

ADJUSTMENT TO LESS-DEVELOPED COUNTRY COMPETITION IN SOME
JAPANESE INDUSTRIES

by

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Abstract

This exploratory study addresses the issue of adjustment to less-developed country (LDC) competition by affected firms and industries in developed countries (DCs). Empirically-based insights into the nature of the adjustment problem are inductively derived from examination of adjustment in four Japanese industries (producing, respectively; cutlery, footwear, umbrellas, and mosaic tile) which have faced severe competition from producers in the Asian newly industrializing countries (Korea, Taiwan, Hong Kong, and Singapore). The study employs existing public and non-public reports, interviews with informants in Japanese government and industry and the results of field research in a production centre.

External factors favouring rapid development of LDC competitive strength are identified, including earlier Japanese exports which internationalized O.E.C.D. markets for the products examined. The pattern of evolution of LDC competitive strength along dimensions other than those of relative product standardization and factor-intensity is discussed. Japanese foreign direct investment in competing LDCs served to increase the adjustment problem of Japanese producers. This is related to the rapidity of LDC competitive development and to the structure of the Japanese industries examined.

Adjustment alternatives are discussed, in terms of the concept of value-added, under the categories of: cost-improving, price-improving, and margin-improving adjustment. The last of these incorporates improvements in value-added arising from a

change of product or of functional activity. The adjustment problem is seen to be a function not only of LDC development but also of concurrent DC development external to the affected industries.

Variation among industry participants in the impact of the adjustment problem and in the number and nature of adjustment alternatives was highly related to differences in the functional activities of firms. Where existing producers are unable to adjust within an industry, the industry, itself, is found to "retrogress" and production activities are transferred to a geographic and socio-economic periphery within the DC. This shifts the ultimate exposure to LDC competition onto those who have the least mobility and are least able to actively adjust to that competition. Some suggestions are made regarding the implications of the findings for government, business, and further research.

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I. THE PROBLEM ADDRESSED AND THE PURPOSES OF THE RESEARCH

1. DEVELOPED COUNTRY ADJUSTMENT TO LESS-DEVELOPED COUNTRY INDUSTRIALIZATION

1.1 Adjustment To A Changing Economic Environment

The economic environment is one of constant change and the well-being or survival of firms, industries, and national economies is ultimately dependent upon adaptation to that changing environment. Pressure for adjustment can arise from environmental change in technology or in the conditions of supply and demand. Moreover, environmental change, itself, is in large part induced by economic and governmental activity.

Adjustment to environmental change serves to maintain or to increase effectiveness and efficiency. Thus, those who adjust rapidly and well have an advantage over competitors for whom adjustment comes more slowly, or not at all, and they are more likely, therefore, to survive and prosper. Environmental change and adjustment to it can, over time, lead to major structural change in an economy.¹ Adjustment itself however, need not be a problem, if those affected by environmental change can adjust at a pace commensurate with the pace of change.²

Change can, however, occur at a pace which strains the

¹ See, for example; United Nations, Structure and Change in European Industry (U.N., New York, 1977).

² See. Matthews, R. A., "Industrial Viability in a Free Trade Economy" pp 23-24 in, Regional and Adjustment Aspects of Trade Liberalization (University of Toronto Press, Toronto, 1973). Matthews gives some examples of substantial structural changes that did not present serious adjustment problems.

adaptive capacity of those affected and it is then that an adjustment "problem" arises. The energy crises of the 1970's reflected rapid change in conditions of petroleum supply, to which many were unable to readily adjust. It also triggered rapid change in the nature of demand for some related products; to which the North American automobile industry, for example, was hard-pressed to adjust. Recent developments in micro-electronics and automation represent, on the other hand, technological change which is widely expected to reduce labour requirements in some industrial sectors at a pace which exceeds the ability of the affected labour force to adjust (via inter-firm or inter-region migration, retraining, etc.).

In recent years, an aggregate of changes in supply, demand, and technology has given rise to the problem of adjusting to competition from less-developed country manufactures in many of the developed countries and it is this particular type of adjustment problem that is the focus of the present research.

1.2 Less-developed Country Industrialization

It has now long since been demonstrated that the complex of socio-technological change we term "industrialization" has the capacity to improve the lot of man by making him more productive. As a result, industrialization, or further industrial development, has become a central goal of all countries. Nowhere has this received more explicit attention than in the less-developed countries (LDCs) which face the difficult task of trying to compress what has often in the past been an evolutionary process into a directed, revolutionary

transformation of their societies.

The problems of economic development in the LDCs has been a particularly prominent topic in the postwar period as so many countries have newly achieved political independence. The problems they face are far-reaching; for, as Moore has put it:

"Given the option or even the knowledge of alternatives existing elsewhere,... most people in most places prefer food to hunger, health to sickness, physical comfort to suffering and life to death. Whether they also prefer work to 'leisure', urban agglomeration to village life, close temporal synchronization to the uneven pace of traditional production is more doubtful, and it is at this level that problems arise in the process of development and industrialization."³

Because of the enormity of the problems of industrial development in the LDCs, few of them made dramatic progress in the early postwar period. By the 1960's, it had become evident, moreover, that industrialization based on import-substitution was not a viable long-range strategy even for the larger LDCs and was clearly inappropriate for small- and medium-sized LDCs. It was necessary for them to develop industries which could

³ Moore, W. E., Social Change 2nd Edition (Prentice-Hall, Englewood Cliffs, N.J., 1973) pp 92-93.

competitively export to the larger world market.⁴

During the 1960's and 1970's, a number of LDCs attained unprecedented economic growth based largely on such export-oriented industrialization strategies.⁵ Such countries have, as a group, come to be known as the newly industrializing countries, or "NICs", and are distinguished from the majority of LDCs by: rapid growth in the level and share of industrial employment in their economies, a rising share of world industrial production and exports of manufactures, and relatively high (for LDCs) levels of per capita national income. The criteria are not exact and, however one applies them, the makeup of the group will undoubtedly change over time.⁶

1.3 Adjustment And Less-developed Country Industrialization

NIC economic development involves change in the international division of labour, as producers in those countries move into the production of industrial manufactures that were hitherto produced elsewhere. The most general and

⁴ See, for example, Lary, Hal B., Imports of Manufactures from Less Developed Countries (National Board of Economic Research, New York, 1968) pp 1-17; and Giersch, Herbert (ed.), The International Division of Labour: Problems and Perspectives Part III, "The developing countries export necessities..." (J.C.B. Mohr, Tübingen, 1974).

⁵ See, Donges, J. B., "A Comparative Survey of Industrialization Policies in Fifteen Semi-industrialized Countries" in, Weltwirtschaftliches Archiv V 112, 1976 pp 626-657; Herman, B., The Optimal International Division of Labour (International Labour Organization, Geneva, 1975); and, Giersch, , op. cit.

⁶ See, Organization for Economic Cooperation and Development, The Impact of the Newly Industrializing Countries on Production and Trade in Manufactures (O.E.C.D., Paris, 1979). This study defined the following countries as NICs: Greece, Portugal, Spain, Yugoslavia, Brazil, Mexico, South Korea, Taiwan, Hong Kong, and Singapore.

familiar explanation of the international division of labour is the theory of comparative advantage. This theory holds that even if one of two countries is absolutely more efficient (productive) than the other in producing any and every product, if each specializes in the products in which it has a comparative advantage (i.e., the greatest productivity relative to other goods), trade can be mutually profitable; in the sense that more total goods can be made available to each of them. Environmental change of various types can lead to changes in comparative advantage. Thus, change in the international division of labour which reflects underlying changes in comparative advantage can be seen as a beneficial phenomenon.

In the non-communist countries, the postwar period has been dominated by the belief, grounded in comparative advantage trade theories, that free trade in goods is in the national interests of all countries. This has led to the codification, primarily within the G.A.T.T. framework, of rules aimed at promoting free trade. These rules have sought, by common consensus, to constrain the political independence of states to unilaterally hinder free trade. Partly as a result of this, another major feature of the postwar period has been an increase in economic interdependence or, to put it the other way, a decrease in economic independence.

Developed country (DC) producers also face changing comparative advantage and where this brings them into competition with LDC producers who enjoy an absolute cost advantage they may need to fundamentally adjust their business

activities if they are to survive. At the aggregate level, this acts as a force for structural change in the overall economies of the DCs. In principle, DC governments do not view this process of adjustment with alarm; such structural change is as fundamental a feature of their ongoing economic development as it is of that of the LDCs.

Indeed, at the international political level, the DCs have an expressed commitment to LDC economic development. The adoption in March of 1975 of the Lima Declaration and Plan of Action on Industrial Development and Cooperation, for example, aims for the LDCs to account for 25% of the world's industrial production by the year 2000.⁷ Moreover, as a concrete step to stimulate LDC development through "trade not aid", an international scheme to favour DC imports of LDC manufactures was instituted in the 1970's.⁸

Despite the considerable amount of DC-LDC agreement in principle as to the wisdom and inevitability of complementary structural change, there is growing conflict in practice. Conflict has only partly been due to rapid export expansion by the NICs. It has also been exacerbated by slow rates of growth in the DC economies during the 1970's. This has served to increase the difficulties arising from LDC competition because it has often meant not merely lower growth but an absolute

⁷ See, United Nations, Restructuring of World Industry (U.N., New York, 1978)

⁸ See, Ginman, Peter J. and Murray, T., "The Generalized System of Preferences: A Review and Appraisal" in, The New International Economic Order Sauvart, K. P. and Hasenpflug, H. (eds.), (Wilton House, London, 1977)

decline in levels of production and an increase in unemployment. Moreover, for those firms which have not been able to withstand LDC competition, low rates of national economic growth have made it more difficult for them, or their employees, to move into other activities.

There has been, therefore, increased difficulty in making the appropriate DC adjustments to LDC industrialization just when, with the advent of the NICs, the need is greater than ever. This has contributed to a rising tide of protectionism in international trade.⁹ The problem of protectionism is not exclusively related to trade between DCs and LDCs.¹⁰ Nevertheless, the most serious and structurally important examples are probably found in relations between DCs and LDCs. As a result, the problem of DC adjustment to LDC competition has received increasing attention during the 1970's and is likely to remain prominent throughout the 1980's.¹¹

⁹ See, for example: Jackson, John H., "The Crumbling Institutions of the Liberal Trade System" in, Journal of World Trade Law V12 No2, March/April 1978; Balassa, Bela, "The 'New Protectionism' and the International Economy" in Journal of World Trade Law V12 No5 Sept/Oct 1978; Cohen, Stephen D., "Changes in the International Economy: Old Realities and New Myths" in, Journal of World Trade Law V12 No4 July/August 1978; Blackhurst, Richard et al, Trade Liberalization, Protectionism, and Interdependence (General Agreement on Tariffs and Trade[G.A.T.T.], Geneva, 1977).

¹⁰ For example, see; Strange, Susan, "The management of surplus capacity or how does theory stand up to protectionism 1970's style?", in, International Organization V. 33, NO. 3 (Summer, 1979) and; Tsoukalis, L. and Ferreira, A. da Silva, "Management of industrial surplus capacity in the European Community", in International Organization V. 34, No. 3 (Summer, 1980).

¹¹ See, Balassa, B., "Prospects for Trade in Manufactured Goods Between Industrial and Developing Countries, 1978-1990" in, Journal of Policy Modelling V2 No3, 1980.

2. APPROACHES TO THE ADJUSTMENT PROBLEM

2.1 Research On The Adjustment Problem

Research on the adjustment problem has, to date, primarily been carried out by national or international organizations concerned with government policy. Such research has generally adopted the "atomistic" view that adjustment is a matter of the movement of individual units of productive factors (e.g., individual workers) between different productive activities. As labour is commonly viewed as being relatively immobile and because unemployment is the most politically volatile feature of the adjustment problem, this research and policy concern has focussed on the DC employment impact of LDC competition, on ways of facilitating labour mobility out of affected industries, and on alleviating the hardships imposed on the unemployed.¹²

The research has shown that, in the aggregate, the net employment impact of trade with the LDCs has been slight and, in any case, the impact on employment has been dwarfed by the much more significant employment impact of changes in demand and in production technology. They have also shown, however, that LDC exports have had significant adverse impact on DC producers at

¹² See, for example: United Nations Conference on Trade and Development [UNCTAD], Adjustment Assistance Measures [TD/121 and supplements] (UNCTAD, Geneva, 1972); UNCTAD, Adjustment Assistance Measures [TD/B/C.2/171] (UNCTAD, Geneva, 1977); Warnecke, S. J., International Trade and Industrial Policies (Holmes and Meier, New York, 1978); MacBean, Alasdair, A Positive Approach to the International Economic Order, Part I: Trade and Structural Adjustment (British North-American Committee, London, 1978).

the narrow sectoral levels and this has led to severe adjustment problems for some specific regions, industries, firms, and segments of the labour force.¹³

2.2 Government Policy

The research and policy focus on individual factor mobility does not mean that government adjustment assistance programmes have been limited to those aimed specifically at individual displaced workers. Indeed, over the past decade or so, the most notable change in DC policy falling under the rubric of "adjustment assistance" has been the proliferation of special tariffs and quotas on LDC manufactured goods. These policies implicitly take the firm or, in the aggregate, the industry as the relevant policy unit.

Matthews has discussed the rationale for adjustment assistance at the level of the firm or industry.¹⁴ Too often however, and especially in the case of tariffs and quotas, policy has acted not to facilitate timely adjustment, but to delay efforts to adjust by removing or reducing the pressures

¹³ For reviews of research and methodology regarding the employment impact see; United Nations Industrial Development Organization [UNIDO], "The Impact of Trade with Developing Countries on Employment in Developed Countries: Empirical Evidence From Recent Research" in, Working Papers on Structural Change, No. 3 (UNIDO, Vienna, 1978), and Organization for Economic Cooperation and Development [OECD], The Impact of the Newly Industrializing Countries on Production and Trade in Manufactures (OECD, Paris, 1979).

¹⁴ See, Matthews, R. A. (1973), op. cit.

for adjustment.¹⁵ Nevertheless, the potential importance of, effective adjustment assistance at the level of the firm and industry is increasingly stressed by researchers and it has a central role in current normative discussions of government policy.¹⁶ However, despite the acknowledged importance of adjustment by firms within affected industries, there has been little empirical research focussed on corporate- or enterprise-level adjustment.¹⁷

If enterprise-level adjustment assistance schemes are to be effective it is, therefore, necessary to develop a clearer understanding of the nature of the adjustment problem at that level. The development of a body of empirical research focussed on enterprise-level adjustment can make a contribution to the

¹⁵ See, for example: O.E.C.D., The Case for Positive Adjustment Policies (O.E.C.D., Paris, 1979); Mutti, John H. and Bale, M. D., "Output and Employment Changes in a 'Trade Sensitive' Sector: Adjustment in the U. S. Footwear Industry" in, Weltwirtschaftliches Archiv V117, 1981; and, Krueger, Anne O., "Restructuring for Import Competition from Developing Countries, I: Labour Displacement and Economic Redeployment" in, Journal of Policy Modelling V2 No2 1980 pp 165-183.

¹⁶ See, O.E.C.D., , op. cit. , and: Wolter, Frank, "Restructuring for Import Competition from Developing Countries, II: The Case of the Federal Republic of Germany" in, Journal of Policy Modelling V2 No2 1980; Adelman, Irma, "Some Thoughts on the Restructuring of North-South Interaction" in Journal of Policy Modelling V2 No2 1980; Matthews, R. A., Discussion Paper No 172, Canadian Industry and the Challenge of Low-Cost Imports (Economic Council of Canada, Ottawa, 1980); Australian Government Publishing Service (AGPS), Study Group on Structural Adjustment, Report March, 1979 Volume I (AGPS, Canberra, 1979); and, Lloyd, P. J., "A Knightian Model for the Analysis of Structural Adjustments by Firms" in, Weltwirtschaftliches Archiv V117, 1981 pp 672-685.

¹⁷ Lloyd, P. J., , op. cit. , explicitly adopts the perspective of the firm but presents a theoretical econometric model and examines its properties, rather than directly examining the empirical features of adjustment from that perspective.

development of this understanding.

2.3 Business Policy

Quite aside from the interest of national government policymakers in the adjustment problem, it has an obvious importance for managers of firms which face the reality or prospect of LDC competition. There is a vast literature on management but the area of greatest apparent relevance is the field of "business policy" or "strategic management". The field is relatively young and in a state of ferment.¹⁸ There is, therefore, no universal theory of strategic management that has structured research in this field.¹⁹ Research has largely reflected the concerns of business practitioners and these have changed, in their particulars, over time.²⁰

As a consequence, and in reflection of the steady economic growth that has characterized most of the postwar period, there has been considerable empirical research emphasis on the

¹⁸ See, Hofer, C. W. et al, Strategic Management: A Casebook in Business Policy and Planning (West, New York, 1980) pp 2-26. Hofer identifies as many as four "paradigm shifts" since the 1950's, in response to increased (or increased awareness of) complexity in the managerial task.

¹⁹ See, Schendel, Dan E. and Hofer, C. W. (eds.), Strategic Management -A New View of Business Policy and Planning (Little, Brown, Toronto, 1979). This volume is responsive to the felt need for a more widely accepted paradigm for the field of strategic management/business policy. It was prepared under the auspices of the Business Policy and Planning Division of the Academy of Management and can be considered the most thorough and definitive recent survey of the field.

²⁰ See, Ansoff, H. Igor, "The Changing Shape of the Strategic Problem" in Schendel and Hofer, op. cit., pp30-44. Ansoff presents a schema relating change in the overall business environment since 1900 to the changing focus of managerial interests.

strategic management of corporate growth and diversification,²¹ for example, but relatively little focussed on corporate retrenchment or decline or on fundamentally adverse industry environments.²²

This is not to say that these latter situations have been ignored at the conceptual level. Theorists have proposed conceptual frameworks based, for example, on the concept of a product life-cycle which explicitly include a "decline" stage calling for a different approach to strategic management.²³ There does not appear, however, to have been much empirical research in the area.

²¹ Ansoff, , op. cit. , makes this point, which is echoed in Dill, Wm. R., "Commentary" in the same volume, p 49.

²² See, Steiner, George A., "Contingency Theories of Strategy and Strategic Management" in Schendel and Hofer (1979), , op. cit. , p 408. According to Steiner, research interest in this area is comparatively recent. He does, however, cite some studies, including: Schendel, Dan E. and Patton, G. R., "Corporate Stagnation and Turnaround" in Journal of Economics and Business Spring/Summer 1976; Argenti, John, Corporate Collapse: The Causes and Symptoms (Wiley, New York, 1976); Altman, Edward, Corporate Bankruptcy in America (Lexington Books, Lexington, Mass., 1971); Ross, Joel E. and Kami, M. J., Corporate Management in Crisis: Why the Mighty Fall (Prentice-Hall, Englewood Cliffs, N.J., 1973); and, Wilcox, Jarrod W., "The Gambler's Ruin Approach to Business Risk" in Sloan Management Review Fall, 1976.

²³ See, for example, Fox, Harold, "A Framework for Functional Coordination" in Atlanta Economic Review November/December 1973; and, Hofer, C. W., "Towards a Contingency Theory of Business Strategy" in, Academy of Management Journal December, 1975. For a survey of "stages theories", see the chapter "Stages of Development Theories and Strategic Management" in Glueck, Wm. F., Business Policy and Strategic Management Third Edition, (McGraw Hill, New York, 1980).

Recent research by Harrigan²⁴ and by Miles²⁵ are major exceptions. Both Harrigan and Miles examined strategic response to adverse environmental change in the form of "declining demand". They develop quite different perspectives, however, on the nature of the strategic adjustment problem posed by this environmental change.

Harrigan considered only a limited set of pre-specified investment and disinvestment strategies with respect to the declining business and was not concerned with what might replace a business if it were abandoned or divested.²⁶ Moreover, Harrigan's research assumed a business-level, as opposed to an enterprise-level, perspective and assumed a diversified (multi-business) parent enterprise.²⁷

Miles, on the other hand, adopted an enterprise-level perspective and made the range of strategic options, itself, an object of inquiry. Moreover, he explicitly considers movement into a different business as an adjustment strategy.

It is not clear what might be the range of relevant adjustment strategies for adjustment to LDC competition, but

²⁴ Harrigan, K. R., Strategies for Declining Businesses (Lexington Books, Lexington, Mass., 1980) and Harrigan, K. R., "Exit Decisions in Mature Industries" in, Academy of Management Journal V2 NO4, 1982.

²⁵ Miles, Robert H., Coffin Nails and Corporate Strategies (Prentice-Hall, Englewood Cliffs, N.J., 1982).

²⁶ Nevertheless, she found the strategic problem presented considerably more complexity than had been attributed to it in the existing literature.

²⁷ Harrigan (1980) , op. cit. , p 55.

they would have to include movement into different business which is less exposed to that competition.²⁸ This, in turn, implies an enterprise-level perspective on the adjustment problem. In this respect, a comprehensive orientation (i.e., one closer in spirit to Miles than to Harrigan) is appropriate to an examination of the problem of adjustment to LDC competition.

The concrete circumstances of the DC adjustment problem may differ considerably from those relevant in the cases examined by Miles and by Harrigan. In particular, a decline in overall demand is not necessarily a feature of the DC adjustment problem. The problem would, however, benefit from similarly motivated efforts to obtain a more detailed empirical understanding of its dimensions.

3. PURPOSES OF THE RESEARCH

The evolving competitiveness of LDC manufactures and the problem of adjustment to that competition by DC producers is of growing importance and has attracted increased attention as a problem for DC government and business. It has not yet, however, stimulated much empirical research on participants in

²⁸ See, Spender, J. C., "Commentary" in Schendel and Hofer, , op. cit. , pp 394-404. Spender argues that most strategic management contingency theory takes the existing environment as a given and overlooks the option of moving to a less hostile environment. "Hence it overlooks by assumption a whole dimension of the strategist's options for coping with...the firm's environment".

affected DC industries.²⁹ There is, in particular, a dearth of studies of the adjustment problems of DC producers in the affected industries.³⁰

The main objective of the research is, therefore, to advance what is known about the adjustment environment presented by LDC competition to DC enterprises in affected industries. To this end, the research seeks to develop empirically-based insights into;

- i. The nature of enterprise-level adjustment alternatives.
- ii. The nature of intra-industry (i.e., inter-firm) variation relevant to the adjustment environment
- iii. The dynamics of the adjustment process.
- iv. The dynamics of the DC-LDC competitive environment.

