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**THE PAPER MAKERS OF PULI:
SUBCONTRACT MANUFACTURING IN TAIWAN'S
HAND-MADE PAPER INDUSTRY**

Volume I

By

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ABSTRACT

THE PAPER MAKERS OF PULI: SUBCONTRACT MANUFACTURING IN TAIWAN'S HAND-MADE PAPER INDUSTRY

By

By Ross C. Gardner

As one of the "four dragons," Taiwan has achieved unprecedented economic success in the last three decades. Few dispute that this success would not have occurred were it not for the thousands of small and medium scale subcontract producers who may account for up to 90 percent of all manufacturing on the island. Despite Taiwan's economic development and the current restructuring in the world economy, however, studies of secondary forms of production such as subcontracting and outwork, often fail to pay close attention to the organization of production and the markets in specific industries in which they are involved. Further, small producers are often characterized in the literature as indiscreet and anachronistic relative to formal, large-scale capitalist production.

In an attempt to understand how, why and under what conditions small producers are created, accumulate capital, stagnate, succeed and fail, this thesis examines one group of small capitalist subcontract manufacturers in

Puli, Taiwan who, since Japanese colonial rule, have produced hand-made paper for the Asian market. The research traces how entrepreneurs in this industry weathered shifts in demand for their product and in the supply and of raw materials, capital, and labor, and the innumerable cost and price fluctuations that accompanied those shifts from 1935 to 1989. More importantly, this research documents the changing nature of social and economic relationships between factory owners and the market as the former attempt to secure some control over the latter in the face of an array of barriers and constraints in the industry.

This study found that, in the 1970s, an elite group of "center factories" within the industry formed "upstream" and "downstream" linkages to suppliers and buyers which gave them control over the access to raw material, capital, and the finished product market. Through this form of quasi-vertical integration, center factories were then able to manipulate subcontract manufacturers and use them as a buffer against rising wage costs in Taiwan and unstable and cyclical market demand for paper in Asia.

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In Memory of my father

Dr. Robert V. Gardner

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A NOTE ON ROMANIZATION

All non-English words and terms are romanized and italicized when they first appear in the text. Since my interviews were conducted in Mandarin Chinese, the majority of Chinese words are romanized using the Wade-Giles system. While many scholars prefer to use the Pinyin system of romanization, the Wade Giles system is often more familiar to Chinese and Taiwanese living on Taiwan. Nevertheless, to help further clarify some more important words and terms, Chinese characters (i.e., *han tzu* 漢字) are included immediately following the romanized text.

As indicated, most of my interviews were conducted in Mandarin Chinese. While Minnan (Taiwanese) is the preferred language among many of my informants, all my informants were "bilingual" and were more than willing to talk to me in Mandarin. On occasion, however, there were periods when my informants would teach me terms and phrases in Minnan which they felt were more poignant or apropos to our conversation.

CHAPTER I INTRODUCTION TO THE THESIS

A. The Problem

Since its invention almost 2,000 years ago, hand-made paper has developed from a luxury item used primarily by China's nobility to a commodity used in thousands of different applications. Where a commodity endures, however, the "fortunes" of workers, craftsmen, factory owners, and traders who produce and market it rise and fall with changes in local, regional, and global markets.

This is a story about a group of predominantly small-scale¹ industrial capitalists and their workers in central Taiwan who, for as many as four decades, made the production of "Chinese style" *chung shih chih* 中式紙 hand-made paper the primary productive activity of their lives. It is about how an industry composed of fewer than 45 factories and 1,500 workers weathered shifts in demand for their product and in the supply of raw materials, capital and labor, and the innumerable costs and price fluctuations that accompanied those shifts. More importantly, however, this study documents the changing nature of social and economic relationships between factory owners and the market as the former attempt to secure some control over the latter in the face of an array of barriers and constraints in the industry.

The decision to conduct research on Taiwan's hand-made paper industry originally grew out of my long-time interest in small-scale production (SSP) in

general and in subcontracting relationships and markets in particular. An ambiguous and chaotic concept, subcontracting can be loosely defined as a subset of relationships between firms in which suppliers carry out the production of a material, a part, a component part, or sub-assembly according to specifications set out in advance by another firm, "whether materials are issued or not and whether the contract is directly with a large manufacturer or through some intermediary contract with another supplier" (Friedman 1977:119 after Holmes 1986:84).

This definition, however, is subject to great variation in the context of specific industries; for example, subcontracting in the automotive industry may involve a far different set of relationships than those in the jewelry industry. Nevertheless, following Holmes, I refer to the firm offering subcontracted work as a "center factory" or "parent firm" and a firm undertaking subcontracted work as "a subcontractor."

Long characterized as transitory or anachronistic relative to the onslaught of large-scale capitalist production (Braverman 1974), recent studies on small-scale production in both the industrialized and newly industrialized world have demonstrated that secondary forms of production and employment organization such as subcontracting and outwork have persisted and thrived. "In the context of the current restructuring crisis in the world economy," furthermore, small-scale production by way of subcontracting "appears to have taken on a new significance and to be playing an important role in the restructuring of certain industrial sectors at both the international and intranational scale" (Holmes 1986:81; see also Berger and Piore 1980; Sabel 1982; Brusco 1982; Schmitz 1982a; Murray 1983; Cook and Binford 1990).

As one of the "four dragons," Taiwan has achieved unprecedented economic success. With an average growth rate in gross national product

(GNP) of almost nine percent in the last four decades (after inflation), a per capita GNP of approximately US\$10,000 in 1990, and foreign exchange reserves of approximately US\$80 billion in 1988, Taiwan ranks as one of the most advanced newly industrialized nations of East Asia (Chan and Clark 1992:33). While a debate continues as to why Taiwan achieved such rapid success in so short a period, few would dispute the fact that the island's thousands of small manufacturing enterprises have played a significant role in the island's development (Ho 1980; Chan and Clark 1992). In 1991, the average size of a manufacturing enterprise in Taiwan was about 20 workers. Further, small firms with under 30 workers constituted almost 90 percent of all enterprises, employ 34 percent of the work force, and generate almost 20 percent of total annual revenues in manufacturing (Kung Shang Chi Fu Wu Yeh Pu Cha Pao Kau 1991).²

The emergence of small-scale producers in Taiwan has not gone unnoticed by social scientists. For over 20 years small-scale producers have been studied to varying degrees primarily in the rural areas of Taiwan and usually in the context of family, kinship, and community studies (Cohen 1976; Gates 1979; Ho 1979; Gallin and Gallin 1982; Harrell 1982; Hu 1984; Greenhalgh 1984; Niehoff 1987; for the mainland see Nee 1985; Lockett 1986; Rosen 1987; for exceptions see DeGlopper 1972; Tang 1978; Stites 1982).³ Contributing significantly to the overall understanding of small-scale producers on Taiwan, this research has fostered a new appreciation for the connection between individual SSPs and family, kin, and community as well as the linkages of SSPs to issues of labor, class, ethnicity, gender, and the state (Gates 1979; Gallin 1984; Arrigo 1985; Greenhalgh 1988).

Despite these contributions, there remains a problem with the study of small-scale production in contemporary Taiwan. Drawing from a broad

empirical palette, economists, sociologists, and anthropologists often use their data as a litmus test for their own theoretical agendas and development models. Sometimes characterized as "contending paradigms" or East Asian development models, these views are at times categorized under the rubrics of modernization theory, dependency theory, statist theory, and cultural models (Winkler and Greenhalgh 1988; Clark 1989; Berger 1990). Berger (1990) lumps the three of these "theories" into what he calls "institutionalist hypotheses," a term which embraces the political economy debates circulating about Taiwan. Generally these views explain Taiwan's economic success in terms of "the specific economic policies and practices that have nothing to do with the fact that the people executing them are Chinese" (Berger 1990:9). The cultural models or "culturalists," on the other hand, tend to ascribe Taiwan's development to the uniqueness of the Chinese people and its social institutions.

Led primarily by Western-trained neoclassicists, modernization theorists view Taiwan's success as the result of adherence to strict development policies. Guided by increased productivity, technological change, sustained savings and investment, Taiwan's economic development provided the stability which set in motion social and political change throughout the island (Rostow 1960; Galenson 1979). Unconvinced that Western laissez-faire based development strategies were benefiting developing nations, dependency and world-systems theorists, in contrast, consider Taiwan to occupy a "peripheral or semi-peripheral" position in the world economy. Under this scenario, "core" capitalist countries manipulate the political, social, and economic sectors of developing countries such as Taiwan by way of powerful multinational corporations (MNCs). The outgrowth of such manipulation is massive exploitation and extraction of capital from periphery to core

(Wallerstein 1974; also see Winkler and Greenhalgh 1988).

Taiwan's continued economic success, however, threw into question the dependency argument, leading some to re-label the country's success as a case of "dependent development" (Gold 1986). While not persuaded that Taiwan was subsumed by core capitalist countries, other scholars were unwilling to identify Taiwan as an all out economic success. Rather, a group known as the "statists" argued for a reexamination of the primacy of the state and its role in directing the development of Taiwan. While there are a number of contending views within this theory, statist stress that development is highly susceptible to the political policy of the state which may or may not be affected by internal or external factors. Concerned with how the state manages its political, economic, and social institutions, they argue that Taiwan may indeed occupy a "dependent" position within the international division of labor, but that its dependence is mediated to a certain degree by agents of the state (Amsden 1979; Gold 1986; Winkler 1988; Clark 1989; Chan and Clark 1992; see Deyo 1989; Bello and Rosenfeld 1990 for a more negative picture of Taiwan's development).

Finally, the "culturalists" have attempted to draw from the "uniqueness" of Asian culture in general, and Chinese culture in particular, to provide the "answers" for Taiwan's success. More specifically, they hold that Taiwan's development has been propelled by a society rooted in Confucian traditions which stress a strong work ethic, a belief in thrift and diligence, a respect for education, and a devotion to family, hierarchy, authority, and the like (Harrell 1985; Stites 1985; Berger 1990; Pye 1990; Redding 1990).

While some of these positions are discussed in detail below, the purpose of this research is neither to reconcile the differences in theory nor to "discover" the reasons for Taiwan's development. Rather, my intention is to

point out that contemporary research on Taiwan today often draws SSPs into broad theoretical debates where they do not always belong. Often empirically positioned in a theoretical no-man's land, SSPs have been and continue to be perceived as occupying distinct positions in Taiwanese society and economy (see Gates 1979; Gallin 1984). These positions, furthermore, are often formed to fit into dialectic or dualistic frameworks (e.g., formal/ informal, capitalist/ pre-capitalist, dependent/ core, subordinate/ dominant, traditional/ modern, Chinese/ Western). In contrast, I see small-scale producers and small-scale production as belonging to a single commodity economy, fluid and malleable, and containing multiple forms, relations, and processes whose interaction is guided by multiple, rather than resulting from one-way causation (Cook and Binford 1990:27; see Schmitz 1982b).⁴ If categorization is necessary, then, it must serve only as a marker of an empirical event; otherwise we risk locking these producers into categories which only become reified in equally rigid theories.

Mired as they are in the prevailing paradigms of their individual academic disciplines, many scholars fail to appreciate the subtle differences in the nature of small-scale production and the markets in which they operate (Gottdiener and Komninos 1989:4). Rejecting detailed *bottom up* studies in favor of more macro-directed and inspired research, many scholars often impose abstract theoretical views and assumptions *down* on small-scale producers without first understanding the nature of small-scale production and subcontracting relationships at the micro level. More specifically, researchers do not give enough attention to the more mundane details of the structural aspects of the organization of production and markets in specific industries and how they change over time. Lack of micro-based investigations often preclude questions which ask about the *historical*

processes by which small producers emerge and are shaped in individual industries (see Roseberry 1989; Lazonick 1994). Further, how does shared experience over time help form the social and cultural conditions within an industry in the present (see Polanyi 1957).⁵ While a theory may tell us dependency exists in a particular industry, for example, we need to know precisely how that dependency came about.

It is my contention that, as Taiwan became integrated into the international division of labor, a growing number of small-scale producers have become enmeshed in complex subcontracting relationships in hundreds of different export industries. The involvement of small-scale producers in subcontract manufacturing for the global economy points to the growing need to study the socio-economic linkages between producers (firms) and the market. More specifically, most producers involved in subcontracting are part of a wider commodity economy which operates and functions in a complex structure of transactions in a market (of which other producers, out workers, workers, and traders are all a part). As SSPs become involved in segmented production, furthermore, there is the increased likelihood that the constraints and barriers that exist external to these enterprises will emerge. The greater these constraints (many of which are market constraints for capital, raw materials, labor, and the finished product), the greater the need to direct research toward the *external context*. It is important, therefore, not to conceptualize the process of production in capitalism

simply in terms of the individual firm and its presumed behavioral proclivities. Production is a vastly more complicated phenomenon which involves both the single enterprise and the interactive system or network of socially divided enterprises. Each single enterprise, to be sure is an

active element of the system, but no one enterprise can unilaterally control the social conditions of its own existence (Scott 1988b:29).

Rather, according to Scott these firms belong to an industrial complex, which is simply "a large assemblage of producers tied into an interdependent whole by means of their external transactional relations" (1988b:28). In brief, I argue in this thesis that the socio-economic nature and structure of these relationships are likely to be a crucial determinant of the conditions of production and the extent to which capital can or cannot be accumulated by individual firms.

Given the general problems in the existing research on small-scale producers on Taiwan, my study of Taiwan's hand-made paper industry is grounded in two assumptions. First, I assume that the producers who are engaged in subcontract production can only be understood in the context of the specific industry and markets where they are formed and operate. Disparate industrial sectors generally conform to different organizational, exchange, and productive structures which cannot be easily incorporated into one general study of small-scale production or one theoretical framework. Second, I assume that a deep understanding of small-scale producers in a specific industry can only be achieved through an examination and clarification of the historical processes by which an industry was created and formed over time. These processes, furthermore, give shape to and are shaped by specific social and cultural traditions (at times a vague but shared version of reality) which help guide economic action (see Long and Richardson 1978; Granovetter 1985).

This thesis will identify and clarify the variables which explain why individual producers can or cannot accumulate capital in the hand-made paper

industry. These key variables become apparent only after a thorough examination of both the internal and external conditions and relations of production in the industry. The internal conditions relate directly to the operation and function of individual firms (i.e., production process, labor / management relationships) while the external conditions have to do more with the way individual firms are linked to other players in the industry (i.e., the structure and nature of the labor market, market for raw materials, capital, and finished product market). Specifically, both the internal and external dynamic of the firm constantly impact on one another over time. I believe this interplay is especially important in understanding the nature of the social and economic relationships *between* individual producers and the market process and why some producers accumulate capital while others do not .

In sum, this thesis will take the form of an empirically grounded, theoretically informed study which discusses the historical processes involved in capital accumulation in the hand-made paper industry.⁶ *Only when proceeding from such a position is it possible to gain an understanding of how, why, and under what conditions producers in the hand-made paper industry are created, able to accumulate capital, stagnate, or fail* (see Schumpeter 1939; 1950; Magnusson 1994).⁷

B. Situating Small-scale Production: A Theoretical Overview

While this thesis does not operate from any particular theoretical premise, it does draw on and is informed by a number of empirical and theoretical materials on small-scale production in general, and small-scale production in Taiwan in particular. For heuristic reasons, I group the literature I review under the headings of small-scale production and the ethnographic record in East Asia (comprising China, Taiwan, and Japan) and small-scale production in general theory.

Small-scale production and the ethnographic record in East Asia

The abundant ethnohistorical literature from Taiwan, pre-1949 Mainland China, and Japan broadly examines the importance of social relationships among those who have conducted business throughout Asian history. While the material on China and Taiwan is most applicable to my research, the impact of Japanese social traditions and patterns upon Taiwanese business organization cannot be ignored. The long period of Japanese occupation in the first half of this century and the close business relationships between Taiwanese and Japanese manufacturers since the 1960s have influenced the manner in which Taiwanese conduct their business today.

Small manufacturing enterprises have been a part of Mainland China's economic landscape for centuries. For the most part, these small businesses were primarily involved in the manufacture of simple and inexpensive labor-intensive goods (such as household implements, footwear and farming implements) destined for the domestic market. With the expansion of the

treaty ports beginning in the mid-1800s, however, the demand for more sophisticated and specialized goods increased. In the northern city of Tianjin, for example, small metal and iron working workshops originally contracted with local factories and foreign concessions to fix machinery, produce simple machine parts, and manufacture iron framing for construction. By the end of World War I, many of these shops were able to produce fairly sophisticated machinery by employing a loose subcontracting arrangement. A primary firm responsible for the finished product would contract with a number of smaller specialized workshops to produce components; by segmenting the production process, no one firm was burdened with the entire cost of production and risk could be spread among all those concerned (Hershatter 1986:92).

Subcontract arrangements were also often employed in pre-Revolutionary China when the cost and complexity of production of particular goods were beyond the capability of small and highly specialized handicraftsmen. In the city of Ningpo, for example, the production of expensive luxury goods often necessitated the establishment of a production agreement between a number of separate workshops, each under the supervision of one master. Each master oversaw a specific production process (such as inlay work, wood carving, and work in precious metals) as well as the selling of the finished product (Shiba 1977:411).

In both Tianjin and Ningpo some of the manufacturing agreements between workshops were established through specific social and cultural linkages in the community. While guild associations were present to some degree, kin and place name relationships were often the primary basis upon which apprenticeship, subcontracting, and "putting out" affiliations were established.

The importance of kin and same place relationships for finding work and establishing small business networks in pre-Revolutionary China was by no means confined to the mainland. Like rural migrants in Tianjin 50 years previous (Hershatter 1986), in post-1949 Taiwan, the rural unemployed and under-employed first sought off-farm work in the cities (Gallin 1978). The majority of the jobless relied upon relatives or fellow villagers already in the cities to help find jobs and housing. In Taiwan, many workers later returned to their native villages to become entrepreneurs once they had accumulated sufficient capital and skills.

For Taiwan, much of the existing data on small-scale manufacturing and subcontracting are available primarily through community studies conducted in the countryside. These studies focus on the impact of industrialization upon traditional village and family life and, in particular, on the introduction of small family-owned shops or factories which symbolized the intrusion of industrial capitalism into the community (Cohen 1976; Tang 1978; Gallin and Gallin 1982; Harrell 1982; Hu 1984; for more recent material on the mainland, see Lockett 1986; Nee 1985; Rosen 1987). In island-wide surveys conducted in the late 1970s, for example, Greenhalgh found that family-centered personal networks continue to bind individuals together in Taiwan. According to her research, in Chinese society, "the family emerges as the primary and most enduring claimant to an individual's loyalty" (Greenhalgh 1984:532).

There is a strong preference for economic relationships [to] be based on prior acquaintance and trust. When one must go outside the family circle to find a creditor, worker or the like one goes to the next concentric circle - those with whom one has some prior social relationship - and then to the surrounding circle

- those with whom an acquaintance has a prior relationship (1984:535).

With an "estimated 97 percent of private industrial firms [urban and rural] in Taiwan organized along family lines" (Greenhalgh 1984:535), research demonstrates the continued significance of social relationships in business dealings, whereby entrepreneurs depend heavily on family labor, financing, and contacts when establishing and operating small subcontract factories (DeGlopper 1972; Gates 1979; Gallin and Gallin 1982; Hu 1984).

While much of the literature on Taiwanese social and economic life has concentrated upon the small entrepreneur in the rural areas, some ethnographic studies have focused on large indigenous manufacturers in the cities. These investigations have emphasized either the organizational behavior of Chinese corporate bureaucracy or the interface between family organization and inheritance practices as they apply to the ownership and management of large family-owned firms (Mark 1972; Silin 1976; Wong 1985). Perhaps because these studies have emphasized organization at the management level, they have paid little attention to the smaller subcontract firms with which they conduct much of their business.

Subcontracting in Japan

Perhaps nowhere else has subcontracting been as extensively examined as in Japan. With more than 60 percent of Japan's small manufacturers involved in subcontracting (primarily parts production and sub-assembly), vast networks have been established between manufacturers to ensure the smooth and efficient operation of the production process. These networks are predicated on pre-existing social relationships based on trust (Clark 1979; Patrick and Rohlen 1987). In many Japanese firms, fictive kin relationships

(*oyabun-kobun*) serve as the link between small manufacturers and their larger partners by creating ties which are highly personal and particularistic (Bennett and Ishino 1963). Often, for example, owners of large companies help former employees start their own small companies in hope of "gaining benefits from the continuing relationship. That is, 'offspring' companies form part of the 'parent's' network through which new orders and valuable information are exchanged..." (Patrick and Rohlen 1987:345).

Given the close relationship between some Taiwanese and Japanese businessmen during both the colonial period and the 1980s, Taiwanese manufacturers may have adopted or modified particular elements of the Japanese manufacturing process as their own. As in Japan, for example, some large "parent" firms in Taiwan are beginning to recognize the importance of cultivating long-term social and economic relationships with "a stable of strong subcontractors as a means of borrowing their strengths without incurring the fixed costs that doing the same work internally would entail" (Patrick and Rohlen 1987:349-353).

Aware of the benefits of a close manufacturing relationship between subcontractors and large producers, as has been the case in Japan, Taiwan's Ministry of Economics initiated a program in the mid-1980s to organize some of the island's large and small factories into a "mutually beneficial" integrated unit. Once such units are formed, the ministry plans to lend assistance to those subcontractors (referred to as satellite factories or *wei hsing kung ch'ang* 衛星工廠) and parent firms (also known in Chinese as "center factories" *chung hsin kung ch'ang* 中心工廠) which lack a stable financial structure and have a weak managerial, marketing, and technological base (Ch'ung Hsin Wei Hsing Kung Ch'ang Chih Tu T'ui Tung Hsiao Tsu, 1986; see also Hsu 1979; Huang 1986; Chen 1987). Because the island's small

entrepreneurs seek much of their assistance from a close network of relatives and friends, it is unclear whether the government's attempt to establish cooperative manufacturing systems will ultimately succeed.

In sum, while the available literature contributes to our understanding of subcontracting in Taiwan, it overlooks certain issues. For example, what impact have Chinese and Japanese social and cultural traditions had upon subcontract manufacturing in Taiwan? Does subcontracting easily accommodate traditional socioeconomic relationships found in China, or does it necessitate some modification of social behavior to allow the inclusion of those outside kin-based relationships? Have particularistic relationships played a major role in ensuring the persistence of subcontracting or is this persistence more the result of the economic peculiarities of contemporary capitalism (as described by Holmes [1986])? Alternatively, does a balance exist between social relationships and economic interests which creates a special business environment that encourages subcontracting to thrive in Taiwan? These questions are important for this thesis because they are inextricably connected to the central issue of capital accumulation.

Following Long and Richardson, I believe the thesis can contribute to an understanding of the social relations of production with respect to the 'internal' relations of production, (such as the pattern of work organization and associated property relationships) and to the various interpersonal and inter-group relationships that lie outside or are external to the actual production process but which are essential to its maintenance. More specifically, "an analysis of the social relations of production requires an examination of the differential use and influence of social and cultural resources in the labor process" and the market which surrounds any industry (1978:188 see also Granovetter 1985).

Small-scale production in general theory

The importance of theory with regard to the issue of small-scale production should be the extent to which it adequately deals with SSP in the contemporary global economy and whether or not it provides the tools to account for the presence or absence of capital accumulation. I have broadly grouped three theoretical positions below under the headings of modernization, dependent / subsumption, and accumulation. The first two positions provide a theoretical backdrop for the discussion of accumulation, a position which I believe is suited to the study of SSP in Taiwan.

Modernization theories

Modernization theory identifies small-scale production as either traditional or non-traditional. Generally, the boundary between the two is determined by the degree to which small-scale producers are linked to either the "informal" sector or to the "formal" sector of the economy. Informal, traditional small-scale producers are often characterized as static, labor-intensive, capital poor, unstable, and non-accumulative. For the most part they produce simple goods for the local market. The primary characteristic assigned to informal enterprises is their limited connections to the formal sector of the economy. If linkages do exist, they are generally seen as minimal and non-exploitative (Hart 1973; see Geertz 1963 for his "bazaar" and "firm" conception of third world producers).

Small enterprises in the formal-modern sector, on the other hand, are commonly thought of as replications of a western form of factory production. They are characterized as involved with formal sector institutions (i.e., likely to take loans from banks and to be involved in a production relationship with

large-scale enterprises), have higher levels of technology and, capitalization, sophisticated managerial know-how, and knowledge of markets. The general implication is that without these links to the formal sector many of these small enterprises would fail (Rostow 1960; Watanabe 1971; Anderson 1982).

Conservative advocates of the modernization thesis generally point to the free market as the core concept and argue that the economy is free standing and self perpetuating (Blim 1992). Neoclassicists in this group take an ahistorical view of the economy, arguing that interactions between individuals and firms occur in the marketplace where they meet as equals and that transactions are made at arms length and are regulated by cost-rational decision making dictated by the market.

Critics of modernization theory point to at least two problems in this formulation. The first centers on the theory's propensity to hold large-scale, vertically integrated production as the prime indicator of economic development. It presumes that the only unit of analysis of capitalist production processes remains the individual firm and, in particular, its internal behavior (i.e., production functions, internal scale efficiencies, management/ labor relations). Certainly the analysis of single producers (i.e., the internal dynamic of the firm) remains a fundamental element in studies of production. Yet, studies of individual producers constitute only one facet in complex production processes (sometimes referred to as systems or industrial complexes). Most small-scale producers are part of a wider commodity economy, which operates and functions in a structure of external transactions in the market. When studies focus on only the internal dynamics of the firm, the unequal relationships of power and dependence which often lie behind these linkages, and result in subcontracting, franchising, licensing, and trade

credit, are often ignored (Holmes 1986:82).

The second problem lies in modernization theory's rigidity in the conceptualization of the "informal-formal sectors" and its disregard for the possibility of interaction and linkages between the two. As Worsely (1984) has pointed out, why assume only two sectors? Why not think of these two sectors as two poles on a continuum? Indeed, some Marxists argue, that interconnections between small-scale producers and large scale capital must be considered, and that the interconnection "must be examined within a mode of production framework so that the flow of surplus from non-capitalist to capitalist modes may be fully appreciated" (Long and Richardson 1978:177).⁸

Dependency/ subsumption theories

Dependency theorists trace their theoretical stance to the work of Frank (1967) and Wallerstein (1974; 1979) among others. This group sees the formation of the world economy as a system based on the exploitation of underdeveloped and late-developing "peripheral" economies by "core" capitalist economies. The dependency or subsumption approach provides the foundation from which scholars concerned with the status of small-scale production could launch their attack on the modernization approach. For example, a number of scholars (Mellassoux 1972; Godelier 1972; Terray 1972) working within the petty commodity production (PCP) framework believe that the majority of small-scale producers in the so called informal sector are completely subordinated to and subsumed by large capital.⁹ In contrast to the modernization model which left room for the possibility of small-scale production crossing from the informal to the formal domain, this group believes that the cross-over is not only impossible but that large capitalists are active in maintaining and sometimes creating a group of super

exploited small producers (a kind of reserve group of small producers waiting in the wings of capitalist production).

Particularly concerned with those workers and small entrepreneurs who do not occupy clear class positions in the production process (Wright 1978), this group argued that many small-scale producers were no more than subcontractors, putting-out, or piece workers who had little independence from the larger more powerful capitalist sector (Murray 1983; Gouverneur 1983; see Gates 1979 for how the situation applies to Taiwanese SSPs).¹⁰ This position is further articulated by Gerry and Birkbeck (1981) who note that the growth of subcontracting, franchising, and outwork is but "thinly disguised wage labor enabling large-scale capitalist enterprises to shift both responsibilities and, as a consequence, production costs onto ostensibly independent operators" (1981:130). Although Portes (1983) declines to use PCP in his analysis, he echoes the position of Gerry and Birkbeck. In his view, any production undertaken by household workers under contract is indicative of an exploitative relationship between large and small enterprises.¹¹

According to Gouverneur, the growth of numerous small manufacturers in similar industries stimulates competition and, in particular, has a

two-fold effect on rates of profit in that it increases the average rate of surplus value through a higher rate of exploitation of workers employed by subcontractors. Essentially, the large firm is in a position to impose not only the norms of production, but also the price, while the small enterprise is obligated to accept these conditions (Gouverneur 1983:142).

It is argued that the dependent position of small producers relative to larger firms impedes the accumulation of capital and advancement from petty

commodity production to petty capitalist production (Gerry & Birkbeck 1981; Chevalier 1983; Portes 1983; Murray 1983; Smith 1984a; 1984b; Rainnie 1985).

Most adherents to the dependency /subsumption school tend to agree that when production is segmented into various physical locations (as is the case of subcontracting or putting-out), large firms which furnish contracts to small firms do not have to contend with the demands of a unified work force - - the one group which is instrumental in driving up costs in labor intensive production. Further, when production is segmented, subcontractors or out workers are often forced to bid against each other for work from large producers, and they are thus forced to take more risks during production than they might otherwise do. Finally, because small-scale producers are flexible, they are often forced by large producers to absorb the costs of production slow-downs or sudden changes in the consumer market.

The common belief of the subsumptionists, then, is that small-scale producers are a self-exploitative group dependent on large capital for survival with little or no hope of accumulating capital on their own. And, although they acknowledge that small-scale commodity producers may have existed prior to the advance of capitalism, they insist that with its advent, they were forced to take work from the primary sector in order to survive (i.e., they were maintained by capital). For the most part, however, subsumptionists assert that the great multitude of small-scale producers are the creation of large capital in need of a cheap and malleable work force.

In the late 1980s, Portes began to rethink many of the issues related to small-scale production and state intervention. Stating that, "history is full of surprises," he acknowledged that, due to the changes in the world economy since the late 1970s and early 1980s, the informal economy had to be seen as

incorporating both third world and industrialized economies (Castells and Portes 1989:11).¹² Moving away from the notion that all small-scale producers are marginalized or completely subsumed by large capital, Castells and Portes (1989), and Benton (1989), center their attention more on the “processes of income-generation” and the degree to which small, “informal” producers are or are not regulated by the state (Castells and Portes 1989:12). Still, Portes’ adherence to the notion that much of small-scale production is part of a temporary crisis in capitalism and that “people all over the world have been mobilized to work and earn a living on the margins of rules and organizational arrangements that no longer fit into their real condition and experience,” appears to continue to adhere to a loose dualist argument of formal -- informal or, more importantly, the regulated -- unregulated (1989:29).

Critics of the subsumptionist/ dependency theory argue that, like modernization models, it tends to generalize about the relationship between petty producers and the larger sphere of capitalist producers. Small-scale producers (in most of their variations) are seen as victims of forces exterior to themselves and the expropriation of surplus value by larger capitalists is considered a one-way street (i.e., capital accumulation only moves toward the larger capitalist entity)(Cook and Binford 1990). In Worsley's (1984) opinion, most of what is put forth by the subsumptionist/ dependency group (which he tends to characterize as falling into the marginalist camp) is reminiscent of the functionalist "culture of poverty" thesis. It might also be argued that the position taken by Portes (1991) tends to perpetuate the only thing that the PCP framework attempted to avoid in the first place; the broad generalization of commodity forms into two antagonistic camps.

Regimes of accumulation and global capitalism

According to Mandel, "capital by its very nature tolerates no geographical limits to its expansion" and uneven development, though beginning in the locus of capitalist production itself, is embedded in a combined international economic structure (Mandel 1975:41-46, 311).¹³ The world economy that capitalism transforms has always consisted of differing social relations of production, ranging from pre-capitalist and semi-capitalist, to full-blown capitalist relations of production "linked together by capitalist relations of exchange" (1975:184-222).

In the late 1970s and early 1980s, Mandel's views seemed to be substantiated when a "new international division of labor" (NUDL) emerged in the world in which production in the "core" countries was slowly decomposed and decentralized to "locations where optimal profits were most likely" (Blim 1992:4; see Froebel 1978). While large capital in the form of multi-national corporations (MNCs) located in the "core" countries, were still seen as the primary beneficiaries of this process, a small group of countries, particularly in East Asia, in which export manufacturing had boomed, were also thought to reap rewards from the NIDL (Blim 1992:5).

The theoretical work of the French Regulationist School (Aglietta 1979; Lipietz 1986) -- which offers insights somewhat analogous to the views of Mandel's crisis in capitalism (1975), asserted that a technological-institutional structure of production and accumulation which leads to periods of growth exists in capitalism, which they called "regimes of accumulation" (Lipietz 1989:73; Moulaert and Swyngedow 1991:240). Further, this regime is guided by a '*form of regulation*' which is composed of institutional structures which ensure or guide behavior within a regime. A regime of accumulation

can be simply defined as

a historically specific production apparatus [in capitalism] through which the surplus is generated, appropriated, and re deployed. The definition can be further refined by decomposing the notion of a regime into an articulation of four distinctive elements: (a) a set of production techniques, (b) a characteristic way of organizing production, (c) a distributional mechanism governing the appropriation and re deployment of the surplus, (d) a process of aggregate demand driving forward the evolution of productive capacity (Scott 1988b:8).

One of the primary arguments of the regulationists is that the regime of Fordist accumulation which has dominated the later half of the this century is giving way to an emerging regime of flexible accumulation. More specifically, Fordist accumulation was and is marked by mass-productive forms which have traditionally searched for large "internal economies of scale based on process-flow and assembly-line methods, technical divisions of labor, and standardization of outputs" (Scott 1988b:9, emphasis added). One of the primary objectives of Fordist accumulation, furthermore, is to gain ever increasing control over and subordination of labor through the fragmentation of work, i.e., de-skilling of labor (Braverman 1979). With changes taking place in the global economy, however, a new regime has emerged which centers on the growing need for flexibility of production processes, labor markets and, in contrast to Fordist mass production, on external economies of scale in the organization of production (Scott 1988b:10).

While there are numerous explanations and hypotheses for why many economies tend toward flexibility, Scott (1988b) provides some key points for the rise of flexible accumulation regimes. These regimes are more likely to occur when (a) market conditions are uncertain and unstable as a result of

fluctuations in demand, competition, or unrelenting product differentiation, (b) combined production processes have varying optimal scales of operation, and (c) geographical agglomeration is in place (1988b:26-27).¹⁴ Whatever the case, Holmes has suggested that the above explanations are often interrelated and that the importance of elements associated with the technical organization of production, the market, and labor supply in defining the degree to which work is segmented (i.e., subcontracted, putting-out, franchised) will vary by industry, region, and country. The structure of capital and labor markets and forms of production organization, furthermore, depend crucially on historically specific dimensions, suggesting the necessity for a multicausal explanation (Holmes 1986:95).

What is important to note, however, is that the flexibilities (and the increased productivity and profits that often accompany them) inherent in flexible accumulation and available to large capital are more readily achieved through the use of segmented production and related labor market segmentation than through large-scale production. Specifically, subcontracting arrangements have increasingly become one of the critical links in the organization of production processes in many sectors of the global economy simply because they increase flexibility. And, although much of literature sees subcontracting as functional for large capital, recent research has indicated that subcontracting can create the possibility for small-scale accumulation (Holmes 1986:88; Sabel 1982).

To understand the organization of production under regimes of accumulation, Scott (1988b) insists that the firm must be viewed as a living social institution composed of two dimensions: an *internal unit of production relations* (of which there may be various parts), and *interfirm (external) relations* (the organization of production between firms). The internal unit

of production is structured by internal economies of scale while interfirm relations by economies of scope (Scott 1983: 237; 1988:18; Sheard 1983:51; Holmes 1986:91; Williamson 1985; 1991). For the most part, "scale effects" in production are apparent with reference to the internal technological and organizational aspects of the firm. "Scope effects," on the other hand, are based on the *transactional relations between production in different firms*. Producers, therefore, try and weigh both scale and scope effects in making decisions on whether to produce internally or buy on the market. ¹⁵

The simplicity of the above model, however, can obscure the actual complexity of production, particularly with regard to external transactions. Under certain conditions, such as highly competitive or unstable markets, producers are under great pressure to extract surplus value from labor, while also trying to maintain some kind of footing (or control) over the commodities they are producing. In many industries, this pressure often drives capitalists into external transactions (i.e., an increasing social division of labor in segmented, vertically-disintegrated production such as subcontracting) whereby internal economies of scale and scope give way to external economies of scale.

By acknowledging this division, we are allowed to "seize production in general (a confusing assemblage of labor processes, technologies, physical stocks, and so on) as a coordinated system of internal hierarchies and external markets" (Scott 1988b:24; see also Williamson 1975). More importantly, there is not always a distinct break between the internal (dynamic) and external (market) relations, but rather an irregular and often chaotic

continuum extending over a variety of intermediate forms (into which production through subcontracting, subsidiaries or

affiliates, joint ventures, partnerships, quasi-vertical integration, all may fall), and we can see production as a complex but rationally comprehensible organizational structure rooted in the polarities of the firm and the market (Scott 1988b:24).

Schmitz (1982a) and Sheard (1983) caution, however, that most intermediate modes in this complex are not always "treated explicitly by economic theory but may in fact be more typical than the polar modes of internal organization and free market transactions" (Sheard 1983:51). Essentially, in the intermediate domain, transactional relations are far more complicated than typically assumed, and are subject to *less precise rules* which often include *power relations* formed around formal and informal structures ranging from oligopolistic licensing agreements (where raw materials, semi-finished and finished products, capital, machinery, are bought and sold) to technology arrangements all of which play havoc with the "free market" (Scott 1988b:25; Holmes 1986:88; Sheard 1983). In contrast to the static neo-classical view, furthermore, the market must be regarded as a dynamic social institution which evolves over time. In this sense, the market structure is endogenous to the evolution of industries and is a force that acts to "shape the competitive process rather than being a blind outcome of the same process" (Magnusson 1994:6; Dosi et al, 1994:204; see also Cantor et al. 1992).¹⁶

Despite these complexities, a detailed analysis of both the *internal* (entrepreneurship, management) and *external* socio-economic constraints (exploitation by larger enterprises and barriers to access to markets for capital and raw material imposed by large capital or by the state) can reveal a cogent view of the position of small producers in any given industrial complex (Schmitz 1982; see also Smith 1984a). Specifically, such an analysis reveals the rules or forms of regulation which operate at the intermediate level,

thereby highlighting the position of small producers in the production process and the extent to which they are "independent or simply an extension of the production networks of large firms" (Schmitz 1982:435; see Wright 1978).¹⁷

In sum, my approach to the study of small-scale production is grounded on the ideas outlined above. I believe that only through such an examination is it possible to gain an understanding of the conditions under which capital accumulation may or may not occur in small-scale production. Simply put, *capital accumulation may or may not occur depending on the nature of production process, labor, capital, and product markets, and linkages present. The social and cultural conditions which emerge as part of these linkages over time, furthermore, help shape or regulate the opportunities and constraints faced by individual producers.*

C. Small-Scale Production And Segmented Production: Toward A Methodological And Theoretical Framework

While it is not within the scope of this thesis to provide a thorough accounting of the flexible accumulation thesis, there are a number of scholars who share some fundamental ideas with the regulationists (Schmitz 1982; Sheard 1983; Scott 1988(a)(b); Holmes 1988; Cook and Binford 1990, to name a few). Their ideas can be used to shape a new theoretical and methodological framework designed to bring small-scale producers back into the of contemporary capitalist production and to reveal how and under what conditions capital accumulation does or does not occur. This framework and my research on the hand-made paper industry, raise three broad questions which I believe can direct the study of small-scale production in Taiwan in general and the hand-made paper industry in particular.

A. My research calls into question the tendency to overly generalize about small-scale production in Taiwan on the national or global level. Following Cook, I believe it more beneficial to start from the assumption that small-scale producers are part of single commodity economy which often contains multiple forms, relations, and processes whose interaction is guided by multiple or at least mutual causation (Schmitz 1982:47; Cook and Binford 1990:27; Holmes 1986:88; Long and Richardson 1978). In contrast to the subsumptionists, therefore, research on small-scale producers in the hand-made paper industry should ask: How and to what extent are the routes to capital accumulation open or blocked by other players in the industry ?

B. As demonstrated with increasing frequency in global markets (of which the paper industry is a part), the logic of flexible production systems

can be viewed as based on a complex segmented production system, hierarchy, or matrix where most *small producers operate at an intermediate position as subcontractors, outworkers, brokers, traders, and franchisers* (or in combination). The involvement of small-scale producers in ever complex structures of subcontract manufacturing points to the reasons why the linkages between producers and others in the market have become so important. Given the connections between producers in the hand-made paper industry to others in the various markets in which they operate, *the organization of production in (and between) firms can be interpreted as a mobile and malleable productive form which acts and reacts not only to changes in price signals but also to numerous other conditions* (most of which are either ignored or misunderstood by social scientists). Specifically, this wider set of non-economic conditions has to do with the socio-cultural or political dynamics which permeate the firm at both the internal and external (interfirm/market) level. Falling as they do between the extremes of the firm and market, it is often at the intermediate level of external firm transactions that decisions cease to be mediated entirely by economic concerns. Two questions emerge from this assertion.

- 1. To what extent do cost and price considerations of inputs (labor, machinery, capital and materials) and of outputs (finished product) dictate the nature of (external) relationships between firms? What is the role of market demand, for example, in influencing these relationships?*
- 2. How is the manner in which small independent producers pursue capital accumulation influenced by social, cultural, and political factors (which may take the form of power relationships) which mold and are molded by the markets in*

which they operate?

C. My research indicates that many producers in the hand-made paper industry realize that the longer they remain at the lower rungs of the production hierarchy, the longer they will remain separated from lucrative contracts in the market. Given the complexity of interfirm relations, is it possible to presume that there is a *direct relationship between the ability of producers to accumulate capital and their position in the production matrix relative to other producers and traders in the market?* More specifically, can capital accumulation occur most easily when control over the production process by way of the market (primarily through trading and brokering) is established? *Furthermore, is the ability to accumulate capital dependent on how skillfully a small producer manipulates his/her relationships in this matrix?*

While many small enterprises usually follow common strategies of capital accumulation they are, above all else, fluid and flexible, rarely behaving the same way from one period to the next. They are in motion at all times, constantly adjusting their behavior to changes in their particular social, cultural, political and economic environment.

Suffice it to say, a central part of this thesis is to illuminate understanding of *how and in what manner individuals maneuver themselves (their businesses) and manipulate others in order to gain as much access to and control over the market as possible.* The thesis will demonstrate under what circumstances access to and control over markets in the hand-made paper industry determine the extent to which sustained capital accumulation can occur. In addition, it will show that, in the Taiwanese context, certain social and cultural norms have helped to lay a framework and provide the mechanism for such relationships to exist and persist in business.

Players in the industry have selected those social and cultural resources which are appropriate to specific socio-economic contexts within the industry and help to maintain relationships which are often essential for survival. Those who succeed in maneuvering in this matrix and gain access to and control over the production process, therefore, are also often the ones who best understand these norms and use them in formulating a business strategy.

In pursuit of the agenda and questions outlined above, the thesis will focus on both the social and economic nature of production at the internal and external level of the firm in the hand-made paper industry. Following the theoretical lead of the accumulationists, it will also focus on three elements or variables I believe are central to understanding the process of small-scale production and subcontracting in the hand-made paper industry and the ability to accumulate capital: (a) the structure and stability of and access to the market for capital, raw materials, a subcontracted part, or finished product; (b) the structure and organization of the production and labor process; and (c) the structure and nature of the labor supply. These three major variables interact in determining the extent to which production is "subcontracted" in any particular industrial sector or region and, in doing so, help give "form to the structure of the labor market," the structure of production, and the structure of the market for both inputs and outputs in the hand-made paper industry (Holmes 1986:87).¹⁸

While the thesis is specifically centered on subcontracting relationships between firms in the hand-made paper industry, extra attention has been accorded to the external dimension (inter-firm relations) of the industry. *This is because my research findings show that the 'structure and stability of markets' is a key variable in the historical process of the hand-made paper industry.* Markets are unique with regard to interfirm linkages in that they

are one segment of the industry which is subject to the vagaries of exchange (i.e., are subject to monopoly and oligopoly). More than any other variable, the market for raw materials, capital, and the finished product are subject to manipulation and control by players in the production process. Control over the access to markets plays a major role in determining the ability of hand-made paper subcontractors to accumulate capital.

D. Research Methods, Informant Confidentiality, and the Research Subjects

Research on the hand-made paper industry of Puli, Taiwan began in the spring of 1989 and concluded in the winter of 1990. I came to study the paper makers in Puli, for three reasons. First, a relationship already existed between an owner of large paper company and my major professor in the Department of Anthropology at Michigan State University. Second, the relatively small size of the industry and the companies within it made for a manageable research sample. Finally, the hand-made paper industry had a long history of complex subcontracting relationships based on a distinct hierarchy of paper manufacturers.

The analysis followed an ethnographic line of inquiry, incorporating questionnaires, in-depth interviews, and participant observation. In a broad sense, the research examined a community of factories and workers in one industry who share little in the way of a common village life. Like many industries in larger urban areas, these factories draw individuals from throughout the basin area of Puli Township in central Taiwan. Of the 29 paper companies in operation in 1989, 22 company owners agreed to be interviewed. Of those owners, 19 provided enough information to fill a three page questionnaire and answer approximately a half-dozen open-ended questions. It is this group which formed my "general sample."

Ten factory owners in this sample were willing to be interviewed over the period of one year. That is to say, ten factory owners and their family members tolerated my repeated visits to their factories and usually found time to talk with me. The owners of these ten factories and their families formed

my "core research group." Most members of this group were small producers who had either a current or past business relationship with one of the largest "center factories" (Tai P'ing Cotton Paper Company) in Puli. The terms "center factory" and subcontractor are explained in Chapter IV. This large company, served as the base from which I launched my research in Puli. While I offer pseudonyms for the companies in the core research group, I rarely refer to them by name in the body of the thesis. Rather, I discuss five of these companies in Chapter VII. As a rule, I do not use factory names in the body of the research to avoid compromising the confidentiality of the my research subjects. Even with the use of pseudonyms, certain incidents which occurred in Puli or comments made by my informants could easily be traced to specific people if I used some kind of identifier. In most cases, therefore, I use the "an informant told me" style of identification to protect my sources.

While most factory owners were uncomfortable with giving me free reign in their factories, one owner of a large paper factory allowed me total access to his operation. This freedom allowed me to spend many hours in his factory to talk to workers and supervisors as well as simply watch the day-to-day work of the factory. While this thesis primarily focuses on entrepreneurs and the relationship between factory owners and the market, I include those data on workers which I believe are of particular importance to the topic. By the conclusion of my research in 1990, I was able to build close relationships with several workers within this factory. They, along with short interviews conducted with other workers in other factories, provided me with considerable data on the workers perspective of paper making in the industry. In many respects, the workers who I interviewed provided me an invaluable glimpse of their bosses and their families which was not readily available when talking to the bosses themselves. Finally, historical sources and

government data were also consulted when available and interviews were conducted with local officials, government bureaucrats, and others not directly involved in the production of paper. Often, these individuals provided an outside view of the industry.

Is it possible to operationalize small-scale producers?

Small-scale producers have been categorized and labeled in so many different ways that it is often impossible to know exactly what group of producers one is talking about. This variation provides a good example of the broad range of ideas associated with small-scale production and is reflected in the way in which small producers are viewed in disparate disciplines and paradigms. As an example of what the reader can expect, Schmitz (1982) has gathered together some examples of terminology. In no particular order they are: informal sector, urban traditional sector, circuit marginal pole, unprotected sector, non-enumerated sector, domestic workshops, outwork, homework, petty commodity production, non-capitalist production, petty capitalist production, small-scale industrial production (Schmitz 1982a:432).

Given the fact that there is a broad range of terminology, it is not surprising that there is also a lack of consensus on the size of small-scale producers. Much of the literature generally views small-scale producers as those who operate with between zero to ten workers. It is not uncommon, however, for researchers to define small enterprises as all those which employ fewer than 40 workers.

I take a decidedly generic position on labeling small-scale producers. Uncomfortable with locking myself into any rigid category, I generally view a small producer as employing between one and thirty workers. Because my

research and interests are tied to subcontract manufacturing, I often use the term small-scale producer (SSP), small-scale enterprise (SSE), small-scale subcontractor, or segmented production. Further, most of my research focused on semi-urban small-scale artisan capitalists, who employ wage labor and had little or nothing to do with agricultural production. This is important to know since much of the anthropological literature deals with small-scale producers within a rural agricultural / peasant context. My lack of adherence to a size/ terminological standard is, for me, a kind of silent protest against the manner in which the social sciences have tried to bifurcate this group with little regard to the fluidity of small-scale production. As the reader will discover, I believe one of the keys to understanding small-scale producers is not so much in how they are defined in terms of size or whether they have labor power, but rather, more on how small producers fit into the overall production hierarchy and the nature of their linkages to the market.

Relationship with my research subjects

While my connection to one of Puli's larger paper manufacturers gave me a base from which to start my research, questions remain whether my association with this company boss (who was a dominant force in the industry), hindered or helped me establish relationships with other factory owners in the industry.

Never going into an interview "cold," I always relied on a factory owner with whom I already had a relationship to introduce me to owners they knew in the industry. While this was a particularly long and drawn out process, I believe I saved valuable time in the long run by simply not "dropping in" on factory owners without a connection to someone else in the industry. I thus never approached a new research subject without them already knowing

something about me.

Most factory owners treated me with varying degrees of suspicion during the first six months of my research (as they would with any outsider). After a half year in the field, however, my repeated visits to their factories and my participation in various social events, appeared to allay some of their apprehension about me.¹⁹ What may have also helped me gain the trust of factory owners was my strategy for collecting data. When I first began interviewing factory owners, I always made sure that an interview would not take place at an inopportune time; after all, my informants were businessmen who had particularly busy work schedules. I also attempted to gauge the mood of my informant once an interview was started. When it was obvious that my subject was impatient or uncomfortable with my questions, I quickly ended the interview. I found out that if I returned at another (better time), these same factory owners would often be more accommodating.

Another interview strategy which seemed to work well was that I reserved the more intimate questions about the owners and their companies for the last stage of my research. I also attempted to learn about the industry by encouraging my informants to talk (gossip) about other factory owners in the industry.²⁰ Fully aware that discussions about "other" factory owners can often be less than truthful, I attempted to maintain a degree of damage control by pursuing the same questions with as many factory owners as possible. Once I had collected enough information on an individual or a particular incident, I then reevaluated my data by weighing one "story" against another.

By the time I completed my research, I had made a number of friends among both factory owners and workers in the industry. I had also gained the reputation of a somewhat strange American who had a Taiwanese wife, could hold his drink (my capacity for alcohol was always tested in Puli), liked

to chew betel nut, smoked lots of cigarettes, and rode a bicycle "like a Mormon." Perhaps not sure how I fit into the scheme of things, I'm sure many factory owners dismissed me as simply a freak who liked to study small factories. A number of paper factory owners, however, paid me what might be taken as both a compliment and a warning toward the end of my research in Puli. Amazed at how much I learned about their industry and what went on there, one factory owner -- echoing the thoughts of several said, "You really do know a lot about this industry." And, perhaps more ominously, "You now know more about us than some of us ever thought possible."²¹

Structure of the thesis

Chapter II deals with economic change on Taiwan beginning with Japanese Colonial rule to 1989. Highlighting important periods in the Taiwanese economy and those policies which directly influenced the development of manufacturing on the island, the chapter first explores Taiwan's injection into the Japanese colonial economy. The chapter then examines the most important economic events of the Post World War II period, concluding with a section on the general nature of small-scale production on the island. While this chapter does not speak directly to the hand-made paper industry, it does provide a framework for understanding the general conditions under which the industry developed from its inception in 1935.

Chapter III, the setting of the hand-made paper industry, examines the socio-economic context of Puli Township. As with Chapter II, Chapter III does not touch directly on the paper industry but, instead, provides background information which will help the reader situate the industry at the local level. In this regard, the Chapter explores the history of the region as

well geographical, administrative, and economic issues in 1989 and 1990.

Chapters IV and V provide a general overview of the internal and external dynamics of the hand-made paper industry as it existed when my research began in 1989. The two chapters essentially provide a framework which will serve as a guide for understanding Chapter VI, the history of the industry, which follows. Chapter IV focuses on the technical organization of production and clarifies the nature of paper "the commodity," the product market, the production process, company ownership, factory location, and the general structure of subcontracting relationships. Chapter V, on the other hand, centers on the social organization of production and focuses on the work force, the entrepreneurs, and the role of family labor in production. The chapter also investigates the ideology of family as a mediator of relationships between factory owners involved in subcontract production.

With Chapters IV and V providing an overview of the industry in 1989, Chapter VI moves back in history beginning with the development of paper production in Ancient China. Divided into four sections, the first section leads the reader through to the end of Japanese period when the first paper factory was founded in Puli. The second section traces the reconstruction and development of the industry during the Post World War II period to 1969. The third section examines the dramatic changes in the export market for hand-made paper and the establishment of small subcontracting companies between 1970 -1979. During the 1970s, as many as 30 papers companies were founded, most of which were involved in subcontracting with companies established prior to the 1969. The last section in Chapter VI explores the changes in the nature of the relationship between "center factories" and subcontractors beginning in the early 1980s to the present. While the decade of the 1980s represents one of the most profitable periods for the industry it

was also a time when high wage rates and growing overseas competition helped contribute to the demise of a significant number of paper subcontractors in Puli.

Chapter VII draws on five paper companies to illustrate how and in what manner the hand-made paper industry has changed over time. Centered on the lives of one center factory owner and four subcontractors, the chapter explores the nature of changes in the relationships both within firms (labor and management) and the between firms (center factory owner and subcontractor) as the society and economy changed around them.

Finally, Chapter VIII concludes with a discussion of the some of the current problems in the study of small-scale production. It points to the fact that both context and change are often ignored by social scientists, and that overly broad generalizations are made about producers in different industries who share little in common. My research on the hand-made paper industry, therefore, is used as a base from which to challenge many of the assumptions made about small-scale production as it is often depicted in generalized theory.

¹ The use of the terms small, medium, and large to refer to the scale of enterprises is often subject to great variation in the literature. In my view that such designations mean little when applied to as many sectors of the Taiwanese economy as is generally the case; an assembly operation of 35 workers in the shoe industry has little in common with an operation of similar size in the hand-made paper industry. As I argue later in this study, researchers have to pay close attention to a myriad of other factors, such as capitalization, labor process, and access to markets, in order to understand what "size" actually means in specific industries. Despite these misgivings, however, I have chosen to follow Schmitz and very loosely categorize small-scale factories as those with under 30 workers. Nevertheless, the reader should keep in mind that this range often includes what many researchers would designate as medium-sized firms (Schmitz 1982:432).

² Also see Kung Yeh T'ung Chi Tiao Ch'a Pao Kao 1991. Data on manufacturing enterprises collected by the Ministry of Economic Affairs (MOEA) differs from data collected by the Directorate-General of Budget, Accounting and Statistics (DGBAS).

³ The work by Deglopper (1972), Tang (1978), and Stites (1982) deal with small-scale producers in more urbanized areas of Taiwan.

⁴ Cook's definition of a commodity is a derivative of Hart (1982) whereby a commodity "is a product of human labor whose use-value can be realized only after it is exchanged to someone other than its producer. One follows the single commodity economy concept, one can "then proceed to address issues of enterprise dynamics, differentiation, and relations without being able to explain one category of enterprises (e.g., petty or peasant) in terms of another (e.g., big or capitalist)(Cook and Binford 1990:30-31).

⁵ Here I am also referring to Polanyi's view that the social may act as a regulatory force on economic relations within an industry.

⁶ Schumpeter (1950) eventually came to see "the study of the historical process as the means by which one acquired the intellectual capability to study the process of change" (Lazonick 1994:253; also see Polanyi 1957).

⁷ Some readers might see the connection to Schumpeter's view of competition as "creative destruction" in the marketplace where firms either adapt to the market and survive or fail.

⁸ The mode of production analysis considers the forces and social relations of production, the connection between co-existing modes, and the action by which surplus value is created and extracted. A mode of production is conceptualized as containing two components: "a) the forces of production (material resources, instruments of labor, labor power and other technologies; and b) relations of production defined as the ownership and control of the means of production and creation and appropriation of surplus product" (Long and Richardson 1978:182).

⁹ In the early 1970s, a group of neo-Marxists (the French School-Meillassoux 1972; Godelier 1972; and Terray 1972), saw a need for the establishment of a model which rejected the dualist informal/formal view of the economy. This new view advocated an analysis which examined the articulation between pre-capitalist (subordinate) and capitalist (dominant) modes of production.

¹⁰ "Independence," according to Cook, " requires three conditions: (1) juridical ownership of the means of production; (2) direct appropriation of the profits of the enterprise; and (3) control over the decision making process which arises out of production "(Cook and Binford 1990: 24 after MacEwen 1979:107). See Rannie (1985) for a discussion of the role of the state in promoting small-scale production.

¹¹ As Schmitz points out, however, such analysis has rarely been subjected to detailed empirical examination (1982: 433).

¹² A highly controversial term, Portes defines the informal economy as simultaneously encompassing "flexibility and exploitation, productivity and abuse, aggressive entrepreneurs and defenseless workers, libertarianism and greediness. (1989:11). Perhaps more to the point, Portes goes explains that that the informal economy is a "common-sense notion whose moving social boundaries cannot be captured by a strict definition," but a process of income generation "characterized by one central feature: it is unregulated by the institutions of society" (1989:11-12).

¹³ Long before Mandel, Schumpeter (1950) understood capitalism's fluid and flexible character with his pronouncements of capitalism's endless creative destruction.

¹⁴ Scott emphasizes that any one of these factors can play a role in flexible accumulation. Other factors which are not as applicable to this study include the presence of segmented labor markets and when external transactional relations are rendered immune from certain pervasive problems of market failure (Scott 1988:26-27). Geographical agglomeration refers to the concentration of many producers in one area.

¹⁵ As originally articulated by Coase (1937), firms expand or contract according to: (a) scale or quantity of output and, (b) production of goods (represented by aliquot functions) which may or may not be internalized within a firm (Scott 1983: 237; 1988:18; Holmes 1986:91; Sheard 1983:51; Williamson 1985). In the case of "a"(scale), before any good is produced in any firm, total average costs of production are determined according to fluctuations in scale. When the quantity of an output is increased leading to a decrease in the total average cost of production, then economies of scale are present. Diseconomies of scale arise when an increase in output is followed by a decrease in the total average cost of production (Scott 1988:18-23).

In the case of "b"(production of goods), decisions must be made on whether to produce a particular good or related goods under one roof. Production may be vertically integrated (with two or more production processes taking place within one firm), or vertically disintegrated (with production of related goods taking place in different firms). Economies of scope exist when the costs of producing multiple goods within one firm are less than the cost of purchasing each good on the open market (here vertical integration will take place). Likewise, diseconomies of scope prevail, when costs of producing of multiple products within a single firm exceeds that of the purchase price of the same products on the market (here vertical disintegration will take place) (Scott 1988:18-23).

¹⁶ Cantor et al. (1992) provide a listing of several important characteristics of the market process derived from the economic literature. These are "voluntary repeated participation by decentralized decision makers, a price system, large numbers of anonymous traders, self-interested motivations, low transaction costs, and private property rights." There are, however, five requirements which are important to a definition of market process: (a)

property rights define control over goods and services; (b) desire to exchange; (c) transaction costs do not exceed perceived gains from completing the exchange; (d) choice exists over trading partners, trading periods, or both; and, (e) there is trust in the security of the transaction being completed in an atmosphere of non-coercion (1992:23).

¹⁷ The debate over independence and autonomy of small firms with relationship to large capital lies, of course, at the heart of the dependency / disguised wage-labor camp of theorists discussed above. While this is part of a much larger debate, I will say that knowing or at least understanding the class position of small-scale entrepreneurs helps to clarify many of the issues which have to do with exploitation of small capital by large capital. Further, this issue provides insight into the role of the state in either maintaining or helping to maintain a class of self-exploiting, petty bourgeoisie for use by large capital. By maintaining or promoting the myth of small-scale entrepreneurship, large capitalist institutions, with help from the state, often maintain a ready supply of subcontractors and pieceworkers who produce products for less money than is possible by large factories. Because subcontractors often produce the same product as dozens of small producers, they frequently find themselves competing against each other, forcing down the selling price of their product. Further, by segmenting much of their production into various physical locations, large manufacturers avoid the problem of hiring and maintaining control over a large labor force. When workers are concentrated in one location they are provided with an opportunity to organize unions, thereby driving up the cost of labor (see Gerry and Birkbeck 1981; Rainnie 1985).

¹⁸ The research conducted by Watanabe (1971), Rubery & Wilkinson (1981), Brusco and Sable (1981), Sheard (1983), Scott & Storper (1986), and Scott (1988a, 1988b) on the nature of production and labor in subcontracting are relevant to the research on Taiwanese subcontractors primarily because: a) there are many industries where there is a high divisibility of the production cycle (e.g., machinery, electronics, clothes, shoes, and automobiles), enabling "parent firms" to realize more efficient economies of scale; b) "parent firms" can maintain greater flexibility and liquidity by segmenting capital (not having to invest in specialized machinery bound to specialized tasks) and having the burden of investment in machinery fall to the subcontractor. Subcontractors in Taiwan are also often the first producers to absorb a production slow-down, frequently acting as a buffer for risky investments in new products, and c) subcontracting may also offer the opportunity to parent firms to minimize the cost of variable capital, "since it acts as both a mechanism ensuring wage discipline and a method for segmenting the labor force" (Holmes 1986:92). Because large firms usually have more powerful labor groups than smaller manufacturers, they often fear being held hostage to labor demands (i.e. a structured wage package, fringe benefits, health insurance) (Brusco and Sable 1981; Murray 1983 see also Friedman 1977). By employing many smaller subcontractors in the production process, larger enterprises avoid friction between labor and management in their own firms. Their subcontractors, on the other hand, have an ability "to adjust the amount of labor power purchased through overtime and short-time work, or even through hiring and dismissals (Brusco & Sable 1981:102).

¹⁹ While I told my informants that any information given to me would be held in the strictest confidentiality, and that the names of factory owners and the factories would be

changed, I always knew that what really mattered to them would be how I conducted myself.

²⁰ By soliciting information about other factory owners in the industry, I was able to allay the apprehensions many factory owners had about questions having to do with their own factories. I also knew, however, that some of my informants deliberately tried to influence my thinking by exaggerating certain incidents or gossip about other factory owners.

²¹ I came to realize that, after a while, many of the factory owners had been talking about me, but about what, I never knew for sure.

CHAPTER II

INDUSTRIAL DEVELOPMENT ON TAIWAN

Located about 140 kilometers from the coast of Fuchien Province in southeastern China, Taiwan's political relationship with the mainland has never been particularly amicable (Figure 2.1). Reluctantly made a part of the Chinese empire in the late 1600s, and gaining provincial status only during the late Ching dynasty (1644-1911), Taiwan has long enjoyed a reputation on the mainland as a rough frontier area filled with political and economic refugees, corruption, and lawlessness. With a population of close to three million in the late 19th century, Taiwan had been growing steadily since the late 1600s when migration from the mainland started in earnest. As one of the last frontier areas in China, Taiwan drew thousands of peasants and seasonal workers from Fuchien and Kuangtung Province who hoped to gain temporary work in order to supplement family incomes back home or establish new families on some of the last "unclaimed" land in the empire.

By the end of the Ching period, the island of Taiwan had a commercial economy structured primarily around the export of agricultural and forest products (predominantly rice, sugar, camphor, and tea) to the mainland. Operating out of the port towns of Taipei, Lukang and Tainan and the treaty ports of Tansui, Keelung, and Kaohsiung, Taiwan had also established a number of commercial ties to international markets in the west. These commercial links helped create considerable wealth for a number of local

families who owned vast tracts of agricultural land and were heavily involved in the import-export business.

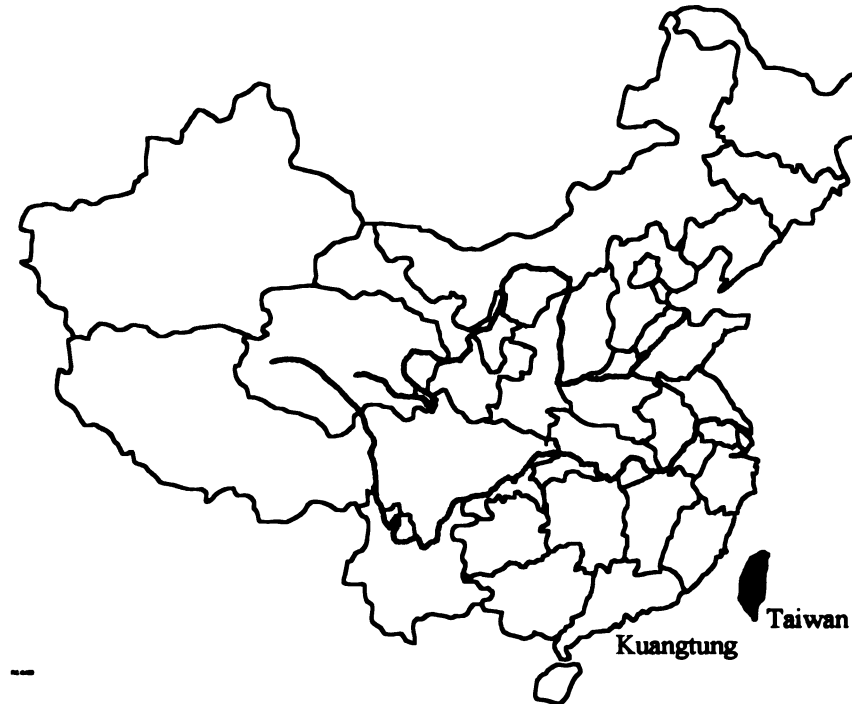


Figure 2.1 The People's Republic of China and Taiwan

One of these families, the Lins, lived in Wu-feng, located south of Taichung City, and situated half way between the Central Mountain Range which runs north-south along the island near the western seaboard. The family dominated much of the commercial activity of central Taiwan and operated one of the island's largest camphor operations. As both landlords and merchants, the Lins were best known for their huge rice exports to the mainland. Much of the camphor was harvested from the mountains in Nantou County just to the east of Wu-feng, distilled and packaged in Puli Township, and exported through Lukang (Meskill 1979:241). With the profits from the sale of their products, the family accumulated greater wealth by importing finished goods from the mainland for sale to the local population.

Despite the great wealth commanded by Taiwanese families such as the Lins, Taiwan's internal political economy remained fairly fragmented and parochial (Meskill 1979: 252, 254). It was not until the Japanese occupied Taiwan in 1895 that the island was forced to confront a strong central bureaucracy and capitalist system. Although Taiwan was "developed" to serve Japanese imperialism, the Japanese gave the island its first exposure to an organized state bureaucracy and, eventually, an emerging industrialism. And it was under Japanese rule, in fact, that many of Taiwan's small-industries got their start, including hand-made paper production in Puli Township, located in Nantou County.

