patents, licenses, or other proprietary

knowledge , its competitive capability is enhanced. Finally, the study indicates that a balance between autonomy of the IJVs and control by the parent company is needed. More research is needed to further clarify this contingencies of equilibrium.

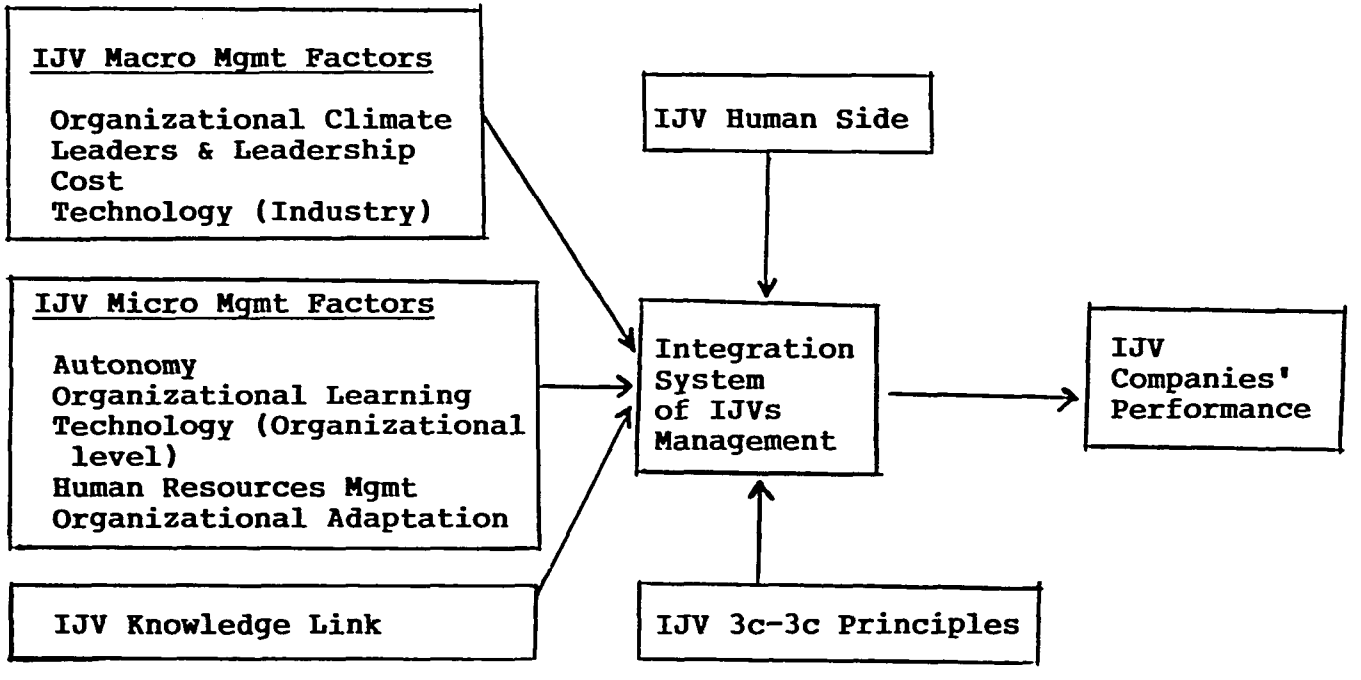
RECOMMENDATION 4: Integrate all important facets of IJVs management.

In this study, four managerial factors -- organizational learning & knowledge, technology, human resources management and organizational adaptation -- were found to have significant relationships to IJVs companies performance. Further, organizational climate, leaders and leadership, lower cost, and technology were identified as the critical success factors. Success of an IJV clearly requires integrating of the IJVs macro management factors (IJV critical success factors) and the micro management factors (organizational learning and knowledge, technology, human resources management and organizational adaptation). This integration is depicted in Figure 4.

RECOMMENDATION 5: Highlight the human side of the IJVs.

The major attributes of IJV's human side which should be highlighted: (1) introducing personnel issues at both the psychological level and cultural level;

Figure 4: Integration of Management in International Joint Ventures



Source: Fongkang H. Chu dissertation (1993)

and (2) restructuring the organization when personnel are concerned. Focusing on IJVs human side and human resources can (1) broaden the perspectives of traditional IJV management; and (2) develop a fuller understanding of the "human dynamics" involved in the IJV change process. The fact that international joint ventures represent an "alliance of people" tends to be overlooked and ignored.

In managing an IJV, better human resources management provides a base for cooperation, and enhancing people value to the company. Thus, IJV senior managers have to simultaneously design an effective human resources management system, and highlight the human side of IJV management.

RECOMMENDATION 6: Use the 3C-3C principle for IJVs management.

Philips and Du Pont combined their technical prowess, financial resources and marketing strengths in order to bid for the global market for optical media. Philips Du Pont Optical--IJV child firm--developed the three C's as the driving forces of forming an IJV. These three C's stand for capability, compatibility, and commitment. These essential principles at work, not only in the stage of choosing IJV partners, but also in the stage of the formation of joint ventures. The three C's are emphasizes the pre-phase of IJV management.

In order to construct a system of principles for total process of IJV management, I propose a second three C's principle, namely, collaboration, communication, and control. Collaboration means an effort to gain cooperative synergy through complementary resources and sharing of marketing channels. Communication is a devotion to developing a solid communication system which will foster the trust that executives regard as essential for IJV's success. Control means that all IJV activities should be controlled in an optimal manner. The second set of three C's are suggested by the study and emphasize the process of post-phase IJV management. The 3C-3C principles are useful guidelines which can serve as reference principles for total IJV management.

RECOMMENDATION 7: Create a fitting organizational climate for IJVs.

Based on the results of the study, organizational climate includes basic elements such as supportive culture, organizational adaptation, superior strategy, and balanced relationships with the parent firms. Organizational climate involves a dynamic mechanism for reaching resources fit, strategy fit and structural fit. An evolutionary adaptations is appropriate when the company tried to establish a fitting climate for an IJV. Acclimatization is a useful conjecture for building a fitting climate for an IJV. IJV managers need to create a fitting organizational climate to reduce the complexity of IJV management.

RECOMMENDATION 8: Develop a Knowledge link with the parent companies.

One of the issues in IJV management is establishing a knowledge link to the parent firms. The major purpose of a knowledge link is to give IJV access to additional skills and capabilities. This link should enable the IJVs to work with the parent companies in creating new capabilities. Knowledge links can be tactical or strategic depending on the objectives of the IJVs learning and knowledge. The study indicates that there is a significant positive relationship between the degree of organizational learning and knowledge and organizational performance. A knowledge link is an effective vehicle to enhance the level of organizational knowledge, and thus improving the IJV's performance. Therefore, IJV managers really need to build an effective knowledge link system in their IJV management.

8.3 FUTURE RESEARCH

The study has identified and explained some key issues of IJV management. In order to understand the overall management effects, further research is suggested:

1. Apply the same method to other major industries in order to test the generalization applicability of the major findings in the study.
2. In terms of research methodology, mail questionnaires were used to identify the cross-sectional effects of IJV management. A case study approach of IJV management is suggested in order to determine the longitudinal effects.
3. The study focused on management issues of child company of IJVs. Further research can be done to cover both the IJV parent companies and IJV child company.