²⁹ Surveys of the Public Affairs Information Service (PAIS) and the ABI/INFORM bibliographic databases as recently as December, 1982 reaffirmed that, as preceding discussion has suggested, most of the literature consists of theoretically-based or macro-economic discussions of either the growth of LDC competitiveness, the aggregate DC employment impact of LDC production, or government adjustment policies.

³⁰ There was very little that addressed the question at the level of the enterprise at all. Lloyd (1981, , op. cit.) and Mickwitz [Mickwitz, Gosta, "The New International Price Competition" in, European Journal of Marketing V13, No4, 1979] are motivated by a concern for enterprise-level adjustment but neither of these are empirical studies.

The research rests upon two fundamental assumptions. The first is that the DC adjustment problem is, in the first instance, a problem of corporate (or "enterprise-level") adjustment to a changing environment. The second is that the advent of LDC competition is an environmental change with specific features and a general dynamic which have some generality and yet, at the same time, are usefully distinguished from those of other forms of environmental change.

4. AN OVERVIEW OF THE STUDY

The organization of the study approximates the chronology of the research process. Chapter two discusses the exploratory orientation of the study and the methodology employed. It also presents a naive conceptual framework that served to organize the field research and preliminary analyses. Chapter three provides background information for the case studies.

Chapters four and five present the empirical core of the study. Chapter four presents a detailed case study of adjustment in the stainless steel cutlery industry and Chapter five presents more abbreviated case studies of three other industries. This latter chapter also includes an analysis of other data regarding the migration of firms from a large variety of industries into new businesses.

The following three chapters present the results of inductive analyses of the empirical data. Chapter six discusses the pattern of development of LDC competition and how this is related to foreign direct investment. Chapter seven analyzes the variety of potential modes of adjustment suggested by the

study and relates them to one another around the concept of value-added. Chapter eight discusses the nature of intra-industry variation and the overall dynamics of the adjustment process suggested by the case studies. In a concluding chapter, the results are summarized and some implications for business, government, and future research are discussed.

II. METHODOLOGICAL CONSIDERATIONS AND CASE SELECTION

1. METHODOLOGY

1.1 Exploratory Research

In view of the dearth of previous empirical studies of the topic it seemed particularly appropriate to adopt an overtly exploratory approach based on field- or case-studies of some affected industries. This approach is considered to be an effective way of learning the variables, and the ranges and combinations of them which might most fruitfully reward further and more directed study.³¹ It can be considered almost an absolutely essential technique when exploring new fields.³² As Mintzberg has said, in the context of research on business policy;

"Students of research methodology in the social sciences generally agree that at early stages in the study of an phenomenon, there is a need to use less rigorous, more exploratory approaches, that can encompass more variables. Only by remaining open to the rich complexity of reality can effective theory building be initiated in a new field."³³

³¹ Runkel, P. J. and McGrath, J. E., Research on Human Behaviour (Holt, Rinehart, and Winston, New York, 1972) p 94.

³² Helmstadter, G. C. Research Concepts in Human Behaviour (Meredith, New York, 1970) p 53.

³³ Mintzberg, Henry, "Policy as a Field of Management Theory" in Academy of Management Review January, 1977, p 94.

It is emphasized that, in the present context, "exploratory" does not mean the search, in a novel environment, for the presence of variables and relationships that have been specified, a priori . It means, on the contrary, a commitment to the idea that the relevant variables and relationships should be defined by the problem, itself. A central task of the investigation, then, is to remain open to the perception of those variables and relationships. The choice of this approach does not, however, obviate the need for some a priori structure. For without some, tentative, conceptualization of the dimensions of the problem, one cannot decide where to begin.

Thus, there is an inherent tension between the desire to be openly exploratory; to let the problem itself specify the relevant dimensions and variables, and the fact that one must impose some a priori order on the investigation if it is to begin at all. A concern with this paradox is not particularly eccentric. It is a central, even if only implicit, concern of all empirical research in which the commitment to the a priori model is less than total. All empirical research, that is, which seeks to learn not only (or not at all) about the adequacy of the model but about the nature of the empirical problem as well.

Nor is it likely that anyone can resolve the paradox. There is, rather, an inherent trade-off between commitment to an a priori model and commitment to an empirical problem. The particular mix adopted in any given instance must involve subjective choice on the part of the researcher. In the present

instance, the choice was made to strongly emphasize a commitment to a problem area believed to be of importance.

A similar choice is implicit in all policy-oriented research though, in many cases, a considerable degree of commitment is given to an a priori model; often one derived from a single academic discipline, such as economics. It is increasingly evident, however, that the very complexity of real-world problems, such as the one addressed here, makes it highly improbable that any, single, model can do justice to the empirical reality.³⁴ There is, therefore, a growing emphasis on inter-disciplinary approaches in which a number of researchers from different disciplines, and with a variety of explicit and implicit perspectives, jointly address a problem. Laudable though this tactic may be, it need not be the only one and, in any case, it is not feasible in the present instance, where the research must customarily be carried out by the individual researcher.

³⁴ Of course, one is not necessarily restricted to "off the shelf" models based on a single discipline. The researcher is free to specify his own a priori and, if he wishes, "multidisciplinary" model which he considers more appropriate. However, as Runkel and McGrath (op. cit. pp 406-407) have put it;

"(in domains which have been little studied)...the researcher must go in with only guesses as guides. In such a case, the investigator must choose between (1) collecting data with little theory to guide him in its interpretation... [or collection! (author's comment)]...or (2) pausing to build theory while having few facts to give him confidence that he is building something useful. Given such a choice, most of us choose the alternative we find personally the less frustrating."

In any case, the basic trade-off between commitment to a model and commitment to an empirical problem remains.

1.2 A Methodology For Exploratory Research

Table 1 presents an array of research approaches and characteristics of those various approaches. The characterization of exploratory research presented there emphasizes the "unfocussed" and "unstructured" nature of the research design and data collection methods. Clearly, this is a matter of degree; it is unfocussed and unstructured relative to the other types of research shown. There must, however, be some a priori focus and structure. How this might be provided is a fundamental but unsettled methodological problem of exploratory research.³⁵

In any investigation the researcher brings to it some a priori "impressions" of the nature of the phenomenon being examined. These constitute an implicit a priori conceptual framework. Even where (perhaps, especially where) a tightly specified a priori model is employed, the researcher's prior impressions will normally only be partially revealed in that model. Those not revealed in the model will, nevertheless,

³⁵ See, for example; Administrative Science Quarterly V 24 No 4, December, 1979. This is a special issue on qualitative research methodology edited by John Van Maanen. While qualitative research does not equate with exploratory research the reverse is often true. Thus, many of the papers reflect the problems of conducting exploratory research. The paper by M. B. Miles, "Qualitative Data as an Attractive Nuisance: The Problem of Analysis" (pp 590-601), specifically deals with the role of rough preliminary frameworks in exploratory research. See, also; Glaser, B. G. The Discovery of Grounded Theory: Strategies for Qualitative Research (Aldine, Atherton, Chicago, 1967) and, Glaser, B. G. Theoretical Sensitivity: Advances in the Methodology of Grounded Theory (The Sociology Press, Mill Valley, 1978).

Table 1 - Characteristics of Various Types of Research

Normative Descriptive					
Characteristics of the research process Types of research	Theory Building			Theory testing	
	Exploration	Concept Develop- ment	Hypothesis Generation	Hypothesis testing internal validity	Hypothesis testing external validity
Purpose	Explore territory	Draw maps of territory	Improve maps of terri- tory	Test maps of the territory	
Nature of research question	What's there? and What are the key issues?	What are the key variables?	What are the relation- ships among variables?	Are the theories really valid?	Where do the theories apply?
Nature of research design	In-depth unfocused longitudi- nal case studies	Few focu- sed comp- arative longitudi- nal case studies	Several focused compara- tive longi- tudinal case studies	Large-scale sample of original population	Large-scale sample of multiple population
Data gathering methods	Observation Unstructured interviews Documents	Observation Structured interviews Documents	Observation Structured interviews Documents Small-scale questionnaires	Structured interviews Documents Open-and closed- ended questionnaires Lab experi- ments Field experiments	Structured interviews Documents Open-and closed-ended questionnaires Lab experi- ments, Field experiments
Data analysis methods	Insight Categori- zations	Factor analysis Semantic differentials Multidimensional scaling		Sign test χ^2 Kendal's Tau Correlation analysis of variance Pearson's Product Moment Corre- lation Multiple Regression Simultaneous Regression	
Nature of results	Identifi- cation and description of pheno- menon	Refined descrip- tion of pheno- menon	Development of hypotheses about phenomenon	Corroboration or refutation of hypotheses for similar organizations	Corroboration or refutation of hypotheses for different organizations

Source: Schendel, Dan E. and Hofer, Charles W. (eds.)
Strategic Management: A New View of Business Policy and
 Planning, (Little, Brown, Toronto, 1979) p. 387.

influence the research enterprise even if only in the interpretation of the findings.

Thus, whatever the merits of these underlying impressions as a partial model of the empirical problem, there is merit in trying to make them explicit. If nothing else, this can encourage others to ask: given this underlying viewpoint, what facts and interpretations is the researcher likely to have overlooked or (subconsciously, one hopes) suppressed or unduly minimized? Thus, one purpose of the following section is to provide an explicit outline of the a priori "impressions" brought to the research. More centrally, however, these same impressions provided the raw material from which was constructed a "naive" conceptual framework with which to structure the field research.

While not arbitrary, insofar as it is derived from some specific a priori subjective impressions of the dimensions of the problem to be addressed, the purpose of the naive conceptual framework is entirely pragmatic. It is merely a "tool" to lend some organizational structure to the field research and preliminary analysis. There is no a priori intellectual commitment to it as a model of DC adjustment. Indeed, it could not constitute even an inaccurate "model" of adjustment as it does not specify a set of specific variables and variable interactions. It does no more than propose a set of hypothetically relevant dimensions along which adjustment might take place. It is derived from a priori impressions of some of the relevant complexity in the managerial environment.

2. THE NAIVE CONCEPTUAL FRAMEWORK

2.1 Some Aspects Of Real-world Complexity

2.1.1 A Simple Example

Begin, by considering some of the real-world complexity of manufacturing activities. The number of manufacturing firms (or industries) which produce a single product for sale to one market, using one technology, must be trivially small. At a minimum, one would expect a variety of "models" of the product which the market perceives (or has been persuaded to perceive) as being different in some substantive way.³⁶ In general, firms will often display far more complexity than this and will incorporate a number of distinct products and production processes, and serve a variety of markets. Potential complexity is, however, far greater even than this.

Even if we focus on just a single product and try to trace it back to its final raw materials, we will find a whole series

³⁶ A Japanese manufacturer of audio products (Sansui), for example, introduced a "LIMITED" edition of an existing amplifier product, at a higher price, in which the difference consisted in a selection procedure for the component parts which was more rigorous than that employed for the standard version. Thus, except for the designation "LIMITED" on the faceplate the product was totally indistinguishable from the standard version even if disassembled. Of course, it was expected that, statistically, these models would offer an average level of performance and reliability higher than that of the standard version. We can also note the implicitly different input mix, i.e., more skilled labour hours in the selection and testing process. Thus, even this example presents a product difference which is arguably more substantive than in the case of "special editions" which offer more obvious but merely cosmetic differences.

of production processes and (intermediate) products from which it is derived. Table 2 illustrates this for the hypothetical case of a set of plastic lawn furniture.

In the example given, various process/product sets often correspond to what are commonly perceived as distinct "industries". This is partly because of the very crude degree of subdivision in the example. A much finer subdivision would presumably be possible given the necessary detailed familiarity. Indeed, the activities in each of these "industries" themselves, could probably be subdivided to a degree similar to that in the table.

2.1.2 Some Further Complexities

Despite the complexity even this implies, the table conceals three further types of complexity. First, it presents a final product as involving sequential and singular intermediate (prior) goods and production processes. Even in the example given this is not strictly true and it is obviously not true for most final goods. Typically, a final good arises from a number of distinct raw materials which are, in various combinations, used to produce a number of non-sequential (parallel) intermediate goods of which, ultimately, the final good is comprised. Thus the line from final good to raw material is not in fact a single straight line as the table suggests but, rather, a tree-shaped branching network running back through various intermediate products and stages to primary raw materials.

Second, the intermediate goods shown (e.g., petrochemical

Table 2 - Some Subdivisions of an Hypothetical Chain of Productive Activities

<u>ACTIVITY</u>	<u>LOCATION</u> Geographic/Organizational	<u>OUTPUT</u>
Oil exploration	various/external	Known oil reserve
Oil extraction	various/external	Crude oil
Oil transport	various/external	Relocated crude oil
Petrochemical production	various/external	Petrochemical feedstock
Furniture design	Toronto/external	Design for set of lawn furniture
Mold production	Toronto/external	Injection mold for lawn furniture set
Injection molding	York/internal	Lawn furniture parts
Finishing	York/internal	Finished parts for lawn furniture sets
Assembly	various/external (customer)	Assembled lawn furniture
Packaging	York/internal	Packaged set of lawn furniture
Advertising	Toronto/external	Demand for lawn furniture
Distribution and Sales	various/external	Relocated furniture, + Revenue
Service	various/external	Maintained demand, ± Revenue

Source: Compiled by author

feedstock, plastic resin, etc.,) are depicted as having utility only in terms of one "final good". This, too, is misleading. Most, if not all primary and intermediate goods will have multiple downstream uses and, thus, the line from any one of them to final goods is also a tree-shaped, branching network running forward to a variety of final goods.

Third, the table depicts a chain of activities carried out through an implicitly given physical plant. No explicit attention is given to the fact that a final good is the result also of the production and consumption (depreciation /obsolescence) of capital goods. Thus, a further, parallel, set of subdivisions is also involved.

2.1.3 Some Implications

There are four important implications of this real-world complexity that bear emphasis. The first is that subdivisions of productive activity such as those shown in the table do not necessarily delimit the activities of individual firms, much less those of a group of related corporations. A single firm (or industry) can span a number of final and intermediate activities even in the case of a single final product and the scope of its internal activities can branch forward and backward into (directly or indirectly) related downstream and upstream activity areas and into the parallel streams that correspond to the relevant capital goods employed.

Second, in concert with this web of activities, the firm may have, even at one single level or stage of production, myriad sets of interactions with a multiplicity of external

actors in various external environments and, in addition to the physical and financial transfers that each of these interactions involve, there will be flows of information or "intelligence" between the firm and these actors and environments.

Third, while the complex of internal activities and environmental interactions of the firm may be, for routine administrative convenience, normally sealed off into a number of relatively discrete divisions or operating units, the firm has considerable potential to alter the nature and strength of these internal divisions and of the linkages among them.

Fourth, the firm also has a more limited potential to alter its interactions with the external environment. It can, for example, integrate forward or backward to incorporate a previously external activity or it can choose to divest itself of an internal activity.

Thus, even consideration of this simplified hypothetical example suggests considerable complexity. The firm itself may produce one or many products. It may carry on few or many of a sequence of related productive activities and it may have alternatives as to how (e.g. alternative production processes, alternative internal linkages between activities, etc.) and where it carries out any one of them. The example also suggests the potential for complexity in its linkages with the external environment. It may have many or few such linkages and the relative importance of a linkage to its partners, and their relative power in the relationship, may vary over linkages, over firms, and over time.

2.2 The Framework

2.2.1 Basic Concepts

The earlier example of an hypothetical set of plastic lawn furniture, suggests the major dimensions of the naive framework. These are; products, technically distinct functional activities (design, injection molding, sales, etc.), and geographic and organizational locations.

As the concern is with competition between DC and LDC manufacturers, the concept of product is central. It is products, not business organizations, per se, which compete in the market. Change in this dimension, however, need not only be between discrete products. One can usefully make a distinction between product categories and product styles; with the former referring to fundamental differences in the function of the product to the end-user and the latter to differences between products having a common functional purpose.

Many manufacturers, of course, produce more than one product. Thus one should distinguish between a "business", which is product-specific, and a "firm", which may incorporate a number of businesses (i.e., produce a number of products). Moreover, it is appropriate that the actor focussed on not be taken as a single legal entity (e.g., the company or corporation) but as a single organizational entity. Thus a number of legally distinct companies which are organizationally linked under common management, for present purposes, can be considered a single entity, "the firm". If we tentatively

consider product category and style held constant, we can focus on some other relevant dimensions of change.

As earlier discussion indicated, the manufacture of a given product involves a variety of concrete activities. The concrete functional activities (in our example, mold production, injection molding, etc.) associated with various products differ enormously. For purposes of a general discussion it is, therefore, necessary to impose some abstract categories (such as design, production, sales, etc.) on functional activities. The number and nature of the abstract categories is a matter not of empirical fact but of subjective choice. Whatever the number and nature of these functional categories, we can ask, with respect to each one of them, how it is carried out (method); how it is located with respect to, or linked to, other functions (organizational location); and where, geographically, it is carried out (geographical location).

We expect that firms at any given point in time would display differences with respect to these various characteristics. Similarly, a single firm at two points in time might display such differences. More to the point, it is our assumption that adaptive change can be usefully mapped in terms of these characteristics.

2.2.2 Single Product Framework

If we let P_{ij} indicate a specific style (j) of a particular category (i) of product, then we can speak of a firm's configuration (C_{ij}) with respect to that product. Either single-product firms or single-product cross-sections of multi-

product firms could be described in this way. We can designate that configuration as; $C_{ij} = L_o^g F_a^t$, where:

F stands for functional activity and L for location³⁷

a = category of functional activity

t = technical/method parameter (how it is carried out)

o = organizational parameter (where positioned or how located with respect to other functions)

and,

g = geographic parameter (where it is carried out).

In this case, with a given P_{ij} , adaptive change over time is equivalent to change in the parameters t, o, and g ("a" is a constant set of functional activity categories all which are always applicable). In the general case, where more than one style or category of product may be produced by a given firm, adaptive change could consist of a change in the relative proportion of activity accounted for by the various products and functional activities; even where the set of products and activities, themselves, remain the same. Thus a full description of a firm's configuration, (C), would require specification of all of the products produced and a weighting or density parameter to indicate the relative level of activity for each functional activity for each product. We might write, for example $L_o^g F_a^t (D_{ija})$, where the particular D_{ija} is a decimal

³⁷ The notation, F, might have been used and has the merit of giving visually similar treatment to t, o, and g; all of which are equally parameters of F. The device of separating out the conceptually similar "locational" (L) parameters o and g were adopted for mnemonic purposes.

fraction indicating the proportion of total firm activity for F_a vis-a-vis P_{ij} and the sum of all D_{ij} for a firm is 1.0.

Which measures or categories are appropriate for a, t, o, and g is a subjective question. Moreover, it is likely that no single answer is equally suitable to all circumstances (e.g., products or functions). In our naive framework we tentatively specified some. These were:

a = 1 Design, 2 Production, 3 Sales

t = 1 Labour-intensive, 2 Capital-intensive

o = 1 Internal, 2 External (to the firm)

and;

g = 1 Domestic, 2 Foreign

Thus, the notation;

$C_{ij} = L_2^1 F_3^1$, indicates a sales function (F_3) which is labour-intensive (F^1) and carried on external to the firm (L_2 and domestically (L^1)).

This may appear as a rather simple schema but, in fact, it defines 512 distinct configurations. If we view adjustment as a single-step move from one configuration to another (it could, of course, be a multi-step series of moves), then the number of potential adaptive patterns we might observe is 262,144. And this is without any consideration of possible change in product style or category or in the distribution of activity as between functional activities.

2.2.3 Generalized Framework

In the general case, the products produced are not necessarily singular nor are they fixed. Thus, a firm's total configuration, C , at any point in time may not be given by a single $L_o^g F_a^t$ for a single style and category of product and may incorporate a number of distinct styles and categories of products linked to various C_{ij} . While LDC competition may impinge narrowly on only one, specific product (C_{ij} -set) in a firm, the adaptive behaviour observed will be determined not by factors relative to that single C_{ij} -set but relative to the entire configuration (C) of the firm.

Thus, two firms which have, with respect to a given style and category of product, exactly the same configuration (i.e., with respect to the given P_{ij} , exactly the same C_{ij}) may display quite different adjustment patterns because of differences in the overall configurations of the firms.

One way to visualize a total configuration is to consider C as a vector of $L_o^g F_a^t$ -values with the length of the vector (number of $L_o^g F_a^t$ -values) determined by the total number of all possible (distinct styles and categories of) products. Thus, there will be a separate $L_o^g F_a^t$ -value for each distinct product. Because we need to accommodate multi-product cases we must reintroduce the density parameter, D_{ij} , which gives the proportion of total firm activity for each relevant P_{ij} . The sum of all D_{ij} for a firm is 1.0. The general vector C would, then, have the form; $C = [L_o^g F_a^t (D_{ij})]$.

