
East Asian Business and Development Research Archive: A Unique Data Resource

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INTRODUCTION

Established in 1986, the East Asian Business and Development (EABAD) Research Archive is the only facility in the United States that conducts extensive research on the firms and inter-firm networks of East and Southeast Asia and systematically collects materials supporting that research. In addition to its print collections, the Archive is one of only two facilities in the world that acquires and develops computerized databases in this timely area. Given that Asian nations invested over 56.4 billion dollars in the United States in 1988, the collections of this unique and important data archive provide the detailed quantitative information critical to better training students to work in the international business community and to informed research and decision making by scholars, and public and private sector leaders in the United States and abroad.

The East Asian Business and Development Research Archive was established to house data collected and generated by a National Science Foundation-funded research project on East Asian business groups that is headquartered at the University of California, Davis. Although the Archive was founded to house data collected and generated by its affiliated researchers, as the research progressed it became apparent that many of the resources needed to complete the research were not readily available in the United States. In response to this need, the Archive expanded its focus to include printed materials which support research on the firms, inter-firm networks, industrial sectors, and economies of East and Southeast Asia, as well as commercial and government datafiles.

The Research Archive is open to the public, and has hosted scholars from across the United States and around the world. Select information on holdings, primarily for serials, of the Research Archive is reported to the University of California's MELVYL(TM) online catalog and to CALLS (the California Academic Library List of Serials). The Research Archive shares appropriate portions of its collection via the campus's Interlibrary Loan Department, and some materials (such as machine readable files) may be accessed by arrangement with Archive staff.

RESEARCH

The Research Archive currently serves the information needs of some twenty-five faculty and advanced graduate students in six academic departments (Agricultural Economics, Applied Behavioral Sciences, Economics, History, Political Science, Sociology) and the Graduate School of Management. However, the Archive also continues to serve the research needs of the multinational, multidisciplinary project it was founded to support. This project is studying Asian business structure and practices and includes collaborating research teams at three formally cooperating institutions: the University of Hong Kong, National University of Singapore, and Tunghai University in Taiwan. Archive researchers also cooperate on an informal basis with scholars in Japan and South Korea.

These research teams are focusing on the development and structure of business in contemporary Asia. A primary focus of Archive researchers is the organization of Asian business networks. Business networks are diversified groups of firms common in Asian nations. Although these business networks are found throughout Asia and are an important factor in the recent growth and prominence of Asian economies, they are little studied. While inter-firm networks are found throughout Asia, there are considerable differences among the networks formed in various nations. Among the structural and organizational differences from country to country are the number and size of affiliated firms in the networks, and the characteristics of the networks and their member firms.

A popular perception of Asia's newly emerging industrial powers holds that these nations form a homogeneous economic block and have boomed simultaneously because of their common culture, political factors, and management practices. However, research by Archive scholars suggests that the economic success of each country may be due, on the contrary, to the fact that each country has identified and taken advantage of its own societal differences (or comparative advantage) in the development of its business network structures and organization. On closer examination, the cultural and social traditions of these countries are very different, and these traditions lend themselves to different organizational patterns and strategies. A brief examination of the

network structure in Japan, South Korea, and Taiwan helps to illustrate this point.

Japan

In Japan, the eldest son inherits everything. Families will often adopt to insure a male heir. Family relations are generally harmonious and cooperation is an ideal. This cultural background is reflected in the structure of Japanese business networks. There are six major inter-market enterprise groups and ten large independent industrial groups. The business networks of Japan are made up of a large number of firms. There are an average of over 112 firms in each inter-market group and an average of 33 firms in the independent groups. These large Japanese networks also tend to be comprised of large firms. In fact, the firms of the Japanese business groups are larger on the average than those of South Korea or Taiwan, with an average of more than 2,800 workers per firm.

This small cluster of sixteen business groups dominates the Japanese economy. Among the business groups are such well known names as Mitsubishi, Mitsuui, Sumitomo, Hitachi, Toyota and Nissan. These groups are not conglomerates in the same sense that has evolved in the West. The ties which bind firms into the group are more social than legal, as firms draw their sense of identity from their membership in a particular community of corporations with its own distinct identity. Unlike U.S. corporations, individual independent firms understand their rank and role in group and are committed to the good of the whole.

