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**JOINT VENTURE MANUFACTURING IN
CHINA - KEY OPPORTUNITIES FOR
OPERATIONS MANAGEMENT RESEARCH**

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Joint Venture Manufacturing in China—Key Opportunities for Operations Management Research

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ABSTRACT

International joint venture manufacturing is important for both the Chinese economy and the large number of foreign companies which are investing in China. A literature survey investigated previous research in this area from both Western and Chinese researchers (and published in either English or Chinese). By reviewing the extant literature in both languages, a broader understanding of the purposes, issues and problems associated with IJV manufacturing in China was obtained. The investigation showed: 1) A significant amount of research has investigated the business advantages of international joint ventures but very little has been published on operational issues; 2) Operations management researchers have, until now, largely ignored this area, although operational aspects play a key role in the success of manufacturing ventures; 3) There are some important differences between the conclusions of Western researchers on international joint ventures and the points raised in the articles published in Chinese. From these points, this paper develops an agenda for further research into IJV manufacturing in China.

KEYWORDS

Manufacturing in China, International Joint Ventures, People's Republic of China.

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INTRODUCTION

The growth in the Chinese economy is impressive by any standards—gross national product has increased annually in real terms by, on average, 8.9 % over the period 1978 to 1995 [Economist Intelligence Unit, 1985-1996] and, if this growth continues, the Chinese economy will be the third largest in the world at the beginning of the next millennium. Fast growth, a potentially huge domestic market [Chan et al, 1997] and low labour costs all lead to the People's Republic of China (PRC) being an attractive area for foreign investment. As a consequence, more than one hundred of the *Fortune 500* companies have businesses in China [Lu and Wang, 1996] and many others are also investing. Foreign direct investment (FDI) increased from \$2.65 billion in 1984 to \$ 73.3 billion in 1996 [Liu and Ye, 1985-1997] and currently over 14 million Chinese are employed in enterprises created or supported by FDI [Anonymous, 1996a].

International joint ventures (IJVs) account for over half of foreign investment [Liu and Ye, 1985-1997] and, of these, 67% are in the manufacturing sector [Scroath et al, 1993]. Due to this very high level of foreign investment in Chinese manufacturing, over 90% of manufactured goods exported from China in 1994 came from enterprises supported by foreign investment [Anonymous, 1996a].

Manufacturing IJVs are viewed by the Chinese authorities as the preferable form of foreign capital because they provide an opportunity for the transfer to the Chinese economy of advanced technology and management skills and lead to increased exports [Anonymous, 1996a]. Western companies also have a particular interest in manufacturing in China as it gives them access to the large Chinese market and to potentially low production costs [Davies, 1994]. Since IJV manufacturing is critical to both the Chinese economy and many foreign investors, it is an area which is worthy of investigation by operations management researchers.

Investments in manufacturing IJVs in China are often warranted because of the strategic benefits they can bring. However, in practice, IJVs do not always perform effectively. For example, ineffective operations management and financial losses have been reported at 30-60 percent of manufacturing IJVs [Anonymous, 1996a] [Anonymous, 1995b] [Han and Xu, 1995]. In addition, many parent companies are dissatisfied with the performance of their IJVs [Beamish, 1993]. Much of the dissatisfaction and financial losses associated with IJVs is related to problems in operations management. For example, finding high-quality local suppliers is not simple [Bruijn and Jia, 1993/4]. This is complicated by the fact that IJVs are required to balance their foreign exchange. This means exports must be increased or a higher percentage of components must be purchased locally. However, increasing exports can be difficult as Western partners' main focus is access to the Chinese market.

The importance of research into operations management in an international context has been recognised [Sweeney, 1994] [Adam, 1992]. Similarly the importance of research into IJVs worldwide [Fey, 1994] and especially in China [Anonymous, 1996a] has also been noted. A stream of research has investigated the role, the legislation, the strategic planning, and the organisation of IJVs (see for instance, [Friedman and Kalmonoff, 1961], [Hennart, 1991], [Fey, 1994], [Chi and McGuire, 1996], [Mitchell and Singh, 1996], [Harrigan, 1986], [Hamel, 1991], [Janger, 1980], [Killing, 1983]). However, both Western and Chinese research have largely ignored the manufacturing operational issues. Therefore, from a operations management perspective, this paper aims to:

- 1) Review the literature on IJVs in China by Western researchers;
- 2) Review the work of Chinese researchers in this area, in order to contrast these with the Western viewpoint and obtain a broader perspective;
- 3) Identify the most relevant opportunities for research into manufacturing IJVs in China.

INTERNATIONAL JOINT VENTURES: ADVANTAGES AND LIMITATIONS

Although IJVs are a relatively new form of business venture, compared to domestic joint ventures or multi-national enterprises [Shenkar and Zeira, 1987], they are increasingly important [Fey, 1994]. Most of the literature agrees that IJVs are a key form of international business. The main rationale for using IJVs over other forms of FDI is that they normally have lower transaction costs and offer either strategic or specific local advantages [Baran et al, 1996]. Nevertheless there is some debate about the circumstances in which they are effective and the best ways in which they can be

managed. This debate reflects the fact that failure rates of IJVs are relatively high [Shenkar and Zeira, 1987] and that alternative modes for market entry, such as wholly-owned subsidiaries or long-term licensing agreements, may in some circumstances be more effective than IJVs [Teagarden and Glinow, 1990].

Theoretical research has shown that transaction costs should be lower in IJVs [Chi and McGuire, 1996]. This has been empirically verified by Hennart [1991], who conducted a large scale study on Japanese-US joint ventures. Fey [1994] went as far as to say that IJVs are “a superior mode of operation” due to their cost efficiencies. Chi and McGuire [1996] claimed that IJVs also have strategic advantages. For example, they offer an effective vehicle for companies pursuing vertical integration [Stuckley, 1983], or horizontal integration [Beamish and Banks, 1987]. Harrigan [1986] argued that joint ventures help to increase productivity and competitiveness because they pool the resources and the strengths of the individual partners. However, an empirical study [Mitchell and Singh, 1996] rejected the “widely stated... argument” that inter-firm collaboration, including IJVs, is always effective. Therefore, specific business circumstances influence whether IJVs really are the best approach for companies.

Despite their potential benefits, Harrigan [1986] identified several risks with using IJVs. These include: the risks of conflict on the sovereignty of technology transfer between partners, or between partners and the host government, and a loss of competitive advantage which may result if the decision making between the IJV partners is slow. These drawbacks normally result from the relative inexperience of companies using IJVs. Other problems may arise because of restrictive governmental regulations, often resulting from lack of understanding of IJVs on the part of the authorities. However, most problems are created by the inability of IJV partners to “manage ventures effectively” [Harrigan, 1986].

IJVs may be more appropriate for some industrial sectors and in some circumstances but not in others. For example, in industries such as oil and bauxite extraction where capital costs are high, IJVs are common—because they allow companies to reduce their individual risks [Hennart, 1988]. Another example where IJVs offer a big advantage is in the transfer of knowledge such as production know-how and management skills. However, the cost of creating an IJV means that it is only viable for substantial projects, as shown by the automotive industry’s reluctance to use IJVs for the production of smaller components [Hennart, 1988].