Before examining the hand-made paper industry in Puli, however, I briefly review the economic history of Taiwan. While more detailed accounts of economic change on the island exist elsewhere in the literature (Gold 1986; Ranis 1992; Clark 1992), my primary concern here is *to trace some of the changes which affected the status of manufacturing on the island in general, and small-scale producers in particular*. Further, the overview of the economic changes that took place on Taiwan also includes information necessary to understand change in the hand-made paper industry in Puli discussed in Chapter VI.

I begin the chapter with the Japanese period because this is the period in which the hand-made paper industry in Puli first began. The Japanese occupation is particularly important to understanding change on Taiwan because some of the agricultural, industrial, and institutional policies enacted during their occupation laid the framework for the development of Taiwan during the post-World War II period.

I next examine the post-World War II or "Nationalist Period." Briefly digressing from a discussion of the economy, I first discuss the changing political situation on Taiwan. Because politics are closely intertwined with state policy on the economy in Taiwan, it is almost impossible to understand one without the other. I then move to a discussion of the sweeping agricultural changes enacted by the government in the 1950s and the subsequent periods of import and export substitution which lasted until the early 1970s.

This discussion is followed by an examination of the actions of the government to upgrade the industrial base in the 1980s as the Taiwanese economy matured and labor on the island became less competitive relative to cheaper labor markets in Asia. Then I discuss the most recent phenomenon in Taiwan's economic history - - industrial transplants and investment from Taiwan to Mainland China and Southeast Asia. The movement of low-technology labor-intensive manufacturing from Taiwan to cheaper labor markets, is particularly important because of the impact it has had on the island's small-scale producers.

Finally, in the last section of this chapter, I discuss small-scale manufacturing on Taiwan. Here I present some preliminary data on why some small-scale production has remained an important part of the Taiwanese economy. Still, as the reader will see in subsequent chapters, hand-made paper manufacturing is one-labor intensive industry which, despite numerous strategies aimed at keeping the industry viable, is unable to compete with cheaper labor markets in the rest of Asia than in Taiwan.

A. THE JAPANESE COLONIAL PERIOD: 1895-1945

Establishing control

With China's defeat at the end of the Sino-Japanese war in 1895, the Ching government was forced to sign the Treaty of Shimonoseki which ceded Taiwan and the Pescadores Islands to a government

lacking any tradition or experience as a colonial power. Japan had acquired Taiwan without long-range objectives of its management, and this administrative vacuum was at first filled by military men untrained for the new colonial tasks and civilian incompetents and carpet-baggers from the home islands eager for quick profit (Peattie 1984:19).

Perhaps because Japan lacked a developed vision of its imperial role, it took the colonial government over two decades to eradicate resistance to their rule. While most of the island's inhabitants eventually came under Japanese control by 1915, isolated uprisings continued until 1930, when a group of mountain aborigines in Nantou County put up a final stand in what came to be called the Wu-she incident. This bloody battle lasted for 43 days and took hundreds of lives on both sides (Liu 1959:58). With the military engaged in rebel incursions, the central government worked to establish a sophisticated and highly organized network of police and community "leaders" to carefully monitor the general population. Through a melding of official Japanese and localized authority, the population was kept under constant surveillance through a system of household registers called *hu k'ou* 戶口 and tax rolls.

Agricultural transformation

As the island came under full military control, the Japanese government began plans to integrate Taiwan into the emerging Japanese empire. Japanese policy on Taiwan was framed in such a way as to make the island an "agricultural appendage of Japan," which shipped raw materials to the homeland and served as a market for Japanese goods (Ho 1984:350). The government realized, however, that such a policy could not be implemented without an educated population, an advanced agricultural base, and a basic infrastructure (Chen 1984:273). Toward these ends, colonial bureaucrats eventually set about creating a self-sufficient colony which, by the 1930s, had attained the highest levels of education, administration, health care, and economic development ever before seen on the island.

Targeting rice and sugar as the two products to lead Taiwan's development, Japan began to improve basic infrastructure in order to insert the Japanese administration into Taiwan's agricultural heartland. Before any program could be implemented, however, the Japanese authorities had to unravel the island's complicated three-tier system of land tenancy. By 1904 a cadastral survey was completed, clarifying land ownership and paving the way for a new land taxation system and changes in the land tenure system. "With the clarification of property rights and a more efficient government, the land tax, for the first time in Taiwan's history was collected efficiently and regularly" (Ho 1978:44).¹

With the help of Japanese social scientists, the imperial government also learned as much as it could about local customs and traditions, all of which furthered the government's control over the population. With a greater understanding of the countryside, Japanese agricultural officials and police

moved into the local areas, persuading local farmers to adopt improved seed varieties, fertilizers, and advanced farming techniques. They also persuaded them to join the government-controlled Farmers' Associations, an organization which served as both an agricultural and political extension service.

These "advances" were not without costs to Taiwan's agriculturists. The Japanese made certain that they (the Japanese) were the primary beneficiaries of their economic policies. By the 1920s, for example, the bulk of Taiwan's exports were primary products of which food accounted for more than 80 percent. Over 70 percent of Taiwan's imports, furthermore, were industrial products, the majority of which were consumer goods, supplied by Japan.²

Cotton textile was imported to clothe the local population, and fertilizer was imported to meet the production needs of agriculture. Machinery and transport equipment were also imported, the former to equip the food-processing industry and the latter to develop a transport system to carry the agricultural and agricultural processed goods to market. The large import of food, which for a food surplus country may be baffling, was also to accommodate the needs of the Japanese (Ho 1979:30).

Commercial and industrial development under the Japanese

Japan's interest in Taiwan primarily as a food producer did not preclude the development of some industry on the island (Ho 1978:17). Food and timber products, for example, could be shipped more easily if they were semi-processed. It also made sense to locally produce some of the equipment and machinery necessary to build infrastructure, particularly when the primary ownership of such enterprises was under the control of Japanese bureaucrats and entrepreneurs. By 1930, food processing accounted for over 64 percent of all registered factories and 76 percent of all factory production. Of the six

largest companies, five were Japanese-owned sugar refineries, which were granted monopoly control of the industry by the Japanese government. The average Taiwanese firms, most of which were also involved in food processing, in contrast, were small employing only ten workers (Taiwan Shen Wen Hsien Li Wei Yuan Hui 1979:79)(Table 2.1). By 1930 nearly three quarters of the workers in manufacturing in Taiwan were employed in these small establishments. Between 1905 and 1940, although agriculture in Taiwan grew in significance, the proportion of men occupied in agriculture increased by only 26 percent. In contrast, the percentage of men engaged in mining grew by 505 percent, and that in manufacturing by 120 percent.³

Table 2.1. Manufacturing Enterprises by Size of Work Force: 1930-1936

Year	total	under 5 workers	5-15 workers	16-30 workers	31-50 workers	51-100 workers	100 + workers
1930	6,109	3,261	2,152	380	107	124	85
1932	6,261	3,596	1,969	388	95	115	98
1934	6,749	3,837	2,122	433	138	11	108
1936	7,846	4,740	2,210	520	157	109	110

Note: Other statistical data put the total number of enterprises far higher than what is represented here.

Source: Ho 1978:377. Also see Taiwan Chih Kung Yeh. Taiwan Shen Wen Hsien Li Wei Yuan Hui Vol. 4 1979.

It was not until the mid-1930s that Japan modified its economic goals for Taiwan. Preparations for war with China forced the colonial government to recognize the need for Taiwan to diversify its economy. Taiwan's new role in the empire was to help supply industrial raw materials for Japan's heavy industries, to become less dependent on Japan for processed goods, and to

provide a base from which to launch Japan's military and capitalist expansion into South China and Southeast Asia (Ho 1978:74). To make Taiwan an industrial appendage of Japan, the colonial government together with Japanese capitalists expanded their efforts to develop Taiwan. Machinery used to manufacture fertilizer, textiles, metal products, and chemicals were moved to the island from Japan. Large gains were recorded in the level of capital investment and in the value of production in both the metal and chemical industries (Ho 1978:74).

To further encourage Taiwan's development, Japanese entrepreneurs and corporations were also given access to land, capital, and special tax incentives to start agricultural and industrial corporations. The data in Table 2.2 show that, as early as 1929, Japanese "owned and managed nearly all modern industrial enterprises" and "three-quarters of the capital in Taiwan organized as joint-stock companies, limited partnerships, or unlimited companies" (Ho 1984:374). Taiwanese entrepreneurs, on the other hand,

were prevented by law from forming joint-stock limited liability companies without at least one Japanese director. This was a means of enforcing the economic subordination already underway. Certain sectors were reserved for the Japanese, and the Taiwanese had neither the capital nor the managerial experience to compete in other modern ventures (Gold 1981:4).

Japanese land policy in Taiwan enabled Japanese firms to become "the most important landholders in Taiwan," appropriating between 20 to 25 percent of total cultivated area before World War II (Gold 1986:371-372).

Table 2.2. Distribution of Paid Up Capital of Companies in Taiwan by Type of Organization and by Nationality of Ownership in 1929

Type	Total*	Japanese	Taiwanese
Joint stock companies	287.9	78.4	1.8
Manufacturing	198	90.7	8.4
Mining	17.1	71.6	20.1
Agriculture	9.4	47.2	52.8
Commerce	53.2	43.4	52.7
Transportation	5.8	55.1	44.5
Fishing	3.4	65.1	34.3
Limited partnerships	16.6	68.0	32.0
Unlimited companies	7.9	23.6	76.4

Source: Ho 1978: 86

*In million yen

Despite the extractive nature of Japanese imperialism in Taiwan, the colonial period left a powerful legacy which would last for decades after the end of World War II. First, the colonial state built an island-wide infrastructure which included extensive rail, road, and telegraph networks that linked much of the island to the capital in Taipei in the north as well as hydroelectric plants and elaborate irrigation and flood control systems which upgraded the island's agriculture and industrial production. Second, by the end of the 1930s, Taiwan's colonial government established an educational system which produced one of the most literate populations in East Asia. Third, the Japanese government, big business, and smaller entrepreneurs introduced a modern and sophisticated commercial and industrial structure which brought modern banking, trading, and stock exchange systems to the island. "More indirectly, the base for an integrated economy rather than a disarticulated enclave was laid by the creation of a geographically-displaced light industry linked to agriculture" (Chan and Clark 1992:77). These developmental measures

provided for one of the most enduring features of colonial rule and laid the framework for further economic development on Taiwan after the war. Already primed through formal education and practical experience for commercial and economic activity, many of Taiwan's small-scale entrepreneurs were ready to start their own operations once the Japanese were gone after 1945 (Pack 1992:82).

B. THE NATIONALIST PERIOD AND POSTWAR RECONSTRUCTION

The withdrawal of the Japanese at the end of the Pacific War, left a political void in Taiwan.

When the Japanese left Taiwan, they left a Chinese population isolated from the government and administrative process. They had been isolated because the Japanese did not give administrative responsibilities to the Chinese; practically all positions of any political significance in the Japanese colonial government, from the Governor General down to the headmaster of a village school, were filled by Japanese (Hsieh 1979:61).

The sudden exodus of trained Japanese managers, technicians, and skilled workers together with the war's destruction left the island's industries, infrastructure, and economy in ruins. For the first time in more than 50 years, the local Taiwanese elite envisioned taking part in the rebuilding and governance of Taiwan. Politics in mainland China, however, would intervene in Taiwanese life and thwart any hope of independent rule.

The KMT and the political landscape

After the fall of the Ching Dynasty in 1911, a National People's Party, the Kuo Ming Tang (KMT 國民黨), was formed by Dr. Sun Yat-Sen, ostensibly along the lines of a Leninist democracy. Well before the end of World War II, however, Sun was dead and the Nationalist government, led by Chiang Kai-shek, was both financially and morally bankrupt. Years of mismanagement, corruption, patronage, nepotism, and an on-again off-again civil war with the communists, left the party barely able to govern itself, let alone mainland China. Still, the fiercely anti-Communist Nationalists were

considered by the western powers as the only "legitimate" government on the mainland and Taiwan.

More concerned with eliminating the last vestiges of colonial Japan than with restoring political and economic power to the local Taiwanese population, Chiang sent a particularly oppressive military governor to the island. The Nationalists behaved more like an occupying than a liberation force, creating tensions on the island which permeated the political and economic lives of the Taiwanese. These problems, compounded by the fact that between 1945 and 1949 the Nationalist government was preoccupied with a debilitating civil war on the mainland, left the island with a rudderless and crippled economy (Ho 1978:105).

As more and more mainlanders trickled into Taiwan between 1945 and 1949, money and machinery trickled out of the island and into the hands of corrupt Nationalist officials and capitalists on the mainland (Winckler 1981: 50).⁴ Taiwan was being stripped of its remaining wealth and left with a corrupt, backward, and incompetent group of outsiders. Life went from bad to worse for the Taiwanese and many on the island wished for the "good old days" of the Japanese occupation. Others, however, looked to radical reform as a solution to the island's problems, and they called for the elimination of corruption and the return of jobs and property to the local population. The tension between mainlanders and Taiwanese finally erupted in a bloody rebellion on March 28, 1947 (known as the "228 incident") in which as many as 20,000 Taiwanese lost their lives (Kerr 1965:310).

By 1949, the Nationalists had been routed by communist forces on the mainland and had no choice but to seek refuge on Taiwan. For the next 40 years the Nationalists maintained a policy of recovery of the mainland while

suppressing any and all political dissension on the island by imposing martial law (Tien 1992:10). Over the years, the KMT also enacted measures to suppress Taiwanese culture and traditions and to promote Mandarin as the official language.

Significant political change came to Taiwan only in the mid 1970s. Dependent for so many years on aging mainlanders to fill the party ranks, the KMT had no choice but to begin a process of "co-optation that recruited many Taiwanese into the party state's upper and upper-middle echelons. Meanwhile, the indigenous opposition movement gathered momentum in the mid 1970s" (Tien 1992:9). By the late 1970s, the banned Taiwanese independence movement became increasingly militant as the KMT increasingly tried to control their activities.⁵ While this stratagem temporarily stifled political dissent, political opposition to the KMT gained strength. By the mid 1980s, the suspension of martial law and increasing influence of local Taiwanese in the KMT, helped remove barriers to almost everything previously considered seditious from political journals to a growing number of new social movements ranging from the ecology movement to women's rights (Tien 1992:9).

Since then, Taiwan's ongoing democratic transition has been attributed not only to its great economic success but also to a ruling party willing to undertake political and economic reforms. These reforms, however, have been accompanied by an increase in social instability. One needs only to read the local newspapers to see an appreciable increase in violent and financial crimes, gangs, labor and street protests, and government corruption. In Tien's words:

Once a society with an extremely low crime rate, Taiwan now has a police force incapable of protecting its citizens from the threat and horror of crimes. ... Many in Taiwan argue that this is symptomatic of a transitional society. But before social

tranquillity can be restored, the fact remains that the current instability is undermining the business and industrial communities' willingness to invest in Taiwan (Tien 1992:20).

Agricultural change

Ensconced on an island for which they had little prior use, the Nationalists had two options: "They could continue business as usual, turning in a gyre until things fell apart. Or they could reform themselves, establish a new relation with Taiwanese society, and make a united stand against the communists" (Gold 1986:57). Under pressure from the United States, which also remained the Nationalist's primary benefactor, Chiang chose the latter. In a move that would placate the Americans as well as temporarily de-fang what was left of Taiwan's gentry, the KMT implemented a much needed policy of land reform.

In 1949 when reform was first enacted, landlords were restricted from collecting more than 37.5 percent of the total agricultural yield from tenant farmers. Then, in 1951, some of the land formerly owned by Japanese were sold to tenants who had claimed it. Finally, in 1953, land owned by landlords above a set amount was sold to tenants (under the Land-to-the-Tiller-Act), resulting in an increase from 33 percent to 57 percent in the number of owner cultivators (Gold 1986:66). In return for these holdings, landlords were awarded stocks in public enterprises and/or with land bonds. No longer tied to the land, many landlords left the countryside for the cities and set themselves up in business.

Having carefully studied the agricultural strategy of the Japanese, once the landlords were gone the Nationalist government quickly moved into positions of authority in the countryside. With assistance from the U.S.A.I.D.,

the government regenerated the former Japanese-controlled Farmers' Associations and other state-managed institutions in the rural areas. The KMT deployed loyal bureaucrats to head this former colonial network and took total control of the market for seed, fertilizer, farm implements, pesticides, sale of rice, and even capital. Essentially, the KMT took over the Farmers' Associations where the Japanese left off (Ho 1978:104). Realizing that the associations facilitated control of the peasantry, the KMT wasted little time in implementing both an agricultural and political policy in the countryside. The government also introduced new farming methods and techniques and distributed information on any other subject it deemed important.

While there were significant gains in agricultural production (between 1953 and 1963 the agricultural growth rate was 4.3 percent), farmers found themselves increasingly squeezed from two directions. First, the earlier successes of the Japanese colonialists in health care and agricultural productivity laid the foundation for high population growth rates in the post-war period. With most of the island's farm land already in production, farm families found themselves with more mouths to feed than land available to feed them. By 1960, 30 percent of full-time farm families and 69 percent of part-time farm families cultivated less than 0.5 hectares of land (Ho 1978:156).

Since the colonial period the size of the average farm has more than halved, decreasing from about 2 hectares to less than one hectare of land. In 1939 about 25 percent of the Taiwanese farms had less than .5 hectare of land but by 1960 the farms in this category had climbed to 37 percent (Ho 1978:156).

As a result, in 1960 that less than 50 percent of all cultivating farm households in Taiwan were fully engaged in the operation of their farms, "with many treating farming as more of a sideline occupation" (Ho 1978:156). By

1964, nonagricultural income comprised approximately 32 percent of total farm family income and, by 1972, the figure was above 50 percent (Ranis 1979:229).

The second problem farmers faced stemmed from the government's iron grip on agricultural production. The government set prices for all inputs and outputs in agriculture. They bartered rice for fertilizer (a scheme totally in the government's favor), taxed land, and collected loans. "All amounted to hidden rice taxes because the government's purchase prices [and other terms] were considerably lower than implicit market prices" (Amsden 1979:357). The government also controlled much of the non-rice farm production through the state-owned Taiwan Sugar Corporation, formerly controlled by the Japanese colonial government and Japanese capitalists, and the Tobacco and Wine Monopoly Bureau. In each of these sectors, the government monopolies forced farmers to buy their inputs from the government and sell their output at artificially low rates. Through the manipulation of agriculture, Taiwan's greatest economic asset, the central government took complete control of the countryside and all the surplus emanating from it. This surplus, in turn, was transferred from agriculture to industry (Amsden 1979:357).

In sum, the Nationalist government achieved more from its agricultural policies than anyone had thought possible. By reorganizing the relations of production in agriculture, the state became the new landlord, extracting as much as possible from a hard working peasantry in the name of development. The ongoing removal of surplus from farmers' incomes in conjunction with growing population pressure squeezed farm families out of farming and into the waiting arms of an emerging industrial sector desperately in need of workers. In this way, "agriculture gave industrial capital a labor force, *and* a surplus" (Amsden 1979:363).

Import Substitution, state enterprises, and industrial reconstruction in the 1950s

In the four years immediately following the end of the World War II, Taiwan's industries barely managed to stay in business. The island's largest companies, most of which were former Japanese corporations, immediately came under state ownership. Constituting virtually the entirety of the most advanced and modern portion of the economy (e.g., banks, electricity, shipping, communications, fertilizer, steel, oil, mining, food processing), these new "public enterprises" were managed by bureaucrats, selected by the state -- and they were primarily Chinese Mainlanders (*wai sheng jen*) who had accompanied Chiang in his exodus to Taiwan (see Evans 1989). These government-appointed industrialists made certain their enterprises were "dependent on the state for capital, foreign exchange, equipment, raw materials, energy, and docile labor"(Gold 1986:73). While the state did not block small business, neither did it encourage their creation or smooth operation. Faced with economic disaster in 1949 and desperate to rebuild its industrial base, state industries came under government protection from overseas competition, allowing many otherwise inefficient companies to survive (Scott 1979:316; Little 1979:470). The government also moved to enact an import-substitution policy in manufacturing which emphasized inward-oriented growth through licensing, import, and foreign exchange controls (Ranis 1979:210).

Bolstered in part by U.S.A.I.D. funding to industry and benefiting from Taiwan's comparative advantage in cheap and abundant labor, manufacturing production increased at an average rate of 22 percent a year between 1949 and 1954 (Ho 1978:187).⁶ And while much of this increase was due to the

"rehabilitation of war-torn industries [industries originally targeted for development by the Japanese in the late 1930s], particularly in food production, import substitution also exerted considerable influence on the pace of industrialization" (Ho 1978:187). During this period Taiwan gained the ability to produce chemicals and textiles (much of which was previously imported) through the establishment of such privately-financed companies as Tainan Textile Corporation and Y.C. Wang's Formosa Plastics (Gold 1986:71; Gold 1989:79).

Between 1954 and 1962, however, import substitution policies were not overly effective and manufacturing grew at an average annual rate of about 11 percent (Ho 1978:189; Ranis 1979:211). Nevertheless, domestic demand for items such as food, textiles, synthetic yarn, bicycles, garments, and metal products (all produced by low technology industries) continued to grow throughout the 1950s helping to create many new small-scale labor-intensive industries.

Emerging agricultural and industrial policies, together with a fledgling consumer goods sector, helped create the first noticeable changes in employment (Ho 1978:131; Shive 1992: 102). In 1940, approximately 64 percent of the total work force on the island was employed in agriculture while only 7.7 percent of the population was involved in manufacturing and 8.2 percent in trade.⁷ Between 1952 and 1960 those employed in agriculture fell from 60 percent to 52 percent while workers involved in industry rose from 18 percent to 25 percent (Galenson 1979:387).

Export Substitution and industrial expansion in the 1960s and early 1970s

By the end of the 1950s and beginning of the 1960s, Taiwan's fledgling industries appeared to be relatively secure, with many having earned considerable profits from protected markets. Armed with a growing reserve of labor from the countryside (from 1952 to 1973 employment expanded at an annual rate of 2.6 percent), the government believed it could only prosper by "exporting what effectively are labor and capital services" (Galenson 1979:321).

A number of reforms were enacted in the early 1960s which aimed to lessen state control of and reduce possible long-term damage to the economy. These included: (a) the elimination of restrictions on imports of key materials necessary for the production of goods for export; (b) liberalization of exchange rate controls; and (c) devaluation of local currency from New Taiwan Dollar (NT) \$20 to NT\$40 to US\$1 (Scott 1979:329). Recognizing the need to reduce red tape and to increase capital investment and technical know-how, the government also moved to encourage foreign investment on Taiwan. It hoped that by offering a host of incentive packages, such as price controls, liberalized exchange rates, tax breaks, and the establishment of Export Processing Zones (EPZs), foreign firms (particularly American) would come to Taiwan to assemble goods and eventually initiate technology transfers and outsource parts to local manufacturing firms. The only stipulation was that these firms export all that they manufactured or assembled and that they meet specific local content agreements as the years went on (Scott 1979:333; Gold 1986:80).

Complicated as they were, Taiwan's new export policies were immediately effective. Between 1963 and 1973 exports of goods and services rose from 13 percent to 43 percent of GDP and the share of industrial products

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in exports increased from 50 percent to 83 percent (Ranis 1979:221). In the almost the same period (1964-1973), annual agricultural growth averaged 4.9 percent while annual growth in industrial output reached an average of 19.67 percent (Ho 123:1978). Between 1961 and 1970, the proportion of factories in food production rose by 70 percent. In contrast, the percentage of growth for textile manufacturing was 300 percent and for fabricated metal production 400 percent (see Figure 2.2).

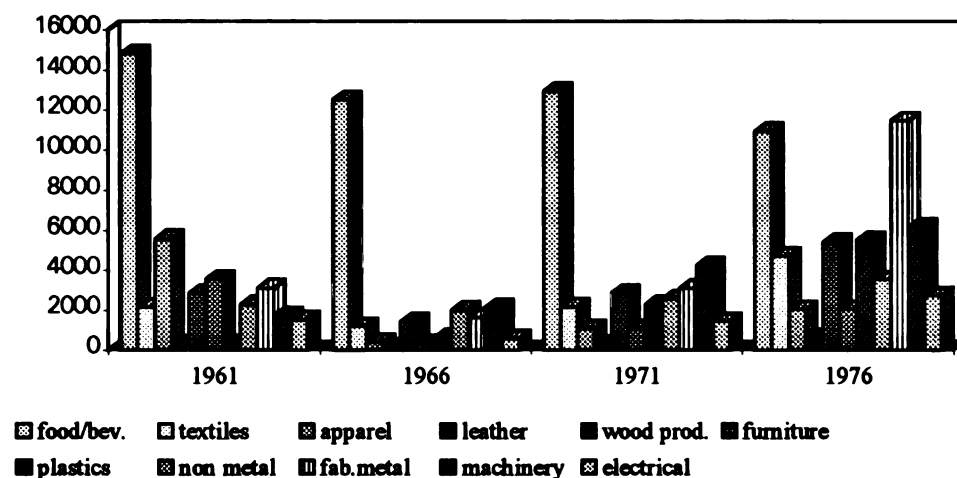


Figure 2.2. Number and Type of Selected Enterprise Units in Manufacturing in Taiwan: 1961-1976

Note: food/bev.= food and beverage products; non metal = non metallic mineral products; fab. metal = fabricated metal products.

Source: Kung Shang Chi Fu Wu Yeh Pu Ch'a Pao Kau 1991, [The Report on the 1991 Industrial and Commercial Census, Taiwan and Fukien Area].

Foreign investment and the state

Some of the first foreign enterprises to invest in Taiwan were American, and they were initially located in cities as bonded factories and later in the new

Export Processing Zones.⁸ Faced with high labor costs at home, many of these firms concentrated primarily on the assembly and manufacture of electronics and chemicals, with many of them preferring to own and operate their factories outright.⁹ Initially parts used in production were imported for assembly and then, gradually, foreign manufacturers began buying locally made parts from Taiwanese subcontractors. The success of the initial off-shore assemblers eventually encouraged others to come to Taiwan and, by the end of 1965, about 35 large corporations were operating manufacturing enterprises on the island.

While large American corporations made considerable profits by exporting goods back to the United States, Japanese corporations adopted a slightly different investment strategy. The Japanese government, highly protective of its own markets, initially resisted "part" or "product" procurement from Taiwan, even from Japanese-owned companies. Rather, many Japanese investors in Taiwan, most of whom owned small to medium-sized firms, took local Taiwanese as partners. Many of these investors preferred to sell the goods they manufactured or assembled to other local Japanese manufacturing firms or to market what they produced in the United States and Europe (Gold 1986:80).¹⁰ With labor shortages, high wages, and pollution increasing and available land decreasing in Japan during the early 1970s, the Ministry of International Trade (MITI) encouraged Japanese producers to invest in low wage markets overseas. "Labor intensive, technologically simple smaller firms migrated, so that the home islands could concentrate on high tech, i.e., capital-intensive and knowledge intensive, high quality, high value-added goods" (Gold 1986:81).

The new Taiwanese economic policies were highly profitable for foreign investors of whatever ilk.¹¹ And, despite the fact that in a very short time

Taiwan went from the simple assembly of goods to the manufacture of entire products in firms owned and operated by Taiwanese capitalists usually on a *subcontract* basis, most local firms remained faceless producers of inexpensive consumer goods.¹² The marketing of these goods which more often than not was the most profitable end of a business, remained in the hands of the thousands of foreign firms which plied the island's markets. "Taiwan became a repository for industrial sectors no longer viable for the United States or Japan. It entered the emerging international division of labor at the bottom end of the product life cycle "(Gold 1986:81).¹³

Despite Taiwan's status in the expanding global economy, the government still managed to protect itself from the full exposure to that economy. Through complicated and often confusing controls over imports (particularly in finished goods) as well as numerous export controls and incentives offered to foreign firms, the state "created a kind of dual economy in which exports, but only exports, could be manufactured under virtually free trade conditions" (Little 1979:475). Indeed, Little (1979) and Gold (1986) point out that the government did not create a *laissez-faire* economy; rather "the state retained multiple controls and only granted what seemed like free-market activities within strict bounds" (Gold 1986:87).

Industrial transformation and the international division of labor: 1975-1989

The rise in oil prices following the OPEC oil embargo in 1973 and 1974 had "an immediate and profound effect on Taiwan's economy" (Crane 1989:32). By 1974, Taiwan was running a trade deficit, inflation was increasing, and a growing labor shortage and escalating wages helped send Taiwan into recession (Little 1979:501; Gold 1986:98). Understandably, the

oil shocks sent reverberations throughout the economy, forcing many in Taiwan to rethink the island's economic situation (Little 1979:501). To stimulate the economy, the government initiated ten major development projects and raised taxes, interest rates, and prices on oil and electricity. Miraculously these policies helped pull Taiwan out of recession in only two years, enabling the island to post one of the highest growth rates ever recorded in 1976 (Crane 1989:33).¹⁴

Faced with growing political isolation (the United States recognized Mainland China in 1979), the second oil shocks in the late 1970s, and increasing wage rates, the government moved to change its position in the world economy. The KMT created a "flexible multifaceted strategy to reduce Taiwan's vulnerability to the instability of the global economy, primarily by vertically integrating and deepening" heavy and capital-intensive industries and promoting investment in technology, steel, and petrochemicals (Gold 1986:100).

With basic industries well established in the early 1980s, the government shifted its attention to technology-intensive industries and began funneling capital and research into high value areas such as electronics, telecommunications, and machinery. Figure 2.3 shows the increase in the number of producers of electronics and electrical machinery which helped boost the number of upstream producers in fabricated metal, and plastics. So strong was the push to upgrade Taiwan's industries in the 1980s, that the government came to resemble Japan's MITI, allocating millions of dollars to build Taiwan's first high-tech research and design industrial park in Hsin Chu City (known as Taiwan's Silicon Valley). The park gave priority to companies (local and foreign) willing to invest in "strategic industries," e.g., computers,

chip fabrication, and other capital intensive ventures (Gold 1986:103; also see Shive 1990), a move which the government hoped would result in significant technology transfers to Taiwan.

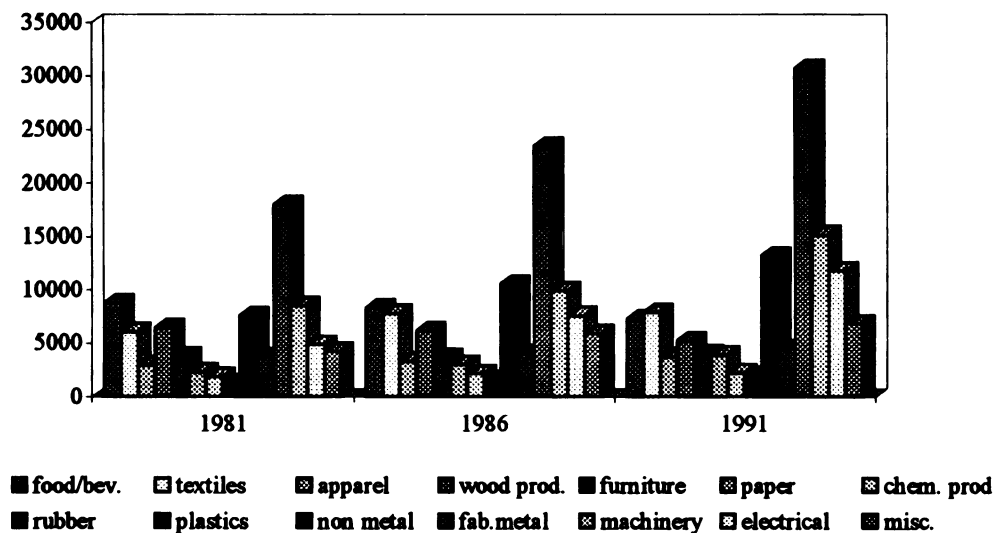


Figure 2.3. Selected Enterprise Units in Manufacturing in Taiwan: 1981-1991

Note: food/bev.= food and beverage products; fab.metal = fabricated metal products; misc.=miscellaneous. These figures are generally far higher than data provided by the Ministry of Economic Affairs (MOEA).

Source: Kung Shang Chi Fu Wu Yeh Pu Ch'a Pao Kau 1991,[Report on the 1991 Industrial and Commercial Census, Taiwan and Fukien Area] .

By 1986, total exports amounted to about 60 percent of the GDP, of which electronics took 25 percent of the total share of exports in 1987 (Riedel 1992:256; Simon 1992). By the late 1980s, exports of these and other high value-added goods helped boost Taiwan's per capita income to over US\$6,000 and a trade surplus of over 21 percent of the gross national product (GNP). As increasing numbers of workers were drawn into the manufacturing sector, employment in agriculture fell and, by 1987, only 15 percent of the labor force

was involved in farming.¹⁵ Employment in industry, however, appears to have stabilized somewhat, reaching an average of about 40 percent of the work force in 1987 (Yearbook of Manpower Statistics, 1988).¹⁶ The data in Table 2.3 shows, furthermore, that changes in employment and economic growth rates came about despite the appreciation of the Taiwanese dollar in 1986 and one of the highest unit labor costs (ULC) in Asia.¹⁷

Table 2.3. Taiwan's Unit Labor Cost in US\$ Relative to Major Competitors: 1970-1990

Period	Korea	Taiwan	Hong Kong	Singapore
1970-1979	107	70	137	97
1980-1984	108	92	133	124
1985-1988	106	100	113	117
1989	150	130	109	114
1990	145	132	107	132

Note: Unit labor costs (1987=100)

Source: Chowdhury and Iyanatul 1993:151

Mainland China and industrial restructuring in Taiwan: the 1990s

While the move to upgrade Taiwan's industries and to "phase out" non-competitive sectors of the economy has pushed, or attempted to move the island in an entirely new direction in manufacturing, the repercussions of these policies on the island's vast number of producers in the 1990s is yet to be fully understood. Having lost much of its comparative advantage in a number of labor-intensive industries at the bottom end of technology spectrum (e.g., simple electronics, shoes, garments, textiles, toys), many of the island's producers are struggling to hold on to what is left of their industries. Generally, Taiwanese factory owners often believe they only have two viable options:

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either leave Taiwan and relocate to cheaper labor markets in Southeast Asia (particularly in ASEAN nations) and mainland China (Pack 1992:110; Riedel 1992) or, remain on Taiwan and make use of the thousands of legal and illegal low waged foreign "guest workers" to compensate for the increase in wages and decrease in labor the island is facing. Nevertheless, the wages demanded by foreign workers in Taiwan are higher than those in Mainland China, continuing to make "cross strait" production highly desirable.

While trade has existed between mainland China and Taiwan via Hong Kong since the late-1970s, it was not until the mid-1980s that China began seeking investors from Taiwan.¹⁸ Many small and medium-sized producers were the first to move their operations to Southern China, particularly to Xiamen and Shenzhen. Because much of the Taiwanese investment in Mainland China is illegal, many small Taiwanese set up shell companies to disguise their investments. At this writing, however, it is estimated that at least 12,000 Taiwanese have either relocated their operations or invested in joint ventures, pumping approximately US\$10 to \$20 billion into the Chinese economy (Riedel 1992:294;Gargan 1994).

Still a thorny issue on Taiwan, some scholars and politicians claim that the movement of low value-added labor-intensive industries to the Mainland will enable Taiwan to concentrate on high-tech industries. Others on the island, however, believe that, because so much investment from Taiwan has entered the Mainland, the island is becoming increasingly dependent on China for cheap labor and that the erosion or de-industrialization of manufacturing on the island is possible (see Chang and Chang 1992). Whatever the case, the economies of China and Taiwan are rapidly becoming so interdependent that it

may already be too late for Taiwan to exert any "independent [political or economic] action" in the future (Baum 1994:56).

Nevertheless, despite the dire predictions that small-scale production on Taiwan may collapse under the weight of high wages, new (and often labor-intensive) small-scale industries producing pieces and parts for "high tech" commodities continue to emerge on the island. Linked primarily to industries such as the booming information (computers and related electronics) sector (see Riedel 1992:292), these factories have had no choice but to increase their comparative advantage by improving worker skills and increasing investment in plant and equipment (1992:287).

C. SMALL-SCALE INDUSTRY IN TAIWAN

In a comprehensive study of small-scale enterprises (SSEs) in post-war Taiwan, Ho found that, in the early stages of Taiwan's development, "nearly all non-agricultural activities take place in the small enterprise sector" (1980: 100). With the liberalization of the 1960s, however, the economy started to change to an industrial base and SSEs or small factories became "the most important component of the small-enterprise sector in Taiwan" (Ho 1980:100).

Although Ho acknowledged the importance of small-scale producers in the small enterprise sector, he insisted that SSEs on Taiwan would probably be a brief phenomenon on the Taiwanese economic landscape, and he predicted that, as Taiwan pursued large export markets in the 1980s, the number of small industries would continue to decline. As markets expand, "the potential advantages of even relatively minor scale economies make it worthwhile for large firms to enter these industries and for existing small firms to expand" (Ho 1980:102).¹⁹ Further,

Because the importance of the economies of scale differs across industries, the position of small-scale manufacturing at the aggregate level is partly determined by the composition of the manufacturing sector. One reason for the decline of the relative importance of small factories in Taiwan is the rapid growth in recent years of industries where scale economies are important (Ho 1980:101).²⁰

Given the prevailing economic thought prior to the 1980s, it is understandable that Ho could not predict the tenacity of small-scale production in Taiwan. Nevertheless, Ho did recognize that location, production process, and markets

all significantly influence the degree to which small-scale production persists in developing economies (1980:101).²¹

What, then, accounts for the continuing importance of small-scale producers in Taiwan in the 1980s? How have factory location, production processes, and labor markets affected small-scale producers on Taiwan? While these questions are beyond the scope of this thesis, I briefly examine some of the conditions which appear to favor the continuation of small-scale production in some sectors in Taiwan.

Spatial distribution of SSP and the changing rural/ urban landscape

Economic data from the 1950s and 1960s indicate that increases in industrialization were not accompanied by an increased concentration of non-agricultural employment or small enterprises in Taiwan's major metropolitan areas (Ho 1979:83).²² The data also indicate that in 1961, 41 percent of the workers in rural areas were employed in rural factories with fewer than ten persons, rural factories were smaller and more labor-intensive than those in urban areas, and the majority of those employed in large rural establishments were located primarily in food, textile, and apparel industries (1979:85).²³ By 1971, as many as 61 percent of the total number of factories on the island were located in rural areas and, of these factories, 77 percent had fewer than four workers (1980: 128).²⁴

A decentralized pattern of industrialization, according to Ho, made it easy for small businesses to develop in rural areas and create employment and entrepreneurial opportunities for rural households.

Taiwan's industrialization followed a more decentralized pattern which has allowed it to grow as an organic unit by promoting

interaction among its components. In other words, by allowing rural industry and agriculture to grow in a mutually reinforcing manner, decentralized industrialization has created rural employment opportunities and enabled greater numbers of Taiwan's rural population to participate in industry without having to leave the countryside (Ho 1979:78).²⁵

Since the 1970s, however, Taiwan's population has expanded to the point where the island has one of the highest population densities in the world. Towns and villages throughout the island have, over the years, grown together, creating semi-urban or urban environments which blur the distinction between rural and urban (Liao 1989:365, also see Speare 1974). High concentrations of factories are found in the suburban areas which ring the cities of Taipei, Taoyuan, Taichung, Chang Hua, Tainan, and Kaohsiung. During my research in Taipei County (which surrounds Taipei City), for example, I commonly saw a farm house surrounded by three-story "row" factories otherwise known as "private industrial areas" (*ssu li kung yeh ch'u* 私立工業區).²⁶ In fact, in 1990, government statistics showed that 21 percent of all factories in Taiwan were located in Taipei County and that 80 percent of those factories employed fewer than 29 workers. When one considers other metropolitan areas in Taiwan, (such as those noted above), well over 60 percent of factories are probably located in what are considered urban areas (Kung Yeh Tung Chi Tiao Ch'a Pau Kau 1991).

Changes in wage rates

One of the primary reasons Taiwan was an attractive place for labor-intensive manufacturing was its potentially large labor force and low wage rate increases of only about four to six percent during the early to mid-1960s (Lundberg 1979:298; see Galenson 1979:403). As Lundberg notes, there

existed no, or very little, active wage push or wage policy as an independent factor in the inflation process. Without active trade unions and with relatively elastic supply of labor, at least up to the 1970s, the price of labor can be regarded as a passive factor, adjusting to market conditions, including changes in prices and productivity (1979:295).

By 1968, however, the proportion of workers entering the active labor force declined and money wages grew by 12 percent. Lower unemployment rates and a tighter labor market in the 1970s, "were accompanied by an increased rate of wage inflation" which grew by more than 30 percent between 1973 and 1975 (Lundberg 1979:296-297); the increase was attributable to inflationary repercussions from the first oil shocks. Galenson points out that, furthermore, from 1953 to 1963 and 1964 to 1975, the average annual percentage rise in wages was lower in the former (4.0%) compared to 5.3 percent in the latter" (1979:415).

Increasing wage rates concerned many small manufacturers throughout Taiwan. For example, many of the-labor intensive factory owners I interviewed told me that if they had not continually increased the value of their products, they would have been driven out of business by the rising costs of labor.

Distribution of labor, factory size, and sectoral composition in manufacturing

While disaggregated data on small-scale manufacturing are generally inconsistent for the 1950s, 1960s, and much of the 1970s, Ho found that, by the mid-1960s, small-scale producers (under 49 workers) employed approximately 30 percent of the total manufacturing work force (Ho 1980).²⁷

That percentage continued to increase throughout the 1980s when, by 1991, 43 percent of those employed in manufacturing worked in factories with less than 49 workers. The percentage of workers employed in factories with 50 to 100

workers, furthermore, remained fairly constant at around 12 between 1976 and 1991 (Kung Shang Chi Fu Wu Yeh Pu Ch'a Pao Kau 1976, 1986, 1991).

Finally, by the 1980s, the number of workers employed in factories with more than 100 workers generally declined. This decline was most noticeable among factories employing between 100 and 500 workers, in which the percentage of workers fell from 28 percent in 1986 to 21.28 percent in 1991 (Kung Shang Chi Fu Wu Yeh Pu Ch'a Pao Kau 1976;1986;1991)..

The gradual shifts in employment from larger to smaller factories are mirrored in the increasing number of smaller enterprises in Taiwan. For example, in 1976, 86 percent of the total registered factories on the island employed fewer than 29 workers. That percentage dropped to 85.46 percent in 1986 only to increase to 88.9 percent in 1991. Figure 2.4 also shows that, between 1976 and 1991, decreases were registered in the number of factories employing more than 100 workers (Kung Shang Chi Fu Wu Yeh Pu Ch'a Pau Kau: 1976;1986;1993).

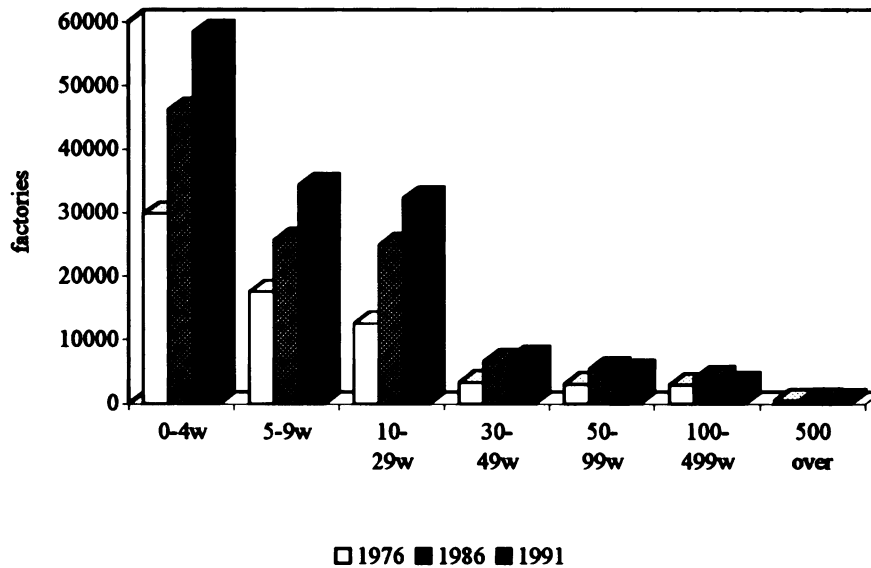


Figure 2.4. Manufacturing Units by Number of Workers in Taiwan: 1976-1991

Source: Kung Shang Chi Fu Wu Yeh Pu Ch'a Pao Kau: 1976;1986;1993). .

In terms of sectoral distribution, the largest percentage of factories employing fewer than four workers in 1971 were engaged in animal feed, food, beverage, tobacco production and in the manufacture of metal and machinery. Other small industries included those involved in printing, machinery repair, simple assembly, and the manufacture of clay, furniture, and glass products (Ho 1980:111).²⁸ By 1981, however, the census data show a broad distribution of small factories involved in dozens of industries. Among factories with under 29 workers, for example, those in metal fabrication accounted for 20 percent, while those in food production took second place with only eight percent of total manufacturing production (Kung Shang Chi Fu Wu Yeh Pu Ch'a Pao Kau: 1981).²⁹ By 1991, the percentage of factories engaged in metal fabrication employing fewer than 29 workers remained at about the same level, while those

involved in the production of machinery rose to 10 percent, in plastic products to 8.3 percent, in electrical to 6.5 percent while food fell to 4.7 percent. Finally, the metal fabrication, machinery, plastics, and electrical industries combined accounted for about 50 percent of the total number of factory units in operation in 1991.

While the nature of production has increasingly shifted toward industries manufacturing high value-added products (much of the metal fabrication, machinery, plastics, and electrical manufacturing in Taipei county, for example, is connected to the information industry), the size of these producers remains fairly small. This is notable given Ho's predication that, as world markets change and expand, small-scale producers were likely to be the first producers to vanish while large-scale producers would increase in number.

Capital markets and investment

With little capital circulating in Taiwan and tight monetary controls in the years following World War II, small enterprises had difficulty securing bank loans. In the post-war period, for example, the Bank of Taiwan granted more than 80 percent of business loans to large government enterprises.

Private firms shut out of the banking system, turned to the unorganized money market and often had to accept short-term credits to finance long-term investments. Low interest rates in the banks and price instability also drove savings to the riskier and highly imperfect money market (Ho 1978:243).

In the 1960s, institutional lending eased somewhat for large enterprises as the government reduced deposit and lending rates.³⁰ Concurrently, savings deposits and interest rates on deposits rose, helping to expand the money supply. Despite the increase in the real lending capacity of the "official"

financial sector, however, most small enterprises continued to find it difficult to secure long-term loans.

According to Ho, during the 1960s, it became apparent that the banking system was antiquated and great criticism was leveled at it for being too conservative and cautious. Banks could neither grant unsecured loans beyond 25 percent of their deposits nor could they extend loans for more than six months for unsecured loans, and only one year for secured loans (Ho 1979:245; see also Lundberg 1979:279-284).

With the capital market undeveloped in the 1960s, the inability of banks to provide long-term loans and capital, especially without collateral, made it difficult for small investors to raise capital. Indeed, it forced many borrowers to use short term bank credits to meet long-term needs....The government owned a majority interest in most banks, so there was little competition in the banking sector. With the government so involved in the banking sector, accusations that banking decisions were made for political reasons were common and perhaps justified (Ho 1978:245).

In fact, Ho believes that the fragmented capital markets in Taiwan presented the greatest obstacle to small-scale enterprises. His research shows that the majority of capital and operating funds used by small entrepreneurs came from accumulated savings, loans from relatives and friends, and sometimes private lenders, even though "informal lending rates" tend to be far higher than those offered to larger companies by institutional lenders (Ho 1980:103).

To introduce flexibility into the banking system and encourage loans to private enterprises, the government enacted more liberal loan policies in the mid-1970s. Nevertheless, borrowing from financial institutions by small and medium-scale enterprises accounted for only 9 percent of investments in 1985,

while investments from "curb markets" (loans extended by households to SSEs) and "internals" (investments and refinancing from company revenues by company owners and stockholders) accounted for most of the remainder (Chiu 1992:183). As Chiu points out, however, in contrast to many large-scale enterprises in Taiwan, most small-scale enterprises are export-oriented. Company owners and shareholders of SSEs often find it easy and efficient to redirect earnings from exports back into their enterprises without depositing these earnings in banks. In my research, I found that the gap between earnings, deposits, and formal bank loans appears to be widening. That is to say, many entrepreneurs of SSEs prefer to redirect their earnings away from formal banking institutions in favor of more "informal" modes of saving and investment. As one entrepreneur told me, "every time a bank is involved in your business you have to be careful. Once they get their fingers on your money, you never get back what you put in."

Whatever the case, the avoidance of formal institutions in the financial matters of SSEs continues to be the favored mode of operation. In this respect, cash from the high "savings rates," for which Taiwan is well known, often finds its way around formal institutions and into the informal financial sector. Without such informal sources of financing and investment, it is unlikely that Taiwan would have the vast number of small-scale producers that it does.

Discussion

How and to what extent will Taiwan's small-scale producers fare in the 1990s? There is every indication that many low-skilled, capital-poor, labor-intensive firms in low technology industries will slowly disappear from Taiwan's industrial landscape. This is especially the case if Mainland China

continues to absorb many of the industries fleeing Taiwan. A number of questions remain, however. What kind of industries will replace (if at all) these lost industries? As with many of industries in the west, will Taiwan lose much of its manufacturing base to cheap labor markets in less developed countries? Will Taiwan be able to replace its low value-added industries with new high-tech industries and will small-scale producers give way to large-scale capital-intensive manufacturers? While these questions are beyond the scope of this thesis, some of them are relevant to small-scale producers on Taiwan in general and the hand-made paper industry in particular.

Ho (1979;1980) was too quick to dismiss Taiwan's small-scale enterprises as a temporary phenomenon. He argued, that mass markets would eventually favor large-scale producers in Taiwan who are able to take advantage of economies of scale. While it is true that lower input costs can be achieved through large-scale mass production of certain commodities, there is growing evidence that global markets (particularly in the 1980s) are increasingly unpredictable, and often composed of niche markets, and that individual product runs appear to be shorter with each passing year.

Pack (1992), who did research on Taiwan's industrial change, reasons that Taiwan's maintenance of high and fairly consistent economic growth-rates over the years is not due to the success of economies of scale (i.e., through large-scale mass production). Rather, he maintains that the Island's overall growth in total factor productivity (TFP) since the mid-1960s was due, in part, to the phenomenal increase in the number of small-scale manufacturers (1992:105).³¹

It is beyond the scope of this thesis to thoroughly explain Pack's theoretical position and research results here. Suffice it to say that Pack asserts

that Taiwan's spectacular growth was due to its large number of SSEs which were far more adaptable and accommodating to global markets than large-scale producers for three reasons. First they were more *flexible* with regard to changing markets and product lines. That is, they were able to adjust more quickly than large-scale enterprises to changing product markets in goods as diverse as computer keyboards, personal computers, and even athletic shoes, and they could easily move toward products which were just developed or toward those in which relative price had increased (1992:105). Second, Taiwanese SSEs manage employees more efficiently than do large-scale enterprises; SSE's avoid complex organizational judgments with regard to organizing and vertically uniting many workers, setting wage incentives and unionized activities. Third, there were "important permissive factors that allowed for rapid change in the industrial structure" such that Taiwan's large supply of trading firms searched for new product markets appropriate for the island's smaller manufacturers (1992:105). These trading firms enabled Taiwan's small firms, with little in the way of capital, to gain inexpensive access to important market information which might otherwise be unavailable to them. This structure, in turn, helped lower barriers to entry to many industries for SSEs. More importantly, the "Taiwanese system enabled firms to engage in subcontracting, thus allowing supplier firms to realize economies of scope in the utilization of specialized capital and labor" (1992:106; see Chapter I).

Thus, *one of the key elements to understanding the future of small-scale enterprises in Taiwan is the relationship small producers have to the market and their ability to attach themselves to marketing and productive networks.* Obviously, proprietary technology will be increasingly difficult to acquire for industries of any size. Lacking the deep pockets of large firms, most of

Taiwan's SSEs will not be able to afford the Research and design (R&D) expenses, fixed capital requirements, or licensing fees to bring new high technology products to market. Nevertheless, through subcontracting arrangements, small producers on Taiwan have always successfully produced parts and finished products for specific markets, often at the beginning or end of product cycles. As I have found in the PC-computer industry in Taiwan, for example, small subcontracting firms often have had to form alliances with other firms (both large and small) in an effort to combine marketing, technology, and production capabilities.

The future appears less certain for those small, labor-intensive firms in Taiwan which fail to form such connections. As I show in the following chapters, small-scale subcontractors in the hand-made paper industry, who for years had no direct connection to the finished product market, had found it increasingly difficult to remain in business in the late 1980s and early 1990s. Unable to compete with cheap labor markets in Southeast Asia and Mainland China, these "unconnected" producers often realize that their continued survival on Taiwan depends on their ability to improve their position in the production hierarchy as well as their capacity to market their products overseas. According to one entrepreneur in the paper industry, "If we can't move our operations overseas, come up with a new product, and find new buyers for our paper, we are through. We just can't make a living on cheap labor anymore."

¹ In the first two decades of Japanese rule, the government also took a national population census as well as an accounting of the island's other natural resources (e.g., forests.).

² The close connection between the Taiwanese and Japanese economies is indicated by the fact that between 50 to 70 percent of Taiwan's total export value was in sugarcane and rice to Japan. Put as succinctly as possible, Ho notes that "Taiwan was an economic asset to Japan not only because it was a source of food and raw materials, but equally important, because it was able to obtain Taiwan's primary products without exchanging an equivalent value of manufactured goods (1979:31).

³ Ho writes, however, that Taiwanese involvement in manufacturing was slightly less than the above figures would indicate. This was primarily due to the large number of Japanese males who entered the colony in search of skilled jobs, most of which were in industry and commerce (Ho 1978: 80).

⁴ Many mainlanders took government jobs vacated by the Japanese. Thousands of well educated Taiwanese were again frozen out of the government as had been the case under Japanese occupation (Gold 1986:50).

⁵ Here I am referring to the Chungli incident and Kaohsiung rally where numerous Taiwanese protesters were arrested by the KMT.

⁶ Comparative advantage refers to the advantage a country possesses when engaged in international trade when it is able to produce a commodity at an input cost which is lower than that of another country.

⁷ Here agriculture also includes fishing and forestry. Industry includes mining, manufacturing, construction, electricity, gas, water, transport, and communication. These figures do not include the large proportion of the population employed in manufacturing (many on a part-time basis) in non-registered factories, small workshops, and home shops.

⁸ The first EPZ was established in 1966 in Kaohsiung.

⁹ Some of the first firms in Taiwan, for example, were Singer Sewing Machine Company, which established a factory in Taiwan in 1963 and General Instrument, which established a bonded electronics factory in the Taipei suburbs in 1964.

¹⁰ The US was at the time beginning to impose tariffs on goods produced in Japan.

¹¹ Gold (1986:83) also traces the path of electronics manufacturing during this period. Many of the first electronics manufacturers in Taiwan were heavily involved with Japanese investors in the 1960s.

¹² Most of Taiwan's manufacturers simply became subcontractors buying what parts they could not produce from Japanese and American companies. For a number of years, for example, Taiwanese Television manufacturers had to buy picture tubes or tuners from Japan, leaving for themselves the less profitable job of manufacturing plastic Television cases or simple parts of the chassis. Only later were some of the manufacturers able to produce on a O.E.M. (Original Equipment Manufacturing) basis.

¹³ Nevertheless, Taiwan's domestic markets remained more or less protected. With the bulk of manufactured goods produced by American firms ending up in the US, local Taiwanese industrialists were able to continue selling high priced and inferior goods to the local market. Only the Japanese were successful in penetrating this barrier through their numerous joint venture and licensing agreements (Gold 1986: 87).

¹⁴ In 1974 the government simultaneously increased state investment in public enterprises in an effort to further stimulate the economy (see Chang 1992:226).

¹⁵ Here agriculture also includes fishing and forestry. Industry includes mining, manufacturing, construction, electricity, gas, water, transport, and communication .

¹⁶ In the late 1960s and early 1970s, employment in agriculture dropped from 51% in 1961 to 31 percent in 1974 while employment in manufacturing rose from 25% to 40% in the same years (Galenson 1979:387-88). Here agriculture also includes fishing and forestry. Industry includes mining, manufacturing, construction, electricity, gas, water, transport, and communication.

¹⁷ In 1986 US\$1 was equivalent to about NT\$38. By 1989, the exchange rate stood at approximately NT\$26.5 to US\$1.(Chung Kuo Hai Kuan, Chu Kou Mau Yi T'ung Chi Yueh Pau Kau 1986: 1989).

¹⁸ Direct trade links between Taiwan and the mainland are still banned at this writing.

¹⁹ Ho (1980) compares the small-scale sectors in both Taiwan and Korea.

²⁰ Ho goes on to point out that his research found that the most productive category of factory was from 50 to 99 workers and that only a limited number of factories in the 5 to 49 worker category are "efficient" (1980:102-103).

²¹ Ho (1980) wrote that, in the early stages of development, location and transportation costs appear to be the areas most sensitive to competition in small-scale manufacturing. When location weakens as a source of competitiveness, production processes become important.

²² From 1956 to 1966, for example, total employment increased at 5.3% a year in Taipei, 5.6% a year in other metropolitan areas, 5.4% in minor cities, and 3.8% in the rural areas.

²³ Ho found that, in the "1930s, when only 30% of Taiwan's labor force was engaged in nonagricultural activities, two-thirds of all nonagricultural workers were located in rural areas. This heavy concentration of nonagricultural employment in rural Taiwan reflects in part the fact that over 80% of the population at that time lived in rural areas and in part the fact that some of the early manufacturing industries (food, products of wood and bamboo, and non metallic mineral products) depended on rural areas for raw materials and markets" (Ho 1979:81).

²⁴ The rural distribution of small-enterprises during the 1960s was due to the Taiwan's relatively well developed rural infrastructure, a legacy of the Japanese and later improvements by the KMT.. The reader will remember that the rural areas of Taiwan were first developed by the Japanese during the colonial period, and then by the KMT thereafter.

²⁵ Ho also pointed out that, "Taiwan's decentralized pattern of industrialization in combination with its relatively well developed transportation system has apparently made it possible for many of the country's rural household members to shift to nonagricultural employment without changing their residence"(Ho 1979:91; see also Ho 1980:23)

From Ho 1979:77-96 In "Decentralized Industrialization and Rural development: Evidence from Taiwan Oct. *Economic Development and Culture Change* University of Chicago.

²⁶ Factories are strung together in a row-house configuration. From 1990 to 1991, I conducted research on the PC computer industry, including over 100 small-scale factories distributed throughout the Taipei County Area.

²⁷ Stites argues that these figures may be greatly understated because they do not include the vast number of non-registered factories or home workshops in Taiwan (1982:160).

Many industrial censuses failed to use a consistent factory size during data gathering until the late 1970s

²⁸ These figures do not include many of the many small rural industries found throughout Taiwan during this period.

²⁹ The percentages are of total number of manufacturing units in Taiwan for this period.

³⁰ "The interest rates on secured bank loans fell from over 17 percent in 1961 to 12 percent in 1971" (Ho 1978: 244).

³¹ See Pack (1992: 73) for a complete explanation of TFP. Essentially Pack rephrases a hypothesis from Alexander Gerschenkron that latecomers to the development process would be able to achieve rapid growth because they were be able to take advantage of the benefits of "relative backwardness." In other words his hypothesis might read that the "*best practice technology* in developed countries exhibited high total factor productivity (TFP) while the actual technology employed in the LDCs generated lower (TFP)." He points out that "obtaining command of both the hardware of and 'software' of advanced technology would enable an LDC to generate rapid growth in TFP as they eliminated the gap between actual and best practice technologies. In effect, their capital accumulation and additions to the labor force would have magnified the growth impact." Once the gap was reduced, however, it would be increasingly difficult to maintain rapid growth...an issue which now confronts Taiwan (Pack 1992:74).

CHAPTER III THE SETTING

Having provided an overview of economic change on Taiwan and discussion of the kinds of industry that have developed since the Japanese occupation, I now turn to a discussion of Puli Township, the setting for my research on the hand-made paper industry. Because this chapter is structured to provide an overview of the setting, I leave the discussion of the hand-made paper industry until Chapter Four. In addition to having a reputation as the center of hand-made paper production on Taiwan, Puli has a rich social and economic history which existed well before the first Chinese immigrants came to the area in the 1600s.

This chapter is designed to situate the hand-made paper industry in the *local* socio-economic context. It provides a short historical road map of Puli which begins with the Ming period, winds its way through the Japanese occupation and the Nationalist period, and ends in 1990. As the chapter will demonstrate, Puli is a unique place which does not conform to many of the stereotypes of the Taiwan "miracle." Furthermore, Puli's uniqueness helped define the course of the hand-made paper industry since its beginning during the Japanese occupation.

A. PULI TOWNSHIP : ADMINISTRATION AND GEOGRAPHY

Puli Township is located in Nantou County, the geographic center of the island of Taiwan. Most of Puli is located in a basin on the northern perimeter of the *Shui-Sha-Lien* plateau which lies in the center of the Central Taiwan Mountain Range, approximately 61 km from the city of Taichung to the northwest (see Figure 3.1). The basin is about 40 square km in size, 475 meters above sea level, and is surrounded by mountains in excess of 2,000 meters. Cool fresh streams feed two major rivers which enter the basin from the northeast (the Mei River) and southeast (the Nankang River) (see Figure 3.2). These two rivers flow near the perimeter of the basin, providing water to a complex irrigation system of concrete dikes and canals which feed one of the region's most lucrative cash crops, *chiao pai sun* 茭白筍, a water-bound crop which produces an edible core similar to that of a bamboo shoot. These same canals also irrigate dozens of other cash crops as well as provide water to a number of small paper factories in the basin.

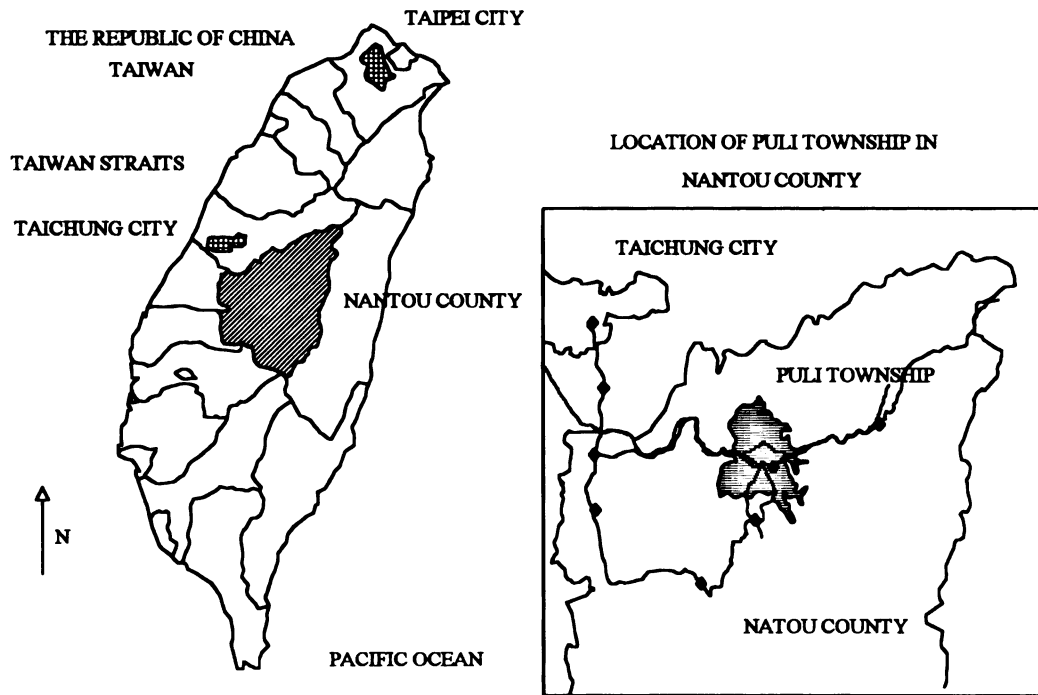


Figure 3.1. Location of Nantou County and Puli Township

Access to the area is gained by a four-lane highway which winds through a small gorge at the southwest end of the basin and by a highway to the south which links the area to the popular tourist area of Sun Moon Lake. A smaller road from the east links Puli to several mountain communities which are populated by Taiwanese and aboriginal peoples. These communities serve as small market towns for mountain farmers and as tourist centers catering to the thousands of people who come to the area from more urbanized areas of the island. Puli, in turn, supplies the entire region with goods and services.

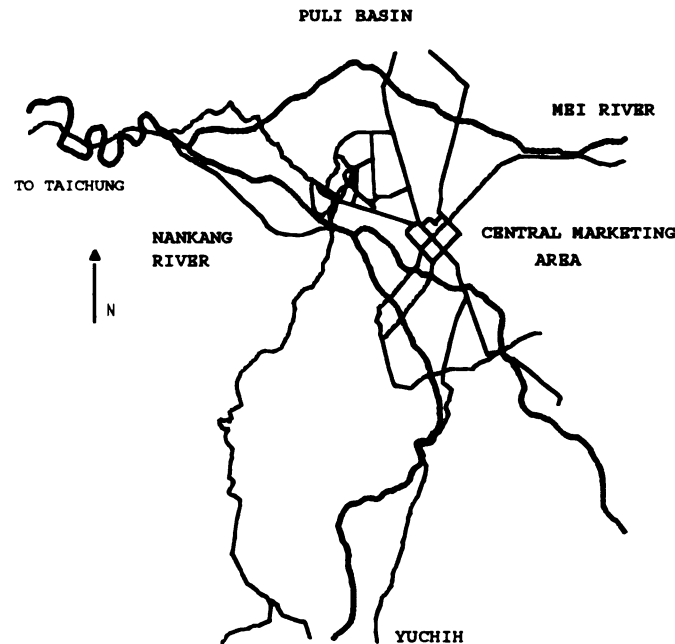


Figure 3.2. Puli Township

Puli is one of the few areas on the island where the weather seems to cooperate and where there is relatively little of the pollution and noise so commonly found in the large cities in the rest of Taiwan. Summers are cool and winters are dry. The air still possesses an organic quality and, sometimes, there is even enough stillness to hear an itinerant soybean milk vendor a block away. These are all qualities increasingly difficult to find in Taiwan, making Puli a popular spot for the tourist trade and for those seeking a less hectic way of life.