An hypothetical firm configuration (in only three

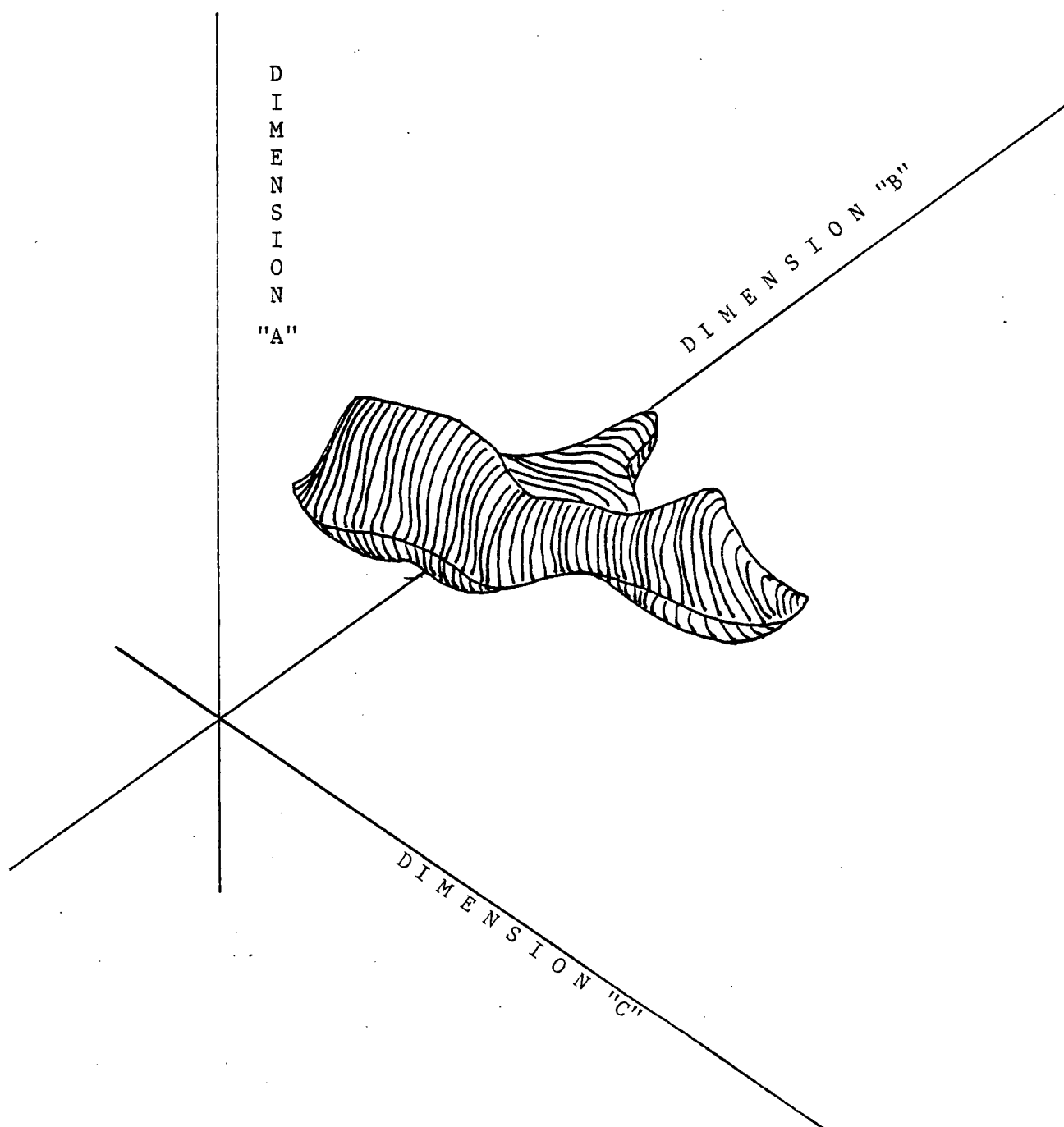
dimensions) is depicted graphically in Figure 1. Assuming one could actually define appropriate metrics for the dimensions specified; a firm's configuration could be mapped in multi-dimensional space, though it would not be confined to three-dimensions and would be unlikely to present as coherent a shape as the figure suggests. It would best be visualized as a swarm of points within the multi-dimensional space, with the density of the points varying considerably but displaying in the aggregate the firm's "configuration".

2.2.4 Some Hypothetical Examples

By way of example, let us assume there are a total of ten possible products and that there are only eight (not 512) possible distinct configurations with respect to a given product. These configurations can be labelled with the integers from 1 to 8 and we can let a "zero" indicate an absence of firm activity. Then, the three firms, A, B, and C might have the configurations shown in Table 3 before (T1) and after (T2) adjustment to LDC competition in product number 5.

Firm A's adjustment consists of shifting the emphasis (density) of its activities among its pre-existing range of products. Firm B's adjustment consists in adjusting its role with respect to product 5 from C3 to C5; the latter being a role with which it has had some previous experience vis-a-vis product 4. Firm C's adjustment consists in application of its pre-existing role (C3) to a different product (product 8) the capability requirements of which presumably have some important overlaps (in technology? In markets?) with those of product 5.;

Figure 1 - Hypothetical Three-dimensional Configuration
for a Firm



Source: Compiled by author

Table 3 - Some Hypothetical Examples of Adjustment to Competition

	t_0 FIRM			t_1 FIRM		
	A	B	C	A	B	C
P 1	0	0	0	0	0	0
R 2	0	0	0	0	0	0
O 3	0	0	0	0	0	0
D 4	1(.2)	5(.2)	0	1(.2)	5(.2)	0
U 5	3(.6)	3(.8)	3(1.0)	3(.2)	5(.8)	0
C 6	0	0	0	0	0	0
T 7	0	0	0	0	0	0
8	3(.2)	0	0	3(.6)	0	3(1.0)
9	0	0	0	0	0	0
10	0	0	0	0	0	0

Note: The table entries $x(y)$ indicate the type of configuration (x = integers from 1 to 8) and density of firm activity (y = 0 to 1.0) across the range of feasible products.

Source: Compiled by author

as we might have deduced from their co-existence in the T1 configuration for Firm A.

It will be evident that the conceptual framework is, as intended, quite general and presumably can accommodate much that is relevant to an adjustment process; whatever the specific cause or outcome.

3. CASE SELECTION

3.1 Japan And The Asian Newly Industrializing Countries

The research examines adjustment in some Japanese industries facing competition from producers in the Asian NICs. Japan and the Asian NICs are discussed in more detail in the following chapter but their relevance to examination of the adjustment problem can be briefly addressed, here.

Japan is the most recent addition to the industrialized developed countries and many of the export products in which LDC producers are presently demonstrating competitiveness were mainstays of Japan's earlier postwar development. Japan's postwar development and structural change has been so rapid as to attract a great deal of attention to the "Japanese miracle".

Most of this attention has been focussed, at the sectoral level, on Japanese acquisition and development of new leading industries and not on concurrent changes in lagging industries and sectors. Yet, Japan's postwar development and structural change has implications across the entire spectrum of industries and sectors. Examination of Japanese industries facing LDC competition can, accordingly, provide some needed balance to the

understanding of Japanese postwar development.

From the perspective of the present research, however, examination of adjustment in Japanese industries has its own attractions. There is, first, the likelihood that because of the rapidity of postwar development there will remain a substantial number of LDC-competing industries to examine. Secondly, the fact that many of these Japanese industries were export-oriented means that there is more likelihood of observing adjustment "unmuddied" by protectionist domestic government policy. Thirdly, Japan is both geographically proximate to the most dynamic of the LDCs, the Asian NICs, and has extensive economic relations with them. Thus, the interrelations of DC and LDC development and structural change is an issue of considerable practical importance in Japan and, as such, has attracted the serious attention of both business and government.

3.2 Identification Of Affected Industries

To examine adjustment to Asian NIC competition in Japanese industry, one must identify a relevant set of industries to examine. As it is products, and not industries or companies, per se, which compete in the international market one must first identify a set of products. These can then be linked to a set of specific industries and firms. The more disaggregated the level at which relevant products are identified, the more likely are we to be able to link the products to narrowly-defined and homogenous industries.

3.2.1 Quantitative Selection

A quantitative approach to the selection problem would utilize existing statistical data to examine relative Japanese and Asian NIC competitive strength for various products. While one would like to select those products in which Japanese loss is due to Asian NIC gain, it is not in general possible to demonstrate such a causal link; even where it almost certainly exists. Similarly, while the respective shares of the world market (the aggregate of all national markets) is an attractive measure of competitive strength, this cannot be readily determined.

There are numerous other problems in implementing a quantitative selection procedure. From our present perspective, the most crucial problem with quantitative approaches is that the level of product categorization at which they are feasible is highly aggregated. As a result, the identified "product/industries" will correspond, in general, to a collection of disparate products produced by what are in practice quite distinct industries. The identified aggregate product categories are not likely to contain all of the relevant subcategories of products. Moreover, it is even possible (though not probable) that they contain none. Finally, even if the existing statistical data were available in highly disaggregated form, in the absence of micro-level data on buyer behaviour, one would still have no assurance that Japanese losses were due to Asian NIC gains.

3.2.2 Qualitative Selection

For reasons such as the above, we did not attempt a quantitative selection procedure. We relied, instead, on the advice of informed opinion in Japanese government, business, and academic circles. Specifically, we asked people to suggest some narrowly-defined products in which Japanese producers have faced severe competition from the Asian NICs. The choice of informants was quite informal and opportunistic but began with researchers at The Institute of Developing Economies and proceeded, in large measure, through a chain of subsequent introductions and suggested informants that began there. In the course of inquiry we contacted a large number of people in government, business, and academia but, fairly early on, considerable repetition became evident in the nominated product/industries.

This procedure, aside from directly identifying narrowly-defined product/industries, comes closer to "tapping in" to micro-level information on buyer behaviour relevant to identifying products in which Japanese losses are attributable to Asian NIC gains. That is to say, the informants generally had relatively direct information as to which supplier countries were winning business away from the Japanese industry. They were also able to identify products at a very fine level of disaggregation; and all the finer as we proceeded from academic/government sources to the level of industry associations and businessmen.

Indeed, informants often made distinctions among products

or product types that went far beyond the finest level of disaggregation available for official statistics. The goal, however, was for identification of products at the equivalent of the finest (6-digit) level of the Japan Standard Product Classification (J.S.P.C.).³⁸ In practice, even this goes beyond the level of disaggregation for which much official statistical data is available. As a result, when seeking statistical data, it is generally necessary to revert to the corresponding 4-digit levels of the J.S.P.C.

3.3 The Identified Product/Industries

The identified 6-digit product categories are indicated in Table 4. In some cases, only a few representative 6-digit products from an entire 4-digit category identified as relevant by our informants are listed. The listing is, therefore, not comprehensive in that sense. There is no reason to believe, moreover, that the aggregate of all of the 6-digit product categories nominated by informants is comprehensive in the larger sense of comprising all relevant 6-digit categories. There are undoubtedly relevant product categories that informants did not advise us of. Moreover, by the nature of the selection process employed, an effort, even by ourselves, to repeat the procedure would be unlikely to produce an identical list of products. We are confident however that, were there to be a comprehensive listing of relevant 6-digit product

³⁸ This classification is available, for example, in Shohin Bunrui-hyo (M.I.T.I., 1979)

Table 4 - Product/Industries Facing Severe Asian NIC Competition

<u>J.S.P.C. CODE</u>	<u>PRODUCT CATEGORY</u>
202111	Cotton Thread
202112	Blended Cotton Thread 203111 - 119
	Twisted or Braided Yarn
204111 ~ 119	Wide-Woven Plain Cotton Textiles
205121	Men's Circular-Knitted Outerwear
205124	" " " Underwear
205512	Knitted Dress Gloves
208211	Plain Knitted Lace
209611	Cotton or Jute Carpeting
209612	Tufted Carpeting
212111	Men's Dress-Shirts
222211	Plain Plywood Board
281211	Bicycle Tires
282113	All Rubber Boots
289211	Footwear Made of Plastics
296112	Leather Briefcases and School Backpacks
296121	Plastic Briefcases and Luggage
304212	Western-Style Ceramic Diningware
304611	Mosaic Tile
332111	Stainless Steel Cutlery
332119	Other Stainless Steel Tableware
332411	Handtools
337111	Bolts and Nuts
337114	Wood Screws etc.
348211	Household Sewing Machines
354311	Radio Receivers (more than three tubes/or transistors)
354312	Black and White T.V. (including kits)
357919	Communications-Use Resistors
357913	" " Capacitors
357914	" " Transformers
363113	Sports and Recreational Bicycles
363115	Bicycle Parts etc.
375112	Binoculars
376112	Eyeglass Frames
277114	Electric and Electromagnetic Watches
392311	Acoustic and Electric Guitars
393112	Metal Toys
393116	Inflatable Vinyl Toys
393119	Miscellaneous (other) Plastic Toys
393214	Stuffed Animals
393411	Tennis, Ping Pong and Badminton Equipment
393415	Skiing, Waterskiing and Skating "
393417	Fishing equipment and Accessories
394211	Ballpens
395111	Table and Pocket Lighters
395113	Cultivated Pearls
396911	Miscellaneous Household Notions
398211	Tatami Covers and Mats
399111	Men's Western-style Umbrellas
399113	Frames (Skeletons) for Western-style Umbrellas
399511	Vacuum Bottles and Jars

Source: Compiled by the author

categories, it would include most, if not all, of those listed in the table.

The majority of the selected industries display levels of establishment scale distinctly below the all-industry averages. In fact, it was brought to our attention that the majority of the selected industries fall among the approximately 200 designated Small- and Medium-size Enterprise Industries (S.M.E.I.) which are the special concern of the Small- and Medium-size Enterprise Agency (S.M.E.A.) of the Ministry of International Trade and Industry (M.I.T.I.).

4. METHODOLOGICAL IMPLICATIONS OF THE AFFECTED INDUSTRIES

4.1 Characteristics Of The Identified Industries

The overall characteristics of the industries identified as facing LDC competition are discussed in more detail in the following chapter. Some of these characteristics, however, had important methodological implications. Specifically, the identified industries were characterized by a preponderance of smaller, privately-owned firms and were widely scattered, geographically, throughout Japan.

As a result, very little operating information regarding individual firms is publicly available and the vast majority of firms attract no ongoing attention in the popular press. Moreover, initial informants (who had helped identify the affected industries) suggested that, because most firms are run by owner-operators, attempts to gather survey data directly from the firms would not likely be successful, especially in a period

of adversity and uncertainty. Finally, the geographic scatter of the identified industries presented considerable logistical problems to field research, especially in light of the time and financial constraints of the study.

4.2 Outline Of Methodology Employed

The problems presented by the characteristics of the affected industries were coped with by means of a sequence of research activities that can be broadly divided into three stages.

4.2.1 A Broad Survey Of The Adjustment Problem

This involved a survey of existing literature dealing with the adjustment problem in general and interviews with academics, government bureaucrats, and representatives of research organizations attached to government or financial institutions. These interviews dealt primarily with the overall adjustment problem, the institutional environment of adjustment, and the availability and whereabouts of data sources relevant to adjustment in the specific, narrowly-defined industries.

4.2.2 An Overview Of Adjustment In Some Specific Affected Industries

This also involved surveys of existing literature and interviews but was focussed on sources relevant to specific industries. Interviews and literature obtained from industry associations figured prominently in this stage and the emphasis was on collecting a modicum of information on a wide selection of affected industries.

4.2.3 Case Studies

On the basis of the preceding stages it was possible to make some informed judgements as to which industries would be suitable for case studies. Nevertheless, a number of equally plausible alternatives remained and the logistical problems and research constraints alluded to earlier precluded the strategy of conducting case studies of all of them. It was decided, therefore, to concentrate on an in-depth study of one industry and to supplement this with briefer case studies of a few other industries.

The industry chosen for the in-depth case study is the stainless steel cutlery industry, centred in Tsubame City in Niigata prefecture. This is seen, both popularly and officially, as a prototypical Japanese rural manufacturing industry. In conducting the research for this case study, a much more intensive literature survey and series of interviews with relevant sources was conducted in Tokyo. In addition, field research was conducted in Niigata City, the prefectural capital, and in Tsubame, itself. The people interviewed ranged from prefectural- and municipal-level industry and commerce department representatives, to local industry association representatives, local bank managers, company founders, managers, and foremen. The companies visited included subcontractors, integrated producers, and distribution-oriented firms.

The other case studies involved a similarly intensive

literature survey and series of interviews in Tokyo. With the exception of a brief, one-day, visit to footwear firms in the Shizuoka area, however, none of these latter case studies had the benefit of field research. In all, four case studies are presented; of which, two are traditionally urban-based (footwear and umbrellas) and two are rural-based (mosaic tile and stainless steel cutlery). All of them have been highly export-oriented and each has encountered severe competition from producers in the Asian NICs.

III. BACKGROUND TO THE CASE STUDIES

1. JAPAN AND THE ASIAN NEWLY INDUSTRIALIZING COUNTRIES

1.1 Japan

Japan's rapid postwar growth and development as an industrial state is a well known story and we will only summarize some of its main features here.

It is important to recognize that rapid and extensive prewar industrialization contributed much to Japan's capacity for growth and development in the postwar period. Thus, recovery from the destruction and disorganization of the Second World War was rapid. While the level of industrial production in 1946 had fallen to that of 1915, by 1955 it had recovered to immediate prewar levels and by 1965-66 had surpassed the projected prewar trend.³⁹ This, of course, implies an accelerated postwar growth rate and, in fact, the postwar growth rate of Japanese gross national product (GNP) has consistently exceeded that of most countries and has been and is expected to continue to be higher than that of the other industrialized market economies.⁴⁰

As a result, between 1960 and 1980 Japan's share of total world GNP increased from 4.4% to in excess of 8%. In trade as

³⁹ See M. Shinohara, The Japanese Economy and Southeast Asia, p28 I.D.E. Occasional Papers No. 15, (Institute of Developing Economies, Tokyo, 1977).

⁴⁰ Japan Economic Research Centre, reprinted in H. Kanamori, Kanamori Hisao no Nihon Keizai Kogi pp 207-208. (Nihon Keizai Shinbunsha, Tokyo, 1979).

well, Japan's share of total world exports has increased from 3.7% (1963) to 5.9% (1979) and its share of world exports from 3.4% (1963) to 6.3% (1979).⁴¹ This growth has been accompanied by major structural change in patterns of Japanese employment, production, and trade and in the productivity and geographical distribution of domestic industrial production.

Despite its considerable industrial development, prewar Japan remained primarily an agricultural society with as much as 50% of its workforce engaged in primary industry as late as 1930. This percentage fell, however, from 48% to 19% in the twenty years between 1950 and 1970. Indeed, the primary sector moved from being the most important (41%) to being the least important (25%) in the ten years from 1955 to 1965.

Since 1975, the relative weight of the secondary sector has declined and that of the tertiary sector has increased, in common with the patterns in other developed industrial countries. Moreover, the absolute level of employment in the manufacturing (secondary) sector peaked around 1970 at 11,679,680.

A more detailed consideration of Japan's patterns of production reveals further change. Table 5 displays change in some major features of Japanese industry at the 2-digit level of the Japanese Standard Industrial Classification (JSIC). Because of its trivial size, we will ignore the weapons and munitions sector in our discussion. As the table shows, all sectors

⁴¹ G.A.T.T., International Trade 1979/80
1980); Appendix Table A22.

(GATT, Geneva,

Table 5 - Change in Japan's Industrial
Structure: / 1960-1975

J. S. I. C. No.	Industry	1975 Indices (1960=100)		Composition			
				Employment		Value Added	
		Employment	Value Added	1975	% Change 1960-75	1975	% Change 1960-75
18/19	Food Processing	145	1023	10.3	+3.0	10.2	20.
20	Textiles	74	460	8.1	-47.1	5.0	-46.8
21	Clothing and Textile Manufactures	264	1766	4.7	88.0	2.1	40.4
22	Wood and Wood Products	104	740	4.1	-25.5	2.5	-16.7
23	Furniture	170	1413	2.5	19.0	1.8	8.7
24	Pulp, Paper and Paper Products	121	730	2.9	-12.1	3.1	-16.7
25	Publishing and Printing	157	1118	4.3	10.3	5.3	110.0
26	Chemicals	107	698	4.3	-23.2	8.9	-19.1
27	Coal and Petroleum Products	150	905	.4	0	1.5	17.6
28	Rubber Manufactures	115	697	1.5	-16.7	1.4	-13.9
29	Leather and Leather Products	186	1115	.7	40.0	.5	25.0
30	Non-metallic Mineral Manufactures	140	923	5.0	0	5.1	0
31	Steel	119	638	4.7	-14.5	6.1	-40.0
32	Non-ferrous Metals	128	513	1.9	-9.5	2.1	-3.9
33	Metal Manufactures	180	1209	7.3	28.1	6.6	13.0
34	General Machinery	145	931	9.9	3.1	11.2	8.5
35	Electrical and Electronic Equipment	181	825	11.3	29.9	9.9	80.0
36	Transportation Equipment	187	969	8.7	31.8	10.4	20.0
37	Precision Equipment	161	1037	2.2	15.8	1.8	20.0
38	Weapons and Munitions	128	7	0	0	0	7.1
39	Other Manufactures	183	1524	5.2	30.0	4.5	29.3
Total		140	857	100	0	100	0

Note: Establishments with 4 or more employees.

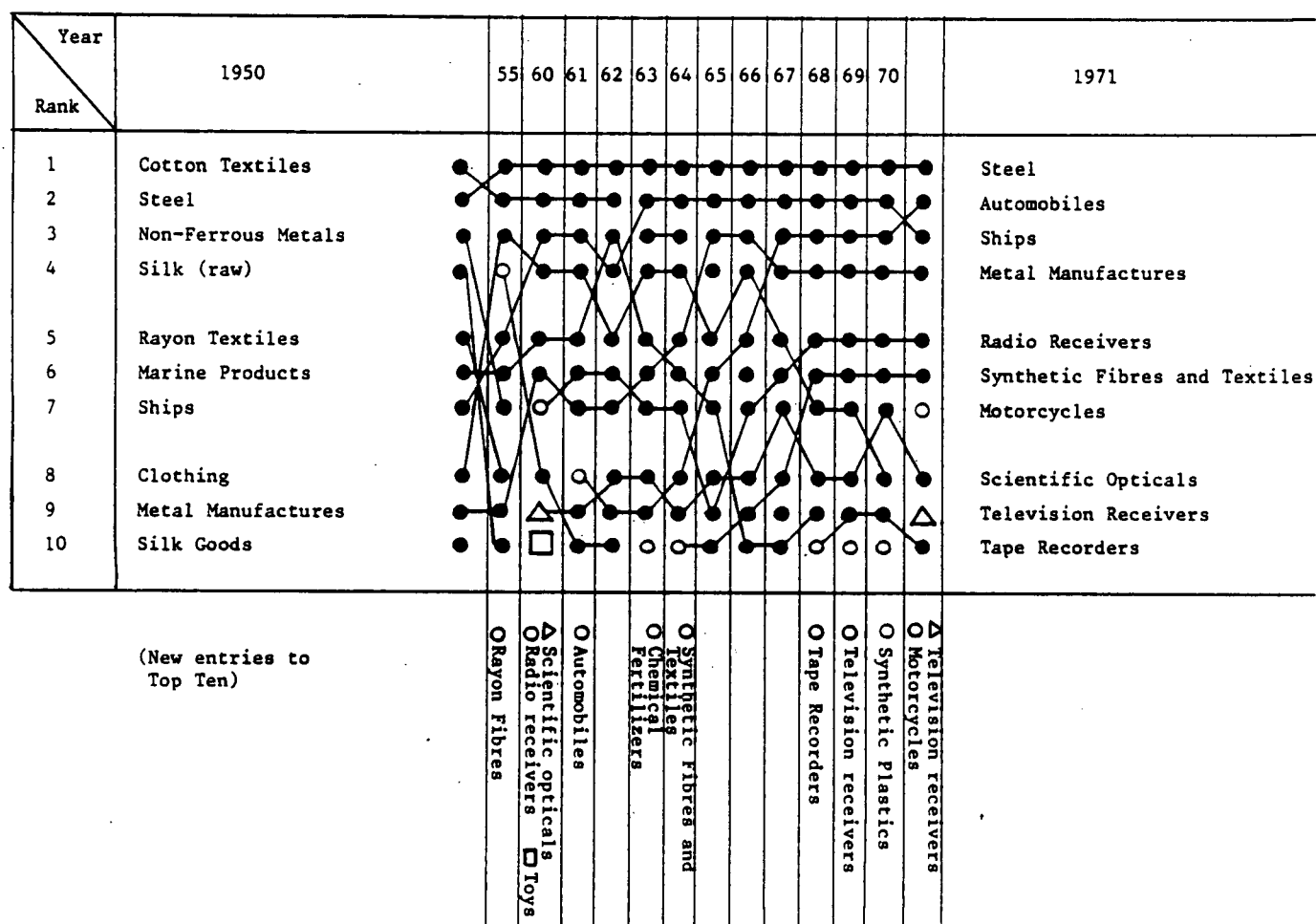
Source: Calculated from data in;
Sangyo Tokei Kenkyu Hokoku: Sengo Waga Kuni Kogyo Choki
Doko Bunseki - M.I.T.I. Statistics Division
 (1979, Tokyo, Tsusho Tokei Kyokai)

except textiles have increased their level of employment and their (nominal) value added over the period 1960-1975. Differential rates of growth have, however, changed the sectoral composition of employment and production (value-added basis). In particular, there has been a drop in the relative importance of employment and production in some high wage, capital-intensive, and natural resource-based "basic" industries; such as chemicals, steel, non-ferrous metals and in pulp, paper, and paper products as well as in some industries dependent upon the intensive utilization of relatively unskilled, low-wage labour; such as textiles, wood and wood-products, and rubber goods.