One set of researchers have concluded that the “academic understanding of joint ventures is still limited in scope and depth” [Yan and Gray, 1994]. In addition, another researcher has expressed the opinion that all theories on IJVs are weak because they do not provide companies with clear information on *how* to manage their ventures successfully [Baran et al, 1996]. Therefore, research into operational issues at IJV manufacturers in China would, potentially, be a useful contribution. From previous research, it can be concluded that, in theory, IJVs are an effective form of international investment but in practice the actual business situation needs careful consideration and IJV implementation needs to be managed appropriately. However, information on how to manage IJVs is sparse.

RESEARCH INTO IJVs IN CHINA

Overview of the Research

Research on IJVs in China has been published in both the English and the Chinese languages, by both Western and Chinese researchers. However, it should be noted that the majority of the Chinese studies have not been published in the west. In order to

give a comprehensive view of previous investigations of IJVs in China, the literature in both languages was reviewed and is summarised.

The number of IJVs in China has risen rapidly—Table I shows that over 34,000 were formed in 1992 alone. Pan [1994] quotes government figures that over 41,000 foreign investments had been made in China from 1979 to 1991, many in IJVs. Fan [1996] identifies that there were 167,500 IJVs which had been formed by the end of 1993. Many foreign companies have invested in China: Taiwan and Hong Kong are the major outside investors [Glaister and Wang, 1993][Osland and Cavusgil, 1996], followed by the US and Japan [Fan, 1996]. German investment is also rising rapidly [Wang, 1996]. However, many IJVs have closed and many of those remaining have experienced significant changes in the equity levels of the partners [Pan et al, 1995].

Table I: Statistics of IJVs in China and Papers on Sino-Foreign Joint Ventures

Year	No. of IJVs formed by year	Investment (Million US \$)	No. of trade papers (in English)	No. of Academic Papers (in English)	No. of Papers - All Types (in Chinese)
1979	*	300	6	-	*
1980	*	300	15	-	*
1981	*	300	11	-	*
1982	*	400	8	-	*
1983	*	400	12	-	*
1984	*	260	11	-	*
1985	*	580	39	-	*
1986	*	800	24	-	*
1987	*	1 490	28	-	*
1988	*	1 980	58	-	*
1989	*	2 040	36	-	196
1990	*	1 890	51	4	231
1991	*	2 300	32	1	183
1992	34 354	6 120	49	2	268
1993	54 003	15 350	148	8	291
1994	27 890	17 930	162	7	331
1995	20 455	39 741	210	9	371
1996	12 628	31 876	180	10	474
Total			1090	41	

Sources: *China Statistical Yearbook* [Liu and Ye, 1985-1997]; ABI database; and Database of Chinese Scientific and Technical Periodicals (DCSTP). * indicates data not available

Foreign investment on IJVs was US \$6.12B in 1992 and rose to US \$31.876B in 1996 (Table 1). The formation of IJVs is the most popular form of FDI [Fan, 1996]. Along with the rise of IJVs in China, there has been a large number of articles published. Table I shows that the number of articles in Western trade journals has risen from six in 1979 to 180 in 1996. These articles, appear in trade and popular journals such as *Chemical Market Report* (e.g. [Lerner, 1996]), *Business China* (e.g. [Anonymous, 1996b], [Anonymous, 1993]), *Business Asia* (e.g. [Anonymous, 1994]) and *China Business Review* (e.g. [Kamis, 1996]). Trade articles typically discuss newly created IJVs and their business objectives or report on, problems encountered by established ventures. Although trade publications do not systematically investigate IJVs, they are a useful source of anecdotal evidence on the key areas in which academic research would address practical problems. From the trade and popular

management press a number of typical issues faced by IJV managers can be identified, such as problems resulting from: cultural differences [Anonymous, 1996b]; human resource management [Anonymous, 1994]; management training [Kamis, 1996]; and product selection [Lerner, 1996]. Interestingly, operational issues are frequently mentioned such as difficulties with: quality control [Anonymous, 1996b]; production capacity [Lerner, 1996]; or sourcing and supplier management [Anonymous, 1993].

There has been a growth in the last few years in the number of Western academic papers describing research into IJVs. Table I shows that ten papers were published in English in 1996 and, in total, 41 academic papers (code 9130) were identified from the ABI database. A large number of articles (mainly in trade journals) have also been published in Chinese (Table I).

Western Research

Table II summarises the content of the 41 western academic papers published in English. It can be seen that the majority of papers (28) have been published in general management journals, followed by marketing (7 papers) and human resource management journals.

International marketing and market entry are the most frequently addressed topics followed by strategic planning, FDI, and IJV performance. Although operational issues are frequently mentioned in most papers, these are not normally investigated in detail, or from an operations perspective. However, a few papers focus on very specific areas of operations management, for example, technology management [Martinsons and Tseng, 1995b] [Tsang, 1995] [Lan, 1996].

A broad range of topics are covered by the literature in English, however, these can be grouped into four main categories:

- Legislation on IJVs in China, their formation and characteristics
- Relationships pertaining to manufacturing IJVs
- Operational issues
- Performance of IJVs.

1) IJVs: Legislation, Formation and Characteristics

Although there are now seven forms of international alliance under Chinese law, Teagarden and Glinow [1990] argued that these can be categorised from a business perspective into the four types shown in Table III. The lack of clarity in the laws and regulations governing IJVs has often made their formation difficult for foreign companies [Pan, 1994]. However, Glaister and Wang [1993] and Pan et al [1995] each charter the history of IJV legislation in the PRC and how the formation of IJVs has become progressively easier.

Each type of IJV has associated characteristics, which influence the circumstances in which they will be effective (Table III). For example, equity joint

Table II: Summary of Western Research on IJVs in China

No. of Publications	Type of Publication	Areas Covered (number)	Methodology	Industries used as Samples	Foreign Partner(s)
41 papers (identified from the ABI database, 1990-1996)	General Management 28; (e.g. International Studies of Management & Organisation, Academy of Management Journal, Journal of General Management, Management International Review, Journal of International Business Study, Journal of Asian Business, Journal of Small Business Management, International Journal of Management) Marketing 7; (e.g. Journal of Euromarketing, Marketing Intelligence & Planning, Journal of Global Marketing, Journal of International Marketing) Human Resources Management & Organisation Behaviour 3; (e.g. Journal of Managerial Psychology, International Journal of Manpower) Technology Management 2; Strategic Management 1; Book 1	1) Marketing (18) 2) Strategic Planning (13) 3) Foreign Direct Investment (13) 4) Performance (12) 5) Multi-national Companies (11) 6) Culture Differences (10) 7) Alliance & Partnerships (9) 8) Ownership (7) 9) Management Style (7) 10) Organisation Behaviour & Structure (7) 11) Negotiations (5) 12) Success Factors (5) 13) Technology Transfer (4) 14) Characteristics of IJVs (4) 15) Human Resource Management (4) 16) Control Mechanisms (3) 17) Management Skills (2) 18) Quality (1) 19) Relationships (1)	Case Studies - 14; 1=<size=<3 2; 4=<size=<8 9; 9=<size =<43 3; Postal Surveys - 12; 25=<size=<151; Archival Analyses - 10; 127=<size=<4223; Literature Reviews - 4; Models (hypothetical examples) - 2	Manufacturing 39; Construction 8; Service 5; Banking 2; Others 5	United States 38; Hong Kong 19; Europe 18; Japan 6; Overseas Chinese 5; Others 12
1 book					