As with many regional areas in Taiwan, Puli has cultivated an identity for itself which is routinely repeated in every tourist brochure and on every sightseeing bus which rolls through the area. Puli, not happy with just one or two natural resources -- local foods and handicraft specialties -- has come up with four items which best reflect the local way of life. To all who live in Puli,

these are known in English as the "4 Ws": women, wine, water, and weather (although some have difficulty pronouncing such an array of Ws). When I first heard this from a Chinese friend of mine, (who sounded as if he had been hired by the local tourist bureau), I actually thought he was translating for my benefit. But there is no clever Chinese equivalent; there actually *are* four Ws. I was also curious about why women were lumped together with what might be considered commodities, until he politely told me that the local "women are a natural resource." "You see," he went on, "the women in Puli are considered to be some of the most beautiful in Taiwan. Many are of both aboriginal and Chinese ancestry." Whether or not that was also the reason for Puli's thriving trade in prostitution, I did not have the heart to ask.

The only landlocked county in Taiwan, Nantou is bounded on the north by Taichung County, on the east by Chang Hua and Yun Lin counties, and on the south and east by Chia I, Kaohsiung and Hualien counties. Nantou is the second largest county in Taiwan (4,106 square kilometers), with 83 percent of its area covered by steep mountains, leaving only 13 percent of its land area for agriculture (Nantou Hsien T'ung Chi Yao Lan 1989). One of the least populated areas in Taiwan, Nantou has 534,000 people and a population density of about 130 per square kilometers.¹ County statistics also indicate that approximately 39 percent of the population is involved in services, 33 percent in manufacturing, and 27 percent in agriculture and forestry.

Within the county, there are 13 administrative units, of which Puli is the fifth largest in area and third largest in population. With approximately 85,500 people dispersed among 21,000 households, it is more densely populated than the rest of Nantou, with almost 526 persons per square kilometers.² Puli's 458 *lin* (neighborhoods) and 31 administrative *li* (villages) cover an area of 162 square kilometers km, with the majority of the population concentrated in or

near what was once a walled city in the south-western part of the basin (now commonly referred to as the central marketing or business district) (see Figure 3.3).

Since the 1800s, Puli has expanded far beyond its city walls and gates, which were originally erected to protect its residents from aboriginal attacks and roaming criminals. The downtown marketing area has, over the years, swallowed up 11 li, creating an urban area of 12 square kilometers. Over 55 percent of the township's population is located within this area, generating a population density of 3,685 people per square kilometers (Shan Ch'eng Ts'ai Feng 1986). Traditional one- or two-story housing has given way to narrow four-story brick and reinforced concrete buildings, many of which have small shops, workshops, or factories located on the ground floors. There are also a growing number of apartment buildings being built on farm land at the perimeter of the city, adding to the growing population density of the area.

To the consternation of many "old timers" in Puli, the region increasingly resembles other small cities in Taiwan.³ Like any urbanized area, Puli has acquired its share of expensive restaurants, banquet halls, *ka la ok* (*kareoke*) bars, and, the latest craze, baseball batting practice cages. Almost every night one can find a night market (composed of itinerant vendors), each of which provides shopping and entertainment. Many night markets also have the added feature of what the locals call "*steeriippu*", a Taiwanese version of the traveling open air "snake oil" salesmen who complete their pitch with a strip tease act.⁴

At the perimeter of the downtown area, many of the remaining li are also quickly losing their identity as separate communities. New buildings are gradually eating up the farm land which used to separate small villages and hamlets that formed a ring around the central market district. Sometimes the only way one can discern one village from the other is by a small community

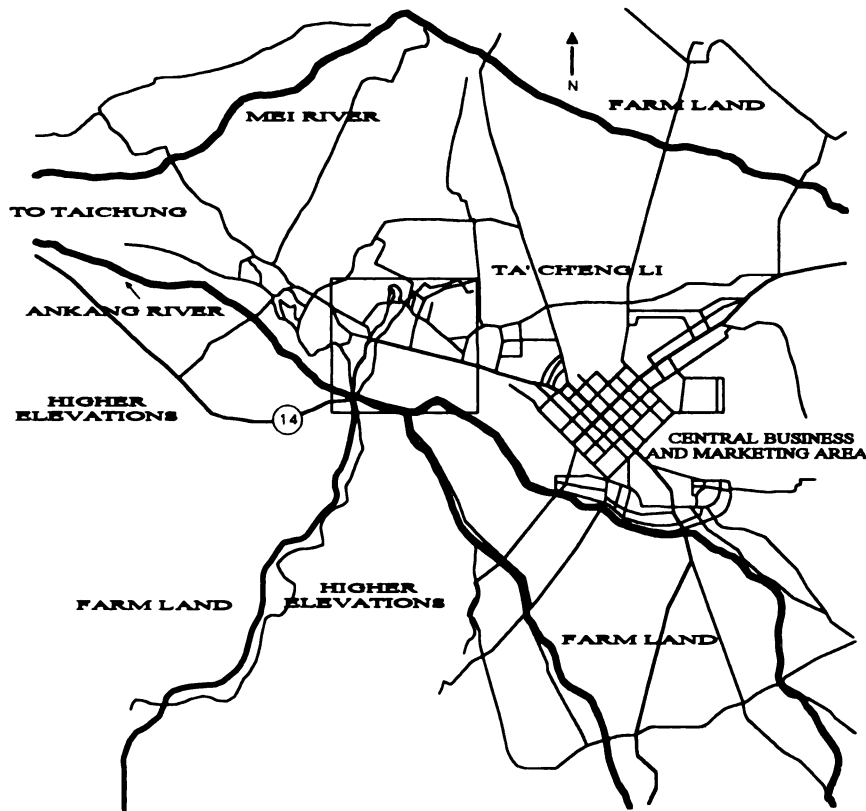


Figure 3.3. Detail of Puli Township and Ta Ch'eng Village

center or community-based temples (at last count there were at least 35 such temples) that often mark off each area (Chang 1984:521). Finally, as one travels into the outlying areas of the township, small hamlets and communities are clearly visible. Older horseshoe-shaped mud brick farm compounds (*san ho yuan*) can still be found in these farming communities.⁵

B. HISTORY OF PULI

Puli from prehistory to 1895: Aboriginal decline and Chinese immigration

As the largest and most fertile basin on the Shui-Sha-Lien Plateau, Puli has been occupied since prehistoric times by a people thought to be originally from Southeast Asia or Southern China. Known as mountain aborigines to the local population, these people were divided into two groups: the Atayal (also known as the *Mei*) and the Bunun (known as the *P'u* from which Puli gets its name). The Mei lived north of the Mei River while the *P'u* lived to the south. Both the *P'u* and the Mei existed on swidden agriculture, hunting, and gathering (Liu 1958:19-21).

Both groups lived in relative peace until the arrival of Chinese pioneers in Puli in the 1600s. Although the Chinese had been migrating to Taiwan from the mainland for a number of years, the defeat of the Ming Dynasty at the hands of the Ch'ing (Manchus) in 1660 forced many Chinese to seek refuge on the island. Puli's relative isolation from the rest of Taiwan, furthermore, did not escape the attention of the many political refugees, outlaws or opportunists who roamed the island at that time. With the Ch'ing unable to gain a foothold on Taiwan until 1684, the island quickly gained a reputation as an outlaw province and Puli became a safe haven for many criminals (Liu 1958:130-145).

The movement of Chinese into Puli did not begin in earnest, however, until about 1795 when population pressure and civil unrest along Taiwan's western coastal plain forced many Chinese inland. The coastal areas had been rapidly filling up with Chinese, who increasingly came into competition with lower plains aborigines (another culturally distinct group living on the Taiwanese lowlands) (Liu 1951).

Worried that Ming renegades and outlaws would seek refuge in the interior of the island and continue to cause trouble, the Ch'ing government outlawed all settlement by Chinese in the mountain areas. The decree was loosely enforced, however, and in 1814 a group of Chinese unlawfully moved into Puli to cultivate land which they "rented" from the aborigines.

Presumably their reasons for wanting to move into Puli were its great fertility. They appealed to the Chinese government falsely in the name of the Aborigines of P'u and the Shui she, a settlement of aborigines living further to the south on the Shui-Sha-Lien Plateau. Their appeal stated that these aborigines were too poor to make a living unless the government would allow them to rent their lands to the Chinese (Hsieh 1979:33).

Unable to stop the spread of Chinese into Puli, the Ching government issued a permit to the Chinese to cultivate land.

Kuo Pai-nien, the leader of this group, took the granting of the permit to mean total approval of settlement in the basin and encouraged over 1,000 Chinese to come to Puli and form a community. "To the aborigines he (Kuo) represented himself as a high official of the Chinese government in charge of this group" (Hsieh 1979: 33). Kuo and his men occupied land and built settlements most likely with watch towers and bamboo hedges for protection, a move that set the Pu against the Chinese in a confrontation that ultimately resulted in the massacre of over half the aboriginal population and became known as the *Kuo Pai Nien* incident. Despite the fact that Kuo was eventually imprisoned by the Ching for his terrorism, he succeeded in eliminating any barriers to Chinese settlement in the basin. By the year 1817, some 10,000 Chinese had illegally invested in land in Puli and had settled in the region.

Threatened with extinction in 1822, the Pu took the risky step of inviting a group of Plains aborigines to settle in the area and share what territory

remained of their settlements. With life increasingly difficult for the plains aborigines, five tribes took up the invitation and moved into the plain, a period of migration that started in 1823 and lasted until 1831. By 1847, about 2,000 plains aborigines had settled in the area. What the Pu had not realized, however, was that the new migrants had been so sinicized that the smaller Pu population would eventually be absorbed and replaced by a people who had much more in common with the Chinese they were trying to exclude (Liu 1958:161; Hsieh 1979:37). By the late 1800s, the P'u as a distinctive cultural group was virtually eliminated.

Puli was by all accounts one of the most promising "frontier" areas in Taiwan in the 1800s. Despite repeated efforts on the part of the Ch'ing government to keep settlers out of the area, Puli continued to grow. According to Liu (1951), most of the immigrants were Minnan peoples from Changchou and Ch'uanchou (in the province, of Fuchien) in southeastern China. People from Ch'uanchou were considered urbanized and eagerly took up trade with the aborigines and other Chinese in 1857. Credited with eventually establishing Puli as a major market town for the entire plateau, the Ch'uanchou people created the only trading area to which rural Chinese farmers went to conduct their business (Liu 1958:200-201). Because Puli was so difficult to reach during the Ch'ing period, the region became relatively self sufficient, producing its own rice, sweet potatoes, vegetables, and other agricultural products. Peddlers who came to Puli usually traveled from the port city of Lukang to sell fish, house wares, salt, and cloth. In return for these goods, the locals traded mountain products, the majority of which were camphor, herbal medicines, deer products, leather goods, and timber. Many of these products, in turn, were sold by some of the large trading houses in Lukang and Taichung area such as the Lin's of Wu-feng (Meskill 1979) to southeastern port cities in China.

With the P'u and Mei (mountain) aborigines effectively eliminated, the Chinese settlers (most of whom were men) set about learning the language of the plains aborigines (the group that replaced the mountain groups), adopting some of their cultural traditions and, eventually, marrying aboriginal women. In 1875 the Chinese government officially removed the prohibition against Chinese immigration, established an office of aboriginal affairs, and built roads into the area. A garrison was established in 1878 and an earthen fortification was built around the town with four gates and a moat (Figure 3.4). The end result was that, by the 1880s, the Chinese dominated the entire basin area, assimilating the remaining aboriginal peoples into a Chinese culture which, by this time, was reinforced by an expanding Chinese officialdom. By 1900, "the number of people who called themselves 'aborigines' gradually declined until eventually, everyone in Puli, regardless of their cultural background, was identifying themselves as Chinese" (Hsieh 1979:41).

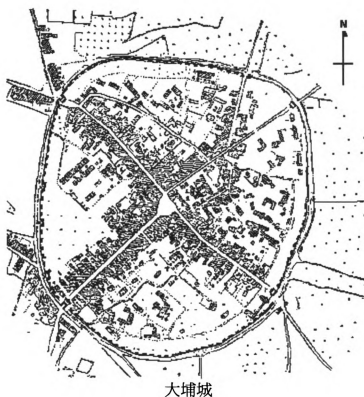


Figure 3.4. The Earthen Walls and Four Gates Around Puli: 1914

Source: (Liu 1958:226)

Japanese colonialism in Puli

During the ten months which followed the departure of Chinese (after the signing of the Treaty of Shimonoseki), soldiers from Puli in 1895 and the arrival of Japanese soldiers in 1896, the basin area was in total anarchy. Chinese bandits roamed the streets and aborigines from the nearby mountains attacked Chinese settlers at will (Liu 1951:208-209). During this ten-month period, life became so difficult that local leaders had to beg the Japanese to come into the area to restore order; leaders asked for help three times before the Japanese acquiesced. The Japanese soldiers and administrators who eventually came to

Puli were so poorly supervised and oppressive, however, that a number of revolts ensued, resulting in even more bloodshed (Chang 1984:128).

As was the case throughout the rest of Taiwan, however, Japan eventually gained control of almost every aspect of Puli life. Through the educational system introduced by the Japanese colonial government, most Taiwanese were taught basic skills so as to better serve the empire. They were schooled in the Japanese language and taught Japanese customs and traditions in an attempt to create a loyal and submissive population. Throughout Puli's small villages, Chinese corporate associations, Farmers' Associations, credit cooperatives, irrigation committees, police, and all forms of local government were either eliminated, altered in function, or taken over by Japanese officials or Taiwanese who demonstrated unwavering loyalty to the empire (Liu 1959:210). It was a divide and rule strategy which pitted Taiwanese against Taiwanese, creating deep divisions in the local community (Chang 1984:133).

Of the land that was expropriated by the Japanese in Puli, most came to be used for sugar cane cultivation (the largest and most profitable export to Japan) and logging operations in the mountains. In 1911, a sugar plantation was established on the northern fringe of Central Puli near the village of Ta Ch'eng Li 大城里 (see Figure 3.3) by a Japanese business group. They also built a small sugar refinery and a narrow-gauge railway to move the sugar cane from nearby fields. Local farmers who had previously planted rice, were either ordered or coerced to plant a percentage of their land in sugarcane and to sell it to the local factory under contract and at fixed prices (Hsieh 1979:70). Surrounded by mountains with massive stands of timber, Puli also became a valuable location from which to launch logging operations. Japanese entrepreneurs set about building miles of logging roads and a lumber mill where timber was partially processed for the Japanese market.

Puli eventually began to grow and prosper around these basic industries (Liu 1951:37-38). The data in Table 3.1 show that as the region produced increasing amounts of sugar cane, timber, processed wood, mushrooms, tea, herbal medicines, and other mountain products for export to Japan, the local population accumulated cash to spend on goods not found in the area. Foundries were established to supply metal products for farming and tools for the lumber industry, while local retail merchants began trading in a range of imported products which, until then, had often been too expensive for locals to afford (see Table 3.2).

Table 3.1. Registered Industries in Puli in 1932

Industries	number
winery	1
sugar refineries	2
rice mills	20
camphor	18
lumber	2
brick	3
ice	1
oil	1
Total	48

Note: These were businesses which paid tax. Most businesses in Puli, however, did not pay any taxes.

Source: Neng Kao Chun Kuan Nei Kai Kuang:1932. from Wang 1990.

For the first time, Puli was significantly linked to markets at both the local and international (albeit colonial) level. Some older informants told me that Puli became something of boom town during the 1930s. Some of this legacy is still preserved in a few back streets in Puli, where one can find forgers working the

old foundries and merchants and Chinese herbalist's trading their wares in ancient brick and polished wood-beamed shops and apothecaries.

Table 3.2. Retail /Wholesale Establishments in Puli in 1927

establishment	number
food	18
cloth and clothing	6
furniture	6
sundries	32
medicine	7
pawn shops	2
Total	71

Source: Taiwan Shang Kung Ming Lu 1927 from Wang 1990

In sum, the effect of Japanese industrial imperialism in Puli was to introduce an entirely new capitalist structure. While extractive in nature, Japanese incursions into sugarcane, timber, and other forest products and their related industries (e.g., steel and metal working) exposed the people of Puli to new ways of earning an income. As capital found its way back to Puli, the basin became more than an important market town; it also became a clearing-house of sorts for the massive amounts of mountain products coming out of the area.

People in Puli learned that a vast number of possibilities existed outside of agriculture and that, given the chance, these new prospects might make a lucky entrepreneur wealthy. Many of the men who worked in Japanese industries also learned about new management techniques, new technologies, and that Puli had the resources which could be turned into products that people beyond the basin and quite possibly beyond Taiwan might want to buy. By the

time the Japanese left Taiwan in 1945, Puli was more involved with economies beyond its mountain confines than at any time in the past.

The Nationalists in Puli

After World War II, and the return to Chinese rule, the Nationalist government set about replacing vacated Japanese positions in education, the police, and in city government with mainlanders and local cadres loyal to the ruling Kuo Min Tang (KMT). Village leaders, *li chang* (formally village headmen), were elected to represent Puli's numerous village enclaves and a township mayor was elected in 1951 to lead them.

During and after land reform (in the early 1950s), one of the most powerful positions in the township was the Chairman of the local Farmers' Association (Hsieh 1979:65). Initially occupied by a KMT appointee, this position was soon opened up for elections. Despite the patina of independence, however, the central government exercised considerable authority and control over the organization using it to shape the social, economic, and political lives of the local people.

During the 1950s, an Irrigation Association was organized which oversaw the repair and use of a vast network of irrigation canals which crisscross the basin. Like the Farmers' Association, this "voluntary" association was sponsored by the government. While not as important or as powerful as the Farmers' Association, the Irrigation Association did become the center of attention during the dry season when farmers struggled to maintain the numerous water-borne crops for which Puli was famous. Although last in line for water use, many of Puli's small paper factories tapped into the system, making the Association more than just the concern of farmers.

The private sector was also not immune to the Nationalist government's onslaught. As in public administration, major Japanese-owned businesses were taken over by the government. The local sugar plantation, for example, became part of the government's island-wide sugar monopoly. Just as the Japanese had stripped majestic mountainsides of their stands of centuries-old timber for the Japanese market, so too did the KMT.

Nevertheless, Puli's prosperity began to improve with the rest of the island's economy. With the imposition of land reform, local farmers eventually began to make money as people in the rest of Taiwan started to buy more specialty fruits and vegetables, much of which was cultivated in Puli.⁶ The number of lumber mills also grew as the harvesting of timber continued in the mountains. The availability of wood and cheap labor in Puli helped spawn a wood craft industry which produced Christmas tree ornaments and other small wood products for the western market. A tourist industry of sorts also emerged due to Puli's close proximity to Sun Moon Lake (built by the Japanese to generate hydroelectric power) and the high mountains and hot springs just to the east. Nevertheless, Puli's economic growth was restricted by the number and kinds of jobs available.

C. CURRENT CONDITIONS OF PULI'S ECONOMY AND LABOR FORCE

One of the reasons Puli is less polluted than the rest of Taiwan is because it does not have many industries. Relatively isolated from the industrial sprawl on the rest of the island, Puli has never been a place where entrepreneurs have particularly wanted to set up a factory. Even the central government's numerous economic development plans over the last few decades have had little or no impact on the area.

"Puli is just not a good place for industry," one local entrepreneur told me. "Many people can still make a lot of money growing cash crops that are in high demand." Another entrepreneur told me that, despite the advantage of wages being slightly lower in Puli than elsewhere on the island, factory owners avoided Puli because of its distance from their customers. With most small factories in Taiwan involved to some degree with subcontract manufacturing, parts have to be moved quickly from factory to factory along the production process, thus taking Puli out of the path of production. Last but not least, one worker told me that, because the environment was one of Puli's selling points, many types of industries would not be tolerated by the local population⁷

It is likely that the dearth of industry in Puli is a result of many factors. While many in the area may hold different opinions about why industry has never really taken off in the basin, one issue remains clear. What industry there is in Puli, is often highly labor intensive and capital poor. Although opportunities abound in the service sector (particularly in the tourist and real estate industries), the hourly wages paid in these sectors are quite low. Unable to find solace in Puli's clear skies and clean water, many people have either had

to settle for low paying work or to leave the region to find better paying jobs elsewhere in Taiwan.

Agricultural production

Despite the yearly decrease in the number of people who farm, agriculture continues to constitute the economic base of Puli. In 1989, 11,500 hectares of land was in direct production, with 7,500 hectares devoted to agriculture (Nantou Hsien T'ung Chi Yao Lan: 1989). In 1989, the number of individuals involved in farming was 14,500, a figure which may not include individuals who work their farms on a part-time basis.⁸ I met few individuals who were full-time farmers during my own research. Most had jobs somewhere in Puli, often taking time off from work to plant or harvest their crops.

Whatever the actual nature of employment in agriculture, rice remains the "official" primary crop in Puli, yielding almost 5,000 tons per annum on approximately 1,400 hectares of land. Specialty cash crops make up the rest of Puli's harvests and include edible sugarcane (cane sold in its unrefined form to vendors throughout Taiwan), chiao pai sun, tea, mushrooms, bamboo shoots, pineapple, passion fruit, and mangoes. One crop curiously omitted from most statistical abstracts is betel nut. This nut is sold island-wide and can fetch a grower hundreds of thousands of NT\$ in a year.⁹ Unofficial sources claim that the nut generates more revenue than other agricultural commodity in the basin.

Finally logging, which used to be one the largest industries in the area, was, in 1989, all but gone. Denuded of old growth forests, the mountains around Puli now have a stippled appearance as betel nut palms increasingly take the place of many of the natural trees on hill sides. In contrast to many of the trees native to the area, however, betel nut palms have a shallow root system and do not hold the loose sandy soils common to the area. As a result, the

mountains which ring the basin are suffering from severe soil erosion and the silting of river beds often causes flooding at lower elevations.

Manufacturing and Commerce

Since the mid-1800s, Puli has had a long tradition as the major trading and marketing district for the Shui-Sha-Lien Plateau and the numerous mountain communities in the area. Until the early-1980s, access to the next largest trading area located on the Taiwan plain required a long and sometimes treacherous journey through small gorges and over an unpredictable river road. In 1989, the new four lane highway now links these other market regions together greatly reducing transportation time and cost.

Commerce remains one of the strongest sectors of Puli's economy. In 1986 there were some 2,529 registered businesses in Puli. About 64 percent of these businesses were involved in retailing or wholesaling, while social and personal services and manufacturing accounted for 14 percent and 15 percent of the total respectively.¹⁰ While more recent figures on the number of wholesale, retail, and service establishments are unavailable, the number of persons involved in commerce continues to grow as the local population increases in size.¹¹

In contrast to the region's commercial sector, Puli's industrial development has been limited in scope and slow in coming. Initially built around the availability of local resources, many of Puli's industries have long been tied to either agriculture or timber production. The data in Table 3.3 indicate that, as late as 1988, for example, 58 percent of Puli's 204 registered factories were listed as producing either wood or paper products, while the bulk of the remaining industries were grouped into food or beverage production.¹²

Table 3.3. Registered Factories By Number of Workers in Puli in 1988

Industry	- 5	5-9	10-19	20-29	30-39	40-49	50-99	100-199	200-299	300-399	400-499	Total
Food	7	6	4	-	-	-	-	1	-	-	-	18
Bev & tob	1	3	2	1	-	-	-	1	-	-	1	9
Apparel	-	-	-	1	-	-	-	-	-	-	-	1
Wood products	15	34	18	4	2	-	-	-	-	-	-	73
Paper & printing	6	8	15	7	5	2	4	1	-	-	-	48
Chemical materials	-	-	-	1	-	-	-	-	-	-	-	1
Chemical products	2	-	-	-	-	-	-	-	-	-	-	2
Petroleum	-	-	1	-	-	-	-	-	-	-	-	1
Plastics	1	2	-	-	-	-	1	-	-	-	-	4
Non metal	1	3	2	2	-	-	1	-	-	-	-	9
Fabricated Metal	1	1	-	-	-	-	-	-	-	-	-	2
Machinery	5	3	-	-	-	-	-	-	-	-	-	8
Electric	-	1	-	-	-	-	-	-	1	-	-	2
Transportation	3	-	-	-	1	-	-	-	-	-	-	4
Sundries & misc.	4	11	5	1	-	-	-	-	1	-	-	22
Total registered	46	72	47	18	8	2	6	3	2	-	1	204

Note: Bev and Tob = Beverage and Tobacco. The data on registered factories is compiled for both the local and central government.

Source: Nantou Hsien Kung Ch'ang Mu Lu 1988, Nantou Hsien Kung Yeh T'ung Chi Tiao Ch'a Pao Kao 1988.

The various statistical abstracts which include manufacturing in Puli put the number of workers in these factories at approximately 4,000 between 1988 and -89. The largest factory in Puli is the government-run Taiwan Wine and Tobacco Monopoly Bureau's *shao hsing chiu* winery which employed about 600 workers in those years. Other large factories include a Chinese/Japanese joint venture which employed 200 workers and produced capacitors for light electronic products. Another 200 workers are employed in a Christmas decoration factory while an athletic shoe-sock factory and a ceramic/pottery factory each employed about 70 workers. The industry employing the largest number of workers, however, is paper and printing while the tobacco and

beverage and the wood product industries come in a close second and third (Nantou Hsien Kung Ch'ang Mu Lu: 1988 and Nantou Hsien Kung Yeh T'ung Chi Tiao Ch'a Pao Kao: 1988).

These same abstracts also provide information about other aspects of manufacturing in the basin and how it compares to manufacturing on the rest of the island. Of the 204 registered factories in Puli, for example, 80 percent had fewer than 19 workers. Figure 3.5 shows that the percentage of factories with fewer than 19 workers in Nantou County and Taiwan Province, on the other hand, was approximately 65 percent. In Puli, 47 percent of the factories had under NT\$100,000 in registered capital and 73 percent had less than NT\$1,000,000 in annual revenues. In Nantou County, in contrast, 28 percent of the factories had less than NT\$100,000 in registered capital and 49 percent had less than NT\$1,000,000 in annual revenues. The respective percentages for Taiwan Province were less than 20 percent with less than NT\$100,000 in registered capital, and 44 percent of factories had less than NT\$1,000,000 in annual revenues.

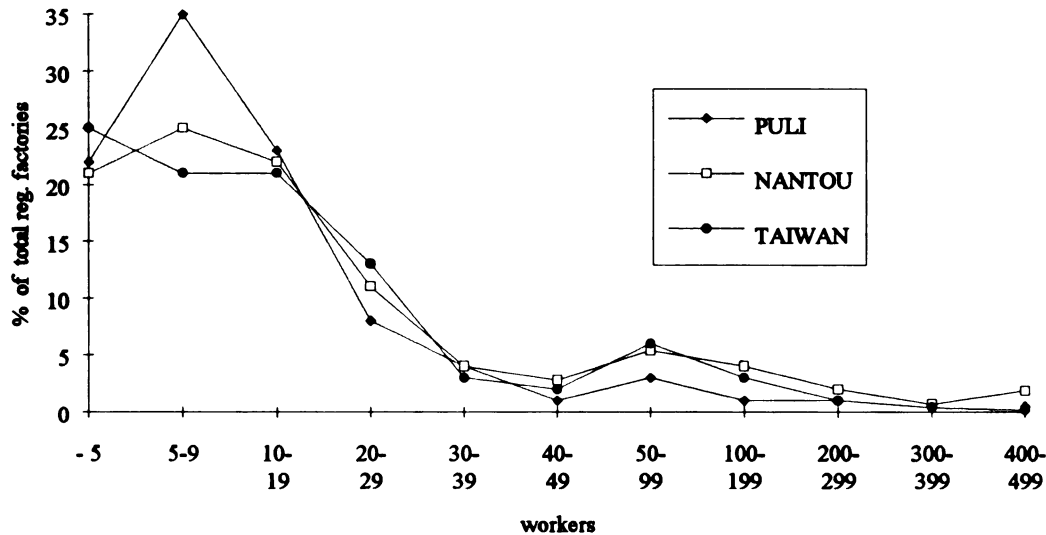


Figure 3.5. Factory Size by Number of Workers in 1988: Puli Township, Nantou County, and Taiwan Province

Source: Nantou Hsien Kung Ch'ang Mu Lu: 1988 .

Finally, while much of the official data on Puli's manufacturing sector reveals a great deal about the nature of production in the basin, this information is comprised of only *registered* 登記 factories. In accordance with this designation (mandated by the central government), only information (such as number of workers, income, and capital) pertinent to these "registered" factories is recorded. After calculating the number of workers in Puli's registered factories, for example, I found that there may have been at least 7,000 workers unaccounted for. An examination of the composition of the work force in Puli below, reveals a clearer picture of the actual nature of production in the area.

In sum, Puli's manufacturing sector was unique when compared to other parts of the island. First, compared to manufacturing in the rest of Nantou

County and Taiwan as a whole in 1989, the basin's industries were heavily reliant on labor-intensive production and light manufacturing, with few or no links to upstream or downstream producers. Puli's registered factories were also smaller in numbers of workers per unit, capital, and annual revenues. With the exception of the electronics firm, no factories resembled high technology or were engaged in the production of high technology goods. While metal fabrication, plastics injection, and electronics manufacturing were some of the fastest growing industries in other areas of the island, they are barely visible in Puli. Second, many of Puli's industries (e.g., wood-working, in particular) were, prior to the mid-1980s, dependent on forest or agricultural raw materials gathered from the surrounding mountains. In a similar vein, food and beverage production were, in part, centered on or dependent on local resources.¹³ Third, wages in local factories were generally lower than wages offered elsewhere on the rest of the island, forcing many young people to look for work in nearby Taichung City or the Taipei metropolitan area to the north.

Puli's labor force

According to Nantou County statistics, 44,514 men and 40,849 women lived in Puli in 1989. About a third (38%) of the population was between 10 and 29 years of age, with those between the ages of 0-9 years making up approximately 17 percent of the total (Nantou Hsien T'ung Chi Yao Lan 1989).¹⁴ In that same year, there were 62,219 individuals over the age of 15, 46,169 of whom were listed as active in the work force; only 123 persons were reported to be unemployed and looking for work. Of the approximately 16,000 individuals listed as not involved in any economic activity (*fei ching chi huo tung* 非經濟活動), 11,244 (70%) were women. Of these women, 7,500 (66%)

were listed as housewives, 26 percent as students, and 6 percent as old or infirmed (Nantou Hsien T'ung Chi Yao Lan 1989).¹⁵

Of the 46,169 people active in the work force, 60 percent were male and 40 percent female. Approximately 56 percent of the men had taken jobs as paid employees (or 33 % of the total work force), while 36 percent were their own boss or employers. Only 7.5 percent of the men worked in family businesses as unpaid family employees (Nantou Hsien T'ung Chi Yao Lan 1989).

For the women of Puli, employment is much different. Roughly 59 percent of women (or 24% of the total work force) work as paid employees in either government or private organizations. Only 9 percent of working women, however, are entrepreneurs. This leaves over 30 percent of the remaining women in non-paid family jobs (Nantou Hsien T'ung Chi Yao Lan 1989).

Again, statistics on occupation reveal real differences about the kinds of work in which men and women were involved (see Table 3.4). Whereas agriculture was the largest employer of men (33 % of men and 28 % of women), manufacturing was the largest employer of women (37% in comparison to 16% for men). The percentage of men involved in public administration, social and personal services was 29 percent while the percentage of women in this sector only totaled 17 percent. The remaining workers were distributed among the construction, transportation, banking, and insurance industries (Table 3.4).

Table 3.4. Labor Force Over the Age Of 15 by Industry in Puli Township in 1989

industry	males	females	total
agriculture	9,292	5,297	14,589
manufacturing	4,637	7,057	11,694
utilities	428	45	473
construction	1,679	103	1,782
commerce	2,149	2,153	4,302
transportation	1,052	285	1,337
banking, insurance	234	315	549
social and personal service*	8,095	3,330	11,425
total	27,566	18,585	46,151

*Includes government positions

Source: Nantou Hsien T'ung Chi Yao Lan 1989

The statistics on employment in Puli point to a population which a large portion of men appear to have been drawn toward self-employment while women work as employees. As indicated below, however, as many as 7,500 workers in manufacturing apparently are not listed as employed in registered factories.

Puli's unseen factories and workers

While the central government maintains records only of registered factories, local governments will occasionally take a census of *unregistered* factories and workshops. In 1989, for example, the Nantou County Government noted that there were approximately 317 non-registered "handicraft factories and workshops" in Puli. ¹⁶

The acknowledgment that other forms of manufacturing were present in the basin helps clarify the inconsistencies in the data on the number of factories and the local labor force. The statistics on manufacturing compiled by the central government, for example, indicate that in 1988 only 4,000 people were

working in local factories. How was it that only 9 percent of Puli's work force worked in manufacturing when County statistics put that figure was at least 25% 1989? A comparison of statistics from the central and county governments reveal other problems with the data on manufacturing. Although there were only two registered factories in the electronics category, for example, county statistics indicate that far more workers were involved in that industry than the statistics from the central government would have suggested (272 compared to 822) (Nantou Hsien T'ung Chi Yao Lan 1989).

The category that is plagued with the most inconsistent figures, however, is the one designated "sundries and miscellaneous" (*tsa hsiang* 雜項). The data compiled by the central government lists the total number of workers in this category at only 371 and the total number of registered factories at only 22. According to the central government this number represents only 9 percent of the work force in manufacturing and 10 percent of the total factories (i.e., 9 % of 4,000 workers and 10% of 204 factories). County surveys, however, rank "sundries and miscellaneous" as the largest employer of labor (38% of 11,694 workers in the manufacturing sector)(see Table 3.5). If the 300-odd *unregistered* handicraft factories and workshops (*shou kung i* 手工藝) ignored by the central government were taken into consideration in the data on registered factories, this "handicraft sector" would represent the largest sector in both factory units and employed labor.

Without a doubt, most of the 300 unregistered handicraft factories or workshops recorded in county statistics were but one portion of a complex network of pieceworkers, middlemen, and labor brokers who worked out of small neighborhood shops and offices. These factories manufactured and packaged small wood, ceramic, or plastic toys, decorations, and Christmas ornaments (products which often are labeled miscellaneous or sundries) that

were sold in American and European markets (see also Puli Hsiang Ch'ing 1985:72).

Table 3.5. Employees Over Age 15 in Manufacturing by Selected Occupations in Puli Township in 1989

Industry	total workers	men	women
food	542	342	200
beverage & tobacco*	334	239	95
wood, bamboo, fur	1860	702	1158
paper & printing	795	404	391
chemicals	28	9	19
oil/ gas	14	4	10
plastics	331	180	151
non metal	83	49	34
fabricated metals	672	626	46
electrical	822	403	419
other	1748	863	885
sub total	7229	3821	3408
sundries and miscellaneous ♣	4,465	816	3,649
total	11,694	4,637	7,057

Note: The data exclude government workers.

* This figure more than likely excludes the Taiwan Wine and Monopoly Bureau work force since their designation would be government workers.

♣ This figure is an approximation of the number of factories which produce small ornaments and hand-painted gift ware.

Source: Nantou Hsien T'ung Chi Yao Lan 1989

As with many light industries throughout Taiwan, a large proportion of production is conducted in small workshops or at home on a part-time basis. Most homeworkers are women (81% of those involved in the sundries and miscellaneous category) who, when not performing household chores, either do piece work at home or simply walk down the street to a local workshop where they employed. I found it difficult not to pass several of these shops on my way to a local paper factory to conduct interviews. Occasionally I would stop to talk

to these women while they painted an eye on a wooden nutcracker bound for the states or glued an arm on a plastic ornament destined for Europe.

During one of these informal interviews, I asked a group of women what they would call their occupation. One woman told me that she was a housewife because she said, "That's what a census taker told me I was." When I asked how many hours she worked painting clothing on little wooden figures, she answered "between 6 and 8 hours a day. If I work less than that, I can only make NT\$400 a day." While she agreed with my assessment that if she worked as many as six or eight hours a day, she really was a factory worker, she added, "that is what I tried to tell the woman from the government census office. But she said that if I didn't work in a [registered] factory, I wouldn't be counted as a factory worker." As I continued to talk to these women, I learned that many women felt they worked to earn supplemental income, despite the fact that many of them might put in eight hours of piecework a day. They also said they received no form of insurance, benefits, or bonuses as did workers in a "legitimate" factory.

My observations of these small factories and their workers made it quite apparent that there was large work force in Puli unaccounted for in any of the official documentation on the region. Working from the statistics compiled by the county government (see Table 3.5), women account for 60 percent (7,057) of the work force in manufacturing, and 75 percent (3,649) of the work force in the most labor-intensive and low-paying jobs (woodworking or sundries and miscellaneous categories).¹⁷ If just half of the 7,500 "non-working housewives" working as homeworkers or in non-registered factories and workshops were considered in the census data,¹⁸ the total number of women workers in manufacturing would rise by 3,750 to a total of 10,807 (or almost 70% of women in manufacturing).

Summary

Since the first Chinese settlement in Puli, the area has always been one step behind social and economic change in the rest of Taiwan. This lack of development gave Puli a reputation for being unique, countrified and, perhaps, less sinicized than the rest of Taiwan. The Japanese occupation did much to change all that. On the front lines of aboriginal lawlessness and Chinese independence, the Japanese made sure Puli was brought into the folds of the empire. Not only did the Japanese build roads, schools, and hydroelectric power plants, they also brought Puli's farmers, craftsmen, and small entrepreneurs into a capitalist (albeit imperialist) trading system. Under the Japanese, many people in Puli saw that money could be made in occupations other than agriculture, particularly if business connections could be established beyond the Township.

After the Japanese left the basin in 1945, the dream of making money evaporated for many Taiwanese. Despite the area's low wage rates, its isolation prevented Puli from industrializing as did the rest of Taiwan. The few jobs available were in agriculture or in the woodcraft or paper industry. Agricultural jobs, however, were seasonal while most jobs in the woodcraft industry were based on piecework. As one older worker reported, there just weren't enough good paying jobs for *men*. While he explained that it was all right for women to take low paying wage and piecework jobs, a man could not afford to feed his family on the money paid for piece-rate work. Many people have thus left the basin because it does not have high paying manufacturing jobs.

Despite the lack of high paying jobs in Puli, however, the area was one of the nicer places on the island to live. Relatively untouched by pollution and overcrowding, many people said that they would move to Puli or that they

would remain in Puli for the sake of their children. As one college-educated man revealed in explaining why he came to Puli and had taken a blue-collar job, "I came here because my daughter has cancer. Since the rest of Taiwan is so crowded and polluted, my wife and I thought this would be the best place for our daughter to live."

Since the 1960s, the Township's population has grown 71 percent, one of the highest growth rates for a non-urban area (Shan Ch'eng Ts'ai Fung 1986:22). Instead of finding employment in industry, many people found jobs in the service sector, and the real estate and tourist industries. One man left his job at a local paper mill because he saw no future in manufacturing in Puli. "If you want to make money," he said,

you now have to get into some kind of service business for all these people who are moving here. Maybe ten or fifteen years ago you could try and start your own paper or wood craft factory. But wages are now too high to support the kinds of labor-intensive industries that are usually set up here. That's why I started my own mobile video rental business.

While Puli has always been a difficult place to find a good paying job, there were, nevertheless, some industries which were started in the basin. Many of these industries were married to the availability of resources and the nature of the climate in this part of Nantou County. Tracing its origin to the Japanese occupation, the production of hand-made paper was one of these industries. In the chapters that follow, I introduce and follow the evolution of the industry, showing that for at least three decades after World War II, the hand-made paper industry provided not only scarce jobs but also the opportunity for workers and entrepreneurs to start their own businesses.

¹ This compares to a island-wide population of over 21,000,000 and a population density of over 500 people per square kilometers.

² The average number of persons per household was 4.03 in 1989 Nantou Hsien T'ung Chi Yao Lan 1989).

³ There are two issues which should be emphasized at this point of the thesis. First, while those who live in Puli often refer to the area as *hsiang hsia* (the countryside), Puli is hardly rural. Its large size makes it necessary to consult countywide and central governmental statistics the two primary sources for general information on the area's economy. Unfortunately, some of the statistical material is not altogether clear, nor do the data always add up in the end. With that said, I have long come to the conclusion that a certain amount of leeway must be afforded these official records.

The second point has to do with the format of discussions on Puli's economy. Since the research is concerned with issues related to manufacturing in the basin, the discussion of other sectors of the economy will be of secondary importance. Given Puli's large size and the limitations on the research, it is impossible to provide a more thorough investigation of other sectors of the economy.

⁴ After the obligatory spiel about healing teas or mushroom potions, the evening strip show begins. These strip shows occur in full view of local market goers, an audience which is composed of a full cross section of Puli society, including grandmothers and children.

⁵ Increasingly, however, many of these houses are giving way to new multi-storied concrete buildings such as those found in more urbanized areas.

⁶ These included profitable cash crops such as *chiao pai sun*, flowers, mushrooms, tea, fruits, vegetables, and sugarcane. Because Puli has a cooler and dryer climate, than the rest of Taiwan, the area became a unique agricultural region for many products.

⁷ Although I knew Puli billed itself as having clear water and fresh air, I have seen enough pollution in the area to know that environmentalists did not have a particularly powerful voice in local politics.

⁸ In 1985, 22,720 people were reported to be in farming (Nantou Hsien T'ung Chi Yao Lan 1989).

⁹ Betel nut is a stimulant chewed by thousands of men (and some women) throughout Taiwan. Unfortunately, its after - effects leave city streets covered in red slime (the chewer must constantly spit out the juice), and its users with numerous health problems (such as cancer of the mouth and upper gastrointestinal track).

¹⁰ The data on the total number of commercial enterprises are not very reliable and are only an approximation because, as is commonly known, many small shopkeepers and restaurateurs do not register their businesses. The remaining 6% is unaccounted for.

¹¹ The number of persons engaged in commerce rose by approximately 29% between 1986 and 1989.

¹² Again the various sets of data available are inconsistent and do not appear to agree. In 1986, the Kung Shang Chi Fu Wu Yeh P'u Ch'a Pao Kao, [The Report on the 1986 Industrial and Commercial Census for the Taiwan-Fuchien Area](a central government report) places the number of manufacturing facilities at 337. In 1988, the Nantou Hsien Kung Ch'ang Mu Lu (a county commissioned cataloging of factories) places the number of

registered factories at 204. The Ministry of Economic Affairs (MOEA) Nantou Hsien Kung Yeh T'ung Chi Tiao Ch'a Pao Kao [Nantou County Industrial Statistical Census Report in 1988 (another central government report) places the number at 178 factories for the same year. Finally, the 1989 data from the Nantou Hsien T'ung Chi Yao Lan (Nantou County level industrial survey) puts the number of factories at 200. All these data suggest that the number of factories in Puli may have decreased since 1986. It is very doubtful, however, that more than 100 factories went out of business between 1986 and 1988.

¹³ The large wine factory was located in Puli because of the purity of the area's water.

¹⁴ The ratio of men to women was 108.97 to 100 in 1989 (Nantou Hsien T'ung Chi Yao Lan [Nantou County Statistical Report 1989])

¹⁵ Sixty-five percent of the men, in contrast, were listed as students and 34 percent as old or infirm.

¹⁶ Terms euphemistically used to categorize a sector of the economy felt by many bureaucrats to be unimportant or an embarrassment.

¹⁷ Again, one can only speculate as to how many women are pieceworkers in the hundreds of small unregistered workshops in Puli.

¹⁸ This was a designation already known to possibly include pieceworkers.

CHAPTER IV
PAPER-MAKING IN PULI IN 1989:
AN OVERVIEW OF THE INDUSTRY AND THE TECHNICAL
ORGANIZATION OF PRODUCTION

When I first arrived in Puli in the spring of 1989, some of the factory owners I initially met received me rather tepidly. One of the reasons for this reception was that some of these men thought I had come to Puli to record the industry before it completely disappeared. "Paper-making will be gone from Puli in less than five years," said one factory owner.

After almost sixty years in Puli, paper-making will be gone because wages are too high in Taiwan and our paper has become too expensive for most markets. Unless the government does something to help us, the factories here will either move all their operations overseas or they will just go bankrupt.

It was true, of course, that some of the large-scale paper makers in Puli were building factories in Mainland China and Southeast Asia and that they were planning on moving some, if not all, of their operations out of Taiwan. It was also clear that time was running out for many of the small paper producers in Puli who had neither the business contacts to find customers on their own nor the money to relocate their factories overseas. It was under these less than optimistic conditions that I began my fieldwork on the hand-made paper industry.

While there was much that was unique about hand-made paper production in Puli, there were at least three elements which set it apart from the multitude of other small industries in Taiwan. First, the history of this industry

was far more interesting than I had ever imagined. Starting in Puli in 1935 under the Japanese occupation, the industry spans a period of more than 50 years. Gleaned from the life histories and anecdotal recollections of informants between the ages of 30 and 70, I discovered that this was a close knit community of producers with a vibrant past. While the recollections of my informants did not always coincide, the differences among them gave meaning not only to the contemporary structure of the industry but also to the individuals who worked within it. How individuals in the industry remember and act on past events is, of itself I believe, an important part of understanding the entire industry in both its historic and current context.

Second, in contrast to many of the western oriented export industries which emerged on Taiwan in the 1960s and 1970s (such as simple electronics, shoe making, and textile and clothing manufacturing), the hand-made paper industry was an outgrowth of the East Asian market. That is to say, the hand-made paper produced in Puli was predominantly a non-western commodity conceived, molded, and structured in Asia for Asian markets. The complex social and economic process which were formed around this industry in Puli, therefore, should be considered within the Asian context.

Finally, unlike many earlier studies of rural small-scale producers (Gallin 1982; Harrell 1982), this industry was fully integrated into the social and economic environment of a complex semi-urban community of over 80,000 people. While Puli has not experienced many of the changes that have occurred on the rest of the island, the area constitutes a large and diverse community which has always maintained extensive social and economic contacts with the rest of the island. Furthermore, because of Puli's large size and that labor was drawn to the industry from all over the basin, many of the workers and owners in the industry did not share a common relationship of "community" outside the

factory setting which was sometimes found in smaller communities. Thus, the research reported in this thesis primarily focused on the industry and not the communities in which they were located (i.e., this study does not resemble an ethnographic village study in any sense of the term). Above all else, this is a micro study of paper-making and paper-makers and the social and economic relationships which emerge from and surround the industry.

Before examining the history of the paper industry, I provide an introductory overview of the hand-made paper industry as I found it in the spring of 1989. In Chapter IV, I focus primarily on the technical organization of production, and include sections on the legal designations of company ownership, paper as a "commodity," the primary markets where paper was marketed and sold, the production process, factory location, and factory investment. I also briefly explain the "business" side of making paper and the various subcontracting arrangements between firms in the industry. In Chapter V, I focus on the social organization of production in 1989 and examine the nature of the labor force, entrepreneurs, and their family members who operate the paper companies in Puli.

While paper-making may initially appear to be a rather uncomplicated labor-intensive industry, the business of making paper and the personalities involved in producing it are extremely complex. Chapters IV and V, therefore, aim to provide the information readers need in order to understand and navigate through the details of the history of the industry as it unfolds in Chapter VI. In essence, Chapters IV and V examine many of the current social and economic dynamics of the industry within firms (the internal dynamic) as a way of understanding how these dynamics emerged between companies and the market over time (the external relationship between firms). Because I consider the historic process of the industry an important part of understanding the

contemporary context, I defer some of my analysis and interpretations of the data to Chapters VI (the history of the industry), VII (relationships), and the concluding discussion in Chapter VII.

A. THE HAND-MADE PAPER INDUSTRY IN PULI IN 1989

A note on the sample and the definition of the paper companies

As indicated in the introduction to this thesis, my analysis is based on three sets of data. The first, and most general set of data (the population) deals with the 29 hand-made paper companies in Puli. These data were developed in my preliminary research and collected from government documents on the hand-made paper industry in 1989 and 1990. The second set of data was obtained from a sample of 19 of the 29 company owners who agreed to at least one formal interview. Finally, the third set of data was provided by a sample of ten owners who agreed to participate in repeated interview sessions over the course of my research. Because I discuss the industry in *quantitative* terms Chapters IV and V, I usually draw upon data from both government documents (on all 29 companies) and the sample of 19 company owners who agreed to be interviewed. Whenever quantitative measures are used, I indicate whether the data come from the population of 29 factory owners or from the sample of 19. Much of my *qualitative* data, on the other hand, come from in depth interviews with the ten factory owners (a sample I describe below).

Unraveling the complexities of business ownership in Puli has been frustrating and, sometimes futile. Few company owners were open about such a sensitive and secretive matter, particularly when company shares or debts were held by individuals outside an immediate family. Given this situation, I usually had little choice but to accept whatever a boss said about the ownership of his enterprise.¹ When a man said that he owned his business, for example, he usually meant that he and his immediate family owned the entire company (i.e., it was a family-run business). Nevertheless, a small group of family members

or friends might have retained some shares in his business. In many cases, when pressed, a factory owner admitted that his wife, his children, a father, a brother, or a close friend held shares in the company. But, in most cases, owners were unwilling to disclose what payment (if any) was made to shareholders.²

Public records identified three primary company designations which reflected the *legal status* of Puli's hand-made paper companies. These designations ranged from the modest title of "factory" or "paper factory" (as in "Northern Peace Paper Factory") to the more impressive "joint stock limited company." These titles were conferred on companies when, during registration, officials were provided with the necessary documents which indicated fixed assets, number of workers, and whether or not a company had shareholders.³

In 1989, the most common business title was simply "factory" or "paper factory" (*kung ch'ang* or *chih ch'ang* 工廠或紙廠). Eighteen of the 29 paper companies in Puli use this designation in their name (as in Northern Peace Paper Factory). The second most common designation, "joint stock limited company" (*ku fen yu hsien kung ssu* 股份有限公司), was used by five paper companies. The third designation, "limited company" (*yu hsien kung ssu* 有限公司) was used by four companies while only two companies used the title "processing factory" (*chia kung ch'ang* 加工廠).

As a rule, company owners who used the terms "factory," "paper factory," or "processing factory" preferred to think of their businesses as small operations (size, of course, is a relative category) which only manufacture hand-made paper. When I raised the question as to why so many companies were titled "factory," one owner exasperatedly replied:

We're just small factories and nothing more. We don't have shareholders nor do we trade our product overseas like some of the larger paper companies in Puli. Most of us are no more than subcontractors for these larger firms, so how can we call ourselves anything but "*kung ch'ang*"?

Indeed, most of the paper companies in Puli were no more than small subcontract manufacturers of hand-made paper. That is to say, the majority of their assets were tied up in plant and equipment, they had no "front office" and no salesmen, accountants, or secretaries. There was usually only one boss who, with the help of "his" (for all bosses were men) wife, family members (if available), and a small contingent of workers, produced paper on a day-by-day, order-by-order basis.

"Limited and joint stock limited" companies, in contrast, denoted a more complex ownership arrangement than that of a "factory." Generally, those factories had stock holders and were among some of Puli's largest firms. Four were "center factories" (see below) and four others were "only casual or part-time center factories," some of which maintained a "front office." Limited companies," explained one owner,

are usually more than just a simple subcontracting factory. They not only make paper, but they sometimes contract out to purchase paper from smaller firms. Most of these companies also buy raw materials and sell paper on the open market. Many subcontracting firms can't do that.

Another category which sometimes defied description was that of "partnerships" (*ho huo* 合夥). Ideally, a partnership implied that capital, profits, and/or company control were "openly" shared by two or more individuals. According to my informants, in practice, a partnership implied a

business relationship in which people involved in the operation of a firm "cooperate" (*ho tso* 合作) and occupy more or less equal positions in the firm.

Partnerships played a major role in the founding of many paper companies in the 1950s, 1960s, and 1970s. The majority of these partnerships started with the best of intentions, but they often ended in conflict. Of the 29 paper companies in operation in 1989, only two were open partnerships (i.e., openly acknowledged as a partnership). In one case where the owners volunteered this information, one said that he was in partnership with his wife's brother (an affinal connection). In the other case, the four partners were related through either blood ties or affinal connections.

While the above titles are important indicators of legal status, I generally use a number of more generic labels to describe the companies in my sample. I try to avoid categorizing companies in terms of size. Rather, I believe it is more important to classify companies as social and economic institutions, that is, in terms of their *socio-economic relationship* to others in the industry and the market. For this reason, I often talk about *factories* (the physical location of production), *center factories* (companies which lie at the center of production and marketing relationships in the paper industry), and *subcontracting companies (or factories)* as though they were animate objects (see below for a more detailed discussion). Because my chief concern is with a small group of center factories and subcontracting companies, however, most of my discussion is directed toward these two types.

Paper as a commodity

While little was known about the first hand-made paper company in Puli, I do know that, just before the company closed its doors at the cessation of World War II, the plant was producing some of the same basic types of paper

made in Puli's paper factories in the post-World War II period. Following the war, Puli's paper factories were turning out dozens of varieties of hand-made paper much of which was sold in markets in Taiwan and East Asia. These papers ranged from the inexpensive, low value-added ghost paper (a simulated paper money burned during religious festivals and funerals), firecracker paper, tea bag, cigarette, and hair permanent wave papers, paper board, low grade document paper, and paper produced for various industrial applications to more expensive, high value-added *calligraphy and art papers*.

Many of these low value-added papers (such as cigarette paper, firecracker, paper document paper, and wave permanent papers) were competitive with machine-made paper only until the mid to late 1960s when the cost of producing such papers by hand became too expensive. It was during the 1960s, furthermore, that the production of high value-added hand-made calligraphy and artists' paper became the primary locus of hand-made paper production. What is important to note about the production of hand-made calligraphy and artists' paper was that it could *not* be manufactured by machine because a *traditional artisan hand-made commodity* was the only paper desired by the market. In other words, those who paid the extra money for hand-made calligraphy paper wanted a "traditional" hand-made product which was not "uniform" as was machine-made paper.

The hand-made papers discussed in this thesis were primarily *calligraphy and artists' papers*. These papers were used by painters, calligraphers, and paper craftsmen, each of whom used different types of paper specifically suited to their needs. The paper varied widely in cost, depending on the type of paper and the markets where they were sold. Generally, however, the cheaper papers sold for as little as US\$0.40 per sheet while some of the most expensive could retail for several dollars per sheet. Papers

commonly ranged in size from about 2 feet by 3 feet to 4 feet by 8 feet and were measured in *tai ch'ih*.⁴ Most paper was sold to wholesalers and distributors by a *tan* 擔 (a more traditional measure of 50 kg.), ream (*lin* 令), while retailers purchased papers by the ream, or the sheet.

While I will describe a number of different kinds of calligraphy and artists' paper throughout the thesis, my primary focus is on one of the commonest calligraphy papers known as *hsuan chih* 宣紙. Hsuan paper was finely textured, light in weight, and had a slightly yellowish hue (*Chung Kuo Tsao Chih Shih Hua* 1985:168).⁵ Most hsuan papers were made from a combination of the inner bark of one kind of long-fibered hemp plant (*yen pi* 雁皮), processed conifer wood pulp, rice straw, and bamboo. A number of other ingredients were added to the bark to help whiten the pulp, regulate pitch (absorption), or act as dispersants or congealants in the production process.

What sets each variety or grade of paper apart was the quantity and quality of the different raw materials used in the pulping process (see below) and the adjustments made by the individual paper-maker, who controlled the composition of the pulp and the thickness and care given to the manufacture of each sheet of paper during the production process (there were dozens of varieties of hsuan papers which were sold as low, medium, and high value-added papers).⁶ It was possible, therefore, to produce a different variety of paper at almost every stage of production. Given this potential variety, artists, calligraphers, and craftsmen had great freedom to choose those papers best suited to their needs and thus, had a great influence on the market for paper.⁷ The ability of a producer, trader, or distributor to predict and adjust to their demands was one of the most important elements in maintaining competitiveness in the market.

The market for hand-made paper

As I will show in Chapter VI, much of the paper produced in Puli up to the mid-1960s was low-grade cigarette, document, and ghost paper for the domestic market. By the mid-1960s, the first *overseas orders* for paper originated in markets in East Asia, and in Southeast Asia; primarily in Korea, Hong Kong, and Singapore. In non-Asian markets (i.e., Europe and the United States), much of the paper was destined for the overseas Chinese who lived there. By the early 1970s, the *Japanese* began buying higher quality and more expensive hand-made calligraphy (hsuan) and artists' papers from Taiwan than what was normally sold to the rest of Asia. By the late 1970s, they dominated the product market, importing the majority of paper exported from Puli.

In 1989, only 10 to 15 percent of all the paper produced in Puli was sold on the domestic market. The remaining 85 to 90 percent of paper produced was exported and consisted of approximately 790,000 kilograms of paper with an export value of NT\$204,952,000 (US\$7,882,769).⁸ Out of these exports, Japanese customers purchased 97 percent of the total export weight and 96 percent of the total export value of paper.⁹ While the number of Japanese customers purchasing paper fluctuated from month to month, my informants reported that between six to eight buyers were considered large while another six were considered small. A buyer was considered large if he purchased a 40-foot container of paper per month while those who were designated as small purchased far less quantity.

Hand-made art and calligraphy paper has always been a seasonal commodity. Used during a number of Asian festivals in the autumn and winter seasons (such as the Lunar New Year), exports usually tend to fall off in the spring and early summer months. As Figure 4.1 shows, for example, the quantity and value of exports have often been highly unpredictable, varying

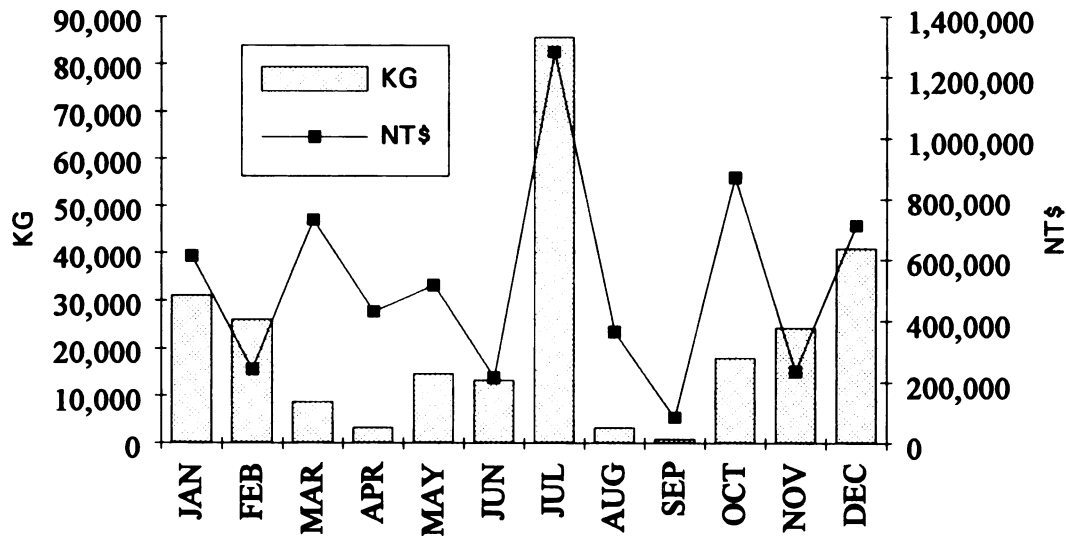


Figure 4.1. Monthly Exports by Quantity and Value of Calligraphy Paper: 1976

Source: Chung Kuo Hai Kuan 1976

from month to month regardless of the season. "It wasn't uncommon for us to go without any orders for two months," said one factory owner. "I even remember when we didn't get any orders for six months in a row."

Why and how the Japanese came to dominate the product market in this industry is discussed in Chapter VI. There, I show that, starting in the 1960s, the instability in demand for hand-made paper together with other changes in the market had a direct impact on the industry in Puli. Specifically, these elements set in motion a number of important changes in the way paper was produced and subcontracted in Puli and marketed in Asia.

The production process

The production of hand-made paper in Taiwan had essentially remained the same for two to three centuries.¹⁰ The one major change was the type of machinery used in the preparation of paper pulp. Small electric motors, pumps, plastic tubing, and modern boilers helped with the delivery of water and steam throughout a factory. These changes, however, had done little to eliminate the hand labor necessary to make and dry each individual sheet of paper (see Figure 4.2).

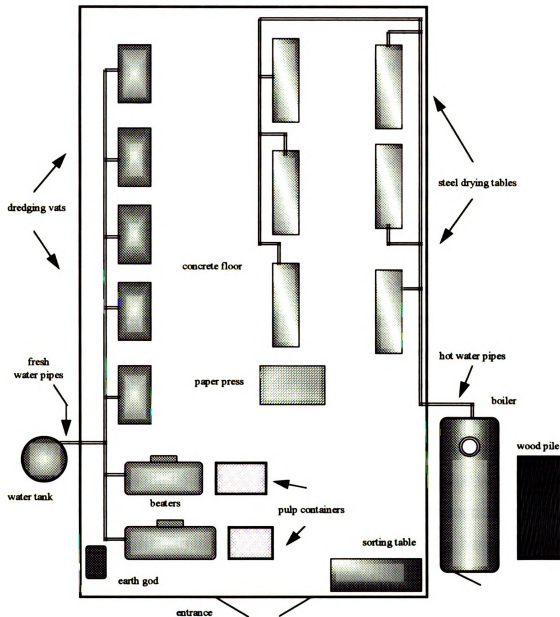


Figure 4.2 Floor Plan of a Typical Paper Factory in Puli

Note: The "earth god" shrine has become an essential part of paper factories in Puli. Prevalent in many small business and factories throughout Taiwan, earth gods were once predominantly found in small shrines along fields in the countryside.

Figure 4.3 shows that production of hand-made paper was divided into a five stage process: (a) preparation of raw materials; (b) pulp preparation or "pulping" (also known as beating); (c) "dredging" of paper; (d) drying; and, (e) sorting/cutting and packaging of paper. Each stage in the process employed a specific mix of labor and machinery which was often identified with either traditional-Asian or modern-mechanical production methods. Traditional Asian methods relied heavily on skilled hand labor and were used extensively during the dredging and drying stages of production. Modern mechanical methods (sometimes referred to as western paper-making techniques), on the other hand, were adopted only since the 1940s and 1950s and were used more extensively in the preparatory stages of the production process (i.e., preparation of raw material and in pulping), thereby reducing labor costs and increasing capacity. Machines were also used intermittently throughout production whenever possible .

The processing of the fibrous raw materials (tree barks, bamboo, rice and wheat straw) that made up the bulk of the hand-made paper pulps was the most tedious, potentially dangerous, and noxious aspect of the production process and was done by hand. Raw materials (most of which were tree bark shipped to Taiwanese factories in 100-200 kg bales of dried, rock-hard bark strips) were broken down and boiled in a large steel cooking vessel (5' x 4' x 5') for approximately 4-6 hours. The boiled bark was then poured into shallow concrete vats where it was separated, cleaned (all dirt, discolored, and hardened material was removed), and bleached (in caustic soda).¹¹

MACHINERY	PRODUCTION PROCESS	LABOR
LIGHT	I. PREPARATION OF RAW MATERIALS	WAGE LABOR
	↓	
HEAVY	II. PREPARATION OF PAPER PULP / BEATING	WAGE LABOR
	↓	
LIGHT	III. DREDGING	PIECEWORK
	↓	
NONE	IV. DRYING	PIECEWORK
	↓	
LIGHT	V. SORTING, CUTTING, AND PACKAGING	WAGE LABOR

Figure 4.3. Technical Division of Labor in the Hand-made Paper Industry

After the initial stage of processing, workers made the paper pulp. At this stage, a machine, called a Hollander beater, was filled with prepared raw materials (processed tree barks, straws, from the initial processing of raw materials) and water and beaten (actually cut and macerated by a cutting device) for a four to six hour period. The final product was a variety of basic paper pulps which could then be made into sheets of hsuan or mian paper in the next stage of the production process. These pulps were pumped or poured into concrete holding tanks within close proximity to the dredgers.¹²

The third stage of paper processing was dredging (*lau chih* or *ch'ao chih* 撈紙或抄紙). Dredging was the most difficult part of paper production and required the most skill and strength. I was told by many factory owners that only the oldest and most experienced workers were allowed to make the highest quality paper. While most workers competently made low quality paper after about six months of training, it could take as many as five years or more before the finest papers could be produced without error.

A description of the process of dredging paper is beyond the scope of this discussion. Nevertheless, it is important to understand dredging is the most critical part of the overall production process of paper-making. Dredgers not only had to maintain a correct mix of pulp in their vats, they also had to evenly distribute the pulp over a fine bamboo mesh screen and transfer that film of pulp on to a waiting stack of wet paper (Figure 4.4). This action had to be repeated between 400 and 1,000 times a day, resulting in 400 to 1,000 sheets of paper with little or no help from machinery.¹³

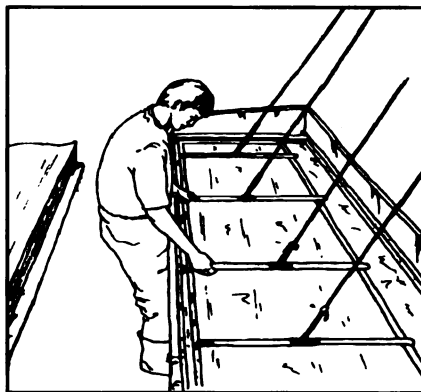


Figure 4.4. Dredger Using a Bamboo Screen to Sift Pulp From a Pulp Vat

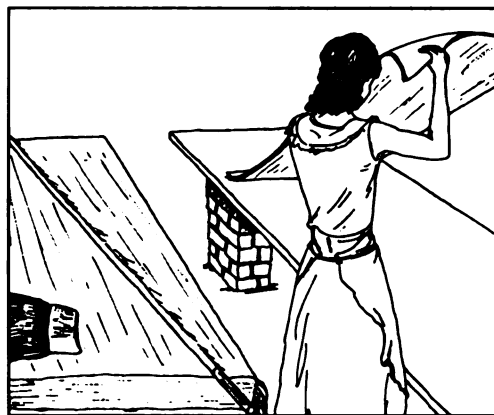


Figure 4.5. Drying Paper On a Steel Drying Table

Once a dredger built up a stack of wet paper, it was pressed to remove excess water and then handed over to the dyers. The paper was peeled sheet by sheet from the stack and brushed down on long hollow steel drying tables heated by hot steam generated in a boiler located either in or just outside of the factory building (see Figure 4.5).

After drying, the paper was inspected, tallied (it was at this point when piecework tabulations were made), cut or trimmed with a large mechanical paper cutter (or, in some cases by hand), and packed in cardboard shipping boxes. Depending on the paper and production volume, as many as six people may have been needed to sort, cut, and pack paper. In some of the smaller operations, however, one person performed this task (often the factory boss).

It is important to understand the structure of production process because when the production of paper was subcontracted, processed or unprocessed raw materials were often prepared by one of the large paper companies in Puli and "sold" to a subcontractor who "dredged and dried" the materials into a finished product. The finished paper was then "sold back" to the company which supplied the raw material and sorted, cut, packaged, and shipped the paper overseas.