Appendix 1:

Reference Research Results

Appendix 1 Table A1:

Simple Univariate Statistics --
A Comparison Between U.S.A. and Taiwan

Variables	N	Mean	SD	T-value
Return on Sales (ROS)				
Taiwan	68	10.56	10.37	1.25
U.S.A.	48	8.56	6.82	
Autonomy				
Taiwan	68	3.53	0.95	-2.70***
U.S.A.	48	3.94	0.69	
Organizational Learning & Knowledge (OL)				
Taiwan	67	3.18	0.63	0.67
U.S.A.	48	3.10	0.62	
Technology (TECH)				
Taiwan	68	3.63	1.71	0.40
U.S.A.	48	3.51	1.33	
Human Resources Management (HRM)				
Taiwan	68	3.29	0.57	-1.45
U.S.A.	48	3.44	0.47	
Organizational Adaptation (ADAPT)				
Taiwan	68	4.64	0.94	-0.09
U.S.A.	48	4.65	1.02	

***: $p<0.01$

Appendix 1 Table A2:

Dependent Variable--Returns on Sales (ROS)

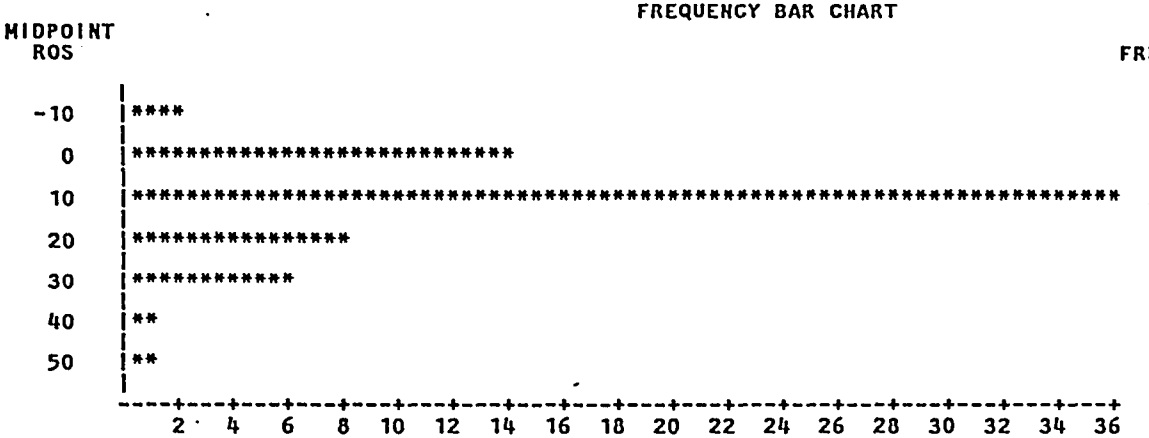
Types	N	Mean*	SD
RESO/JV:			
Taiwan	16	8.02	7.20
U.S.A.	4	6.58	1.76
MKT/JV			
Taiwan	8	13.63	6.80
U.S.A.	15	5.82	4.70
TECH/JV			
Taiwan	9	6.29	10.39
U.S.A.	NA	NA	NA
RISK/JV			
Taiwan	3	6.20	1.61
U.S.A.	NA	NA	NA
RESOMKT/JV			
Taiwan	13	11.58	9.46
U.S.A.	15	10.25	8.59
TECHMKT/JV			
Taiwan	18	11.09	10.20
U.S.A.	14	10.26	6.93

* Based on the t test result, there is no significant difference among the types.

Appendix 1 Table A3: Return on Sales

GROUP=A (Taiwan group)

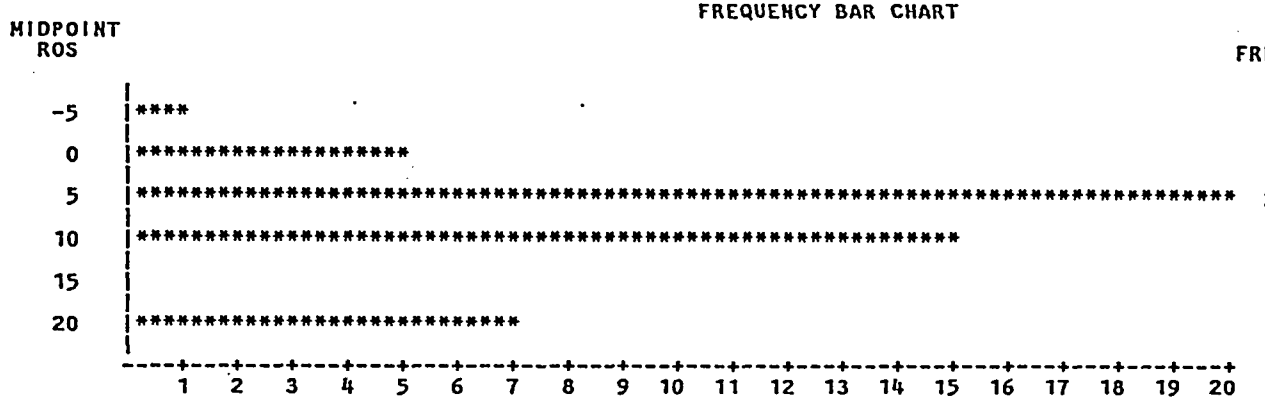
FREQUENCY BAR CHART



MIDPOINT ROS	FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
-10	2	2	2.94	2.94
0	14	16	20.59	23.53
10	36	52	52.94	76.47
20	8	60	11.76	88.24
30	6	66	8.82	97.06
40	1	67	1.47	98.53
50	1	68	1.47	100.00

GROUP=B (United States group)

FREQUENCY BAR CHART



MIDPOINT ROS	FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
-5	1	1	2.08	2.08
0	5	6	10.42	12.50
5	20	26	41.67	54.17
10	15	41	31.25	85.42
15	0	41	0.00	85.42
20	7	48	14.58	100.00

FREQUENCY

SAS

Appendix 1 Table B1:

IJV Size of Groups
(# of employees)

Group	N	Mean	SD	T-value
Taiwan	68	392	559	3.19**
United States	48	122	338	

**: P<0.05

Appendix 1 Table B2:

IJV Size of Types
(# of employees)

Type	N	Mean	SD
Resources Driven J.V.			
Taiwan	16	481.1	529.9
U.S.A.	4	525.8	983.2
Market Driven J.V.			
Taiwan	8	378.4	397.9
U.S.A.	15	23.3	13.5
Technology Driven J.V.			
Taiwan	9	245.9	217.9
U.S.A.	NA	NA	NA
Risk Driven J.V.			
Taiwan	3	257.3	211.8
U.S.A.	NA	NA	NA
Resources + Market J.V.			
Taiwan	13	365.8	411.9
U.S.A.	15	188.0	326.1
Technology + Market J.V.			
Taiwan	18	426.7	860.3
U.S.A.	14	40.7	36.4

Appendix 1 **Table B3:**
Linear Model of Independent Variable--Size

Source	Sum of Squares	D.F.	Mean Square	F	Prob.
Regression	2.22	1	2.22	0.03	0.86
Residual	7334.9	111	66.08		
Total	7337.21	112			

Coefficient of determination=0.0003

Estimated Parameter	Coefficient	t*	Significant Level
Intercept	9.3813	10.69	0.0001
Employee	0.0003	0.18	0.85

* H0: **B = 0** (Slope parameter equals to zero)
According to T test, it accepts null hypothesis.

Appendix 1 Table C1:

Paired T-Test of ROS Among IJV Types

Paired #	Paired Types	T-Value
1	RESO * MKT	-0.40
2	RESO * TECH	0.46
3	RESO * RISK	0.40
4	RESO * (RESO + MKT)	-1.35
5	RESO * (TECH + MKT)	-1.32
6	MKT * TECH	0.47
7	MKT * RISK	0.60
8	MKT * (RESO + MKT)	-1.05
9	MKT * (TECH + MKT)	-1.01
10	TECH * RISK	0.03
11	TECH * (RESO + MKT)	-1.30
12	TECH * (TECH + MKT)	-1.29
13	RISK * (RESO + MKT)	-0.90
14	RISK * (TECH + MKT)	-0.88
15	(RESO + MKT) * (TECH + MKT)	0.06

Note: There is no significant difference of the IJV performance (ROS) among six IJV types.