Note:

1. The types of publications identified in the second column total 42;
2. Several key words are identified in each article therefore the third column shows that the 41 articles and 1 book covered 19 main areas with, for example, 18 articles discussing marketing issues;
3. The fourth column indicates the methodologies used. For example, 14 publications describe case studies of which 9 papers describe between 4 and 8 cases. Postal surveys are described in 12 papers with samples of between 25 and 151.
4. Some research covered multiple industries, therefore the fifth column shows that 39 used samples from the manufacturing sector, 8 uses samples from the construction sector, etc.;
5. The sixth column shows that of 42 publications, 38 sampled in Sino-US joint ventures, 19 in Sino-HK joint ventures, 18 in Sino-Europe joint ventures, etc.

ventures provide the least strategic flexibility because the partners are highly dependent on each other and must jointly make all the decisions relating to the IJVs [ibid]. It is suggested that foreign partners need to choose the legal mode which is most consistent with their goals and objectives [Teagarden and Glinow, 1990]. Due to the dynamic nature of China's business and legislative environment [Bruijn and Jia, 1997], it is vital to accurately identify which factors lead to the formation of successful IJVs [Martinsons and Tseng, 1995a] [Luo, 1995a, 1995b] [Kim, 1996] [Osland, 1994].

The formation of a successful IJV can be complex and the subject of IJV formation has attracted much attention from researchers. One study concluded that "despite the increased frequency and strategic importance of international joint ventures in China, little is known about the performance of these ventures, nor the factors that affect the outcomes" [Osland and Cavusgil, 1996]. In a study of 8 companies, the authors derived a model of the factors which influence IJV performance, identifying market and legislative forces, plus factors related to companies' strategies and organisational structure as having the greatest influence on success [ibid]. Similarly both Luo [1995b] and Glaister and Wang [1993] point to the importance of companies selecting the right partner, with whom there should be a good degree of commonality on strategic objectives. Campbell [1989] made an in-depth longitudinal study of twelve IJVs in China between 1985 and 1988 and identified three main factors for the success of IJVs: a suitable partner needs to be selected; clear business objectives need to be set at both strategic and operational levels and; good business relationships are essential. Pan [1994] has also investigated how the culture of the foreign partner exerts an influence on the way an IJV is formed, concluding that the origin of the foreign partner plays a significant role.

Table III: Types of International Joint Ventures in China (from Teagarden and Glinow, 1990)

	Type	Chinese Legal Mode (s)	Operating Characteristics
1	Operating Reciprocal Alliances (ORAs)	Equity Joint Ventures	least strategic flexibility; highly interdependent and jointly carry out strategic and operating decision making, and engaged in joint production or service delivery; most control over IJVs (uncertain) outcomes.
2	Operating Contractual Alliances (OCAs)	Contractual Joint Ventures	highly interdependent and jointly carry out strategic and operating decision making, and engaged in joint production or service delivery;
3	Passive Contractual Alliances (PCAs)	Exploration and research consortia	only some partners engaged in joint production or service delivery
4	Passive Reciprocal Alliances (PRAs)	a) Process/assembly and buy-back agreement; b) dynamic technology-transfer agreement; c) long-term licensing agreement; d) compensation trade agreement.	most strategic flexibility; the degree of engagement in production and delivery approaches "arm's length"; least control over IJVs (uncertain) outcomes.

The scope of IJVs in China vary considerably; in their most extensive form they may include research and development, manufacturing, marketing, sales and distribution functions [Kim, 1996]. The characteristics of IJVs have been investigated empirically by several researchers (e.g. [Pan 1994] [Beamish 1993] [Wang, 1992] [Yan and Gray, 1994]). They determined that most IJVs are in the engineering, electronics, chemicals and plastics sectors. As the government of the PRC usually exerts

considerable pressure on the location of IJV facilities (and the choice of local suppliers), most are located along the coast or in such cities as Beijing or Shanghai [Martinsons and Tseng, 1995a]. Glaister and Wang [1993] identified what they termed a bi-polar distribution of IJVs; they tend either to be small companies interested in exporting from China or large multi-national companies focusing more on the Chinese domestic market.

2) Internal / External Relationships for IJVs

Developing, maintaining and managing relationships within and outside the venture are vital to the success of a IJV in the long term [Campbell, 1989] [Martinsons and Tseng, 1995a]. The Chinese word *guangxi*—which means personal contacts—is often mentioned in the literature [Luo, 1995b] [Martinsons and Tseng, 1995a] [Pan, 1994]. and developing good working relationships is essential for IJVs with all their contacts.

Relationships within an IJV, between partners and between management and IJV employees are, not surprisingly, documented as key factors. Fundamental to the success of an IJV is the relationship between the management teams of the partners—understanding and mutual trust are essential but many problems can arise and “many of the problems and obstacles in international joint ventures have their roots in cross-cultural communication and understanding” [Fan, 1996]. In order to understand where the problems and different perspectives arise, it is necessary to understand the views of both the foreign and Chinese partners [Wagner and Coll, 1994]. It has been pointed out that it is therefore ironic that most studies of relationship problems have ignored the Chinese perspective [Yan and Gray, 1994] [Osland and Cavusgil, 1996]. The division of responsibility between foreign and Chinese partners managers in an IJV influences the quality of the working relationship and “as a result, shared or split control is the principle means by which success may be achieved” [Beamish, 1993]. Individual partners may have different objectives which can lead to conflicts. Typically foreign companies have strong profit and market share objectives for IJVs [Bruijn and Jia, 1993], whereas Chinese partners are more focused on longer-term objectives, such as technology transfer [Tsang, 1995]. However, “Chinese managers’ perspectives, in particular, have not been well understood” [Osland and Cavusgil, 1996]. Good relationships to the Chinese employees on the shop-floor of IJVs is also essential for improving productivity [Tsang, 1994].

External contacts are equally important to internal ones. Local bureaucracy can be a serious problem for IJVs and so close relationships must be developed by foreign IJV partners with the Chinese authorities [Chan, 1996]. The relations with suppliers, particularly local raw materials and component suppliers, are complex and crucial [Martinsons and Tseng, 1995a, 1995b] [Tsang, 1995]. The reasons why good contacts need to be forged with suppliers are that low quality, slow delivery, and the unwillingness to supply small quantities are common problems with suppliers in China. Consequently the availability of good local suppliers plays a key role in influencing the choice of products which will be produced in China [Bruijn and Jia, 1993].