These changes have been reflected in the composition of export trade which has undergone radical change. The comparison of Japan's top ten export items in 1955 and in 1970, given in Table 6., suggests the nature of these changes. While natural textiles and clothing items accounted for eight of the top ten export items in 1955, they accounted for none in 1970. In their place was a broader variety of manufactures, the production of which required higher levels of technology and/or capital-intensity.

The decade of the 1970's presented a number of new forces for change in the Japanese industrial economy. By the early 1970's the adverse impact of postwar development on the environment and on the availability of industrial landsites and water resources was inescapably evident. The move to a regime of floating international exchange rates led rapidly to an appreciation of the yen relative to the currencies of many major

Table 6 - Change in the Composition of Japan's Major Exports: 1950-1971



Source: Hayashi, Yujiro ed., *Sekai ni Kakeru Nihon no Gijutsu* (Japanese Technology Challenging the World) Japanese - Tokyo, Kogakusha, 1972. p. 55

foreign markets and reduced the competitiveness of many Japanese products; especially those, such as labour-intensive consumer's goods, where productivity improvements were elusive. At the same time, continued productivity increases in other sectors, and the vastly increased weight of Japanese exports in world trade, led to increasingly vocal complaints and calls for protection by competitors of Japan in the major markets of the OECD countries.

The first oil crisis, in late 1973, injected a sense of both urgency and direction into this atmosphere of uncertain transition and ushered in a difficult period of reassessment and change in the fundamental structure of demand and in the price structure of the economy. Partly out of necessity and partly out of commitment and consensus, Japan, in the latter half of the 1970's made major efforts to adjust to, rather than evade, these new economic realities. By 1980, much had been accomplished and Japan's rate of economic growth, while lower than the rates of the 1960's, had risen again and was considerably higher than those of the other OECD countries.

1.2 The Asian NICs

A recent OECD study shows that the most dynamic of the NICs is the Asian, or Far-Eastern, group composed of Hong Kong, Singapore, Taiwan, and Korea.⁴² These countries rates of growth in output and demand have not only consistently exceeded those

⁴² Organization for Economic Cooperation and Development, The Impact of the Newly Industrializing Countries on Production and Trade in Manufactures (OECD, Paris, 1979).

of the advanced industrialized countries of the OECD but have generally been higher than those of other representative NICs; such as Greece Portugal, Spain, Yugoslavia, Brazil, and Mexico.⁴³ This exceptional performance by the Asian NICs is due in large part to their relatively vigorous and early change to an outward-looking, or export-oriented, industrialization strategy.⁴⁴

In reflection of this, the export orientation of the manufacturing sector is considerably higher in the Asian NICs than it is in the other NICs and their share of total OECD imports has increased more rapidly than has that of the others.⁴⁵ In absolute terms as well, the Asian NICs are dominant and accounted for about 60% of total OECD imports from the NICs in 1977. In turn, the developed market economies, of which the OECD countries comprise the major markets, accounted for 75% of total Asian NIC exports of manufactures in 1976, up from around 50% in 1963.⁴⁶

This strong growth in the volume of exports and in the orientation to OECD markets has been accompanied by remarkable changes in the commodity composition of exports from the Asian NICs. This is evident even at the highly aggregate 1-digit

⁴³ , ibid. . pp 50-51.

⁴⁴ See Donges, J. B., "A Comparative Survey of Industrialization Policies in Fifteen Semi-Industrialized Countries" Weltwirtschaft Archiv 112, 1976 pp 626-657 (especially, pp 655-656) and Suzuki, N., "Ajia Chushinkogyokoku no Kogyoka to Yushutsu no Yakuwari" in N. Suzuki (ed.), NIRA OUTPUT NRC-78-22 : Ajia Shokoku no Kyusokuna Kogyoka to Waga Kuni no Taio (Sogo Kenkyu Kaihatsu Kiko, Tokyo, 1980) pp 53-113.

⁴⁵ OECD, Impact , op. cit. .

⁴⁶ Suzuki, NIRA OUTPUT , op. cit. . p 85.

level of the Standard International Trade Classification (SITC) as shown in Figure 2.

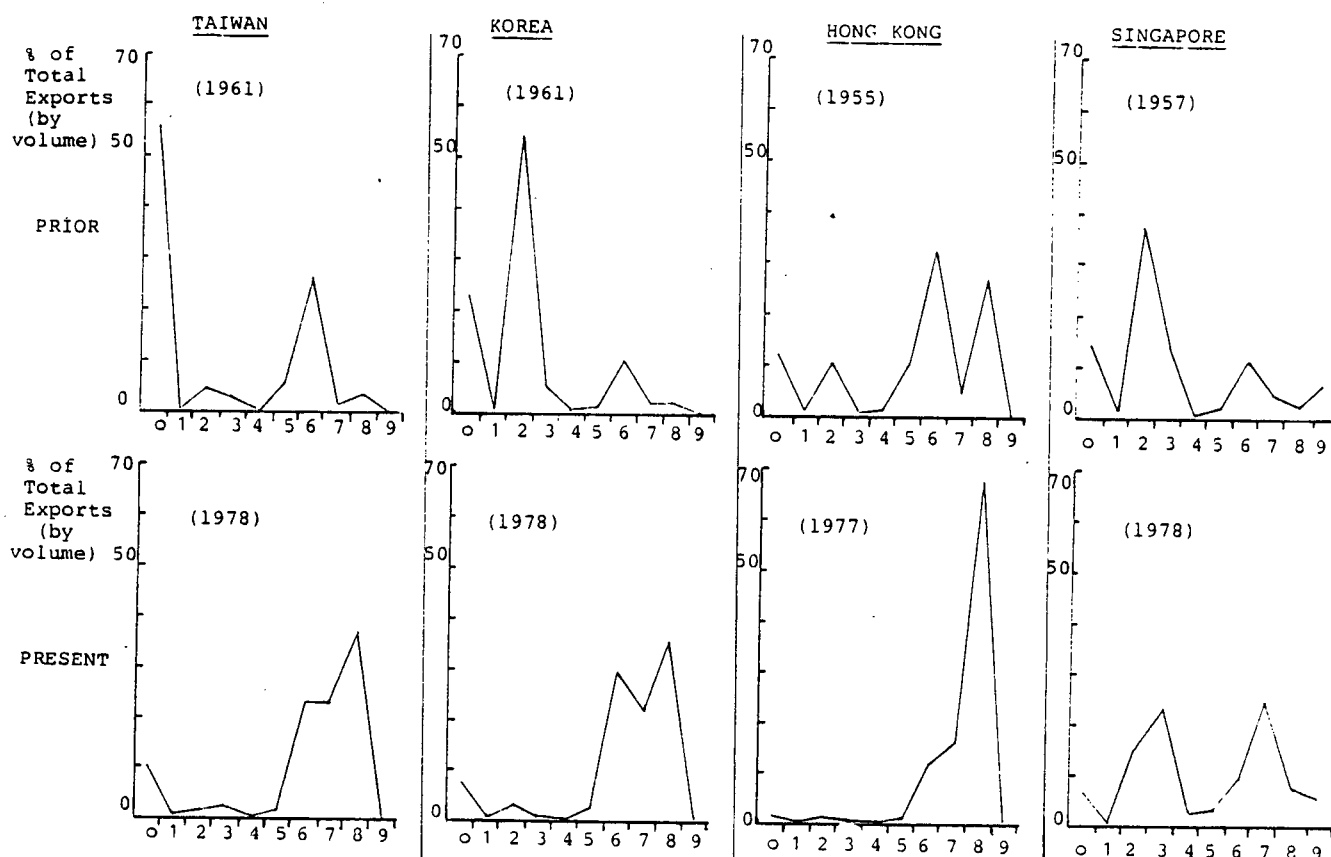
In the late 1950's and early 1960's all of the Asian NICs tended towards a commodity composition of exports dominated by agricultural products, raw materials, and semi-processed goods and by a few low technology manufactures (especially textile spinning and weaving) within SITC category 6. By the late 1970's however, their export profiles had changed dramatically and were dominated by a broader range of finished manufactures within SITC categories 6, 7, and 8. The profile for Singapore appears somewhat different because of its role as petroleum refining centre. If the profiles were redrawn on the basis of the value-added embodied in exports, the Singapore profile would likely conform more closely to those of the other Asian NICs.

1.3 Contending Views Of Japan-Asian NIC Relations

1.3.1 Competition

At one level, the Asian NICs are seen as a threat to Japanese industry. This view is more common among the general public than it is among the government and the federal technocracy. Moreover, it is strongest in those industries, regions, and individuals most subject to the effects of competition from Asian NIC producers; either domestically or, more commonly, in third country markets. Those holding this view look at changes in the competitive strength of the Asian NICs and see, in patterns such as those shown in Figure 3., signs of inevitable and growing competitive conflict between Japan and

Figure 2 - Change in the Commodity Composition of Asian
NIC Exports

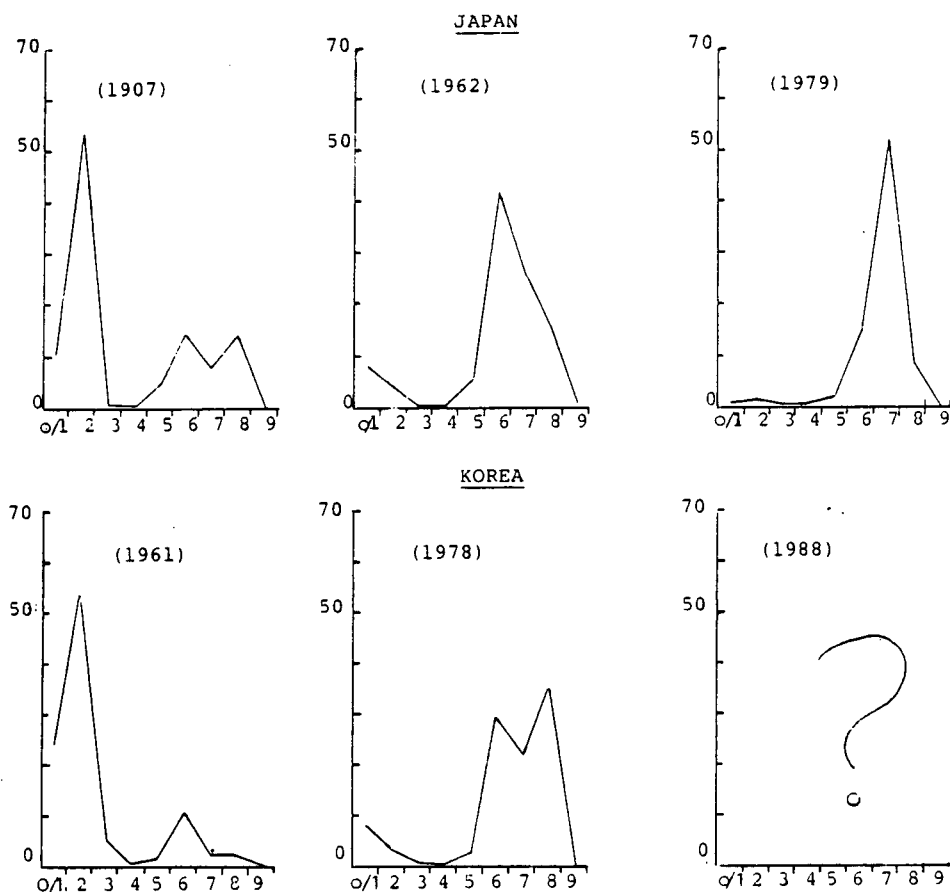


S.I.T.C. 1-Digit Categories, Key:

0	-	Processed Foods	5	-	Chemicals
1	-	Beverages & Tobacco Manufactures	6	-	Manufactures Classed by Materials (includes Textiles)
2	-	Selected Processed Materials	7	-	Machinery & Transport Equipment
3	-	Coal & Petroleum Products	8	-	Miscellaneous Manufactured Articles
4	-	Fats and Oils	9	-	Other Trade

Source: Compiled from data in Suzuki, N., (ed.) NIRA Output NRC-78-22: Ajia Shokoku no Kyusokuna Kogyoko to Waga Kuni no Taio. (Sogo Kenkyu Kaihatsu Kiko, Tokyo, 1980) pp 53-113.

Figure 3 - Changes in Japanese and Korean 1-digit S.I.T.C. Export Profiles



S.I.T.C. 1-Digit Categories, Key:

0 -	Processed Foods	5 -	Chemicals
1 -	Beverages & Tobacco Manufactures	6 -	Manufactures Classed by Materials (includes Textiles)
2 -	Selected Processed Materials	7 -	Machinery & Transport Equipment
3 -	Coal & Petroleum Products	8 -	Miscellaneous Manufactured Articles
4 -	Fats and Oils	9 -	Other Trade

Source: Compiled from data in U.N. Yearbook of International Trade Statistics (U.N., New York, various years) except for 1907 Japanese data which was estimated from data in; Nabeta, Mitsuo Sen'i Gyokai (Kyoikusha, Tokyo, 1979) p 18

the Asian NICs. As that figure shows, for the case of Korea and Japan, changes in the Asian NIC's patterns of exports parallel those that Japan has undergone but are taking place much more rapidly. As a result, the Asian NICs export profiles are "catching up" with those of Japan and are placing those countries into an increasingly competitive relation to Japanese producers.

Of course, at a slightly finer level of aggregation, it is evident that the sub-categories in which Japan and the Asian NICs have the greatest concentration of exports are often distinctly different. In some sectors such as textiles however, there is a clear association between increasing Asian NIC competitive strength and a decline, not just in the relative export performance but in the absolute size of the Japanese sector. This was most dramatically brought home in the textiles sector in 1972-1973 when, in the wake of the first oil crisis, there was a sudden large increase in the volume of Japanese textile imports. In the space of one year, textile imports increased more than three-fold and, as a result, the Japanese producer's index of inventories soared to an average of 171 (1970=100) in 1974-1975. The major source for these imports was the Asian NICs and, in particular, South Korea and Taiwan.⁴⁷

Even within the machinery industries there is concern regarding the growing capabilities of the Asian NICs. A recent

⁴⁷ See M. Shinohara, The Japanese Economy and Southeast Asia, p50. I.D.E. Occasional Papers No. 15. (Institute of Developing Economies, Tokyo, 1977).

survey of sixty-five representative Japanese machinery manufacturers with operations in other Asian countries examined the present and prospective competitiveness of the local industries vis-a-vis Japanese manufacturers. The survey results revealed a wide range of products in which the Asian NICs had either already reached a competitive capability or would soon do so (see Table 7.).

This point of view is not recent and, fueled primarily by experiences in the textile industries, has had currency since the late 1960's. It has, moreover, not lacked for support in the popular press or in business and economic journals. A variant of this concern that the Asian NICs are catching up with Japan (or, "oiage-ron") focuses on the possibility that Japanese technology transfers, primarily via foreign direct investment (FDI), will have a "boomerang-effect"; with offshore production for the Japanese market wreaking havoc on purely domestic producers and on those regions of Japan in which the relevant domestic industries are located. A more recent refinement of this idea focuses less on the direct impact on the domestic market of such FDI and more on the impact in the third country markets of the domestic Japanese industry.⁴⁸

⁴⁸ See Shinohara, , op. cit. pp 50-51.

Table 7 - Machinery Products in Which Asian NIC's
Technological Competence Provides a Present or Prospective
Competitive Strength

Product Type	Country			
	Singapore	Hong Kong	Taiwan	Korea
Washing Machines	2	3	4	4
Refrigerators	3	3	3	4
Lighting Equipment	2	3	4	4
Radio Receivers	3	4	4	4
Television Receivers	3	3	4	4
Resistors • Condensers	2	2	3	3
Semi-conductors	2	3	3	3
Batteries	4	-	3	4
Automobiles	1	1	1	3
Buses • Trucks	1	1	2	3
Auto Parts	1	1	2	3
Motorcycles	-	-	3	-
Bicycles	-	-	3	3
Locomotive Wheelsets	1	1	3	3
Shipbuilding	3	2	3	3
Cameras	2	3	3	2
Valves	2	1	3	3
Tanks	2	3	3	3
Pumps	2	2	2	3
Water Purification Equip.	3	3	3	3
Agricultural Machinery	2	1	3	3
Textile Equipment	1	1	2	3
Desktop Calculators	3	3	3	3
Electronic Resistors	1	2	2	3
Electric Power Meters	-	-	3	3
Generators	1	1	2	3
Electric Motors	2	4	3	3
Transformers	2	1	3	3

Key: 1 = 10 years or more, 2 = 5-10 years, 3 = within 5 years,

4 = Today

Source: Excerpted from survey data on 65
Japanese companies in Asu no Raibaru
(Nikkei Shinbunsha, Tokyo, 1978)

1.3.2 Collaboration

At the other extreme is the view that the industrial development of the Asian NICs has extremely important positive implications for Japan. The formal emergence of this view is more recent than is that of the "oiage-ron" but it is of growing influence especially within the federal government and technocracy.⁴⁹

To begin with, the very fact that Japan has a large and growing positive balance of trade with the Asian NICs makes it difficult to argue that their industrialization has not been, in the aggregate, beneficial to Japan. Moreover, even within sectors that have, in the aggregate, suffered from Asian NIC competition, there is a growing complementarity between Japan and the Asian NICs -as evidenced in the growth of intra-industry trade. Thus, within the textiles sector, Japanese imports of silk and silk textiles, cotton textiles and clothing are accompanied by Japanese exports to the Asian NICs of artificial textile fibres and textiles, thread and yarn, and industrial textile products.

Others, more dramatically, argue that the industrialization of the Asian NICs presents an opportunity for Japan to become the central member of a vital regional economic community. The de facto development of such an integrated economic community

⁴⁹ Two recent studies whose findings support this view are the previously referenced, NIRA OUTPUT and a study by a JETRO research group, T. Watanabe (ed.), Ajia Kogyoka no Shinjidai (JETRO, Tokyo, 1979).

would, it is hoped, provide for Japan (and the other members) some of the stability and regional efficiency which is sought, for example, by the European industrialized countries within the European Economic Community.⁵⁰

1.3.3 Differing Perspectives

These two opposing views of Asian NIC industrialization are due in large measure to a difference in perspective. On the one hand, from the macro-economic perspective, it seems clear that Asian NIC industrialization has benefitted the Japanese economy and that the main direction of structural change in Japan-Asian NIC economic relations is towards an increasingly important and mutually beneficial complementarity. At the same time, at a more micro-level of analysis, it is equally clear that industrialization in the Asian NICs has been associated with decline in specific sub-sectors of Japanese industry and with considerable regional social disruption in Japan.

Thus, the situation in Japan is similar to that noted earlier for OECD countries in general. The impact of LDC industrialization is, in the aggregate, favourable but poses some problems of adjustment in specific sectors.

⁵⁰ See, Toshio Watanabe, Ajia Chushinkoku no Chosen Nikkei Shinsho, (Nihon Keizai Shinbunsha, Tokyo, 1979).

2. THE IDENTIFIED INDUSTRIES IN PERSPECTIVE

As the investigation has come to focus on a selected set of S.M.E.I., it would be well to put them into a broader perspective. This is done by, first, describing briefly the role of S.M.E. in the Japanese economy and, second, by outlining some features of a particular type of industrial organization which appears to be more prevalent in the identified set of S.M.E.I. than it is among S.M.E.I. in general.

2.1 The Role Of Small- And Medium-sized Enterprises In The Japanese Economy

2.1.1 Definitions

Small- and medium-sized enterprises (SME) are officially defined in a number of ways in Japan. The fundamental definition is that given in the Basic Law for Small- and Medium-sized Enterprises (Chushokigyo Kihonho) and is based jointly on the number of employees and on the capitalization of the enterprise.⁵¹ By that definition, S.M.E. are defined variously for the wholesale, retail and service , and manufacturing sectors as follows;

- i. Manufacturing sector: 300 or fewer employees and capitalization of one-hundred million yen or less.
- ii. Retail Trade and Service sectors: 50 or fewer

⁵¹ This, and other legislation regarding business, can be found in the annual publication, Tsusho Rokuho (M.I.T.I., Tokyo).

employees and capital of 30 million yen or less.