Appendix 1 Table D1:

IJV Human Resources Problems (n=114)

Rank	Problems	Mean	SD
1	Weak motivation	5.20	2.29
2.	Ineffective management control	4.86	2.39
3.	Communication blockage	4.78	2.58
4.	Promotions be blocked	4.58	2.26
5.	Difficulties in performance evaluation	4.57	2.25
6.	Poor employee's satisfaction	4.38	2.19
7.	Compensation gaps between employee groups	4.11	2.18
8.	Difficulty of adapting to host country	3.83	2.41

Appendix 1 Table D2:

IJV Human Resource Problems

Group of Taiwan

(n=66)

Problems	Mean	SD
1. Weak motivations	5.06	2.52
2. Ineffective management control	4.68	2.53
3. Difficulties in performance evaluation	4.62	2.42
4. Communication blockage	4.53	2.46
5. Promotions be blocked	4.52	2.53
6. Poor employee's satisfaction	4.42	2.28
7. Compensation gaps between employee groups	3.71	1.97
8. Difficulty of adapting to host country	3.36	2.24

Appendix Table D3:

IJV Human Resources Problems
Group of the United States
(n=48)

Problems	Mean	SD
1. Weak motivations	5.40	1.95
2. Communication blockage	5.13	2.72
3. Ineffective management control	5.10	2.20
4. Promotions be blocked	4.67	1.86
5. Compensation gaps between employee group	4.65	2.37
6. Difficulties in performance evaluation	4.50	2.02
7. Difficulty of adapting to host country	4.48	2.49
8. Poor employee's satisfaction	4.31	2.08

Appendix 1 Table D4

Mean Values of IJV Human Resources Problems: A Comparison between U.S.A. and Taiwan

Items	Resources Driven		Market Driven		Technology Driven		Risk Driven		Resources + Market		Technology + Market	
	U.S.	TWN	U.S.	TWN	U.S.	TWN	U.S.	TWN	U.S.	TWN	U.S.	TWN
QZ1: Weak motivations	5.00	5.44	5.31	4.88	NA	6.33	NA	4.33	5.67	3.93	4.69	4.61
QZ2: Ineffective management control	5.25	4.94	5.00	2.75	NA	4.78	NA	5.00	4.53	4.86	5.23	4.56
QZ3: Difficulty of adapting to host country	3.00	2.56	4.44	1.75	NA	3.67	NA	4.33	4.60	3.50	4.85	4.00
QZ4: Promotions be blocked	3.00	4.38	4.94	4.75	NA	4.78	NA	4.00	4.87	4.79	4.15	3.78
QZ5: Communication blockage	3.50	4.25	5.00	5.13	NA	4.33	NA	4.00	4.73	4.64	6.23	4.11
QZ6: Difficulties in performance evaluation	3.50	4.50	4.81	3.50	NA	4.22	NA	4.33	4.87	5.21	3.92	4.50
QZ7: Compensation gaps between employee groups	3.00	3.50	4.69	2.75	NA	3.22	NA	5.33	5.20	4.00	4.08	3.67
QZ8: Poor employee's satisfaction	3.75	4.56	5.38	4.88	NA	4.22	NA	5.67	4.20	3.07	3.23	4.56

Based on the Tukey multiple comparison result, type 7 (U.S. resources driven JV) and type 8 (U.S. market driven J.V.) has the significant difference.

Appendix 1 Table D5:

IJV Human Resources Problems--
MANOVA Test

MANOVA TEST:

MANOVA test for the hypothesis of no overall group effect:

H0: $\underline{U}_a = \underline{U}_b$

Criteria	Probability
1. Wilks' criterion	Prob>F = 0.1067*
2. Pillat's Trace	0.1067
3. Hotelling-Lawley Trace	0.1067
4. Roy's Maximum Root Criterion	0.1067

* Note: Aecept null hypothesis.

There is no significant difference between Taiwan group and the United States group in IJV human resources problems.

Appendix 1 Table D6:

IJV Human Resources Problems --
Tukey Multiple Comparison

Alpha=0.05 DF=63 MSE=0.504, Critical value of studentized range=4.638; Minimum significant difference= 1.1643

Tukey grouping*	Mean	N	Type
A	4.95	8	8
A			
B A	4.83	8	11
B A			
B A	4.62	8	4
B A			
B A	4.55	8	12
B A			
B A	4.44	8	3
B A			
B A	4.27	8	1
B A			
B A	4.25	8	5
B A			
B A	4.22	8	6
B A			
B A	3.80	8	2
B			
B	3.75	8	7

* Means with the same letter are not significantly different.

Only type 8 with type 7 has the significant difference.

Appendix 1 Table E1:

IJV Critical Success Factors

(n=116)

Factors	Mean	SD
1. Experienced managerial personnel	6.08	1.13
2. Appropriate leadership	5.47	1.23
3. Marketing or distribution systems	5.46	1.27
4. Strong financial resources	5.30	1.50
5. Technical skilled employees	5.16	1.30
6. Superiority in strategy	5.12	1.38
7. Advancement in technology	4.89	1.42
8. Full line of products or services	4.86	1.37
9. Low per-unit cost	4.84	1.55
10. Organization adaptation	4.73	1.30
11. Trademarks or reputation of parent firms	4.63	1.49
12. Supportive culture	4.59	1.52
13. Patents, licenses or other proprietary knowledge	4.55	1.50
14. Low price to customers	4.34	1.58
15 Location of joint venture facilities	4.10	1.31

Appendix 1 Table E2:

IJV Critical Success Factors: A Comparison between U.S.A. and Taiwan

Mean Value*

Type	QA1	QA2	QA3	QA4	QA5	QA6	QA7	QA8	QA9	QA10	QA11	QA12	QA13	QA14	QA15
Resources															
Taiwan	5.69	4.75	4.63	4.06	5.00	4.63	4.63	5.38	3.88	4.56	4.50	5.06	4.63	4.31	4.13
U.S.A.	5.00	5.25	2.75	5.00	5.75	4.75	2.50	4.50	5.75	3.25	3.25	4.50	3.00	3.50	4.00
Market															
Taiwan	6.50	5.88	5.63	3.88	5.13	5.00	4.63	4.75	4.25	4.88	4.50	5.13	4.25	4.88	4.38
U.S.A.	6.67	4.60	3.87	4.27	4.57	4.67	4.47	6.40	4.33	5.60	4.13	5.87	4.47	5.40	4.73
Technology															
Taiwan	6.89	5.56	6.00	4.22	5.56	4.22	4.11	5.00	4.11	5.44	4.89	5.89	5.22	4.89	5.00
U.S.A.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Risk															
Taiwan	6.33	6.00	6.00	4.00	5.67	5.67	4.67	6.00	3.67	5.67	6.67	6.33	4.33	5.67	6.00
U.S.A.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Resources + Market															
Taiwan	6.14	4.64	4.29	4.07	5.14	4.50	4.79	5.43	3.93	5.14	4.43	5.64	4.50	4.71	5.07
U.S.A.	5.67	5.13	4.80	4.00	6.13	5.33	5.00	5.60	5.00	5.33	4.53	5.67	4.87	5.20	4.93
Technology + Market															
Taiwan	5.67	5.61	5.67	3.94	5.00	4.61	5.06	5.22	4.22	5.33	5.00	5.11	4.72	5.17	5.17
U.S.A.	6.29	5.36	5.21	4.14	4.86	5.50	4.64	5.57	4.64	5.07	4.36	5.64	4.57	4.50	4.29

* Scheffe multiple contrast test shows that only type 4 with type 7 is significantly different.
type 4: Risk driven JV in Taiwan;
type 7: Resources driven JV in U.S.A.