The paper companies: General description

When I began research on the paper industry in 1989, I found that only 29 paper companies were left in Puli. These 29 companies were operating out of 37 *production sites* (factories), although slightly more than half were located in Ta Ch'eng Village. The remaining companies were scattered throughout the basin area near the end of irrigation systems where they were unlikely to pollute farm-land. ¹⁴

Table 4.1 shows that, of the 29 active companies in Puli, over four-fifths (82%) owned or operated only *one* production site (i.e., factory), while the remainder owned or operated two or more sites. Further, paper companies with only one factory site accounted for two-thirds (64%) of the total factory sites while companies owning or operating over two factory sites, owned or operated 36 percent of all sites. These data are important because, until the early 1980s, only one or two companies owned more than one factory site signaling the gradual consolidation of production in the industry (this issue will be discussed in Chapter VI).

Table 4.1. Active Hand-Made Paper Companies in Puli in 1989

no. of production locations per co.	no. companies
companies own and /or operated 1 site	24
companies with 2 sites	3
companies with 3 or more sites	2
totals	29

The data on labor show that, if Puli's paper factories had been operating at or near full capacity in 1989, 1,100 workers could have been employed in the hand-made paper industry.¹⁵ Over the research period, however, most factories in Puli were operating at approximately 75 percent of capacity and the number employed at any one time could range between 700 and 900. Factory owners tended to confirm this figure, reporting that during peak agricultural periods, fewer than 500 workers made paper at any one time.¹⁶

While Chapter V includes a more complete discussion of the labor force, the data in Table 4.2 show that the two largest paper companies each employed over 100 workers or about one-quarter of the total work force in the paper

industry. Of the eight companies with between 30 and 99 workers, however, one-half of the total work force was in their employ. This left the remaining 19 companies with under 29 workers (or two-thirds of the total number of companies) with only one-third of the total work force in the industry.¹⁷

Table 4.2. Worker Distribution Per Company in 1989

no. of workers	no. and % of companies*	% of total work force*
100-149	2 (6.9)	23
50-99	6 (20.7)	42
30-49	2 (6.9)	7
10-29	14 (48.3)	26
1-9	5 (17.2)	2
total	29	

Note: An approximate figure of 1,080 workers was used in the calculation.

*Does not equal 100 % due to rounding.

Again, the distribution of workers in these companies in 1989 was due, in part, to the growing consolidation of production and workers since the early 1980s. During the 1970s, as many as 30 subcontracting factories were operating in the industry and the distribution of workers among firms was far more uniform than it was 1989. By the mid-to late-1980s, however, the number of workers and subcontractors in the industry was on the decline, and the larger companies in Puli had to absorb more factory sites and workers in order to try and keep up with the growth in demand for paper (see section on subcontracting below).

Industrial epochs in the paper industry

My research on the history of the paper industry in Puli shows that, since the founding of the first hand-made paper company in 1935, at least 50 paper

companies were established over the last 54 years. Nevertheless, with little or no documentation on the hand-made paper industry, there is no way to substantiate the number of paper companies which have come and gone during the last five and a-half decades. My interview data indicate, however, that 25 percent of the paper companies founded since 1935 were in operation for between one to three years before going out of business.

The number of factories established and in operation between the mid-1930s and the late 1980s are shown in Table 4.3. The periodization used in the table corresponds to the four most important periods in the history of the industry; (a) 1935-1944 (Japanese period), (b) 1945-1969 (Post-war reconstruction of the paper industry), (c) 1970-1979 (Japanese export market and the emergence of subcontracting relationships) and, (d) 1980-1989 (Readjustment and industrial demise). While a thorough discussion of these historic periods is found in Chapter VI, I provide a brief description of these periods below to situate the industry in a specific historic context.

Table 4.3. Number of Factories Established and in Operation by Period in 1989

period when established	no. of companies*	no. of companies which have carried on to 1989
1935-1944	3	0
1945-1969	14	8
1970-1979	30	18
1980-1989	3	3
Total	50	29

Note: *All figures are approximations. In the course of establishing a business, some companies went in and out of business as many as two to three times.

Interview data indicate that, during the Japanese occupation, three paper companies came into and went out of business in succession between 1935 and 1944. Between 1945 and 1969, a period of industrial reconstruction in the industry following the end of World War II, only 14 companies may have been founded during this period and about half of them survived until the late 1980s. The third period, 1970 to 1979, marks a decade of rapid growth in the industry. During these nine years, informants estimate that about 30 paper companies were established, although only about 18 of these companies survived until 1989. Finally, problems in the labor and finished product market, in the mid-1980s, began to act as a brake on the growth of the industry and anticipate its decline.

While it was difficult to track the large numbers of paper *companies* (and changes in company names) in Puli over the years, an analysis of *factory sites* provides a tangible mark or indicator of the erratic nature left on the industry over the years. These were the factory sites (production locations) which were built by companies over the years and were scattered throughout the basin. Once constructed, these sites often changed owners and companies several times. In fact, I discovered that people in Puli would often refer to the same factory (site) using the different company names they remembered from the past. That is to say, these old factory sites continued to be referred to in the "vernacular." As a result, a confusing mix of company names from the past and present often crept into my conversations with factory owners and workers, who often made no distinction between a "company" or "factory."

The data in Table 4.4 provide clues to the connection between company and factory site. While three different paper companies were established between 1935 and 1945, for example, they operated only one factory site. While the companies have since vanished, the factory still stands at the same

location only now under new ownership. Nevertheless, some old timers in Puli still refer to factory as "the Japanese factory."

Table 4.4. Number of Factory Sites in Operation in 1989 by Period Established

period when established	no. of factory sites constructed	no. of sites still in operation 1989
1935-1944	1	1
1945-1969	7	7
1970-1979	30	25
1980-1989	4	4
Total	42	37

Between 1945 and 1969 (the post-war period), as many as 14 paper companies may have been established in the area. Only *seven factory sites*, however, appear to have been built during the period. Between 1970 and 1979, the period of greatest growth in the industry, at least 30 new factory sites were constructed.

In short, while the number of companies in operation dropped after the early 1950s, the number of factories still in use remained almost the same. As the number of paper companies went out of business, the factories they operated were bought out or absorbed by other companies in the basin. A large firm's propensity to buy out or take over a paper company (usually because of debt to another company or bankruptcy) by a larger firm tended to be greatest in the mid-1980s when few new entrepreneurs came into the industry.

Factory description and capital investment

Many of the older paper makers who worked during the Japanese period told me that if I ignored the reinforced concrete, plastic piping, electric lights,

and wood-fired boilers (used to heat the drying tables and "cook" raw materials) which exist in many of the contemporary factories in Puli, the factories of the late 1980s looked much the same as they did in the 1930s.

In 1989, the 37 factories in Puli ranged in size from under 30 *ping* (or approximately 1,065 sq. ft) to well over 1,000 *ping* (1 *ping* = 35.5 feet). Seven (24%) companies operated factories under 60 *ping*, 20 (70%) companies had factories from 100 to 500 *ping*, while the remaining two (6%) companies had factories that were over 500 *ping*. At least half the 37 paper factories in Puli appeared unkempt and jerry-rigged. Often illuminated by single a florescent bulbs hanging from wire attached to the ceiling, some factories were so dark that it took two to three minutes for one's eyes to adjust to the interior when entering from outdoors. In addition to the poor lighting, electrical wiring which powered the many water pumps, electric motors, and other equipment was often haphazardly strung from walls and ceilings. With factory floors almost continuously wet, it was not uncommon to feel a charge of electricity coursing through ungrounded equipment. Perhaps the greatest hazard, however, came from wet and slippery concrete and sheet metal flooring which was often littered with wet paper pulp and other debris.

There were numerous reasons given for the poor condition of these factories. One disgruntled female office worker in one of the larger companies bluntly told me that her boss could not care less about his factory as long as it made money. "Look at the machinery and equipment in this place, it's all 30 years old. That's not because the factory is old. It is because he buys used equipment instead of new stuff." She then went on to say that several people have been seriously injured in the factory over the years. "Our boss would rather invest his money in the stock-market and land than in his factory."

Factory owners who were more than willing to comment on the condition of a rival's factory, were less accusatory. They did say, however, that investing in a factory was a waste of money. "Why spend a lot of money on machinery or fixing up your factory when you could be out of business next week?" *Many factory owners, in fact, told me that investing in a factory or in their workers was a poor investment.* They believed that as long as machinery delivered a profit, there was no need to change or upgrade equipment, and as long as workers performed their duties, there was no need to invest in further training or in making a factory safe.

The poor physical condition of factories in Puli and the resistance to invest in workers or equipment was characteristic of this industry. Time and again I was reminded by factory owners that investing in a factory (to upgrade production) was a risky business because capital could not be easily "moved" (into other investments) if the industry or economy soured. As one owner of a small company related,

I'd really rather be able to move my money around [as in real estate or the stock market] rather than have it invested in a factory and equipment which has little market value. Let's face it, production is only *a way* of earning money that should be invested in something else. I'd really be happier just being able to market and distribute paper rather than having to contend with the problems of manufacturing [i.e., machinery and labor].

As most of my older informants pointed out, starting a factory in the post-World War II years did not require a lot of capital. For example, the most expensive piece of machinery for factories built between 1945 and 1969 was a pulp beater. I was told that an initial investment of NT\$100,000 (US\$4,000-5,000 in 1990 dollars) would be more than enough to pay for the equipment for a factory with about ten dredging tubs.

For the most part, factory owners who set up their plants prior to 1970s were fairly vague about how much they spent on their operations. When, for example, I inquired about how much money owners had spent on equipment or factory buildings, I was told that such expenditures were part of their initial start-up costs and that they could not remember how much they had spent. They said that they usually expanded their business when they had a long period of good business and most additions to plant and equipment were done on a piecemeal basis over many years. "Nothing just happened," was one reply. "Our factories slowly took form over time. Most of us didn't just build the whole factory at once because none of us could pay for anything that had to be bought all at once." One older paper maker, who had built his factory in the 1950s, explained his initial investments this way.

I really didn't have to spend much money on constructing a factory building because I used part of our old farm house and out buildings. When I built the tubs for screening, I used wood instead of the concrete or stainless steel as they use now. I didn't need to buy a boiler because each drying table was fashioned so you could light a fire under each one individually. Still, life was really difficult back then. I don't think the young people who started their factories later on could have done what we did with as little as we had.

The statistical data available support the relatively low initial capital investment of most factories in Puli. Nine factory owners (slightly over half of my informants) said that they spent no more than NT\$100,000, while six owners indicated that they spent less than NT\$250,000 when they initially set up their factories (see Table 4.5). Only two factory owners said that they spent more than NT\$750,000 on their initial investment.¹⁸ While the reliability of these figures is suspect, their meaning is clear; most entrepreneurs wanted me

to believe that they started from humble beginnings. Factory owners repeatedly told me how poor they were when they started their factories and how difficult the work was.

In 1989 it remained equally as difficult to assess the value of the fixed assets of Puli's companies. The Nantou County Government's Factory Catalogue for 1990 , for example, lists 13 of the smaller registered paper companies in Puli as having only NT\$30,000 in fixed assets (Nantou Hsien Kung Ch'ang Mu Lu: 1990). I was told, however, that low investment figures were supplied to the government for tax purposes. The data in Table 4.5 show the results of my own investigation which indicate that, for at least one of the smaller companies (those with fewer than five dredging tubs) in my sample of 19 companies, the value of fixed investments was between NT\$100,000 and NT\$250,000. Almost three quarters (71%) of the companies, however, had between NT\$250,000 and NT\$1,500,000 in fixed assets. Finally, almost one quarter (23%) of the sample, had over NT\$2,000,000 in investments.

Table 4.5. Original and Current Investments in Fixed Capital

Investment NT\$	initial investment and % *	1990
-100,000	9 (47%)	
100,000-250,000	6 (31%)	1 (4%)
250,000-500,000	2 (10%)	5 (23%)
500,000-750,000		4 (19%)
750,000-1,000,000	1 (5%)	5 (23%)
1,000,000-1,500,000	1 (5%)	1 (4%)
1,500,000-2,000,000		
2,000,000NT-5,000,0000		2 (9%)
5,000,000		3 (14%)
No. of respondents	19	21

Note: The figures for "initial" denote initial capital investments in plant and equipment. Those for 1990 signify current fixed capital investments. The above figures on factory investments in 1990 were derived from data on the current cost of buying or building new pieces of equipment in a paper factory.

* All percentages are rounded

In 1989-1990 costs, a man would have to make an initial investment of at least NT\$500,000 to establish a factory operation with five dredging tubs and five drying tables. Construction of a factory building might cost an added NT\$500,000 (not including the cost of land which would be far higher than the cost of a building). These costs were partially responsible for the demise of the industry as one factory owner explained, "Present day costs are one of the many reasons why no one wants to get into this business." But other factors also played a role, he revealed, "At least 10 to 15 years ago the business was still growing and we knew we could always recover our investments, but today with a dwindling market and competition from overseas it is becoming almost impossible to recoup investments in equipment."

Given the cost of establishing a new factory and the future of the industry, it is understandable why no new factories have been built in the last

eight years. Investments in the industry in 1989 and 1990 were limited to maintenance and repair, or money spent when an owner thinks he can increase productivity by investing in a semi-automatic pumping system. A semi-automated system uses a series of pumps and agitators to automatically distribute paper pulp to dredgers. Whatever the case, the most expensive single piece of equipment would be a boiler and a beater for pulp preparation. Screens used for making paper, however, must be replaced after about six to eight months, and cost approximately NT\$10,000 a piece. Screens, frames and most of the other equipment could be purchased from merchants in Puli who specialize in provisioning the hand-made paper industry.

Factory location

Most of the of factories built in Puli during the 1950, 1960s, and 1970s were located near the northern border of Ta Ch'eng Village (*li*) (which I have designated as district B), approximately one kilometer north of District A (Figure 4.6). An area with narrow winding streets and closely packed one-story brick farm houses, this part of Ta Ch'eng also served as the village center. Ta Ch'eng was, in fact, the only area in Puli where factory owners were concentrated in what was a "village" environment. The confined setting forced many factory owners to build their factories "upward" instead of "outward." Mostly small factories of no more than 200 ping per floor, they were constructed of reinforced concrete and brick with the heavier (screening and pulping) operations located on the lower floors while the "lighter" parts of the production line (drying, storage, packing) were located on upper floors. Factory owners often built a family residence on the upper floors of these buildings, which could reach four stories in height.

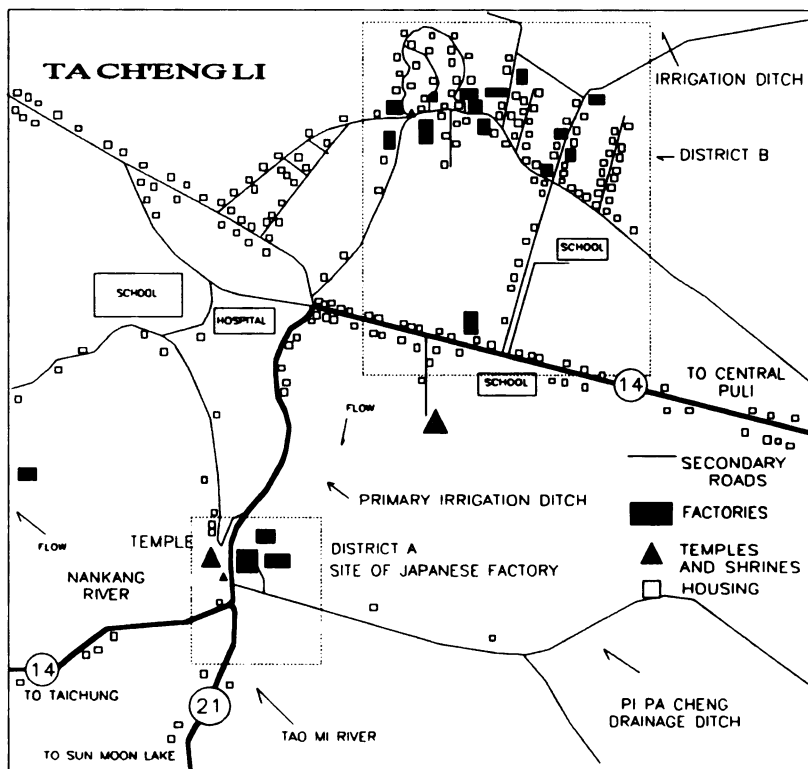


Figure 4.6. Location of Selected Hand-Made Paper Factories in Ta Ch'eng Village: 1989
Note: All maps show approximate locations of paper factories and do not include all paper factories in Puli.

While most paper factories were built in the Ta Ch'eng village area, at least ten factories were constructed elsewhere in the basin (see Figure 4.7).¹⁹ Generally located on large parcels of land, these scattered factories were frequently over 300 ping in size and tended to extend "outward" along the ground floor (Figure 4.8). Often less substantial than those built in Ta Ch'eng, these factories were built with asbestos corrugated roofing supported by a steel girded superstructure. The walls were often bricked or half bricked to allow ventilation, leaving the structures with a shed-like appearance.²⁰ Family

members lived either on upper floors of many of the factories or in living quarters adjacent to the plant.

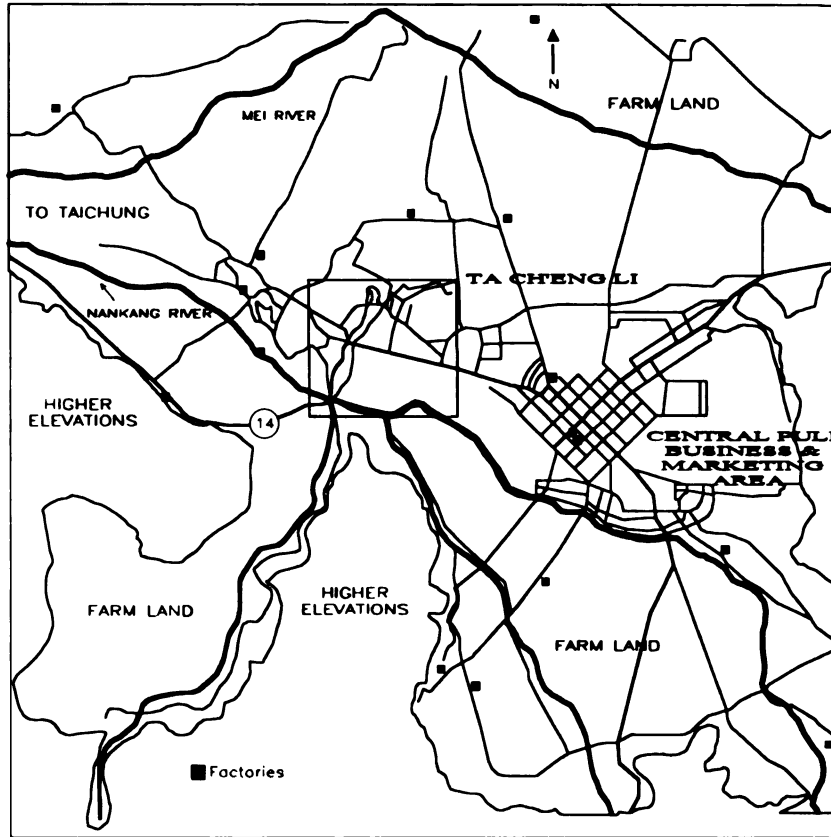


Figure 4.7. Location of Selected Paper Factories Outside of Ta Ch'eng Village in 1989

There were a number of reasons why many of Puli's paper factories came to be located where they were. When some of the older factories were built between 1935 and the 1950s, the level of technology available necessitated the extensive use of water for power, production and the removal of wastes. A factory thus had to be located near a large and reliable water source (such as a river). As electricity and electrical equipment became more available and affordable in the 1960s and 1970s, a paper factory could be located anywhere,

provided that there was a run-off system which would minimize the dumping of pollutants back into a irrigation system used by farmers.

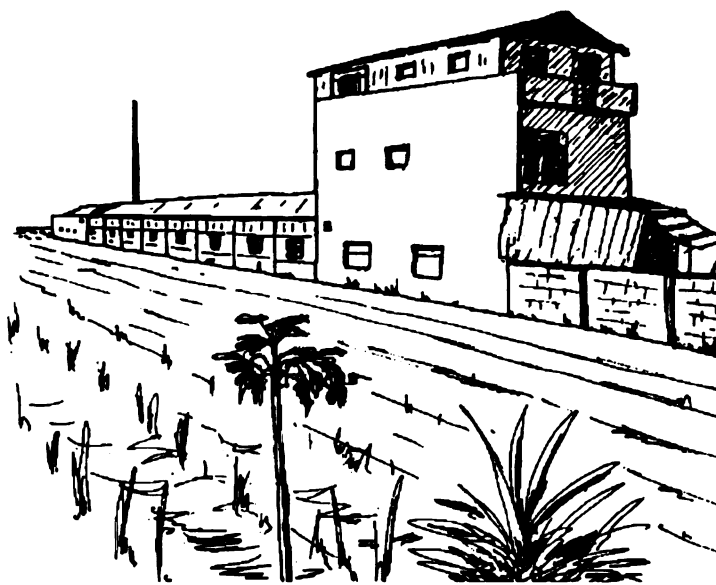


Figure 4.8. A Hand-Made Paper Factory Built "Out" Along the Contours of Farm Land

Three additional factors explain the location of factories in Puli. Some of the first owners established their businesses near the old Japanese plant in the hope that they would be visible to customers. This was certainly a concern in the 1940s and 1950s when the paper business was just getting off the ground. By the 1960s and 1970s, however, Puli had already gained a reputation for its handmade paper products. Why then did so many companies which located in District B of Ta Ch'eng build their factories so close to each other? The answer is that, by the 1970s, much of the paper was produced by subcontracting. Many of the new paper companies built in northern Ta Ch'eng wanted to be close to the large factories in Puli which offered them subcontract work. "In the

old days," reported one informant, "every day you could see paper moving from factory to factory on push-carts. It was a lot easier to do business when we were so close to each other."²¹

B. DOING BUSINESS IN THE HAND-MADE PAPER INDUSTRY

The nature of subcontract production

The various subcontracting arrangements in place in the industry in 1989 exemplified the last vestiges of once complex and highly productive relationships between firms. In the words of one subcontractor,

What you see now [1989] is what is left of what was once a really big subcontracting system in Puli. This was a busy place when, in the early 1980s, there must have been about 30 subcontractors in operation. Now there are maybe ten or so of us [subcontractors] left. Even the way we subcontracted has changed. No longer do the center factories really dominate the industry the way they did. Maybe that is why our relationship [between center factory and subcontractor] has changed and why we are no longer very close.

When subcontracting actually started in this industry remains somewhat of a mystery. Most informants indicated that subcontracting probably first emerged in response to the growing demand for paper from overseas buyers and subsequent production shortfalls in the late 1960s and early 1970s. With only about ten companies in operation at the end of the 1960s, Puli's existing company bosses found themselves unable to supply enough paper to buyers forcing many to look for new ways to increase production. While many factory owners did add additional production lines, others remained wary of over-investing in machinery and equipment because of the seasonality of the market and the often catastrophic fluctuation in orders. As one factory owner explained, "I didn't want to invest in a lot of equipment *and* the workers to operate that equipment when I wasn't sure if I could consistently employ either one of them."

Between 1970 and 1979, a new group of younger entrepreneurs started as many as 30 hand-made paper companies, bringing the total number of paper companies in operation to about 40 at the end of the decade.²² Smaller in size than many of the companies that were established in the 1950s and 1960s, these new operators were brought into subcontracting relationships with a few large companies, dramatically raising production capacity in the industry. Since the early 1970s, the nature of subcontracting arrangements and the relationship between firms and the market have undergone a number of significant changes, which are discussed in detail in Chapter VI. Here, I provide a brief explanation and overview of subcontracting as it appeared in 1989.

As discussed in Chapter I, subcontracting is at best a chaotic concept which often defies explanation. This confusion transcends international boundaries to the extent that subcontracting factories in Taiwan were often referred to with at least three separate terms "satellite" (*wei hsing kung ch'ang* 衛星工廠), "(re)-processing" (*chia kung* 加工), and "putting out" (*wai pao* 外包)). Whatever the label, subcontracting is used in this thesis as a generic and inclusive term and, following Holmes (1986), who loosely defines subcontracting as a subset of interrelationships between firms in which suppliers carry out the production of a material, part, component part, or subassembly according to specifications set out in advance by another firm, "whether materials are issued or not and whether the contract is directly with a large manufacturer or through some intermediary contract with another supplier" (1986:84).

In contrast to the production of most other commodities, hand-made paper could feasibly be broken up into the production of a part, component part, or sub-assembly. Rather, hand-made paper was very much an artisan commodity which was made in its entirety within a single factory. In 1989, the

subcontracting of paper in Puli occurred when one paper company (parent firm), referred to as a "*center factory*," (actually a center "company") received an order for paper from a customer and passed on the order or portion of the order to a subcontractor. The term "center factory" is derived from the fact that these companies were positioned at the center of both *market and production transactions* in the paper industry. "These center factories not only produce paper," said one subcontractor, "but they also have *the market connections* to sources of raw materials as well as the finished product market that we don't have" (emphasis added). As both producers of paper and traders or brokers of paper, center factories effectively controlled most of what was bought and sold in the industry and in Puli. How, why, and under what conditions these center factories acquired this control is one of the primary issues discussed in Chapters VI and VII.

Types of subcontracting arrangements

At least four different types of subcontracting arrangements have been used at one time or another since the early 1970s. The finished product market, raw material market, labor market, financial markets, and production technology and processes were, in part, responsible for the emergence of these different arrangements at any given time. But their emergence was also influenced by the differing nature of the social relationship between center factory and subcontractor. The four forms of subcontracting arrangements in the hand-made paper industry which have emerged since the 1970s were: (a) capacity subcontracting with two-way exchange; (b) capacity subcontracting without two-way exchange; (c) specialized subcontracting; and (d) supplier subcontracting.²³

Capacity subcontracting with two-way exchange

Also referred to as cyclical or concurrent subcontracting (Holmes 1986), this was the most common form of subcontracting in the hand-made paper industry during the 1970s. In this system, paper was fabricated by a subcontractor according to a set of specifications (pulp formulas) that were set and supplied by the center factory. Depending on market demand, however, a center factory would occasionally produce a portion of the same order it gave to a subcontractor.

What differentiates this system from other subcontracting arrangements was that most, if not all, the raw materials needed to complete a job were supplied by the center factory in a semi-processed or unprocessed form. As with most subcontracting arrangements, however, the center factory also controlled access to the finished product market. Figure 4.9 shows that, when capacity subcontracting was at its height in the 1970s, center factories formed market barriers between their subcontractors and the market for raw materials and finished products.

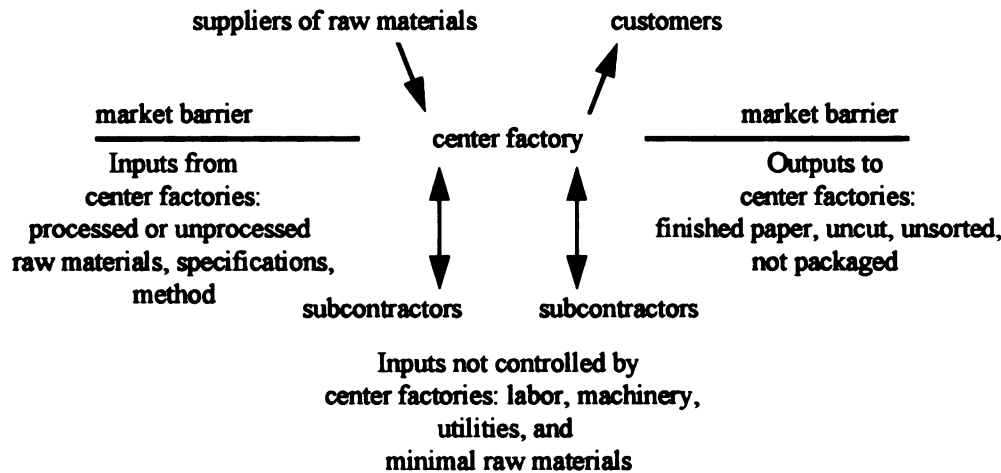


Figure 4.9. Capacity Subcontracting With Two-Way Exchange

Capacity subcontracting with one-way exchange

This system was identical to the above except that the center factory supplied few or no raw materials to its subcontractors. This system began to supplant the two-way exchange system in the early to mid-1980s when subcontractors gained greater access to their own supplies of raw materials than they initially had. By 1989, most subcontracting arrangements were of this form. Despite their access to raw materials, however, few subcontractors were able to directly secure orders with overseas buyers themselves.

In general, center factories used both forms to produce their low grade and less profitable papers (one type of paper in this category was hsuan paper #5). Some of these papers were also near the end of their product cycles when competition between center factories necessitated cost-cutting. By passing on orders for papers which were low-cost or near the end of their product cycles to their subcontractors, center factories often retained greater value from their workers because they were busy producing a high-grade, more profitable paper.

There were times, however, when business was poor and center factories had to revert to producing cheap papers themselves. Generally, when orders for expensive papers were down, center factories simply told their subcontractors that no orders were available. In this way, center factories maintained a work force which was productive, despite the fluidity in the market. Subcontractors in Puli, in contrast, were often left without work. Thus, they served as a safety valve for center factories when business was lacking.

Specialized and supplier subcontracting

While capacity subcontracting remained the predominant form of subcontracting well into the 1980s, two other types of subcontracting arrangements began to appear in the early to mid-1980s. Often carried on concurrently with capacity subcontracting, "specialized" and "supplier" arrangements slowly emerged as subcontractors gained special skills in producing the specialty papers center factories could not or would not produce.

In "specialized subcontracting," decisions about both the method of fabrication and the fabrication itself were made by the subcontractor, and center factories did not produce the paper "in-house". In "supplier subcontracting," on the other hand, the subcontractor was, in many respects, an independent supplier with full control over the development, design, and fabrication of a specialized types of paper. This form least resembled a subcontracting arrangement because a center factory purchased paper which it could not produce. In most cases, a customer asked for a specific type of paper from a center factory and the center factory functioned more as a trader or middle-man. The specialty papers produced under both specialized and supplier subcontracting were often high value-added papers formulated to fill a specific need in the market and carried a high selling price than the more common forms

of paper produced under capacity subcontracting arrangements. My research showed that, in 1989, only three to four subcontractors in my sample of 19 companies supplied (and often intermittently) these kinds of papers to a center factory.

As described in Chapter VI, most center factories attempted to dominate the production and market for high value-added specialty papers for themselves rather than allow these papers to be made by their subcontractors under supplier or specialized arrangements. The ability of center factories to devote more resources to research the market and production technologies than could subcontractors often gave center factories a considerable lead in such production. Control over the access to overseas markets for hand-made paper by the four center factories, however, was key to their ability to secure and maintain their dominance in the production of all forms of paper in Puli. Nevertheless, those subcontractors who were able to move from capacity subcontracting (a lower form of subcontracting) to specialized or supplier subcontracting, were able to accumulate greater profits than those subcontractors who could not. Both specialized and supplier subcontracting, furthermore, enabled a company owner to have more control over his product than a capacity subcontractor and occasionally brought a producer nearer to overseas buyers in the market than those at the bottom of the subcontracting matrix.

About half a dozen subcontractors managed to "grab" a Japanese customer away from a center factory or to arrange to supply a smaller Japanese buyer (or small domestic buyers) with paper in the early to mid-1980s. These former subcontractors gained considerable independence from the major center factories in Puli but at substantial risk to themselves. The fact that they were able to gain access to the market, however, appeared to have given them an

"extra lease on life" in an industry which was quickly losing ground to cheaper overseas producers. As can be seen in Figure 4.10, there was a relationship between changes in the market demand for hand-made paper and changes which occurred in the nature of subcontracting.

Markets and production	Stages of Industry
<ul style="list-style-type: none"> -markets centered in Taiwan East and Southeast Asia. -access to large portion of market controlled by trading companies in Taipei -production of low priced, low quality papers. Limited production of calligraphy and art papers. -overseas markets in East and South East Asia slowly give way to lucrative markets in Japan. -decreased production of low priced papers and increased production of high value-added art and calligraphy papers -Japan becomes primary market for exports of high value-added art and calligraphy papers. -Puli producers continue to sell increasingly higher quality and higher value-added papers -low wage producers of paper in Mainland China and South East Asia challenge Puli producers -Japanese customers put pressure on Puli producers to lower prices -Puli center factories invest in factories in Mainland China and Southeast Asia 	<p>1945</p> <ul style="list-style-type: none"> -industry in infancy -little or no subcontracting -only small paper companies in operation in Puli. <p>1970</p> <ul style="list-style-type: none"> -emergence of subcontracting between center factories and subcontractors. -primarily capacity subcontracting -center factories control access to markets for raw materials and finished product market <p>1980</p> <ul style="list-style-type: none"> -access to finished product continues to be controlled by center factories, but some subcontractors gradually gain access to raw material markets -capacity subcontracting with two-way exchange gives way to one-way exchange -some subcontractors become independent producers by selling on domestic market or by tealing customer away from center factory -specialized and supplier subcontracting emerges as a secondary (and limited) form <p>1989</p>

Figure 4.10. Chronology of Subcontracting in Puli

Factory status in 1989 and the research sample

At the height of subcontracting in the early 1980s, approximately three-quarters (about 32 or 75-80%) of the paper companies in operation were engaged in subcontracting on a full-time basis. They subcontracted primarily with the *four* largest (or primary) center factories which were large enough to consistently conduct business with two or more subcontractors on a monthly basis.²⁴

By 1989, problems in the industry had reduced the total number of companies to 29, of which over one-third (11 or 38%) were subcontractors. The number of center factories, however, remained stable. The data in Table 4.6 show the status of all companies in Puli in 1989. In addition to the four center factories and eleven subcontractors, another four companies in Puli used subcontractors on an infrequent basis (i.e., were "casual" center factories) while five companies functioned independently (i.e., were neither subcontractors nor center factories). Finally, the remaining five companies had special agreements with other paper companies in Puli.

Table 4.6. Status of 29 Hand-Made Paper Companies in Puli in 1989

Company Status	no. factories	% total *
a. large or primary center factories	4	13%
b. casual or quasi -center factories	4	13%
c. subcontractors	11	38%
d. independent companies	5	17%
e. companies which had special operating agreements	2	7%
f. companies involved in joint ventures	2	7%
g. management company	1	
Total number of companies	29	

Note: * Does not =100% due to rounding

a. Center factories which used subcontractors on a frequent basis

b. Companies which used subcontractors on infrequent basis or used only one subcontractor at a time, often infrequently, often not the same subcontractor.

c. Depended on subcontracting on a full-time basis.

d. These companies usually traded directly with their customers (outside Puli), but may have occasionally performed subcontract work or bought paper from subcontractors.

e. Two companies entered into special lease/management agreements with other paper companies in Puli

f. Only two companies in Puli worked closely when buying raw materials and selling finished paper

g. This was a company which "used" a branch factory of a center factory to make paper for the center factory (see Chapter VII).

As noted above, 19 of the 29 company owners agreed to be interviewed, while only ten out the 19 agreed to be interviewed on a long-term intensive basis. The four "casual" or "quasi-" center factory operators (category "b" in Table 4.6) and two of the independent owners (category "d") refused to be interviewed in depth. While much of the information I have on these companies is second-hand, I do know that those labeled "casual" or "quasi-" center factories were generally smaller (in all respects) than the four "primary" center factories, used only or one or two subcontractors at a time, and used them infrequently. "Most of these companies," said one informant, "were formerly subcontractors until they stole a Japanese customer from one of the larger center factories in Puli. These bosses were not well liked in the industry and therefore kept to themselves."

While the discussion which follows is based on material supplied by my sample of 19 companies, I know the most about the owners from the ten companies with whom I conducted long-term intensive interviews. The status of the companies in this group can be loosely categorized as one large center factory, six subcontractors, two "independent" paper companies, and one company which had a management arrangement with the above center factory. Most of the small companies in this group, furthermore, had conducted business with the center factory in this sample at one time or another. Because I believe that the production relationships in the hand-made in 1989 cannot be completely understood without first examining the history of the industry, however, I leave the explanation of exactly what it was to be a "subcontractor," "center factory," or an "independent" company owner until Chapter VI.

Center factories and subcontractors: a general comparison

The data in Table 4.7 provide comparative data on the four largest center factories and eight subcontractors taken from my sample of 19 companies. To ensure confidentiality, however, I provide only a "range of data" in the table so that no single company can be clearly identified. The data show that all four center factories employed between 50 and 150 workers, owned or operated two or more factories, had "front offices," maintained a branch (trading) office in Taipei, and were founded between 1948 and 1965. My estimates suggest that investments in these companies were well over NT\$2,000,000.

Table 4.7. Comparison Between 4 Center Factories and 8 Subcontractors in 1989

company type	workers	investment NT\$	factory sites	year founded
center factories (4)	50-150	2 to 5 million	2 and over	1948-1965
subcontractors (8)	1-45	under 1 million	1	1970-1986

Note: Data on number of workers, investments, factory sites, and year founded are all ranges for each factory. Comparison taken from sample of 19 companies.

Subcontractors in contrast, were smaller, employed fewer workers, operated fewer sites and were less well capitalized than center factories. None of these companies had "front offices" with an office staff and few had wage workers.

While every subcontractor claimed that he did not have an export trading license, I believe many did considering these trading licenses were relatively easy to obtain in Taiwan. Because the owners of center factories maintain their dominance in the industry by controlling access to the finished product market, possession of such a license (by a subcontractor) would only serve to challenge that control, and abrogate the relationship between subcontractor and center

factory boss. Thus, a subcontractor who admitted that he had a trading license might jeopardize his relationship with a center factory.

Anatomy of an order for commonly subcontracted hsuan paper

In general, overseas orders for paper arrived in Puli on a monthly basis. Most of these orders originated with the about eight major Japanese customers who controlled most of the wholesale and distribution of paper in Japan. Given the wide range of paper types produced in Puli, the orders would vary by type, quality, size, and quantity. On average, market demand for high quality high priced papers was low while the demand for low quality low priced "common papers," was high.

The majority of orders from Japan were placed with one of the four center factories, which together received anywhere between 60 to 80 percent of the total monthly overseas orders for hand-made paper. I estimate, furthermore, that the largest of these center factories controlled anywhere between 25 and 30 percent of the overseas market (CETRA 1989). According to informants, every order was carefully scrutinized by managers and bosses in the center factories, who then decided whether to produce a paper "in-house" or to subcontract the order or a portion of the order to one of Puli's smaller factories. These bosses and managers weighed the possible costs and revenues accruing from specific orders and, whenever possible, the center factory reserved the production of high priced papers for "in-house" primarily because profits from such orders were much higher than profits from producing less expensive papers. "Usually orders for the low priced papers go to our subcontractors because they can produce the paper for lower cost," said a supervisor in a center factory. "But sometimes when there aren't enough orders of the high-quality

papers, we produce the cheaper stuff ourselves just to keep our own workers busy."

In 1989, all company owners said that the high cost of labor in Puli had long represented the biggest problem for the hand-made paper industry in Taiwan. Most owners tried to reduce labor costs by avoiding the use of waged labor or keeping their numbers to a minimum. In their view, waged labor could *not* be used as efficiently as the labor of piece-workers (see Chapter V). Center factory bosses reasoned that, because most subcontracting factories rarely needed wage or office workers to pack, cut, sort, and ship paper, labor costs in subcontracting factories could be kept to a minimum. Center factory operators, on the other hand, usually could not avoid hiring waged and salaried workers because of their size and the fact that the finished product must be sorted, cut, packaged, and shipped by them. The direct and indirect labor costs in center factories, therefore, were generally higher than those in subcontracting companies. "Scale economies were less important when labor is paid only by the piece," said one center factory boss. "So we let our subcontractors produce the larger orders of low-priced papers. Because we [center factories] have higher labor costs, we usually produce the more expensive papers ourselves."

This owner of the factory did not say, however, that economies of scale probably played a role when he purchased raw materials, prepared raw materials, packed, shipped, or bought insurance. Costs for purchasing raw materials by subcontractors, therefore, were usually higher than those of larger firms.

Other informants in Puli, however, told me that the reason subcontractors would often produce low to medium-quality papers, such as hsuan paper #5, at low cost was because the center factory bosses constantly played one subcontractor off against another in an effort to lower the price they had to pay

for paper. Subcontractors thus end up bidding against one another which leads to severe competition and cost cutting on the part of a small factory owner.

"We have lower operating costs," said one subcontractor, "because we are the ones who have to compete. That means that I [the boss] have to work longer hours for less profit. The center factories don't have to worry about cost cutting like we do because they pass their overhead costs on to us." When I asked this man if the center factories in Puli also had to compete with each other for orders from Japanese customers, I was told "That situation was different." Indeed, by the time I finished my research in Puli, at least three subcontractors had told me that they believed that the four center factories colluded to force their subcontractors to lower their prices. While I heard such accusations on a number of occasions, I was never able to corroborate this "charge" in interviews with owners of center factories.

To determine who bore the costs of producing subcontracted paper and who received what percentage of profits from production, I pieced together data on production costs for one common type of hsuan paper (referred to hereafter as *hsuan paper* #5). This paper was usually produced and sold by subcontracting factories in Puli which was then sold by the center factories to Japanese buyers. While labeled differently by competing factories, all hsuan paper #5 was essentially composed of the same raw materials and was manufactured in a similar manner, producing a paper of matching thickness and quality throughout the industry.²⁵

The data in Table 4.8 provide a general estimate of production costs for manufacturing one ream of hsuan paper #5 in the summer of 1989.

Subcontracting costs of producing 500 (full sized) sheets of this paper averaged out to about NT\$2,250 or 80 percent of the total cost.²⁶ Additional production costs for indirect labor (e.g., management and office workers), cutting,

shipping, packing, insurance, and tax, on the other hand, averaged about NT\$500 (or 20% of total costs).²⁷ These costs would most often be borne by a center factory.

As discussed in detail in Chapters V and VI, center factories continually pressured subcontractors to reduce the price of their paper (by cutting their variable costs), a situation made difficult by the labor shortage in the industry 1980s and the fear that center factories might try and "take over" their factories if they committed too much production to any one company.

Table 4.8. Average Estimated Cost Calculations for Hsuan Paper #5

Cost	NT\$	subtotal NT\$	*500 sheets
piece-rate dredger 1 sheet	1.5		
piece-rate dryer 1 sheet	1.25		
labor insurance (etc., 2 workers)	.1		
subtotal piece-rate bill		2.85	1,425
raw materials	1.6		
utilities	.05		
subtotal		1.65	825
total costs to a subcontractor		4.5	2,250
<i>other indirect labor costs</i>	.5		
<i>other costs (packing, shipping, etc.)</i>	.5		
<i>total costs to center factory</i>		<i>1.0</i>	<i>500</i>
total		5.5	NT\$2,750

Assumptions:

1. In 1989, an average worker produced about 500 (1 *lin*) sheets a day (of common paper) or about 13,000 sheets a month (26 *lin* a month). Each worker worked an average of 26 days between 8-10 hours a day.
2. Direct labor costs: piece rates for a dredger (NT\$1.5) and a dryer (NT\$1.25) per sheet.
- 3)The product number indicated above has been changed to protect the source.
- 4)Italics represent costs which were likely to be incurred by a center factory.

I was also able to obtain export invoices for hsuan paper #5 from one center factory. During the month of June, one shipment was made to Japan

which consisted of 28 separate orders. A total of 7,388 kg of paper were shipped at a value of US\$81,390. The invoice indicated that one of the orders consisted of 10 lin (reams) of hsuan #5, selling at an average price of NT\$7.6 per sheet or NT\$3,800 per ream. Assuming that total production costs per sheet were in the vicinity of NT\$5.5, the profits from this shipment were about NT\$1,050 for 500 sheets or about NT\$2.1 per sheet.

During the summer of 1989, at least two subcontractors received approximately NT\$2,700 from a center factory to produce one ream of hsuan paper #5. If a subcontractor's average costs were about NT\$2,250, he garnered a profit of about NT\$450 or about 40 percent of the total profits for a typical order. By the end of my research in 1990, however, these same subcontractors told me that the center factories forced them to lower their prices by NT\$300 per ream. Apparently exports to Japan of cheaper paper from Mainland China forced center factories to cut their prices.

A number of informants (both workers and owners of subcontracting factories) told me wildly varying stories about how much money the center factories made on various types of paper made by subcontractors (see Chapter VI). During the summer of 1989, many subcontractors thought hsuan #5 was sold to the Japanese for about NT\$3,200 per ream, giving them what they believed was an acceptable return. "As long as we can make NT\$250 on a ream," said a subcontractor, "then we think it's fair." They also indicated, however, that their profits were tied to the number of orders which came into Puli each month. The higher the demand for paper from Japan, the more money subcontractors could ask from center factory bosses. They also indicated that, in general, they rarely received orders from center factories for high quality papers. "Orders for hsuan paper #7 and #10," said one subcontractor, "can provide at least as much as NT\$500 per ream. But we rarely see those jobs

anymore." Essentially, if a subcontractor knew what the monthly demand was for paper was and how much the center factories charged the Japanese for the paper, he would have more bargaining power when negotiating with a center factory boss.²⁸

Suffice it to say, by the time my research was completed at the end of 1990, most subcontractors reported that they made between five to ten percent profit on the work they did for the center factories. Since they lacked accurate information on market demand, costs, and selling price of the paper they produced, however, they could not pressure the center factories to provide them with more money for the paper they produced.

Summary

Reserving much of my analysis for Chapters VI, VII, and VIII, Chapter IV (and Chapter V, to follow) introduces the descriptive material necessary for gaining an understanding of the contemporary structure of the industry as well as a offering a vertex, of sorts, for understanding the historical process leading up to 1989. In general, this Chapter begins the process of demystifying the industry by laying bare the interplay between the internal and external socio-economic conditions and relations of production in the hand-made paper industry (issues discussed in Chapters IV and V) and the nature of key variables in each (i.e., the production process, labor\management relations, structure and nature of labor market, raw material market, capital and finished product market), helps clarify the conditions under which capital can or can not be accumulated.

While Chapter IV speaks to the technical organization of production in the industry at both the internal and external level, it was the nature of the connection between the product market and inter-firm relationships which

deserves special comment here. First, when riding the "hills" in market demand for hand-made paper provided profits for a producer, it was the "troughs" which produced the greatest threat to the survival of a firm. Second, subcontracting emerged as a method of production designed to lessen the impact of the volatility of demand on center factories. Third, by gaining control over the access to the product market, center factories were also able to extract profits from their subcontractors at various points in the production process.

Finally, I should mention the issue of "scale" verses "scope" or "power" versus "efficiency" with regard to inter-firm transactions and vertical integration (see Williamson 1985; Scott 1988). Due to the lack of time-series data on the industry, it is impossible to determine exactly what profits accrued to whom (i.e., to center factory owners or subcontractors). This might be disappointing to some readers who desire an answer regarding who "exploited" whom in this industry. I believe the issue is not so much about whether center factories were able to make more profits than subcontractors, but rather who was in a *position* to directly or indirectly *control* others in the production process (whether inter-or intra-firm) and access to markets where profits were made. Although these and other issues will be discussed in some detail in Chapter VI, it was control over access to markets in this industry which appears to have played a central role in determining how the industry came to be structured as it was and who was or was not able to accumulate capital.

¹ Most company owners were men although, in a legal sense, the owners might have been women.

² In Puli, 13 companies were listed as "limited companies" *yu hsien kung ssu*. Theoretically, companies must have at least seven shareholders to be considered for such a designation. The remainder of companies were simply listed as factories or processing factories (*kung ch'ang*, *chia kung ch'ang*), designations which do not carry the "limited" status.

³ The criterion used for the title of manufacturing requires a business title, fixed location, minimum capital of NT\$30,000, and using labor or machines to manufacture, reprocess, and or repair. Amount of capital is based on time of registration. Two years after a permit is issued, a factory owner must have completed construction of his manufacturing site. Source: Kung Yeh Hsing Cheng Fa Kuei Hui Pien 1986.

⁴ One *tai ch'ih* is equal to 1/3 of a meter. Many papers were also sold in smaller and larger sizes.

⁵ Hsuan paper was named after Hsuan Chou, a region in Anhwei Province in Mainland China where paper has been produced for centuries. Each factory in Puli gave its different papers names or numbers. These names provided some protection to the paper maker in case another factory wanted to copy or sell an identical paper to a customer.

⁶ Throughout the thesis I use "low", "medium", and "high" value - added paper to describe the relative difference in the cost, price and quality of various hand-made papers manufactured in Puli at particular points in time.

⁷ The different properties of hsuan paper produce different results when used by artists. Depending on the individual tastes of the painter or calligrapher, hsuan paper can be manufactured with varying amounts of pitch which regulates absorbency. Made from long bark fibers, the paper resists tearing and, if manufactured with natural high quality natural materials, can last centuries without significant discoloration or deterioration.

⁸ Most export figures for 1989 measure the quantity of hand-made paper by the kilogram. Each variety of paper might vary in weight per ream from between 2.5kg to about 5kg a ream. The average weight for some of the most common types of paper, however, was between 3.0kg and 3.5kg. Of these paper exports, almost 96% of the total weight and 83% of the total value was hsuan-type paper. US\$ at NT\$26 to US\$1.00 exchange rate.

⁹ The exact amount and value of paper produced in Puli could not be determined because neither the government nor any other organization kept track of paper produced for the domestic market. While there were a few hand-made paper producers outside of Puli, their total production accounted for no more than 5% of total exports.

¹⁰ Only by first understanding the nature of production of a commodity (as demonstrated in Adam Smith's (1922) description of pin-making), can we then understand the technical constraints which operate in a given industry which, in turn, has a direct bearing on the social division of labor in production both within and beyond the firm.

¹¹ Lower back problems and skin lesions often resulted from prolonged bending and contact with water and caustic soda. Burns were also not uncommon from working in close proximity to the cookers which may hold as much as 500 gallons of boiling bark slurry. The

end product was a soft yellow-white (in the case of *ian pi*) or white (in the case of *shu pi*) bark which closely resembled cooked bamboo shoots.

¹² Despite the fact that the Hollander beater was the most expensive machine in the repertoire of the paper maker, it did not eliminate the need for hand labor. Rather, its appetite for raw materials required workers to maintain a regimen of monitoring and "feeding" the beater.

¹³ Most paper makers used a small electric motor to stir paper pulp in their vats. Since the early 1980s, a few factories have introduced a new delivery system which eliminates much of the mixing of pulp.

¹⁴ When many of the new factories were being built in the 1970s, there was concern over the increased use of herbicides and fertilizers spread on farmland in the basin. By the mid- 1970s, the irrigation system upon which so many factories depended, became so polluted that water could no longer be drawn from the canals which ran through the area. Eventually, most factory owners drove wells and pumped water into their factories, leaving the canals for waste disposal.

¹⁵ This estimate involved an analysis of the number of pieces of equipment per factory site, an estimate of the number of workers capable of producing a given output per month, and estimates overall production per month per factory.

¹⁶ While there is great variability in the number of employed laborers in the paper industry from season to season, informal observations of one factory revealed great variation in the number of hours and days put in by workers. During what was supposed to be a slow agricultural period (i.e., a time when workers would be available to work more hours making paper), dredgers and dryers were seen arriving for work each morning throughout the morning and even afternoon.

¹⁷ The data also indicate that no *single* production site had over 100 workers.

¹⁸ Another factory owner, however, indicated that in one of these cases, the factory was started in the 1940s as a very small operation. It is thus unlikely that the start up costs could have been as high as the NT\$750,000 claimed by the owner.

¹⁹ These factories were usually built on family land or on the land of a relative. At least four factory owners said that they simply built their factories on family land because they explained rhetorically: "Why pay higher land prices to build a factory in Ta Ch'eng Li when you have family- owned land and greater space somewhere else in Puli?" In fact, land prices in Ta Ch'eng were considerably higher than in the more remote areas of the basin.

²⁰ As a rule, the factories in Puli also reflected their heritage. The older factories in Puli were often started in family farm compounds (*ssu ho yuen*). In some of these older factories, pieces of mud brick wall protruded into the factory and incorporated into additions made in later years. In one such factory old rooms from the family farm house were used for storage, while parts of an old pig pen housed tubs used for screening. In the newest part of the factory, a two story reinforced concrete building provided space for the drying tables and the company office.

²¹ Given the importance of being near another factory for subcontracting, why locate a factory outside of Ta Ch'eng? As the industry expanded in the mid- to late 1970s, it became more difficult to find workers from the Ta Ch'eng area willing to make paper. As wage rates rose in Puli, companies in Ta Ch'eng found themselves competing for a limited number of

workers, many of whom preferred to work near where they lived. In other areas of Puli, according to a number of informants, workers who wanted work were available but they would not go as far as Ta Ch'eng Li.

²² As had been the case between 1945 and 1969, as many as one- quarter of these companies folded within a short period of time. One factory owner who tried to start his factory in 1978, for example, found that there were not enough orders to go around and ended up closing after only six months in business.

²³ The terms are taken from Holmes (1986).

²⁴ The majority of those companies which bought and sold overseas (either raw materials and /or finished paper) had trading licenses.

²⁵ Each paper type is given a name or number - in part to mask the source (subcontractor) who produced the paper.

²⁶ My informants, however, indicated that these costs could range from a low of NT\$1,700 to as much as NT\$2,600.

²⁷ Again, these costs could run between NT\$300 and NT\$700 per lin.

²⁸ Most factory owners were fairly candid about the accounting procedures for their businesses. On a number of occasions, I was told that three or four sets of books were kept, each of which was created for a particular government agency and even for stock holders. The one set of books which was an accurate accounting of what went on in the factory was never shown to outsiders. One owner told me that he made so little money, that his books always showed a loss.

The inaccuracy of official statistics for capital investment in each factory is illustrated in the factory catalogues published by the local Hsien government. These figures are sent to the Ministry of Economic Affairs (MOEA) in Taipei which figures them into their island wide statistical abstracts. Official records indicate, for example, that 18 paper factories in Puli have as little as NT\$30,000 invested in their factories. Whatever the case, one factory owner did say that the amount of investment could be approximated simply by noting the number of tubs in each factory and working from there. With that in mind, figures given to me having to do with factory investment are approximately 15% lower than what I was told.

CHAPTER V

THE SOCIAL ORGANIZATION OF PRODUCTION IN THE HAND-MADE PAPER INDUSTRY: 1989

As indicated at the beginning of Chapter IV, Chapters IV and V together provide information on the paper industry so that the reader can navigate through the details of the history of the industry. The discussion of the social organization of production in paper making, which is divided into two parts, carries on where Chapter IV left off. In the first section, I provide a description of the labor force and working conditions in the industry while in the second, I discuss entrepreneurs, family labor, and kin relationships. In the conclusions I also consider the issue of family ideology as it was played out within and between firms.

A. LABOR FORCE CONDITIONS AND THE NATURE OF WORK

The primary concerns of company owners in Puli in 1989 with regard to labor was the seasonality and, therefore, unreliability of the labor force, high wage rates, and the lack of workers willing to make paper (see below). The vicissitudes of the work force made owners highly protective of the workers they had. Fearful that their workers would run to other factories which offered better piece - rates or benefits, they preferred to keep any information about their workers to themselves. This secretiveness, together with the seasonal fluctuation in labor, made the gathering of data on the work force very difficult. The problems of estimating the number of workers in the industry was

illustrated by the following excerpt from an interview with a frustrated factory owner.

Even though I have 30 workers who are registered as working in my factory, I never seem to have much in the way of consistent work from them. Just because my workers may not be planting their fields does not mean they will come in every day, or work nine or ten hours a day every day of the week. How can I tell you how many workers I really have when sometimes I don't even know myself.

Piece and Wage Workers

In addition to being differentiated by their positions in the production process, workers were divided on the basis of their wages. Each worker in Puli's hand - made paper industry either received a set hourly wage or received a piece - rate wage. In contrast to many other manufacturing industries, wage workers were considered by many factory owners, and by the workers themselves, to be ancillary to production while piece - rate workers (a term often associated with a marginal, home - based, or peripheral work force) formed the core of the labor force in the hand - made paper industry. Wage workers, furthermore, were found only in those factories large enough to afford them, while piece - workers were the primary labor force in all factories. A survey of 27 *factory sites* indicated that, of the 630 production workers in those factories, about 548 (87%) were involved in piece - rate work while only 82 (13%) workers were involved in wage work.

Wage Workers

Hourly wage workers typically prepared raw materials, mixed pulp, and cut, sorted, and packed paper. They also performed odd jobs throughout a factory, such as chopping wood and stoking a boiler, cleaning factory equipment, and performing minor repairs; jobs which were considered unskilled, onerous, or dangerous. In addition to their difficult working conditions, their wage rates were some of the lowest in the industry, averaging between NT\$9,500 -NT\$13,000 per month for women and NT\$15,000 - NT\$18,000 per month for men. The average monthly wages for paper makers in the entire industry in 1989 was NT\$21,537 for men and NT\$15,586 for women (Report on Manpower and Labor Productivity 1989).¹

Because of the low wages in the hand-made paper industry, few young workers (either male or female) were willing to accept hourly wage jobs. Some old workers, many of whom were retired or on fixed incomes, however, did take these jobs as a way of supplementing their income. In one of the large center factories, for example, two mainlanders in their mid-60s operated three beaters which supplied paper pulp to the dredgers. Their work required the lifting of several hundred pounds of wet paper pulp per day in a part of the factory that was especially hot and damp. After working in the factory for five years, their wages averaged less than NT\$18,000 per month. In another part of the same factory two old women, one of whom was in her late 60s, processed raw tree bark to be used in the pulping process. Their wages were only NT\$9,500 per month, just above the minimum wage in 1990. The working conditions of both groups of workers were among the worst in the factory.

The number of hourly wage workers employed in paper production was directly tied to the productive output of individual factories. The larger the factory, the greater the need for wage workers to perform a number of

preparatory processing and finishing tasks. As a result, it is estimated that only ten of the 29 companies which employed more than 30 workers consistently used waged labor (see Table 4.2 in Chapter IV). In one of the largest factories in Puli, for example, more than ten wage workers were needed to prepare raw materials, paper pulp, and sort, cut, and pack paper for shipment.

In many small companies, however, orders were often unstable with long down - times at the factory. Their owners thus, considered labor hired on an hourly wage rate as less flexible than workers hired on a piece - rate basis. Wage workers who came into work expected to be paid whether they worked or not while those who worked on a piece - rate basis had no such expectations. For this reason, many small company owners tried to avoid using wage labor. Rather, they either used their own labor or that of a family member to perform such tasks. Of the 14 companies which employed between 10 and 29 workers, wage workers were sometimes hired on a part time basis while the five companies employing fewer than 10 workers rarely used wage workers.

Piece - rate workers

Dredgers and dryers (illustrated in Figures 4.4 and 4.5) in the paper industry were paid on a piece - rate basis. As skilled workers, piece - rate (*chi chien kung tzu lu* 計件工資率) workers generally received higher salaries and had greater respect on the production floor than wage workers. Dredgers who had worked for a number of years in the industry and who produced some of the finest paper were often venerated and served as role models for some of the younger workers.

Piece - rate work had been used in the paper industry for as long as anyone can remember. Most older informants indicated that it probably emerged in response to two factors peculiar to the industry and the local

economy. The hand - made paper industry was what might be termed a bipolar seasonal industry in that the demand for and supply of labor fluctuated according to seasonal changes *in both the product market and agricultural production.*

A number of older informants in one factory told me that when the industry first began in Puli, a large number of workers at the factory were also involved in farming. Because they were unable to leave their fields during harvest or planting season, factory owners had no choice but to allow their workers time off to tend their crops. "At one time, the work force used to be reasonably predictable," said one factory owner. "In the 1950s, 1960s, and early 1970s we had a fairly good idea when our workers would be in the fields and we could plan our production runs."

As Taiwan became more affluent, however, the number of cash crops in production grew, drawing workers away from factory work at increasingly odd times of the year. One factory owner complained that several of his workers were heavily involved in the betel nut business and he thus never knew when they would appear for work. "Our industry is a seasonal one," said one factory owner. "But it is getting harder and harder to predict and prepare for each and every season."

My interviews with 87 pieceworkers in three different companies showed that approximately 35 workers (41%) were involved in farming crops which demanded their attention during the year. Aside from betel nut cultivation, many workers were also involved in planting *chiao pai sun*, while other workers were intermittently involved in the harvest of a variety of local fruits and vegetables in the summer and fall. To the consternation of many factory owners, any number of workers considered paper-making as almost sideline work which they did during the slack agricultural seasons. Some cash

crops became so lucrative that workers earned far more money in agriculture than they could making paper. Nevertheless, many workers continued to put in a minimum number of hours in the factory in order to receive labor benefits and insurance.² "Working in the paper factory gives me some extra security that I might not have otherwise have," explained one worker.

In contrast to factory wage labor, piece - rate workers in the industry often arranged their own hours, a practice which frustrated owners. It was not uncommon during my research to walk into a factory and see only a handful of workers where there had been dozens only a week before. When I asked factory owners about the absence of their workers, their response would often be "its planting season," "there is a wedding," "they are at a *pai pai*" (a religious gathering or festival), "some are taking time off," or simply, "I don't know." As one factory owner put it, "many of our piece - rate workers behave like their own boss. They come and go as they please. But because so few workers make paper anymore, I dare not fire them."

With wages increasingly uncompetitive in Puli, many workers found that they had to supplement their incomes with other outside wage work, farming, or even small business. One company owner said that, because most of his workers were paid by the piece, workers would just come into work whenever they needed money. "Its not as though they were a necessary part in a production line." Because workers were often in and out of their factories, however, owners had a hard time estimating how much paper they could make from one week to the next.

As shown in Chapter VI, the unpredictability of workers in Puli put subcontractors at a distinct disadvantage in two ways. First, center factory owners demanded that they (subcontractors) meet production schedules no matter what the problem. When they did not meet those schedules, center

factory owners would often cut future orders. Second, because subcontractors were never sure how many workers they would have, there was less chance that customers (other than center factory owners) were unlikely to do business with them. "Many of the Japanese buyers who might want to do business with us," commented a subcontractor, "are afraid we can't meet delivery of an order because they know that our workers are unpredictable." Further, the subcontractor explained that the use of subcontractors softened the labor shortage for center factory owners because "they can just turn to one of their subcontractors to fill any gaps in supply."

Piece - rates

Piece - rate workers who were dredgers earned considerably more money per week than hourly wage workers. In late 1989, piece - rates for dredgers ranged from NT\$1.3 to NT\$3 per sheet, depending on the grade of paper produced. Dredgers who produced a high - quality paper or very large paper had to work slowly and were paid a high rate to compensate for their slow speed but well developed skills; this work was usually done in the center factories. Dredgers who produced a high grade paper could make on average, between 300 and 500 sheets a day. Most dredgers in Puli's subcontracting factories, however, produced a low to medium - grade paper which required less skill and time to produce than high grade papers. These workers averaged about NT\$1.5 per sheet. Because of these low rates, these workers were concerned with the amount of paper they could produce a day, and some dredgers produced as many as 900 to 1,000 sheets per day.

Although piece - rates paid to both men and women who performed similar work were the same, women tended to produce an average of only 400 to 500 sheets of paper per day. All dredgers, however, had to put in

approximately ten hours per day to produce these averages. As a result male dredgers averaged about NT\$900 per day while female dredgers only averaged NT\$750 per day. Working a typical 55 hour work-week (5 1/2 days), a male worker could earn about NT\$20,000 per month. If he was able to make 1,000 sheets of paper a day, his wages could increase to over NT\$30,000 a month. A woman dredger, in contrast, earned only about NT\$17,000 a month.

While I was denied access to the time cards for piece - rate and hourly wage workers, my observations revealed that many women tended to arrive at work slightly later in the morning than did men. Many women also left work slightly earlier for lunch as well as at the end of the day than did men. When I asked women why they appeared to spend less time at work than did their male colleagues one woman replied, "Some of us have to make breakfast, lunch, and dinner. Of course we spend less time at work, we have a second job at home."

Women piece - rate workers who dried paper were paid an average of NT\$1.2 per sheet. They dried approximately 450 sheets of paper per day, earning about NT\$600 in wages. Working on the same ten-hour a day schedule as the dredgers, women dryers could earn about NT\$13,500 per month. Because paper takes a set amount of time to dry on the heated steel tables, women were fairly limited in the number of sheets they could dry in a day. Even particularly fast workers found it difficult to dry over 500 sheets a day.

Piece - rates were calculated for both dredgers and dryers at the time the finished paper was sorted by a supervisor or boss. A small slip of paper was attached to each batch of paper (usually a ream) inscribed with the name of the dredger and dryer and the size and type of paper. As the paper was sorted, it was also inspected and counted. When a torn or otherwise inferior sheet was encountered, it was marked against either the dredger or dryer and deducted from their total wages for the day.

Workers were told how much paper was counted and how much was deemed acceptable for shipment sometime during the work week. They were paid only for paper which was free from defects. Not infrequently, a worker would object to the final tally, often blaming an individual who came before or after him/her in the production process for the problem. A dredger, for example, might tell his boss or supervisor that the pulp prepared for that day was not of the proper consistency to dredge a good batch of paper. He might also blame a dryer for tearing too many sheets, thereby denying him/her of a higher count. Dryers on the other hand, often complained that a dredger produced paper which was too thin, thereby rendering the paper impossible to dry.

I was told by a number of workers that it was not uncommon for a boss to pit workers against each other in order to obtain the best paper. "That is why many of us try and blame the boss for denying us our full count of paper before we blame each other," said one worker. "Sometimes the boss just doesn't like what he sees in the paper we produce and, therefore, will lay the blame on anyone of us. It is very unfair."

My observations toward the end of my research in 1990, revealed that many bosses found themselves increasingly pressured to come up with a high quality product while forced to cut labor costs. According to many owners, Japanese customers were pressuring the industry to improve quality because the Japanese had all the low quality paper they needed from factories in Mainland China and Southeast Asia. "A few years ago [when they had few competitors] we really didn't have to worry about quality like we do now," according to one subcontractor.

Now the Japanese are telling the center factory bosses to raise their quality *and* lower prices. The center factory bosses then pressure us to do the same, and then we put pressure on our workers. It is much harder on us [subcontractors], however, because we are stuck with producing much of the lower quality paper. Because our profit margins are much lower than the center factory, there is little we can do to cut costs.

The gender division of labor in production

Before the early 1980s, men and women who worked in the hand - made paper industry clearly understood their position in the production process. Men either made the pulp or dredged paper and women either dried paper or prepared the raw materials. Men also received more money than women for the work they did because men's work was considered either strenuous or more skilled than was women's work. "Women could not dredge paper back then," I was told by one old worker.

It was too difficult for women to handle the big bamboo screens used in dredging and it took them just too long to learn. Men, on the other hand, could not be expected to dry paper because the work required the dexterity which only women have. During the hot summer months, men would also perspire too much and that would ruin the paper.

When I asked this worker if any women were ever given a chance to learn a task traditionally defined for men (and vice versa), he replied, "Of course not. Women would not attempt to take work away from a man, and a man wouldn't want to do the work of a woman because the pay was too low."