- iii. Wholesale Trade sector: 100 or fewer employees and capital of 10 million yen or less.

There are, however, many other pieces of legislation dealing with SME and some of these laws are applied in accordance with different figures for the two criteria of maximum employment and capitalization while others, in addition, are restricted to specific industries that have been designated by the government for the purposes of the legislation. Practically all of these alternative official definitions apply a more liberal interpretation of SME and have the effect, for the purposes of the specific legislation, of broadening the coverage of the term "SME".⁵²

The "enterprise" in SME refers to any legally distinct economic entity whether a company, partnership or proprietorship. The fundamental unit for purposes of government statistics is, however, the "establishment" (Jigyosho), or place of business, and a given enterprise may consist of more than one establishment. This disparity between the official statistical unit and the official legal and policy unit often complicates efforts to examine the role of SME, as officially defined, in the Japanese economy.

The two major problems presented by most official statistical sources are; 1. The data are presented for

⁵² A table outlining the relevant criteria for SME for purposes of various legislation is given on page four of Chushokigyo Seisaku no Gaiyo (SMEA, June, 1980).

establishments and not aggregated for enterprise-level analysis and, 2. The data are disaggregated by number of employees or by capitalization level but not jointly for both of these. These factors both confound efforts to describe statistically the position of SME within the Japanese economy.

In practice, the concerned government agencies themselves often rely in their own publications on data for establishments and employ only one of the two definitional criteria, usually the employment criterion, in selecting descriptive statistical aggregations. This approach is also adopted here.⁵³

2.1.2 Description

Manufacturing establishments employing 300 or fewer employees account for slightly more than 99% of all manufacturing establishments in Japan and this figure has been stable between 1969 and 1978. The weight of such establishments in total manufacturing employment is lower but still substantial and has increased from 69% in 1969 to 73% in 1978.

Productivity and wage levels are relatively low and, in 1977, were respectively 51% and 58% of the figures for larger establishments. While their relative productivity has increased slightly (from 49% in 1967), their relative wage levels have dropped quite sharply (from 63% in 1967).

SME are relatively more important in Japan than in the other OECD countries, as the comparisons between Japan, U.S.A.,

⁵³ Except where otherwise noted, the figures in the following section are drawn from data in SMEA op. cit. pp 4-12 in passim.

West Germany, U.K., and France given in Table 8 indicate. The weight of SME in the total number of establishment is high in all five of the countries but highest in Japan. The share of Japanese SME in total manufacturing employment is, at 71.9%, much higher than in the other countries and is approached only by the 67.6% figure for France.

With respect to value added, the Japanese SME are even more outstanding and account for a far higher proportion (56.6%) of total value added in the manufacturing sector and a far lower level of productivity relative to larger enterprises (51.3%) than in any of the other four OECD countries (the corresponding four-country averages are, respectively, 27.1% and 75.9%).

2.2 Sanchi And Jiba Sangyo

2.2.1 Introduction

Preliminary examination of the identified set of S.M.E.I. revealed a tendency for production to be highly concentrated in a small number of narrow geographic regions and, in many cases, for the industry as a whole to be a relatively dominant force in the regional industrial economy. As expected, for a set of S.M.E.I., these industries are composed of many small- and medium-sized firms rather than one, or a few, large firms.

These characteristics correspond quite closely to those of a distinct category of Japanese industrial organization termed, "sanchi" (production region) or "jiba sangyo" (community-based industry) and, in fact, almost all of the identified product/industries are generally considered to be of this type;

Table 8 - A Comparison of the Role of Small- and Medium-sized Firms in Some Major O.E.C.D. Countries

INDICATOR	COUNTRY				
	JAPAN	U.S.A.	W. GERMANY	U.K.	FRANCE
Number of Industrial Establishments ('000) Share ^a (%)	711 (99.5)	299 (95.6)	410 (98.3)	88 (84.7)	326 (98.8)
Number of Industrial Employees ('000) Share ^a (%)	7802 (71.7)	7702 (42.7)	3819 (37.0)	1558 (21.9)	1403 (67.6)
Industrial Value Added Share ^a (%)	(100 Billion Yen) 2969 (56.6)	(100 Million Dollars) 1304 (36.8)	(100 Million D.M.) 726 (31.7)	(Million Pounds) 5635 (18.2)	(100 Million Franc) 1357 (21.7) ^b
Productivity (Value Added per Employee) (Larger Firms=100)	51.3	78.3	79.1	79.2	66.9
Date	1977	1972	1970	1975	1975
Maximum No. of Employees in S.M.E.	299	249	199	199	199

Note: a) Share is the percentage of the respective national total.

b) Sales

Source: Chushokigyo Seisaku no Gaiyo
(Small and Medium-sized Enterprise Agency,
Tokyo, June, 1980)

though those based in urban areas such as Tokyo and Osaka obviously do not dominate their local economies to the degree of those based in rural areas.

There is no reason to believe that, in general outline, this form of industrial organization is uniquely Japanese. Some Japanese observers consider them analogous to such well-known foreign examples as the cutlery industries of Sheffield, in the U.K., and Solingen, in Germany. There are, in fact, a number of European regional industries that share their basic features with the Japanese sanchi. Nevertheless, the form may be more common in Japan and, in any case, is very common in the identified set of S.M.E.I. For this reason some separate discussion of sanchi provides useful background to consideration of the adjustment issue.

The terms, "jiba sangyo" and "sanchi" are ill-defined even in their Japanese usage and are often used interchangeably. An examination of the actual usage of these terms by Japanese writers on the topic suggests that they might be most usefully distinguished in terms of the mode of production within the industry. Writers on jiba sangyo, when they deal with this aspect, almost invariably emphasize a "social division of labour" (shakai-teki bungyo) wherein the production process is finely disaggregated into distinct processes corresponding to separate "sub-industries" comprised of distinct types of firms, often quite small in size, and specialized in only one or a few of the stages of production.

The polar opposite to this pattern would be exemplified by

the case where all or most of the production processes are carried out within a single establishment. Seen in this light, then, "sanchi" can be taken as a broader term referring to geographically concentrated (and, often, regionally dominant) industries dominated by S.M.E.I., with the narrower term "jiba sangyo" reserved for those sanchi which display a highly differentiated set of production processes carried out by various, specialized, establishments diffused throughout the community.⁵⁴ Figure 4 indicates the names, products, and locations of some representative Japanese sanchi.

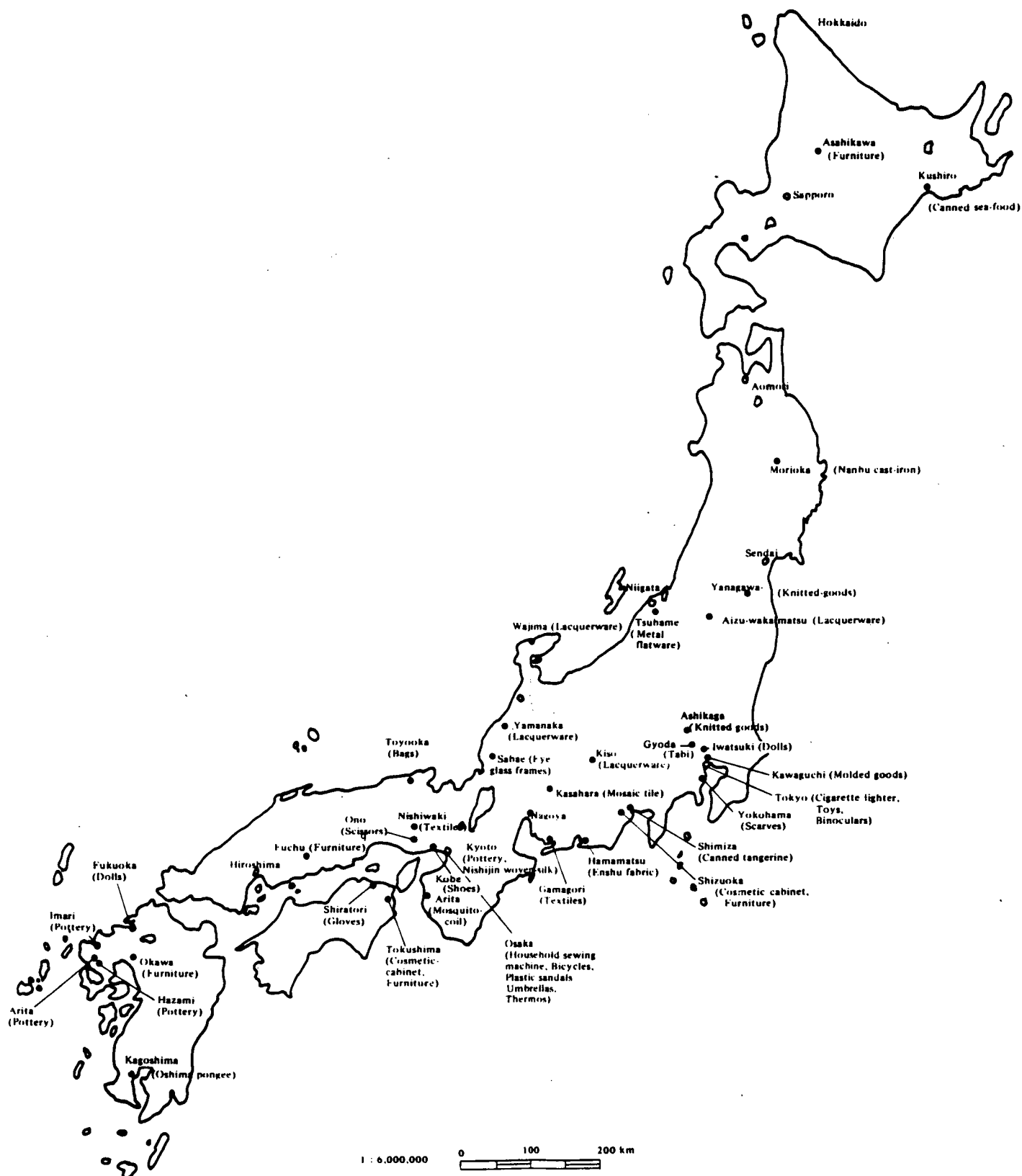
3. GOVERNMENT POLICY AND INTERVENTION

The Japanese government does not have a single coherent set of institutions and policy-based interventions aimed at the problem of adjustment in industries facing LDC competition. There are, however, a set of institutions and more generally formulated policies which serve to provide adjustment assistance to affected industries. These institutions and policies are outlined in some detail in Appendix A. Here, a summary of their main characteristics is presented.

The characteristics of the identified industries indicates that the affected industries are primarily those dominated by small- and medium-sized enterprises and the relevant institutions and policies are, therefore, largely those associated with the Small- and Medium-Sized Enterprise Agency

⁵⁴ It should be noted that these definitional distinctions are mine. They would not be universally accepted (or rejected) by Japanese scholars.

Figure 4 - Map Showing Names, Products, and Locations for
Some Japanese Sanchi



Source: Yamazaki, Mitsuru

Japan's Community-based Industries:
A Case Study of Small Industry

(Asian Productivity Organization, Tokyo, 1980).

(SMEA), or "Chushokigyo-cho", an agency of the Ministry of International Trade and Industry (MITI), or "Tsushosangyo-sho". In reflection of the importance attached to SME in Japan, there is an extensive and intricate network of SME-oriented institutions running from the federal bureaucracy down to the grass-roots level. The institutions can be roughly divided into financial, organizational, and consultative/deliberative bodies.

The "Big Three" ("San Kikan") of the SME-oriented financial institutions are, in terms of capitalization and loans outstanding, as large as if not larger than the biggest of the Japanese commercial banks. They provide, in the aggregate, the full range of financial services to SME; ranging from the provision of credit guarantees and insurance to financial, managerial, and technical consultation and the provision of venture capital through equity investment.

The organizational institutions promote the formation and effective operation of cooperative and industry associations among SME and provide educational, research, and promotional services to member firms; as well as providing fora for government-business consultation and interaction that extend down to the local, grass-roots level. In addition, there are a number of deliberative/consultative councils that are concerned with monitoring and recommending policy with respect to various small- and medium-sized enterprise dominated industries (SMEI).

The policies most relevant to the adjustment problem are;

1. The SME Modernization and Advancement Policy,
2. The SME Change of Business Policy, and,
3. The Depressed Regional Industry Policy.

The policies generally employ a similar set of policy instruments (loans, guarantees, tax provisions, grants, etc.) but differ considerably in terms of their eligibility requirements and in the basic policy unit (industry, region, individual firm, etc.) to which they apply. All applicants must be in a government-designated set of eligible industries and, in some cases, must also be based in designated regions of the country as well. Some programmes require industry-wide agreement on an adjustment programme while others are available to small groups of firms or to individual firms.

Overall, the programmes are characterized by; the formulation of specific adjustment plans by the applicant (not the government), review of proposals and administration of the programmes by bodies which incorporate local (third-party) business representatives, and an apparently detailed attention to the feasibility of proposed plans accomplishing appropriate objectives within a short (say, five year) period of time.

IV. A CASE STUDY OF ADJUSTMENT: THE TSUBAME FLATWARE INDUSTRY

1. BACKGROUND TO THE TSUBAME FLATWARE INDUSTRY

1.1 Niigata Prefecture

The longest river in Japan, the Shinanogawa, tumbles down the western slopes of the mountain range that separates the east and west coasts of Honshu and then meanders more placidly across a wide floodplain in central Niigata to empty into the sea near Niigata city, the capital of the prefecture. The train from Tokyo parallels the river for much of its course through the floodplain and the passing panorama of fertile rice fields, broken occasionally by small towns and villages, creates in the first-time visitor a sense of rural tranquillity which seems not five hours, but decades removed from the urban-industrial clamour of the Tokyo-Osaka industrial belt. Despite all the material comforts of modern rural life, people here, one can easily imagine, are living a style of life much closer to Japan's agrarian origins. A style of life, that is, in which the pace and rhythm of activity is determined largely by the seasons and the local weather and in which people have an insular focus upon their own, immediate, community.

There may be some slight truth to this romantic image, but it is terribly inadequate. This is after all, subsidized, not subsistence, agriculture and even the most insular of rice-farmers cannot help but have a keen interest in the levels at which the central government in Tokyo can be persuaded to support the price of rice and in the success of the central

authority's efforts to offload excess domestic production on the world market. Even more at odds with the romantic-pastoral image of Niigata are the pockets of industry dotted about the countryside in small towns and villages. There, the dependence on developments in foreign countries and the level of awareness of changes in foreign currency exchange rates may far exceed that of the majority of Japanese living in the more cosmopolitan atmosphere of Tokyo. In no place is this more true than in the small town of Tsubame which sits in the middle of the Shinanogawa "ricebowl" and is, incongruously, the world's largest single production centre for stainless steel knives, forks, and spoons.

1.2 Tsubame

Tsubame began as a river port on the Shinanogawa in the Kamakura era (1185-1333) and, together with the nearby town of Sanjo, prospered during the Ashikaga period (1392-1573) as a distribution centre for the surrounding region.⁵⁵ The area was subject to frequent flooding (it was, for example, inundated about once every three years between 1625 and 1875) and, despite the fundamentally good agricultural fertility of the area the farmers lived a precarious existence. Perhaps for that reason, when the surrounding province of Echigo (present-day Niigata)

⁵⁵ This and other historical material presented here is primarily drawn from; S. Ikeda (ed.) Niigata-ken no Kinzoku Kako Sangyo [limited ditribution] U.N.U. Document No. HSDRJE-51J/UNUP-356 (United Nations University, Tokyo, 1982); Kinzoku Yoshokki no Enkaku [mimeo] (Japan Metal Flatware Industry Association, Tsubame, undated); and on personal interviews in Tsubame in September, 1980.

came under the direct control of the Tokugawa shogunate, Tsubame was developed by the shogunate as a centre for Japanese-style (hand-forged) nail production providing supplementary employment for the local farming population. This came to support, as well, dozens of wholesale merchants and hundreds of artisans with a more singular commitment to the industry. From this foundation, the metalworking industry diversified into the production of copper vessels and smoking pipes, utilizing ore from a nearby mountain, and developed a cadre of artisans skilled in decorative techniques for ornamenting these articles. The production of nails, however, remained the dominant industry.

The Meiji Restoration and the subsequent inflow of western products had a severe and unrelenting impact on Tsubame. The inflow of machine-made (drawn) nails decimated the local industry and forced the survivors to try to shift production into such products as metal smoking pipes, metal writing brush cases and copper kitchen utensils. However, these products also suffered from the successive introduction from the west of; cigarette smoking, the fountain pen, and aluminum kitchenware. As a result, Tsubame experienced a long period of decline from its earlier position of relative prosperity. The cycle of decline and brief recovery through change to a new product was broken, ironically, only when Tsubame reversed the pattern and began production of a product of western origin.

In 1914, samples of table knives and forks from a Netherlands trading company were sent to Tsubame by an Osaka

trading company. It proved possible to duplicate them by means of traditional methods and tools such as the hammer, saw, and file. This led to exports in that year of 200 dozen units.⁵⁶ More modern methods employing metal rolling and plating techniques and mechanized stamping equipment were soon introduced and by 1921 some production had moved out of the households and into small factories. These, together with the wholesalers and cottage workers came to comprise the basic units of a complex industrial structure woven into the local economy. Development of the industry was aided in no small measure by the disruptions to western production occasioned by the First World War. The extension of the national railway to Tsubame in 1922 greatly facilitated the subsequent establishment of the region as an active supplier to the world market. Prewar production peaked in 1925 with shipments worth 3.5 million yen, of which 86% was exported. Production then steadily declined as men, materials, and equipment were increasingly diverted in support of Japan's war efforts.

Production of tableware ceased during World War Two but recovered rapidly in the postwar period with the initial impetus for recovery being provided by production to supply the army of occupation and, subsequently, the troops engaged in the Korean War. Around 1950, the industry switched from brass and chrome

⁵⁶ There are alternative accounts of the details of Tsubame's early development as a supplier of flatware (see, for example, Kamikojima's account on page 27 of, Ikeda, op. cit. . What seems certain, is that the initial initiative came from outside of Tsubame.

steel to stainless steel as the basic raw material. Despite some initial problems with quality control, the Japanese steel industry was soon able to provide stainless steel of suitable quality and the industry began a period of rapid expansion focussed primarily on the U.S.A. market. This led to the imposition of quotas for the U.S.A. market for stainless steel flatware in 1957. While this led some producers to make strategic changes (some, for example, moved into the production of stainless steel housewares) most found that the rate of growth of the U.S.A. market provided them with sufficient opportunities there despite the existence of quotas. Their judgement appeared to be vindicated when the U.S.A. removed quotas in the latter half of the 1960's and ushered in a golden age of even greater prosperity for Tsubame.

By 1970, Japan held 69% of the U.S.A. import market and, in Tsubame (which accounted for more than 90% of Japanese production), around 80% of the workforce was involved in one way or another in the production of stainless steel cutlery. The industry was both more prosperous and pervasive than ever before.

All this was to change, in but a few years, through a series of developments so threatening as to raise some question as to whether this industry, like the nail industry before it, might be fated to wither away.

1.3 The Structure Of The Tsubame Stainless Steel Flatware Industry

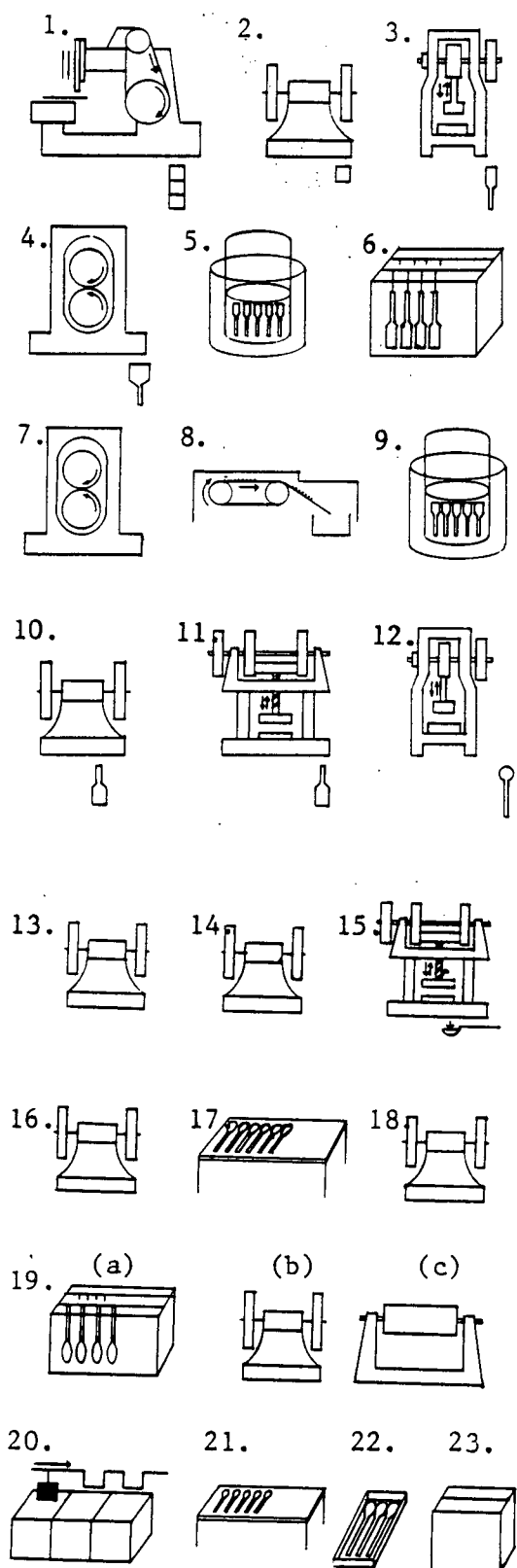
An understanding of the structure of the Tsubame flatware industry is important for an understanding of both Tsubame's prosperity and its subsequent problems. It is also important, however, as an example of a pattern of organization and development that is found in much of Japanese light industry; especially that centred in predominantly rural areas.

1.3.1 The Social Division Of Labour

The manufacture of even an apparently simple product can involve a number of distinct stages of production. As Figure 5 indicates, nearly two dozen steps can be involved in the production of a spoon. Depending on the type and quality of the flatware involved, as many as 42 production stages can be involved. The type of equipment employed can, within limits, affect the the total number of steps required. For example, the more powerful (and expensive) the forging equipment used; the cleaner is the result and the fewer the number of subsequently required finishing operations.