Appendix 1 Table E3:

IJV Critical Success Factors--MANOVA Test

MANOVA TEST:

MANOVA test for the hypothesis of no overall group effect:

H0: $\underline{U}_a = \underline{U}_b$

Criteria	Probability
1. Wilks' criterion	Prob > F= 0.0705*
2. Pillai's TRACE	0.0705
3. Hotelling-Lawley Trace	0.0705
4. Roy's Maximum Root Criterion	0.0705

* Note: Accept null hypothesis.

There is no significant difference between Taiwan group and the United States group in IJV Critical Success Factors.

Appendix 1 Table E4:

IJV Critical Success Factors--
Scheffe Multiple Contrast

Alpha=0.05 DF=139 MSE=0.497; Critical value of F=1.948; Minimum Significant Difference= 1.078

Scheffe Grouping*	Mean	N	Type
A	5.512	15	4
A			
B A	5.146	15	11
B A			
B A	5.107	15	3
B A			
B A	5.033	15	6
B A			
B A	4.997	15	8
B A			
B A	4.976	15	12
B A			
B A	4.911	15	2
B A			
B A	4.828	15	5
B A			
B A	4.656	15	1
B			
B	4.183	15	7

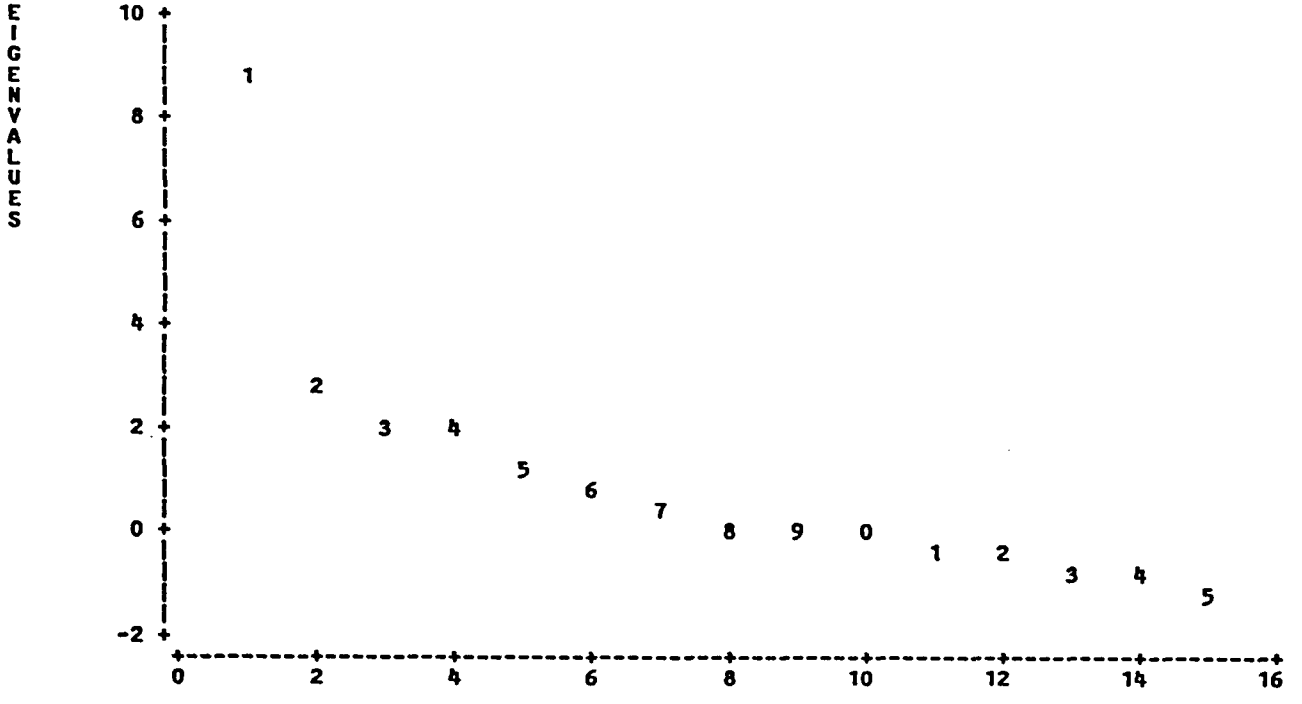
* Means with the same letter are not significantly different.

Type 4 with type 7 is significantly different.

Appendix 1 Table E5:

ALPHA FACTOR ANALYSIS

SCREE PLOT OF EIGENVALUES



Alpha Analysis for IJV Critical Success Factor

Appendix 1 Table F1:

IJV Autonomy Components-- Power of Management Decisions

(N=116)

Components	Mean	SD
1. Marketing decisions	3.94	1.11
2. Finance decisions	3.57	1.35
3. Production decisions	3.60	1.22
4. Research & Development decisions	3.56	1.23
5. Personnel decisions	3.92	1.06
6. Strategy making	3.97	1.00
7. Long term investment	3.33	1.25

Appendix 1 Table F2:

IJV Autonomy of Types

Type	N	Mean	SD
Resources Driven J.V.			
Taiwan	16	3.31	1.22
U.S.A.	4	4.43	0.87
Market Driven J.V.			
Taiwan	8	3.70	0.65
U.S.A.	15	4.10	0.60
Technology Driven J.V.			
Taiwan	9	3.87	0.44
U.S.A.	NA	NA	NA
Risk Driven J.V.			
Taiwan	3	3.52	1.20
U.S.A.	NA	NA	NA
Resources + Market J.V.			
Taiwan	13	3.49	0.84
U.S.A.	15	NA	NA
Technology + Market J.V.			
Taiwan	18	3.62	0.99
U.S.A.	14	3.68	0.83

Appendix 1

Table F3:

IJV Autonomy-- Power of Management Decisions

Type	Marketing Decision	Finance Decision	Production Decision	R&D Decision	Personnel Decision	Strategy Making	Long Term Investment
Resources							
Taiwan	3.44	2.88	2.81	3.50	3.50	3.81	3.25
U.S.A.	4.75	3.75	4.50	4.75	4.50	4.75	4.00
Market							
Taiwan	4.13	3.63	4.25	2.88	4.38	3.88	2.75
U.S.A.	4.60	3.93	3.80	4.00	4.73	4.67	3.00
Technology							
Taiwan	3.56	4.00	3.89	3.89	3.78	4.11	3.89
U.S.A.	NA	NA	NA	NA	NA	NA	NA
Risk							
Taiwan	2.67	2.33	2.67	2.67	3.00	2.33	2.00
U.S.A.	NA	NA	NA	NA	NA	NA	NA
Resources + Market							
Taiwan	3.69	3.23	3.54	3.31	3.77	3.69	3.23
U.S.A.	4.33	3.87	3.53	3.80	3.87	4.27	3.53
Technology + Market							
Taiwan	3.94	3.56	3.67	3.22	3.56	3.83	3.56
U.S.A.	3.71	3.79	3.71	3.57	4.00	3.57	3.43

Appendix 1 Table F4:

IJV Autonomy--MANOVA Test

MANOVA TEST:

MANOVA test for the hypothesis of no overall group effect:

H0: $\underline{U}_a = \underline{U}_b$

Criteria	Probability
1. Wilks' criterion	0.0267*
2. Pillai's Trace	0.0267
3. Hotelling-Lawley Trace	0.0267
4. Roy's Maximum Root Criterion	0.0267

* Note: Reject null hypothesis.

There is significant difference between Taiwan group and the United States group in IJV autonomy dimension.