The inter-market groups (or *kigyō shudan*) consist of a horizontally-bound web of large firms which tend to occupy leading positions in different economic sectors. These non-competing firms form a community of equals in which all firms exercise mutual control. These groups all include their own banking institutions, insurance companies, and trading companies that serve the financial needs of the group. In addition, all have a "Presidents' Club" that includes the president of each leading firm in the group in a council which meets regularly to discuss the affairs and concerns of the group as a whole. Each Presidents' Club member firm maintains a number of vertically aligned affiliate and subsidiary firms (or *keiretsu*). These affiliate and subsidiary firms also maintain a number of exclusive long-term subcontracting relationships with smaller firms that are not formally part of the group, but are vital to the production system.

The independent inter-market groups are also *keiretsu* (or vertically integrated networks). Each consists of a very large parent company with vertically aligned subordinate companies. Despite their label, these "independent" groups are not totally independent from each other or the

inter-market groups. The independent groups maintain linkages to other groups through such mechanisms as mutual shareholding by financial institutions. These linkages closely resemble the sort of ties found among the Presidents' Club firms.

South Korea

In South Korea, most of a family's wealth passes to the eldest son; although younger brothers often receive some inheritance. Families tend to be tightly knit. Again, this family structure affects the organization of the Korean business networks. These networks are known as the *chaebol*. In contrast to Japan's large groups, the *chaebol* networks are smaller, including only about 11 firms each. The size of the firms in the *chaebol* is also substantially smaller than those in the Japanese business groups, with an average of less than 1,500 workers. However, the *chaebol* are still major players in the economy of South Korea and include such major firms as Hyundai, Samsung, Daewoo, and Lucky Goldstar. *Chaebol* tend to be owned or controlled by a single person or family, with stockholding playing a very minor role in the unification of the business group. Very few of the *chaebol* firms issue stock, and stock ownership, as well as corporate directorship, often is tightly held by family members. The *chaebol* generally are organized through a central holding company and are managed according to a unified structure much more like an American family business than the Japanese inter-firm networks. Where the *kigyō shudan* are a community of equals, the *chaebol* are under hierarchical control by top management and family members. The *chaebol* also tend to be much less diversified than the Japanese *kigyō shudan*, specializing in only a few related industrial sectors. Unlike the Japanese business networks which incorporate banks and other financial firms to meet the group's needs, the *chaebol* do not own banks, but do hold minority shares in government controlled banks. The *chaebol* do not employ the subcontracting relationships common to the Japanese business groups. Instead, they tend to start or acquire firms to meet their own production needs.

Taiwan

In Taiwan, yet another pattern of familial organization prevails. Wealth is divided equally among all sons, and family squabbling and rivalry is not uncommon. This is reflected in a network structure which emphasized smaller, separate firms in a network which is much less structured than is the case in Japan or South Korea. The business networks of Taiwan are known as *jituanqiyè*. These business groups incorporate the smallest number of firms of the three nations, typically fewer than 8 firms each. These small business groups also tend to be comprised of the smallest firms of the three nations, with an average of less than 500 workers per firm, and as a group, *jituanqiyè* tend to play a much smaller role in the

economy than the business groups of Japan and South Korea. Only 40% of the top 500 manufacturing firms in Taiwan belong to the jiuanqiyi. In fact, business groups dominate in only one industrial sector in Taiwan, textiles. Very few of the Taiwan business groups are familiar in the West (among the few exceptions are Tatung and the computer firm Acer). The Chinese business groups also have none of the tight vertical ties that characterize the keiretsu and the chaebol. Instead, the Taiwan business groups are highly diversified agglomerations of smaller firms in different economic sectors, having an average of 8 firms spread across 4 different industrial sectors. Like Japan, the Chinese business groups rely on subcontracting relationships with non-member firms. However, these relationships differ from the Japanese in that Taiwan's satellite production systems, as they are known locally, are highly flexible arrangements which may be short term in duration. The prevailing ownership pattern in Taiwan is one of private family control, either family firms or limited partnerships. However, unlike the South Korean chaebol which are tightly controlled by a single patriarch, the Taiwan business groups are governed by the interests of the extended family. The Taiwan business groups are only loosely integrated and lack a unified management structure. Instead, every firm duplicates its own management structure with the same set of people, generally the owners and close family members, holding multiple managerial appointments in several firms within the group. Financing in the Taiwanese business groups also differs from both Japan and South Korea and reflects this principle. By far the largest source of money, more than 60% of loans, is privately arranged loans from family and friends, as well as retained earnings.