In Tsubame, such trade-offs have generally been resolved in favour of smaller-scale equipment and more production stages. In concert with this, there has been an elaborate division of responsibility for the various production stages among firms in a variety of narrowly specialized "sub-industries" which are solely engaged in, for example; mold production, die casting, forging, electroplating, or polishing. Figure 6 illustrates the

Figure 5 - Production Stages for a Stainless Steel Spoon
(Tsubame, Japan)



1. Cutting out blanks.
2. Grinding blanks.
3. Cutting out rough shape.
4. Rolling out bowl material (rough).
5. Acid Bath cleansing.
6. Electrolytic polishing.
7. Rolling out bowl material (finish).
8. Heat treatment.
9. Acid Bath cleansing.
10. Rough shaping of handle.
11. Embossing of handle pattern.
12. Cutting bowl material to size.
13. Grinding bowl blank.
14. Polishing bowl blank.
15. Pressing out bowl of spoon.
16. Surface buffing.
17. Inspection.
18. Rough polishing.
19. Finish polishing:
 - a) Electrolytic polishing.
 - or b) Lathe polishing.
 - or c) Barrel polishing.
20. Cleansing
21. Hand polishing and final inspection.
22. Packaging.
23. Crating for export.

Source

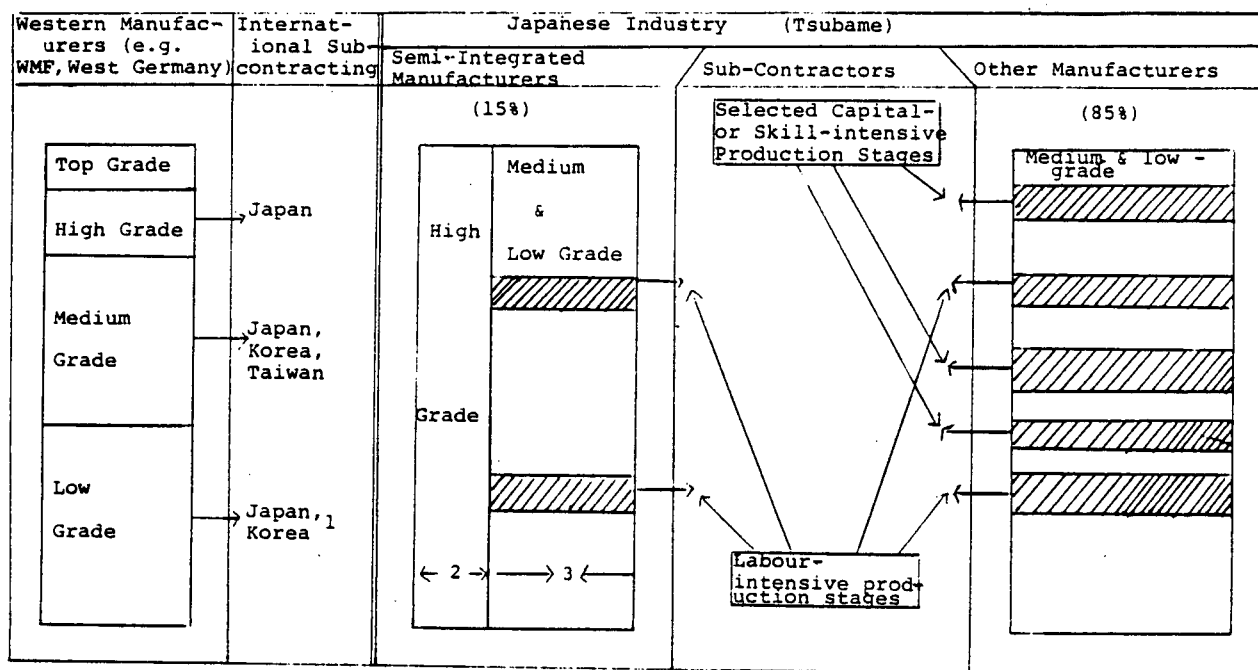
Ikeda (ed.) op. cit.

major sub-industries in Tsubame and their interrelationships. Figure 7 shows the major patterns of subcontracting both internationally and within Tsubame. The downstream distribution and marketing capability of the industry is minimal and only rarely extends beyond local wholesalers and Japanese trading companies based in Tokyo, Osaka, and Nagoya.

A crucial strategic role is played by a subset of firms which act as the interface between the Tsubame industry and the downstream wholesalers, trading companies and foreign buyers. While some of these central firms rely on both internal production and subcontractors, others depend almost entirely upon subcontractors for production. The success of these central firms, and especially those of the latter type, depends upon their contacts, information, and coordinating skills and requires not only an intimate knowledge of Tsubame's industrial structure but also a degree of familiarity with downstream sales channels. There is a high degree of competition among firms in all sub-industries but these central, coordinating, firms compete not only for downstream customers but also for the services of upstream subcontractors. As an example, one central firm studied by Kamikojima⁵⁷ reported that the production of a medium-grade spoon involved in-house involvement in stages 1. 3. 4. 11. 12. 15, 20, 21, and 23 (see preceding figure); with the remaining stages being let out to various subcontractors.

⁵⁷ S. Ikeda (ed.) , op. cit. p. 46

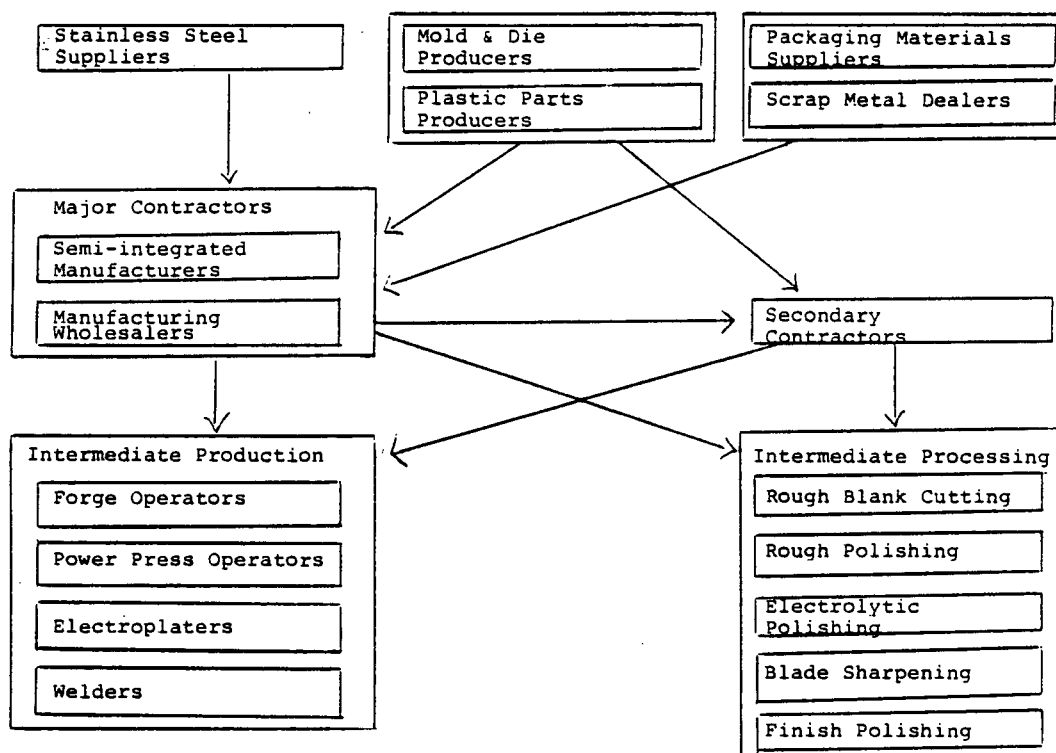
Figure 6 - Patterns of Subcontracting; Internationally and in Tsubame



1. Japan for low volume, high variety lines and Korea for high volume, low variety lines.
2. Expanding.
3. Declining.

Source: Interviews, Japan Metal Flatware Industry Association; September 1980

Figure 7 - Participants and Patterns of Production in the
Tsubame Flatware Industry



Source: Adapted from Kinzoku Yoshokki no Enkaku
[undated, mimeo.] (Japan Metal Flatware Association, Tsubame)

Differences among the various sub-industries are not confined to their different roles and strategic importance; they differ also in the scale of their operations and the nature of their participants. In particular, the more labour-intensive operations, such as polishing, are dominated by very small-scale cottage industry in and around Tsubame.

Thus, while the average scale of operations (1978) in the stainless steel flatware industry, per se, is only 9.8 persons per establishment this is, nevertheless, more than four times the average scale in the metal polishing sub-industry (2.3 persons per establishment); in which more than 70% of establishments are operated by individuals and family workers. These petty cottage-based family firms are predominantly operated by members of the surrounding farming community, which also provides much of the labour for the larger factories. Between 1955 and 1965, there was a diffusion of simple industrial operations out into the countryside. This typically involved the purchase of some small-scale equipment and machinery, sometimes financed by the sale of a portion of the family farm. In this way, the surrounding agricultural community has provided, not only a supply of low-cost labour, but has also made a significant increment to the capital stock of the industry.

While the interdependence among sub-industries is great, it did not lead to the formation of permanent consortia or to corporate groups spanning the various production stages. Relationships between upstream and downstream firms within the

industry are, rather, extremely fluid. This is due in no small measure to the activities of the production coordination sub-industry discussed earlier. These firms, and especially those engaged in little or no direct production themselves, both make possible and depend upon a complex web of independent and highly competitive sub-industries and firms.

1.3.2 Product Variety, Design, And Distribution

While there is some functional variety between various types of knife, fork, and spoon (e.g., soup spoons, teaspoons sugar spoons, baby spoons, etc.); there is a far greater variety in the quality and styles of each of these. The industry association operates a program for members to register flatware designs and in 1980 there were around 13,000 distinct designs registered.⁵⁸ Actual variety in style is, of course, even greater. By way of example, one local wholesaler/production coordinator handles a total of 4,000 items with a staff of 36 people and is actively involved in distributing around 750 of these items at any one time.⁵⁹ Quality variety is also considerable and reflects, among other things, differences in the quality of steel used.

Up until the latter half of the 1960's, the Tsubame industry received specifications of quality, design and target price almost exclusively from 100 or so small export trading

⁵⁸ Interview, September, 1980.

⁵⁹ Ikeda, op. cit., p. 56; These totals probably include some stainless steel hollow-wares (pots, bowls, etc.) in addition to flatware.

companies based in Tokyo, Nagoya, and Osaka which acted as liason for foreign buyers. The local sanchi-based wholesaler/coordinators were primarily involved in forwarding and expediting orders for these exporters and in servicing the small domestic market through urban-based wholesalers.

Rapid growth and increased penetration of foreign markets induced some changes during the 1960's. In particular, the industry came to the attention of wholesalers based in foreign markets who increasingly looked to Japan as a source of supply and sought to establish more direct ties with the producers. Ultimately, foreign manufacturers such as WMF, in Germany, and Oneida, in the U.S.A., turned to Tsubame as a supplier of (medium- and higher-grade) items in the lower price range of their product lines. In the case of European countries, the insertion of Japanese-made items into the product line was particularly easy for the local manufacturers because of the absence of any "country-of-origin" labelling requirements.

This could have been an opportunity for the Tsubame industry to shorten its distribution channels to the major overseas markets and for some of the firms in the industry to establish a corporate identity within those markets. This, in turn, could have been expected to lead to a rationalization of the industry. By and large, this did not happen. Certainly, by the end of the 1960's, Tsubame was producing a wider quality range; running from the utility-grades found in factory lunchrooms and schools, to the lower reaches of the premium quality products of the famous western manufacturers.

Practically all of this production was, however, marketed under the brand names of western producers and distributors or as unbranded, utility-grade, product. Thus, while surpassing the traditional western industries in quantitative terms⁶⁰ (and, increasingly, matching their quality as well); Tsubame, let alone its manufacturers, remained unknown to the final users of its product.

Thus, Tsubame entered the 1970's as a much larger industry but with a structure of production and distribution that was little changed from that of the early 1960's. A major reason for this lack of change was the impact of the quotas imposed with respect to the overwhelmingly dominant U.S.A. export market.

1.3.3 Quotas And Tsubame's Industrial Structure

By 1956, Tsubame's exports to the U.S.A. amounted to just under 6 million dozen stainless steel knives, forks, and spoons. The U.S.A. industry was thrown into a state of near panic by the inundation of their home market by Japanese producers and lobbied vigourously for protection. The Japanese Foreign Office and MITI took an intense interest in these protests because of the fear that U.S.A. imposition of import restraints would set a precedent for other and more nationally crucial Japanese exports to that market.

⁶⁰ Chusho Kigyo Kinyu Geppo, op. cit. (1979, 1-6) claims the following 1979 production capacities, in million dozen; U.S.A., 12.0; West Germany, 2.5; Japan, 75.0; Korea, 37.1; and Taiwan, 13.6.

In 1957, in an effort to forestall U.S.A. action, an export adjustment cooperative was formed under the provisions of the Export-Import Trading Law⁶¹ and this evolved in the following year into the industry association which persists today. Under the direction of MITI it was decided to establish a self-imposed quota system with respect to the U.S.A. market. While MITI's initial impulse was to establish a simple system of production quotas for the U.S.A. market, it had not reckoned on the structural complexity of Tsubame's production and distribution systems. As previously indicated, the structure was, and is, complex.

Let, for the present, those firms whose production activities encompass, among other things, the final packaging of the product be termed "manufacturers"; and consider all other firms involved in the actual production process as "subcontractors". A similar dichotomy can be formed on the distribution side to distinguish between "wholesalers", who are involved in moving orders into and product out of the sanchi, and "exporters", who manage the actual sale and shipment of the product to the U.S.A. market.

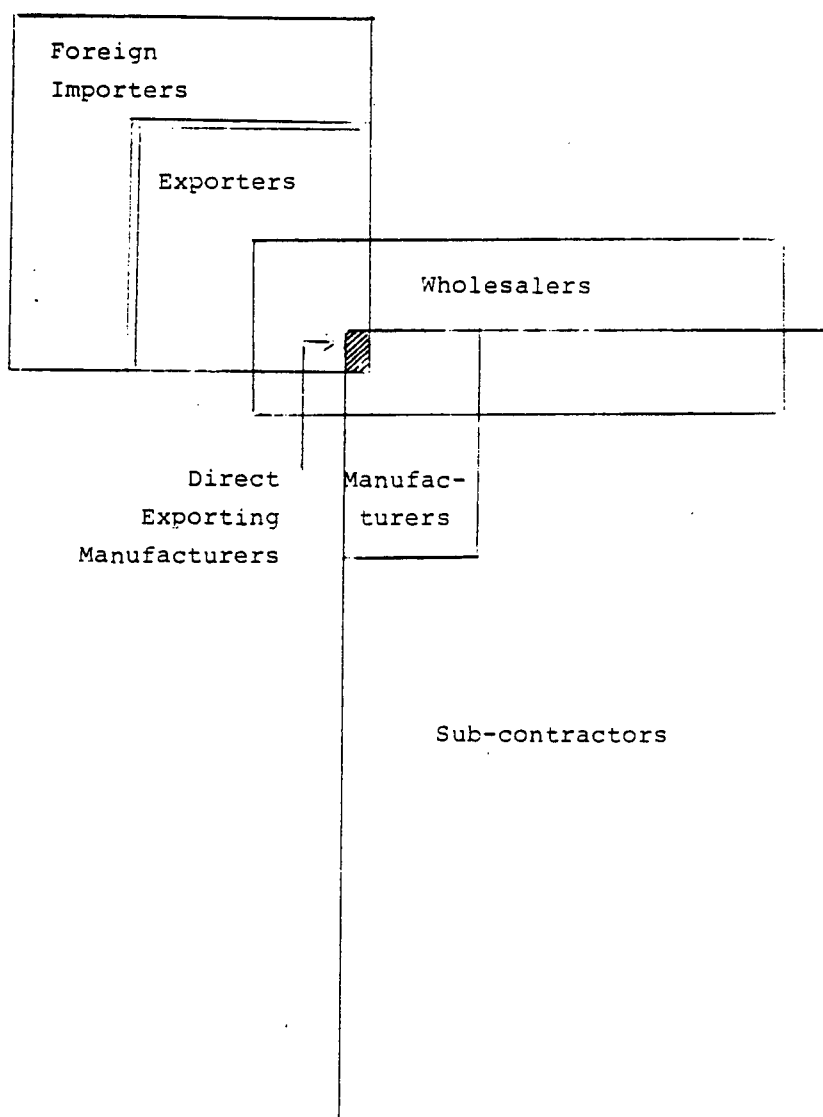
At the time of establishment of the quota system there were some subcontractors who were, in fact, larger than the manufacturers they dealt with. Moreover, among the manufacturers, there were some who disposed of their output locally, to wholesalers, as well as others who shipped their

⁶¹ Yushutsunyu Torihiki-ho; Section 3, Article 5: see, Tsusho Rokuho (MITI, Tokyo, 1980) p 127.

output to exporters in port cities. Some few of the manufacturers apparently even engaged in a limited amount of direct exports to buyers in the U.S.A. market. So too, on the distribution side, some acted simply as pure wholesalers and intermediated between manufacturers (or subcontractors) and the exporters in port cities, while others also engaged in direct export activities from a base within the sanchi. In addition, there were urban-based firms who were pure exporters, totally specialized in export trading, and with no direct involvement in Tsubame, itself. Figure 8 illustrates graphically some of this variety. It is particularly notable that there were very few firms that integrated their activities across the entire spectrum from manufacturing to distribution to exporting.

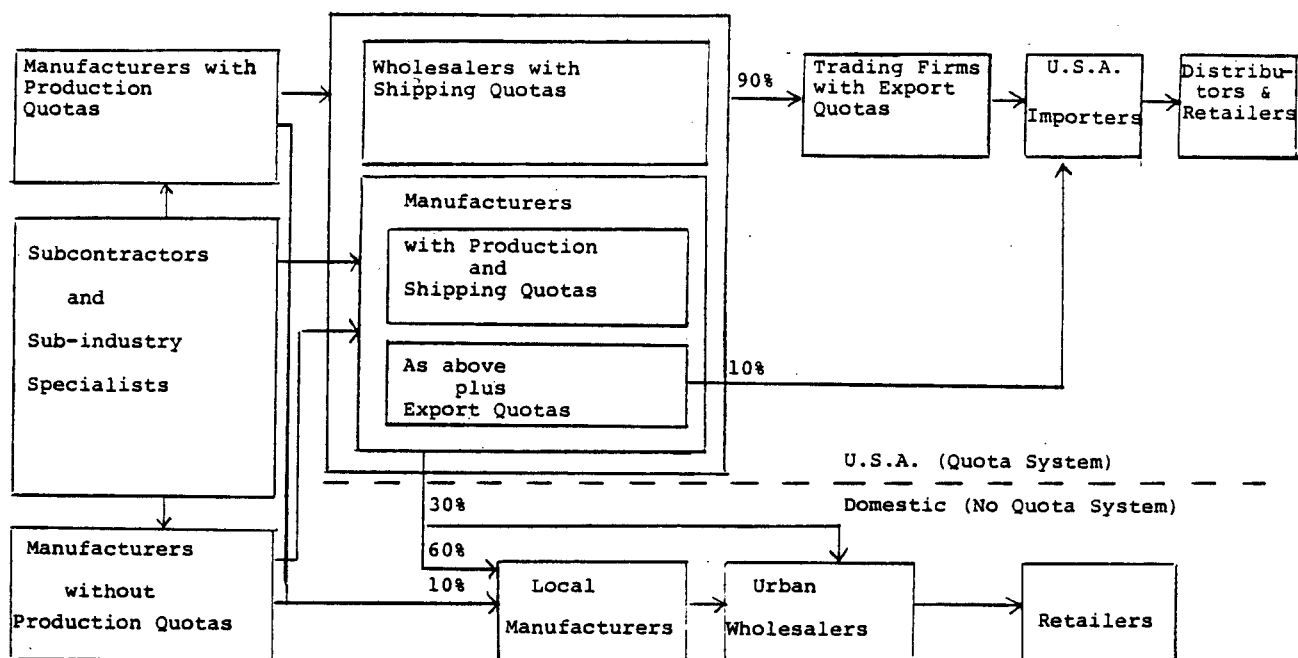
Thus, the imposition of a system that vested quotas solely in the "manufacturers" would create a tremendous shift in relative power and prosperity. Moreover, it would not reflect participants' relative contributions to the previous development of the existing export market. Clearly, any system that was to equitably meet the demands of the majority of existing participants in the U.S.A. market would have to reflect their variety. In the event, three parallel quota systems were established; one each for production, shipping (wholesaling), and exporting. The general functioning of these systems is indicated in Figure 9. As the diagram indicates, however many firms were involved, the product needed to pick up along the way a full complement of production, shipping, and export entitlements.

Figure 8 - Variety in Participants' Functional Scope;
Tsubame



Source: Compiled by author on basis of interviews at Tsubame in September 1980.

Figure 9 - Product Distribution Under a Quota System:
Tsubame



Note: Percentages indicate relative volume of total for export and for domestic sales.

Sources: The pattern of distribution is derived from industry association material. The percentage figures are estimates based on the various (and sometimes conflicting) studies referenced in the text.

The initial level of quotas set in 1957 within the Japanese industry was 5.9 million dozen. Despite this self-imposed export quota system, the U.S.A. did impose import quotas in 1959 which, except for the years from 1966 to 1971 inclusive, lasted until 1975. The quotas set by foreign countries, and revised from time to time, then set the standard to which the domestic Japanese quota system was coordinated.⁶² The U.S.A. quota system applied to low-priced tableware and was sanctioned by a 40% surcharge to normal duties on all imports above the quota maximum (a "tariff-quota").

The Japanese quota system, which was modelled on the pre-existing structures of production and distribution, continued to be the system of direct relevance for the industry. At the same time, however, it served to freeze these structures into place and to inhibit any fundamental reorganization of the industry.

1.3.4 Summary

Tsubame's industrial development is a good example of the development of rural industry in response to an underemployed agricultural workforce. In the modern era, the Japanese network of small-scale trading companies enabled Tsubame to vastly expand its potential by providing a link with foreign markets. In this way, Tsubame was able to be successful in a product and in markets in which it would otherwise have never been involved.