Appendix 1 Table G1:

IJV Organizational Learning & Knowledge
-- between Taiwan group and United States group

Group	N	Mean	SD	Variance	T	Prob.
Taiwan	67	3.31	0.64	equal**	0.51	0.6080*
United States	48	3.25	0.63			

---

* Two groups' organizational learning & knowledge have no significant difference.

** H0: Variances are equal, F'=1.04
Prob = 0.9057, accept H0, thus variances are equal.

Appendix 1 Table G2:

IJV Organizational Learning & Knowledge of Types

Type	N	Mean	SD
Resources Driven J.V.			
Taiwan	16	3.08	0.70
U.S.A.	4	2.60	0.73
Market Driven J.V.			
Taiwan	7	3.59	0.59
U.S.A.	15	3.23	0.61
Technology Driven J.V.			
Taiwan	9	3.31	0.68
U.S.A.	NA	NA	NA
Risk Driven J.V.			
Taiwan	3	3.31	0.32
U.S.A.	NA	NA	NA
Resources + Market J.V.			
Taiwan	13	3.39	0.51
U.S.A.	15	3.53	0.45
Technology + Market J.V.			
Taiwan	18	3.38	0.73
U.S.A.	14	3.16	0.69

According to Scheffe test result, there is no significant difference among the types.

Appendix 1 Table G3:

IJV Organizational Learning & Knowledge-- MANOVA Test

MANOVA TEST:

MANOVA test for the hypothesis of no overall group effect:

H0: $\underline{U}_a = \underline{U}_b$

Criteria	Probability
1. Wilks' criterion	0.6080*
2. Pillai's Trace	0.6080
3. Hotelling-Lawley Trace	0.6080
4. Roy's Maximum Root Criterion	0.6080

* Note: Accept null hypothesis.

There is no significant difference between Taiwan group and the United States group in IJV organizational learning and knowledge.

Appendix 1 Table G4:

IJV Organizational Learning & Knowledge--
Scheffe Multiple Contrast

Alpha=0.05 DF=104 MSE=0.40; Critical value of F=1.971, Minimum significant difference=1.32

Scheffe Grouping*	Mean	N	Type
A	3.59	7	2
A			
A	3.53	15	11
A			
A	3.39	13	5
A			
A	3.38	18	6
A			
A	3.31	9	3
A			
A	3.23	15	8
A			
A	3.16	14	12
A			
A	3.11	3	4
A			
A	3.08	16	1
A			
A	2.60	4	7

* Means with the same letter are not significantly different.

Appendix 1 Table H1:

IJV Technology Between

Taiwan group and the United States group

Group	N	Mean	SD	Variance	T	Prob
Taiwan	68	3.63	1.71	equal**	0.39	0.6915*
United States	48	3.51	1.33			

* Two groups' technology have no significant difference.

** H0: Variances are equal, F'=1.65.
Prob = 0.0714, accept H0, thus, variances are equal.

Appendix 1 Table H2:

IJV Technology of Types

Type	N	Mean	SD
Resources Driven J.V.			
Taiwan	16	3.86	1.74
U.S.A.	4	2.78	1.34
Market Driven J.V.			
Taiwan	8	3.04	0.87
U.S.A.	15	3.25	1.26
Technology Driven J.V.			
Taiwan	9	3.61	1.29
U.S.A.	NA	NA	NA
Risk Driven J.V.			
Taiwan	3	2.69	1.68
U.S.A.	NA	NA	NA
Resources + Market J.V.			
Taiwan	13	3.09	0.41
U.S.A.	15	3.82	1.65
Technology + Market J.V.			
Taiwan	18	4.38	2.42
U.S.A.	14	3.68	0.98

According to Scheffe test result, there is no significant difference among the types.

Appendix 1 Table H3:

IJV Technology-- MANOVA Test

MANOVA TEST:

MANOVA test for the hypothesis of no overall group effect:

H0: $\underline{U}_a = \underline{U}_b$

Criteria	Probability
1. Wilks' criterion	0.6915*
2. Pillai's Trace	0.6915
3. Hotelling-Lawley Trace	0.6915
4. Roy's Maximum Root Criterion	0.6915

* Note: Accept null hypothesis.

There is no significant difference between Taiwan group and the United States group in IJV technology.

Appendix 1 Table H4:

IJV Technology--Scheffe Multiple Contrast

Alpha=0.05 DF=105 MSE=2.37; Critical value of F=1.97; Minimum significant difference= 3.20

Scheffe Grouping*	Mean	N	Type
A	4.38	18	6
A			
A	3.86	16	1
A			
A	3.82	15	11
A			
A	3.68	14	12
A			
A	3.61	9	3
A			
A	3.25	15	8
A			
A	3.09	13	5
A			
A	3.04	8	2
A			
A	2.78	4	7
A			
A	2.69	3	4

* Means with the same letter are not significantly different.

Appendix 1 Table J1:

IJV Human Resources Management: A Comparison Between U.S.A. and Taiwan (Mean Value)

Items	Resources Driven		Market Driven		Technology Driven		Risk Driven		Resources + Market		Technology + Market	
	U.S.	TWN	U.S.	TWN	U.S.	TWN	U.S.	TWN	U.S.	TWN	U.S.	TWN
HR1: Established career path	3.75	3.31	2.93	3.13	NA	2.78	NA	2.33	3.00	2.86	3.31	2.53
HR2: Equipped employees w/job related skills	3.25	3.56	3.40	3.25	NA	3.78	NA	2.67	3.87	3.36	3.54	3.84
HR3: Equipped managers with improved skills	2.50	2.88	2.93	2.63	NA	3.11	NA	2.33	3.33	2.71	2.38	2.95
HR4: Compansation packages	3.25	3.38	3.93	3.25	NA	3.33	NA	2.67	3.20	3.57	3.46	3.68
HR5: Methods of selection	3.00	2.88	3.40	3.38	NA	2.89	NA	3.00	2.93	3.14	3.38	3.42
HR6: Match rewards to performance	3.75	3.13	3.80	3.38	NA	3.00	NA	3.00	3.33	3.21	3.69	3.63
HR7: Employees' appraisal methods	3.75	3.56	3.33	3.50	NA	3.11	NA	2.33	3.13	3.14	3.69	3.63
HR8: Working conditions.	3.00	3.19	4.33	3.75	NA	3.89	NA	4.00	3.60	3.64	3.85	3.53
HR9: Fringe benefits	3.25	3.31	4.00	3.38	NA	3.56	NA	2.67	3.33	3.36	3.69	3.58

According to scheffe test result, (type 8 vs type 4), (type 6 vs type 4), and (type 12 vs type 4) are significantly different.

Appendix 1 Table J2:

IJV Human Resources Management-- MANOVA Test

MANOVA TEST:

MANOVA test for the hypothesis of no overall group effect:

H0: $\underline{U}_a = \underline{U}_b$

Criteria	Probability
1. Wilks' criterion	Prob > F= 0.4756*
2. Pillai's Trace	0.4756
3. Hotelling-Lawley Trace	0.4756
4. Roy's Maximum Root Criterion	0.4756

* Note: Accept null hypothesis.

There is no significant difference between Taiwan group and the United States group in IJV human resources management.

Appendix 1 Table J3:

IJV Human Resources Management-- Scheffe Multiple Contrast

Alpha=0.05 DF=72 MSE=0.085; Critical value of F=2.01, Minimum significant difference=0.584

Scheffe Grouping		Mean	N	Type
	A*	3.56	9	8
	A			
	A	3.53	9	6
	A			
	A	3.44	9	12
	A			
B	A	3.30	9	11
B	A			
B	A	3.29	9	2
B	A			
B	A	3.28	9	7
B	A			
B	A	3.27	9	3
B	A			
B	A	3.24	9	1
B	A			
B	A	3.22	9	5
B				
B		2.78	9	4

* Means with the same letter are not significantly different.