COLLECTIONS

A wide array of quantitative and descriptive information is needed to map and analyze the structure and impact of business groups in Asia. A broad range of statistical data are required, ranging from individual corporate balance sheets and shareholder information, to detailed data by industrial sector, and basic macroeconomic time series for each economy under study. Descriptive information and analyses are also useful. These materials range from corporate directories, annual reports, and newspaper coverage to the recent work of other scholars as presented in scholarly working paper series from institutions both in the United States and abroad. The East Asian Business and Development Research Archive collects such materials, in both print and electronic formats. Focal countries for the Research Archive include Hong Kong, Indonesia, Japan, Malaysia, the People's Republic of China, Philippines, Singapore, South Korea, Taiwan, and Thailand.

A. Print

The Archive collects a broad range of print materials

from and pertaining to focal nations. Both textual and quantitative information are available. For firms, the Archive collects selective annual reports and other corporate publications, corporate directories (with an emphasis on those providing balance sheets and other financial data), private investment advisory services, and publications from Asia's stock exchanges. The Archive also maintains a selective Asian newspaper clipping collection which includes articles on corporations and businessmen. Archive assistants presently clip selectively the South China Morning Post, Korea Herald, Straits Times, and Sing Tao newspapers. For data on the industries and economies of Asian, holdings include government statistical reports such as statistical abstracts and economic censuses, Asian business magazines, and academic working paper series from U.S. and foreign institutions. In addition, the Archive collects indexes and bibliographies from Asia.

At present, vernacular language materials are collected in Chinese, Japanese, Korean, and Thai. Research Archive staff translate these materials as needed to support research, making them available to many Western researchers for the first time. Among the items currently being acquired are some unique materials. The first is the "Files and papers of companies re-registered during the Japanese occupation." The records to be acquired are the unpublished files and papers of companies re-registered during the Japanese occupation of Hong Kong (approximately 1942). These materials include memoranda and articles of association, lists of shareholders, annual returns including profit and loss accounts and balance sheets of the registering company, and the articles of incorporation. These records provide a "snapshot" of the formation of businesses in modern Hong Kong that adds a new dimension to our understanding of the firms and business groups of this present day economic power. The second collection to be acquired is a set of interview transcripts from the research team at Tunghai University which has conducted detailed interviews with corporate officers of large Taiwan firms. These one-of-a-kind transcriptions provide fascinating insights into Taiwan business practices and the structure of Taiwan firms.

B. Machine Readable

At present, the Research Archive's machine readable holdings consist largely of our own in-house databases on East Asian business networks, particularly those in Taiwan and South Korea. These datafiles provide basic financial and background information on the business groups and their member firms. For Taiwan, a database on stockholders and directors is also in preparation. Archive Research assistants also are preparing comparable databases for Hong Kong and Singapore.

For both Taiwan and South Korea, datafiles have been developed for the major business networks, as well as for their member firms. Data are available for 1983 and 1986. The files contain such information as firm or group name, sales, assets, debts, equity, profit, value added, number of workers, and industrial sector codes. Data for the Korean files are translated from the Korean language publications of the Management Efficiency Institute. Data for the Taiwan files comes primarily from the records of the China Credit Information Service.

FUTURE DIRECTIONS/ACCESS ISSUES

In the future, the Research Archive hopes to expand its database holdings through acquisitions from several sources. One source of datafiles is the work of the international research network described above. This network will continue in the long term, and the individual teams will continue to create unique data collections for the Archive on a cooperative basis, with each team sharing the data they have collected with the other teams.

The Archive is also expanding into the area of government and commercially produced datafiles. Archive representatives are negotiating with the key government statistical agencies in Hong Kong, Taiwan and Thailand to obtain their censuses or surveys of manufacturing establishments in computerized form. In some cases, the Research Archive will be the only public institution outside those countries to have the material in computerized form. We expect the Thailand files shortly and the Hong Kong datafiles as early as next Fall. We are also in negotiation with South Korea for similar datafiles and plan to expand our coverage to as many other Asian countries as possible. In addition to economic census data, we are working to identify and acquire other economic and business databases from public and private sources in the Far East. Currently, sources we are negotiating with include the China Credit Information Service, Daishin Economic Research Institute, and the Stock Exchange of Hong Kong.