⁶² Following the U.S.A., quotas were imposed by many other Western countries including; Canada, France, Italy, the U.K., the Benelux countries, Norway, West Germany, Denmark, and Greece. (Japan Metal Flatware Industry Association, undated mimeo.).

The highly disaggregated production system evolved from a tradition of small-scale cottage industry but has undoubtedly been supported in the postwar period by the national government's support of rice prices. This has served to maintain a population of under-employed petty farmers which contribute low-cost labour and small-scale capital to the Tsubame flatware industry.

This production system brought with it certain advantages. It facilitated the utilization of low-cost labour which was partially employed in agriculture and, in later years, was able to attract petty capital investment from that same group. With respect to the stainless steel flatware industry, itself, the system displayed a high degree of resiliency in reacting to variations in business conditions and flexibility in coping with wide variations in the lot size of orders. This latter flexibility was due in large measure to the presence of a large number of firms involved explicitly in coordinating the various parts of the production system and to the large number of petty participants who were only partially dependent on the industry.

Thus, the system of disaggregated production and distribution systems was not without considerable strengths; to which Tsubame's postwar success attests. Nevertheless, the system might have been expected to undergo considerable change in the face of the growth and opportunities presented to the industry in the 1960's. The fact that it did not is largely attributable to the imposition of quota systems in the late 1950's which had the effect of institutionalizing the structural

status quo. The successes of the 1960's suggest that these pre-existing structures were, by and large, able to cope with unprecedented growth opportunities. It was less evident that they could cope with the environmental changes the industry came to face in the 1970's.

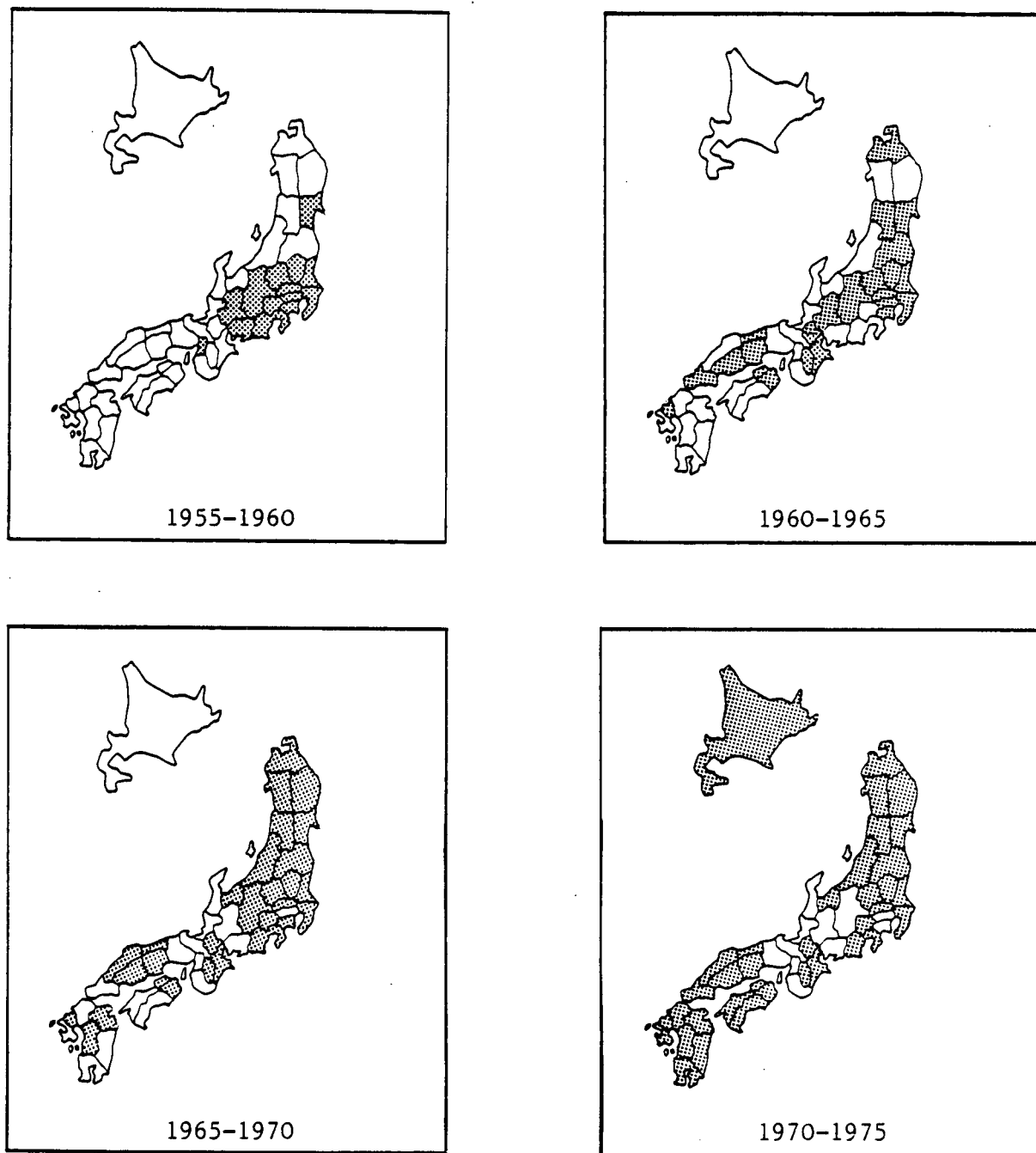
2. ENVIRONMENTAL CHANGE AND THE ADVENT OF ASIAN NIC COMPETITION

In the 1970's, a number of domestic and international environmental changes, together with the advent of formidable competition from the Asian NICs, threatened the prosperity, if not the continued existence, of the Tsubame flatware industry.

2.1 Environmental Change

In postwar Japan, initial industrialization was concentrated in the pre-existing industrial heartland, but there has been a steady diffusion of industrial activity out into the rural hinterland (see Figure 10). More recently, a high-speed national highway and the new Joetsu Shinkansen "bullet train" make Tsubame an even more attractive industrial location. As a result, pre-existing pockets of rural industry, such as Tsubame, have faced increasing competition for labour from other industries which have moved into their regions. At the same time, the size of the underemployed agricultural workforce has shown a steady decrease and the average age of its remaining members has steadily risen. All this has tended to bid up the wage level for the flatware industry. The addition of other, new, industries in the rural areas may also have made local municipalities less dependent upon the traditional local

Figure 10 - Changing Regional Contributions to Japanese Industrialization



Note

The shaded areas represent regions (prefectures) which increased their share of the national industrial workforce in each period.

Source

Osono, et al, Chiho no Jidai to Kogyo no Saihaichi (Toyo Keizai Shinposha, Tokyo, 1980).

industry and, thus, less indulgent towards any external diseconomies they imposed upon the community. Certainly, in Tsubame, the industry faced steadily increasing labour costs and, in the latter half of the 1960's, strong pressures from government to move the noise, vibration, and traffic associated with production out of the central areas of the town.

For all their undoubted impact, these local environmental changes were less important than international environmental change. The industrialized countries, including Japan, undertook in the late 1960's to provide easier access to their markets for LDC manufactures. This resulted, the 1970's, in preferential rates of tariff which increased the already considerable price-competitiveness of LDC manufactures. For stainless steel flatware, the U.S.A. and the European Economic Community introduced such tariff preferences in 1972⁶³ and thus increased Japan's exposure to competition from the LDCs.

When the Nixon administration broke the link between the U.S.A. dollar and gold, pressure increased for an upward revaluation of the Japanese Yen; which had, hitherto, been pegged to a fixed exchange rate with the U.S.A. dollar (360 Japanese Yen per U.S. Dollar). In February, 1973, the Japanese government placed the Yen onto a floating exchange rate basis and the rate vis-a-vis the U.S.A. dollar (and most other currencies) rose considerably. This had the effect of further

⁶³ These were subject, however, to restrictive volume quotas so that the preferential tariffs applied only to 15% or so of total LDC exports of flatware to those markets.

increasing the relative price of Tsubame's output in the major export markets. The immediate impact of this was modulated somewhat by the U.S.A.'s re-imposition of import quotas in 1971. This was a country-based quota system with a global maximum and Japan was awarded 70% of the global amount. However, the ultimate impact of the increased relative price of the Japanese product, when the U.S.A. removed quotas in 1975, was all the more dramatic as new low-cost producers in the Asian NICs rapidly captured market share from the Japanese industry.

2.2 The Advent Of LDC Competition

Japan's share (by value) of the U.S.A. import market for stainless steel flatware fell, between 1970 and 1976, from 69% to 42%.⁶⁴ The vast majority of this loss of share was attributable to gains in share by the stainless steel flatware industries of Taiwan and, especially, South Korea. Table 9 presents some comparative data for the major firms in the flatware industries of Japan, Korea, and Taiwan. Of these industries, the most dynamic is that of South Korea, the low-cost producer.

Korean exports of flatware amounted to only \$430,000. in 1970 but rapidly rose in value to \$40 million in 1975, \$75 million in 1976, \$116 million in 1977, and \$127 million in 1978.⁶⁵ The Korean share in its major market, the U.S.A., showed

⁶⁴ Chiho Jisei Geppo (Ministry of Finance, Kanto Office; Tokyo, August 1978) p 11.

⁶⁵ Kankoku ni Okeru Kinzoku Yoshokki Sangyo [limited distribution] (JETRO, Tokyo, 1979) p 4.

Table 9 - Comparison of Major Firms in the Flatware Industries of Japan, Korea, and Taiwan; circa 1974-75

similarly rapid growth.

The Korean industry initially concentrated almost exclusively on producing low-grade (e.g., No. 13 Chrome steel) flatware sold in bulk. Within a short time, however, it was also competing in the market for higher grade (e.g., No. 18 and No. 18-8 steel)⁶⁶ flatware and boxed sets of flatware. It was highly dependent upon imports of stainless steel from Japan but has apparently reduced this dependence somewhat in the latter half of the 1970's with an increase in domestic procurement and a partial shift to other, lower-cost, foreign suppliers in West Germany and the U.K.⁶⁷

The Korean industry is distinguished from that in Japan by a smaller number of firms and a much larger average firm size. In 1978 there were a total of 50 firms and they employed an average of 116 employees per firm.⁶⁸ This is more than ten times the average size of firms in Tsubame; even if we ignore the large number of cottage-based metal-polishing firms which form such an important part of the industry there. As the preceding table indicated, the top seven Korean firms are even larger than this and have an average of 1,000 employees per firm. The Korean firms engage in little or no subcontracting and carry out production almost entirely in-house. The size of the firms also enables them to purchase stainless steel supplies directly from

⁶⁶ The numerical designations indicate the percentages of chromium and nickel in the steel. Thus, No. 18-8 steel contains 18% chromium and 8% nickel. The top-grade of flatware uses No. 18-8 or No. 18-10 steel.

⁶⁷ ibid. . pp 6-7.

⁶⁸ JETRO, Kankoku p 6.

the manufacturers⁶⁹ and they typically deal directly with foreign buyers.⁷⁰

Despite their vastly greater size, the Korean firms appear to utilize about the same equipment and technology as in Tsubame⁷¹ but do so via line production within the confines of a single firm. The "assembly-line" organization, centralized management, direct, large-volume, buying of raw materials, and relatively shorter channels of distribution to export markets may afford some advantages to Korean firms. Much more certainly, however, they have a distinct advantage in labour costs. One analysis indicates that, even after considerable post-1973 Korean wage inflation (and including the low-wage metal-polishing firms in the Japanese figures), the average wage in the Korean industry is only one-quarter of that in Tsubame.⁷²

Whatever the relative importance of the various sources of Korea's lower costs, the Korean producers exhibit a major price advantage in international markets. The preceding table indicated a cost advantage of around 15% but, by way of example, one Japanese industry representative has suggested that, for the identical product, the Korean article may be as much as 40% cheaper than the Japanese product and 85% cheaper than the West German product.⁷³

By the late 1970's, further wage inflation, and problems in

⁶⁹ Chushokigyo Kinyu Koko Geppo 1979, 1-6, p 39.

⁷⁰ JETRO, op. cit. pp 24-48.

⁷¹ "Kankoku no Oiage to Tsubame Sanchi no Taio" in, Chushokigyo Kinyu Koko Geppo 1979, 1-6 (Chushokigyo Kinyu Koko, Tokyo) p 39.

⁷² ibid. p 37.

⁷³ Kaigai Shijo 1980 No. 9, (JETRO, Tokyo) p 56.

meeting delivery schedules, had apparently eroded the Korean industry's competitiveness and some of its customers had reverted to Tsubame as a supplier.⁷⁴ Some participants in the Tsubame industry took this as a sign that the Korean industry had peaked and that the prospects for the continued viability of the Tsubame industry were thereby improved.⁷⁵ In fact, such optimism does not seem warranted. The Korean producers' difficulties in meeting delivery schedules were a reflection of orders overtaking their existing production capacities and this sort of problem is relatively easily overcome. Similarly, wage inflation in Korea was a problem for flatware producers because the Korean exchange rate was pegged at what came to be an artificially high level. Subsequent devaluation of the Korean Won has recouped much of their price advantage. There are, in any case, other potential LDC competitors for the Japanese industry.

In reality, the majority of Japanese observers, both inside and outside of the industry, felt that the problems of participants in the Tsubame flatware industry would not be eliminated by external events and could only be resolved by adjustment within Tsubame, itself.

⁷⁴ Chushokigyo Kinyu Koko Geppo 1979, 1-6, p 45.

⁷⁵ Interviews in Tsubame, September, 1980. See also, ibid. p 45.

2.3 Adjustment To Asian NIC Competition

The long-established metal flatware industries in such countries as the U.K., West Germany, and the U.S.A. have undergone a long period of postwar decline in production capacity. Much of this decline was attributable to an inability to compete with the Japanese industry in the lower- and medium-price flatware lines which constitute the bulk of the total market. In fact, the Japanese industry was already, in terms of production capacity, eighteen times the size of the West German industry and more than three and one-half times the size of the U.S.A. industry by 1974.⁷⁶

As a consequence, the industries in the western countries have come to be centered on a few, well-known, companies specializing in the largely domestic or regional sale, under their own brand-names, of medium-priced lines of flatware produced to order in East Asia; and in the design, production, and international sale of smaller volumes of higher priced, prestigious, lines of stainless steel flatware. In these higher priced lines, the U.K. and West German industries remained highly competitive. Thus, the collapse of the industries around these strongholds of competitive strength has been accompanied by a rapidly increasing export-orientation as the producers have lost their mass markets, even domestically, but have maintained their dominance in export markets for higher priced flatware.⁷⁷

⁷⁶ Chusho Kigyo Kinyu Koko Geppo 1979, 1-6, p 37.

⁷⁷ For West Germany see, ibid. ; for the U.K. see, "Eikoku Sheffield no Kanamono/Kinzoku Yoshokki Sanchi" in, Kaigai Shijo Sept. 1980, p 36.

In this sense, they could be said to have made a successful adjustment, albeit at greatly reduced volume, to the challenge of low-cost Asian production.

The advent, in the late 1960's and early 1970's, of Korea and Taiwan as the new low-cost producers of flatware posed a greater threat, therefore, to producers in Japan than to those in the major consumer nations. Not only did the Japanese industry by then account for the largest single share of world production, it had attained that position almost solely by means of price-competition based on precisely those cost advantages that underlay the development and growth of the industry in their Asian NIC competitors. Thus, it was the Japanese industry, more than any other, which faced the need to adjust to the changed competitive environment. Not surprisingly, the problem of LDC competition has been the dominant topic in the industry from the early 1970's to the present.

While any number of specific proposals have been made with respect to the adjustment problem, four major adjustment strategies seem to underly most of them. These are;

1. Revival of price competitiveness
2. Shift of markets
3. Move to higher-grade lines
4. Migration to new businesses

Following discussion of each of these strategies, using the analytic framework outlined earlier, consideration is given to their effectiveness and interrelationships.

3. REVIVAL OF PRICE COMPETITIVENESS

This is inherently a revival-oriented strategy aimed at reestablishing and maintaining Japanese dominance in the price-competitive end of the flatware market that accounts for the bulk of international trade and of Tsubame's production. The strategy involves no change in product category or style and is focussed on change in the "Production" functional area.

3.1 Sales

There has been some effort to reduce the price to the importer by cutting out middlemen and dealing more directly with overseas importers or manufacturers. This is only possible, however, for goods and countries that are not on a quota, or for companies which possess a full set of production, shipping, and export quota entitlements.

3.2 Production

-area of major change

This is the functional area of most importance for this strategy. Attention is focussed on the facets of Methods and Organization.

3.2.1 Methods

i. Appropriate Quality

There was a general perception that Tsubame's competitors were often taking market share with goods that were not only of lower cost but also of lower quality. Put the other way, this suggested that

Tsubame's producers were often offering goods that were of excessively high quality for particular markets. As there is a fairly direct link between quality and costs of production, it appeared that price-competitiveness might be improved by simply devoting more attention to a fine-tuning of production methods so as to produce lots whose quality just met - but did not exceed- the demands of the relevant markets.

ii. Lower Quality/Cost Production

The success of the Asian NIC producers also suggested that Tsubame's quality levels (and concomitant costs), even at their lowest, may have crept up beyond the levels appropriate to some markets. This required the introduction of new, or previously abandoned, production practices aimed at producing much lower quality (and cost) flatware.

These practices included:

- The substitution of lower-cost chrome-plated steel for stainless steel.
- The introduction of "tumble-polishing" wherein the flatware is polished only by being tumbled in a barrel of abrasive powder (much as amateur "rockhounds" polish gemstones).

iii. Capital Intensification

It remains an open question as to whether lower-grade flatware can be competitively produced by means

of highly capital-intensive production techniques. The Korean industry does not provide a relevant example as, while they integrate production stages within large-scale firms, their actual production techniques are similar to, and perhaps even more labour-intensive than, those in Tsubame. The Japanese industry has, however, made some moves in this direction.

- Introduction of Sophisticated Polishing Equipment

Polishing is the most labour-intensive stage of production. During the 1970's, highly mechanized polishing equipment of increasingly high capacity was developed and introduced into the industry. This was partly a response to the decline in the number of cottage-based metal-polishers (see below) and partly a contributing cause of that decline. An initial piece of automatic polishing equipment was imported from West Germany and, using this as a model, an improved version was developed for the local industry. By 1978, 800 of these machines were in use within the sanchi. As equipment of this capacity is expensive and requires high volumes, it has mainly been adopted by the larger firms in the metal-polishing sub-industry and by the larger semi-integrated manufacturers.

- Automated Production Systems

Of greater significance than the above, piecemeal, mechanization would be the development of automated

production systems which could carry out a series (or all) of the required production processes at competitive cost levels. Some partial efforts to develop this sort of innovation were carried out in the 1970's. The greatest efforts were focussed on the development of automated methods of serrating knife edges and forming tines for forks. It would appear that most of the development costs for this sort of equipment are covered by government agencies with only a nominal (say, 5%) contribution by the industry, itself.⁷⁸ While no direct evidence was found as to the rate of diffusion or the impact on productivity of this sort of equipment, it is apparently not yet in common use. In the late 1970's, further development work was still underway. Even were such equipment to prove effective and economical however, there may be few firms financially capable of making the necessary investment. The limited financial capabilities of the firms in the industry may also account for the remarkably low level of the industry financial contributions to these potentially crucial research and development efforts.

iv. Lower-cost Labour

There was some suggestion that the vanishing

⁷⁸ While no detailed information for this recent development work was obtained, industry association data for the first half of the 1970's shows production technology development expenses of nearly one-half million dollars of which less than 5% was borne by the industry (mimeo., Japan Metal Flatware Industry Association, [undated]).

supply of low-cost labour be augmented by opening up opportunities within the industry for senior citizens. Such an effort might require a revision of production practices so as to facilitate their participation; just as the (now declining) pattern of diffuse, cottage-based, polishing operations had done with respect to the agricultural labour force. However, no concrete evidence of this was encountered.

3.2.2 Organization

i. Shift more production to sub-contractors.

Wage levels among the small subcontractors are generally much lower than among the manufacturers. Thus, these latter firms could lower their costs by transferring some uneconomic in-house production activities to subcontractors. Of course, this general pattern has long been the basis of the industry's structure. The suggested change, therefore, is not in the pattern of transfer, per se, but in the nature of what is to be transferred. However, as some of the central firms in the industry have already relegated almost all but the finishing, inspection, and packaging stages to subcontractors, it was not evident that this tactic offered a great deal of additional opportunity for cost reduction.

ii. Change of Industry Structure

There is a view that the most important adjustment must be in the very structure of the

industry itself. This is in contrast to measures (such as i), above) which seek to extend or modify, but maintain, the basic features of the existing structure. There seem to be two distinct motivations for this view. One is related to the perceived disadvantages of the existing system and the other to the presumed organizational requirements of new technology.

- Disadvantages of Existing Structure

The advantages of the traditional production system in Tsubame lay primarily in its ability to tap into a supply of low-cost labour provided by an underemployed agricultural labour force. As the supply of this labour has decreased and its cost has increased, this advantage of the production system has diminished. At the same time, it has not passed unnoticed that the success of the Korean industry appears to be based, at least in part, on a distinctly different pattern of integrated production within large-scale firms. This, together with rising labour costs in Tsubame, has led to a reappraisal of the merits of the disaggregated stages of production and social division of labour that have characterized the industry there.

Thus, the traditional structure of production in Tsubame is now seen to involve some considerable

disadvantages, including;

- Low (and difficult to raise) productivity levels
- High levels of wastage within and between production stages
- High intra-industry transportation costs
- Excessive managerial costs due to the difficulties of monitoring quality and coordinating production across diffuse production locations

- Organizational Requirements of Newer Technology

Even at existing levels of mechanization and partial automation the newer equipment employed requires larger volumes to be economical. This demands some consolidation of production into organizations (firms or consortia of firms) of considerably larger size. Moreover, the introduction of more advanced equipment, as it is developed, will make this consolidation even more imperative. Indeed, even from the financial perspective, it is unlikely that much of the capacity of the industry can be modernized without considerable pooling of resources by participants.