Type 8 vs Type 4
Type 6 vs Type 4
Type 12 vs Type 4
} are significantly different.

Appendix 1 Table K1:

Mean Value of IJV Organizational Adaptation: A Comparison between U.S.A. and Taiwan

Items	Resources Driven		Market Driven		Technology Driven		Risk Driven		Resources + Market		Technology + Market	
	U.S.	TWN	U.S.	TWN	U.S.	TWN	U.S.	TWN	U.S.	TWN	U.S.	TWN
OA1: The org. can adapt to dramatic shifts & changes underway in society.	3.50	4.31	4.87	5.00	NA	4.00	NA	4.00	5.20	4.14	4.46	4.84
OA2: The org can handle the new demands reflecting the changes in top management.	4.75	4.88	4.53	5.38	NA	4.78	NA	5.00	4.93	4.93	4.54	5.11
OA3: The org. can deal effectively with the new person coming into org.	5.00	4.19	4.47	5.00	NA	4.67	NA	4.67	4.60	4.86	4.85	4.95
OA4: The org. has changed its priority and approaches with regard to resources, environment & ecology.	4.00	3.75	4.67	5.50	NA	4.22	NA	4.33	4.40	4.36	4.62	4.79
OA5: The org. is innovative in finding ways to improve the institutional environments.	3.50	4.75	4.60	5.00	NA	4.11	NA	4.00	4.87	4.00	4.54	4.79

According to Scheffe test result, type 2 (market driven JV in Taiwan) vs type 7 (resources driven JV in U.S.A.) is significantly different.

Appendix 1 Table K2:

IJV Organizational Adaptation-- MANOVA Test

MANOVA TEST:

MANOVA test for the hypothesis of no overall group effect:

H0: $\underline{U}_a = \underline{U}_b$

Criteria	Probability
1. Wilks' criterion	Prob > F= 0.1024*
2. Pillai's Trace	0.1024
3. Hotelling-Lawley Trace	0.1024
4. Roy's Maximum Root Criterion	0.1024

* Note: Accept null hypothesis.

There is no significant difference between Taiwan group and the United States group in IJV organizational adaptation.

Appendix 1 Table K3:

IJV Organizational Adaptation--
Scheffe Multiple Contrast

Alpha=0.05 DF=36 MSE=0.107; Critical value value of F=2.153; Minimum significant difference =0.9104

Scheffe Grouping*		Mean	N	Type
	A	5.18	5	2
	A			
B	A	4.87	5	6
B	A			
B	A	4.80	5	11
B	A			
B	A	4.63	5	8
B	A			
B	A	4.62	5	5
B	A			
B	A	4.60	5	12
B	A			
B	A	4.40	5	4
B	A			
B	A	4.38	5	1
B	A			
B	A	4.36	5	3
B				
B		4.15	5	7

* Means with the same letter are not significantly different.

Only type 2 with type 7 is significantly different.

Appendix 1 . Table L1

N=115 REGRESSION MODELS FOR DEPENDENT VARIABLE: ROS MODEL

NUMBER IN MODEL	R-SQUARE	C(P)	VARIABLES IN MODEL
1	0.00152922	13.544052	AUTONOMY
1	0.02950459	10.054550	OL
1	0.03996453	8.749831	TECH
1	0.05744489	6.569423	HRT
1	0.09063520	2.429435	ADAPT
2	0.02985853	12.010401	AUTONOMY OL
2	0.04062327	10.667664	AUTONOMY TECH
2	0.05759021	8.551296	AUTONOMY HRT
2	0.05808690	8.489341	OL TECH
2	0.07103314	6.874494	OL HRT
2	0.08455197	5.188227	TECH HRT
2	0.09174772	4.290666	AUTONOMY ADAPT
2	0.09923474	3.356773	HRT ADAPT
2	0.10093326	3.144909	OL ADAPT
2	0.11215549	1.745107	TECH ADAPT
3	0.05821260	10.473662	AUTONOMY OL TECH
3	0.07144656	8.822926	AUTONOMY OL HRT
3	0.08487421	7.148031	AUTONOMY TECH HRT
3	0.09267689	6.174766	OL TECH HRT
3	0.10110074	5.124019	AUTONOMY HRT ADAPT
3	0.10253439	4.945193	AUTONOMY OL ADAPT
3	0.10722435	4.360191	OL HRT ADAPT
3	0.11352320	3.574506	AUTONOMY TECH ADAPT
3	0.11836161	2.970987	OL TECH ADAPT
3	0.11904121	2.886218	TECH HRT ADAPT
4	0.09324858	8.103456	AUTONOMY OL TECH HRT
4	0.10951155	6.074898	AUTONOMY OL HRT ADAPT
4	0.12011874	4.751813	AUTONOMY OL TECH ADAPT
4	0.12113014	4.625656	AUTONOMY TECH HRT ADAPT
4	0.12373373	4.300898	OL TECH HRT ADAPT
5	0.12614603	6.000000	AUTONOMY OL TECH HRT ADAPT

Appendix 2:

Questionnaire

Appendix 2: Questionnaire

Doctoral Dissertation Questionnaire

INTERNATIONAL JOINT VENTURE MANAGEMENT: AN EXPLORATORY STUDY OF COMPANIES IN TAIWAN AND THE UNITED STATES

by

FONGKANG H. CHU

Baruch College

The City University of New York

1992

DIRECTIONS FOR PROJECT PARTICIPANTS: This questionnaire is intended to be part of my **Doctoral Dissertation Research.** Designed for easy completion, it will take only ten to fifteen minutes to complete.

If you are interested in this topic, please check the box below to receive a copy of the results.

____Yes ____No.

All the data provided here will be kept confidential.
Please be sincere in your answers. Your cooperation is appreciated.

Name of your company: _____

Name of Joint Venture Partner or parent companies:

_____

Principal product(s) in your company: _____

The year your company was formed: _____

GENERAL INFORMATION SECTION:

I. How many employees do you have in your company: _____

II. What was your annual sales (in U.S. dollars) last year? _____

III. Within the past three years, your firm's annual sales has
1. Grown 2. Remained Static 3. Declined

If you answered grown or declined, what was the average rate of growth/decline per year?

% Growth _____ **% Decline** _____

IV. What was the average return on sales (ROS) within the past three years ?

Average ROS = _____

$$\text{ROS} = \frac{(\text{Profit before taxes + owner compensation})}{\text{Sales}}$$

V. When the venture was formed, the major reasons for establishing the company were: (please check one)

____ Resources driven (to gain labor/financial resources)
____ Market driven (gaining access to foreign market)
____ Technology driven (technology transfer from US)
____ Risk driven (reducing the venture risk)
____ Resources plus Market driven
____ Technology plus Market driven

SUCCESS FACTORS SECTION:

VI. Please use a scale from 1 to 7 (when 7 represents the most important factor and 1 represents the least important factor) and rank the importance of the following factors for a successful joint venture (please check each item):

	Least important						Most important
1. Experienced managerial personnel .	1	2	3	4	5	6	7
2. Technical skilled employees	1	2	3	4	5	6	7
3. Advancement in technology	1	2	3	4	5	6	7
4. Location of joint venture facilities .	1	2	3	4	5	6	7
5. Strong financial resources	1	2	3	4	5	6	7
6. Low per-unit cost	1	2	3	4	5	6	7
7. Trademarks or reputation of parent firms	1	2	3	4	5	6	7
8. Marketing or distribution systems .	1	2	3	4	5	6	7
9. Low price to customers	1	2	3	4	5	6	7
10. Superiority in strategy	1	2	3	4	5	6	7
11. Patents, licenses or other proprietary knowledge	1	2	3	4	5	6	7
12. Appropriate leadership	1	2	3	4	5	6	7
13. Supportive culture	1	2	3	4	5	6	7
14. Full line of products or services . . .	1	2	3	4	5	6	7
15. Organization adaptation	1	2	3	4	5	6	7

VII. To what extent do you have the power to participate/engage in management decisions: (Can you make decision independently?)