3) Operational Issues

The trade press identified a number of operational problems which adversely affect IJV performance. The academic literature also discusses facilities and their costs, human resource management in manufacturing, quality, supplier management and technology transfer.

IJVs need suitable manufacturing facilities in an appropriate location. The Chinese partner should be able to supply suitable facilities, low-cost labour, raw materials and components, and provide a good location from which to distribute the final products [Campbell, 1989]. Overhead costs are, however, often high in China as local companies are often expected to provide housing and other services for their employees [Pan, 1995].

Finding suitable staff for IJV manufacturing plants is difficult. The shortage of professionals and managers and the obvious differences between the Chinese and the foreign approaches to management make recruitment and training inevitably difficult [Tsang, 1994]. Finding skilled Chinese managers is particularly difficult [Pan, 1995]. Local employees often have not had suitable training and so this influences the level of technology which can be used in manufacturing in China [Pan, 1995]. Other human resource management problems like employee discipline, trade unions may also pose serious interruptions to operations if not correctly handled [Tsang, 1994].

Quality control strongly influences the success of manufacturing IJVs in China [Tsang, 1995] [Martinsons and Tseng, 1995a, 1995b] [Chua and Kin-Man, 1993]. Although the concept of total quality management has been emphasised in China for the past decade, effective quality systems have seldom been implemented and the standard of manufactured goods and components is often variable [Martinsons and Tseng, 1995b]. In addition, due to poor inventory management, excess raw materials, work-in-process and finished goods inventory make it difficult for plants to maintain a clean operating environment, and this leads to further quality problems. Finally, most joint ventures have to extend their quality control beyond their own organisational boundaries and conduct training programs and/or inspection to their own suppliers [*ibid*].

The relations with suppliers, particularly local raw materials and component suppliers, are complex and crucial [Martinsons and Tseng, 1995a, 1995b] [Tsang, 1995]. One team of researchers studied 73 IJVs and concluded that “sourcing of material and components is a serious issue for IJVs in China” [Pan et al, 1995]. The Chinese authorities often exert pressure on companies to purchase materials and components from specific local suppliers. However, because of the problems with local supply mentioned earlier, many IJVs source a high proportion of materials and components overseas; often a larger percentage than initially projected. This can lead to higher-than-expected production costs and to difficulties with the balance of foreign exchange [Campbell, 1989].

The process and speed of technology transfer within IJVs is a critical strategic issue [Lan, 1996] [Tsang, 1995] [Martinsons and Tseng, 1995a]. The term technology transfer is a broad one which covers product design, process selection, equipment introduction, production documentation, operators’ experience, management and control systems. It may take place at different levels (e.g. production technology or management technology) [Lan, 1996]. Major problems which hinder smooth implementation of technology transfer are identified as the recruitment of suitable staff and managers, communication and training [Tsang, 1995].

4) Performance of IJVs

Quite a few studies focus on how the performance of IJVs can be best measured (see for example [Osland and Cavusgil, 1996] [Osland, 1994] [Luo, 1995a, 1995b] [Hu and Chen, 1996] [Luo and Chen, 1995]). However, most of the literature focuses on high-level performance criteria and ignores operational measures.

IJV partners often use different criteria to evaluate performance, or have different perceptions about what has been achieved [Osland and Cavusgil, 1996] [Osland, 1994]. Another reason is that different dimensions are used to measure IJVs performance [Luo, 1995b]. For example, Chinese partners tend to focus on process-oriented criteria such as technology transfer, managerial learning and exports. As indicated earlier, foreign partners in contrast use criteria such as profitability and market share. Both sides are interested but from different perspectives in the transfer of know-how.

From the review of the literature, it was notable that little research has focused on the day-to-day measures used by partners to determine the performance of their manufacturing operations. Consequently Beamish [1993] has pointed to the need for research into this area.

Chinese Research

For many western researchers, the literature published in Chinese on IJVs is inaccessible. However, as IJVs involve both foreign and Chinese partners, it is important to consider the research which has been published in Chinese and from a Chinese perspective. A literature survey revealed that a significant number of articles have been published in Chinese. One previous researcher has dismissed these as “either propaganda or promotion rather than academic research in nature, and written in a totally different framework with little quantitative analysis” so that “it is impossible to draw any meaningful comparison with Western studies.” [Fan, 1996] However, the authors of this paper dispute the claim that nothing can be learnt from the Chinese literature. Therefore, to demonstrate this and make the content of the key Chinese articles accessible to researchers, the articles will be reviewed.

Thirteen key Chinese articles and textbooks are listed in Table IV. These were selected because they:

- Are representative of the typical type of research published in Chinese;
- Were published in top Chinese journals or are leading textbooks. (Four highly-recognised, refereed Chinese journals—*Management World*, *Journal of Industrial Economy of China*, *Economic Research Journal* and *Economic Theory and Business Management*—were reviewed for this study.)
- Discuss problems that both Chinese researchers and the authorities consider to be the most important ones concerning IJVs.

To enable easy comparison, the literature in Chinese has been summarised under similar headings to those used for the literature in English. However, one area which is covered in more detail by Chinese authors is the business environment in China. Therefore, the summary of the Chinese literature has the following headings:

- The business and economic environment for IJVs
- The legislation on IJVs in China, their formation and characteristics
- Relationships pertaining to manufacturing IJVs
- Operational issues