This startlingly honest answer helped clarify the many changes that had taken place in this industry since the early 1980s. From the industry's inception in the mid - 1930s until the early 1980s, the ratio of women to men in a given factory was relatively equal. This distribution was dictated by the fact that

factory owners tried to have as many dredging tubs as drying tables in order to keep production flowing as smoothly as possible. Because only men dredged and only women dried, the ratio of men to women remained fairly constant.

This gender division of labor was justified on the grounds of men's and women's physical abilities. The differences in women's and men's wage and piece-rates were rationalized by the "fact" that women "could not learn certain skills" and that men were the primary bread-winners in families and, therefore, should be paid a higher wage than women. That reasoning held for almost 45 years when, in the early 1980s, the gender division of labor in the industry shifted. The reason for this shift in balance was rooted in rises in labor costs and a subsequent shortage of male workers. According to one owner, fewer men seemed to come into the industry in the early 1980s than earlier. "It wasn't a sudden change," explained the owner.

All we knew was that there appeared to be fewer men willing to become paper makers when the older workers retired. This work is very tiring and it takes a long time to develop the skills to make paper. Some of the younger people either didn't want to work that hard, or they said that they could earn the same wage as construction workers or day laborers.

While some owners began to raise the piece - rates they were willing to pay in order to attract more men to their factories, others believed that such bidding wars played into the hands of workers and served only to eat into profits. In their view, the real solution was to find workers willing to accept an increasingly uncompetitive piece - rate wage relative to what was offered on the labor market.

Sometime in the early 1980s then, someone (no one can recall whose idea it was) came up with a solution to the growing shortage of male workers.

Women would be trained as dredgers and replace the men lost to retirement or other industries. Suddenly, women were able to do the work of men and could even be paid the same amount of money as men.

Although some men initially objected to the changes, a number of women jumped at the chance to earn more money. In contrast to men who could move on to high paying jobs in Puli or leave the area to seek better work elsewhere, most women (particularly married women) were tied to their families in the basin. Aware that the industry was having problems, such women believed they could accumulate more income than ever before possible before the industry vanished altogether. As one woman office worker told me, women with little education did not have as many opportunities to make as much money as men. But the wages they got as dredgers were far higher than the wages they could get anywhere else in Puli.

By the mid - 1980s, dredging became a job that women were able to do. "This is no longer a man's job" said an old male dredger with a little embarrassment. "We men discovered that our skilled jobs just were not as good as we all thought." Whatever the case, women became a growing force in the industry and factory owners had to pay them the same rates as men -- a situation which did not always sit well with some of the old workers.

Factory owners, desperate for more workers, encouraged as many women to take these jobs as possible. "The women in Puli," one factory owner told me,

were really good workers. Much better than the men. They didn't complain about their wages as much as men did and they generally worked harder. My male workers always seemed to be taking breaks, going off to buy betel nut or just not coming in.

In a similar vein, another boss complained that

Taiwanese men are lazy. You know why we couldn't find any workers? They spend their days fishing (in the many small fishing ponds in Puli), gambling, or just pretending they are *lao pan* (boss). All they do is open up a betel nut stand and say they're a boss. None of them want to work as workers, they think wage work is beneath them.

The data in Table 5.1 suggests that, in 1989, the addition of one - third of the women to the position of dredgers lifted the overall female participation rate in the industry from one - half to about two - thirds.

Table 5.1. Number and Percentage of Workers in Three Hand-Made Paper Companies by Gender and Type of Work in 1989

	total no. workers	dredgers and %	dryers and %
men	28 (32%)	28 (62%)	---
women	59 (67%)	17 (37%)	42(100%)
Totals	87	45	42

Source: Data collected from 3 factories with a total of 87 workers. The percentage of men to women in a larger sample of 13 factories (390 workers) was slightly higher with approximately 38% men and 62% women.

Changes in the composition of the labor force become even clearer when age and number of years employed in the industry are analyzed. The data in Table 5.2 show that, as fewer young workers entered the industry, the average age of workers increased with each passing year. As one office worker remarked, the only reason so many of these old workers stayed in the industry as long as they did was because they could not find any other type of work in Puli.³

Table 5.2. Age and Number of Years of Employment by Gender in the Paper Industry in 1989

	men	women
average age	42	39
age range	27-61	12-60
average years in paper industry	10	9.6
average years at this company	7.05	6.2
range of years at present company	1-18	1-18
range of years in occupation	1-37	1-32

Source: Data collected from 3 factories with a total of 87 workers.

The search for marginal labor and the degendering of work

The redefinition of jobs as suitable for one gender to another (and from one age group to another) was one last desperate attempt on the part of owners to fill the vacuum left by men who had retired. Many male workers who were employable in other wage markets had, for the most part, abandoned the industry by the late 1980s leaving a shrinking pool of older workers and women who had few opportunities to earn a wage elsewhere. As pressure mounted to cut costs, factory owners attempted to squeeze more work from their remaining workers without raising wages. As a result, the relationship between workers and factory owners became increasingly contentious over time.

Workers increasingly considered themselves underpaid, overworked, and frequently abused by owners who refused to invest in their factories. This became particularly apparent when, in one of the larger factories, I asked a supervisor about the wages paid to two old women who cleaned and cooked tree bark. "If this were my factory," replied the supervisor in disgust, "I would be ashamed to have these old grandmothers doing this kind of work."

The younger workers won't do this because they feel the work is beneath them and, of course, it only pays minimum wage. These women have been working here for years, some of them used to be higher paid piece - workers drying paper. But when they got older and couldn't keep up the pace, the boss moved them to this job. The old women have so much loyalty to the owners, that they won't complain about the rotten wages they get.

Women's response to the crisis in the industry was slightly different from that of men primarily because they occupied a different position in the labor market, as the following excerpt from an interview illustrates.

When the paper industry suffers in Puli, it will be the women who will suffer most. Many women feel that after working for so many years they will not be able to do any other job later on. Men on the other hand can get any job they want, they can even become *lao pan*. Few female workers on the other hand will be able to find work that pays as well as the jobs they have now as paper dryers. If they do get jobs in other industries, they will have to work under terrible conditions [i.e., wood or toy painting in work-shops and as home - workers] which are poorly paid and do not provide any benefits.

The importance of paper making to women was reflected in the changes in the gender division of labor in the industry since the early 1980s. Whereas men increasingly saw work in the paper industry as a dead - end job, women saw it as the only decent employment in the area. It was not unusual to find, therefore, that some factory owners tried to convince all workers (especially women) to work as hard as possible because they would not have any jobs in a half dozen or so years. Most of these workers also knew that, given their low educational and skill levels and the lack of manufacturing jobs in Puli, they could not command better paying jobs elsewhere.

The manipulation of workers in an effort to cut labor costs

Faced with the need to reduce production costs, most owners regarded labor costs as the one variable cost which could possibly be controlled. In fact, most owners believed that high labor costs and low productivity were primarily responsible for the slow death of the hand - paper industry in Taiwan, particularly in a situation in which they were faced with growing competition from cheaper labor markets in Southeast Asia and Mainland China.

Owners, therefore, pursued a number of strategies to reduce their labor costs. In no particular order, these strategies were: (a) payroll deductions; (b) reduction or elimination of bonuses; (c) quality and productivity deductions; and, (d) premature departures.

Payroll deductions were most often used by large paper companies in which salaries agreed upon by worker and owner were rarely realized (by the worker) due to a complex monthly wage scheme. At the end of every month, a sizable amount of a worker's paycheck might be withheld after the company tallied up certain "company deductions." These deductions were calculated alongside of governmental deductions (such as income tax and labor insurance) on a worker's monthly pay stub. While such deductions varied from company to company, they were all difficult to calculate or to fully understand. Typical of such deductions were a "workers' health fund," "New Year Fund" (a wage deduction so that the company could buy prizes and gifts for workers during the company's New Years Dinner [*wei ya*]), and a "transportation fund." Workers could not clearly or confidently tell me the purpose of each fund, although most believed that very little of this money was actually spent for their benefit.

The second strategy, the *bonus system*, was another form of "deduction" often used by large paper companies. Theoretically, bonuses were given to

workers when a work - group, of which they were a part, met designated production targets. These targets, however, never seemed to be clearly spelled out by owners thereby making them a flexible wage item to manipulate. Indeed, few workers reported that they received a bonus, and the reason given was that someone in their group did not perform up to expectations.

Quality and productivity deductions were a third strategy used by large and small companies in Puli. Rather than being grounded on group performance, however, this deduction was based on individual effort. A percentage of pieceworkers' (dredgers and dryers) pay, for example, would be subtracted when they failed to make paper at a given rate or when the paper they produced failed to meet a specified quality. Again, workers were never sure how or according to what criteria these deductions were made and based.

The fourth form of "deduction" owners used to reduce their labor costs was what I have labeled *premature departures*. Prior to the end of my research, three long-time workers in a factory left because of disputes with the owner. While the disputes seemed minor in nature, they resulted in significant loss of face for the workers who then felt compelled to leave the company. What makes these cases stand out was that all three workers would have been eligible for retirement pay had they remained at the company for another year. Workers at the factory believed that the disputes were provoked by the boss in the hope that the workers would quit, thereby negating his obligation to pay retirement benefits. Although their accusations were unsubstantiated, workers from other large factories in Puli claimed that such incidents had occurred elsewhere in the industry as well.

Suffice it to say, most company owners had to devise a number of strategies in the latter half of the 1980s in order to ensure a continued supply of inexpensive labor in an industry which has become increasingly uncompetitive

at all levels of production. As men started leaving the industry, women and older workers began taking their jobs. As competition from cheaper labor markets in Mainland China and Southeast Asia pressured owners to lower prices and raise quality in 1989, they began to seek additional ways to ensure the continued viability of the industry. Many of these strategies, however, led to rising tension between workers and bosses.

As will be shown in Chapter VI, shifts in the nature of the relationship between workers and bosses were mirrored in the changes in the nature of the relationship between center factory owners and subcontractors. Pressures emanating from alterations in the economy (both within and beyond Taiwan), the finished product market, and the labor market were often played out *at every level of the relations of production*. These pressures, furthermore, were passed down along the chain of market and production relations until they "landed in the laps" of subcontractors and production line workers at on the lowest rungs of the industry.

B. ENTREPRENEURS, THEIR FAMILIES, AND THE IDEOLOGY OF KINSHIP

While my research was not originally designed to examine the specific role of family in the hand - made paper industry, issues of kinship could not be ignored in such a study. After all, these companies were family - run enterprises which depended on family members to provide labor, skills, and capital. All of these inputs, furthermore, contributed to a company's survival or failure.

Nevertheless, the importance of the role of family labor to the creation and operation of Chinese family firms has been long established (Mark 1972; Greenhalgh 1984; Wong 1985). I, thus, do not wish to take up or even to debate the issue in this thesis. Rather, my desire here is only to present an overview of *how* entrepreneurs, their families, and their kin contribute to the operation of Puli's paper companies. More importantly, I want to stress the importance of family not so much in the way it functions *within* firms but how family and kin *ideology* has come to play a role in the relationship *between* firms and historical context under which family labor was or was not used. I believe, for example, that market barriers erected by center factories in the 1970s created conditions in the industry such that the family labor of subcontractors could not be utilized to the fullest.

Company owners ⁴

Most of the 19 paper company owners in my sample acknowledged that their average age was much higher than that of other factory owners in Taiwan. They also pointed out that many of them had started their factories when they were relatively young men (for all were men). As one factory owner explained, "this is a fairly old industry for Taiwan and many of us are now in our 50s and

60s." In fact, the average age of these owners in 1989 was 51 while their average age when they started their companies was approximately 34.⁵

Factory owners in Puli were relatively highly educated considering the period in which they were born. Of the 19 owners surveyed, six (32%) had graduated from primary school or had some primary school education, four (21%) had graduated from middle school, and seven (37%) had graduated or attended a high school or a vocational high school. One factory owner graduated from a technical junior college. At least two owners had also received some additional schooling in Japan.

While thirteen owners received some education under the Japanese colonial administration, about five claimed they were conversant in Japanese. Most of these men were about 60 years of age or older and believed their ability to speak Japanese helped them establish trading relationships with Japanese buyers and become center factory owners. In fact, the owners who operated the four largest center factories in Puli knew Japanese. Most owners of subcontracting companies were younger than center factory owners in 1989, could *not* speak Japanese and, therefore, were at a distinct disadvantage in the market (see Chapter VI). They repeatedly told me that their inability to speak Japanese on the part of subcontractors, was one reason why they had to deal with center factory bosses. "What Japanese buyer would deal with an owner who can't speak Japanese?" A subcontractor rhetorically said.

Family Labor

The role of family labor in the operation of Puli's hand-made paper companies has not changed dramatically since the founding of the first Taiwanese owned paper companies in the post-war period. During their formative years, most owners had only a few tubs and tables and, whenever

possible, would "man" these stations either themselves or with the help of family members. "When we first started, hired labor would be used only when orders were too large to be filled by family labor," explained one informant. "We considered ourselves no more than workers. We would work right alongside family members and any hired labor that we might have had." Another man, an owner of a small paper factory described the importance of family labor this way.

Family workers are important to any business. They are important not just for the physical work that needs to be done, but also for the management of the company. Family members can also be trusted and they usually carry out your directions without back talk.

Sometimes, however, family labor was not available. Wives of owners might dry paper and prepare pulp for processing when they were not involved in domestic work, but because many of the new owners were only in their early to mid- 30s, their children were too young to make paper. Further, as one factory owner explained, while children "would help with some of the lighter tasks, most of the stages of production were so difficult that only an older teenager could do the work."

Moreover, the present situation in 1989 reflected that of the past, in that few owners wanted their children to follow in their footsteps. Rather, they often pushed them to pursue an occupation other than paper-making. Worried that their children would not pass their school examinations, many owners made little use of the labor their own children. Only when children did not show promise in a "better" profession, were they sometimes allowed to pursue paper-making as a career.

The data in Table 5.3 show the number of workers in 19 companies in 1989. The number of family members involved in company operations in Puli ranged from two (including the owner) to 12, with an average of approximately 3.7 family members per company. The ratio of workers to family members in companies with 2 family workers was 8.1 factory workers for every 1 family member.

Table 5.3. Family Workers per Company in 1989

a) no. family workers	number of co.	b) total no. of workers.
2	6	98
3	7	278
4	4	104
10	1	70
12	1	102
Totals	71	652

Source: Survey of sample of 19 companies.

Note: a) total of 71 family workers. All figures include the factory owner counted as one family member. b) total of 652 workers (including family members) in 19 companies... $71/19=3.7$ family workers per company.

This ratio changes dramatically, however, when companies are disaggregated by factory size (by number of workers). The proportion of family workers in the smallest companies increases to well over half the total work force in each company.

The data also indicate that in companies employing fewer than 30 workers, family workers often performed jobs as pieceworkers, wage workers, plant managers, supervisors, and accountants. In the larger firms, (those employing over 50 workers) however, family members rarely worked on the factory floor (i.e. as blue-collar workers). Small firms in Puli (most of which

were subcontracting firms) thus were disadvantaged in comparison to large center factories. Owners of large companies could afford to educate and train their children to be businessmen and women. These better educated family members would then be sent out to find new customers, technologies, and products for production. Small company owners, on the other hand, had no such luxury. Their family members were often needed to perform all sorts of tasks, most of which did little to expand a company's contact with the outside world. As one owner of a small subcontracting firm put it,

My son often has to do menial tasks on the factory floor because I can't afford to hire wage laborers like the larger factories. Every time he does such work, someone else's son in a larger factory is meeting with a customer, finding out about what new kinds of paper people want to buy, or even learning how to invest his father's money in the stock market.

Family organization and firm operation

With the exception of one joint family, the owners in my sample lived either in nuclear or stem families. As might be expected sons were the most frequent family members to work in their parent's firms. In one company, sons were fully engaged in the operation of the father's business.⁶ In this case, one son managed production at the family's factory in Puli while the other son was involved in sales and export operations in Taipei. Despite the physical separation imposed by the business, the family maintained the joint arrangement. About two-fifths (42%) of the sample had one son (most of whom were married) who helped operate an enterprise in cooperation with their fathers and mothers (see Table 5.4). The involvement of sons in a family paper business was fairly common in Puli. In contrast to other family members, sons

inherit the business and, therefore, were often considered more as partners as they (the sons) get older. Nevertheless, daughters, did occasionally work in the family firm. Their labor, however, was often sporadic and was not considered an important contribution to the labor pool. In many firms, daughters were more often than not expected to pursue their studies or another occupation, and were discouraged from spending too much time in the business.

Daughters-in-law or other family members (if available) were also expected to help in the business, unless they were employed elsewhere. Not surprisingly, such families lived in stem arrangements, shared cooking and living quarters, and had a common family economy.⁷ I was often told that because of the relatively small size of Puli's companies, only a stem type arrangement was "convenient" (*fang pien*). In this context, convenient came to mean that there were not enough profits to support a joint family with more than one married son. Further, I was also told fights and arguments were common between daughters-in-law, when two married sons and their families worked in one small business.

Table 5.4. Family Relationships, Organization, and Factory Operations in 1989

Family relationship in each company*	no co.	% of total co.	family type
two sons and other family members †	1	5	1 joint
one son	8	42	8 stem
husband and wife only	6	31	6 nuclear
patrilineal cousins	2	10	2 stem
affines	1	5	1 nuclear
wife‡	1	5	1 nuclear
total	19	98%	

Source: Survey of sample of 19 companies.

Note: Percentages do not = 100 due to rounding

*In all but one case both the husband and wife compose the core of all companies. While the amount of time a wife spends running the company varies from case to case they were, nonetheless, a critical component in the operation of Puli's factories.

† Family members means members other than married sons.

‡ In this case, the husband has turned over the day-to-day running of the paper company to his wife while he operates a new roofing business.

Eight families in my sample took the nuclear form. The owner and his wife were primarily responsible for the operation of a business in six of these cases because their children were not yet old enough to help operate a factory, were involved in other occupations, were students, or were in the army.

Because the paper industry was on the decline in Puli in 1989, most small factory owners believed that their sons would have no future in the industry and, therefore, discouraged them from pursuing paper-making as an occupation.

While the children of three additional owners pursued other occupations, these men had sought out other relatives to run their businesses. Two of these owners relied on patrilineal cousins to help operate their businesses while the third man was in partnership with his wife's brother.⁸

While it was clear that small firms in Puli were less likely to be able to support large extended families and, therefore, were apt to have only one married son in the business, it was not equally true that all large companies had extended families and more than one son working in an enterprise. In only one center factory, did two sons and several family members work for the father. In another equally large center factory, only one of an owner's four sons worked in the family firm. The other sons were physicians, who worked in other parts of Taiwan.

As noted above, a large and wealthy firm was able to support more family members and provide what were essentially white-collar positions for them than was a small and less affluent family. In a large center factory, furthermore, family members could contribute to the expansion of the firm. Yet not all large firms (or center factories) necessarily used the labor of family members within the firm, particularly when other professions or occupations were open to them. Thus, the success or failure of a firm in the hand-made paper industry (large or small, subcontracting or center factory) did not seem to be directly linked to the number of family members working in these firms. Whether or not this finding is a reflection of the nature of the industry, is a problem for future research.

Wives

In all but one paper company, husbands and wives form the labor/management core of the firm. During the establishment of a new company, the labor of wives and their management skills often played a critical role in the success or failure of a company. Further, wives and their families also were an important source of capital for a new firm. Indeed, in

approximately half the cases, a wife or her family had contributed money to the new ventures.

Nevertheless, husband's rarely acknowledged their wives' contributions to the family business. In one unusual case, however, an owner admitted that he and his wife were partners. With his wife at his side, the man told me that she had worked hard helping him set up the factory and that she had also contributed money from her private money (in Taiwanese, *sai kia*) to establish the business.⁹ This was the first time a factory owner openly acknowledged the importance of his wife in setting up and running a company and also the only time I heard any man refer to his wife as his partner.

As illustrated in Chapter VII, wives were almost always physically present in factories managing workers, keeping the company books, and helping to prepare raw materials.¹⁰ While her husband was out of the factory, one woman jokingly revealed that, "the wives of factory owners are often the ones who manage what goes on inside the factory while our husbands run around and play lao pan". Well versed in company operations, wives were also recruited during difficult negotiations between company owners (as in the case of negotiating prices between a center factory and a subcontractor). When disputes sometimes arose between companies, furthermore, wives were often rumored to be at the center of the conflict.

The financing of family firms

I have placed the topic of financing and investment in this chapter primarily because it was more closely associated with the issue of family than with formal economic institutions such as banking. Following World War II, the majority of start-up capital was furnished by personal savings, patri-family members, affines, rotating credit clubs, and partnerships.¹¹ Most of Puli's

paper factories either could not get bank loans or were simply too intimidated by the system to want to get involved with it.¹²

By the mid-1970s, subtle changes appear to have taken place in the way factory owners sought investments. Of the 13 owners in my sample who opened their factories in the 1970s, all claimed to have first relied on money from personal savings for investment capital. About three-quarters of these men also said that they looked to family members for money while a similar proportion indicated that they also joined rotating credit clubs, while one-third indicated their affines contributed money to their factories. A number of entrepreneurs also reported that they waited until they had accumulated enough savings and skills before opening their own factories. In most cases, "enough capital" meant that they themselves had been able to put up at least 50 percent of the required investment. Entrepreneurs who put up any lower percentage, I was told, would make an entrepreneur vulnerable to other shareholders or partners who might want to take control of their company once it became successful.

As the paper industry began to take root and show a profit in the 1970s, some banks opened their doors and expressed a greater willingness to negotiate loans. Nevertheless, would be entrepreneurs continued to shun such money as a source of investment capital. According to one small paper company owner,

Local banks were only interested in the larger factories. But for the smaller ones like ourselves, they seemed to think that we would go out of business at any time. So the banks would make demands that we could not meet, like putting up a large collateral.

Another factory owner who needed money in the mid-1980s took a loan from the local Small and Medium Business Bank, an institution supposedly

attuned to the needs of small companies. After he received the loan, however, the bank seemed to go "crazy."

Almost everyday the bank representative would come to my factory to check on my business and make sure I had enough orders. They wouldn't leave me alone. Finally I joined a rotating credit club and paid off the bank loan as soon as I could. It was just too *ma fan* (inconvenient).

Most of the companies which were recipients of bank loans were Puli's large center factories. In fact, one center factory owner told me that he thought that after the late 1970s, most center factories received the majority of their financing from local banks. Bank loans remained difficult to obtain for Puli's small subcontractors, however. For this reason, some subcontractors went to center factories for loans which they used to purchase anything from raw materials to the upgrading of a factory. As will be seen in Chapter VI, a number of subcontractors who took loans from center factory owners went into debt and eventually lost their factories to their creditors. This was one reason why, in 1989, so many center factories were operating more than one factory site.

Kin and affinal ties between factory owners

When I began my research I initially hypothesized that kin and affinal ties would serve as a conduit through which business between firms in the paper industry could be conducted (such as that between a center factory and a subcontractor). After all, this was a small and highly competitive industry where one might expect owners who were related to cooperate in the purchase of raw materials, the production process, and perhaps the marketing of finished products. Furthermore, upon discovering that all of the 19 owners interviewed

had some relationship with other owner(s), I expected to find a great deal of cooperation between owners who were relatives.

The research revealed that out of 19 factory owners, at least two pairs of brothers (i.e., four owners) owned separate paper companies, as did a father and son (two owners). There were also at least four companies where affinal ties existed between owners. The remaining four owners said that they had various combinations of uncles, aunts, and nephews in the business. Finally, there were at least five other owners who said they believed that they had a more distant relative who also was involved in paper-making, but they were not quite sure of the relationship that existed between them.

Nevertheless, as my interviewing progressed, I came to realize that many factory owners *did not* consider their relationship (patri-kin or affinal) with other factory owners to be particularly important to their businesses. It was not uncommon, for example, for a respondent to literally wave off my inquiries by saying, "Oh we [the respondent and another factory owner] are related, but we rarely do business together," or "Most of our kin relationships were either distant or not that important."

There are, of course, a number of important issues relative to kin and affinal ties which are linked to the issue of inter- and intra- firm relationships in the paper industry. And, while some of these issues will be discussed in Chapter VI, a few need to be highlighted here. For example, a number of entrepreneurs got their start in the 1970s by working for relatives or by forming partnerships with relatives in the 1950s and 1960s. Unless a man worked for his father, however, it was unlikely he would gain control or ownership of a company because ownership was usually reserved for a son. When a man entered a partnership with relatives, many such arrangements were short lived, generating hostility between relatives.

Such hostilities between relatives often lingered for years. When an entrepreneur struck out on his own following a breakup, he often made it a point to mention that he did so without help from a relative who was already in the business. Once a company was established, furthermore, an entrepreneur rarely gave any significance to the fact that he might have done business with a relative or that a relative went out of the way to send business or provided him with more favorable business deals than a non-relative might.

As I was to find out, the paper industry was rife with animosity between company owners long before any relatives entered the industry in the 1970s. Nevertheless, one owner candidly told me, "even though it was not uncommon for a factory owner to have a cousin, uncle, or nephew operating or working in another factory, no factory owner would want to be put in the position of having deal to cheat [or be perceived to have cheated] a relative."

Notwithstanding, kin relationships between firms were not particularly important regardless of firm size. While I believe that most company owners liked *the idea* of having their relatives actively involved with them in the industry (like one big family), the realities of a competitive industry precluded close kin ties which might interfere with conducting business. "It doesn't really matter if people are related in this business," said a subcontractor. "Even when it might be beneficial for two relatives in two business to work together, the situation might change in two months. So many bosses feel it is better to not to jeopardize their relationship." Indeed, when I asked the subcontractor if he thought it would be considered "ok" if a center factory boss worked with a relative who ran a subcontracting factory, he replied this way.

You don't understand. Center factory bosses use subcontractors to earn much of their profit. How long do you think it would be

before a relative operating a subcontracting factory would ask for his "fair share" from a relative who ran a center factory? If two people are going to form any kind of alliance in this industry, it would have to do with whether two or more owners can be friends, can get along, and share equally. You don't necessarily need a relative to do that.

The ideology of kin relationships between firms

Given the fact that kin or affinal ties were not considered particularly important to the formation of inter-firm relationships, one might ask if other social or cultural elements may have acted to hold this industry together. Were there any key sociocultural resources drawn from Chinese society which might have contributed to the smooth operation of paper production in Puli? What, for example, was the importance of "relationship" in general? More specifically, were the Chinese concepts of *kuan-hsi* 關係 (personal relationships) and *jen-ch'ing* 人情 (human obligation) important to individuals in the hand-made paper industry?

According to King (1991), one's *kuan-hsi* or particularistic connection or personal network is "based on attributes [kinship, surname, native place, dialect, schoolmate, co-worker, religious affiliation] shared by people" (1991:69). *Kuan-hsi* is a relationship in which two or more people have a commonality or shared identification while *jen-ch'ing*, has been popularly described as human feelings of obligation or interpersonal relationships tied to reciprocal aid. According to King (1991), *Kuan-hsi* can be a social or economic. "In a strict sense *jen-ching* hardly enters into economic *kuan-hsi* since economic exchange is dictated by impersonal market rationality. On the other hand, in social *kuan-hsi* -- which is diffuse, unspecified, and is ruled by the principal of reciprocity -*jen-ching* plays a central role" (King 1991:75).

Most Chinese acknowledge that if "you have a problem" or "need something to get done" you first go through channels (i.e., one's network)(King1991:71). But because kuan-hsi can lock an individual "into an intricate relationship of interdependence with others" which incurs heavy "social investments"(King 1991:76), the greater a person's kuan-hsi with another the less autonomy and freedom because he or she may be called upon at anytime to "do a favor."

Workers and company owners often invoked these terms. Their meaning, however, tended to differ from King's interpretation of them.¹³ As suggested above and as will be discussed in Chapter VI, kin and non-kin relationships were used as a medium through which skills, capital, and labor were pooled to set up factories in the postwar period (1945-1969). Nevertheless, while kuan-hsi (relationship) was not necessary on the factory floor (between workers and a boss), jen-ch'ing certainly was. "He [the boss] does or does not have jen-ch'ing "(*mei yu jen ch'ing* 沒有人情) was an expression often used by workers to describe their relationship with a boss. What they meant by this was that a boss had (or lacked) sentiment (jen-ch'ing), gave face to, or was able to manage his relationship with his workers. It was not necessary however, for a boss to have kuan-hsi or to have a kind of "network" with his workers.

The use of jen-ch'ing and kuan-hsi became a bit unclear, however, when relationships moved beyond the factory. In the 1970s, a fictive kin ideology based on traditional notions of kuan-hsi, jen-ch'ing, and the patri-family emerged between at least *one center factory owner and his subcontractors*. Within this subcontracting relationship, elements of hierarchy, obligation, and loyalty were articulated in terms of the large extended family "*ta chia t'ing* 大家庭." The notion of family was utilized as method of bringing together what was largely a disparate group of subcontractors (the "children" in

the group) into one cohesive, cooperative, and compliant subcontracting unit under the control of the center factory owner (the "patriarch" of the group). Traditional notions of the family (the most venerated institution in Chinese society) were adopted as a blueprint for behavior that required the center factory owner to provide security and profit for his subcontractors while his subcontractors were supposed to reciprocate with loyalty and obedience.

By the late 1970s and early 1980s, some subcontractors in Puli noticed that their relationship with a center factory boss was not quite as "familial" as they were led to believe. Many subcontractors came to see their relationship with the center factory owner as adversarial rather than cooperative. By the time I started my research in 1989, terms which used to connote a familial connection between firms had given way to those which described the relationship as "exploitative," and "unfair," terminology which essentially delineated a relationship based on class.

Why, how, and in what manner these ideologies came to be used in the industry will become clearer in Chapter VI. Here it is sufficient to note that the use of these ideologies (be they based on notions of kin or class) was closely tied to specific events in the history of the hand-made paper industry. More specifically, as changes occurred in the market for finished products and raw materials, so to did the nature of the relationship between firms.

Summary

As will be demonstrated in Chapters VI and VII, the core of Puli's paper companies were composed, at the very least, of an entrepreneur and his wife where they functioned as both managers and workers. While the labor of other family members was often critical in the formation of a firm in the 1960s and 1970s, many bosses often discouraged their children from making paper

making a career. Many bosses discouraged their children from pursuing paper-making because the future of the industry in Puli was not particularly bright. When a son failed to find better employment opportunities, however, an entrepreneur would normally take him into the family business. Still, most companies were small and could not support more than one married son, forcing the other children to find employment elsewhere. Center factories, on the other hand, were all large enough to employ more family members than were subcontracting firms. Only one center factory in my sample, however, relied on more than one son to help operate the company.

It was the belief of most factory owners in Puli that the more family members one was able to employ in a company the better. What was most important, however, was that the employment of family members was often dependent upon the position of the company in the industry relative to the market. In small subcontracting firms with no market connections, a son or sons had little opportunity work beyond the confines of the factory floor. But in firms with market connections, sons could be used to expand a firm's market connections. Used in this capacity, sons (or other family members) helped center factory bosses expand their businesses not in the capacity as "blue collar labor," (which was more case among subcontractors), but as "white collar" managers and salesmen.

In contrast to kin relationships *within* firms, kin relationships *between* firms were far less important. That is to say, most company owners did not "go out of their way" to do business with a relative. Given the highly competitive nature of the industry, as well as the level of animosity and the lack of trust between factory owners, one would think that a kin connection would provide some common ground for establishing trust and cooperation between firms.

The research will reveal, however, that with much of the industry structured around subcontracting relationships, true kin relationships can sometimes prove to be more of a burden than asset. Downplaying the importance of kin relationships, center factory and subcontractor bosses alike claimed that doing business with relative would not necessarily make a difference in their business. There was also the intimation that, were problems to occur between two relatives doing business together which, given the suspicion and animosity which existed in this industry was not unheard of, then their social relationship might suffer. If, on the other hand, a business relationship soured between factory owners who are not related, one would not have to continue associating with that person as would be the case among relatives.

1 Unlike hand-made paper, most workers in Taiwan's "other" paper industry produced machine made papers and worked as wage workers. Wage workers working in Puli, could usually earn between NT\$94 and NT\$102 an hour, excluding overtime.

2 Labor laws stipulate that workers must work a minimum number of hours each month in order to receive benefits. In some factories, however, the labor shortage is so severe that some factory owners overlook this minimum just so they won't lose a worker to another factory.

3 The one difference to this, however, was that there were more women who were starting to make paper at a young age (12years). The youngest male in the business was 27 years of age.

4 Of the nineteen owners interviewed in 1989, eleven started their companies in the 1970s. Out of these eleven companies, ten were started by men who had previously worked as paper makers in another paper factory in Puli. At least 80% of these men, furthermore, had also worked an average of ten years in the industry before starting their own operations.

5 This figure indicates the age when owners started their *current* paper companies. With as many as 30% of the current factory owners having started their companies as partnerships prior to opening the companies they operated in 1989, this figure should be much lower.

6 In some factories, additional sons may have helped out in the factory, but only on a temporary basis. These were sons who were either waiting to be drafted into the army, were home from school, or in between jobs.

7 The concept of family economy in this context meant that income from a company was largely controlled by the father, while a son received either a small salary or stipend of some kind. All family expenses, were paid by the father from pooled family income.

8 This is not to say that affines or cousins were relatives of last resort when it came to operating a company. In some cases, affinal relationships especially between brothers-in-law were especially close, closer in some cases than the relationship between brothers from the same natal family.

9 *Sai Kia* is a Taiwanese term whereas *ssu fang ch'ien* is a mandarin term. Both these terms refer to the money a woman receives at the time of her marriage.

10 My observations also revealed that women often appeared to be the worriers in the business while husbands often project an air of light heartedness and indifference.

11 Commonly used throughout Taiwan, rotating credit clubs were often established between friends, relatives, and co-workers as a way of quickly raising needed capital. As a rule the founder of a club was often an individual most in need of immediate funds and would be the first to receive a loan from the group.

Although varying in size, most clubs averaged between 10 and 20 members. The club would remain in existence for as many months as there were members. Each month, all but one member must pay in a set amount of money to the club. During the first month, the founder, along with group members, decided on how much money each will provide per month. For the first month, each member gave a set amount (say NT\$5,000) to the founder

who may or may not be required to pay interest to each member. During the second month, group members would meet again and decide which member would receive the money for that month. This was decided by a secret bid, in which each member submits how much interest on the loan they were willing to pay. Those who give the highest bid (say 15%) were often individuals most in need of cash. Once the bid was won, each member then gave the winner the set amount (NT\$5,000). During each subsequent month, members did not won the bid, repeat the process and receive their money. As each month goes by, those who have already received a loan, pay in the set amount (NT\$5,000 plus interest).

12 Unfortunately, however, when pressed for greater details about how much, when, and by whom investments were made, most respondents generally gave vague answers or said they could not remember.

13 It is my belief, furthermore, that these terms are often too static to allow for kinds of variations that occur over time and socio-economic contexts.

THESIS
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**THE PAPER MAKERS OF PULI:
SUBCONTRACT MANUFACTURING IN TAIWAN'S
HAND-MADE PAPER INDUSTRY**

Volume II

By

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A DISSERTATION

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CHAPTER VI

A HISTORY OF THE HAND-MADE PAPER INDUSTRY IN PULI

The history of hand-made paper production in Puli is, for the most part, based on a compilation of interviews with workers and factory owners involved in the industry since 1935. These recollections have become, without a doubt, somewhat distorted with time. What little documentation exists is often derived from a few "mini-autobiographies" of large factory owners who have sought to preserve for posterity their often embellished role in the industry. Needless to say, these selective versions of history often omit important and sometimes disparaging information about certain individuals involved in past events. Whatever the nature of the data, however, these distortions are important not always for what they might say about the past, but for what they can tell us about the current attitudes and behavior of individuals in the industry. I have generated a generic view of the industry by evaluating the glorification of the past and the "gossip" of the present against information from informants who, I believe, have little reason to twist past events.

This chapter is divided into four sections, each of which documents important periods and events in the industry. While most of these events do not always seamlessly thread their way from one section to the other, I address some specific themes throughout the chapter. For example, data on the export and labor market are included (when possible) near the beginning of each section so as to provide a "road map" of where the industry was heading during a particular period. As indicated in the introduction to the thesis, changes in the

market offer a number of important clues which can be used to delineate change in the rest of the industry. The presence of these guides, furthermore, helps to form a base from which to examine changes in the nature of production relationships, particularly the emergence and subsequent dissemination of subcontracting relationships in the industry. Finally, except for the first two sections in this chapter, I generally refrain from mentioning specific companies or individuals. I believe that adding a cast of characters to the dissertation, at this point, would only serve to confuse and draw the reader away from the other issues I address. I do return, however, to a discussion of individual players in the industry in the case study in the chapter which follows.

The first section of this chapter, Section A, begins with a discussion of the origins and commodification of paper production in Asia and ends with the establishment of the first hand-made paper company in Puli during the Japanese occupation. Section B traces the reconstruction and expansion of the industry from the post-war period to 1969. This section focuses primarily on the actions of a few determined factory owners who, with considerable foresight, were able to see the importance of moving beyond the production of paper to the marketing of their own product. By establishing these important market connections, a few of Puli's producers were able to bypass middlemen in the industry and position themselves as key producers, traders, and marketers of hand-made paper.

This theme is continued in Section C where I show how these market connections provided a base from which this elite group of factory owners could erect market barriers in the 1970s. These barriers effectively separated the growing and lucrative finished product market in Japan and the market for raw materials from a new group of small factory owners who set up shop during the 1970s. These new producers, however, were not blocked from becoming

"producers." With their access to the market effectively obstructed by Puli's elite "center factories," these small producers had no recourse but to become subcontract manufacturers: a new productive arm for the elite. While the center factories continued to dominate the industry throughout the 1970s and 1980s, some of their subcontractors eventually made a move toward greater capital accumulation and autonomy in the 1980s.

Section D, therefore, chronicles the social and economic changes which took place in the industry in the 1980s that allowed subcontractors to implement specific strategies which brought them into a stronger position in the production process and the market. While some subcontractors managed, at least, to temporarily increase their incomes and leverage in the industry vis-a-vis the center factories, most small producers saw their business begin to disintegrate toward the end of the decade. In the face of rising labor costs, a labor shortage, and competition from emergent foreign producers of hand-made paper, many of Puli's smaller companies went out of business. Only those companies lucky and shrewd enough to secure a Japanese buyer for themselves, and/or able to move their operations to cheaper labor markets overseas, would be able to survive into the 1990s.

A. HAND-MADE PAPER PRODUCTION TO 1945

The commodification of hand-made paper in East Asia

Puli's contemporary hand-made paper industry was an outgrowth of a long history of both the Chinese and Japanese paper-making traditions. These traditions have helped shape not only the nature of the production process but also the nature of the commodity produced and marketed in Taiwan and East and Southeast Asia. Before discussing the contemporary technical or physical aspects of paper production in Puli, however, I provide a brief synopsis of the development and commodification of paper in Asia.

It is generally believed that the invention of paper can be traced to a bark cloth culture which was widespread in prehistoric China and Southeast Asia. Bark was one of the few malleable materials readily available to people throughout this region and it was initially used for clothing. Sometime after 1,500 BC, however, the Chinese began experimenting with iconography and painting using wood, bark, bone, and pottery as a medium for their creations. While bone and pottery did not deteriorate as did wood and bark it was, nevertheless, a difficult material upon which to paint and write.

Perhaps frustrated by the limitations of bark, wood, bone, and pottery upon which to write an ever expanding and complicated lexicon of images and crude characters, about 2,000 years ago the first scribes and calligraphers in ancient China began experimenting with a new form of "manufactured" writing material. These craftsmen created a flexible and fairly smooth writing material by "floating" a combination of pounded fibrous materials such as silk, flax (some of which were in the form of rags), bark, and straw in vats of water; the character for paper *chih* 紙 contains within it the radical for silk. Once thoroughly mixed and softened, the pulp was then lifted out on bamboo mats

and left to dry. While not an ideal writing surface, the paper was at least somewhat pliant and easily took the inks and dyes already developed for inscription on bone and pottery .

It is popularly claimed that paper was invented sometime in 105 AD by Ts'ai Lun 蔡倫, a scribe, who lived in Hunan province during the Han Dynasty (*Chung Kuo Tsao Chih Shih Hua* 1985:32). A number of archaeological finds in Northwest China in the 1970s and 1980s, however, turned up paper artifacts which may actually predate the "invention of paper" by some 200 years. It is also equally likely that paper may have been produced at a number of different locations with no one individual responsible for its development (1985:25).

By the 3rd century AD, Chinese craftsmen had improved upon their paper pulps by using a number of varieties of processed tree bark to manufacture paper (among them mulberry bark, one of the primary materials which is still in use in China, Taiwan, and Japan today) (Figure 6.1)(1985:250). Craftsmen also refined their manufacturing techniques of *dredging* (referred to in Chinese as *lao chih*) paper from vats of paper pulp onto flat boards to dry (Figure 6.2).



Figure 6.1. Pounding of Tree Bark Into Pulp
Source: Chung Kuo Tsao Chih Shih Hua 1985: 53.



Figure 6.2. Dredging of Large Paper by a Two-Man Team
Source: Chung Kuo Tsao Chih Shih Hua 1985: 70.

As each successive dynasty in China strove for immortality through record keeping, great emphasis was put on the manufacture of new kinds of paper by the Chinese state. Various types of paper came to be equated with specific dynastic periods and each was almost always an improvement on the former. The manufacture of these "dynastic papers" created a governmental monopoly over the production of fine paper for the first 600 years after its invention. It was not until the 8th century, in fact, that paper appears to have become a commodity available to the public and less of a luxury item reserved only for the nobility.¹

Dissemination of paper production

Paper was first introduced into Korea and Japan by China sometime during the Western Ch'ing Dynasty late in the 3rd century AD.² By the 8th century, paper making technology made its way into the Middle East, and was eventually introduced in Europe during the 12th century. It was not until the 20th century, however, that paper making all but ceased as a skilled handicraft in the west when machinery was built to mass produce paper of all grades and thicknesses.

Despite the great popularity of machine-made paper throughout the world, hand-made paper remain an important part of the East Asian economy and culture. Machine made paper had its place in institutional and industrial markets, but hand-made (or more popularly known in the west as calligraphy or rice paper) remained the favored material for painters, calligraphers, and craftsmen.

In the early 1900s in Japan, for example, a sudden upsurge in machine-made paper production in that country caught the attention of western paper

producers who had long dominated the Asian market. But they also found that machine-made paper was not the only thriving paper trade. In an article in the *Far Eastern Review* in 1919, a reporter noted that Japan actually had two distinct paper industries, machine-made paper and traditional Japanese paper. The former was strictly a capital-intensive, factory-based industry while the latter was principally a labor-intensive, hand-made household industry (1919:517). Intrigued by an activity which appeared "primitive" by western standards, the journal noted that much of hand-made paper production was confined to a small number of Japanese prefectures, each producing papers with distinct uses and grades. A large portion of the paper produced in Yamato Prefecture, for example, was used in the lacquer industry while papers produced in other areas were exported to China for use as calligraphy paper.³

While hand-made paper continued to be produced in China well into the republican period (from 1911 on), numerous economic, social, and political problems in the region and the war with Japan eventually took a toll on paper manufacturing on the Mainland. In some areas where the communist party was in control, a few cooperatives were formed around what were previously privately owned paper factories. But despite these efforts, severe economic hardship during and after the war virtually brought the manufacture of quality hand-made papers to a stop. The paper business would not recover in Mainland China until well into the 1980s. I will return to a discussion of hand-made papers from Mainland China later in the thesis.

The fact that hand-made paper was manufactured in Japan and exported to Mainland China in the early 1900s, speaks to how quickly a basic commodity like paper could be caught up in the changing political and economic fortunes of the region during that period. Long paralyzed by foreign imperialist powers and their treaty ports, the Chinese found themselves reduced to exporting raw

materials while the production of even the simplest commodities (once indigenous to the region) were left to outsiders.

It is little wonder that, with the Chinese economy on its way to ruin since the late 1800s, Japan had become a major producer and exporter of hand-made paper in the region in the first half of the 1900s. By the time the first hand-made paper company was founded by Japanese entrepreneurs in colonial Puli in 1935, furthermore, is it safe to say that the paper produced there was very much a commodity structured on Japanese production methods and geared toward a colonial market.

Hand-made paper production in Puli during the Japanese period

Prior to the arrival of the Japanese in 1895, most of the hand-made paper made on Taiwan was not widely sold as a commodity for artists, craftsmen or calligraphers. Rather, hand-made paper was produced in the absence of more expensive machine-made papers which would have been imported from Japan or the west; the hand-made paper was, therefore, for everyday use. Following the Japanese occupation, however, the colonial government and Japanese entrepreneurs eventually established a few machine-made paper plants on the island. While generally of a higher quality than locally made papers, the Japanese machine-made papers were considerably more expensive than those produced by hand. Japanese machine-made papers were so expensive and scarce, for example, that the majority of paper factories in the area of Nantou County continued to produce inexpensive hand-made papers for everyday use (e.g., toilet, document, and ghost paper burned during religious rituals) well into the 1920s. Although there may have been as many as 40 small hand-made paper factories located in the county at this time, it is not known what percentage of these factories were Japanese or Taiwanese owned.

While the production of hand-made paper in small family-owned factories was fairly widespread in central Taiwan, a Japanese owned hand-made paper plant was not established in Puli until 1935. During that year, a Japanese merchant by the name of Yien-an came to Puli to establish a toilet paper factory. He was drawn to the area, as were other entrepreneurs who came to the area from the nearby cities of Taichung, Lukang, and Chang Hua, by Puli's reputation as a place to make fast money. But Yien-an had probably also been drawn to the basin because he also heard that Puli had ample supplies of cheap labor, pure water, and raw materials that could be easily obtained from lumbering operations in the nearby mountains.⁴

Yien-an established his factory about 3 kilometers from the center of town (the main market area) on the southern perimeter of Ta Ch'eng village. Situated precariously on a small flood plain about 100 meters from the Nankang River (see Figure 4.6), Yien-an channeled water under his factory along a sluice-way that was configured to take water from the "tail" section of the irrigation system which ran next to the factory. This irrigation system originated at the Mei River to the north-east and ran diagonally on a southwestern tack through the basin reuniting in Ta Ch'eng Village just north of the Nankang River. The sluice system served to bring water into the factory for the manufacture of paper pulp and to remove waste from the site. Despite Yien-an's clever use of water, he knew little about making paper and even less about good management. In the end, he was forced to sell the factory after operating it for one year.

The second owner of the factory was a local Japanese businessman who ran a laundry in Puli. In contrast to Yien-an, this entrepreneur envisioned producing more profitable hand-made art and calligraphy paper which could be sold to wealthy Taiwanese and expatriate Japanese living in Taiwan. After

spending considerable time and effort experimenting with how to make calligraphy paper, he too failed to successfully organize its production. With little in the way of profits from the existing toilet paper operation, the business foundered yet again.

In 1941 the factory was sold to a third Japanese, Mr. Ta, a retired mid-level tax collector from the southern city of Tainan. Naming the factory *Puli Tsao Chih So* 埔里造紙所, Mr. Ta also believed that calligraphy paper could be produced at the factory and at a higher profit than that derived from general purpose papers. The basin area had all the necessary raw materials (i.e., several varieties of long-fibered tree bark, bamboo pulp, and rice straw), local water was the proper acidity, and the year-round air temperature and humidity were well suited to paper making. To ensure his investment, however, Ta hired two paper technicians from Japan and, in 1943, invested in a Japanese manufactured pulp beater. The beater was powered by a water wheel mechanism attached to the sluice-way running underneath the factory. Prior to the end of World War II, Ta's factory was producing calligraphy paper for the Taiwanese market and, with over 100 workers, was one of the largest companies in the basin.

Workers and entrepreneurial aspirations during the Japanese period

Workers who labored as paper makers in the 1930s report that the Japanese factory was not large and was constructed out of red brick, mud brick, and bamboo. Inside the factor, lighting was poor and the ground constantly wet. Primitively equipped, the washing, soaking, and dredging vats were made of mud brick and wood planking, which always seemed to leak, and the drying tables were made of thin sheet metal, below which individual wood burning mud brick ovens were used to heat the metal table top.

Although they remember little about the actual operation of the Japanese factory, some older laborers vividly recollect the day-to-day drudgery of their work. "In those days," according to one older paper maker, "it took us days just to prepare all the ingredients to make a batch of paper. Our hands would often bleed after constant handling the wet tree bark, bamboo leaves, and rice straw." After hours and sometimes days of soaking, most raw materials had to be pounded by hand with wooden mallets, cleaned, bleached, and cut and mashed into paper pulp fine enough to be suspended in a tub of water from which the paper was dredged. "We would be lucky to make 500 sheets of paper in one week," said a retired worker. "It was long hard work and we had little to show for our effort at the end of the day. Only after we got the Japanese beater, were we able to make more paper because we had more time for production."

Most of my older informants indicated that the Japanese bosses treated them fairly well. The antagonism between Taiwanese and Japanese which was prevalent at the beginning of the Japanese occupation, seems to either have diminished by the mid-1930s or simply was not carried onto the factory floor. Most workers in the factory were young men and women who had spent all their lives under Japanese administration. They could speak Japanese and many had come to accept Japanese rule as a permanent condition in their lives.

In an interview with a local journalist in 1989, one old worker boasted that, after starting at the Japanese paper factory at the age of 17 in 1936, he quickly learned the ins and outs of paper production and was trusted with the formulas for paper-making. His Japanese boss soon promoted him to the position of technician and, by 1943, he was earning more than twice the wage of local policemen and was "treated like a V.I.P." (*shang ping*) by the Japanese owner.⁵ Apparently he learned so much under the Japanese that, after the war,

he went on to establish his own machine-made paper factory in Tainan City to the south.

New possibilities

Despite the fact that only one paper factory was in operation at the end of the Japanese occupation, its ultimate success demonstrated to many Taiwanese workers and local entrepreneurs in Puli that forestry or agriculture there was not only way to earn a living in an industrially barren region.⁶ Boxed in by mountains and isolated from industry in the rest of Taiwan, Puli's growing population found it increasingly difficult to make a living on a finite area of land. According to an older informant who worked in the Japanese factory, some workers felt that one day some of them might be able to become their own bosses and own paper factories. In contrast to sugar refining or logging, paper production required little in the way of capital, was labor intensive, thus necessitating no more than three or four workers. It was, by its very nature, an industry well suited to entrepreneurial activity.

As illustrated by the story above, many workers were exposed not only to the technical aspects of factory production but also to factory management and, in a few cases, to some aspects of sales. It was also obvious that one could make money producing paper, one worker reported. He emphasized, however, that money could only be made when customers could be found beyond the basin. As had always been the case in Puli, those entrepreneurs who understood the importance of markets beyond the basin were often the most successful. Whatever the case, the entrepreneurial aspirations of local Taiwanese would have to wait until after the end of World War II when economic and political conditions on the island returned to some semblance of order.

B. POST -WAR RECONSTRUCTION OF THE HAND-MADE PAPER INDUSTRY: 1945-1969

Following WW II, the Japanese paper factory was shut down, putting over 100 paper-makers out of work. As was the case throughout the island, the lucrative expatriate Japanese market disappeared and with it the capital to pay workers and to buy raw materials. Gone too were the Japanese technicians and managers who helped run the factory and upon whom the industry was so dependent. Workers from the old Japanese plant wondered what would happen to their jobs and the factory, and many hoped that the plant would be turned over to local control.

Despite the social and economic chaos of the period, the entrepreneurial aspirations of a number of these workers and local entrepreneurs carried over after the war. True, most Taiwanese were left destitute, having neither the time or money to indulge in writing calligraphy or painting. There seemed little reason why anyone in Puli would want to invest scarce capital in hand-made paper, and it made no sense to make paper by hand which could just as easily be made by machine. Many people in Puli familiar with the paper industry before the war, however, witnessed the mistakes and successes of the three Japanese owners of the only paper company in the basin. One old worker told me that by the end of the Japanese occupation, "we saw that our Japanese owner was making a lot of money. Those of us who had worked at the factory since the 1930s all knew that we could also make money if we owned our own place." These hopes began to fade, however, as mainlanders from the KMT began settling into many of the administrative jobs in Puli once held by Japanese bureaucrats.

The workers' fears were realized when the Nationalist government took control, essentially nationalizing the paper factory's property and making it a branch or affiliate *fu shu tan wei* 附屬單位 of a newly formed government paper monopoly based in Taichung City.⁷ Having appointed themselves the new guardians of former Japanese possessions on Taiwan, the government placed a mainlander in charge of the paper factory, ignoring the wishes of former workers and local leaders. With no market for calligraphy paper left on the island, government bureaucrats refitted the factory to produce paper pulp (for use in making everyday papers) using raw materials from the nearby mountains.⁸ For four years the government-owned factory made pulp, but without the personnel who had the management or technical skills, the factory was not operated profitably. Finally in 1949, the factory was sold at public auction to the son of a gynecologist who lived in Puli.⁹

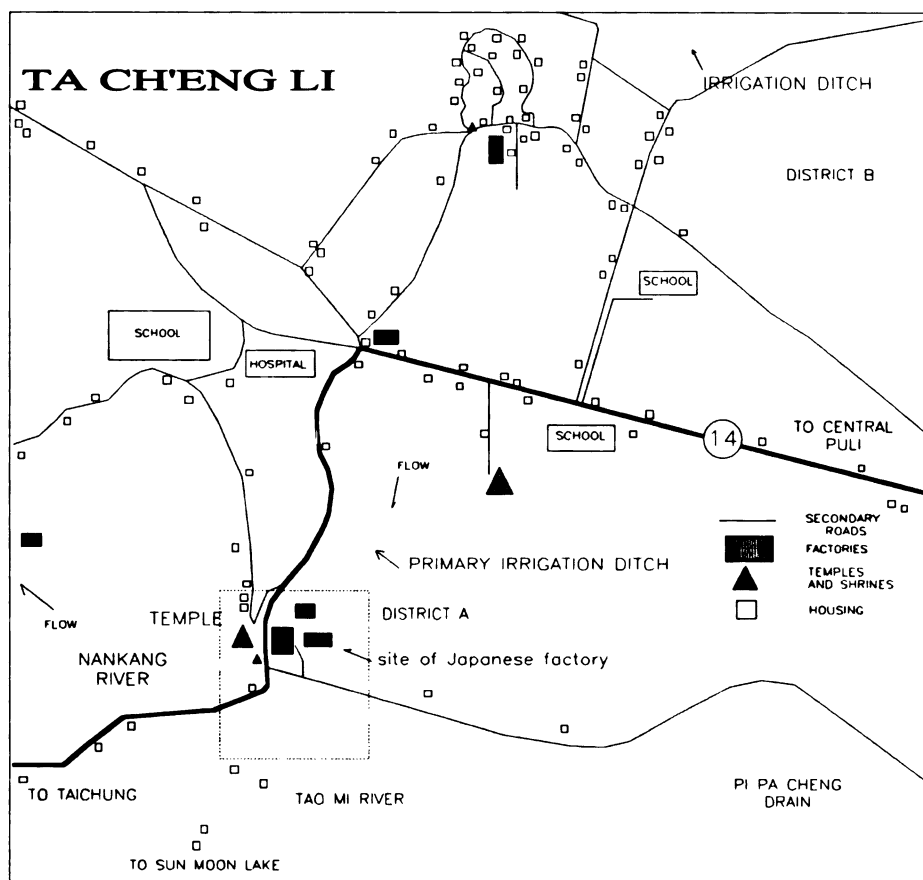
Puli's first Taiwanese-owned paper companies

Angered at the way in which the KMT annexed what many workers and local townspeople considered "their factory," two unrelated Taiwanese workers from the former Japanese-owned plant formed a partnership with a local pharmacist to start a second paper company in 1948. The pharmacist provided the bulk of the start-up capital for the new venture, while the two factory workers contributed most of the technical know-how. In contrast to the former Japanese plant, their factory was located over an irrigation canal close to the center of Puli.

Despite the combination of skills and capital, the company operated at a loss and, after four years in operation, barely provided an adequate income for the three partners and their families. Only the pharmacist could fall back on his pharmacy business for extra income when the paper business started to falter.

By 1950, the company could no longer maintain all the partners; and the pharmacist bought out his two associates and became the sole owner of the company.¹⁰

Despite the buy-out, one of his former partners, Mr. Hsieh, still hoped to own a factory. But the proceeds he received from the buyout were not enough to cover the cost of starting a new operation. Hsieh, thus, had to wait until 1954, when he had saved enough money and found a new partner willing to put up additional funds to finance a new paper company. The men then bought a small section of land that was only a few meters from the old Japanese paper factory located on the banks of the Nankang River (Figure 6.3).



**Figure 6.3. Map Of Ta Ch'eng Village Area and Six of Puli's First Paper Factories:
1945-1969**

Note: The map is not an approximation of Puli during the period between 1945 and 1969. It's primary purpose is only to show the location of some of Puli's earlier paper factories in the Ta Ch'eng area.

Why Hsieh decided to set up his factory in this particular place is not entirely clear. One explanation maintains that Hsieh's new factory could make use of the same irrigation canal which ran under the old Japanese plant (now owned by the son of the gynecologist). Another more plausible explanation for building a factory so close to another factory, however, came from Mr. Hsieh's son. He speculated that his father wanted to "catch the customers" who came to visit the larger paper plant next door.¹¹

The factory that Hsieh built was, according to other factory owners in Puli, a makeshift arrangement. Old pictures from the 1950s show a factory building constructed of bamboo and thatch, no more than 15 to 20 meters in length. Apparently, Hsieh had so little capital, he could not afford any machinery to help prepare the pulp for dredging and he only had about five dredging tubs made from wooden planks. "It was barely a factory," said an older informant. "It was so primitive that you would have thought you were back in ancient China." So flimsy was the structure that, in 1959, when a typhoon swelled the Nankang River, water obliterated the factory and Hsieh was out of business yet again.

The stories of the first Taiwanese-owned paper companies in Puli were often repeated by the older men in the industry to anyone willing to listen. Many of these stories were heavily garnished either with tales of entrepreneurial savvy or with sarcasm aimed at the foolish exploits of "would-be businessmen." With so many companies going in and out of business between 1945 and 1969, it was not always clear how many factories were actually started, or by whom. Based on the recollections of my informants there may have been as many as fourteen companies established during this period, but only between eight to ten companies were probably still in operation at the end of the 1960s (see Table 4.3).¹²

Partnerships

As touched upon in Chapters IV and V, there was evidence to suggest that many factory owners used partnerships to make up for shortfalls in family labor when firms were established in the 1940s, 1950s, and 1960s (and even into the 1970s). Partnerships also appear to be to have been formed because most entrepreneurs lacked certain technical skills and the capital to establish their own firms. In most cases, partnerships were established with someone from outside an immediate kin group. One factory owner told me that when he first started his factory his oldest son was under ten years of age.

I had to rely on my own labor and the labor of my wife and a few of her relatives. But the labor of my partner and his wife was critical. You see, none of us at the time had children old enough to work ... and at the very start of the factory we relied more on our own unpaid labor than anything else.

Another older worker, who briefly became a boss in the 1960s, told me that many of the men who worked together in the older factories were friends.

When we wanted to start our own company, a partnership became the most practical way of setting up an enterprise. We all lacked the necessary capital in those days, so many of us had to draw funds from a number of different sources in order to buy equipment and raw materials. Some of us also sought out partners who were particularly skilled at making certain kinds of paper or who knew something about negotiating sales. The most important thing, however, was that we held equal shares in the enterprise.

In a few cases, "pseudo-partnerships" were formed between affines.

One man reported that when he went to work in his brother-in-law's factory, his sister's children were not old enough to work. While he was not a partner, he was treated like one.

My brother-in-law treated me like a family member. I also served as a factory manager, salesman and, above all, a worker. My wife also worked for my brother-in-law, as did his sister. But when the eldest son became old enough to help run [manage] the factory, I knew it was time to leave.

Not surprisingly, few partnerships survived for very long. At least half of the factories begun as partnerships between 1945 and 1969 failed after a few years of operation. Many of these companies simply lost money thereby forcing *all* partners out of business. In other cases, however, at least one member held a greater monetary interest in a new enterprise than others, as was the case with the pharmacist discussed above. According to the son of one poor partner,

In those days the paper factories were very small [with perhaps only half a dozen tubs] and they made very little money. When profits at the factory declined, the poorer partners suffered the most while the wealthier one often had other sources of income to help him out. I think this was the case with my father. He needed money just to feed his family so he had to sell out.

Other individuals in Puli had their own interpretation of what might have happened to this factory owner almost 40 years ago; a few people thought Mr. Hsieh was an alcoholic (*chiu kwei*). Many believed, for example, that most entrepreneurs just wanted to operate their own business without having to negotiate and work with someone else. Many owners and workers in the paper industry felt strongly that most people wanted to be their own boss.

Many of these bosses think of themselves as little emperors and it gives them face (*mien tzu* 面子) to be able to order people around and have control over everything. You know, I think it is almost impossible for two bosses to stay together very long in one small company; their egos are too big.

Echoing this appraisal, an older factory owner reported that,

When the business is just starting out everyone works together. But once the factory makes some money then disputes arise because no one is sure who really controls what. Taiwanese often have a hard time working together and working out their problems.

Whatever the reasons for the failure of these partnerships, one widely held opinion in the industry that made considerable sense. Whenever a poorer, less-educated entrepreneur became a partner with a wealthier, better-educated partner, the former one eventually lost out. One informant said that many of the paper workers were not well educated and relied on the honesty of their richer partner to "fix" everything. When I asked him if any contracts or other agreements were signed in those days, he replied, "Absolutely not. Every agreement was a verbal one. To ask for a contract of some kind would mean you didn't trust your partners."

The market for finished paper and the pressure of rising wage rates

The exodus of the Japanese from Taiwan and the difficult economic conditions faced by most Taiwanese in the post-World War II period completely undermined the market for Puli's high quality calligraphy and art papers. The post-war paper company owners, therefore, had to come up with new products which the local market needed and could afford. The demand for cheap, low quality papers with more practical applications than calligraphy or art paper forced the first post-war factories to produce large quantities of ghost paper, firecracker paper, tea bag paper, cigarette paper, hair permanent-wave papers, paper board, low-grade document paper, and paper used in various industries.¹³

Despite the low profits garnered from producing these papers, their manufacture easily dovetailed with a capital-poor labor-rich economy in which such a labor-intensive industry could be temporarily sustained. In the immediate post-war years machine-made papers remained expensive in Taiwan. In fact, it is possible that the only reason paper-making survived during the post-war period was because wages were low throughout Taiwan. With an abundance of cheap labor in the basin, low quality hand-made paper could still be made at a profit. "Most of us were living month to month in the 1950s and 1960s," said one owner.

If we had the money to invest in machinery, which we didn't, few would have done so. We all had a hard enough time just paying for raw materials and meeting our payroll. Had we had loans on equipment to repay at the same time, we would have gone bankrupt.

Enjoying a competitive advantage after the war because labor was so cheap and machine-made paper expensive, one older owner commented that instead of using machines, "we used men to make paper." He went on to point out, however, that sometime between the early and mid-1960s, a growing number of paper companies in other places in Taiwan began purchasing machinery to make much of the same paper made in Puli.

It was not long after that, that machine-made paper became much cheaper in Taiwan, making it difficult to compete only with labor. What we needed and waited for was the market for hand-made *art and calligraphy paper* to return to Taiwan so that we could make some profit. These papers could not be made by machine so we wouldn't have to worry about that kind of competition (*italics added*).¹⁴

By the mid-1960s, therefore, increased investment in Taiwan's machine-made paper industry had the effect of lowering prices for many types of paper produced by hand in Puli. That is to say, by sharing the same market for some types of paper, competition from the growing supply of cheap machine-made papers gradually cut into the market for paper that could be made either by machine or by hand (particularly with respect to certain types of industrial papers).¹⁵

Unable to isolate themselves from the economic transformation going on in the rest of the island, factory owners in the hand-made paper industry in Puli were also gradually forced to give into wage demands which were more in line with the rest of the island's industrial wage rates. Nevertheless, wages remained lower in Puli than in more industrialized urban areas. In addition, because there were few industrial jobs in the basin, a growing number of workers were forced to leave the area to seek employment in large cities. By the mid-1960s, factory owners in Puli were becoming concerned about the longevity of the market for the inexpensive types of hand-made paper (given the increased competition from machine-made papers and rising wages), and realized that new markets for higher value-added papers had to be found.

Fortunately for the industry, as cheap hand-made papers began to lose their marketability the market for more profitable hand-made art and calligraphy papers slowly began to show signs of improvement. While their recollections remain somewhat vague, factory owners in business during the 1960s indicated that buyers from overseas markets in Hong Kong, Singapore, and Korea (where there was a strong tradition of using hand-made art and calligraphy papers) also began to buy paper in greater quantities than in the 1950s and early 1960s.¹⁶ Puli gained such a good reputation for the production

of paper overseas that, by the late 1960s, more than half of the paper produced in the basin was manufactured for export.

An early attempt at cooperation

Although low wage rates may have helped many of Puli's paper companies survive the post-war period, profits were generally low and competition between owners intense. For the most part, the companies produced the same inexpensive, low-grade papers, which served to increase competition. When buyers came to Puli, they could often force down the price of paper simply by threatening to take their business to a competing company.

With only six or seven paper companies in operation the early 1960s, these competitive pressures most likely contributed to the high turnover-rate of new paper companies in Puli. Competition during this period also underscored the vulnerability and powerlessness of producers of hand-made paper in the market. The insecurity apparently had such a pernicious effect on the industry that, rather than fall prey to the divide-and-rule strategy of buyers, a few factory owners began to cooperate.

Several informants remember one notable attempt at cooperation which occurred during the early 1960s. While they remain uncertain whether this was the first effort at cooperation between company owners, all agree that this case was the most noteworthy, not because of what went right but because of what went wrong. What was also significant about this episode was the extent to which it affected future relationships between factory owners in the industry. As one informant revealed, "the soured deal had a lasting effect on future relationships between the factory owners in Puli. Factory owners came to see each other as cheaters who could not be trusted." Moreover, he emphasized, whenever thereafter someone made a suggestion that factory owners cooperate

and work together, everyone would talk about this incident and question who would actually benefit.

The now infamous undertaking first began when buyers from one of the industry's largest customers, the government-owned Taiwan Power Company, made their annual trip to Puli with a large order for paper used in transformer boxes. Apparently, Taiwan Power had a reputation for pitting one factory against another in order to force down the price of paper. No one was ever happy with the price offered by the Company, but there seemed to be little that could be done to fight back.

With the arrival of Taiwan Power's buyers in Puli, one paper company boss (referred to hereafter as "the third factory owner") proposed that the three competing paper companies get together and set a non-negotiable price for their paper. The electric company would have no idea what was going on and, even if it did, it would still have to buy paper from at least one of the companies.¹⁷ Although wary of the proposed deal, the two other producers went along with the scheme.