	Small power				Sufficient power
1. Marketing decisions	1	2	3	4	5
2. Finance decisions	1	2	3	4	5
3. Production decisions	1	2	3	4	5
4. Research & development	1	2	3	4	5
5. Personnel decision	1	2	3	4	5
6. Strategy making	1	2	3	4	5
7. Long term investment	1	2	3	4	5

VIII. How long has your firm been in business ?
1. less than 3 years 2. 3-5 years
3. 6-10 years 4. 11-20 years
5. over 20 years

IX. Did you have any previous experience in joint venture management ?
_____ Yes; _____ No.
If yes,
How many years of experience did you have? _____years.
How many joint ventures did you manage? 1 2 3 4 5

ORGANIZATIONAL KNOWLEDGE SECTION:

X. To what degree did your company get support from your parent company in the following areas?

	very weak	*weak*	*mode-rate*	*strong*	*very strong*
Resources support	1	2	3	4	5
Technical support	1	2	3	4	5
Management support	1	2	3	4	5
Channel support	1	2	3	4	5

XI. How often did you have training for joint venture management?

1.NEVER 2.ALMOST NEVER 3.SOMETIMES 4.FREQUENTLY 5. VERY OFTEN

XII. Please indicate to what degree in your company:

	very poor	*poor*	*mode-rate*	*good*	*very good*
1. Knowledge can be imitated	1	2	3	4	5
2. Knowledge can be exchanged/shared	1	2	3	4	5
3. There is a climate of learning	1	2	3	4	5
4. Innovative ideas are encouraged . . .	1	2	3	4	5

TECHNOLOGY SECTION:

XIII. What was the average percentage of research & development amount to sales dollar value during the past three years ?
R&D to Sales ratio: _____%

XIV. Please indicate the state of your company's technology achievement:

	very weak	*weak*	*mode-rate*	*strong*	*very strong*
1. Advancement of basic & technological knowledge	1	2	3	4	5
2. Leader in new products introduction	1	2	3	4	5
3. Leader in products improvement	1	2	3	4	5
4. Leader in process improvement	1	2	3	4	5
5. Leader in design and prototype development . .	1	2	3	4	5

HUMAN RESOURCES SECTION :

XV. Please use a scale from 1-10 (when 10 represents the most important problem and represents the least important problem) and rank the order of the problems of human resources in in your company:

_____ Weak motivations for workers and managers to change their behavior.
_____ Management controls are ineffective.
_____ Adapting to host country is difficult.
_____ Promotions were somewhat blocked.
_____ Communication blockage in the company.
_____ There existed difficulties in performance evaluation of staffs.
_____ Compensation gaps between employee groups existed.
_____ Poor satisfaction of employees.

XVI. What was your company's employee turnover rate last year _____%.
To your knowledge, compared to other companies in the industry, your company's turnover rate is:

1. EXTREMELY LOW 2. LOW 3. REASONABLE 4. HIGH 5. EXTREMELY HIGH

XVII. Please use a scale from 1-5 (when 1 represents to a very SMALL EXTENT and 5 represents to a VERY GREAT EXTENT) and answer the following questions:

To what extent do you believe a manager should follow the following patterns of management:

	Small extent				Great extent
1. Provide feedback to employees	1	2	3	4	5
2. Explain expected standards of performance . .	1	2	3	4	5
3. Detect subtle changes in technology for the joint venture	1	2	3	4	5
4. Keep group attention focused on important matters	1	2	3	4	5
5. Provide rewards for individual efforts	1	2	3	4	5
6. Considers feeling	1	2	3	4	5
7. Encourage career development through informal means	1	2	3	4	5
8. Demands highest work performance standards .	1	2	3	4	5

	Small extent				Great extent
9. Maintains a friendly working relationship . . .	1	2	3	4	5
10. Believes that the JV's objectives go beyond making money	1	2	3	4	5
11. Provides employees with opportunities for exposure to other units in the joint venture . . .	1	2	3	4	5
12. Keeps employees posted on new developments affecting them	1	2	3	4	5
13. Explains the significance of group efforts . . .	1	2	3	4	5
14. Holds employees accountable for their actions .	1	2	3	4	5
15. Develops expertise in the technical aspects of employees' jobs	1	2	3	4	5

XVIII. In your opinion, could you evaluate the following implementation activities of the current human resources practices in your company:

	Very poor	*poor*	*Mode-rate*	*good*	*Very good*
1. Established career path for employees and managers	1	2	3	4	5
2. Equipped employees with job related skills . . .	1	2	3	4	5
3. Equipped managers with improved managerial skills		1	2	3	45
4. Compensation packages for employees and managers	1	2	3	4	5
5. Methods of selection of employees to the jobs .	1	2	3	4	5
6. Match employees and managers rewards to their performance	1	2	3	4	5
7. Employees' performance appraisal methods . . .	1	2	3	4	5
8. Working conditions (noise, dust, illumination)	1	2	3	4	5
9. Fringe benefits for employees and managers . .	1	2	3	4	5

ORGANIZATIONAL ADAPTATION:

XIX. On this scale of lowest (1) to highest (7), circle your rating of your organization's adaptation effectiveness:

	Lowest						*Highest*
1. The organization is able to adapt to the dramatic shifts and changes underway in society and the larger culture	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2. The organization is able to handle the new demands made upon it as a result of the changes in top administration and management emphasis	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3. The organization is able to deal effectively with the new kind of person coming into your workforce and management	**1**	**2**	**3**	**4**	**5**	**6**	**7**
4. The organization has changed its management priorities and approaches with regard to scarce resources as well as environmental & ecological concern	**1**	**2**	**3**	**4**	**5**	**6**	**7**
5. The organization is innovative in finding ways to improve the institutional environment	**1**	**2**	**3**	**4**	**5**	**6**	**7**

BIBLIOGRAPHY

Ansoff, H. G. "Strategic Management of Technology", The Journal of Business Strategy, Vol. 7, No. 3, Winter 1987, pp. 28-39.

Auster, E.R. "International Corporate Linkages: Dynamic Forms in Changing Environments", The Columbia Journal of World Business, Vol. 12, No. 2, Summer 1987, pp. 3-6.

Baird, L. and Meshoulam I. "Managing Two Fits of Strategic Human Resource Management", Academy of Management Review, Vol. 13, No. 1, January 1988, pp. 116-128.

Beatty, C. A. "Mergers and Acquisitions in Canadian Companies: Predicting Success", **Working Paper**, #90-37, Queen's University, Ontario, November 1990

Belsey, D. A., Kuh, E., and Welsch, R. E. Regression Diagnostics, New York, John Wiley & Sons, 1980

Berg, S. V.; Duncan, J. and Friedman, P. Joint Venture Strategies and Corporate Innovation, Cambridge, Oelgeschlager, Gunn & Hain, Publishers, Inc., Massachusetts, 1982

Bivens, K. K. and Lovell, E. B. Joint Ventures with Foreign Partners: International Survey of Business Opinion and Experience, New York, National Industrial Conference Board, 1966

Caves, E. and Mehra, K. "Entry of Foreign Multinational Into U.S. Manufacturing Industries", in Porter, M.E. (ed.), Competition in Global Industries, Boston, MA, Harvard Business School Press, 1986

Chowdhury, M.A. "International Joint Ventures: Some Interfirm-Organization Specific Determinants of Successes and Failures--A Factor Analytic Exploration", Ph.D Dissertation, Temple University, 1989

Cronbach, L.J. "Coefficient Alpha and the Internal Structure of Test", Psychometrika, Vol. 16, No.3, 1951, pp. 297-334.