Table IV: Summary of Selected Literature in Chinese on IJVs in China

Author(s)	Title/Subject	Publication	Methodology	Sample Size	Main Topics Covered
Anonymous, 1995b	Status, Problems and Suggestions of China Attracting Foreign Direct Investment	general economics journal	seminar discussion, institute and government visit, newspaper downloading	industrial department visit >7	research & development; economy of scale and scope; digesting western advanced technology; infrastructure
Anonymous, 1996a	Study on Using Foreign Direct Investment	general management journal	government visit, firm visit, newspaper download, statistic report	industrial department visit 7	partner selection; strategic objectives; management control; IJVs' performance; industry relations; localisation of manufacturing strategy and managers
Chen, 1995	On Strategy Change of Using foreign Capital	general management journal	desk work, secondary material	not applicable	dynamic environment in China; strategic planning; merits and drawbacks of using foreign investment
Han and Xu, 1996	Operational Situation of Sino-foreign Co-operated Enterprises and Countermeasures	general management journal	interview, postal survey, statistic report	interview 30; survey 100	management control; introduction of management skills; technology transfer & localisation of products; supply and sales management; operational problems
Liu and Tang, 1996	New Management Involving Foreign Enterprises	textbook	use of government material on IJVs, secondary data	not applicable	formation and operation of IJVs, macro-economical and administrative issues
Lu, 1996	What are Multinational Companies Bringing to Chinese Management?	general management journal	desk work, secondary material	not applicable	management thinking; transfer of management skills; management training; effectiveness of management
Lu, 1997	Regional Allocation of FDI and China's Investment Environment	general economics journal	archival data analysed with a econometric model	29 provinces	factors which influence FDI; evaluation and improvement of the investment environment; regional allocation of investment
Lu and Wang, 1996	Strategy and Practice of International Companies in China	general management journal	company visit, survey, government visit	company visit 67	operational objectives and priority; management control; partner selection; dynamic technology transfer; quality and norm guarantee from local suppliers of components and raw materials
Luan, 1995	Informal Control in IJVs	general economics journal	desk research, secondary material	not applicable	the influence of the board of directors; product distribution; price; sales issues; cost of capital equipment
Rong and Wei, 1994	Managing Sino-foreign Joint Ventures in China: Principles and Applications	textbook	government visit, case study, literature review, news paper downloading, statistic report	case study >10	technology transfer; management control; operations environment; production control; foreign exchange balance
Wang, 1996	Influences of Investment by International Companies on China Economy	general management journal	company visit, interview, seminar discussion, government visit	company visit >50	systematic use of investment forms; positive influence of foreign management skills and technology; local managers; operations environment
Yao, et al., 1991	Setting up and Managing Sino-foreign Joint Ventures	textbook	government visit, case study, literature review, news paper downloading, statistic report	case study >10	management learning; feasibility analysis; management control; operations environment
Zhou et al, 1992	Systematic Management of Enterprises Using FDI	textbook	government visit, case study, literature review, news paper downloading, statistic report	case study >5	partner selection; supply management; technology transfer, foreign exchange balance; operations environment

Note:

Four highly-recognised, refereed Chinese journals were reviewed for this study. These are: *Management World*, *Journal of Industrial Economy of China*, *Economic Research Journal* and *Economic Theory and Business Management*.

Performance of IJVs.

1) Business and Economic Environment

A number of authors discuss the broader issues of IJVs and their influence on the economy. Whereas the focus of Western studies tends to be on companies, there is much discussion in the literature in Chinese on the advantages and disadvantages of IJVs.

The growth of FDI is obviously recognised [Anonymous, 1995b] but it is not always viewed positively; there is a degree of controversy that pervades the literature. Many advantages of IJVs are acknowledged: such as the investment in China they bring [Chen, 1995] [Wang, 1996]; the potential for the transfer of technology and management skills [Chen, 1995] [Wang, 1996] [Anonymous, 1996a] [Han and Xu, 1995] [Zhou et al, 1992]; and increased exports [Wang, 1996]. However, a range of disadvantages, from the Chinese perspective, have been identified. These include the slower than expected transfer of technology and management skills [Chen, 1995] [Wang, 1996]; the recognition that introducing IJVs is probably not an effective way to guarantee the balance between exports and import [Chen, 1995]; and the Chinese view that multi-national enterprises have made excessive profits in China [Chen, 1995]. The fact that R&D capability has seldom been created in IJVs is seen as a big disadvantage [Wang, 1996][Anonymous, 1995b]. However, not only have disadvantages of IJVs been identified but, in addition, a key question has been raised what level of FDI is desirable? Some comments claim that FDI is already too high and the real returns for China are unknown [Anonymous, 1995b]. Consequently, it has been recommended that FDI be limited [Chen, 1995], although other writers have appealed that it is too soon to limit investment [Wang, 1996].

The discussions on the merits of FDI to the Chinese economy has led a number of authors to point to the urgent need for research in this area [Chen, 1995] [Anonymous, 1995b] and, particularly, on ways to improve the business environment to support Sino-foreign ventures [Lu, 1997].

2) IJVs: Legislation, Formation and Characteristics

Full descriptions of the types of IJV allowed in China and the relevant legislation are given in textbooks such as Rong and Wei [1994]. In this area the literature in both English and Chinese is similar; it is largely descriptive. However some additional perspectives can be found in the Chinese literature.

For instance, competition for FDI between different regions is leading to problems, as the legislation for IJVs defined by central government is not always being followed by regions which are pursuing investment [Chen, 1995]. The legislation governing the market economy in China is seen still to be in its infancy; the influence of government control is recognised to be crucial [Lu and Wang, 1996]. For example, state-owned enterprises are encouraged form IJV with foreign partners, while private enterprises are not allowed [Rong and Wei, 1994]. State-owned enterprises are recognised as having serious limitations as IJV partners. These include slow, ineffective decision making, too many employees and often obsolete equipment.

The above issues all combine to make the formation of IJVs risky and consequently the rate of full implementation (e.g. manufacturing products) is only between 50% and 60% [Anonymous, 1996a]. The right choice of partner is seen as essential, for the foreign company [Lu and Wang, 1996] but also for the Chinese company looking for a foreign partner [Zhuo et al, 1992].

Probably the most comprehensive analysis of the characteristics of IJVs in the Chinese literature is that of Han and Xu [1995]. This study empirically investigated 68 companies, surveying the percentage of Chinese chairmen (63%) and the balance in control of operations between foreign and Chinese managers. This study is important as it looks at some specific operations issues. For instance, it identifies the weakness of Chinese managers in manufacturing management and lists a range problems observed in manufacturing IJVs.

3) Internal / External Relationships for IJVs

Chinese researchers also discuss the importance of relationships and the relationship between management at IJV partners is often mentioned. Too much control of IJVs by foreign partners is often identified as having a negative influence. This imbalance in management power [Anonymous, 1995b] often leads partners quarrel about operations objectives. Several studies point to the positive perception from Chinese managers of a more co-operative approach by foreign companies (e.g. [Han and Xu, 1995] [Lu and Wang, 1996]) and imply that this will lead to more effective (joint) decision making.

Experience from the private sector will show ways for state-owned enterprises to reform. These “new operations mechanisms” [Rong and Wei, 1994] are considered to be applicable to the “socialist market economy” in China of management of Chinese enterprises [Han and Xu, 1995].

4) Operational Issues

Operational problems are widely mentioned by Chinese authors. The complexity of manufacturing management is recognised [Lu and Wang, 1996], as is the need for more Chinese managers to gain experience in this area [Wang, 1996]. Currently, the approach of many Chinese managers to solving operations management problems is too informal [Han and Xu, 1995]. It has been said that “management theory in general is important but what is more important is the value of concrete operations management skills [in China]” [Lu, 1996].

Chinese IJV partners are sometimes poor at getting loans from local banks and at getting materials and components from local suppliers [Anonymous, 1995b] [Anonymous, 1996a]. Quality problems with materials from suppliers is common [Lu and Wang, 1996]. Some empirical studies have revealed that specific management techniques such as statistical process control and manufacturing resource planning are very useful in IJVs [Han and Xu, 1995].

Similar to Western research, Chinese studies highlight the importance of training and retaining local managers, but approached this issue from a different perspective [Lu and Wang, 1996] [Anonymous, 1996a] [Han and Xu, 1995]. Local managers are only perceived as fully qualified if they are loyal to the Chinese government, serve the benefit of the Chinese partner and ensure the Chinese parent firm’s control over IJV operations. Whether they possess management skills and proficient communication is perceived as less important than their loyalty. Nevertheless, local managers are encouraged to learn western management skills and incorporate these into Chinese style and culture [Yao et al, 1991].