The plan began to go awry, however, when a typhoon hit the island. The storm was so severe and the flooding so extensive that much of the available raw material used in making the transformer paper was destroyed. To salvage the deal, two of the paper producers proposed that the three companies should share the burden and buy new raw materials as a group.¹⁸ Unbeknownst to the two, however, the third company owner had already begun to negotiate with a Filipino company to supply his company with the necessary raw material.¹⁹ Reluctant to cut into his own profits, the third company owner was unwilling to divide the cost of the raw material with the other two owners; he could make more of a profit by selling the materials to his "partners" outright.

As the dispute over the cost of the raw materials wore on, the two other factory owners went ahead and offered their pre-arranged bid to the electric company. The third factory owner, however, cast a lower bid, thereby undercutting the pre-arranged price. When the lower bid came through, the two factory owners were furious and accused the third owner of trying to cheat them out of the deal.

One informant told me that there was most certainly a lack of communication between owners in the group. The fact that one company was "secretly" negotiating for the purchase of raw materials, however, did raise some questions in the industry as to whether the third owner actually had any intention of cooperating in the first place.

There were, of course, a number of other less calamitous "incidents" between factory owners throughout the early years of the industry. For example, I heard stories of machinery sold by one factory owner to another, but never paid for. And there were dozens of stories about how one owner would try and steal customers and workers away from another owner or undercut a competitor's price for paper. These and other similar practices helped to create an atmosphere of suspicion and mistrust between factory owners which appears to have lasted to the present day. While I heard that some other attempts were made over the years to get owners to at least talk to each other, intense rivalries remained the norm.

The third factory owner's purchase of raw materials directly from an overseas supplier not only served to generate enmity between factory owners in Puli but it also marked one of the first attempts by an owner to "go it alone" in the market. Rather than passively wait for a Taiwanese trading company in Taipei to secure new supplies of raw materials, this particular owner took the

initiative to bypass the middlemen and establish a business connection with a supplier beyond Taiwan's borders.

While the move took most other company owners in Puli by surprise, some factory bosses not only praised the cleverness of the boss who first thought of making this connection, but also began to rethink their own status and position in the industry beyond the level of "producer." As the sections that follow show, there was a growing trend in the mid- to late 1960s among some of Puli's paper producers to seek access to the market for both raw materials and finished product.

Development of Trading Relationships and the Removal of the Middleman

Throughout the 1950s and early 1960s, the arduous and sometimes hazardous trip from Taipei to Puli discouraged many small and medium sized customers from traveling to the area. Like many small industries throughout Taiwan, most of Puli's factory owners thus relied on small trading firms in the cities to provide them with orders. "Why would anyone want to come to Puli when anyone could sell [our] paper from an office in Taipei?", one factory owner said rhetorically. Nevertheless, their dependence on outside trading firms in Taipei never sat well with many of Puli's factory owners. As one older factory owner reported when the boss of a trading company came to Puli, "we never really knew what was going on and we never knew how much of a profit the trading company was making."

As domestic and overseas export markets in Hong Kong, Korea, and Singapore grew in importance in the mid-1960s, some of Puli's paper companies moved to secure a more direct connection to their customers. How and in what manner these connections were made helped determine which

paper companies in Puli would eventually grow and prosper in the industry and which would stagnate and fail.

One of the most successful strategies to forge a connection with buyers was to establish a small trading office in Taipei, thereby cutting out the middleman. Both domestic and international buyers could go directly to a paper company's Taipei branch trading office to negotiate a deal. The establishment of a trading office in the city, however, required capital, a trading license, and a trustworthy and competent person to do the job. There were, therefore, only a few paper companies in Puli able to pull together the necessary money and personnel to do just that.

With the establishment of branch offices in Taipei, the isolation imposed by Puli's location dissipated. For the first time, a few paper companies were able to trade their goods in a market which was much larger than anything ever before experienced. By dealing directly with a customer rather than with a trader, they were able to determine more accurately what was in demand and which prices would float on the market.²⁰ Entrance into the market allowed some of Puli's producers to establish a direct link with customers and enabled them to build business relationships (*sheng i kuan hsi* 生意關係) critical to doing business in and beyond the confines of Puli and Taiwan.

In addition to these new connections, some factory owners also researched the market for raw materials and were able to establish relationships with suppliers of those materials. These connections became even more important as the availability of raw materials in Puli began to decline and as the search for raw materials became necessary for the production of newer and better varieties of paper. Further, these few factory owners learned about other business opportunities available to them. It was thus not uncommon for them to branch out into real estate or to invest in other sectors of the economy which

were completely unrelated to paper-making. This initial foray into the realm of sales, marketing, and the procurement of raw materials by some of Puli's wealthier producers helped them to solidify their position relative to other smaller producers in Puli by blocking many of Puli's smaller "unconnected" producers from access to the market.

Consolidating the market and consolidating power

Faced with low profits, rising wage rates, competition, and growing market barriers, many of the approximately 14 companies failed, forcing a number of entrepreneurs to try two or even three times before finding success in the industry. As a result, only about ten paper companies survived into the 1970s. Many in the industry liken the 1940s, 1950s, and 1960s to a kind of "shake-down" period. Factory owners sized each other up, tested the waters in terms of cooperative deals (most of which failed), and attempted to gain advantages over competitors. "These owners were tough", says one younger company boss who started his own operation in the 1970s. "I'm not so sure I could have survived if I opened my factory during that period."

It is unclear how many paper companies were able to take the propitious step and set up a trading office in Taipei. The data do suggest, however, that by the end of the 1960s three to five paper companies had such offices, although an office might only be a single room rented in the city. Three to four of these companies, however, were large and well - enough connected to influence the purchase of raw materials and the sale of finished paper. That is, by the end of the 1960s, only three or four "elite" companies had established a foothold in the industry and either controlled or potentially controlled a large portion of the export market for paper in Korea, Hong Kong, and Southeast Asia.

These elites' position in the market at the end of the 1960s helped them gain unprecedented access to and control over the market for raw materials and the finished product well into the next decade. Elite companies which were able to acquire such control were in the position to establish themselves *at the center of productive and marketing activities* in Puli during the 1970s, earning them the label "center factory" (*chung hsin kung ch'ang*), a term I will use hereafter.²¹

C. THE JAPANESE EXPORT MARKET AND THE EMERGENCE OF SUBCONTRACTING RELATIONSHIPS: 1970-1979

The 1970s was a decade when the manufacture of hand-made paper gradually shifted from production for less profitable markets in the East and Southeast Asia to that for more profitable art and calligraphy papers for Japan. This shift created a new set of productive relationships and created the conditions under which the few *center factory* owners in Puli effectively manipulated the majority of small producers in the industry through subcontract manufacturing.

The purpose of this section is to show how changes in the raw material, product, and labor markets, and in the production process during the 1970s combined to reshape the industry; and to describe how the three or four elite factory owners who emerged at the end of the 1960s were able to position themselves as center factories and take advantage of these changes. I argue that were it not for the dramatic increase in the number of new small factories in Puli, however, the changes in the way paper was produced, in general, and the emergence of subcontracting, in particular, would probably never have occurred.

I begin the section with a discussion of the connection between rising wage rates in the industry and changes which occurred in the finished product market for hand-made paper. Following this discussion, I describe the formation of trading relationships between center factory operators in Puli and their Japanese customers, discuss the emergence of subcontracting during the 1970s, and analyze the nature of business relationships which emerged between subcontractor and center factory boss. This relationship, furthermore, was structured on an idealized, fictive kin relationship where center factory

operators tried to "personalize" and "paternalize" a connection which they knew to be inherently exploitative.

Changes in the Export Market For Hand-Made Paper and rising wage rates in the 1970s

Marketed as a hand-made, artisan commodity, the industry has had little choice but to follow a labor-intensive path throughout its long history. Most paper producers in Puli, long knew that as the industry grew and Taiwan developed they would have to incrementally raise the value of their paper in order to stay ahead of ever increasing wage costs.

We saw in the previous section that, prior to the mid-1960s, the cheap hand-made papers produced in Puli's factories lost market share to machine-made papers manufactured in Taiwan's new, capital-intensive factories. During this same period, the domestic and overseas markets for art and calligraphy papers which could only be made by hand began to grow, providing a temporary reprieve for producers in Puli.

With the approach of the 1970s, the bulk of the calligraphy, art, document, and backing paper (paper used to "back" or mount calligraphy paper to a scroll) was going to markets in East and Southeast Asia. While no sales figures were available for paper made for the domestic market, my informants indicated that after the 1970s, domestic sales of paper ranged from 10-20 percent of total production.²²

Two of the largest markets were Hong Kong and Singapore which together purchased 93 percent of the total export quantity of hand-made paper in 1972. These exports, however, accounted for only 80 percent of the total value of hand-made paper exports. Using a ratio of value (NT\$) over quantity (KG), the paper exported to these markets was rather inexpensive working out

to an average approximately NT\$7.2 per kilogram.²³ One old factory owner recalled that in the early 1970s, "every factory in Puli was making a lot of paper. But we were making money only because we were producing large quantities of low value-added paper which was then sold at a relatively low price."²⁴

Worried about rising wage rates and the lack of profits, Puli's producers realized that they had to find entry into the wealthiest markets in Asia, Japan, where there was a large appetite for hand-made paper and consumers willing to pay more for the product than those countries in the rest of Asia.

While Puli's paper bosses were looking toward Japan and the future, Japanese hand-made paper producers were growing uneasy about cheap labor in Taiwan and the future of their own paper industry in Japan. Faced with a serious wage crisis of their own, a few Japanese *buyers* came to Taiwan in the late 1960s in search of cheaper varieties of calligraphy paper which they could no longer profitably produce. Because there was no way to produce by machine what could only be made by hand, Japanese trading houses and wholesalers had no choice but to seek out low-cost labor markets where quality hand-made paper could be made.

Taiwan fit every condition most Japanese traders sought. It had a fledgling calligraphy paper industry which produced acceptable papers at a very low price. Although the quality of most of Puli's "high-grade" papers was barely acceptable to the Japanese, manufacturers had the potential to improve their product once buyers passed along the desired specifications; most Japanese buyers were actually interested in buying various grades and sizes of hsuan paper.²⁵ In addition to these advantages, Taiwan was close to Japan, a former colony and, most importantly, was home to a large number of older Taiwanese who spoke Japanese.

Sometime around 1970, a few of Puli's center factories perfected the production of hsuang papers and a small number of Japanese buyers began to purchase limited quantities. The benefits of doing business with this new market were immediately felt throughout the industry. In 1972 when the Hong Kong and Singapore markets purchased 93 percent of the total quantity of paper, the Japanese purchased only 1.3 percent. That small purchase, however, accounted for almost 10 percent of the total export value. While production costs were higher for paper produced for the Japanese, the profits gained were far greater than those for papers produced for the rest of the Asian market. Rather than paying an average NT\$7.3 per kilogram for paper, the Japanese paid an average of NT\$63 per kilogram (see Figure 6.4).

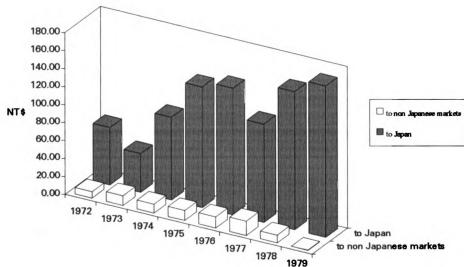


Figure 6.4. Disaggregated Export Sales Ratio (NT\$/KG) of Hand-Made Paper Sold to Japanese and Non-Japanese Markets: 1972-1979

Source: Chinese Maritime Customs, Taiwan area. Statistical Department, Inspectorate General of Customs, Taipei. These figures reflect the aggregate value of paper per kilogram which includes shipping, packaging, and other overhead costs.

Despite the high prices paid by the Japanese, export data for hsuan- type paper indicate that, after only a short period of initial growth in the early 1970s, there was a gradual decline in exports, ending in a disastrous year in 1977 (see Figure 6.5). Export data also indicate that, in relation to overall exports, Japanese buyers purchased paper (primarily hsuan paper) fairly inconsistently during the decade.

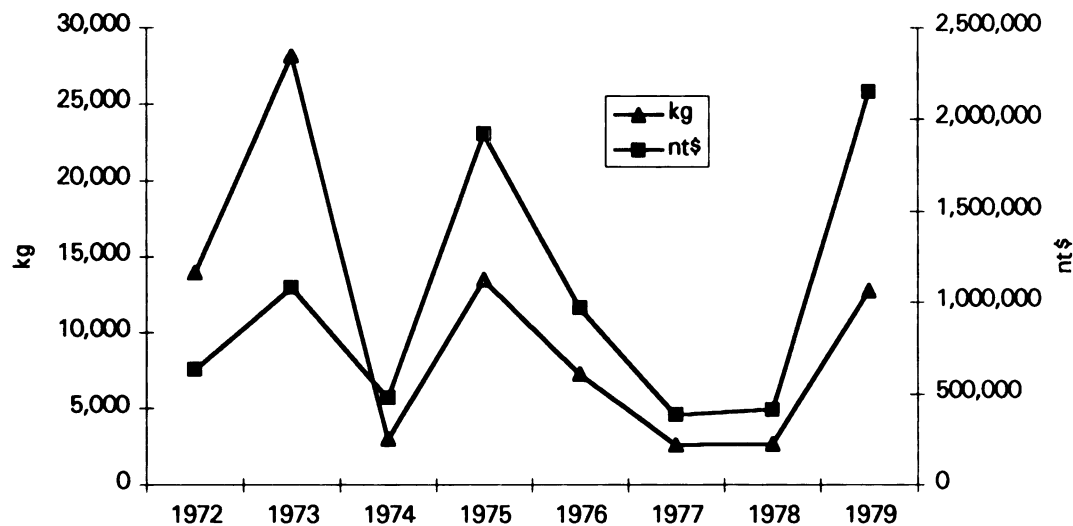


Figure 6.5. Export Weight and Value of One Type of Hsuan Paper to Japan: 1972-1979

Source: Chinese Maritime Customs, Taiwan area. Statistical Department, Inspectorate General of Customs, Taipei.

Disaggregated export data from the 1970s suggest, furthermore, that in 1974, 1977, and 1978 (in the aftermath of the oil shocks and the fluctuations in exchange rates), Japanese customers purchased limited quantities of paper when compared to those sold to other markets in Asia (Figure 6.6).

Nevertheless, the Japanese share of export value generally surpassed that of other overseas buyers in 1975, 1976, 1978, and 1979.

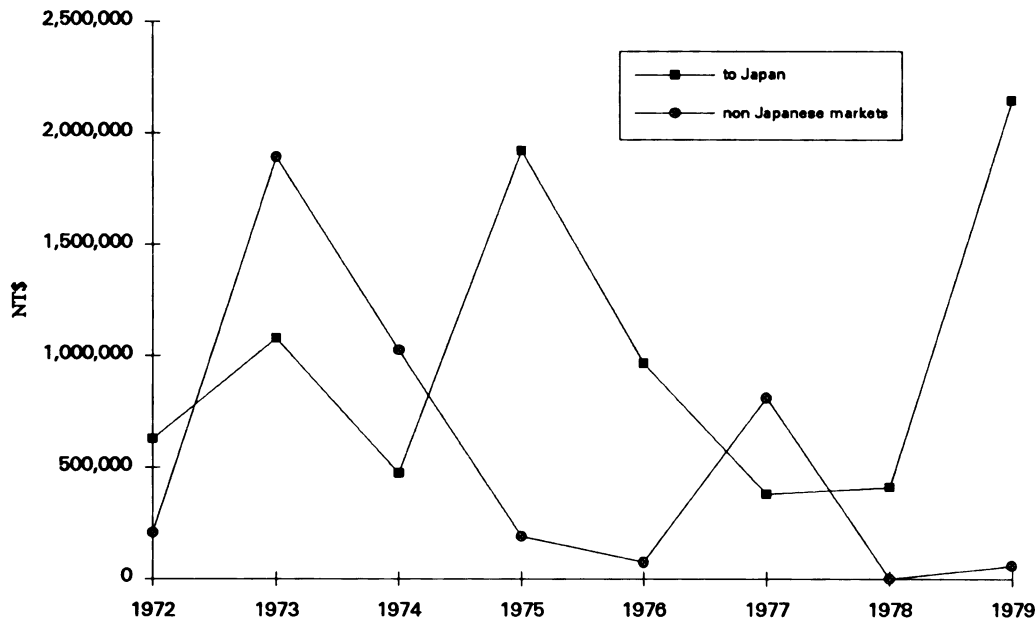


Figure 6.6. Export Value (NT\$) of One Type of Hsuan Paper to Japanese and Non-Japanese Markets: 1972- 1979

Source: Chinese Maritime Customs, Taiwan area. Statistical Department, Inspectorate General of Customs, Taipei.

The export data indicate that during shortfalls in Japanese orders in 1977, large orders were once again solicited from other Asian customers. While these exports were less profitable than those going to Japan, they apparently were an important safety net for the industry during the 1970s. By 1979, however, the Japanese export market was well on the way to recovery, and exports to the rest of Asia took a permanent and distant last place.

While the export data above are not always clear, most factory owners vividly remember that there were some very bad years during the 1970s and that

a number of companies were forced out of business. One factory owner described the period thusly:

Business was pretty good up to 1977, then the Japanese just stopped buying paper from us. We didn't know what was going on. Many of us devoted our time, money, skills, and an ever greater share of our production to make paper for the Japanese in the early to mid-1970s. But that turned out to be a big mistake. Once we lost those orders we all understood how vulnerable we were.

Other factory owners insisted that they were working much harder in 1977 to make just a small amount of money. One owner complained, "It was just like back in the 1960s; we produced a lot of cheap paper with no profit. It was terrible." Despite the fact that, in the 1970s, paper continued to be made for the entire Asian market, company owners continued to refer to the Japanese and not other Asians as the primary market for their paper. The reason for this bias may be because profits from Japanese orders were always higher than the profits from other Asian orders.

The fate of specific paper companies in Puli during the 1970s is difficult to ascertain. Neither the export data nor my interviews reveal which factories were able to obtain the small but lucrative Japanese orders placed during those bad years. Nevertheless, many factory owners did have an opinion on the issue of why business was so poor. Most owners, for example, attributed the decline in exports to the oil shocks or changes in the exchange rate which forced many overseas buyers to cut back on their orders of paper. Some owners believed, however, that the Japanese buyers may have conspired to withhold orders to force Puli's paper companies to "their knees" and lower their prices.²⁶ This same conspiratorial / collusion theme, however, was also leveled at Puli's large center factories which controlled access to the Japanese market for most of the

decade. Several small owners insisted that the Japanese had not withheld orders, but, rather that Puli's center factories were responsible for the decline.

Regardless of the cause of the crisis, the 1970s was a tumultuous decade in the market for hand-made paper. During this period, sales were highly erratic, not only from year to year but from month to month. Notwithstanding the fact that the factory owners preferred to do business with Japan, the Japanese consumer seemed determined to disappoint them by suddenly dropping out of the market. Despite these problems, the less profitable multiple markets in Hong Kong, Singapore, and Korea eventually gave way to the large, highly profitable, but unpredictable, *singular* market in Japan. Although the shift to the production of high value-added papers for Japan helped the industry to keep up with rising wage rates in Taiwan, it also created a dependence on one market. As discussed below, this one market created conditions which worked to the advantage of a few of Puli's larger paper firms.

Formation of trading relationships between Puli center factories and Japanese buyers

We saw above that, during the latter half of the 1960s, three to four better connected "elite" paper companies in Puli had consolidated their connections to buyers in Hong Kong, Singapore, and Korea. When Japanese customers first showed an interest in Puli, therefore, they gravitated toward companies that were already involved in the production and export of paper. Further, because the owners of these companies were all in their mid- to late 40s, they had grown up in the colonial educational system and could speak Japanese. According to one of these factory owners, "it was not that difficult to form a close relationship with our customers because most of us could speak

Japanese and we knew about Japanese culture and society. After all, those of us who were older grew up under their administration." ²⁷

These select few working out of their Taipei branch offices carefully nurtured their relationship with their customers and jealously guarded them from their competitors in Puli. One factory owner who was not fortunate enough to establish such a relationship explained that, when the Japanese started buying paper, these factory owners did not want to risk losing their customers by bringing them to Puli.

They were scared that their Japanese customers would find out about the other factories in Puli and possibly shift their business to them. For the first few years these owners gave crazy excuses to the Japanese for not wanting to take them to Puli. They said "Puli is in the wilderness. There isn't any entertainment. There aren't any Japanese restaurants." The only thing that was the truth was that we actually didn't have any Japanese restaurants at the time. But we had plenty of entertainment. Puli had some of the prettiest prostitutes in all of Taiwan.

The owners who received the first orders from the Japanese, however, quickly learned that their customers were not the easiest people with whom to deal. They wanted newer and larger varieties of art and calligraphy papers than those most paper companies were used to manufacturing. The Japanese also wanted paper of a much higher quality than was sold to other Asian customers and they placed great importance on delivery schedules. Many of the Japanese customers, likewise, were hesitant about dealing with smaller paper companies which might not be able to purchase raw materials on their own, meet delivery schedules, or provide consistent quality. These and other demands, together with the fact that many monthly orders were becoming increasingly large, were yet other reasons why most Japanese customers were drawn toward Puli's "center factories."

Toward the end of the 1970s, there were probably fewer than a dozen buyers of hand-made paper in Japan. But six to eight of these buyers, were large enough to control most of the distribution channels in Japan. What is important to understand about these buyers, however, was that it was generally in their best interests to maintain long-term relationships with Puli's center factories.²⁸ Taiwan was a new and cheap labor market which would probably be able to supply Japan with good inexpensive paper for some time to come. As long as the Japanese "partner" delivered orders, and the Taiwanese center factories delivered cheap paper, both could make a considerable amount of money.

By the end of the 1970s, four center factories appear to have solidified their control of the export business with Japan. These companies were singled out by informants as the industry's "biggest center factories," the largest of which, may have sold paper to anywhere between four to six of Japan's largest buyers. Most informants also remember that these four were large enough to "control most of what came into and went out of the industry in Puli." In addition, these companies were the only ones large enough to consistently use subcontractors who provided the bulk of their exports.

Despite the strong position of the top exporters, the data also show that between two to three "medium" sized companies in Puli may have secured trading relationships with small to medium Japanese buyers by the end of the decade; I was told that smaller Japanese buyers sometimes sought out some of the medium-sized paper companies in Puli to do business. These "other exporters" in Puli, however, appear to have shipped only limited quantities of paper, which they primarily produced themselves rather than subcontracting out the work. Regardless of the number of customers or their size, each exporter was fiercely competitive and constantly worried about losing a customer to

another exporter or to one of Puli's 30 or so smaller paper companies which serviced these businesses as subcontractors.²⁹

Finally, at least two of the largest center factories in Puli set up overseas trade offices in Japan in the mid- to late 1970s. Although ostensibly established to assist their buyers in Japan, there is considerable evidence to suggest that these offices were founded in an attempt to gain a foothold in the Japanese market. While little is known about these overseas operations, their establishment does serve as an example of the ongoing effort on the part of center factories to penetrate markets, in this case the Japanese market. In the words of one center factory owner, "I learned early on that gaining greater access to those who bought our paper was often more important than actually producing paper. After all, that is what we have subcontractors for."

The emergence of the center factory / subcontractor relationship in the 1970s

There is little doubt that, as Puli's producers were gradually drawn into the Japanese market in the early 1970s, capital was invested in the industry. Nevertheless, three interrelated problems continued to dog the industry. The first problem centered on the seasonality and general unpredictability of the market for hand-made paper.³⁰ The erratic behavior of the market was compounded by paper makers' scramble to secure more and more orders from a few Japanese customers. One older factory owner reported that after the Japanese started to buy paper in the early 1970s, "it was like the rest of the [Asian] market just vanished [in the minds of Puli's paper makers] in importance." Japanese orders were so valuable, he explained, that one small job might be more profitable than a dozen orders from customers in Hong Kong or Singapore. In his view, everyone in Puli wanted orders from Japan, even

though the commitment to that one market involved an increase in their vulnerability. Indeed, when orders from the Japanese did not materialize, many plants went idle and some even went bankrupt.

The second problem faced by Puli's producers was that, despite the fickle nature of the market, the demand for hsuan papers rose for most of the 1970s. Factory owners operating during the late 1960s and early 1970s indicated that, when they produced paper for the non-Japanese market, they could produce a lot of low grade paper with fewer workers than it took to produce the Japanese paper. This was because the paper made for the Japanese, required workers to slow down the production process in order to maintain quality. This meant that factory owners needed more workers to handle the orders from Japan. One owner told me that as the Japanese ordered more paper, they were often shorthanded. But when orders came in for cheap papers from the rest of Asia, they usually had few problems filling an order because they could produce it that much faster."

The third problem the industry encountered was the ongoing dilemma of increasing rising labor costs. While profitable orders from Japan temporarily mitigated these wage increases, the unpredictability of the market apparently continued to eat into profits made from those orders. As one factory owner said rhetorically, "How can anyone make money when workers and equipment have nothing to do?"

How were producers in Puli able to cope with feast or famine market fluctuations while also struggling with rising wage costs and increased demand for better paper? One might answer that with about ten factories still in operation at the end of the 1960s, one might think that all that only the simple expansion of existing factories was needed to increase production. Yet, while

such an expansion may have mitigated the gap between supply and demand, it could not remedy the problem of market fluctuations or rising wages.

Thus the answer to the question posed was found in a new echelon of entrepreneurs. By the end of the 1960s there were increasing aspirations among a number of workers in the industry to own their own factories. Whereas most factory owners believed wages paid to their workers were too high, many workers in the industry felt that their wages were far too low, and that there was little possibility of "moving up" in the small, family-run paper companies for which they worked. It is not surprising, therefore, that most of the approximately 30 new paper factories founded in the 1970s (more than twice the number of factories started in the 1960s) were established by former paper workers.

While those company owners able to make it through the 1960s may have initially seen these new entrepreneurs as a threat to their businesses, some of the larger producers in the industry quickly understood that these new companies could work to their advantage. The new entrepreneurial drive came at a time when the industry was in need of more producers, not just to meet growing demand but also to distribute risk, to increase productivity and flexibility, and to cut labor costs. If Puli's center factories could somehow put these new factories to work (through subcontracting arrangements), substantial profits could be made.

Puli's new blue collar bosses

By most accounts, many men who entered the industry as workers in 1950s and 1960s had thought about owning their own paper factory in the 1970s. My interviews concerning the question of becoming or not becoming a boss consisted of discussions with ten men who in the 1970s, were

entrepreneurs. In those interviews, I asked why they thought so many new paper companies emerged in the 1970s and why so many people apparently wanted to become a factory boss. While I had varied responses to my questions, most of my respondents emphasized one point: if a man remained a worker in this industry, he would neither advance very far nor would his salary increase sufficiently to allow him to enjoy a comfortable life. One former worker turned boss explained his feelings about the period this way.

During the 1970s, many workers found that when they reached their 30s they could barely support their families on wages that they received in the paper factories. They couldn't afford to buy a house, a car or many of the new consumer goods that were on display in the local market. I think most of my friends who started factories in the 1970s did so because that was the only way they could afford to build a house. To build a house is one of the most important things for a man with a family.

Before exploring this theme further, however, I discuss a number of reasons why these workers chose the entrepreneurial path. These reasons I've labeled mentoring, emulation, low wages, insecurity, challenge, and standard of living.

Mentoring

Some of the men who became factory bosses started their careers in the paper industry at a very young age and most had a close relationship with their former bosses. Comments such as, "my boss was like a father to me," and "we had a family type of relationship" were often used to describe the connection. One entrepreneur told me that when he first went to work at the age of 15, his boss, whose own sons were too young to work in their father's factory, treated him very well: "My boss treated me like his own son. He even fed me at lunch-time and taught me everything about paper making." He then went on to

say that at the age of 18, just before going into the military, he had already decided to follow in his mentor's footsteps.

Other respondents, however, speculated that the close relationship between an owner and his younger workers was probably rooted in the nature of the work force rather than in anything else. Many of these workers were boys who were young, poor, and impressionable, and as one boss revealed, they "looked up to their bosses and respected them." Other respondents offered psychological explanations arguing, as one man did, that "All bosses like to act like small emperors. They all want face, and face is harder to get from older workers than the younger ones."

Emulation

Another worker- turned- boss indicated that the motivation for becoming a boss did not necessarily have anything to do with how one was treated as a worker.

The reason why many of my friends went on to start paper factories in the 1970s had nothing to do with their relationship with their former bosses. Many workers in their twenties start to think seriously about starting their own companies, believing that as a boss they would be respected and could control their workers rather than being ordered around and controlled themselves. Of course they all hoped that they could become rich as well. But if they didn't, that was all right. Being a boss, no matter how small you were, was always better than being a worker and making money for someone else.

Low wages

Few informants were openly critical of their former boss, but all complained about the difficult working conditions and low wages. One factory

owner told me that, when he was a worker at a factory in the 1960s, he and his co-workers had no choice but to accept the wages they were paid, even though many felt they were too low.

Because our wages were so low many of us wanted to start our own factory, but we hesitated because we weren't sure what the market was like. And, if we failed, what other kinds of work could we do in Puli? Puli had few if any jobs at the time.

Apparently many workers thought about starting their own paper factories in the 1960s but dismissed the idea. Many lacked confidence in the market, believing that it was saturated with cheap hand-made paper and breaking into the industry would be very difficult. Further, the low profits to be reaped discouraged others. As one informant explained:

For most of the 1950s and 1960s, paper factories in Puli usually made paper and sold it themselves or through a trading company. Many of them already had their own customers so it would be difficult for anyone new to start a business and find customers. Besides, the existing factories were making so little money, there was little chance a new factory would do any better. All it would do was create more competition.

The changes in the overseas markets in the late 1960s and 1970s, however, enabled many to rethink their future as workers in Puli. According to another informant,

Toward the end of the 1960s and in the early 1970s, I saw that my boss was making more money while he continued to pay me low wages. It was during that period that I told my wife I would own my own paper factory one day. All I needed to do was save enough money and maybe take in a partner, then I would be able to do it.

Insecurity

Other bosses gave less weight to the importance of making money as the reason for becoming a boss. One man who worked as a manager for his brother-in-law's paper company said that working for someone else was "not convenient". "I had parents who were getting old and I decided I wanted to be able to be around so I could take care of them." While this man chose to identify his virtues as a filial son to explain his decision, he nevertheless, also pointed out that his brother-in-law's son was becoming old enough to start working in the factory.

I knew that when his son came to work in the business, I would have gotten in the way. My brother-in-law's company was not large enough to accommodate another person as manager of the factory. After I talked it over with my wife, we decided to start our own paper factory. That was 14 years ago.

The Challenge

There were, of course, those workers who became bosses because they wanted to be businessmen, test their own ideas, and plan and manage their own enterprise. These were the men who often sat through an interview constantly thinking of new and different ways to produce, buy, or sell paper. In other words, they lived to be a boss.

Improved standard of living

For some of the same reasons as noted under "wages," almost ten interviewees added that, as workers, there was probably little chance of raising their standard of living as the years went by. One man explained that most of

them lacked an education which prevented them from getting a better job than something akin to paper making.

Because there were so few good [manual labor jobs] in Puli, many people had to go to Taichung or Taipei to work. If we wanted to stay in Puli, but also wanted a higher income our only recourse was to become our own boss.

Suffice it to say, many paper workers in the 1960s believed that the wages they were receiving would not and could not go high enough to provide for even a modest standard of living. As indicated in their interviews, they saw becoming their own boss as the surest route to upward mobility. Most of these workers, however, did not believe that the 1960s was the best time to become an entrepreneur. During most of the 1960s they were aware that the paper business was highly competitive and that profits were not high.³¹ Many workers, furthermore, may not have accumulated enough capital nor had the connections and know-how to start their operations during that period.

While there was growing dissatisfaction with the low wages received in the 1950s and 1960s, the opportunity to become one's own boss seems to have increased around the early 1970s. As discussed above, the transformation in the market created new opportunities for growth in the industry at a time when many of the existing factory owners in Puli were feeling the pressure of rising wages. As one factory owner put it, "Just when we thought our existing overseas markets (i.e., Hong Kong, Singapore, and Southeast Asia) might provide us with wider profit margins, wages would increase yet again." Essentially the strategy of squeezing workers' wages to realize higher profits propelled these workers onto the entrepreneurial path.

The creation of the subcontracting group

As the first workers began leaving their jobs to start their own factories in the early 1970s, the response of their bosses was suspicion and anger. Some bosses were worried that a former worker would set up his own shop, steal his paper formulas, and produce and sell paper directly to a customer. Other owners, however, were simply upset that an employee would leave to start a company that might one day become a competitor.³² Despite the negative reaction by many bosses to these defections, other rival factory owners began to offer the new entrepreneurs help by subcontracting work to them.

As subcontracting slowly emerged as a way of doing business in the early 1970s, center factories with market connections and subcontractors gravitated toward each other, forming small production groups. How or why these groups formed as they did is difficult to determine because few in Puli remember many details about the 1970s. What my informants do remember, however, was that when many of the new paper companies were started in the 1970s, most entrepreneurs had no choice but to find a large factory willing to provide them with orders, raw materials and, when necessary, loans of much needed cash. One factory owner who started his business in 1974 described the first year of operating his factory this way.

When I left my brother-in-law's paper factory in 1974 he was rather angry with me. I knew, of course, that my brother-in-law would not be willing to help me buy raw materials or find customers for my own factory. Besides, his factory was not one of the larger center factories in Puli and he only had limited access to the market. Because I was short of capital to buy raw materials during my first few years of operation, I asked one of the large center factory bosses for a loan. He gave me NT\$100,000 and also sent some of his own workers over to help me set up my factory. He was really good to me.

Elaborating on the "good will" shown, the subcontractor added that the center factory boss told him that he did not have to pay any interest for the loan. Rather, he continued, "all the center factory boss said was that I would have to buy all my raw materials from his factory, make the type of paper he wanted, and sell it back to him until the loan had been repaid." When I asked the subcontractor who set the price of the raw material and the finished product he replied, "Of course the center factory boss set the price."

The frequent granting of loans by center factories created a creditor /debtor relationship which many subcontractors could not afford to break. "Every time we needed to buy raw materials, we needed a loan," said a subcontractor. Further, this relationship was cloaked in an ideology of kinship, creating an unbreakable bond between a center factory and subcontractor in which the boss of a center factory treated his subcontractors as though they were part of his "family." The boss from the center factory would often visit a subcontractor and his family, inquire about how they were doing, participate in wedding feasts, funerals, and New Year celebrations. One subcontractor reminisced that in those days, "the boss of the center factory treated us as though we were one of his workers in his own factory." After a moment's hesitation, however, he added:

Actually, he treated us better than his own workers. The boss and his wife acted like parents to us, frequently telling us that we [subcontractors and center factory] were part of their group (*groopu* a Japanese term taken from English word group) or a large or extended family (*ta chia ting*). The boss of the center factory would often tell us that we must all work together and make sacrifices so that we could beat out the other center factories in Puli for the orders from Japan. Unlike today, there was very

little independence for subcontractors back then. We had to be part of a group in order to survive.

Throughout my research, many Japanese terms (or English/Japanese derivations) were used in conversation. Since most the older factory owners could speak Japanese, such terms were not uncommon in everyday conversation. Because of the long period of Japanese rule, one could speculate that the industrial organization which emerged in Puli was similar to the *oyabun-kobun* system (Bennet and Ishino 1963) which had long existed in Japan. Bennet and Ishino describe such groupings in Japanese society as "social groupings which have.....persons of authority [who] assume obligations and manifest attitudes toward their subordinates much as if they were foster parents, and conversely subordinates behave dutifully and hold feelings of great personal loyalty toward their superiors" (1963:40).

Looking back on the 1970s, many subcontractors believed that, for most of the decade, their relationship with center factory bosses was generally good. Some subcontractors even indicated that they trusted the center factory boss as if he were a close friend or relative. "Most of us believed that we would be taken care of if anything happened to us," said an informant.

As new factories were established in the 1970s, most coalesced around the four large center factories in Puli. The size of these groups, however, varied over the course of the decade, expanding and contracting as new factories came on-line or went out of business and as the amount and frequency of orders secured by center factories oscillated.³³

While most subcontractors maintained long-term relationships with their center factory bosses, disputes would sometimes stimulate a subcontractor to switch allegiance and service to a competing center factory. Such disputes, however, were rare and most subcontractors tried to remain with one center

factory operator as long as possible. When I inquired of one informant why there appeared to be fewer disputes between subcontractors and center factory operators in the 1970s as opposed to the 1980s, I was told bluntly, "What could we complain about back then? We were part of a group, a large family without which we were helpless. Of course there were fewer disputes." Lacking the power to oppose the center factory, most subcontractors had little choice but to cooperate with them. Whether the ideology of family actually helped buffer an otherwise predatory relationship, will be discussed below.

Into the lion's den

The hand-made paper industry encountered by Puli's newest paper entrepreneurs in the 1970s was a far different industry than that faced by most new companies in the 1950s or 1960s. During the earlier period, the barriers to entry were directly linked to the lack of capital, low demand for hand-made paper and, the non-profitability of the product. More importantly, however, paper makers during the 1950s and 60s confronted market barriers which lay beyond the confines of Puli and the production process. Most of the finished product market was managed and controlled by independent trading firms operating out of the cities or by large independent buyers such as the Taiwan Power Company. By the late 1960s, however, a few of Puli's "elite" producers began to gradually push aside these "barriers" and form their own alliances and relationships directly with domestic and overseas buyers in East and Southeast Asia. By the early 1970s, many independent trading firms lost their leverage over producers in Puli, leaving three or four center factories in the basin to form their own trading alliances with buyers from Japan.³⁴

With access to the product market under their control, center factory bosses became a new and formidable market barrier standing in the way of any

new firm started in the 1970s. Newcomers to the industry had little choice but to deal with one of these center factories to receive an order. But control over the product market constituted only part of the problem. Most subcontractors also had to go through the center factories to purchase *their* raw materials.

Solidifying control over the market for raw materials

While many of the center factories were establishing their control over access to the product market, a few were also in the process of gaining control over the market for critical raw materials needed to make many of the new types of paper demanded by the Japanese. Prior to the end of the 1960s, many of the indigenous materials found on Taiwan (such as certain types of long fiber mulberry bark, bamboo, and rice straw etc.) that were used in the production process became increasingly difficult to find. This was due, I was told, to Taiwan's growing population and over-exploitation of its natural resources. In addition, some of the existing resources, such as rice straw, could no longer be used because of contamination by herbicides and pesticides. This forced some of the larger factory owners to seek new sources of raw materials. A few of the center factories found the suppliers of these materials in Southeast Asia (particularly in the Philippines and Thailand). Some of these same companies also discovered that certain chemical compounds produced in Japan, Germany, and the United States could also be used to enhance the quality of certain types of hsuan paper. Because many of these materials, whether natural or chemically derived, were rarely used in other industries or markets, at least two center factories were able to negotiate "sole agent or licensing agreements" with overseas suppliers to sell these raw materials in Taiwan.

The consequences of such agreements on the paper industry varied on the basis of the type of paper produced and the supplier. Companies which

controlled access to a specific raw material, for example, also controlled its sale. When such a company raised the selling price of the material, a competing center factory was often forced to produce paper which required that material for a far higher price, ultimately making his paper less competitive on the market. This strategy often left the company which controlled a given raw material in full possession of the production of specific types of paper. In such a situation, rival center factories would attempt to carve out niche markets for themselves and their subcontractors. Rather than trying to compete directly with each other, they simply would produce different kinds of specialty paper (see Figure 6.7).

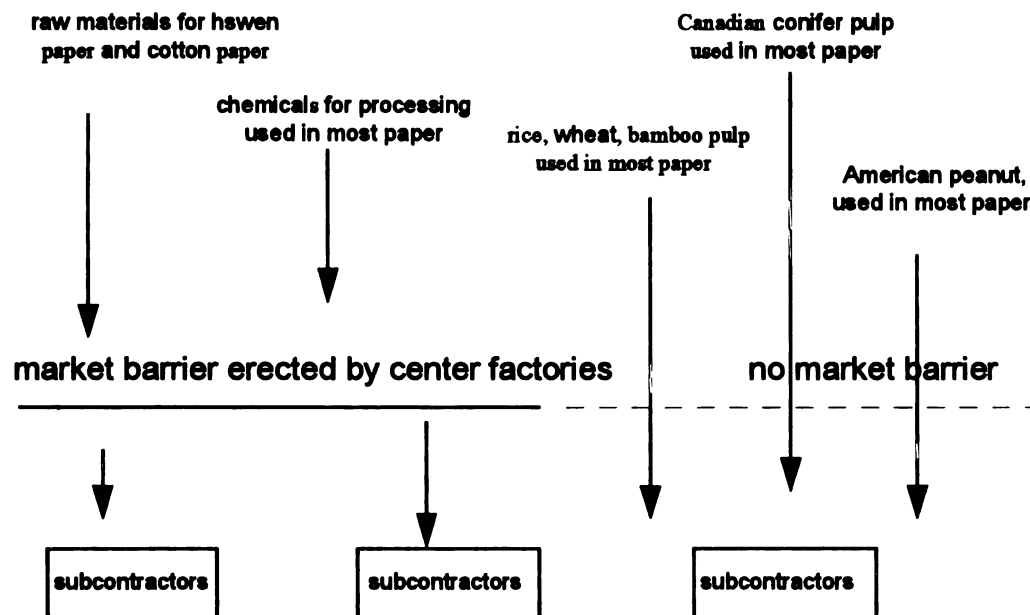


Figure 6.7. Diagram of Raw Material Flows Which Existed for Most of the 1970s.

Note: Arrows which stop at the level of the center factory indicate restricted access to the indicated raw material by subcontractors. Arrows which pass through the level of the center factory indicate that access to the market for these materials was open for the direct purchase by subcontractors.

In the early 1970s a sole agent agreement was created which had a broad impact on the industry in general, and on subcontracting companies in particular. Faced with an acute shortage of a commonly used long fiber bark in the early 1970s, one of Puli's center factories secured an overseas source for the material by signing on as an sole agent.

According to interviews with a number of subcontractors in operation during this period, this center factory owner did not withhold the bark from other paper companies in Puli. Rather he sold the material at various prices to *other* center factories and to small subcontractors. While the other rival center factories had the capital to purchase large quantities of the bark outright, subcontractors rarely had the capital to purchase raw materials without first selling paper. Further, center factories almost always stipulated that a subcontractor would have to first buy the raw material supplied by the center factory (at a price it set) and then sell the finished paper back to the center factory. This requirement forced many subcontractors to take "loans" from center factories in order to buy the needed raw material.

While it was unclear how long the center factory had control over the bark, the fact that this center factory chose to distribute it instead of monopolize its use for itself is very important. Quite possibly, it speaks to a business strategy where the extraction of profit gained from the distribution and sale of the (heavily marked-up) raw material was seen as more important than withholding the material altogether and destroying the competition. Perhaps the center factory boss understood that, in refusing to distribute the bark, other companies in Puli would eventually secure alternative sources. Whatever the case, the profits from selling the raw material to other producers in Puli must have proven to be quite lucrative for the center factory.

The nature of credit and the power of post-dated checks

While the credit offered to subcontractors might take any number of forms, one of the most common types were checks written to come due sometime in the future, or postdated checks (PDC) (*yuan ch'i chih p'iao* 遠期支票).³⁵ The use of post-dated checks was one of the best indicators of power and the status of relationships within the hand-made paper industry. The justification for the use of a PDC varied with the circumstances of the transaction. The following discussion provides an example of how PDCs were used by center factories to pay subcontractors for the work to be performed.

A center factory sometimes wrote post-dated checks to subcontractors for the work they performed. Depending on the nature of the relationship between subcontractor and center factory, a PDC could be written for 15, 30, 60, or even 90 days. According to one subcontractor, some factory bosses use PDCs to manipulate their subcontractors. "If a center factory boss pays you immediately for the work you do, then you know he really likes you." If the boss paid with a postdated check, however, he might be indicating how displeased he was with a subcontractor. The longer the time, (i.e., a 15, a 30, or 60 day check), the greater the displeasure.³⁶

In other circumstances, however, subcontractors equated immediate payment or short-term post-dated checks as an indication that a center factory simply needed a subcontractor to complete a job as quickly as possible. One subcontractor revealed that, when business was good and when there was greater demand for the work of subcontractors, "I could demand an immediate cash payment. But when there was less work and less demand for subcontracted paper, the center factory might write more post-dated checks."

The use of postdated checks in the industry, therefore, served not only as a device to extract capital from subcontractors, but it also functioned as a mechanism for measuring the status of relationships in the industry. With the ability to reward and punish by simply decreasing or increasing the time of payment, center factories used PDCs to coerce or intimidate subcontractors to be compliant and loyal. Nevertheless, even post-dated checks were vulnerable to fluctuations in the market. When demand for paper was high and center factories had to fill many orders from Japan, there was less likelihood that a PDC would or could be used to extract extra profits or cooperation from a subcontractor.

A second way PDCs were used was when a subcontractor would write checks to a center factory because the subcontractor could not pay for raw materials or other goods with cash. In this case, a center factory would accept the PDC from a subcontractor with the stipulation that interest would be added to the total according to the check's amount and its length of time. That is to say, the longer the period of time on the check, the higher the interest rate. As in the above, however, a center factory boss often used his own discretion when deciding on the amount of interest attached to the check. The better the relationship between a center factory boss and a subcontractor, the greater the likelihood the amount of interest would be smaller.

Finally, this lack of available credit to smaller producers in Puli enabled center factories to gain partial control over the flow of capital in the industry. With little chance of securing bank loans, most subcontractors were forced to use money from personal savings, family members, friends, and rotating credit clubs to invest in the construction of a factory. Center factories, on the other hand, appear to have been the primary sources of credit for the purchase of raw materials. There is evidence to suggest, furthermore, that as some

subcontractors became used to receiving credit from center factories they also borrowed money for the purchase of goods other than raw materials. While this issue will be discussed in the section to follow, I would submit that, along with the center factories' control of raw materials and the finished product market, their control or at least access to capital provided them with a third device to both control subcontractors and extract surplus value.

The souring of a relationship

By the late 1970s, the relationship between center factories and subcontractors in Puli became strained. One of the first signs of trouble came in 1976 and 1977, when the industry began to receive fewer orders from Japan through the center factories. As noted above, the Japanese bought little paper in 1978. Many subcontractors thus found themselves either without work or having to once again manufacture large quantities of cheap paper for markets in Southeast Asia.

It appeared to many manufacturers in Puli that the industry had returned to the period in late 1960s when the average price fetched for a ream of paper was little more than the cost of materials. While most subcontractors acknowledged that every company (large and small) suffered in the late 1970s, the subcontractors felt the pinch the most. One owner of a subcontracting factory vividly recalled a boss of a center factory telling him month after month that there just were not any orders.

Many of us [subcontractors] were already in debt to the center factories for the purchase of raw materials or for other loans we had taken to improve our buildings or buy equipment. So we became desperate when these orders suddenly stopped. When the center factory boss told us there were a few small orders coming

in, he also told us that we would have to charge less for our work. We had no choice. Many of the subcontractors started to undercut each other's price just so they could get what little work was available from the center factory.

While this subcontractor attributed the strained relationships to market forces, others believed the roots of the problem were more sinister. For example, one owner insisted that many of his fellow subcontractors began wondering if indeed there was a problem with the market. "Every time I went by a center factory, all the workers were busy making paper while the rest of us were sitting idle." In his view, the owners of the center factories had gotten together and created a story about how the Japanese were not buying paper. "I think they [owners of the major center factories] all had a meeting and decided that they would create a crisis. That way the center factories could force all the subcontractors to compete against each other and force our prices down." Although I discovered no concrete evidence of collusion between center factories, fully half of the subcontractors suggested that the bosses of the center factories had worked together at one time or another against the interests of their subcontractors.³⁷ Many seemed vague, however, as to when these possible conspiracies took place and what they were about.

While exports of paper were down in the late 1970s, a second problem arose which exacerbated the tension between center factories and subcontractors.³⁸ Sometime in 1978, a man operating a small trading firm in Taipei came to Puli offering to sell tree bark from the Philippines. When he approached a few of the local subcontractors, they indicated that they didn't need any bark because they purchased it from their center factory. Like any good salesman, he asked them how much they paid for their bark. The subcontractors answered that they paid between NT\$60 and NT\$80 per *chin* (1 *chin* = 1 kilogram). A subcontractor who was a witness to the event recounted

that "the trader's eyes popped out of his head," he roared with laughter, and told them that he bought by the same bark for less than NT\$30 per chin.

Apparently sometime in the late 1970s, two Taiwanese traders found a new source of the critical raw material in the Philippines and Thailand. Many subcontractors believed that the center factory had probably kept the price of the bark artificially high, knowing full well that no one in Puli would find out about the actual market price of the bark. To add insult to injury, when the 100 kilogram bales of the more expensive bark arrived from overseas, the center factory would remove between 25-35 kilograms per bale, before selling the bark to their subcontractors.³⁹

After learning the news about the low-priced bark, a number of subcontractors confronted their center factory boss. In the explanation of the discrepancy in price, the boss replied that the price of the bark had *just* gone down. Then the man who related the story to me added, "the boss said that he had several thousand pounds of bark in his warehouse that would rot if we didn't buy it from him. So he asked us to continue buying his bark until it was used up." As far as can be determined, they did.

The discovery of the mark-up infuriated the subcontractors who, for years, had heard about "shared sacrifice" from the bosses of the center factories with whom they did business. "The only people who sacrificed anything were the subcontractors," asserted one still angry informant.

It was all a lie. All along they were exploiting (*li yung* 利用) us while saying we all belonged to a big family. They had no obligation or feeling that they should help us at all (*mei yu jen-ch'ing*). When does a family member ever treat another family member like that?"⁴⁰

Many subcontractors, however, seemed fatalistic about the incident. Although they were very angry when they heard, they felt they had no alternative but to accept the *fait accompli*. As one man related,

There was nothing we could do! Most of us would still have had to buy our raw materials from the center factories because we were too small to purchase the material on our own. Even then, most center factories required us to buy their raw materials if we were going to make paper for them. We had no choice. We still had to rely upon the center factories to provide us with orders.

In a very real sense, the patina of a fictive kinship system was used to cover the many contradictions inherent in the center factory subcontractor relationship.⁴¹ The ideology of "family, cooperation, duty and obligation" was used to mollify and assuage a group of dependent producers in an attempt to maintain the conditions conducive to the continued extraction of excessive profits. By invoking traditional Chinese sentiments of family and trust, center factories provide subcontractors with a rationale that allowed them to believe that there was something good or non-economic about their relationship with a center factory other than simply making or losing money.

One question which remains, however, is when did the fictive kin relationship begin to fail to be used as an ideological device to "smooth" center factory and subcontracting relationships and, if it did, what other ideology was used in its stead and why? The comment by one subcontractor that center factories "exploited" subcontractors, for example, is indicative that a "class" ideology might have begun to replace an ideology of "kin." Unfortunately, it is difficult to determine when these subcontractors first started to believe they were part of an exploited group in the industry since such terms probably were not in vogue in Taiwan until the mid- to late- 1980s.

The form and structure of subcontracting relationships in the 1970s: A conclusion

The beginning of the 1970s marked a period in the history of the hand-made paper industry when a number of critical economic and social conditions came together to form its unique industrial structure. It was a period when rising labor costs in the hand-made paper industry in Japan began to give way to cheaper labor markets in Taiwan for the production of inexpensive hsuan papers. With both a viable hand-made paper industry already in place and its former status as a colony, Taiwan provided one of the best places to do business for the Japanese in Asia. It was one of the few areas in Asia where potential suppliers were both amicable to Japanese buyers and able to speak the language.

Once the shift by the Japanese to Taiwan was underway, a few of Puli's "elite" factory owners with previous trading experience in East and Southeast Asia wasted little time in forging new trading relationships with customers from Japan. These relationships were mutually beneficial in that as long as the "center factories" ensured the continual flow of inexpensive quality paper to Japan, Japanese buyers would maintain a long-term relationship without defecting to other suppliers.

One of the first problems to arise for Puli's emerging center factories, however, was how to ensure a reliable supply of hand-made paper, given ever-rising wage costs in Taiwan and the highly seasonal nature of the product market. Saved once again by circumstances beyond the control of those in the industry, a new group of entrepreneurs set up shop in Puli as subcontractors. Motivated by their inability to secure high wages as workers and a desire to become their own boss, this restless group of paper-makers plunged into the

industry in the belief that their lives would become better as bosses of their own factories.

Far from the independent suppliers who bought and sold paper on the free market, however, most of these new factory owners were locked into complicated subcontracting relationships in order to be able to survive. The relationship between subcontractor and center factory was complicated because woven into what was supposed or projected to be a cooperative bilateral relationship was the unilateral control of raw materials, the finished product and, to large degree, capital by the center factories. Barriers to markets were erected first through the formation of tight trading relationships between center factories and their Japanese customers, and then through the use of sole licensing agreements which gave center factories considerable control over the supply of many of the raw materials used in the production of paper (otherwise known as price squeezing). In a few cases, furthermore, there is evidence to suggest that some center factories made investments in their suppliers which only served to further solidify their control over the market. And, while only a small number of center factories were successful at forging both upstream and downstream connections, they were able to effectively manipulate and control a large percentage of the paper produced by smaller paper makers in the basin.

Indeed, their control over the access to the market for raw materials and the finished product market was so pervasive that center factories were able to herd most of Puli's smaller producers to serve as "capacity" subcontractors (see Chapter IV). That is, center factories simply adjusted the amount of work sent out to subcontractors according to fluctuations in the demand for hand-made paper. When demand was high, center factories brought the total productive capacity of their subcontractors to bear. When demand was low, center factories simply cut back on orders issued to subcontractors, while maintaining

a full compliment of workers in their own factories. Through capacity subcontracting, center factories were able to maintain flexibility and profitability, while decreasing their own vulnerability and risk in an otherwise unstable market for hand-made paper.

Maintaining flexibility and reducing risk, however, was not the only way center factories benefited from the subcontracting relationship. They also were able to garner a profit at different stages in the production process. This they did first, by setting artificially high prices for raw materials sold to subcontractors and second, by charging interest on loans extended to pay for those raw materials through the use of PDCs. Then, able to manipulate both the *distribution and volume of orders to, and prices for*, the production of low value-added hsuan papers (such as hsuan paper #5), center factories took additional profits after sales to Japanese customers.⁴² Center factories, furthermore, were also free to screen the quality of the finished paper manufactured by subcontractors, thereby enabling them to reject any sheet not up to their standards.

The center factory -- subcontractor relationship which existed for most of the 1970s can best be termed as an oligopolistic and oligoponistic control of markets for inputs and outputs at both ends of the production process. Forming market connections which *resembled* a form of vertical integration or quasi-vertical integration, Puli's most powerful center factories extended their control over the industry through a loose form of backward and forward market integration, creating what were essentially locally-imposed market bottlenecks which funneled goods in and out of the industry through the center factories (Figure 6.8).⁴³ In contrast to most forms of vertical integration in which a center factory takes advantage of economies of scale, much of the production of paper

was performed by subcontractors, thereby benefiting center factories through economies of scope.

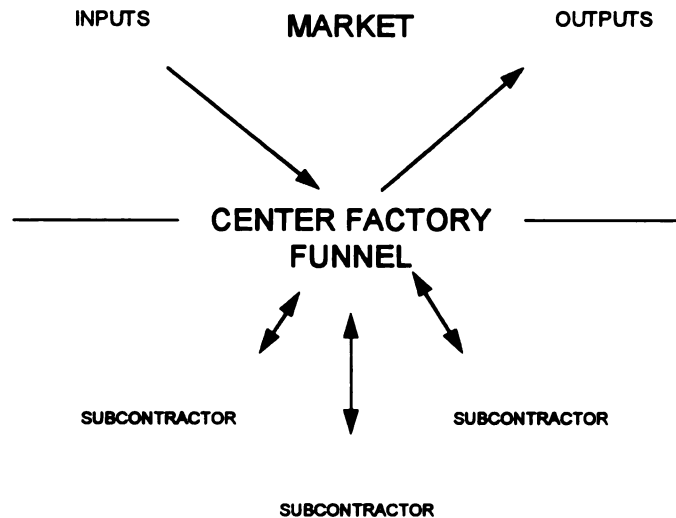


Figure 6.8 Center Factory -- Subcontractor Market Funnel

No doubt aware that capacity subcontracting was one of the most deleterious forms of subcontracting, center factory owners tried to placate their subcontractors by appealing to traditional norms of "belonging" and "family." Positioning themselves as patriarchs of subcontracting groups, the owners of center factories treated their subordinates as though they were a privileged and protected group, whose only duty was to give undaunting loyalty to the center factory boss.⁴⁴

The problems faced by many subcontractors toward the end of the 1970s, however, caused many to rethink their relationship with center factory owners with whom they had done business for so many years. No longer would anyone really believe that the center factory had anything but its own interests

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in mind when doing business. The idea that subcontractors and center factories shared a common goal or sacrifice was, in the words of one subcontractor, "nothing but nonsense" (*fei hua*). In the view of most subcontractors, small producers who believed that a center factory boss cared about them were probably naive.

For years many of us knew that we [subcontractors] were probably being used, but what did we expect. Maybe if we were the bosses of center factories we might have done the same thing. While many of us probably knew what was going on, we did not want to talk about it. If anyone heard us accusing a boss of a center factory of treating us unfairly, it would be very easy for them to simply cut us off from raw materials and orders. Then what would we do?

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D. READJUSTMENT IN SUBCONTRACTING RELATIONSHIPS AND INDUSTRIAL DEMISE: THE 1980s

The 1980s was in general a period of consistent growth and stability in the hand-made paper industry. The Japanese bought more paper than ever before and continued to do so throughout most of the period. By the middle of the decade, approximately 42 factory sites had been built in Puli and the number of paper companies registered with the government had reached 40. A near record 650,000 kilograms of calligraphy and art paper was being churned out by the basin's factories; this figure is estimated to be close to the industry's production capacity for high grade papers produced in Puli. These favorable conditions, however, stand in contrast to three problems which were percolated through the industry during what was probably its last profitable decade.

The first problem centered on the growing rift in the relationship between subcontractors and center factory bosses. Most subcontractors were no longer in a cooperative mood, particularly when so much business was pouring in from Japan. In contrast to the 1970s, many subcontractors also believed that their survival in the industry depended on an aggressive stance and, when possible, challenging the power and authority of the center factories.

The second problem confronting the industry stemmed from the continued upward spiral of wages and piece-rates and the growing labor shortage in the industry. With an increasing number of young people, particularly men either avoiding or leaving the paper industry for better paying jobs in the cities, Puli's paper producers found themselves unable to replace workers lost through retirement.

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Finally, *growing competition* from inexpensive hand-made paper produced in the low-wage labor markets of Mainland China and Southeast Asia constituted the third problem to hit the industry. With high wage rates in Taiwan driving the price of hand-made paper ever upward, Japanese customers were once again in search of cheap sources of paper. By the end of the 1980s and the beginning of 1990, new overseas factories were successfully exporting enough paper to Japan to cut into exports from Puli.

While the entrance of new overseas producers into the industry in the late 1980s appears to resemble the situation of Japanese producers competing with Taiwan almost two decades earlier, there is one notable difference. Whereas most Japanese producers did not attempt to move or "transplant" their own production from Japan to Taiwan in the 1970s, at least six paper companies (four of which were center factories) in Puli did just that toward the end of 1980s. Sensing that growing labor costs in Taiwan would eventually price much of Puli's paper out of the market, a handful of paper companies began building factories in the Philippines, Mainland China, and Southeast Asia. In other words, Puli's "overseas transplants" joined the few indigenous low-cost paper plants in those regions and began to compete with their own industry in Taiwan.

As in the previous section, I begin with a short review of the changes in the export market for Puli's hand-made paper. I then move to a discussion of the changes in the relationship between center factory owners and subcontractors and an analysis of the reasons for these changes. Throughout the discussion, I continue to explore the nature of subcontracting and strategies which emerged in the 1980s as subcontractors attempted to cope and adapt to the changes in their industry.

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The product market for hand-made paper

The annual export data for hand-made paper for the 1980s indicate that its overall export weight and value rose fairly steadily throughout the decade and peaked around 1989, only to decline thereafter (see Figure 6.9). The data also indicate that as exports to Japan grew in importance so too did the production and export of hsuan-type papers, which virtually supplanted all other hand-made papers. As early as 1984, for example, almost 85 percent of all hand-made paper exported from Taiwan was hsuan paper, and 96 percent of that was shipped to Japan (Figure 6.10). These percentages compare with data in 1977 showing that exports of hsuan-type papers to Japan were slightly less than half of total export value. During 1984, furthermore, production of hsuan papers shipped to Japan realized an average value-to-weight ratio of NT\$216 per kilogram increasing to NT\$259 per kilogram in 1988.⁴⁵

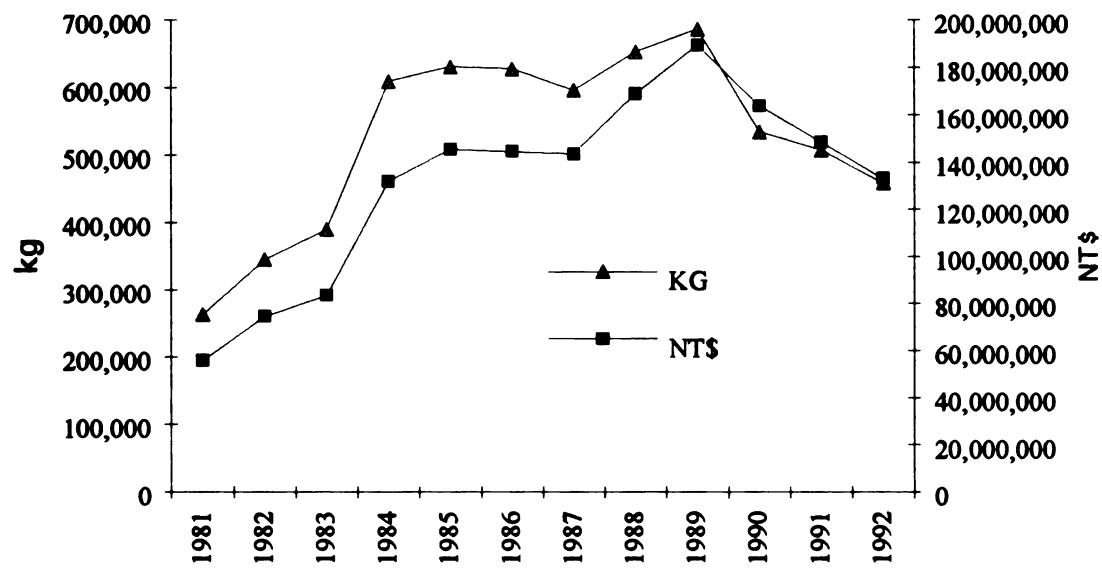
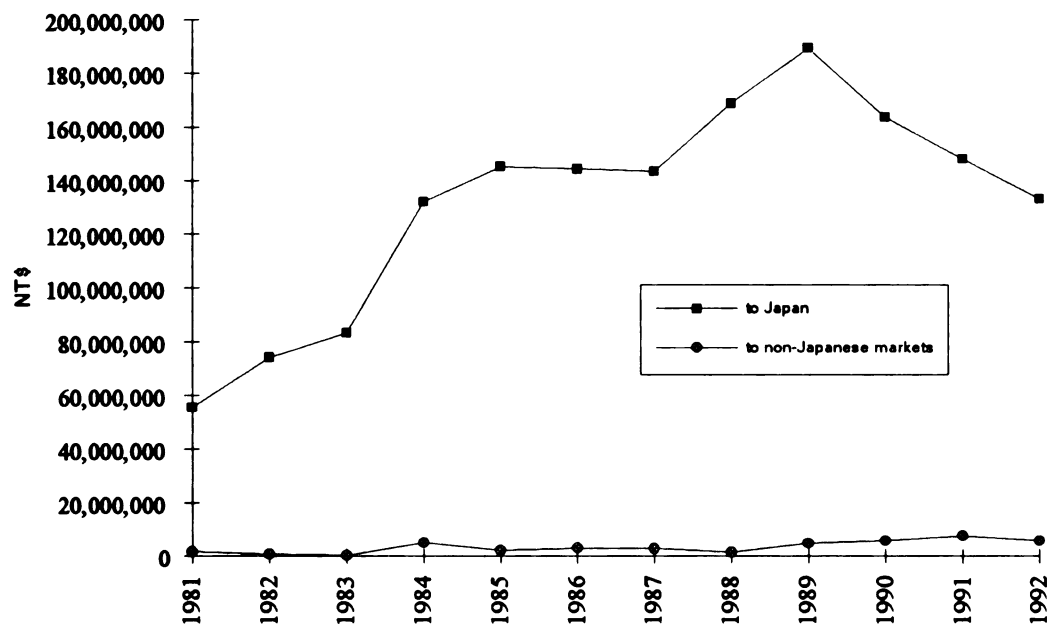


Figure 6.9 Export Weight And Value Of Hsuan Paper To Japan: 1981-1992

Source: Chung Kuo Hai Kuan



**Figure 6.10 Export Value Of Hsuan Paper To Japanese And Non-Japanese Markets:
1981-1992**

Source: Chung Kuo Hai Kuan

On initial inspection, export data from the 1980s indicate that the decade was a relatively prosperous period for the hand-made paper industry. Indeed, factory owners (large and small) reported to me that, for the most part, they made a considerable amount of money in the early 1980s. Between 1985 and 1987, however, the export of paper temporarily stagnated creating a degree of panic among some subcontractors. A number of factories went out of business during this period, not because business was actually all that bad, but because some subcontractors were over-extended and in debt to center factories. As was the case in this industry, monthly orders for paper also remained somewhat unstable and unpredictable throughout the decade, helping to bankrupt some factories and create a renewed sense of insecurity in others. "We were either making a lot of paper all at once or we weren't making any paper at all," lamented one factory owner.

By 1988, the insecurity of many subcontractors appears to have intensified, despite the fact that exports of higher-grade hsuan papers were expanding. Many subcontractors were told by center factory bosses that business was going to get worse because paper produced in factories on the Mainland was being exported to Japan. One center factory owner commented,

Once their quality improves it will be difficult for us to compete because they [Mainland companies] are paying their workers less than NT\$50 per day while our workers are getting between NT\$700 and NT\$1,000 per day. How can our piece-rate costs compare to their rates? We just can't compete with them.

A subcontractor, however, summed up the situation a little differently.