Davis, T. J. and Stetson, C. P. Jr. "Creating Successful Venture-Backed Companies", The Journal of Business Strategy, Vol. 5, No. 3, Winter 1985, pp. 45-58.

Dillon, W.D. ; Madden, T.J. and Firtle, N.H. Marketing Research in a marketing environment, San Louis, Times Mirror / Mosby College Publishing, 1987

Duchesneau, D. A. and Gartner, W. B. " A Profile of New Venture Success and Failure in an Emerging Industry", Journal of Business Venturing, Vol. 5, No. 5, September 1990, pp. 297-312.

Fagre, N. and Wells, L. "Bargaining Power of Multinationals and host government", Journal of international Business Studies, Fall 1982, pp. 9-23.

Fornell, C., Lorange, P. and Roos, J. "The Cooperative Venture Formation Process: A Latent Variable Structural Modeling Approach", Management Science, Vol. 36, No. 10, October 1990, pp. 1246-1255.

Franko, L. G. Joint Venture Survival in Multinational Corporations, New York, Praeger, 1971

Frayne, C. A. and Geringer, J. M. "The Strategic Use of Human Resource Management Practices As Control Mechanisms In International Joint Ventures", Paper from book by JAI Press Inc. Research in Personnel And Human Resources Management, 1990, Suppl. 2, pp. 53-69.

Friedlander, F. and Pickle, H. "Components of Effectiveness in Small Organizations", Administrative Science Quarterly, Nov. 13, No. 2, September 1968, pp. 289-304.

Ghoshal, S. "Global Strategy: An Organizing Framework", Strategic Management Journal, Vol. 8, 1987, pp. 425-440.

Hamel, G.; Doz, Y. L. and Prahalad, C. K. "Collaborate with Your Competitors -- And Win", Harvard Business Review, January-February 1989, pp.133-139.

Hannart, J. "A Transactional Costs Theory of Equity Joint Ventures", Strategic Management Journal, Vol. 9, 1988, pp. 361-374.

Harrigan, K. R. Strategies for Joint Ventures, Massachusetts, Lexington Books, 1985

Harrigan, K. R. Managing for Joint Venture Success, Massachusetts, Lexington Books, 1986

Harrigan, K. R. "Joint Ventures and Competitive Strategy", Strategic Management Journal, Vol. 9, 1988, pp. 141-158.

Harvey, M. G. "Application of Technology Life Cycles to Technology Transfers", The Journal of Business Strategy, Vol. 5, No. 2, Fall 1984, pp. 51-58.

Hladik, K. J. International Joint Ventures: An Economic Analysis of U.S. Foreign Business Partnerships. Lexington, MA. Lexington Books, 1985

Kedia, B. L. and Bhagat, R. S. "Cultural Constraints on Transfer of Technology Across Nations: Implications for Research in International and Comparative Management", Academy of Management Review, Vol. 13, No. 4, 1988, pp. 559-571.

Killing, J. P. Strategies for Joint Venture Success, MA. Praeger Publisher, 1983

Kabayashi, Y. "human Aspects of Management", In Ballon, R.J.(Ed.), Joint Ventures and Japan, Tokyo, Sophia University, 1967

Kogut, B. "Joint Ventures: Theoretical and Empirical Perspectives", Strategic Management Journal, Vol. 9, 1988, pp. 319-332.

Lei, D. and Slocum, J. W. Jr. "Global Strategic Alliances: Payoffs and Pitfalls", Organizational Dynamics, Winter 1991, pp.44-62.

Lorange P. and Probst J.B. "Joint Ventures as Self-Organizing Systems: A Key To Successful Joint Venture Design and Implementation", Columbia Journal of World Business, Vol. 12, No. 2, Summer 1987, pp. 71-77.

Lorange P. and Roos J. "Why Some Strategic Alliances Succeed and Others Fail", The Journal of Business Strategy, Vol. 12, No. 1, January/ February 1991, pp. 25-30.

Lucas, R. "Political-Cultural Analysis of Organizations", Academy of Management Review, Vol. 12, No. 1, 1987, pp. 144-156.

Lyles, M. A. "Common Mistakes of Joint Venture Experienced Firms", Columbia Journal of World Business, Vol. 12, No. 2, Summer 1987, pp. 79-85.

Milliman, J.; Glinow, M. A. and Nathan, M. "Organizational Life Cycles and Strategic International Human Resource Management in Multinational Companies: Implications for Congruence Theory", Academy of Management Review, Vol. 16, No. 2, April 1991, pp. 318-339.

Morris, J. M. Joint Ventures: An Accounting, Tax and Administrative Guide, New York, John Wiley & Sons, 1987

O'Reilly, C. "Corporations, Culture, and Commitment: Motivation and Social Control in Organization", California Management review, Summer 1989, pp. 9-25.

Peters, T. J. and Waterman, R. H. In search of Excellence, New York, Harper & Row, 1982

Peterson, R. B. and Schwind, H.F. "A Comparative Study of Personnel Problems in International Companies and Joint Ventures in Japan" Journal of International Business Study, Vol. 8, No. 1, 1977, pp. 45-55.

Pucik, V. "Strategic Alliances, Organizational Learning and Competitive Advantage: The HRM Agenda", **Working Paper**, #537, University of Michigan, January 1988a, pp. 1-27.

Pucik, V. "Strategic Alliance with the Japanese: The Role of Organizational Learning", **Working Paper**, # 538, University of Michigan, January 1988b, pp.1-27.

Raelin, J. A. "An Anatomy of Autonomy: Managing Professionals", The Academy of Management Executive, Vol. III, No. 3, August 1989, pp. 216-228.

Robinson, R.B. Jr. "Measures of Small Firm Effectiveness for Strategic Planning Research", Journal of Small Business Management, Vol. 21, No. 2, 1983, pp.22-29.

Shenkar, O. and Zeira Y. "Human Resources Management in International Joint Ventures: Directions for Research", Academy of Management Review, Vol. 12, No. 3, 1987, pp. 546-557.

Shenkar, O. and Zeira Y. "International Joint Ventures: A Tough Test for HR", Personnel, January 1990, pp. 26-31.

Stevenson, W. B. ; Pearce, J. L. & Porter,L. W. "The Concept of "coalition" in Organization Theory and Research", Academy of Management Review, Vol. 10, No. 2, April 1985, pp. 256-268.

Stopford, M and Wells, Managing the Multinational Enterprise, New York, Basic Books, 1972

United Nations, East-West Joint Ventures, New York, United Nations, 1988.

Walsh, J. P. and Ungson, G. R. "Organizational Memory", Academy of Management Review, Vol. 16, No. 1, 1991, pp. 57-91.

Wille, J.R. "Joint-Venturing Strategies", From the book edited by Carter, J.D.; Cushman, R.F and Hartz, C.S. The Handbook of Joint Venturing, 1988, pp. 3-24.

Williamson, O. E. "The Economics of Organization: The Transaction Cost Approach", American Journal of Sociology, Vol. 87, 1981, pp. 548-577.

Wright, R.W. "Joint Ventures Problems in Japan", Columbia Journal of World Business, Vol. 14, No. 1, 1979, pp. 25-31.

Yeh, R. "Management Practices of Taiwanese Firms: As Compared To Those of American and Japanese Subsidiaries in Taiwan", Asia Pacific Journal of Management, Vol. 8, No. 1, April 1991, pp. 1-14.