From a Chinese perspective, technology transfer is key and government policies are favourable to IJVs which succeed in this area [Lu and Wang, 1996] [Rong and Wei, 1994]. Both government and researchers recognise that it is advantageous to

“exchange some domestic market share for advanced technology” [Liu and Tang, 1996]. However, technology transfer is not moving as fast as expected [Luan, 1995].

5) Performance Evaluation

Many aspects of performance including labour productivity, balance of foreign exchange and business profit are important both to the Chinese government and Chinese partners [Anonymous, 1996a] [Chen, 1995] [Rong and Wei, 1994]. Lack of good operations management and qualified managers, low rates of investment, and poor profit transfer (e.g. high value-added import and low value-added export of products) are widely suggested to contribute to the poor operational performance in IJVs [Anonymous, 1996a] [Han and Xu, 1996].

Many studies imply that, in spite of general cultural barriers, it is relatively easy for local people to adapt to working with Western corporations and culture. Some studies (e.g. [Chen, 1995]) identify that joint ventures with Hong Kong and Taiwanese firms lead to more problems than with Western companies. This is because the former are more likely to use illegal business practices and, in addition, technology transfer is typically limited. So joint ventures with Western firms normally enjoy a better reputation and most joint ventures with large Western companies are reported to be performing well.

The importance of performance evaluation has been frequently recognised. However, no concrete measures at business level has been identified to deal with current problems. Systematic research on performance are in great demand [Rong and Wei, 1994] [Anonymous, 1995b] [Anonymous, 1996a].

Comparison of Western and Chinese Research

The common areas between the literature on IJVs in English and Chinese are: the legislation on IJVs in China, their formation and characteristics, relationships pertaining to manufacturing IJVs, operational issues and IJV performance. In addition, Chinese researchers highlight the importance of investigating the real value of IJVs to the Chinese economy. Western researchers are more interested in how an appropriate partner can be selected and a successful IJV formed. Unfortunately, most operational issues have been identified but not investigated.

The difference in style between the Western and Chinese papers warrant comment (see Table V). Most Western papers investigate contemporary events and case studies and surveys are widely used. The majority of data comes from the manufacturing sector, particularly from Sino-US IJVs. Western research focuses on the company as the unit of analysis, collects primary data, and draws conclusions which are directly applicable to managers.

In contrast, Chinese work usually takes the national economy as the unit of analysis and conclusions are largely aimed at policy-makers. Chinese researchers are less concerned with the quality of research design and their investigations tend to use secondary data. Another distinction is in the presentation. Chinese papers do not consider the literature and seldom give references or quote sources. This is because the majority of authors are government employees; the majority of Chinese journals are aimed at policy makers rather than practitioners; and there is only a short tradition of management research in China. However, the literature in Chinese should not be ignored if a better understanding of IJVs is to be achieved.

Table V: Comparison of Western / Chinese Research Styles

Items of Comparison	Western Research	Chinese Research
Unit of analysis	company, business, managers	national economy, industry, region
Main audience	managers in companies	macro policy-makers
Methodology	stated in detail	usually not stated
Range of the topic	narrow (focused)	wide
Data collection	first hand mostly	second hand mostly
References	usually listed	seldom given
Previous studies	reviewed in detail	usually ignored
Authors' backgrounds	university	government related
Main contributions of papers	concrete results, conclusions and suggestions	general conclusions and suggestions

PROPOSED DIRECTIONS FOR RESEARCH

The number of papers published reflects the fact that the increasing number of IJVs in China is attracting the attention of researchers. Previous studies have focused on the way different types of IJVs are formed; the importance of relationships in managing IJV; and the need for good operations management, particularly in achieving appropriate quality levels. However, little previous research has been conducted from the operations management perspective and so further research is necessary "in order to reveal the myth around how a JV in China is actually managed and evolved, and what are the key success factors [sic]" [Fan, 1996].

Before recommendations for further research are given, it should be noted that previous authors have identified the importance of adopting the right approach to researching IJVs in China. For example, Osland and Cavusgil [1996] recognised that research needs to be conducted not only from a Western perspective, with only interviews with managers from Western IJV partners. The Chinese perspective on the issues and problems faced by IJVs is important data that has too often been ignored [Fan, 1996] [Yan and Gray, 1994]. Yan and Gray [1994] also point out that there is a need for longitudinal studies of IJVs; much of the extant research has concentrated on the formation of IJVs only and has ignored longer-term development of these ventures. Cross-industry studies are also needed [Fan, 1996].

Which areas of the management of IJV manufacturing are recommended for further research? Five main areas for future research are proposed:-

- *Manufacturing Strategy.* Partners in manufacturing IJVs often have different objectives. How are these differences resolved at the business strategy level and how does this lead to the formulation of a manufacturing strategy? It is an area where little previous research has been conducted. The links between business, marketing and manufacturing strategies are important ones [Hill, 1992] and an investigation of these in the context of IJVs in China is needed.
- *Benchmarking Manufacturing Performance.* There has been significant previous research into business performance of IJVs in China and most of these studies have used manufacturing companies as examples. However, these studies have totally ignored measures of manufacturing performance. Although problems have been identified in variety [Martinsons and Tseng, 1995b]; quality [Martinsons and Tseng,

1995b]; productivity [Tsang, 1995]; and cost [Anonymous, 1996a], actual measurement of these factors has not been made. Management of manufacturing performance is widely suggested to be the critical factor to the success of IJVs [Osland and Cavusgil, 1996] [Martinsons and Tseng, 1995b] [Anonymous, 1996a] [Han and Xu, 1995]. In Western research there is a strong emphasis on benchmarking manufacturing performance (e.g. [New and Szwejczewski, 1995]) and this approach is needed, particularly in the context of international operations [Adam and Swamidass, 1992].

- *Cross-Functional Integration.* Research into manufacturing IJVs has revealed that many companies fail to achieve good marketing performance because of problems in manufacturing [Osland, 1994] [Osland, 1996] [Pan, 1995] and there may be disputes between different functions on priorities [Osland, 1996]. However, best practices in solving these issues need to be identified as, potentially, the better integration of manufacturing, marketing, purchasing, etc. will lead to an improvement in the efficiency of manufacturing IJVs.
- *Supplier Management.* The shortage of good local suppliers poses a serious barrier to the successful implementation of manufacturing IJVs in China [Pan, 1995] [Anonymous, 1996a] [Han and Xu, 1995] [Campbell, 1989]. Problems with suppliers seriously affects technology transfer [Lan, 1996]; the quality and delivery of products [Tsang, 1995]; and the cost of the production [Han and Xu, 1995]. Although these problems have been clearly identified by previous research, there has not been an investigation of the approaches used by companies to address them. Currently, there is a steady stream of research on the importance of supplier management (e.g. [Krause and Ellram, 1997] [Goffin et al, 1997] [Burt, 1989]) and there is a need for this type of investigation to be made at Chinese IJVs. Which criteria do companies use to evaluate their local Chinese suppliers? What type of relationships do IJVs have with their suppliers? Are there best practices in supplier management in China? These are the sort of questions that need to be answered.
- *Adoption of Operations Management Concepts and Practices.* Much of the literature identifies the weakness of Chinese operations management practices. As advanced management techniques and concepts become known and applied in China, there is a need to study how they are modified—localised—to make them effective in the local environment [Anonymous, 1995a] [Anonymous, 1996a].