Since any of us can remember, we [subcontractors] have been producing only a few varieties of low- to medium-grade hsuan papers which we sold to the center factories. Up until the late

1980s, we all made a lot of paper for them and some of us were able to squeeze out as much as 25 percent or more in profit. Now [1990], however, they tell us we have competition from the Mainland and we have to cut costs. Many of us have seen our profits shrink to under 5 percent, but there is nothing we can do. The center factories, on the other hand, keep the orders of the more profitable higher grade hsuan papers for themselves. The quality of those papers still can't be duplicated by the mainland factories, so the center factory owners don't have to worry about competing with anyone except themselves.

Export data from 1990 (and thereafter) clearly show a sharp decline in the amount of paper exported to Japan. This decline represented what many producers say was the beginning of the end for most of the small producers in the industry. "We are in the same position many Japanese companies were in the late 1960s and early 1970s," said one subcontractor.

Back then our wages were as low as those in China today. Now we know how those factory owners in Japan must have felt. The only companies that will survive are the center factories which have begun to move their operations overseas and a few small companies in Puli [those with fewer than half a dozen workers] which were lucky enough to create a unique type of high-cost specialty paper.

Unraveling of the center factory – subcontractor relationship

Still bruised by the realization that center factory bosses did not have their best interests mind, Puli's subcontractors entered the 1980s with a modified perception of their place in the industry. Most subcontractors wanted greater independence and the flexibility to choose the center factories for which they work, greater role in the determination of prices for their paper and, if possible, the chance to produce more high value-added and more profitable papers than the common papers, such as hsuan #5, produced through capacity

subcontracting. More than ever before, however, these subcontractors wanted the chance to move beyond subcontracting and to sell directly to the Japanese. Most believed that the only way to secure a future for themselves and to accumulate the greatest profits was to eliminate the center factory owners who had, for years, been their middleman.

Only temporarily mollified by the increasing number of orders from Japan in the early 1980s, most subcontractors remained frustrated with their tenuous position relative to the market. Even though smaller producers had the option to purchase their own raw materials from a few trading companies in Taipei, many continued to lack the capital to purchase these materials in bulk. Moreover, even those with the capital often feared to do so, because such a purchase might jeopardize their relationship with center factory bosses who continued to control most of the finished product market.⁴⁶ As a result, most subcontracting relationships in place in the late 1970s continued for a few more years into the 1980s.

Sometime during the spring of 1983, however, a number of ongoing changes in the industry (originally started in 1979-80) began to create serious cracks in the center factory -- subcontractor relationship.⁴⁷ Furthermore, these changes were generally more favorable for subcontractors in Puli than for center factories. Perhaps the most important change in the industry was the consistent increase in demand for hsuan paper from the Japanese market. According to many subcontractors, the increase was very apparent because many center factory bosses anxiously scurried to their subcontractors to fill orders. In the words of one factory owner,

Center factory owners became desperate to fill their monthly orders from Japan. With so many center factories wanting us to make paper, we had an easier time negotiating an increase in price.

Afraid that we might run to other center factories which offered more money for our paper, many center factory bosses agreed to our demands.

During this period, both the productivity and profits of subcontractors increased dramatically; given the higher number of orders, subcontractors could more efficiently employ their work force. With more money in the bank and access to cheaper raw materials, many subcontractors felt they had more leverage in their dealings with center factories and they were emboldened to seek change. As one factory owner revealed, "As subcontractors, we knew that given the opportunity, we should try and secure a better life for ourselves in the industry." In sum, changes in the industry in the late 1970s and early 1980s provided some subcontractors with the opportunity to attempt to remake themselves and to shift their status beyond that of simple subcontractors in the production /market hierarchy for hand-made paper. How and in what manner these subcontractors chose to exploit this condition is the focus of the discussion which follows.

Strategies for survival

While all subcontractors longed for profits and security in the industry, only a finite number of viable options, or what could be called strategies, were available to them. I begin this section by discussing the three which were the most frequently chosen by subcontractors in Puli. First, some subcontractors sought profits and security by gaining access to the market for one's own papers and severing the center factory -- subcontractor alliance. I label this group "the independents." Second, others remained within the center factory -- subcontractor relationship believing it was really their only choice. By working within the existing framework, many subcontractors believed that one's

position could improve in the subcontracting hierarchy by surreptitiously probing and testing options while maintaining the status quo. I categorize this group as the "dependents." Finally, some subcontractors in the industry had, in the words of factory owners in Puli, "no logic" because they actually believed free competition existed in the industry and that they could move from center factory to center factory, selling their services to the highest bidder. This group I label "The job hoppers."

After discussing these three groups and the strategies they chose, I briefly consider two other strategies subcontractors used to help better position themselves in the industry. The first has to do with the pressure to automate the production process while the second is centered on the attempt to stimulate cooperation between subcontractors.

a) The dependents

Having chosen to "work within the system," the "dependents" did little to openly challenge the power and authority of the center factory and adopt as compliant and dependent a manner as possible (see Brusco and Sabel 1981).⁴⁸ Many subcontractors in Puli told me this was "safest" strategy simply because it avoided confrontation, thereby allowing center factories and subcontractors to maintain a good relationship. "Dependents" believed that maintaining a good relationship with a center factory meant that a subcontractor should not jump from one center factory to another when offered a better price for his paper. In return for such loyalty, however, a subcontractor hoped and expected that the center factory boss would send him more business or offer him a more generous price for his papers, even when demand for paper was low.

By maintaining an obsequious posture, a subcontractor was usually permitted a certain amount of leeway in the type of subcontracting arrangement

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he established with a center factory. Although capacity subcontracting remained the predominant form throughout the 1980s, two other types of subcontracting arrangements - "specialized and supplier"- began to emerge in the early part of the decade (see Chapter IV). Often carried on concurrently with capacity subcontracting, "specialized" and "supplier" subcontracting were used in a very limited way as some subcontractors gained special skills in producing unique hsuan or other specialty papers which center factories could not or would not produce. These specialty papers were formulated to fill a specific need in the market and carried a higher selling price than the more common forms of paper produced under capacity subcontracting.

While the demand for papers produced under specialized and supplier subcontracting was limited, some subcontractors believed that it might be possible for their own special high value-added paper to "catch on" in the Japanese market, thereby making them rich. There was, however, a flaw in this reasoning. How could their paper be sold without a center factory appropriating too much of the profit or claiming the paper as its own. Many subcontractors knew a specialty paper would never become a major product nor would they gain control over their own paper as long as a center factory controlled access to the market for finished paper.

One subcontractor who was noted for producing his own fine papers told me that, in 1981, a center factory owner he worked through showed some of his paper to a Japanese buyer. When the center factory owner returned to Puli, however, he told the subcontractor that the buyer liked the paper but felt the price, NT\$1,200 a ream, was too high and that the buyer would only purchase the paper for NT\$800. Through a friend, the subcontractor later learned that the customer had actually accepted the NT\$1,200 figure, and that the center factory owner had been cheating him out of an extra NT\$400 in profit.

Many often described the complicated way in which center factories camouflaged paper that had been made by subcontractors. For example, center factories sometimes used a confusing numbering system when they sold paper to overseas customers. One subcontractor indicated that a center factory assigned each type of subcontracted paper a specific number. When that center factory sold the paper to the customer, however, the number was changed so the customer could not trace the paper to the subcontractor. "The whole idea," contended a subcontractor,

is to keep the overseas buyer and the subcontractor as far away from each other as possible. So when a buyer tells a center factory owner that he likes a certain type of paper, the customer has no way of knowing who makes it and so has to continue to buy from the center factory.

b) The job hoppers

As the demand for hsuan paper increased in the Japanese market during the early 1980s, most subcontractors were under less pressure to submit to the heavy demands associated with capacity subcontracting. Recognizing that center factory bosses would not jeopardize their lucrative Japanese orders, particularly when demand for paper was at its highest, most subcontractors attempted to negotiate better terms than they previously had with center factories bosses. Implicit in these demands was the threat that if an agreement was not reached, a subcontractor might go to a competing center factory. During the 1980s, however, few subcontractors were willing to endanger their relationship by actually jumping to another center factory.

There were, however, a few subcontractors who actually acted out on the implied threat, shifting to a competing factory when they did not receive the

price demanded from the center factory owner with whom they had been doing business. Apparently these subcontractors were sure that market conditions in the industry would continue to move in their favor. The story about one such "job hopper," which was told to me by a the son of one owner of a center factory, illustrates this strategy well.

During most of the 1970s, this subcontractor would come to our factory once a week to pick up his raw materials and deliver the finished paper to us. He never complained about the price we paid him for his paper. Then when business became very good in the early 1980s, this subcontractor started to ask for a higher price for his paper. When we refused to pay him more money he then went to another center factory and made paper for them. Because our subcontractor left, my father told his Japanese customer that he might not be able to deliver the promised order on time. The buyer then told my father that if he didn't make delivery, he would go to another center factory and give the business to them. Finally, my father pleaded for the subcontractor to come back. The subcontractor not only got the price he wanted, but he also bought our raw materials with a post-dated check and without interest! He then demanded that we deliver the raw material and pick up the finished paper ourselves. My father was so mad. This subcontractor had been making paper for us for 10 years.

While it is unclear how many subcontractors took this route or when, half a dozen subcontractors had gained a reputation for hopping from center factory to center factory looking for the top price for their paper. Perhaps others did not chose this strategy because, as a subcontractor explained, it involved a great deal of risk.

While these subcontractors may have made a little more money in the short run, they were stupid in the long run. These center factory bosses remember who was loyal and who wasn't. All these subcontractors did was to destroy their own road.

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Dozens of other stories related how subcontractors jumped from job to job looking for the best price. As one subcontractor owner put it,

They were stupid because not only did they ruin their relationship with the center factories, they didn't even have a plan for the future. They had to know that once business got worse [since it always seemed to], the center factories would make them pay for what they had done. If I were them, I would have at least tried to grab a Japanese customer before I did any thing like that.

This assessment seems valid because, when I arrived in Puli in 1989, there were only three subcontractors in Puli who had a reputation as job hoppers. While most subcontractors found business to be much more difficult in the late 1980s, than in the early 1980s, these "job hoppers" had a particularly difficult time finding work. As one center factory boss related, "now these three subcontractors are calling us on a weekly basis for work. They aren't arguing about price like they did before. They know they are fortunate just to have any work from us."

c) The independents

There were only two options available to subcontractors who wanted to be independent from center factories. But, regardless of the option they chose, subcontractors had to be very careful about how they executed their plans. The most popular strategy involved the production of paper for the small domestic market and\ or for the occasional small trader or buyer from Taipei or overseas.

With the domestic market for hand-made paper providing between 10 percent and 15 percent of total revenues in the industry, center factories did not consider the Taiwan market particularly important. The center factories in Puli also were unable to effectively control the domestic market for paper because it was impossible to keep small merchants in Taiwan from buying directly from a

small subcontractor in Puli; no effective barrier could be erected between these merchants and smaller producers in Puli. Further, on occasion, when a small trader wandered into Puli with a small overseas order for paper, larger center factories were less likely to interfere with such a transaction. "It was very easy to figure out what would bother the center factories," said one small subcontractor turned independent producer.

As long as we sold paper to domestic buyers or to very small trading companies or small overseas buyers [in small lots] then it was unlikely that anyone would bother us. The whole idea was that a subcontractor should not threaten the business of a center factory and that meant not trying to move into their territory by taking away a larger customer.

While most subcontractors felt there was some risk involved in this strategy, most agreed that the safest tactic for a subcontractor who wanted to become independent was to not sever his connection with a center factory.⁴⁹ Because most center factory bosses did not consider such a move a threat to their business interests, they generally did not interfere with smaller companies which chose such a route. In fact, center factories sometimes continued to supply raw materials and, on occasion, buy some paper from these factories. Nevertheless, because the domestic market was so small and orders often inconsistent, selling locally rarely made anyone rich.

A second and far less popular strategy for subcontractors to gain independence was to steal a customer (almost always a Japanese customer) from a center factory. But this was by far the riskiest way to try and secure one's future in the industry. If a subcontractor succeeded, he might become very wealthy. But if he failed, he usually was forced to go out of business; no center factory would ever do business with him because he was considered to be completely untrustworthy).

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In addition to the risks involved in stealing customers, the practice posed several problems for would-be independents. First, customers rarely come to Puli and when they did, they would be "protected" by the center factories. Second, a factory owner had to speak Japanese if he was to negotiate a deal with a buyer. Because many of the entrepreneurs who set up their factories in the 1970s were too young to have learned Japanese, they either had to learn the language or hire an interpreter. Third, a subcontractor had to offer an extremely tempting deal in order to lure a customer away from one of the center factories. For example, he would have to agree to supply a paper similar to that supplied by a competitor but at a far lower price. He would also have to convince a customer that he, the rogue subcontractor, would be capable of providing quality paper and meeting delivery schedules. Finally customers understood that if they moved their business to a competitor in Puli, they might very well endanger any other business relationships they had in the industry.

The pressure to automate

As the industry had grown and matured during the 1960s, many factory owners sought to increase production and reduce labor costs by investing in equipment to cook, beat, and cut paper. They bought electric motors to pump pulp and water and many upgraded their factories by purchasing boilers which heated their steel-drying tables more efficiently. No one, however, could think of a way to replace the dredgers and dryers who were at the core of the production process.

By the mid-1980s, increasing migration of workers to other industries and rising labor costs threatened industry profits. Because there was little chance customers in Japan would tolerate additional increases in the price of paper, factory owners were forced to devise new methods to cut costs. The

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story which follows illustrates one subcontractor's response to the growing demands for lower prices and to a shrinking labor market in search of higher piece-rates. Unable to effect change in his status as a subcontractor by shifting to the production of high value-added papers, he tried to reduce his dependence on labor through automation.

In 1988, piece-workers at a small subcontracting factory told their boss that because he didn't pay as much as the larger factories in Puli, they would leave if their wages were not raised. When the boss did not meet their demands, most workers left the factory. Unable to work out an agreement with a center factory boss to produce a high quality paper and too small to fill orders as an independent producer, the boss opted for one last, but risky option. Borrowing money from his wife's relatives, he set out to automate his factory.

As we sat outside his empty factory several months later, he told me that he had spent a lot of money to automate the pumping and the drying process.

I purchased a used steel drying drum [10 feet in diameter and 5 feet wide] once used to make machine-made paper; I got it from the boss of the center factory I had subcontracted for. That drum cost me NT\$500,000. But after installing the equipment I realized that the steel on the outside of the drum was warped and that the paper came out all wrong and I couldn't use it.

Unable to put the machinery into operation, the subcontractor went out of business. Following the closing of the factory, rumors circulated among subcontractors asserting that the center factory boss who sold the drum knew it was defective. The subcontractor, however, was too embarrassed to ask for his money back. He also did not want to accuse the center factory boss, a man with whom he had been doing business for so many years, of cheating him.

One subcontractor who was aware of the situation explained that,

So many subcontractors are being squeezed by both the center factory bosses to cut prices and their workers to increase wages, that they will do almost anything to stay in business. The subcontractor should have known that he was taking too big a risk in trying to automate his operation. In fact, other companies have tried to automate and the Japanese customers have noticed the changes in the paper. The Japanese can tell the paper is not hand-made because it is too uniform. They only want to buy "hand-made"... otherwise they would have produced the stuff themselves and with far better equipment than what we would ever have.

Despite the risks in investing in new equipment, however, some factory owners attempted to maintain profitability without going to the extreme. In 1990, one subcontractor spent an additional NT\$600,000 to partially automate his operation. He told me that, because he didn't have the money to invest in a factory overseas, he would have to try upgrading his factory in Puli. Other subcontractors indicated this subcontractor was throwing good money after bad. "Maybe he'll be able to produce more paper in the short run," said one skeptic, "but by the time he pays for all that new equipment he installed, the industry will be long gone. All he is doing is putting off the inevitable."

The Subcontractor's Association

When the export market failed to improve between 1985 and 1987, some subcontractors lost money, while others went bankrupt. It was a time when, as one subcontractor related, center factory owners remembered the "good subcontractors" and those who gave them problems. The lull in demand for paper during this period, together with a resurgence in the clout of the center factories relative to their subcontractors *and* the growing labor shortage, motivated subcontractors to create a new, and secretive, paper association in

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1987. Organized and composed only of subcontractors, the group met once a month to share information on workers, products, piece-rates, and center factories.

I became aware of this group only when, during an interview with a subcontractor, another subcontractor dropped by to visit with him. After a considerable amount of fidgeting and small-talk between the three of us, the impatient visitor finally handed his friend a sheet of paper. After another awkward moment the man I was interviewing, indicated that I was "O.K." and could be shown what was written on the paper.⁵⁰ The document in question was a price list of about two dozen types of hsuan paper sold to the Japanese by the center factories.⁵¹ The men said that the figures were estimates of the prices which *they believed* the center factories received for the paper subcontractors produced in Puli. They told me that they hoped that, if the subcontractors agreed to adhere to a set price for each type of paper sold to the center factories, they would not only avoid undercutting one another, but they could force the center factories to buy paper from them at what they believed was a more equitable price.

Curious to know whether this association was successful, I made further inquiries when I visited other subcontractors. Surprised at what I knew, a number played down the association, telling me that their meetings were just an excuse for everyone to get together and get drunk. "They don't accomplish anything in those meetings," said one trusted informant. "I've tried to get subcontractors to work together, only to find that they eventually go their own way." Further, he explained, when subcontractors get together to fight against the center factories, someone always pulls out. Most of the subcontractors were afraid that if the center factory bosses found out about what they were

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doing, they would be cut out of any future orders. "No one has any bones (*ku tou*) [the equivalent of backbone in English] in this industry," he insisted.

On another occasion, this same informant told me that, in 1985, the owners of both center factories and subcontracting factories had gotten together during a meeting of the Nantou Paper-Makers Association.⁵² During this meeting, the paper-makers raised the problem of the growing labor shortage and workers jumping from one factory to another in search of better piece-rates. To remedy the situation, the group agreed that whenever a worker skipped to another factory, the factory owner on the receiving end would pay the Paper Association NT\$30,000. The logic that underlay the decision was that such fines would discourage factories from pilfering workers and thus forestall a piece-rate war which would only serve drive up labor costs for everyone. According to my informant,

Like so many agreements reached between us, the whole thing fell through. After the first worker left one factory for another factory, everyone demanded the new employer pay up. But the owner refused to pay, saying that the worker came to his factory on his own. So no one pressed the issue any further.

After telling this story, my informant threw up his hands and bellowed,

No one cooperates in this industry. There's just too much suspicion and self-interest. So now you understand why even the subcontractors can't seem to agree on anything and why we are all about to vanish.

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The 1980s: A Summary

Jolted from their once passive position and emboldened by the upswing in the market during the early 1980s, many subcontractors found the courage to challenge the center factories' authority and control over the finished product market. Most subcontractors were aware that the longer they remained segregated from the market, the less chance they had to accumulate high profits and to obtain long-term security in the paper industry. They knew, however, that the several "roads" (*lu* 路) available to reach this objective were fraught with a variety of risks.

Subcontractors who chose to "work within the system" and to improve their position in the production hierarchy by moving from the position of capacity subcontracting to supplier-subcontracting were less likely to run much of a risk than they did with the other strategies discussed. The two most common problems with this strategy, however, was that demand for expensive, higher value-added papers was limited, and center factory owners continued to control the product market. There was also no guarantee that the profits from higher value-added production would find their way back to the subcontractor. Regardless of whether a subcontractor was able to obtain orders for higher valued papers, most informants believed that there was greater stability to capacity subcontracting and that it brought to the subcontractor more security than becoming an independent or a job hopper.

A few subcontractors tried to make quick money by jumping from center factory to center factory as they searched for the best price for their papers. While this strategy might have brought slightly higher profits during periods of high demand it was, by far, one of the riskier strategies in the long run. Given the enormous fluctuations in demand that characterized this industry,

subcontractors were in a far more tenuous position when demand declined and center factory owners were able to "remember who their friends were."

There were those subcontractors, on the other hand, who attempted to go independent and honor the unspoken rule to avoid customers already claimed by the center factories. In doing so, they were left with only one option: to negotiate with small domestic buyers and the occasional small customer from overseas, neither of whom bought much paper or guaranteed consistent orders. Nevertheless, because a producer had at least some personal access and connection with the market, it was always possible for him to get lucky and accumulate enough buyers to keep his operation in business. This route, however, was considered less lucrative in the short run, although more secure in the long run.

Finally, "rogue" some subcontractors tried to improve their position by filching customers from center factories. None of these owners would agree to be interviewed (they were all highly secretive), perhaps fearing that I might abscond with their customers, as they had done to others in the past. Despite my lack of first-hand information on this group, gossip always circulated about their coups. While most center factory bosses openly vilified these factory owners, many subcontractors admired their nerve. As the only factory owners who ever mounted a direct assault on the hegemony of the center factories and succeeded, they were role models who subcontractors secretly wished they had the guts to emulate. Nevertheless, the few "rogue" subcontractors who failed served as reminder of the pitfalls involved such an effort.

In conclusion, subcontractors employed a number of strategies to attain a better position in the production hierarchy and to position themselves close to the product market. Throughout their careers, however, most small producers constantly tested these various strategies or variations thereof, probing for

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possible weakness and openings which might pay off in the end. Puli's subcontractors were constantly evolving and changing in an attempt to keep in step with the rapid changes in their industry's labor market both in Taiwan and in the rest of Asia. They continued to hope that, one day, one of their strategies would pay off and they would catch the big order or customer which would propel them beyond the grasp of the center factories and land them in the product market.

¹ The heart of paper production was in the eastern provinces of Chekiang, Anhwei, and Shanghai.

² Paper was not manufactured on a consistent basis until after 610 AD.

³ The article reported that in 1916, the industry employed "about 45,621 families, including 60,885 males and 84,736 females, with an average daily wage of 24 cents" (Far Eastern Review 1919:517).

⁴ Interview with Hung Yi-han, an older worker from the first Japanese factory, about Yien-an and the early years of the paper industry. A copy of a short manuscript of this interview was given to me by one of the local factory owners. The article was commissioned by the owner to essentially "immortalize the owner's contribution to the paper industry in Puli" (1989).

⁵ Interview with Hung Yi-han

⁶ As far as can be determined no Taiwanese factories were in operation at this time.

⁷ The new company was called Ta Tu Taiwan Paper (Taiwan Yin Hang Chi K'an).

⁸ In taking over the Japanese paper factories in Central Taiwan, each factory was given a specific task. The paper factory in Puli, seems to have been temporarily converted for the production of paper pulp for other branch factories in Taichung and Nantou. This was probably done because of Puli's proximity to raw materials in the nearby mountains. Other names attributed to the factory in Puli were Puli Hand-made Paper, another name was simply The Nantou Paper Factory).

⁹ Much of the data on the Japanese paper plant came from interview materials with those who worked in the plant. Although the present owner of the plant refused to talk to me, I was able to secure an interview with the owner's half- brother who ran another hand-made paper mill in Miaoli County.

¹⁰ Today, the company's owner operates his factory with the help of his 42- year-old son, while eleven family members are all stockholders in the business. The company has become one of the largest paper-makers in the area, with approximately 160 workers making handmade paper. The factory also has a sizable machine-made paper operation which produces specialty papers. Since the machine-made business of Puli's hand-made paper factories is not part of this research it will not be discussed to any great length here. For about three of the paper companies researched, however, machine-made papers compose a major part of their business.

¹¹ Throughout Taiwan, many businesses tend to locate in specific districts and often in direct proximity to their competitors. While competition is brought out in the open, specific manufacturing or commercial districts are believed to attract and concentrate customers.

¹² Given the fact that only seven factory sites were actually built and only seven companies from this period managed to stay in business until the late 1980s puts the failure rate at about 2 to 1.

¹³ In a sense, this was a partial return to the type of production in existence in many parts of Taiwan during the early years of the Japanese occupation.

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¹⁴ During the mid 1960s, a few of Puli's paper makers bought machinery to make paper. This was done, I was told, because a few owners were not sure to what extent the market for hand-made paper would return to Puli. While only small operations with one or two small machines, these factories eventually chose not to compete head-on with larger paper factories in Taiwan, but instead concentrated on the production of a long-fibered specialty papers with a limited market.

¹⁵ In a sense, this was one of the first instances where economic development in the rest of Taiwan's industrial economy (i.e., machine-made paper) was beginning to reap unforeseen consequences on the labor-intensive nature of hand-made paper production.

¹⁶ Most export data for the 1950s and 1960s on hand-made paper is either missing or not accurate. Most of the information on exports, therefore, come from interviews with factory owners. Some factory owners remember that exports to other markets in Asia, though limited, probably began in the early 1960s. Other owners, on the other hand, remember that exports did not amount to much until the late 1960s.

¹⁷ I was told that this was a special long- fibered paper which could not be made by machine in Taiwan and would otherwise have to be imported. I have no way of knowing if this was indeed the case.

¹⁸ In the original plan, each paper company would be responsible for buying their own raw material used in the power company job.

¹⁹ My informant speculated that, in the negotiations, this third paper company boss may have been given exclusive distribution rights (at least for a limited period of time) for the raw material sold in Taiwan.

²⁰ Instead of just selling a half dozen types of paper, for example, they found that a customer might also want various other types of paper (such as other sizes, colors, textures, and weights). This was the kind of information that would otherwise have been impossible to learn working through a middleman.

²¹ I have heard at least two expressions used by factory owners in Puli.

²² The only way I was able to determine paper output in this industry was to compare export data to an estimate of production capacity in Puli.

²³ Export figures were obtained from the Chinese Maritime Customs Office, Taiwan Area. During the early 1970s the customs office was not very specific about types of paper shipped abroad, making the search for the correct paper listed under the appropriate CCC code quite difficult. Eventually, however, I was able to match the appropriate export data to what was being produced in Puli. This is a simple NTS/ KG ratio which reflects the aggregate value of paper per kilogram and includes shipping, packaging, and other overhead costs. This ratio is not meant as an accurate accounting of the true value of paper, rather it is used only as an indicator of differences in the value of paper shipped to various markets.

²⁴ Despite his complaints, however, the profits these factories received for the paper sold to the rest of Asia were still higher than the very cheap ghost, cigarette, and tea bag paper made in the 1950s and 1960s.

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²⁵ At the time, Japanese buyers considered many of the high- grade varieties produced in Puli to be only of average quality. Nevertheless, it was the market for lower grade papers which needed to be filled and Taiwan's most expensive papers were far cheaper than any low- grade papers produced in Japan.

²⁶ Japanese have always purchased paper from Taiwan in US\$. Although there was a significant drop in the US\$- Japanese Yen exchange rate form 1976 to 1978, the change should have made Taiwanese paper more affordable.

²⁷ While many at this time were not sure of the exact number of Japanese customers who came to Taiwan in the early 1970s, most remember there were far fewer than exist today; in the mid 1980s, there were approximately 8 large Japanese customers.

²⁸ There was evidence to suggest that a few of these Japanese companies may have also invested in a center factory or two.

²⁹ By the mid 1970s, virtually every new company was involved in a subcontracting relationship with a larger "center" factory.

³⁰ The reader should remember that a portion of the industry's work force was also involved in agriculture and many workers withdrew from the industrial labor force during certain times of the year.

³¹ How these workers were able to come to such a conclusion is not entirely clear since few would have access to the kind of information necessary to make such a determination about the industry. Since both the industry and the factories in which they were working were quite small, however, it is plausible that workers knew a considerable amount about the industry.

³² Among those factory owners I interviewed who started their factories in the 1970s, not one said that they received any help from a former boss of theirs. Some did say that after a period of time, a former boss might offer them some subcontract work, but that was all.

³³ I was also told that as some subcontractors grew in size, they occasionally contracted with more than one center factory at a time. By the end of the 1970s, the largest center factory had about 15 subcontractors working for it.

³⁴ There were, however, a few exceptions to this trend. One of the largest trading firms of hand-made paper continued to export hand-made paper from Taichung and Taipei throughout the 1970s and early 1980s, even though it had no factory of its own. In 1983, however, a revolt of sorts occurred among Puli's subcontractors and they refused to sell the company any more paper. At that time, the trading firm was forced to set up its own production facility so it could continue to export paper.

³⁵ In other arrangements, loans of cash would be given outright to be repaid at the end of the month or on an agreed upon repayment date. According to my informants, in almost every case when a loan was extended to pay for raw materials, the subcontractor would have to sell the finished product to the center factory offering the loan.

³⁶ I also asked my informant if this might also reflect the liquidity of the center factory. While he said that this was true for some of the smaller factories, he believed that this rarely reflected the financial conditions of a center factory. In my research of the computer

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industry in Taipei, postdated checks often indicate that a company does not have enough cash in the bank to cover an immediate payment.

³⁷ When the issue of collusion arose in my conversations with subcontractors, I could not help feeling that some of my informants were: (a) uncomfortable talking about the subject for fear of possible reprisals; (b) were toying with the issue perhaps hoping that the idea would somehow take on greater significance; (c) genuinely angry at what had happened during the late 1970s and really didn't care what might happen. Those subcontractors who were quite vocal about the collusion issue were either on their way out of business, or were not heavily involved in subcontracting at all.

³⁸ As with so many stories told to me during my research, this one was related with full animation and, perhaps, a bit of folklore. Nevertheless, all of these stories were corroborated by other informants albeit with a few modifications in their recollections.

³⁹ Actually shipped in bales of about 125 -135 kilograms in what might be called a "baker's dozen."

⁴⁰ This was the one of the rare times that I heard a factory owner actually use the word exploitation.

⁴¹ See Bennet and Ishino (1963) on the use of fictive kinship systems in industrial organization.

⁴² As the 1970s wore on and the Japanese bought more higher- value added hsuan papers, most center factories attempted to keep such production "in house" because of the greater profits involved in such production.

⁴³ I use a "form" of vertical integration because most center factories did not actually own most "suppliers" of raw materials or the wholesalers or distributors of the finished paper.

⁴⁴ Once again call attention to Bennett and Ishino's work (1963) on "paternalistic patterns in economic organization" in Japan. They found that paternalism in economic organizations generally suggests a "relationship between the agents in any economic organization in which the employer acts toward his employees in a manner somewhat similar of a father toward his children" (1963:224). There is, of course, great variation in these patterns ranging from benevolence to exploitation.

⁴⁵ When export value and weight to non-Japanese markets in 1982 and 1991 are compared to the exports to Japan, the non -Japanese exports are extremely small.

⁴⁶ Although the center factories were forced to lower their prices of raw materials in line with the going market rates, few subcontractors were able to take advantage of the opportunity. Eventually in the early 1980s, however, many subcontractors eventually accumulated enough capital to purchase their own raw materials in bulk.

⁴⁷ There remains a considerable amount of disagreement among subcontractors as to when the break in relationship between center factory owners and subcontractors actually occurred. A few subcontractors stated that the relationship was in serious trouble by the late 1970s. Others claim that no noticeable rift occurred until about 1984 or 1985.

⁴⁸ In Brusco and Sabel's (1981) excellent study of artisan producers, they describe a type of small firm in which the demand for their products and services is ultimately

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determined by the investment and marketing decisions of the large firms with whom they do business(1981:101).

⁴⁹ A few subcontractors implied that many of the center factory bosses liked knowing what was going on in the industry.

⁵⁰ Because, at the time of the interview, I already knew a number of bosses for almost one year and was trusted with this information. I felt I had gained a personal victory of sorts when these men told me about the association.

⁵¹ They actually made a copy for me, blocking out the name of the organization at the top.

⁵² This was a sanctioned industrial association formed in the mid-1960s for the benefit of paper makers in the area.

CHAPTER VII

THE NATURE OF INTER-FIRM RELATIONSHIPS

To illustrate the history of the paper industry offered in Chapter VI, I present a nuanced picture of the nature of relationships within the industry in this chapter. This picture is made up of a composite rendering of one center factory owner and four subcontractors drawn from my sample of 19 paper companies to protect the anonymity of my informants. Using the center factory as the focal point of my discussion, I demonstrate the nature of productive relationships both within and between these five firms. More specifically, I show how the entrepreneurs who own these firms emerged in the industry and confronted and adapted to changes in labor and in the material and finished product markets.

I begin the chapter with an examination of Tai P'ing Cotton Paper Company, one of industry's oldest and most successful center factories. The story of Tai P'ing is about one man's evolving awareness of the nature of production, labor, and markets. It is about how, after gaining an understanding of the importance of product markets, one entrepreneur set about molding a productive sphere composed of workers and subcontractors who would provide products for the cheapest price and at minimal risk. It is a story about how, during the formation of this sphere, he used the guise of "family and group" to unify workers and subcontractors into a cohesive and productive unit which would, with a minimum of dissent, churn out paper in accordance with fluctuations in demand. Finally, it is a story about how, after the mid- 1980s,

the center factory owner, workers, and subcontractors came to question the benevolent nature of this relationship.

Following this discussion, I examine the experiences of four subcontractors, each of whom has pursued a different strategy to ensure profits and security in the industry. These four men developed their strategies after gaining considerable experience in an industry which was not only highly competitive but was also manipulated by owners of center factories who, since the early 1970s, controlled access to the majority of the Japanese market. In essence, these four men provide vivid examples of the struggle to adapt and survive in an industry which they came to accept as finite. Further, I show that these factory owners did not respond in a static way to the changing circumstances. Rather, they pursued a variety of strategies (or variations thereof) over time. While I occasionally describe the reputations of some factory owners as "job hoppers" or "dependent" subcontractors, these labels are nothing more than heuristic devices. Factory owners were always in pursuit of a "better way" or a new opportunity to achieve more security and more profits, and they were rarely wedded to only one pattern of behavior or strategy.

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**A. TAI P'ING PAPER COMPANY:
A CENTER FACTORY**

In 1959, a massive typhoon rumbled through Central Taiwan, wiping out whole villages and flooding cities. Although normally protected from typhoons by the surrounding mountains, Puli experienced considerable damage along the flood plains of the Mei and NanKang Rivers. Among the businesses and homes blown down along the rivers that day was a rickety bamboo and thatch hand-made paper factory owned by Mr. Hsieh and his partner.

The flood left Hsieh in serious financial trouble. Unable to rebuild, he sold what was left of his factory and land for NT\$50,000 to Mr. Chang. A 37 year old local entrepreneur, Mr. Chang was educated under the Japanese colonial system and was fluent in Japanese. After completing vocational high-school, Chang took a job after World War II as a hydroelectric engineer with the state-run Taiwan Electric Company in Puli.

In 1990, still vigorous and energetic at the age of 68, Chang told me that, despite his relatively good job with the power company in the 1950s, it was difficult to accumulate enough savings to buy the things he wanted for his family. Thus, to supplement his income from the power company, Chang and his wife bought a small hotel. But, by the late 1950s, the hotel had not provided enough extra income for his family of nine children. Encouraged by his wife and a friend, who worked at one of the local paper companies, Chang decided to try another line of work. He gave up his government job and the security that came with it, sold the hotel, and plunged into the paper industry which, at the time, was not very lucrative. Chang, however, never shied away from risk

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because, as he reported, he had complete confidence in his abilities and knew that he could make something of the business.

Knowing little about the paper business, Chang brought in two minor partners to help him set up and run his new enterprise. After only one year, however, both these men left the company. Although some old informants in the industry told me that the two men left because the factory made too little money, Mr. Chang insisted that they left because "they wanted to start their own businesses." After buying the factory in 1959, Chang spent NT\$250,000 of his savings to rebuild the company. He expanded the factory by adding more dredging tubs and drying tables, rebuilt the factory superstructure with brick and wood, and bought an electric motor to drive the factory's only pulp beater. "My original factory was only 40 ping (1400 sq. ft)," Chang reminisced. "We had nothing back then but we still managed to make money. As we made money, we reinvested in the factory, buying more tubs." Chang made money for four years and for four years added more tubs and tables until he had a total of 32 tubs and tables and a work force of about 30 people. Chang's wife told me many times that in the first years of starting their factory, life was very difficult for them. "Everyone in our family who was old enough to work had to work. I worked right alongside my husband drying paper. When we started getting a few more workers, I was able to take more time off and look after the children and help my husband supervise the business."

Removing the middleman

While the market for hand-made paper slowly began its transformation in the 1960s, boss Chang did not sit by idly. As other paper manufacturers did in Puli, he relied on middlemen from cities in Kaohsiung, Taichung, and Taipei to

sell his paper throughout Taiwan. But, when he used these traders, he lost well over 50 percent of the selling price on the cigarette, ghost, tea bag and inexpensive art and craft paper that he produced. In Chang's view, the agents were the root of the problem because, he explained, Taiwan was just a little place and it seemed ridiculous that these agents were taking so much profit from the sale of his paper. Chang knew that he could make far more money if he could gain direct access to the market and control over the sales of his own product. To bypass the middleman, therefore, he rented a small office in Taipei in the early 1960s and began finding his own buyers. Because his children were too young to help him in his business, Chang relied on his nephew to run the Taipei office.

The opening of this office was, perhaps, the shrewdest business move Chang ever made. By selling directly to the final buyer (or eliminating one level of middlemen), the business world beyond the factory expanded before him. Chang realized that many manufacturers, such as himself, had long been excluded from an economy that bought and sold raw materials and finished products and in which mark-ups on commodities at both ends of the production process were manipulated by trading firms and distributors, who knew little or nothing about the manufacture of paper.

Chang worked hard finding buyers for his paper. By negotiating directly with customers, he gained an understanding of the market for his product. By the late 1960s, he discovered that hand-made paper was no longer profitable unless it was high value-added, high-quality art and calligraphy (hsuan) paper. He also learned that machine-made paper would replace the low-grade, low-quality papers he had been making for much of the decade.

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Despite the fact that Chang was not making much money on his hand-made paper in the early 1960s, he persevered. Anticipating the growing need for machine-made paper, he set up a second paper company, bought some used machinery, and slowly weaned his production of low-grade paper from the hand-made production line to the machine-made line.¹ As he bought new machinery and built more dredging tubs, Chang expanded his factory. In addition to housing the machinery for the production of machine-made paper, the new multi-storied reinforced concrete structure included an office and his family's apartment, from which Chang was able to oversee operations at the factory on a twenty-four hour basis.

New overseas markets

By the mid-1960s, Chang was already selling some of his papers to overseas buyers in markets in East and Southeast Asia. As in Taiwan, there was a demand for cheap calligraphy papers overseas. Although these papers were not very profitable, Chang nevertheless cultivated his business relationship with their buyers (many of whom were ethnic Chinese who ran trading firms in Korea, Hong Kong, Singapore, and Indonesia).²

By the time the Japanese market for hand-made calligraphy paper began to open in the early 1970s, Chang was ready and waiting. Of his early contacts with Japanese buyers even before receiving his first order, Chang explained:

When these customers came to our Taipei office, I made them feel right at home because I could speak Japanese and I knew about Japanese culture. Yes, it took time to make a relationship (*kuan-hsi*) with them. But the relationship between my family and my customer's families have become very close over the years.

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As he filled more orders for paper, Chang earned the trust of his Japanese customers and his relationship with them gradually improved throughout the 1970s. They, in turn, rewarded Chang with larger orders of increased value. "We were like a large family," Chang told me one day. "Our customers in Japan, our workers here in the factory, and all the subcontractors who did work for me. We all worked together and we all benefited."

Between the late 1970s and the late 1980s, Chang continued to enlarge his factory. By 1989, the building was large enough to include an office where ten workers carried on the accounting, secretarial, and management tasks of the business. The office was laid out in an open office plan (sometimes known as the Japanese office plan), with managers and supervisors occupying desks placed at the heads of rows of other desks occupied by lower-ranking workers. The front door and office furniture were situated according to Chinese geomancy or *feng shui* while the company motto, written in calligraphy on the company's own paper, hung in a large frame on the wall near the front door.³ Every morning office workers and family members who worked at the plant would line up and recite the motto, which encouraged employees to work hard and produce the finest product possible. With over 100 piece-rate and wage-workers, Tai P'ing was the largest hand-made paper "center factory" in Puli.

The Family

Upon completing their education, five of Chang's nine children came to play an increasingly important role in the daily operations of the family company. Chang's second daughter, for example, moved to Japan where she managed the branch trading office for the family business. The youngest daughter, on the other hand, worked in the family's Taipei office. Regardless of

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their role, however, Chang's daughters had no legal stake in the business, an arrangement that followed Chinese rules of decent. Nevertheless, Chang pointed out: "I made sure that all my daughters would be taken care of. Aside from the large dowry, I also made sure that they all married successful men. Three of my daughters are married to lawyers."

As with many Taiwanese family firms, Chang's two sons would eventually inherit the business. Born about ten years apart, Chang's younger son managed the family's Taipei office while the older son oversaw the entire factory in Puli. The older son, his wife, children, lived with their parents in the "family home" in Puli. The second son, on the other hand, lived with his wife and four children in an apartment above the company offices in Taipei. As was the case with boss Chang's wife, the wives of the two sons in Puli also worked for the company.

When the factory was first established by boss Chang, his children were not old enough to help out in the firm and, in fact, have never worked as laborers in his factory. College educated, they occupied the upper management positions in the company, although boss Chang made all the major decisions. By locating his children in strategic areas of his company, Chang was able to manage both workers and important company information. Chang also encouraged his children to take frequent trips abroad to find new suppliers, buyers, and to broaden the marketing and trading operations of the firm. For example, his sons frequently traveled to find new and cheap labor markets to make paper (such as the Philippines), new suppliers of tree bark, and buyers of new high value-added papers that the company had been trying sell.

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Worker relations

In the mid-1980s, as boss Chang and his wife slowly left the day-to-day operation of the firm in the hands of their sons and daughters, friction increased between the family and workers and between the family and the company's subcontractors. While all these problems were not necessarily created by Chang's children, many workers in the company suggested that they felt abandoned by boss Chang and his wife. In fact, Mr. and Mrs. Chang both believed that they had fewer problems with their workers in the 1960s and 1970s when they were in day-to-day contact with them. "Back then, I often worked alongside our workers drying paper," Mrs. Chang said one day.

I could joke and talk with my workers just like they were my friends. None of our workers talked back to us like they do today. They also rarely complained about the working conditions or their wages. Today, however, everything is so complicated. We have all these labor laws and worker benefits. I can't even understand them. But I tell you, our younger workers understand many of these laws and they often use them to threaten us if we don't do what they want.

Many of the old workers in Tai P'ing agreed with Mrs. Chang's assessment. Some women remarked that when they were younger, the boss and his wife seemed closer to them -- more like friends than bosses. As one old dryer explained:

In the last few years the boss and his wife haven't come onto the factory floor as much as they used to. They must be too busy making money. Instead, their children or some other young office workers or supervisors deal with us, but they seem less interested in *us*. These younger people don't ask us how we or our families are doing like old Mrs. Chang used to. They don't have any feeling for us anymore (*ta men mei yu jen ch'ing wei*). Instead they just tell us the paper we make is poor, or that we should work harder.

Prior to the lunar New Year's vacation in 1990, I observed Mrs. Chang surrounded by some paper workers in the factory. She was pleading with them not to take an early holiday because the factory still had to finish an order for a large Japanese customer. Most of the workers were planning on leaving the factory two days early so that they would have a full two-week vacation; the workers had already agreed among themselves to take off two days early. They listened quietly to her pleas but, in the end, none could be convinced to work the extra two days.

Mrs. Chang, sensing perhaps that I did not completely understand what was going on, later took me aside and told me what she thought about workers in Taiwan. In her view, there was no hope for Taiwan's future because people just didn't want to work hard anymore. She also felt that, because labor was cheaper and more compliant in the rest of Asia, factories in Taiwan would move overseas leaving its workers without jobs.

In the Philippines [where the Chang family was in the process of building a factory to make paper], college educated students receive wages of only NT\$3,000 to 4,000 per month. In Taiwan high school educated young people can easily earn NT\$15,000 to 20,000 per month. In Puli, none of these young people want to work, they just want to go Taipei to get away from their scolding parents.

Mrs. Chang predicted that, in five years, Taiwan would not have any manufacturing jobs because workers would be too expensive to hire. "In five years Taiwan will not be a good place to live, work, or do business. Everything is changing too quickly and no one cares about anything anymore." She then looked at me as though I might provide some answers and said rhetorically, "Don't they know that if they don't work hard now there soon may

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not be any more jobs in Puli? If they don't work now they won't be able to save any money for when there is no work."

Despite the concern Mrs. Chang seemed to have for her workers, the drive to cut costs at the factory undermined her family's relationship with its work force. In the late 1980s, for example, the company hired two ethnic Mainlanders in their late 50s to work in the factory. Their jobs were demanding and involved making paper pulp used by the dredgers in the factory. "These men were hired because they are cheap, rarely complain, and they are honest," one supervisor candidly admitted to me. "The boss also feels that, because they are so old, they won't try and steal the paper pulp formula and open their own paper factory." As with many of the old male and female workers in the paper industry in Puli, these two waged workers earned considerably less money per month than young Taiwanese male workers in the factory.

In 1990, a dispute arose between these two mainlanders and one family member when the workers requested two ceiling fans (total cost NT\$ 1,300) near their work stations so they could keep cool during the summer months. The manager refused the request, suggesting instead that the workers purchase their own fans and bring them to work with them. As word spread throughout the factory about the manager's treatment of the two "old men," many workers openly vented their anger. One of the mainlanders involved in the dispute remarked that the manager was "nothing but a spoiled child." When, after several weeks, the manager showed no intention of installing the fans, the mainlanders left the factory.

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Any number of workers were willing to share their opinions about this incident. One machinist, for example, told me that no one really cared about the workers at the factory anymore. He had reached this conclusion because:

Our boss does not want to invest in anything in the factory even when it is only a few hundred NT dollars. It is often the little things that a boss does for his workers in a factory which makes workers happy. But when it comes to spending a little money, it is like they have to chop off an arm.

Breaking into a wide grin, he then chopped at his arm and asked: "Ever hear the one - [You want your horse to work for you, but you don't want to have to feed it hay] *Yao ma hao. Yu yao ma pu chih ts'ao.*"

Other workers were equally vocal following the dispute. One young woman, a worker in the front office, directed her anger toward the owners of the company. "If you look around this factory, you can see that the boss purchased nothing but old and used machinery," she related, her lower lip quivering with anger.

Even though the family has plenty of money they don't want to invest it in the factory, machinery, or workers. They [the boss's family] complain that none of the workers care about working hard. But they don't even care about their own factory so why should we? All they care about are those who will take the lowest wage. All they care about is making money out of nothing.

While most of the criticism was directed at managers and bosses at the company, another worker indicated that he thought the problems at this company had more to do with the general mentality of being a boss in Taiwan per se. "Just look around you," he directed. "This factory has been operating for thirty years and it still is a mess. When they buy new machinery it's *used machinery.*" Locating the root of the problem with the disinterest company

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owners take in their factories, he continued, "They are too casual [about us] and are more interested in playing the stock market or trading in real estate."

Many of the problems that emerged between workers and owners over the years were also attributable to the suspicion and lack of trust in the industry. As in any business, company owners in Puli closely guarded their secrets. They went to great lengths to try and prevent *any kind of information* (e.g., formula for paper, customers, sales revenues, production costs, piece-rates) from reaching the ears of anyone who was not a family member or trusted employee. In small firms, it was fairly easy to guard against leaks to other firms; only the boss or his family members had access to such information. In large firms, however, large numbers of workers were needed to run an operation, thus increasing the likelihood that secrets could easily find their way to a competitor.

Another incident at Tai P'ing Paper illustrates how fast leaked information could spread and how damaging it could be. One day a woman who was trimming paper cut off more than she should have. When a supervisor discovered the mistake, he exploded. Yelling at her, he said that she was wasting paper that sold for over NT\$10,000 per ream. News of the outburst quickly spread throughout the factory, not so much because of the nature of the behavior, but because of what was learned about the cost of the paper. While most workers knew that the particular type of paper being cut was expensive and of high quality, they had no idea that it was being sold for so much money. "We have been trying to raise our piece-rates for months," explained an informant. "But the boss has said again and again that he gets very little profit for his paper and that business is always poor. Now I think we have some information we can use when we want to bargain with him."

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My interviews with subcontractors also revealed the importance of such secrets. When I began to tell one subcontractor about the incident at "another" factory, he laughed and said he already had heard "the story from someone else," and only a few days after it had occurred. The subcontractor, however, sympathized with the boss at Tai P'ing because he often encountered similar problems in his own factory. "My workers are always trying to find out how much I sell my paper for. If they find out I'm getting NT\$50 more per lin than *they had estimated*, then they demand higher piece-rates." When I asked him if he knew the price of Tai Ping's expensive paper, he answered,

Unfortunately, the center factories never give me orders for that kind of expensive paper. Most of the center factories make that paper themselves. The paper we make for them is almost always the cheap stuff. But we're always interested in how much money the center factories sell our paper to the Japanese for. The center factories are always trying to knock down our prices saying the Japanese won't pay any more, but I don't believe them.

Suffice it to say, the ever-increasing cost of labor weighed heavily on the minds of all factory owners. Subcontractors often identified with center factory owners on the issue of Puli's workers. Perhaps searching for some common ground with center factory owners, they frequently told me that the real problem in the industry was uncooperative and greedy workers and that center factory owners or the market were somehow less responsible for their lack of profits.

While a number of subcontractors blamed many of their problems on center factory owners, they often failed to identify their key role or the role of their workers in the center factory -- subcontracting relationship. They were not able to point out to me that a center factory boss was using *their* workers to round out the problems of cyclical or unstable demand (i.e., that a subcontractor's workers often had to go idle when there were few orders), or

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that they were relegated to producing paper at the end of product cycles when competition was most acute and cost cutting the most critical (see Berger and Piori 1980; Sabel 1982). That is to say, subcontractors, never openly acknowledged the fact that center factory bosses were actually manipulating the entire work force in the industry through subcontracting.

Tai P'ing's trading and production empire

Since its founding, Tai P'ing Paper became one of the largest center factories in Puli. According to boss Chang, during the hay day of subcontracting in the 1970s and early 1980s, (omitting mention of how bad business was in 1977 or 1978), Tai P'ing Paper produced less than 30 percent of its paper "in-house." The remaining production was handled by the company's 11 to 15 subcontractors, who were located throughout Puli.⁴ Chang claimed that many of these subcontractors also worked for him on an exclusive basis, churning out orders of paper for both his Asian and Japanese customers. Although he pointed out that he had far fewer workers in the 1970s than he had in 1989, Chang insisted that he "didn't need many workers back then because I had so many subcontractors." With the number of subcontractors in decline since the mid-1980s, however, Chang had to increase his "in house" production of paper. By 1989, the company produced about 50 to 75 percent of its monthly exports in its own factory while the remainder was manufactured by their subcontractors.⁵

Figure 7.1 shows Tai P'ing's involvement in trading and production in 1989. As can be seen, moving from left to right, Tai P'ing owned four separate branch factories, three of which were in Puli while the third was a newly built factory in the Philippines. Not yet "on line" when I began my research, the

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Philippine factory was projected to employ over 100 paper workers and to produce the same common papers already made by many of Puli's subcontractors. Of the remaining branch factories in Puli, Branch Factory number No.1 was a small factory built in the late-1980s to handle the production overflow from the company's other factories while the other two were formerly owned by subcontractors (Branch Factory No.2 and No.3 -- also known as Ta Pu Paper Factory) who went into debt to Tai P'ing and were taken over in the mid-1980s. As discussed below, Ta Pu Paper Factory, eventually became a quasi-branch factory which was operated by a subcontractor (see below).

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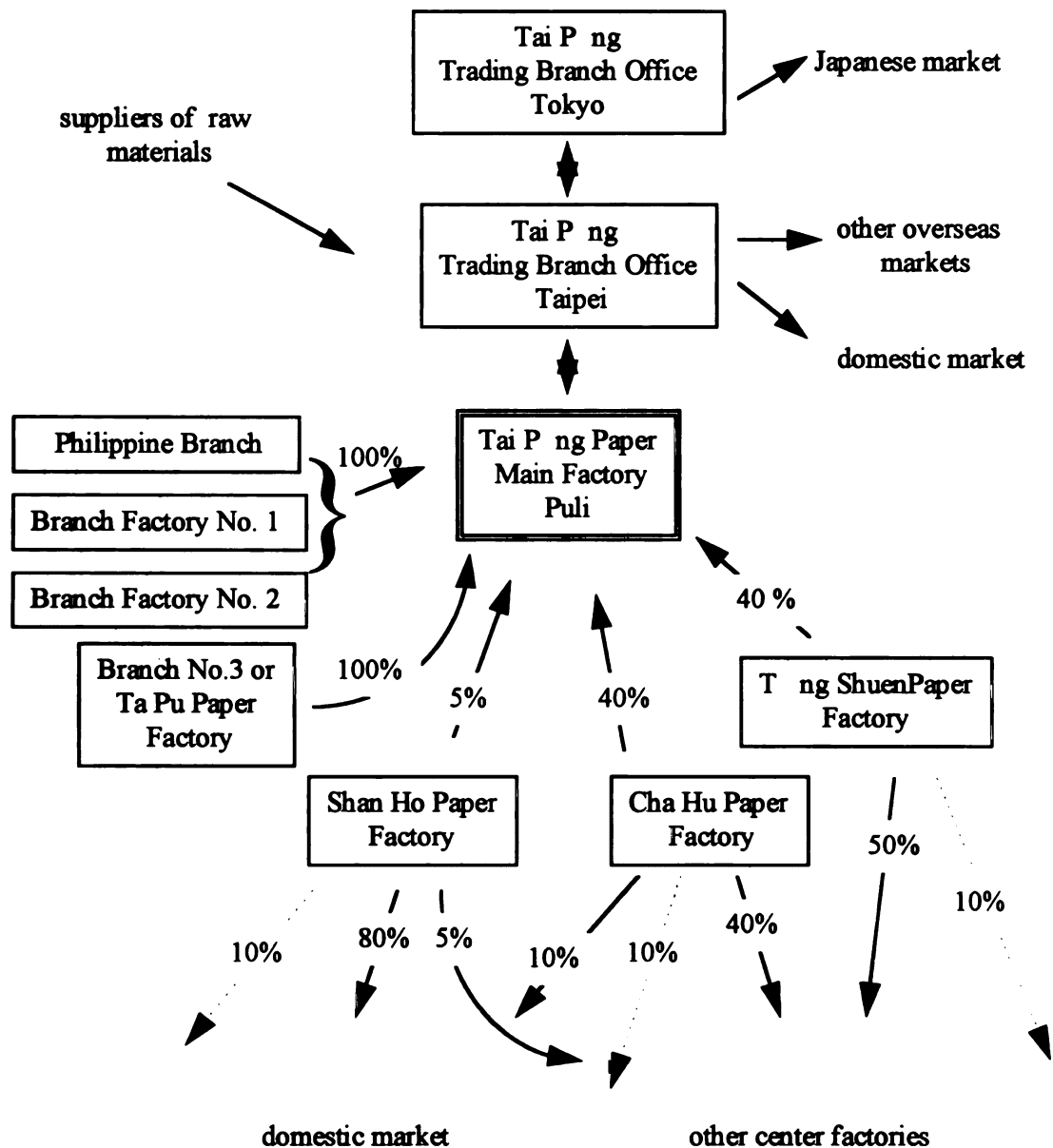


Figure 7.1. Diagram of Selected Trading and Subcontracting Relationships of Tai P'ing Paper Company: 1989

Note: Percentages represent approximate monthly distribution of production. Broken lines represent unknown or possible overseas exports. Shan Ho Paper, Ch'a Hu Paper, and T'ung Shuen Paper were all subcontractors.

The remainder of the Tai P'ing Paper empire extended into the marketing-trading segments of the industry. After the trading company was set up in Taipei, boss Chang opened a branch office in Tokyo in the late 1970s. Theoretically, all paper exports passed through the company's Taipei Trading Branch office and were sold directly to at least four large Japanese customers; they in turn distributed the paper to an elaborate network of wholesalers and retailers throughout their country. ⁶

While information on the family's financial holdings were closely guarded, some who were close to it indicated that its current worth in real estate, stock, and other (non-paper investments) probably exceeded their investments in the paper business. Many people in the industry reported that Chang foresaw the day when rising wages in Taiwan would put many companies out of business. Indeed, Chang admitted that

I learned very early on that manufacturing was only part of the entire industry and that paper making was only one part of making money. I knew that, to be successful in life, I would have to extend my understanding of the world and the markets where I wanted to sell my papers. I also knew that this knowledge would lead to other ways of making money.

Tai P'ing and its subcontracting relationships

In his conversations with me about changes in his relationship with his subcontractors, Chang emphasized that, in the past, Tai P'ing's subcontractors always belonged to one large industrial family (an analogy Chang often used in conversations with others). There was no question, however, that "this family" was under *his* firm control, as the following quotation illustrates.

We [he and his wife] attended all sorts of social functions with them over ten years ago. We treated them like our own workers. We told them if they take good care of us we'll take good care of them. When business would decline, for whatever reason, we would make sure that they at least had some minimum orders to fill.⁷

Highly charismatic, Chang could reach out to anyone and make him or her feel as though they truly belonged to his "fold." When Chang first set up his subcontracting networks in the 1970s, he was able to endear many subcontractors to himself and his "cause." That cause was "beating" other center factory owners in Puli and the Japanese. Indeed, some subcontractors suggested that, in the 1970s, they believed in Chang and their sense of common "purpose."

By the time I arrived in Puli, however, it was obvious that his relationship with his subcontractors was not as good as it had once been. Despite Chang's pronouncements, he no longer took a personal interest in his subcontractors. Because of his drive to find new buyers and markets for his product, Chang appeared preoccupied with business unrelated to the *production* of hand-made paper business in general and his subcontractors, in particular. Instead, the enthusiasm he seems to have given to cultivating and encouraging his subcontractors and workers in the past was redirected to the task of finding those individuals who could find new markets.

As a result, the task of overseeing business relationships and negotiations with their subcontractors increasingly fall to Chang's wife, daughter-in-law, and employees. When I asked Mrs. Chang about *her* relationship with her subcontractors, she gave me an answer which sounded similar to her comments about her relationship with her workers.

Much has changed in this industry since the 1970s and early 1980s. Today we only have about three to five subcontractors working for us and even then their work is inconsistent. Most of our subcontractors work for whomever will give them the highest price for the paper they make. I keep telling them that unless they start making better paper for a cheaper price, the paper factories in mainland China and Southeast Asia will put us all out of business. But they don't listen, all they want is more money. So we give them work, but we don't even get any loyalty in return.

Even though Mrs. Chang linked the problems in the industry to the changes occurring in the Asian labor market, she did not spare her criticism of the subcontractors'. "Our subcontractors have all changed. All these people want is more money but they don't want to work for it." While critical of the workers in her own company and in the industry in general, Mrs. Chang omitted mentioning the fact that many of her subcontractors were also having problems with their own workers, and that these were problems made worse by her company. Further, she made no connection between the 'poor' attitude of subcontractors and the fact that they were rarely given the opportunity to produce profitable papers, or that their workers were often idle. Indeed, according to a number of subcontractors, the Chang's seemed to have lost touch with the day-to-day problems of operating a small business such as meeting a payroll which increasingly ate away at profits. Suffice it to say, the relationship between the Chang household and their subcontractors had become increasingly contentious since about the mid-1980s. While fully aware of the economic changes going on around them, the Changs appear to have given less attention to how these changes might have affected the business of their subcontractors.

B. THE SUBCONTRACTORS

To understand why Mrs. Chang leveled such charges against her subcontractors and to gauge the nature of the relationship between Tai P'ing and their subcontractors, I now turn to four companies: Shan Ho, Ch'a Hu, T'ung Shuen, and Ta Pu Paper Factories, with which Tai P'ing had close relationships (see Figure 7.1). These four companies formed the productive appendages, so to speak, of Tai P'ing's empire. The first company, Ta Pu Paper, produced the most paper for Tai P'ing. The entire output of this firm, between 300 to 400 reams of paper a month, was all "sold" to Tai P'ing. Ch'a Hu Paper, Tai P'ing's second largest supplier, produced between 150 to 200 reams of paper month. This company sold less than 80 reams of paper to Tai P'ing; the remainder was sold to other center factories in Puli. T'ung Shuen, the third company, averaged less than 150 reams per month, of which 60 reams went to Tai P'ing. Finally, Shan Ho Paper, the smallest company, produced between 100 to 150 reams per month. Less than 10 reams of this paper was sold to Tai P'ing; the remainder was manufactured for domestic buyers. With the exception of Ta Pu, these factories also probably produced small amounts of paper for small overseas buyers (indicated by the dotted lines in Figure 7.1), although they rarely admitted this.

In Chapters IV and VI, I categorized the subcontractors in Puli according to the *type of subcontracting arrangements* (e.g., capacity, supplier, specialized) and the *strategies* (e.g., dependent, job hopper, independent) they pursued to ensure the accumulation of profits in 1989. I have also classified these factories according to *status* (e.g., center factory, casual center factory,

subcontractor, independent). While terms such as these identify the differences between producers at any given moment in time, people did not consider them immutable. When the opportunity presented itself, for example, some producers were able to change the nature of subcontracting arrangements, from "capacity" to "supplier" from one month to the next or even combined the different arrangements at the same time. In a similar vein, while a subcontractor might take a dependent position with one center factory, he might choose to "job hop" with others. Finally, while an owner of a small firm might appear to be independent, that is, trade and produce paper outside of subcontracting arrangements, in fact, he usually maintained minimal subcontracting arrangements with a center factory. Suffice it to say, subcontractors in Puli were highly malleable, constantly adjusting their position in the production process when circumstances allowed.

A dependent factory

I have loosely categorized Tai P'ing's four subcontractors under headings which mirrored three strategies (dependent, job hopper, and independent) commonly pursued by subcontractors in Puli. The first, Ta Pu Paper Factory, was a quasi-branch factory owned by Tai P'ing Paper Company, yet operated by a man, Mr. Li, who considered himself a subcontractor. Mr. Li's operation is illustrative of a "dependent" subcontractor, even though his relationship with Tai P'ing could also be characterized as almost "tenant" in nature because he was unable to sell his paper to anyone but Tai P'ing Paper.

A job hopper

The owner of the second company, Ch'a Hu Paper, was a "job hopper." Believing he could sell his paper to the highest bidder, the owner of Ch'a Hu often jumped from center factory to center factory trying to find the best price. Both Ch'a Hu and Ta Pu produced common types of hsuan paper (e.g., hsuan #5) for Tai P'ing under a capacity subcontracting arrangement.

The independents

In contrast to the owners of Ta Pu and Ch'a Hu, the man who headed the third company, T'ung Shuen Paper, produced a medium- to high valued-added paper for various center factories under "supplier or specialized" subcontracting arrangements. While not actually "independent" of the center factories, T'ung Shuen was a relatively successful company which had more autonomy than producers who might be categorized as "dependent."

Finally, the owner of Shan Ho, the fourth company, produced most of his paper for the domestic market and could, therefore, be characterized as an "independent." Like the owner of T'ung Shuen, the small amount of paper he produced for center factories was primarily medium- to high value- added paper produced in a "supplier" or "specialized" arrangement.

The degree of autonomy a subcontractor enjoyed in Puli was tied to the nature of his subcontracting arrangement with a center factory and, most importantly, his distance from the finished product market. The relationship these four subcontractors enjoyed with Tai P'ing represented, in a sense, a range between dependence and independence structured on the degree to which Tai P'ing positioned itself between its subcontractors and the market for paper. Ta Pu Paper represented the least independent company while Shan Ho, the

most independent. The brief histories of Ta Pu and Ch'a Hu, furthermore, demonstrate the conditions within which many of these firms have changed over time and the strategies they employed to accumulate capital and ensure their survival.

**C. TA PU PAPER FACTORY:
A DEPENDENT**

In 1968, Mr. Li left middle school at age 15 and began working in a paper factory. Having decided in his late teens that he wanted to be his own boss, Li set about working for a number of paper companies in Puli, including Tai P'ing Paper. "By working for all those companies," reported Li, "I was able to learn as much as I could from as many bosses as possible." In the late 1970s, Li and a worker from another company started their own factory, but they went bankrupt after about one year. Left without any money, Li went to Taipei, managed to save his earnings, and returned to Puli after two years. Still wanting to open a paper plant but short of enough money, Li looked for another way to get back into the paper business.

In 1982, Mr. Li discovered that a boss of a small paper factory in Puli was having a difficult time making money and was looking for someone to rent his factory. Seeing an opportunity to run his own company, Li rented the factory for almost three years and sold his paper to Tai P'ing Paper. "Boss Chang and I were close friends," Li remarked. "When I was a worker, I spent a lot of time at their factory and they treated me very well.

In 1985, a dispute with his landlord left Li without a factory in which to make paper. A seemingly unrelated event, however, was to offer a solution to his problem. Shortly before Li lost the factory, boss Chang collected on a debt from one of his other subcontractors; an in-kind payment which consisted of the man's entire factory. Apparently one of Mr. Chang's long-time subcontractors began taking loans from Tai P'ing Paper in the early 1980s. These loans were ostensibly made so that the factory owner could pay off his debts on raw

materials, and the construction costs and the cost of machinery purchased when he started in the mid 1970s.

Opinions on why this hapless factory owner lost his company ranged from speculation that he was a drunkard to he was a poor manager, or simply a victim of a greedy center factory owner (i.e., the boss of Tai P'ing Paper). "He got into debt to Tai P'ing because boss Chang wanted his factory," insisted one outspoken subcontractor who went out of business in late 1990. "Instead of trying to get this fellow to pay his debts on time, Tai P'ing just allowed him to take on more and more debt until there was no way out for him."

Whatever the nature of the bankruptcy, Mr. Chang was left with a new factory and Mr. Li was in need of one. In 1985, Li and Chang worked out an agreement whereby Li took over the operation of the bankrupt factory. In exchange for the use of the building, Li agreed to assume responsibility for all maintenance and repairs made to the factory, to sell all the paper he made to Tai P'ing, and to take whatever price Mr. Chang offered for the paper.⁸ Mr. Li, in turn, hired and paid his own workers and kept whatever profits remained after selling his paper to Tai P'ing. According to Mr. Li, while this was not an ideal arrangement, it was probably the closest he could come to owning his own factory. Further, Li commented that because the factory was in bad shape when he took over the business, "We had to spend NT\$300,000 just to fix up the place. [But] I had some savings, and my wife's family and a friend of mine contributed some money."

When I began interviewing Mr. Li in the spring of 1989, he employed between 40 and 47 workers in his factory; approximately half were dredgers and half dryers. Li's three children were all under the age of 12 and rarely helped in the factory. Li did not expect his children to go into the business

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because, as he explained, "Working in a factory like this will not provide them with a future. With the center factories in Puli in control of access to the Japanese market for paper, there is no way my children will be able to make this into a business which can support them."

On any number of visits to Li's factory I noticed an old woman running around the factory doing odd jobs such as chopping wood, stoking the large boiler that heated the drying tables, cleaning the factory floor, and lifting heavy buckets of pulp and raw materials into the pulp beater. Because I had seen old women doing some of the roughest and dirtiest jobs in other factories, I assumed this woman had been hired because she would work for low wages. But when I asked Li about this woman and how much she earned, he gave me a betel nut, grinned, and answered, "Oh, she's my mother. Like my wife, she doesn't get a wage."