We have just received word that the Research Archive was awarded a grant from the University of California Office of the President's Pacific Rim Research Program for 1990/91. A primary purpose of the grant will be to develop a public online system which will provide remote access to some of the Archive's materials. We hope to make the system available to all qualified researchers for not-for-profit use. The system will be available to the UC campuses as a gateway resource to the MELVYL(TM) online catalog.

At present, we envision at least three basic components to the system. First, the service will provide electronic mail capabilities for communication between and among UC scholars of East and Southeast Asian societies. The UC system computer network already provides the

capability for private electronic communication between scholars. This system will be a more public forum for communication. Scholars will be able to upload messages or inquiries for general response by their colleagues, post notices of upcoming events, or send inquiries to the Archive. A second component of the online system will be appropriate statistical databases of the Research Archive. Selected files of the Research Archive will be mounted online to allow searching and downloading by scholars at other campuses. Finally, we will mount a bibliographic database. We have negotiated an exchange agreement with officials of the United Nations for access to the electronic version of their Asian Bibliography. Asian Bibliography is a quarterly publication of the Economic and Social Commission on Asia and the Pacific that provides citations to a wide range of literature in the social sciences. The bibliography emphasizes literature from Asian sources in both English and vernacular languages.

A project such as the one we have undertaken raises a number of critical issues with regard to collection development and access. First, the logistics of collection development are extremely complex. Geography, language, culture and costs all serve as barriers to collection building.

Acquisitions must often be handled in person. Research Archive participants have made multiple visits to Asia in order to build the necessary ongoing relationships with data producers. In many cases, the computerized files we seek to acquire are not publicly available (or have not been made available to foreigners), and careful negotiation is necessary to obtain permission to acquire them. In addition, while ranking officials in the government usually speak English, in most Asian countries, the staff who fulfil data orders generally do not. So, even with a visit to establish an agreement for the provision of data, fulfillment of the request is sometimes difficult, and often slow. Letters don't always reach the hands of English speakers, and FAX machines and e-mail are not common throughout Asia, at least in the government sector. Follow-up visits are required to complete the transaction, to acquire updates to files, or simply to maintain the relationship cultivated with a given agency. Costs can also be very prohibitive unless an agreement can be reached to supply data at a non-commercial rate, or on a cost recovery basis. All of which further emphasizes the need to handle acquisitions in person.

In addition, although the Research Archive has just begun to collect datafiles from Asian sources, we anticipate a certain number of barriers for data users; however, we do not have the experience necessary to determine the extent of these barriers. We are already finding that the language barrier can be somewhat problematic. For example, we hope to acquire balance

sheet data for publicly traded companies in South Korea from a private research firm. However, all the documentation and textual data in the files are in Korean. At least some in-house translation will be required to make this data generally useful. In addition, we anticipate that for most of our foreign acquisitions remote usage will be limited. We will either need to create, document, and mount general purpose subsets in our online system, or make arrangements for scholars to visit the Research Archive and perform their own extractions. In order to use these foreign datafiles wisely, we anticipate that many researchers will need to carefully consult both the tapes and the documentation prior using the data in a research project. For this level of use, on-site consultation will be required. In addition, in some cases our license allows us to make the data available to all qualified researchers for not-for-profit use, but will not allow us to make copies of datafiles for the use of other institutions, again reinforcing the need for on-site consultation and usage.

On the other hand, our planned online system presents some options for extending access to highly specialized, yet topical, research data. In many respects, the online system is an experiment to assess the feasibility remote access to such resources via computer networks. Over the next several years, we hope to better understand the strengths and limits of such networks for resource sharing of data collections such as ours. We also hope to better define the broader collection development and access issues and to begin to answer some of the key questions which will determine the extent to which this facility can grow and service scholars at other UC campuses, across the country, and around the world.

BIBLIOGRAPHY

Biggart, Nicole Woolsey, and Gary G. Hamilton. "Explaining Asian Business Success: Theory No. 4," Research Program in East Asian Business and Development Working Paper No. 18.

Hamilton, Gary G. and Marco Orru. "Enterprise Groups in East Asia: An Organizational Analysis," Shoken Keizai no. 161 (Sept. 1987).

Hamilton, Gary G., William Zeile, and Wan-jin Kim. "The Network Structure of East Asian Businesses," Research Program on East Asian Business and Development Working Paper No. 17.

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