CONCLUSIONS

The contribution of this paper is that it has, for the first time, reviewed both the Western and Chinese literature on international joint ventures in China. It has contrasted the methods and findings of these two bodies of literature and, from an operations management perspective, identified key opportunities for further research. The range of topics recommended for further research are manufacturing strategy, manufacturing performance, cross-functional integration, supplier management and the adaptation in China of operations management practices. This research would not only be important for filling gaps in the academic knowledge but also would be very relevant to managers of IJVs in China. The rapid growth in the Chinese economy and in the number of Western companies with manufacturing operations in China means that operations management researchers should not ignore this area—especially as there is a real need for improvements in both the theory and practice of IJV manufacturing management. Many questions need investigation and they should be

answered by suitable empirical research made from an operations management perspective.

REFERENCES

1. Adam, Jr, E. E. and Swamidass, P. M., " Assessing operations management from a strategic perspective", *Manufacturing Strategy - Process and Content*, Chapman and Hall, London, 1992, pp. 373-401.
2. Anonymous, "Sourcing goods and parts: networking", *Business China*, Vol. 19, No. 7, April 5th 1993, pp. 3-4.
3. Anonymous, "Developing customised country strategies: read between the lines", *Business Asia*, Vol. 26, No. 19, September 12th 1994, pp. 5.
4. Anonymous, "managing on the frontier", *The Economist*, Jun. 24th 1995a, pp. ss12-ss14.
5. Anonymous, "Status, problems and suggestions for China in attracting foreign direct investment" (in Chinese), *Journal of Industrial Economy of China*, Oct. 1995b, pp. 53-58.
6. Anonymous, "A Study of the usage of foreign direct investment" (in Chinese), *Management World*, 2/3 1996a, pp. 46-54/79-90.
7. Anonymous, "Saving face, improving quality", *Business Asia*, Vol. 22, No. 17, Aug 19th 1996b, pp. 12.
8. Baran, R., Pan, Y. and Kaynak, E., "Research on international joint ventures in East Asia: A critical review and future directions", *Journal of Euromarketing*, Vol. 4, No. 3-4, 1996, pp. 7-22.
9. Beamish, P. W., "The Characteristics of joint ventures in the People's Republic of China", *Journal of International Marketing*, Vol. 1, No. 2, 1993, pp. 29-48.
10. Beamish, P. and Banks, J., "Equity joint ventures and the theory of multinational enterprises", *Journal of International Business Studies*, Summer 1987, pp. 1-16.
11. Bruijn, E. and Jia, X., "Managing Sino-Western joint ventures: product selection strategy", *Management International Review*, Vol. 33, 1993, pp. 335-360.
12. Bruijn, E. and Jia, X., "Joint ventures in China face new rules of the game", *Research Technology Management*, Vol. 40, No. 2, March-April, 1997, pp. 48-54.
13. Burt, D. N., "Managing suppliers up to speed", *Harvard Business Review*, July-August 1989, pp. 127-135.
14. Campbell, N., *A Strategic Guide to Equity Joint Ventures in China*, Pergamon Press, 1989.
15. Chan, P. S., "International joint ventures in East Asia: an exploratory study", *American Business Review*, Vol. 14, No. 2, 1996, pp. 19-23.
16. Chan, W-K., Perez, J., Perkins, A. and Shu, M., "China's retail markets are evolving more quickly than companies anticipate", *The McKinsey Quarterly*, No. 2, 1997, pp. 206-211.
17. Chen, B., "On strategy change of using foreign capital" (in Chinese), *Management World*, 6 1995, pp. 45-48.
18. Chi, T. and McGuire, D. J., "Collaborative ventures and value of learning: integrating the transaction cost and strategic option perspectives on the choice of market entry modes", *Journal of International Business Studies*, Vol. 27, No. 2, 1996, pp. 285-307.
19. Chua, B. and Kin-Man, G. T., "Managing joint ventures in China: A cross-cultural approach to motivation and quality", *International Journal of Management*, Vol. 10, No. 3, 1993, pp. 294-299.

- 20.Davies, S., "China's treasure chest unlocked: assessing the potential for UK businesses hoping to strike gold on the streets of Beijing. *Financial Times*, 20th May 1994, pp. 12.
- 21.Economist Intelligence Unit (EIU), "China, Mongolia", *Country Report*, London, 1985-1996.
- 22.Fan, Y., "Research on joint ventures in China: progress and prognosis", *Journal of Euromarketing*, vol. 4, No. 3, 3/4 1996, pp. 71-89.
- 23.Fey, C. F., "International joint ventures: an important topic for the 1990s and beyond", *Working Paper*, Western Business School, The University of Western Ontario, London, Ontario, April 1994.
- 24.Friedman, W. and Kalmanoff, *Joint International Business Ventures*, Columbia University Press, New York, 1961.
- 25.Glaister, K.W. and Wang, Y., "UK joint ventures in China: motivation and partner selection", *Marketing Intelligence and Planning*, Vol. 11, No. 2, 1993, pp. 9-15.
- 26.Goffin, K., Szwejczewski, M. and New, C., "Managing suppliers: when fewer can mean more", *International Journal of Physical Distribution & Logistics Management*, Vol. 27, No. 7, 1997, pp. 422-436.
- 27.Han F. and Xu Y., "Ample analysis of the management situation of sino-foreign co-operated enterprises and the study of countermeasure" (in Chinese), *Management World*, Sixth Bimonthly, 1995, pp. 140-150.
- 28.Hamel, G., "Competition for competence and inter-partner learning within international strategic alliances", *Strategic Management Journal*, Vol. 12 (special issue), 1991, pp. 83-104.
- 29.Harrigan, K. R., *Managing for Joint Venture Success*, Lexington Books, D.C. Health and Company, Massachusetts 02173, USA, 1986.
- 30.Hennart, J., "The transaction cost theory of equity joint ventures", *Strategic Management Journal*, Vol. 9, 1988, pp. 361-374.
- 31.Hennart, J., "The transaction cost theory of joint ventures: an empirical study of Japanese subsidiaries in the United States", *Management Science*, Vol. 37 No. 4, 1991, pp. 483-497.
- 32.Hill, T. J., "Incorporating manufacturing perspectives in corporate strategy", *Manufacturing Strategy - Process and Content*, Edited by Voss, C. A., Chapman & Hall, 1992.
- 33.Hu, M. Y. and Chen H., "An empirical analysis of factors explaining foreign joint venture performance in China", *Journal of Business Research*, Vol. 35, 1996, pp. 165-173.
- 34.Janger, A., *Organization of International Joint Ventures*, the Conference Board, New York, 1980.
- 35.Kamis, T. L., "Education for the PRC executive", *China Business Review*, Vol. 23, No. 4, 1996, pp. 34-39.
- 36.Killing, P., *Strategies for Joint Ventures Success*, Pager, New York, 1983.
- 37.Kim, S. C., "Analysis of strategic issues for international joint ventures: case studies of Hong Kong-China joint venture manufacturing firms", *Journal of Euromarketing*, Vol. 4, No. 3-4, 1996, pp. 55- 70.
- 38.Krause, D. R. and Ellram, L. M., "Success factors in supplier development", *International Journal of Physical Distribution & Logistics Management*, Vol. 27, No. 1, 1997, pp. 39-52.
- 39.Lan, P., "Role of IJVs in transferring technology to China", *Journal of Euromarketing*, Vol. 4, No. 3-4, 1996, pp. 129-153.