Indeed, Mrs. Li who was 37 years old (he was 36), was as preoccupied in the business as was her mother-in-law. She helped manage the women workers, sorted and kept an account of paper produced, and kept track of the company's books. While Mrs. Li did not work on the factory floor, she watched over her workers and made sure everything went smoothly. As the company boss, Mr. Li had overall responsibility for the business and, as is common among firms employing more than 20 workers, he did not work alongside his workers on the factory floor. "I supervise my workers and often make up the paper pulp in the morning when my workers come in to make paper." On as many as half of the occasions when I went to his factory, however, Mr. Li was not there. His wife told me that he was often in town "doing business." What that business was, she would not say.

The Lis and Tai P'ing Paper

When I first started my interviews with the Lis, they spoke highly of Mr. and Mrs. Chang of Tai P'ing Paper. Mrs. Li related that Mrs. Chang telephoned her and talked to her "about anything at all. Mrs. Chang made me feel as though I was part of her family." To this Mr. Li added that they were part of Tai P'ing's "group," and that it was in the best interest of a subcontractor to deal with only one center factory at a time. "When you are loyal to them," said Mrs. Li,

they will be loyal right back. They will take care of you if business becomes poor by sending orders your way. If a subcontractor jumps from center factory to center factory looking for the best price, however, the center factories will start to distrust you and may not provide you with consistent orders.

By late spring of 1990, business for the paper industry had become worse than in the previous year. The number of workers in Li's factory was down to 20 and the price they received for the paper they produced for Tai P'ing had dropped. During one long interview, Li indicated that he thought it seemed that the two major problems in the industry were the shortage of labor and an increase in competition from cheap paper from the Mainland.

The boss at Tai P'ing Paper told me that the they would have to cut the price of paper for which they were paying me by NT\$300 a lin. Mrs. Chang told my wife their Japanese customers were demanding lower prices or they would buy more paper from the Mainland. I already receive about NT\$100 less for my paper than their other subcontractors since I don't pay Tai P'ing any money for rent on the factory.

Li was selling his paper to Tai P'ing for NT\$2,700 and, Mrs. Chang had told him that Tai P'ing received only between NT\$3,100 and NT\$3,300 per ream from

the Japanese for the paper he made. He calculated that the extra cost of packaging, shipping, and insurance which was paid by Tai P'ing was probably about NT\$500 per ream. "So you see," he said, "Tai P'ing is only making about NT\$100 or less in profit." But having said this, Mr. Li paused, thought for a moment, and mused, "That figure can't be right. They must be making much more profit than that. I guess I must have heard incorrectly (*wo t'ing t'so le*)."

As it became more difficult for Li to make a profit, he lamented that, "The only way I can make more money is to make more paper. But look at my factory, half my workers are gone. How can I make more money with fewer workers?" According to Li's wife, many of their workers had gone to another factory because the boss was paying higher piece-rates. But, she confided, "He is too embarrassed to say why many of his workers have left him."

He thought many of his workers liked him because he treated them so well. He never expected so many would leave over the minor difference in the level of piece-rates. Increasingly, many workers in the industry are jumping from job to job. If workers don't like a boss, his paper pulp, or the piece-rates they just leave. Because there are so few workers in the industry now, they have no problem getting work. All the factory owners are desperate for workers.

As I continued interviewing the Lis through the summer and fall of 1990, I began to question the health of their company and I asked Li if he was worried about what might happen to his business. In contrast to his mood in earlier interviews with him, Li replied "I'm not afraid. I've already prepared everything" (*Wo pu pa, wo i ching chuan pei hau*). Indeed, during the summer, Li had begun to question whether Tai P'ing would "take care of him" very much longer. "Tai P'ing has already started their factory in the Philippines, and I'm sure that they will begin making the paper that I make right now." Then,

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changing the subject, Mr. Li showed me a number of ideas he had for making money. He pointed out that he had friends in Taipei, Hong Kong, and Vietnam (Li had already made one trip to Vietnam in the spring of 1990) with whom he could do business. But, taking hold of my arm he cautioned, "Don't tell anyone in Tai P'ing about this. I know I have some good ideas and if they hear what I'm doing they might try doing it themselves." When I asked him why he didn't try selling his ideas to the Japanese he shook his head, as though I still didn't understand, and said simply, "If I go anywhere near any Japanese, Tai P'ing might think I'm trying to steal a customer. Then I'm through."

The Lis relationship with other factory owners in the industry

While Mr. Li and his wife often told me how much they liked the Changs and how much they made his family feel as if they were a part of their family, Li did not hesitate to offer negative opinions about other factory owners in the industry. One particular subcontractor who was a focus of his discussion was Mr. Kao of Ch'a Hu paper (see below). Mr. Kao was also a subcontractor for Tai P'ing Paper and, therefore, Li's competitor for orders from the center factory.

Mr. Kao, according to Mr. Li, had started jumping from center factory to center factory in the early 1980s, looking for the best price for his paper.

Mr. Kao thought that he was a big shot during that time and that everyone had to give him whatever price he wanted. Now, however, business is much worse and many of the center factories remember what he did a few years ago. Now they only occasionally throw a few orders his way.

Noting that I had an ear for gossip, Mrs. Li eagerly added that Mr. Kao's wife was probably responsible for many of her husband's problems. Mrs. Kao

is "tough and makes doing business difficult for her husband. Mrs. Kao always demands more money from the center factories and pushes her husband to take more money than they deserve." In Mrs. Li's view, Kao's wife did not really understand that "the paper business should be handled by the men." When I asked her if any other wives interfered in their husband's business, she replied "Oh yes! You know Mrs. Lin [the wife of another factory owner] hated her husband's business and his workers. Finally she just drove him out of paper-making. Now they are selling tea in the mountains."

Why Mrs. Li wanted to tell me this information about other factory owners is not entirely clear. I found the Lis' derisive comments about other factory owners, however, to be a common occurrence in Puli. In such a small and competitive industry, gossip about other subcontractors appeared to be a form of guerrilla warfare designed to gain an upper hand over a competitor and, perhaps, a way to gain favor with a center factory boss.

It was what the Lis had to say about their relationship with Tai P'ing, however, which I found most interesting. In contrast to most other subcontractors in Puli, the Lis were bound to a subcontracting relationship in which they had no choice but to sell paper to Tai P'ing. More like a "tenant" subcontractor than an independent entrepreneur, the Li's had to maintain a "good face" for me when I asked them about their relationship with Tai P'ing.

One out-spoken subcontractor told me that Li *had* to tell me he felt part of Tai P'ing's "group or family" because he "had no other choice." In this man's view, I need only study Ta Pu to understand the nature of the relationship between center factory owners and subcontractors in the 1970s. He contended that, in the 1970s, center factories manipulated subcontractors not only by controlling access to the finished product market but also by controlling access

to raw materials and the capital necessary to buy those materials. "Many of us were in debt to the center factories," he related. "The center factories had the power to control everything in our lives. And, like Ta Pu, we had no choice but to be part of 'someone's family whether we liked it or not.'"

Was claiming to belong to a center factory's "family" or "group" simply a pragmatic response to circumstances beyond the control of subcontractors? This is difficult to gauge since there were many subcontractors who, like Mr. Li, believed that no matter what the circumstance, a close, outwardly dependent relationship with a center factory owner was the most logical business strategy to take in the industry. They, like Li, recognized that, in the absence of overseas customers, it made little sense to attempt to openly circumvent the power and authority of a center factory. What made more sense was to "give the center factory boss face" by acknowledging his position in the industry and playing the role of willing and compliant subcontractor. As with many subcontractors in Puli, however, Li always had some other business scheme in mind. Aware that Tai P'ing probably would not "take care of him" in the future, Li had plans for making money, which I assumed to be outside of Tai P'ing's sphere of control. As he knew too well, center factory bosses were not very forgiving of subcontractors who attempted to ply paper in their markets.

**D. CH'A HU PAPER FACTORY:
A JOB HOPPER**

Having apprenticed as a metal worker during the Japanese colonial period, Mr. Kao's father (whom I refer to as Old Kao), invested his savings in a small metal-working shop and foundry in Puli in the early 1950s. Old Kao made a considerable amount of money fabricating equipment used to haul timber out of the mountains which surround the basin. By the late 1950s, Old Kao was looking for another business to invest some of the profits. In 1960, his wife's brother, who worked at a local paper company, suggested that the two men go into business together making paper. With Old Kao's money and metal fabrication skills and his brother-in-law's knowledge of paper making, the two set up a small paper factory behind Old Kao's metal foundry near the center of Puli's main market area. Like other paper factories at that time, they started with only a few tubs and tables staffed by family members and no more than a handful of workers.

Throughout the 1960s, Old Kao struggled to compete with other paper companies in Puli. When the company failed to make money in the late 1960s, his brother-in-law broke off the partnership. Apparently, he was also uncomfortable with the fact that Old Kao owned the factory and that it was located on Old Kao's land. The brother-in-law also knew that one of Old Kao's two sons might challenge him in the company as they matured into adulthood and needed jobs. Faced with these prospects, the brother-in-law opted to start his own paper factory, one that in 1989 produced only machine-made paper.

Following his brother-in-law's departure, Old Kao was undecided about what to do with his paper business. He had high hopes that his older son, who

was about to take his college entrance exams, would pursue a professional career. His younger son, who was less academically inclined, seemed more interested in the family metal business than in school. If all went well, his sons would each have a profession and he could phase out his paper company.

Unfortunately, all did not go as planned; the older son failed his college entrance exams. Faced with the prospect that his two sons might have to work together in the same metal business, Old Kao decided to maintain the paper company. After closing his original factory in 1971, he bought property in Ta Ch'eng Village as close as possible to the center of the paper industry. There he constructed a new paper factory and a new multi-storied concrete home for his older son and his son's future family.⁹ But before could bring his plans to fruition, Old Kao died unexpectedly in the early 1980s, leaving his older son in control of the paper business.

Despite the fact that Old Kao founded his company in the early 1960s, it never developed into a center factory as did some of the other companies started during that same period. Rather, he either produced and sold paper for use in the Taiwanese market or he sold paper to other factories in the basin. A number of workers and factory owners in Puli speculated on why his company never developed into a center factory. Those who knew Old Kao believed that, had he not died at such a young age, other companies might now be subcontracting for Ch'a Hu Paper rather than the other way around. "Old Mr. Kao was a very competent business man," said one old factory owner. "He started two completely different companies [metal working and paper making] and seemed successful at both. But after he died and his son took over the paper business, the company just went no where."

Notwithstanding his early death, Old Kao appeared to have been involved in too many other ventures to fully concentrate on the paper business. Although Old Kao could have become a center factory owner, he never found his own customers in the 1960s or 1970s. One owner commented that, after 1970, "Old Kao wasn't as aggressive as he could have been. After the other center factory owners grabbed the Japanese buyers, it was already too late."

The son as factory boss

When I was first introduced to Kao's son (hereafter referred to as Kao or Mr. Kao) by a worker from Tai P'ing Paper Company, the son readily agreed to participate in my research. Mr. Kao was particularly outgoing and had a reputation among many bosses and workers in the industry as a good person who loved to socialize. In fact, Kao told me that one of the benefits of being a boss was that it gave a person time to sit down, drink tea, and talk to his friends.

Mr. Kao was 39 in 1989 and lived with his wife, eight-year-old son, and mother. Every morning Kao got up before 6:00 a.m. to make the pulp used in the factory on that day. Like Mr. Li, Kao did not screen paper himself and his wife, like so many other women in the industry, kept track of the company books and helped manage the workers.

Kao's factory housed twelve tubs and ten drying tables. If operated at capacity, the company could employ only about 23 individuals with an output of approximately 300 reams of paper per month. During my visits to the factory over the course of the research period, the number of workers fluctuated between 15 and 20 on any given day. Kao told me that in 1988, he produced an average of about 250 to 300 reams a month of common hsuan papers. In 1989, that average had fallen to between 150 to 200 reams per month, with almost 40

percent of his output sold to Tai P'ing paper and 40 percent sold to other center factories. The remaining 20 percent of his output was sold either to the domestic market or to small overseas buyers. Since 1988, Kao had tried to start a business relationship with a number of paper retailers in Taipei believing that, if he could increase his monthly sales to the domestic market by about 35 percent, he could reduce his dependence on the center factories (see Figure 7.1).

Kao had always tried to decrease his dependence on the center factories. Indeed, soon after he took over the business, he gained a reputation as a "job hopper." Rather than maintaining a long-term relationship with one center factory, other factory owners claimed that he sought the best price for his paper from anyone willing to pay. According to a supervisor at Tai P'ing Paper, when the demand for paper was high, Kao frequently declined to make paper for Tai P'ing because they did not offer a high enough price. The supervisor pointed out that,

Things are much different now [1989]. Business is getting worse and Kao can't just pick and choose whom he will make paper for. Just the other day, Mrs. Kao came to our factory and asked if we had any orders for them. I guess our boss felt sorry for them so she gave them a small order.

Kao's relationship with center factories

Like other wives in the industry, Mrs. Kao freely aired her opinion about others in the industry. While rarely professing her close relationship to the bosses of center factories, she never hesitated to tell me about how difficult their own and other subcontractors' lives were *because of those center*

factories. She explained that no matter what a subcontractor did, a center factory found a way to siphon off their profits.

When we all had to buy our raw materials from the center factories, they charged far more for those materials than what they cost. When we didn't have enough money to pay for the overpriced materials, they would extend us loans with high interest rates. It was so easy for us to get into debt. And if we weren't looking, they would 'eat us up' [take away their factories].

The phrase "to be eaten" was frequently used by subcontractors to describe what would happen to them if they got too deeply in debt to a center factory. In addition, the Kaos introduced me to the concept of maintaining "broken" or "fragile" relationships. In their view, although the center factories often talked about the importance of a close relationship with their subcontractors, they actually preferred a kind of broken relationship so that when business was poor they were not obligated to help their subcontractors. "This has happened as long as I can remember," explained Mrs. Kao.

The center factories say that if you do more work for us and stay with us, we will always take care of you. Then, after two or three months of making paper for a center factory, the center factory bosses start complaining about quality. Then they cut back on your orders. In the meantime, you've already told the other center factories that you can't fill their orders because you are already obligated to this one center factory. When these center factories know you are in difficulty then they can demand whatever they want from you.... You become more vulnerable [i.e., receive lower prices and/or are forced to increase quality].

Expanding on her explanation, Mrs. Kao related an incident that occurred in 1989. A center factory boss asked her husband to make a lot of

paper for him and told her husband that, because the order would last the whole year, he needed her husband's guarantee that he would do the work.

I warned my husband against taking the job because we had been cheated before. But the center factory boss's wife pleaded with my husband to take the work. You know, my husband has a good heart, so he took the work.

The Kao's committed 75 percent of their production to the one center factory (not Tai P'ing). Then, less than six months later, the center factory suddenly sent back 30 percent of the paper made by Ch'a Hu, claiming that the quality was no good. By the end of 1989, long before the agreement was to expire, the center factory cut its orders almost completely.

In an attempt to ameliorate the problem, Mrs. Kao telephoned Mrs. Chang at Tai P'ing Paper to ask if they had any orders for them. Mrs. Chang was willing to give the Kao's work but only if the quality of the paper improved and the quantity would be greater than before. But, when Mrs. Chang told Mrs. Kao the price they were willing to pay for their paper, Mrs. Kao objected.

Mrs. Chang said that we should be able to make enough money as long as we make more of it [i.e., the low price would be off-set by increased production]. That old lady wants us to produce good quality paper at such a low price -- what she really wants is for us to produce paper for them only. Then we will be held by them, held by the throat.

On survival

Toward the end of my stay in Puli, Kao, in response to my questioning, saw no way he could survive in the paper industry after the mid-1990s and revealed that it was already too late for him to do anything about his situation.

When I asked him why he didn't invest in an overseas' factory like some other paper companies in Puli, Kao looked at me in disbelief and answered,

I don't have any connections in Southeast Asia or Xiamen [Mainland China]. The center factories, furthermore, still have control over access to the Japanese market. The most important connection is with a customer. Without that, it doesn't matter where you make paper.

Barriers to the product market were not the only factors responsible for his problems, however. In Kao's view, his factory would probably fail one day because it was too small to lure a Japanese customer away from a center factory, nor did he know how to speak Japanese. Aware that he had been taking Japanese lessons during the past few months, I expressed surprise. Pausing for a moment, he explained, "There is this Japanese trader I know who is coming to see us in the spring [of 1991]. He knows some paper wholesalers in Japan who might be interested in buying some paper." When I asked if his meeting might be risky for him if the center factory owners found out about it, he explained that, while in 1985 it would have been risky and that center factory owners probably would have cut him out of any work, in 1989, the center factories had cut back on his orders so much there really was not much more that they could do to him. Moreover, he continued, this Japanese trader was so small, he was barely noticeable in the market.

The fact that the Kaos gained a reputation for job hopping was probably due to the fact that they were willing to confront and challenge center factory bosses. Much less passive and conciliatory toward the center factories than the Lis, the Kaos believed that center factories should compete for the business of subcontractors and that they should be held accountable when they don't live up to an agreement (i.e., they should be required to take an entire order). While

they did not openly say it, it appeared that the Kaos were frustrated with a subcontracting system which operated more on concepts of loyalty and hierarchy than on price signals. By following their "free-market" instincts they were ostracized by other factory owners and, they believed, often passed over by center factories who favored subcontractors who were submissive and "group players."

Positioned outside the normal subcontracting channels, the Kaos' company resembled a disenfranchised producer wandering the basin for work. Perhaps because of this, their choice of words and phrases to describe their relationship with center factories in Puli were peppered with analogies of being consumed, eaten, dominated, and locked out of the market.

**E. T'UNG SHUEN AND SHAN HO PAPER FACTORIES:
TWO INDEPENDENTS**

T'ung Shuen Paper

Established in 1977 by Mr. Chen, T'ung Shuen Paper Company employed 15 workers in 1989. Boss Chen operated the company with the help of his wife, eldest son, and daughter-in-law. With an output of about 150 reams of paper per month, Chen sold 40 percent of his production to Tai P'ing; 50 percent was divided among the other center factories; and the remaining 10 percent sold on the international market.

According to Chen, in the late 1970s and early 1980s, he sold most of his paper to only one or two center factories at a time. "Most of us [subcontractors] had been upset with the center factory bosses because of the way they controlled access to raw materials and the product market," Chen explained. "Then, in the mid-1980 [as with many producers he was not clear on a date], some of us started selling our paper to whomever [other center factories] wanted to buy our paper."

Dissatisfied with being relegated to the low-grade paper market, Chen began experimenting with the production of higher quality paper. By the late 1980s, his experiments with different kinds of pulp started to pay off, and he began to produce a high value-added paper. While he was not specific, Chen indicated that the bulk of his output was one kind of specialty hsuan paper which "the center factories could not produce themselves, but the Japanese wanted to buy."

According to other subcontractors in Puli, Chen gained a reputation for producing high quality paper. A procurement (*ts'ai kou* 採購) manager at Tai P'ing paper rated T'ung Shuen's paper as some of the best in Puli. "He produces

much better paper than Ch'a Hu or Ta Pu. We still haven't been able to make the paper exactly like Mr. Chen does, so we have to buy it from him." Selling his paper to the center factories under a "specialized subcontracting" arrangement, Chen acknowledged,

I was lucky. I managed to create a special paper which some artists in Japan want to buy. I came up with my own formula, and I cut and package the paper myself. The only thing the center factories do is ship the paper to their customers.

While Chen at first seemed reluctant to reveal how much more money he made than other subcontractors or what percentage of the final price the center factories made on his paper, he admitted that, "I really don't know. Sure I make more money, but sometimes the orders don't come in and I have to make the same cheap paper everyone else makes."

Shan Ho Paper

Founded in 1974, Shan Ho was operated by Mr. Lin, his wife, son, daughter-in-law and eight (non-family) workers. Having first worked for Tai P'ing as a subcontractor, Lin started to question the importance of his relationship with Tai P'ing when the downturn occurred in the industry in the late 1970s. During that period, Tai P'ing did not provide him with any orders for a number of months and he almost lost his factory through bankruptcy. "By then I was already worried about how dependent we were on the Japanese and how unpredictable the demand for paper was," commented Lin. "So I started thinking of the different ways I could detach myself from subcontracting and try and build more stability into my business." Lin also indicated that, at the time, he had a hard time depending on his workers to come to work on time. "I knew that, because of my small size and problems with labor, I would never be able to

wrestle a Japanese customer away from a center factory. What Japanese would want to business with someone who couldn't guarantee delivery because of the unpredictability of his workers."

In the late 1970s and early 1980s, Lin began making friends with a number of Taiwanese wholesalers and retailers in Taipei, Taichung, and Kaohsiung. Although the market was small and the price they were willing to pay for paper was much lower than that paid by the Japanese, Lin found that domestic buyers were less concerned by on-time deliveries and never ordered large quantities of paper. Gradually, he began filling small orders for these buyers while continuing to subcontract.

In the mid-1980s, Lin managed to split his production equally between paper for the domestic market and paper for the center factories. By 1989, he produced approximately 80 percent of his paper for the domestic market, with the remaining 20 percent split between paper produced for center factories and probably for overseas buyers. As with all subcontractors I talked to, he was extremely reluctant to talk about his customers. When Lin sold paper to the center factories he tried to sell high value-added paper. "The center factories really don't want to buy expensive paper from us," Lin complained, "But many subcontractors feel its not worth while to make the cheap paper because profits are so low."

While Lin's operation remained small over the years, he was far more optimistic about his future than many larger subcontractors in Puli. This was probably because he had for a long time carefully analyzed the industry's situation. During the early 1980s, according to Lin, when demand for paper was high, many subcontractors made money and expanded their factories. Few

subcontractors, however, gave much thought to their tenuous position in the market.

When business is good, the relationship between subcontractors and center factories is good and everyone is happy. For some reason, they think that it will always stay that way. But when business declines, the relationship between producers gets worse and suddenly all the subcontractors complain that they are not getting any business. What do they expect when the center factories control the market?

Lin believed that most subcontractors were short-sighted. No one wanted to make paper for the domestic market because they could make more money selling to the Japanese. Because they had not prepared for the decrease in business, they remained dependent on the center factories. "Now that the Japanese are buying less paper," Lin remarked ruefully, "some of these subcontractors are trying to sell to the domestic market. But the market is too small to support them all."

Despite Lin's independence, he said he liked to "keep in contact" with the center factories in Puli.

Even though I turn down a lot of work from the center factories, I occasionally fill a small order. The center factory bosses don't like it when subcontractors become too independent. They like to think they are in control. So I try to maintain a relationship with them.

Aside from his apparent independence, and like others in the industry, Lin felt the center factory bosses were too powerful to ignore. His movement into the domain of trade did not always sit well with some of the center factories with whom he had conducted business in the past. Thus, he attempted to

mollify the center factory owners by maintaining some semblance of a relationship with them.

The owners of both Shan Ho and T'ung Shuen Paper represent entrepreneurs who had greater success in the industry than did those who operated companies such as Ch'a Hu and Ta Pu. For T'ung Shuen, success meant creating and producing a subcontracted paper that center factory operators were unable to produce themselves and which brought them higher profits. Nevertheless, unless T'ung Shuen managed to wrestle a customer away from a center factory or develop a new type of high value-added paper before the center factories learned how to make it, his success might be short lived. Perhaps aware that he was too small to attract such a customer, Chen remained committed to producing paper for center factories.

As Mr. Lin of Shan Ho paper confided to me one day, "Maybe I don't make that much profit, and maybe I'm still one of the smaller producers in Puli, but I'm much more secure than factories twice my size." Having understood long ago that success in the paper industry could only be measured in terms of direct access to buyers and not short-term profits, Lin believed he would be in business long after subcontractors who depended on center factories for work. Yet, in pursuing his objective, Lin continued to straddle the "independent-dependent line," by appearing as non-threatening as possible and with no more ambitious goal than to sell small amounts of paper to a minor market.

Summary

While the preceding discussion provides a glimpse into the business lives of owners past and present, it also conveys important themes or patterns about the nature of work within companies and the relationships between companies.

More importantly, these descriptions highlight the interaction between entrepreneurs and markets over time and how bosses continually attempt to adapt or adjust to changes which are often beyond their control.

As in any industry, the ability to make a profit is tied to the sustained demand for a product. In the face of rising wage rates, a labor shortage, increasing overseas competition, and an *unstable demand* for a commodity, profits become more elusive. When confronted with such problems, most companies operating in a free or open market are left with enough room to maneuver and can make adjustments in products, production processes, pricing, and technology.

Ta Pu Paper, the least autonomous company, was entirely dependent on one center factory because all of its paper had to be sold to Tai P'ing. Ch'a Hu Paper, on the other hand, sold paper to a number of center factories, yet it produced only a cheap, low-grade paper commonly made by other factories. Highly vulnerable to fluctuations in demand, they both prospered when business was good and suffered when orders were down. In contrast, T'ung Shuen produced a medium to high value-added paper which could not be made by a center factory but which had a market in Japan. While its paper was more profitable than that the paper produced by Ta Pu or Ch'a Hu, the majority of their paper was sold through the center factories to the Japanese. Finally, Shan Ho was the only factory in this group which had managed to wean itself from the center factories. With no more than 10 percent of its production going to the center factories, Shan Ho was, by far, the most independent.

The relationships illustrated above, however, demonstrate that when the access to product markets are manipulated by center factories, subcontractors are left little room to maneuver or make adjustments in order to cope with such

problems. Rather, through the use of subcontracting, particularly capacity subcontracting, center factories pass on their own "adjustments" to subcontractors. Left with the double burden of coping with a center factory's problems as well as their own, subcontractors quickly found that whatever profits they made during upturns in the economy were quickly eroded during downturns.

Further, left with little room to maneuver their enterprises at will, subcontractors, are reduced to sorting out a fundamental question (or contradiction) about their relationship with center factories: Why continue in such an unfair relationship? I believe that, unable to reconcile their position, yet desperate to remain "factory owners," subcontractors help sustain an ideology (perpetuated by center factories) which softens the harsh realities inherent in the relationship. Consequently, they use ideas embedded in traditional Chinese thought/culture such as self sacrifice, obedience, and hierarchy, all helping to "numb" their condition and make the relationship palatable.

When conditions in the industry changed in the 1980s, however, some subcontractors no longer were willing to tolerate their situation and chose to "fight back." Those who fought either won or lost. Those who lost, had no need to fall back on the ideology of kinship and family when other more appropriate ideologies, such as class, were available to convey the nature of the relationship. Did Mr. Kao believe, for example, that he had little to lose by characterizing his relationship with the center factories as exploitative rather than familial? Did Mr. Li and even Mr. Lin, on the other hand, believe it was in their own interest to continue using the notion of "family" to describe their relationship with Tai P'ing Paper because more was to be gained maintaining a

compliant relationship than one which was openly antagonistic? These are questions which cannot be answered here. They are, however, important issues which can be raised in future research.

¹ Chang entered into a joint venture with a Japanese partner. This separate company produced special machine-made papers and was operated as a separate entity. While this company is also very interesting, I do not discuss it here to avoid complicating the discussion of hand-made paper production.

² As with so many of the older factory owners with whom I talked, little was said about these markets. Rather, most of our conversations centered on the Japanese market and the tremendous amount of money they made there.

³ *Feng sui*, literally wind and water, "encompasses a constellation of patterns and symbols which reflect the notion that human alterations of the landscape do not simply occupy empty space. Rather, building sites [or offices] are viewed as manifesting certain properties which influence, even control, the fortunes of those who protrude upon the site" (from Wei 1992:36 after Knapp 1986:108-109).

⁴ According to my calculations, the factory employed only 50 workers in the late 1970s.

⁵ By 1989, as much as 90 percent of Tai P'ing's paper was sold to overseas customers. On average, it shipped 1300 reams of hand-made paper per month.

⁶ Since the early 1980s, however, Tai P'ing has built its own small network of distributors and wholesalers in Japan. While I tried to obtain information on trading networks for hand-made paper in Japan, I was often met with resistance from my informants (most of whom were from inside the company).

⁷ When I asked Chang what he meant by "taking care of us" he said that his subcontractors had to promise to complete orders on time, produce good quality paper, and not to complain about the price he offered.

⁸ Chang remained the owner of the property and Li had to produce any kind of paper Chang wanted produced.

⁹ Kao built his factory on land designated for farming. While it was illegal to build a factory on such land, it was a common practice in Puli. Indeed, men often listed their occupations in the area Hu Kou as farmer in order to purchase farm land.

CHAPTER VIII CONCLUSIONS

Working from a theoretically informed and empirically grounded perspective, this thesis has identified those variables which explain how, why, and under what conditions individual producers in the hand-made paper industry were created, were able to accumulate capital, stagnated, or failed. These variables became apparent only after a thorough examination of both the internal and external conditions and relations of production since the industry's founding in Puli in 1935. The internal conditions relate directly to the operation and function of individual firms (i.e., the production process, labor / management relationships) while the external conditions have to do more with the way individual firms are linked to others in the industry (i.e., the structure and nature of the labor market, market for raw materials, capital, and finished product market). Deconstruction of the interplay of these variables over the life of the industry revealed that the structure and stability of markets was a key variable in determining success or failure in paper-making. More than any other variable, markets were unique with regard to external - inter-firm linkages in that they were subject to the vagaries of exchange (e.g., power relationships based on oligopoly, oligopsony, and special licensing agreements). Specifically, the market for raw materials, capital, and the finished product were susceptible to manipulation and control by a group of elite entrepreneurs who were the first to establish themselves as producers and marketers in the paper industry. This control over the access to markets, in turn, played a major

role in determining the ability of “second generation” hand-made paper subcontractors to accumulate capital.

This chapter is divided into five sections which cover five subjects relevant to some forms of subcontracting in Taiwan in general and small-scale production in the hand-made paper industry in particular. In the first section, I briefly review some of the theoretical positions of the Neoclassicists and Marxists with regard to small-scale production in capitalist economies and their overriding emphasis on labor. I argue that with a large portion of manufacturing centered on segmented production, emphasis should be paid to how inter-firm relationships are structured in individual industries and how power relationships are played out. In the second section, I deal directly with my research findings in the hand-made paper industry and how those findings lend support to the need to understand small-scale industry at the local level. Further, I emphasize that an awareness of how production is structured and transactions executed between firms can reveal how producers attempt to control access to markets thereby gaining leverage over others in the production process. Following this section, I turn to the issue of how and why the traditional Chinese ideology of kinship became an important regulator and metaphor for inter-firm relationships. Then, I discuss some of the contradictions inherent in subcontracting. I conclude the chapter with a short epilogue.

A. RETHINKING SMALL-SCALE CAPITALIST PRODUCTION

The propensity of both *western* neoclassical and Marxist scholars to hold large-scale, vertically integrated production as the prime indicator of economic development is a trend which has lost favor as more research is conducted on small-scale enterprises and subcontracting in both developed and developing industrial economies (Sabel 1982; Holmes 1986; Blim 1992). On the one hand, modernization theories, which often take a static neoclassical approach to small-scale producers (SSPs), have generally concentrated on the internal mechanisms of the individual firm and its cost-rational decision making in the "free-market." In general, only *Fordist* regimes of accumulation were viewed as "mature industries" because of their "internal economies of scale based on process flow and assembly line methods, technical divisions of labor, and the standardization of outputs" (Scott 1988a:9; Lipietz 1989).

On the other hand, Marx identified small-scale producers as a pre-capitalist form of production found during the transition from feudalism to capitalism in Europe. They were conceived as the temporary rural precursors to modern capitalism, part of a larger historical process whereby agricultural production and home industry would eventually give way to a higher order of production, a revolutionary path to capitalist form of production (Marx 1967a:350-359; 1967b: 334; Dobb 1963:123). Marx's understanding of the development of the capitalist labor process was based on the view that, because of competition, capitalist employers constantly strive to maximize surplus value by cutting the costs of production, often by extending the length of the work day, expanding mechanization, and increasing the division, alienation, and intensification of labor. Marx further contends that industrial production only

really begins when each capitalist enterprise employs a large number of workers, mechanizes on an extensive scale, and produces relatively large amounts of commodities (Marx 1967; also see Lenin 1964).¹ The preoccupation with the notion that surpluses could best be realized through the expansion of centralized employment (capital-intensive production under one roof), scientific management, and de-skilling of jobs (see Braverman 1974:65), led to the identification of the direct control over the labor process as the driving force in the development of monopoly capitalism (Rubery and Wilkinson 1981).

Since Marx's day, however, the nature of labor has changed. Industrial complexes have become enmeshed in the global economy and neither Marx nor the neoclassicists could have understood that large-scale enterprises would be forced to eventually seek *other ways* to accumulate capital. While it is beyond the scope of this thesis to explore all these mechanisms, the efficiencies which were believed to be inherent in some so-called "mature," large-scale capitalist organizations have given way to the notion that large concentrations of workers under one roof can lead to increased conflict between management and labor as workers (e.g., through unionized action) resist the cheapening of their labor power or the worsening of their working conditions (Rubery and Wilkinson 1981; Brown 1992). Forced to battle labor within their own enterprises, large-scale producers run the risk of being held hostage by disgruntled workers.

In addition, the nature of markets has also changed. Much of the stable demand for standardized products which was long characteristic of mass markets and was the "cornerstone of mass production," has increasingly given way to shrinking, uncertain demand for products (Sabel 1982:195; see also Rubery and Wilkinson 1981:122; Malecki 1986; Cantor 1992). The efficiencies of producing for stable mass markets through mass production

within firms, therefore, have often surrendered to flexible production processes *between* firms and external economies of scale. Capitalists with technological or market connections, for example, may often leave the production of low value-added commodities to large numbers of small producers. Competition thus operates at the level of small-scale production, leaving large capital to vie for consumer markets and the production of high value-added parts (many of which are proprietary or critical components), component parts, or finished commodities.

While it is not necessary to re-hash the various theoretical positions which try to explain the role of small-scale producers in the global economy, it is important to briefly reiterate some important points. In generalizing that small-scale producers and labor are confined to either the formal or informal sectors as beneficiaries of capitalism or subsumed by it, for example, many scholars fail to look beyond simple dualities and examine how particular industrial complexes are structured. Many researchers often do not give enough attention to the structural details of manufacturing and markets in specific industries and, therefore, often fail to link the ability of SSPs to accumulate capital to how production is organized at the external level of the firm. Rather, small-scale producers should be seen as part of a single commodity economy, fluid and malleable, and containing multiple forms, relations, processes whose interaction is guided by multiple, instead of resulting in one-way causation (Cook and Binford 1990:27). Researchers should also explore the historical processes by which small producers emerge and how shared experience in the past helps shape social relationships in an industry in the present.

As this thesis and the work of others (Schmitz 1982; Sabel 1982; Piore and Sabel 1984; Scott 1988a) have demonstrated, depending on the nature of

specific industries and markets, the “appropriation of surplus value may occur not only in the labor process, but through other mechanisms” (Littler 1982:28). These other mechanisms can be found when we take into consideration the whole “circuit of capital” (Brown 1992:223). Further, SSPs are not always “victims” of forces exterior to themselves, nor do all profits necessarily move toward large capital in the core economies. In sum, under certain conditions, such as highly competitive or unstable markets, capitalists are under considerable pressure to extract surplus value from labor while also trying to maintain *control* over the technologies and commodities they are manufacturing (Moulaert and Swyngedouw 1991). In many industries, this pressure often drives capitalists into external transactions such as subcontracting.

Market access, control, and power: a convergence

The apparent “logic” or “simplicity” of subcontracting relationships often obscures what, in reality, are highly complex power relationships between producers and the market. When studying subcontracting relationships within any industry, therefore, it is imperative to consider two important issues. First, there *is* an economic rationale to small-scale production which has to be taken into consideration. As employed by Scott et al. (1983; 1988a), the *internal* unit of production is structured by economies of scale which are based on the technological and organizational aspects of a firm. Inter-firm relations (*the external*), in contrast, are based on economies of scope. Producers of whatever scale or status weigh both scale and scope effects when making decisions about how to organize production and whether to produce internally or buy on the market.

Second, firms involved in subcontracting, however, *are not* simply economic automatons which function as distinct and “rational” economic units

buying and selling at "arms length" in the free market. Often there is no distinct disjuncture between the internal dynamic of the independent firm and its external market relations. Rather, many firms operate at an intermediate level (as subsidiaries, affiliates, quasi-subcontractors, subcontractors, workshops, outworkers, and traders) between the polarities of the independent firm and free market (Schmitz 1982a; Sheard 1983; Scott 1988b). Further, firms which operate at this intermediate level are often subject to the less precise rules found in the "free market," and they are formed around a specific historical backdrop which may include, for example, oligopolistic and oligoponistic control over access to markets, capital, and technology. When free access to markets and perfect competition are not present, therefore, relationships between producers are often structured and mediated by power imbalances. Because many of these power relationships cannot be overtly exposed for what they are (i.e., unequal and, even, usurious relationships based on coercion and threat), and because they are not socially palatable, players in an industry may select and use social and cultural resources which are appropriate to specific inter-firm contexts in order to help maintain, regulate, and smooth business relationships (Long and Richardson 1979; Granovetter 1985).

In sum, given that external transactional relations are often highly complex, do not exist in a "free market" vacuum, and are mediated by imprecise rules, it is important to identify the location of producers relative to other producers and traders in the production process and market at any given time. Only in this way can we gain an understanding of how and in what manner producers maneuver themselves in an industry and what mechanisms producers may or may not possess to manipulate and control others (e.g., through the control of proprietary technologies, markets). I believe that only through such an approach can we gain an understanding of the conditions under which capital

accumulation may or may not occur in small-scale production. As indicated in Chapter I, *capital accumulation may or may not occur depending on the nature of the production process, labor, capital, and product markets and linkages present in specific industries at certain periods in time. The nature of social and cultural relationships and conditions which emerge as these linkages evolve over time, furthermore, help shape or regulate the opportunities and constraints faced by individual producers.*



B. MARKETS AND THE HAND-MADE PAPER INDUSTRY

Throughout the history of the hand-made paper industry in Puli, markets for labor, raw material, capital, and finished products played a critical role in determining the direction of the hand-made paper industry and who was or was not able to accumulate capital. In and of themselves, these variables were not terribly important. Rather, what was important was how and in what manner producers in general, and center factories in particular, attempted to manipulate these markets and make them work to their advantage as the industry changed over time. Specifically, by gaining control over the access to markets, center factories were able to exercise considerable power over subcontractors in the industry. In this section, I briefly review this process and then turn to a discussion of markets and their importance in the industry.

Labor, early movers, and an emerging pattern of control

As in any labor-intensive industry, the manner in which labor was organized and used in hand-made paper production was an important variable in determining capital accumulation. This heavy dependence on labor had, since the 1960s, forced center factory bosses to pursue two strategies. The first strategy was to continually search for new markets which would purchase high value-added papers. The second strategy involved the use of subcontract production.

Since the founding of the industry in Puli, the search for new markets which would purchase increasingly high value-added papers had been a perpetual struggle. In the 1930s, the industry's Japanese plant sought-out expatriate Japanese and wealthy and educated Taiwanese to buy paper which

would bring them high profits. Following World War II, the industry lost its market for high value-added paper and, by the 1960s, competition from machine-made papers and rising wage rates necessitated a shift away from the production of cheap low value-added papers to high value-added papers. This, together with the fact that paper producers had been losing revenue to middlemen since the 1950s, compelled some producers to remove or at least restrict the ability of independent trading companies on Taiwan from operating in the hand-made paper industry. This action brought greater profits from the sales of calligraphy and artists' papers in new markets in Hong Kong, Korea, and Southeast Asia in the 1960s.

By the early 1970s, center factory bosses in Puli had managed to secure small but highly profitable orders for paper from the Japanese market and establish long-term relationships with customers there. They discovered, however, there was a major problem that was tied to their new responsibility as both traders *and* producers. They inherited the burden of keeping these overseas buyers happy. This was particularly difficult in the 1970s for two reasons. First, Japanese buyers pressured producers to maintain quality and tight delivery schedules in the face of growing but unstable demand for paper in Japan. Second, rising wage rates and an unpredictable labor force in the industry created problems of maintaining costs and guaranteeing the supply of paper. If a factory owner invested scarce capital and costly labor in his own factory in order to remedy these problems, instability in demand and the subsequent inefficient use of labor and equipment due to factory downtime might negate any benefits gained by securing close proximity to the finished product market. Rather, what was needed was a way to indirectly control industrial output and extract profits from labor without having to incur the costs and risks usually associated with such control.

The emergence of a new group of entrepreneurs in the industry throughout the 1970s, presented a viable alternative to "in-house" mass production and led to the second strategy employed by the center factories: the segmentation of production through subcontracting in a way that would insulate the center factories from market fluctuations. That is to say, center factory bosses found a new way to: (a) employ small numbers of workers and maintain managerial control within their own plants; b) keep their workers busy during periods of low demand; and c) employ their workers in the production of high value-added papers. Further, by filling the void left by independent trading houses, center factory owners also placed themselves at the apex of trade and production, creating market bottlenecks aimed at preventing these new producers access to Japanese buyers.

Able to insinuate themselves between the product market and their subcontractors, center factory owners became both producers and middlemen in the industry. From this position, center factories were able to *indirectly control and administer* a large portion of the industry's work force and redirect problems of labor and unstable demand onto the shoulders of their subcontractors. The resulting flexibility gained through the use of subcontractors served as a important leveling mechanism which smoothed fluctuations in an industry plagued by uncertain demand for paper. In this way, most center factories appear to have been able to realize a profit even during the worst periods in the industry.

As Japanese customers purchased increasingly large amounts of paper throughout the 1970s, the number and size of center factories remained fairly stable. Through the use of subcontractors, center factories were able to consistently supply their customers with paper, despite fluctuations in demand. And, while large Japanese buyers of paper probably could have purchased

paper directly from subcontractors, many of them were reluctant to do so out of fear their demands could not be met. For a subcontractor to deal directly with the Japanese or even entertain such a move, moreover, was a risk most subcontractors were unwilling to take.

In sum, by controlling access to the market, center factories were able to gain considerable leverage over the growing number of subcontractors in the 1970s and create a productive/ trade relationship on their terms. The market barriers erected by center factory owners prevented smaller paper producers who lacked market connections from trading directly with overseas buyers. As demonstrated in Chapter VI, center factories controlled the flow of materials, functioning, as it were, as *gatekeepers of inputs and outputs in the industry* (see model below).

Nevertheless, by the early 1980s, subcontractors in Puli were able to gain some small degree of autonomy. Japan began purchasing paper in greater quantities and subcontractors were able to secure raw materials at fair market prices. Some subcontractors, therefore, felt they were secure enough to redefine their relationship with center factories and to adopt strategies which had the potential to bring them higher profits and greater security than they had experienced in the 1970s. For some subcontractors, searching for the best price for their paper, or "job hopping," seemed to be the best strategy. For others, becoming "independent" by finding one's own buyers for paper outside of the subcontracting relationship was a more logical step. This was accomplished either by "stealing an overseas buyer from a center factory," thereby severing the relationship with a center factory, or gradually finding small domestic buyers for paper. Finally, there were those subcontractors who chose the strategy of remaining within the subcontractor center factory relationship, a

compliant or "dependent" posture which did not challenge the power or authority of the center factory.

Used as a heuristic device to illustrate how these subcontractors maneuvered themselves in the industry, these "strategies" were neither constant nor binding. Rather, subcontractors adopted one or the other as the socioeconomic context of the industry varied over time. In other words, subcontractors also did not simply "select" a strategy one day and implement it the next. A strategy was, if nothing else, the outcome or synthesis of a long-term relationship between subcontractors and center factories. Well aware that certain strategies fit particular circumstances, most subcontractors strove to remain malleable and flexible with respect to their relationships with others in the industry. In essence, the thesis demonstrates that *many producers in the industry aspired to maintain flexibility and freely move within the production matrix, pursuing those contacts which provided the greatest profits and fewest risks.*

Manipulating raw material and capital markets as devices for gaining control and capital accumulation

Cutting out independent traders in downstream markets in the 1960s, was only one strategy employed by center factories in an attempt to gain additional revenues. By the time subcontracting was under way in the early 1970s, several center factories had already secured connections to "upstream" suppliers of critical raw materials by signing exclusive licensing agreements with and /or investing in a supplier's operation. In controlling the access to the supply of raw materials, center factories were in a position to exercise their influence and control over virtually every stage of the production process and, to a lesser extent, the capital market in Puli.

Center factories were also able to extract considerable profits from their subcontractors by requiring them to purchase raw materials at above market prices whenever an order was passed on from a Japanese customer. With access to institutional sources of capital severely restricted, furthermore, center factories also extended credits and loans (by using post dated-checks) to subcontractors for the purchase of raw materials and, to a lesser extent, machinery and equipment. Control over access to raw materials and capital, coupled with control over access to the finished product market, translated into the ability of center factories to manipulate the price of inputs and outputs in the industry. Specifically, center factories had considerable leverage in setting the price of paper including; the price of raw materials sold to subcontractors, interest rates on loans extended to purchase raw materials (and/or other goods or equipment), and the type and quantity of paper produced by subcontractors. All of these factors served to transfer profits from subcontractors into the coffers of center factories.

Control over product markets: the key to control?

The market funnel model introduced in Chapter VI (Figure 6.8), describes the way in which center factories formed market connections which resembled a form of "vertical integration" or "quasi-vertical integration." These connections extended a center factory's control over subcontractors by creating what were essentially locally-imposed market bottlenecks which funneled goods in and out of the industry. But, in contrast to true vertical integration, where center factories take advantage of economies of scale, much of the production of paper was performed by subcontractors, thereby benefiting center factories through economies of scope.

In an elaboration of that model, Figure 8.1 points out how control over access to the finished product market by center factories formed the critical axis in the relationship between production and markets in the hand-made paper industry. While this control rarely (if ever) extended into overseas product markets (i.e., beyond overseas buyers and into the distribution of paper to wholesalers and retailers), center factories found they could penetrate "upstream" and gain some control over the access to market for raw materials and, to some extent, the capital market. Fashioning a kind of "control pyramid" in the industry, center factories were able to glean profits as inputs passed from suppliers into the production pyramid and outputs passed out of the production pyramid into overseas markets. Forming a sphere of control at the points of exchange, center factories were able to find "other ways of appropriating surplus value" (Littler 1982: 28). In essence, center factories were able to forgo the direct control of labor in favor of other mechanisms to earn profits within the whole circuit of capital (1992:223).



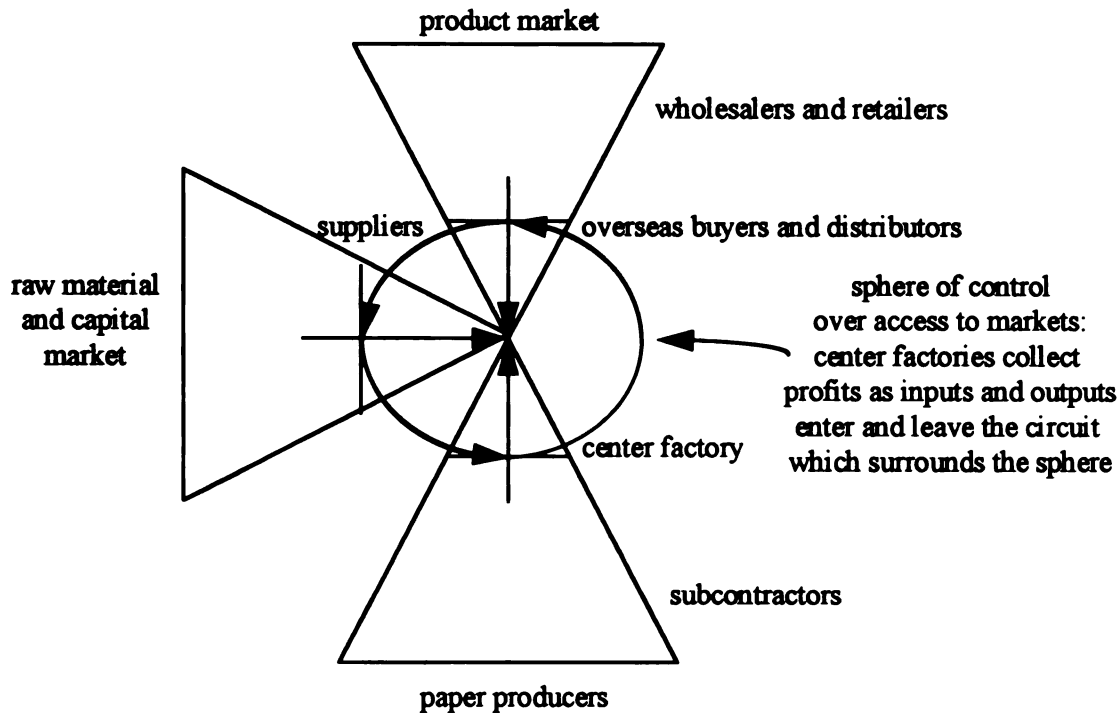


Figure 8.1 Production and Market Pyramid in the Hand-Made Paper Industry in the 1970s

By the early to mid-1980s, the leverage center factories enjoyed over their subcontractors had diminished. No longer in control of the raw material market, center factories simply took a percentage of the profits when finished paper passed from their subcontractors on to the Japanese. Nevertheless, by maintaining control over access to the product market, center factories were able to continue to select orders of high value-added paper for themselves and pass low value-added orders on to their subcontractors. During slumps in demand for paper, furthermore, center factories were still able to maintain full productivity in their own plants while their subcontractors often went without work.

Capital accumulation and the relationship to product demand

The fact that four major center factories remained in business since their founding before the 1970s speaks to their success in controlling both access to markets and their subcontractors in the industry. Of the 30 subcontractors established after 1970, however, only slightly more than half (18) managed to stay in business until 1989. Further, only nine of these 18 companies were able to become either "casual or quasi-center factories" or "independents" while the other half remained full-time subcontractors (see Chapter IV, Table 4.6). Despite the industry's problems toward the end of the 1980s, casual-center factories and independents were making money and were relatively secure. While the fate of the remaining subcontractors was less certain, those who were able to produce high value-added paper as "specialized" or "supplier" subcontractors were also able to accumulate capital. Those companies which remained involved in "capacity" subcontracting (e.g., Cha Hu Paper), however, were projected go bankrupt by the mid-1990s.

Whatever the case, many subcontractors managed to make money in the hand-made paper industry. Some subcontractors remember the early 1970s as good years while others remember the early 1980s, and even 1987 and 1988, as more profitable periods. Still others reported that even when business was poor, there were some months when profits were high and money could be made. Needless to say, most subcontractors indicated that success or failure in the industry was dependent on timing, luck, the nature of their relationships with center factory owners, and their skills as businessmen and paper makers. All these owners, however, believed that their success also hinged on what was occurring in the market from one month to the next. In the words of one informant, "If consumers in Japan stopped buying paper for two or even three months when we expected a lot of business, we could easily go bankrupt."

While it is difficult to know the exact circumstances and the status of companies which went bankrupt, most informants indicated that these companies were all subcontractors. That is to say, few if any reached the status of a "casual or quasi-center factory" or became an "independent" before going out of business. My own observations of factories still in operation in 1989 indicate that the five subcontractors in decline were either operating under "special agreements" or were involved in "joint ventures" with center factories.

Functioning as a buffer against fluctuations in the market and a safety valve for center factory owners, subcontractors were not insulated from fluctuations in demand. Specifically, when demand was low, the use of subcontractors was reduced while center factory operators maintained full productivity (and efficiency) in their own factories. With few orders available to the industry, center factories had considerable leverage over subcontractors and were able to pressure them to compete for business, thereby ultimately lowering revenues for subcontractors. If during downturns in the market a subcontractor was trying to make payments on a piece of machinery or pay off a debt to center factory for raw materials, he could lose his business. In addition, if a subcontractor's relationship with a center factory was not good, there was the possibility that a center factory would simply not pass along a critical order that could save a business.

When demand for paper was high, center factory owners were under pressure to deliver large orders on-time. Bringing the productive capacity of their subcontractors to bear, center factories often found themselves under pressure to offer subcontractors better prices than what they may have otherwise received when demand was low. With greater leverage to negotiate higher prices for their paper, many subcontractors were able to make money. How and in what manner subcontractors used those revenues often spelled

success or failure. Some factory owners spent their earnings on expanding their factories or on a new house, while others were said to have "drunk their profits away."

While the upgrading of some machinery or expanding a factory's capacity might have been a good business move in the short run, it often did not make any difference in the long run. As one subcontractor, who I interviewed in the midst of his empty factory, related,

When business was good in the early 1980s, I thought it would last forever and I spent all my money expanding my factory to where I had over 50 workers. Now I only have two workers. I just didn't understand at the time that it didn't necessarily matter how large a factory I had. What mattered was having my own customers or at least producing a paper which no one else could make and for which there was a market.

This seems to be the important lesson factory owners in the hand-made paper industry eventually came to learn and understand. The critical element in sustaining an enterprise in this industry was predicated on building a network of customers to whom one could directly sell paper. It appears that those factory owners who understood the importance of this and acted on it before the late 1980s had a chance to survive. All producers understood that the longer they were denied access to the market and remained on the lower rungs of the production hierarchy, the longer they were separated from lucrative contracts in the market which brought high profits.

The research on the hand-made paper industry demonstrates that both the individual firms and the markets for which they were formed were dynamic "social institutions" (Scott 1988) which evolved over time. Further, markets were endogenous to the evolution of this industry and were an important force that acted to "shape the competitive process rather than being a blind outcome

of the same process” (Magnusson 1994:6 emphasis added). In the final analysis, gaining control over access to markets was the linchpin or key variable in the hand-made paper industry because it enabled firms to: (a) obtain a direct link to buyers and sellers outside of the confines of the industry and Puli; (b) gain a degree of security and sustainability not otherwise obtainable when a middleman (who is either a trader or center factory) made decisions about who got what; (c) secure high profits for their paper since only they (and not a middleman) profit from the sale of their paper; and, (d) be in a position to gain additional profit by manipulating others in the production process through subcontracting. Those firms fortunate enough to attain such control were likely to be able to accumulate capital, survive, and sometimes thrive in an industry known for fierce competition and market instability.

C. KIN AFFILIATIONS AND FAMILY IDEOLOGY AS A MEDIATOR AND METAPHOR FOR INTER-FIRM RELATIONSHIPS

When I began my investigation of the paper industry, my research plan called for investigating what role kin relations played both within individual firms and between firms. My search for "kin connections," as it were, was driven by past research on Chinese and Taiwanese firms which emphasizes the role of family in the creation and operation of small companies (Mark 1972; Greenhalgh 1984; 1988; Wong 1985). While I discuss the role of kin relationships within family firms elsewhere in the thesis (see Chapter V), I believe a few comments should be made about the nature of kin ideology between firms in the hand-made paper industry.

Despite the fact that kin relationships were not thought of as particularly important or desirable in the hand-made paper industry, the ideology of the "extended family" was employed as a way of sanctioning the relationship between center factories and subcontractors in the 1970s. The idea of belonging to a family or kin group was not "just invented," however. Rather, "the extended family" was adopted from a Chinese and, perhaps, Japanese social and cultural repertoire as the most logical way of articulating the relationship between a subcontractor ("the child") and the center factory ("the patriarch")(see Long and Richardson 1978). If we take this reasoning one step further, the changing nature of relationships between producers in the paper industry since the 1950s could be seen in terms of 'society' acting as a regulatory force shaping the behavior of actors within the industry (Polanyi 1944; see Granovetter 1985). Adopted as a model of behavior within what was essentially a hierarchical relationship of production, center factories were

theoretically supposed to provide security and some profit for subcontractors, while subcontractors were obligated to reciprocate with loyalty and obedience. Idealized as a relationship bound by a kind of benevolent trust between companies, there was little or no provision made for the realities of capitalism.

In a business where markets extending far beyond the confines of Puli ultimately determine who makes profits and when, it was only a matter of time before subcontractors discovered that center factory bosses did not have their best interests in mind. While many subcontractors admitted in 1989 that they were “used” and “exploited” in the 1970s, few would have openly expressed their feelings about this situation at that time and in those terms. For subcontractors to describe their relationship with center factories as anything but symbiotic or at least mutually beneficial, however, would do little to change the reality of the relationship. Aware that their continued existence in the industry meant “towing the line” for center factories, most subcontractors had little choice but to accept their position and hope that they could accumulate capital when demand for paper was high. With the ideology of family and kinship shrouded in vague ideas of kuan-hsi (relationship) and jen-ching (social obligation), subcontractors were provided an acceptable alternative to the harsh realities of being a subcontractor. Virtually powerless to effect change, other more “acceptable terms” such as belonging to an “extended family” were used to describe their position in the production process, a term which, in the present, was an oxymoron to many subcontractors.

Exactly when or why the ideology of family fell from favor is not altogether clear. The data suggest that, in the early 1980s, at least four factors converged to change the character of the industry. These four were: (a) the ability to purchase raw materials at fair market prices; (b) the increased demand for paper; (c) greater profits which accrued from that demand; and, (d) a

simmering resentment and distrust of center factories. All four factors provided subcontractors not only with greater autonomy and bargaining power with respect to center factories, but "an excuse" to sever or, at least, thumb their noses at their "familial relationship."

In a sense, many subcontractors had their first opportunity in the early 1980s to chose and/ or implement a strategy for surviving and making money in the industry. Some chose with whom to subcontract or even what kind of paper to subcontract. Others, chose to become independent. Whatever the strategy or combination of strategies a subcontractor might have pursued, he appeared to attach less importance to how his relationship with a center factory was articulated.

While it is difficult to make a direct or specific connection between the status of markets and the nature of relationships at any given time, I believe that as economic conditions in the hand-made paper industry changed over time so too did the nature of relationships between subcontractors and center factory owners. As the demand for paper fluctuated or as markets opened or closed it is likely that the way relationships were perceived in the industry also fluctuated. Further, few individuals would have thought of their relationship to others as static. Instead, the very survival of the smallest subcontractor and even the largest center factory depended on a flexible pragmatism and malleability which allowed for change or at least the possibility of change to take place. This was a pragmatism which one month might lead a subcontractor to act like a "dependent" or in the next might result in an attempt to become an "independent." Time and conditions all played a role in how one "played one's hand."

As a final comment, we must guard against an overly functionalist interpretation which directly links changes in the market to changes in the

nature of social relationships between firms. I believe, however, that more research should be conducted on how and in what manner markets impact on the formation of relationships between firms in an industry over time and vice versa. More specifically, my own research on the personal computer industry in Taipei, Taiwan has lead me to believe that less restrictive product markets allow for the creation of relationships between producers which is more equal than that found in the paper industry. Greater access to markets, furthermore, permits family members greater freedom to explore and exploit connections to suppliers and buyers upstream and downstream from their family-run businesses. Whatever the case, before one can adequately understand how kin or other social connections are formulated and operate in a given industry, it is critical to also understand the productive and market structure *between* firms and how it may or may not impact on how social relationships are formed and played out in an industry.

D. THE CONTRADICTION NATURE OF SUBCONTRACTING RELATIONSHIPS: A CAVEAT

The contention that "Fordist" production is vulnerable to conflict between labor and management (or what Marx would describe as a contradiction between labor and capital) and fluctuations in cyclical or seasonal demand, often ignores the many problems inherent in flexible accumulation. Specifically, the increased productivity and flexibility gained through subcontracting in some industries can also create a volatile structure of production which can appear symbiotic and collaborative on the one hand, and antagonistic and contradictory on the other. That is to say, many of the problems which exist within large-scale manufacturing do not simply disappear when production is subcontracted.

During the 1970s, for example, the emergence of subcontracting in the hand-made paper industry was the result of forces operating from two directions and motivated by completely different circumstances. On the one hand, workers (i.e., from the "bottom up") were under pressure to become their own boss because of their low pay and status in the industry. Competitive pressures imposed by the changing nature of the market and related problems of cost containment from "the top down," on the other hand, motivated center factories to use subcontracting and outwork as a method of maintaining flexibility, reducing risks, and cutting costs. Coming together as they did, these two forces created the conditions conducive to subcontracting and a pool of highly competitive subcontractors, all of whom constantly jockeyed for position within the industry.

The attempt by center factories to shift the burden of production on to the shoulders of subcontractors, however, exposed a number of problems in the industry which threatened the very existence of the subcontracting system itself. These problems became particularly acute when demand for paper was low (as it frequently was) and competition intensified between subcontractors for business from center factories.

Wary of tying capital to fixed investments, center factories chose to farm out as much of their production of low value-added paper as possible while saving the production of high value-added papers for themselves. With little or no access to the product market, however, subcontractors were forced to compete with each other for orders doled out by center factories, thereby reducing the price center factories had to pay for paper. Theoretically, by allowing subcontractors to take the brunt of downturns in the industry, center factory owners forced subcontractors either to become more efficient producers or to drop out of the market.

In reality, however, the pressure to maintain profitability forced many subcontractors who were able to remain in business throughout the 1970s and 1980s to produce increasing quantities of paper, often resulting in a decline in quality. Further, given their control over access to raw materials, capital, and the finished product market in the 1970s, there was every indication that center factories attempted to extract profits at virtually every opportunity. In addition to taking a percentage of profit off the final selling price of paper manufactured by their subcontractors and sold to the Japanese, center factories also charged subcontractors high prices for raw materials and the loans they extended to pay for those raw materials.

Given that the emergence of subcontracting in this industry enabled center factory bosses to avoid over-committing and over-exposing their own

labor and resources to the market, we might ask why center factories would endanger the advantages they gained from the relationship by creating additional burdens for subcontractors and so threaten the very existence of the subcontracting system? Was this simply a matter of short-sighted greed or were there other conditions operating at the time? What accounted for this contradictory behavior which, on the one hand, helped to create the conditions under which subcontracting in Puli could exist and, on the other, appears to have been causing its destruction?

I believe that in many inter-firm productive relationships such as subcontracting in the paper industry, the actors involved in those relationships often do not behave according to an identifiable “economic logic” simply because they are not always free to choose from whom they buy and to whom they sell. Given that behavior toward others in the industry is regulated by economic, social, cultural, and political forces, at any given moment in time, a strategy pursued by a firm may make little “economic or business” sense in the long-run, but may make perfect “social” or “political” sense in the short-run. As indicated in this thesis and the work of Schmitz (1982), Scase (1982), and Scott (1988), subcontracting and outwork are often structured on the basis of power relationships in which some players enjoy an unequal advantage in markets, technology, capital, or labor.

In the case of the hand-made paper industry in the 1970s, center factory bosses *may have* understood the role subcontracting played in the industry. They may have believed that the power they exercised over the market for inputs and outputs, together with the continued emergence of new subcontractors, provided them with enough confidence (and a buffer) to extract as much surplus value from their subcontractors as possible without fear of destroying the system. It was also possible, on the other hand, that some center

factories *may not have* fully understood the importance of maintaining a healthy or viable subcontracting sector; in addition, it would appear that center factories were unaware or may never have understood the apparent incongruity, that capitalizing on the subcontracting sector might destroy the very system which created their wealth in the industry.

Whatever the case, the owners of center factories understood that the extraction of profits did not have to be relegated to the domain of labor within their own operations. They understood that profits could be taken at any number of points along the production process because of their control over both the access to upstream and downstream sectors of the industry and the *rules* governing the exchange of those inputs and outputs. Suffice it to say, the importance of subcontractors to center factories may have been in their dual role as buffers against downturns in demand and rising wage costs in the long-run, and a means of accumulating quick profits in the short-run.

By the mid-to late 1980s, however, a new set of conditions forced both subcontractors and center factories to come to terms with the changes in the industry. With labor less available at home and increasing competition from cheap labor markets in Mainland China and Southeast Asia, as many subcontractors went bankrupt, new ones came into the business. On the one hand, it was during this period that some subcontractors had the opportunity to select a strategy which might ensure their survival at least into the late 1990s. There were, after all, at least four subcontractors who, by the end of the 1980s, had managed to become casual- center factories while another five were operating on an independent basis, selling paper to small domestic or overseas buyers. The impact of the overall decline in the number of subcontractors, on the other hand, forced center factories to take responsibility for a growing share of production. Undoubtedly alarmed at how work was shifting from

subcontracting to their own operations (and all the problems inherent in having to pay and manage a large expensive labor force), center factory owners made plans to transfer their production overseas in the late 1980s. Once those plans were laid, it was only a matter of time before the entire industry would "pack up" and move overseas.



E. EPILOGUE

The decline of the hand-made paper industry in Puli is just one example of how industries don't die but rather just "move on." Markets usually wait for no one as competition to offer a commodity at the cheapest price drives capitalists to create a myriad of strategies to maintain profitability. In the end, however, the pressure to "escape" to cheaper labor markets eventually wins out and an industry will literally "gut itself" in an attempt to maintain immortality.

For those factory owners and workers in Puli who are unable to follow their industry to cheaper labor markets, however, their way of life is over. When I left Taiwan in the spring of 1991, the subcontractors I had come to know were already thinking of how they would shift their efforts to the service industry and take advantage of Puli's proximity to vacation spots in the mountain resorts that surround the area, while center factory owners were well on their way to moving their production to factories overseas. Two of these owners, furthermore, were already making plans to preserve their place in history by building museums highlighting their "pivotal" role in the hand-made paper industry. Perhaps this is Puli's fate. Left without industry, Puli may have to resort to memorializing its by-gone industries as tourist attractions, a strategy already learned in the once thriving textile mill towns in my hometown in New England.

¹ Lenin dealt with the issue of small-scale producers in a more flexible manner than Marx. Following his research on the Russian peasantry, Lenin discovered that many peasant handicraft producers appeared involved in capitalist relations of production. Although the majority of peasants remained active in agricultural production, many were also involved in simple manufacturing and/or involved in wage work with merchants involve in putting-out and brokering (Lenin 1964: 373-85 and Cook and Binford 1986, Schmitz 1982:436). Lenin's findings also indicate that when large families became involved in earning off-farm income, wage labor was often employed; all of which indicated the beginnings or foundation for capitalist production.

Essentially, Lenin's research indicated a strong interrelationship between agriculture and home production. Given the right conditions, however, small-scale production as an incipient form of capitalism, might displace the former as a primary means of production and capital accumulation. Cook and Binford (1986) believes that the major contribution of Lenin's work, should be seen where agricultural production and small-scale production are mutually exclusive. That there often exist a mix or a interrelationship between agricultural production and small-scale production which may eventually lead to proletarianization or embourgeoisement, but rarely stagnation.

Lenin's grasp of subcontracting and outwork is particularly astute. According Schmitz, Lenin, saw the "petty bourgeoisie theorists who devise policies for the support of small-scale(subcontracting and putting-out) producers...[as promoting measures] which would, first, mainly benefit the buyer-up (parent firm); second, help to preserve conditions of work and remuneration far worse than those of the workers directly employed by capitalists firms; and, third, retard the development of industry and fully fledged capitalism (Schmitz 1982:436).

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