- 40.Lerner, M., "Cystine and Cysteine recovering after period of uncertain supply", *Chemical Market Reporter*, Vol. 250, No. 23, 1996, p. 14.
- 41.Liu, H. and Ye, Z. *China Statistical Yearbook* (In Chinese and English), China Statistics Publishing House, Beijing. Editions: 1985-1997.
- 42.Liu, L. and Tang, Y., *New Management Involving Foreign Enterprises* (in Chinese), Press of Nankai University, Tianjin, November 1996.
- 43.Lu, M., "Regional allocation of foreign direct investment and appraisal of China's investment environment" (in Chinese), *Economic Research Journal*, Dec. 1997, pp. 37-44.
- 44.Lu, X., "What are the multinational companies bring to our management", (in Chinese), *Economic Theory and Business Management*, 5 1996, pp. 34-36.
- 45.Lu Y. and Wang X., "Strategy and practice of international companies in China" (in Chinese). *Management World*, 2 1996, pp. 139-150.
- 46.Luan, X., "Informal control in international joint ventures" (in Chinese), *Economic Theory and Business Management*, 4 1994, pp. 67-71, 74.
- 47.Luo, Y., "Linking strategic and moderating factors to performance of international joint ventures in China", *Mid-Atlantic Journal of Business*, Vol. 31, No. 1, 1995a, pp. 5-23.
- 48.Luo, Y., "Business strategy, market structure, and performance of international joint ventures: the case of joint ventures in China", *Management International Review*, Vol. 35, No. 3, 1995b, pp. 241-264.
- 49.Luo, Y. and Chen, M., "Financial performance comparison between international joint ventures and wholly foreign-owned enterprises in China", *International Executive*, Vol. 37, No. 6, 1995, pp. 599-613.
- 50.Martinsons, M. G. and Tseng, C. S., "Successful joint ventures in the heart of the dragon", *Long Range Planning*, Vol. 28, No. 5, 1995a, pp. 45-58.
- 51.Martinsons, M. G. and Tseng, C. S., "High-technology management in China: a case study of the Shanghai success stories", *Journal of Engineering and Technology Management*, Vol. 12, 1995b, pp. 111-137.
- 52.Michell, W. and Singh, K., "Survival of business using collaborative relationships to commercialize complex goods", *Strategic Management Journal*, Vol. 1, 1996, pp. 169-195.
- 53.New, Colin C.; and Szwejczewski, Marek. "Performance measurement and the focused factory: empirical evidence". *International Journal of Operations & Production Management*, Vol. 15, No. 4, 1995, pp63-79.
- 54.Osland, G. E., "Successful operating strategies in the performance of US-China joint ventures", *Journal of International Marketing*, Vol. 2, No. 4, 1994, pp. 53-78.
- 55.Osland, G. E. and Cavusgil, S. T., "Performance issues in US-China joint ventures", *California Management Review*, Vol. 38, No. 2, Winter 1996, pp. 106-130.
- 56.Pan, Y., "Features of European equity joint ventures in China: a longitudinal study", *Journal of Euromarketing*, Vol. 4, No. 1, 1994, pp. 5-21.
- 57.Pan, Y., Vanhonacker, W. R. and Pitts, R. E., "International equity joint ventures in China: operations and potential close-down", *Journal of Global Marketing*, Vol. 8, No. 3/4, 1995, pp. 125-149.
- 58.Rong, Y. and Wei, D., *The Theory and the Practice: Managing Sino-foreign Joint Ventures in China* (in Chinese), FEC Press, Beijing, November 1994.
- 59.Shan, W., "Environmental risks and joint venture sharing arrangements", *Journal of International Business Studies*, Vol. 22, No. 4, 1991, pp. 555-578.

60. Schroath, F. W., Hu, M. Y. and Chen, H., "Country-of-origin effects of foreign investments in the People's Republic of China", *Journal of International Business Studies*, Vol. 24, No. 2, Second Quarter 1993, pp. 277-290.
61. 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.
62. Stuckley, J., *Vertical Integration and Joint Ventures in the Aluminium Industry*, Cambridge, Mass., Harvard University Press, 1983.
63. Sweeney, M., "A methodology for the strategic management of international manufacturing and sourcing", *International Journal of Logistics Management*, Vol. 5, No. 1, 1994, pp. 55-65.
64. Teagarden, M. B. and Glinow, M. A. V., "Sino-Foreign strategic alliance types and related operating characteristics", *International Studies of Management & Organisation*, Vol. 20, No. 1-2, 1990, pp. 99-108.
65. Tsang, E. W. K., "Human resource management problems in Sino-Foreign joint ventures", *International Journal of Manpower*, Vol. 15, No. 9, 1994, pp. 4-21.
66. Tsang, E. W. K., "The implementation of technology transfer in Sino-Foreign joint ventures", *International Journal of Technology Management*, Vol. 10, No. 7-8, 1995, pp. 757-766.
67. Wagner, C. L. and Coll, J. H., "East side/west side: the Chinese view of Sino-Western negotiations", *International Journal of Management*, Vol. 11, No. 2, 1994, pp. 683-689.
68. Wang, Z., "Managerial psychological strategies for Sino-Foreign joint ventures", *Journal of Managerial Psychology*, Vol. 7, No. 3, 1992, pp. 10-16.
69. Wang, Z., "Positive and negative influences of investment by international companies on China's economy" (in Chinese). *Management World*, 3 1996, pp. 67-78.
70. Yan A. and Gray, B., "Bargaining Power, Management Control, and Performance in United States-China Joint Ventures: A Comparative Case Study", *Academy of Management Journal*, Vol. 37, No. 6, 1994, pp. 1478-1517.
71. Yao, L., Fan, M., Lu, X. and Hou, S., *The Launch and the Management of IJVs* (in Chinese), BAAU Press, Beijing, April 1991.
72. Zhuo, Z. , Li, D. and Liu, J, *Systematic Management of Enterprises Using FDI* (in Chinese), BUET press, Beijing, May 1992.

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