The primary means of moving towards a new organizational structure within the industry appears to be the encouragement of consortia of functionally distinct firms into groups capable of integrated production and of the formation of more closely integrated clusters of subcontractors

around the existing central manufacturing firms. Moreover, while the relocation of firms into the suburban industrial parks was largely justified on the grounds of reducing environmental disruption in the town centre, it was widely hoped that the resulting geographic proximity and shared facilities would encourage the formation of such cooperative groups. To date, however, this does not seem to have commonly occurred. Decades of fierce intra-industry competition and a deep-seated independence among the owners of firms seems to inhibit an easy transition to cooperation.

3.2.3 Other

There are two important tactics which do not fit easily into any of the categories in our framework.

i. Reduction in the Cost of Stainless Steel

Stainless steel, in itself, accounts for close to 50% of Tsubame's flatware production costs. The flatware industry firms felt that the steel producers were segmenting their markets and charging lower prices to customers, such as Korean flatware producers, in the more competitive export market. The industry negotiated with steel suppliers for a price reduction but it was not until November 1978, after the flatware producers had made a cooperative direct import of West German stainless steel, that domestic producers granted a price reduction. The reduction of

10% in steel prices was estimated to translate into an approximately 5% reduction in total production costs.

ii. Reduction in Subcontracting Costs

There was a major shift of the burden of adjustment onto the subcontractors -especially those operating out of their own homes. These cottage-based subcontractors were often too old, too unskilled, or too isolated to easily obtain alternative employment and yet had come to depend on the industry and on their capital investment in it for some or all of their income. Reductions of from 30% to 50% in rates paid to subcontractors were not uncommon and in some cases reduced incomes to one-half of the local average or less. While, in the short term, this undoubtedly had the effect of reducing manufacturing costs and improving price competitiveness; in the medium term, the long hours, onerous working conditions, and low pay drove many of the participants into retirement. The polishing sub-industry is the prime example where this tactic was employed and between 1970 and 1977 there was a 23% decrease in the number of firms and a 31% decrease in the number of employees.

4. SHIFT TO NEW MARKETS

This strategy is premised on the idea that there are potential new markets in which Japanese producers have, or can develop, a competitive advantage over lower cost producers on the basis of superior information regarding both the needs of

those markets and the relevant distribution channels. In essence, the strategy involves no change in product category or style and focuses on change in the sales function.

4.1 Sales Function

-area of major change

4.1.1 Location

The strategy is aimed at two geographically distinct areas; newly emerging foreign markets and the domestic, Japanese, market.

i. Newly Emerging Foreign Markets

The prime examples of newly emerging markets for which this strategy has had some relevance are in the Mid-East and Africa. The customers in these markets are not very discriminating vis-a-vis metal flatware and the bulk of the potential market is likely to be for low-grade, low-cost, flatware.

ii. The Domestic Japanese Market

Here, as in the western countries, there is a major distinction between the institutional market, where the emphasis is purely on price and utility, and the household market, where style and quality are also of importance. In either case, the size of the market is much smaller than it would be in a Western country of comparable population. It is not generally believed to be possible to significantly increase the size of the institutional market through promotional activity. It is felt, however, that there is a

potentially much larger household market.

4.1.2 Organization

i. Emerging Foreign Markets

The only serious examples of relevant markets, to date, are those in the Mid-East and Africa. As this suggests, the likely markets are in the developing countries. The approach to these markets has thus far not involved the extension of the industry's capacity into the areas of downstream sales and distribution. It has, however, apparently involved a greater utilization than in the past of the intelligence-gathering and trade promotion capabilities of such government organizations as JETRO and of Japanese trading companies capable of dealing with these novel markets for flatware. Thus, the competitive edge over lower-cost competitors in market information is to be provided not by the industry, per se, but by a hoped for superiority in government trade promotion organizations and in the network of private Japanese trading companies.

ii. The Domestic Japanese Market

As we have already indicated, the domestic institutional market does not offer much prospect of significant growth and industry hopes are centered on the household market for flatware. Organizationally this has led to the incorporation into the industry association (and some individual firms) of retail

sales promotion and extended domestic distribution capabilities.

4.1.3 Method

i. Emerging Foreign Markets

No fundamental change in the method of sales is involved. The novel geographic focus does mean, however, that industry and occasional corporate participation in trade shows and government initiated trade promotion activities can now involve the need to prepare new literature and display materials appropriate to the novel cultural and linguistic environments.

ii. Domestic Japanese Market

The major problem of the Japanese household market for flatware is that, while the people are affluent and cosmopolitan, both custom and the native cuisine favour the use of chopsticks as an eating utensil. These range from low-grade disposable chopsticks (now mainly imported from countries such as Taiwan) to expensive, high-grade, chopsticks suitable for the most elegant of occasions. There has, however, been a dramatic westernization of the Japanese diet during the postwar period and a high degree of receptivity to the material aspects of Western cultures. It appears, therefore, that there is some prospect of developing a larger household market through a concerted effort to popularize metal

flatware as an addition to, and not a replacement for, the traditional eating utensils.

These efforts have been carried out largely by the industry association through advertisements in women's magazines and through sponsorship or participation in urban exhibits and displays of housewares. This latter activity has involved the preparation of videotape recordings outlining the proper organization of tablesettings and the etiquette of dining with metal flatware. In addition to these sales promotion activities, a switch to the domestic market also means an increase in per-unit operating capital requirements because the domestic market involves much more delay in receipt of cash for shipments than does the export market, where payment is made upon shipment.

4.2 Design

With respect to both the emerging foreign markets and the domestic market, design responsibility for the product is usually within the industry and companies. In contrast, in the case of many traditional export markets, the foreign buyers provide the design specifications. Thus far, the importance of design features has been limited, but there is some hope that the Japanese industry might gain a competitive advantage by developing designs which have greater local aesthetic appeal, for example, by copying or transforming traditional motifs into the flatware design.

5. SHIFT TO HIGHER-GRADE LINES

This strategy aims to adjust to low-cost competitors by shifting production into the higher-grade lines of flatware in which those competitors do not pose as great a threat. It has significant tactical implications for all three functional areas.

5.1 Product

5.1.1 Grade

-area of major change

The higher price range of stainless steel flatware is distinguished from the lower priced flatware in a variety of ways. The materials are of the highest quality (e.g., usually 18-8 or 18-10 quality stainless steel), as is the finish. The design is often (but not always) more intricate and massive and is embossed in greater relief. Importantly, while a move to higher quality, higher price, flatware reduces the exposure to Asian NIC competition, the higher the quality and price, the more the product is exposed to competition from the traditional producers in Europe and North America.

5.2 Production

-area of change

5.2.1 Organization And Location

The production of higher quality stainless steel flatware apparently favours the organizational integration of the production stages. This facilitates quality control, as well as the control of information regarding novel designs and production practices. This probably favours the existing larger manufacturers and, perhaps, those groups of firms with shared facilities and geographic proximity within industrial parks.

5.2.2 Methods

It is probably fair to say that the production techniques and skills required for success in the high-priced range of the flatware market already exist within Tsubame. Indeed, in many cases, these are already being applied in the production of flatware under subcontract to foreign manufacturers. It is possible, however, that Japanese competitiveness in this price range might be improved by the introduction of improved, automated, equipment such as that discussed under the "price-competitiveness" strategy. Changes in methods of production are, nevertheless, not likely to be of major importance for this strategy.

5.3 Design

Design is an important aspect of this strategy and clearly the industry and firms feel a need to strengthen their in-house capabilities in this regard. In addition, there has been some consideration of utilizing the services of well-known foreign designers. It is not clear, however, whether the main purpose

of this would be to utilize their design services or the prestige of their names. If it is the latter, the tactic would more appropriately be categorized as a sales method. In any case, it is notoriously difficult as a practical matter to prevent the copying of flatware designs. Thus, while appropriate design is an important prerequisite for the success of this strategy, it is not by itself decisive.

5.4 Sales

-area of major change

5.4.1 Organization

Because of the importance to this strategy of product differentiation and the creation of a high-quality brand image, more direct control of the downstream sales and distribution functions is seen as the crucial step in its implementation.

5.4.2 Location

The major markets for high-quality flatware are, as ever, in Europe and in North America and these must be the ultimate target of any effective implementation of this strategy. As a practical matter, however, the industry as a whole, and individual firms within it, see their greatest initial opportunities in markets which are relatively more open to new brands, due to the absence of established, local, competitors. The prime examples where this seems to have helped the Japanese producers are Australia and Japan. Nevertheless, the affluence and sophistication of the Japanese consumer mean that, if the industry succeeds in increasing demand for quality flatware in

the domestic market, some of the benefits of the increase will almost certainly be captured by their competitors in the West.

5.4.3 Method

Of major importance is the method of sale in which promotional efforts emphasize non-utilitarian features such as style and exclusivity and attempt to create product differentiation linked to brand names. With respect to all potential markets, the industry association is attempting to establish an international reputation for quality by the administration of a standards system to govern the use of a proprietary "hallmark", or trademark, symbol in the form of a stylized swallow (which is the meaning of the Japanese character pronounced "tsubame"). In practice, however, foreign buyers are generally unenthusiastic about having this symbol embossed on the flatware they order and, when the flatware is to be sold under a foreign brandname, they do not permit it. The Tsubame hallmark may, as is hoped, become the brand identification for a guild-like consortium of smaller firms producing and marketing high-quality flatware on a cooperative basis.

For the moment, however, the highly competitive atmosphere among firms has inhibited the development of inter-firm solidarity and commitment to such a cooperative pooling of fortunes. The Hallmark does, however, figure prominently in industry association promotional material aimed at stimulating overall demand for the sanchi's flatware, especially within the Japanese market. Aside from participation in exhibits and displays in urban areas of Japan, the industry association

advertises occasionally in the more elegant, up-market, Japanese magazines.

The larger individual firms engage in similar promotional efforts aimed at establishing a quality image, but do so under their own, proprietary, trademarks. Some of the firms have established sales promotion offices in Tokyo and two have had some success in developing a brand identity and market in Australia.

6. MOVE TO A NEW BUSINESS

This is a Migration-oriented strategy in which the aim is to move out of the product facing competition from lower-cost producers and into a business or businesses affording the prospect of a higher degree of competitive strength relative to the relevant, usually different, set of competitors. The strategy can, of course, involve change in any of the facets of all three of the functional categories. The nature of these changes is, however, as various as the specific new businesses into which firms move. For that reason, the discussion in this section differs from that for the preceding three strategies.

First, this strategy, in contrast to the preceding three, is most easily discussed in terms of what has not changed, or has changed the least. What, that is to say, is the point or points of maximum linkage with the prior business? This requires a slightly different slant in the application of the analytic framework.

Second, the sheer variety of concrete examples complicates any attempt to generalize.

Third, the fact that the adjustment involves movement to not one, but a variety of other businesses, enormously complicates the task of finding relevant information. In most cases, the interest of information sources for the flatware industry ceases when a firm leaves the industry.

For these reasons, this strategy is addressed by discussing first, an exception to much of the preceding and the single "new business" that has figured most prominently in the adjustment process; stainless steel housewares. Consideration will then be given, more briefly, to some of the various other businesses that have attracted migrants from the flatware industry.

6.1 STAINLESS STEEL HOUSEWARES

Background

The stainless steel housewares industry produces a wide range of products including; cookware, kitchen tools, bar equipment, coffee pots, wine goblets, trays, and serving dishes. As this list suggests, the products are extremely varied but centre on articles relating to food and drink.

In Tsubame, the industry had its origins in the early postwar period and its development has paralleled that of the flatware industry. It is a smaller industry and, while the Tsubame producers account for a substantial proportion of national production, they are much less dominant in this industry than are the flatware producers in theirs. The housewares industry has a larger domestic market than the flatware industry and is less export-oriented. The average firm size is also larger than in the flatware industry, in part, because of the heavier equipment and concomitantly greater capital investment required. The industry has a great deal of structural similarity to the flatware industry however, and, at the level of the sub-industries, there is extensive overlap.

While a majority of the manufacturers in the industry have never been directly involved in the production of flatware, some of them are "refugees" from the flatware quota systems introduced in the late 1950's. In the

1970's, with the advent of Asian NIC competition in flatware, there has been an increase in the number of migrants moving from a base in the flatware industry into the housewares industry. This is somewhat ironic as, with a slight time lag, the housewares industry is coming to face much the same pattern of competition from Asian NICs as occurred in the flatware industry; and is beginning to implement analogous adjustment strategies. Nevertheless, the housewares industry does provide the advantages of a larger domestic market, higher value-added, greater product variety, and relatively reduced levels of current competition from Asian NICs.

6.1.1 Product

-change within the same product genera

While this does represent a change of product, the pervasive and high degree of overlap in customers, sales channels, production materials and methods and circumstances of product usage point up a "generic" similarity to the flatware business.

6.1.2 Production

-area of some change

There is an enormous overlap with the organization, location, and methods of production of the flatware industry. For some sub-contractors, the move may involve little more than a shift in client firms. For the flatware manufacturers, entry into the housewares industry can require the acquisition of new, heavier, equipment and the management of a more complex set of

production stages (a coffee pot, for example, requires as many as 45 distinct and major production stages). The fundamental aspects of production are, however, relatively familiar to them.

6.1.3 Sales

i. Location

While the housewares industry has traditionally enjoyed a substantial export market, one of the prime attractions to flatware firms is the larger domestic market of the housewares industry. This allows firms to enjoy an advantage over Asian NIC competitors in both information and distribution costs. Thus, the move into housewares has generally meant an increase in the relative weight of domestic sales.

ii. Organization and Method

The usual web of wholesalers and trading companies is important but the relatively greater weight of the domestic market, and the producer's greater familiarity with it, makes it feasible for firms to develop a more extensive internal sales and distribution capability. Manufacturer's brand names are common and basic sales methods differ somewhat from those employed in the flatware industry. There appears to be, for example, no effort on the part of the housewares industry association to increase overall final domestic demand as there is already a substantial existing market for "housewares" in

general.⁷⁹ Thus, promotion aimed at the final consumer is almost all carried out by individual manufacturers on behalf of their own brands. These promotional efforts, moreover, are generally on behalf of not one item but of a, often design-coordinated, "line" of housewares. This is undoubtedly one major advantage over the flatware industry; the cost of developing and utilizing an in-house sales and distribution capability can be spread over a larger product base.

6.1.4 Design

i. Organization

In view of the emphasis on a higher level of product differentiation it is not surprising that the move into this industry makes an in-house design capability more crucial.

ii. Method and Location

The variety of products involved means that the design process must deal with a wider variety of technical considerations reflecting the differences in production processes and in end-use of the products. At the same time, it opens up the possibility, and perhaps the competitive necessity, to apply a single basic design aesthetic over a wider range of coordinated products. Thus, the design process tends

⁷⁹ Though they do operate a cooperative "showroom" in Tsubame City.

to be more complex but also more integrated across products. There is some feeling that, as regards the more fashionable housewares, an urban design location is desirable in order to keep in closer touch with the market.

6.2 Other New Businesses

Many firms involved in the flatware industry have left that business and not moved into the housewares industry. Of these, some will have gone bankrupt, some will have simply closed up shop and others will have attempted to move into new lines of business in the manufacturing or service sectors. There is, however, no obligation for firms to report these changes to a central authority nor is there any single authority charged with the responsibility of monitoring such changes. There is therefore, a dearth of relevant information.

As a result, we must rely largely on industry association data regarding present or former member firms, and such firms tend to be larger than average. Even with these limitations, this data is of uncertain comprehensivity and, moreover, does not include migration into the service industry sector.

The industry association data for 1974-1978 indicate a total of 47 firms left the industry, of which; 53% withdrew from manufacturing entirely, 28% entered other miscellaneous metal fabrication businesses, 6% entered non-flatware related intermediate production as specialized subcontractors (metal plating, heat treating, etc.) and the remaining 13% entered various miscellaneous businesses.⁸⁰ As these figures indicate, many of the firms leaving the industry may not be migrating to a new business but be simply slipping into extinction.

⁸⁰ Japan Metal Flatware Industry Association data, cited in Ikeda (ed.) , op. cit. p. 60.

Of the firms which can be said to have migrated to a new business, there is some additional industry association data on those moving into other manufacturing businesses. There is also official government data regarding firms whose change of business has been aided by government assistance programmes. Table 10 outlines the timing and type of new businesses entered for 31 cases between 1968 and 1978. As the table indicates, there was considerable migration to new business before the introduction of government assistance programmes.

On the basis of the table we can make some speculative observations as to the nature of the new businesses entered. A few of them appear to involve a continuation of a previous specialized activity, such as heat treating or metal plating, but re-focussed on a different customer base. A substantial number involve a change to parts production for another, more prosperous, industry such as electronics or automobiles. The largest number, however, represent a move to the production of a distinct new finished good.

Today, if not at the time of migration, around one-quarter of this latter group of finished goods now face competition from LDCs similar to that found in stainless steel flatware (e.g., eyeglass frames, watch bands). With one, lone, exception (golfballs), all of these new product lines have an evident link with the pre-existing metal fabrication skills of the firms. In most cases, the entry into the new business seems to involve the location of a niche in an expanding, but pre-existing, domestic industry such as housing or leisure equipment (window sashes,

Table 10 - Migrations Out of the Flatware Industry into New
Manufacturing Businesses

Item Year	Independent		Prefectural Support		Federal Support		Total
	No.	New Business	No.	New Business	No.	New Business	
1968	5	Scissors Machinery Parts Stainless Steel Rolling Sewing Machine Parts Stainless Bath- tubs					5
1969	1	Metal Tempering					1
1970	1	Valves					1
1971	2	Auto Parts Eyeglass Frames					2
1972	3	Curve Mirrors Kendo Facemasks Window Sashes	1	Curve Mirrors			4
1973	2	Golf Balls Watchbands	3	Electrical Equip Parts Construction Equip. Parts Bicycle Parts			5
1974	2	Auto Parts Window Sashes	1	Auto Parts			3
1975	2	Price Marker Wooden Products	1	House Fixtures			3
1976	2	Metal Tempering Home Exercise Equip.					2
1977					4	Freezer Parts Lighting Fixtures Aluminum Handled Cutlery Sprayer	4
1978					1	Pump Parts & Lighting Fix- tures	1
Total	20		6		5		31

Source: Japan Metal Flatware Industry Association

housing fixtures, exercise equipment).

In only a few cases is there clear evidence of innovative product development. There are two particularly interesting examples of this type; sports steering wheels and "curve mirrors". In the first case, the new product was in response to a growing demand among young drivers for custom automobile accessories. A substantial market had developed for replacement "sports" steering wheels, most of which were imported from Italy. One Tsubame firm which had experience in producing wooden handled stainless steel flatware was able to direct that experience into the development of a stainless steel and reinforced wood sports steering wheel which it successfully marketed domestically through specialty auto accessory stores.

In the second case, the new product was also linked to the diffusion of the automobile in the domestic market. While the number of private automobiles on the road in Japan increased by a factor of more than ten between 1965 and 1978, the amount of roads only increased by about 15%.⁸¹ Moreover, Japanese roads usually do not separate pedestrian and automotive traffic very effectively (there are few sidewalks) and are extremely narrow and twisting compared to those in, say, North America. Thus, one of the most ubiquitous of traffic safety devices is the "curve mirror", which consists of a large (about one-half metre) convex mirror mounted on a pedestal at sharp bends in the road. This affords people a preview of the oncoming automobile

⁸¹ Keizai Tokei Nenran, 1980 (Toyo Keizai Shinposha, Tokyo, 1980) p 304.

and pedestrian traffic that awaits them around the corner. These mirrors were made out of plate glass, in much the same manner as household mirrors. One of the firms in the Tsubame flatware industry saw the opportunity to apply their metal polishing expertise and develop an alternative type of curve mirror made out of highly polished stainless steel. They successfully did so and the advantage of much superior durability in handling and in use has won them considerable success in this large domestic market.

As we indicated at the outset of this section, there is a very limited amount of information available regarding migration to new businesses. Thus, any conclusions must be viewed as highly speculative. With that proviso, the preceding discussion, based on the experience of 47 flatware industry association members, suggests that movement out of the flatware industry (aside from movement into the housewares industry) has had the following overall pattern;

Withdrawal from business [53%]

- a) Bankruptcy, closure⁸² (21%)
- b) Other⁸³ (32%)

Migration to New Business [47%]

- a) Same activity, new customers (5%)
- b) Dependent subcontracting of parts (16%)
- c) Finished goods production (26%)

⁸² Includes one merger.

⁸³ This may include movement into service industries.

7. MIXED STRATEGIES

Some strategies appear to combine two or more of the major types discussed above. We will discuss one example.

A company called Tsuin Baado ("Twin Bird") Kogyo has implemented a strategy which combines movement into new businesses, a focus on the domestic market, and the production of higher-priced lines of flatware.⁸⁴ This company had been a subcontractor of chromeplating for auto parts but moved to the flatware industry in the mid-1960's as a means of escaping the dependency of subcontractor status. The product which best exemplifies this strategy is their "Priere" line of coordinated flatware, hollow-ware (coffee pots, serving dishes, etc.), and chinaware. The Japanese custom of gift-giving supports a large gift market in which Tsuin Baado Kogyo felt it might find some opportunities. Investigation by the company revealed that ceramics products held about 50% of the gift market while various metalwares (including flatware) accounted for only 10%. This gave rise to the idea of gaining more acceptance for the firm's flatware in this market by linking it to ceramics which, as a generic type, enjoyed a much larger demand in the gift market. The company decided to do so by offering a coordinated "tablesetting".

Chinaware production methods are quite distinct from those of stainless steel flatware and many of the traditional Japanese

⁸⁴ This discussion of Tsuin Baado Kogyo is based on a published interview given by the company's managing director. See, "Jiba Sangyo Rida no Okina Chie" in Shoko Jianaru August, 1980 pp 5-7.

ceramics sanchi have established reputations. For this reason, the company decided to look for outside collaboration. It chose to utilize firms in the Tajimi ceramics sanchi. This sanchi, besides being well-known in the domestic market, has a fine division of labour among numerous specialist firms; much like Tsubame. This enabled the company to negotiate from a position of relative strength and obtain lower-cost production of the chinaware component than would have been possible had the firm approached larger firms in some of the other ceramics sanchi. The new combined product line has been highly successful and made a major contribution to an annual growth rate in sales between 1977 and 1980 of over 40%. There has now, moreover, proven to be a substantial export market for the "Priere" line.

In my view, this is basically a strategy of moving to higher-priced lines of flatware production. The initial emphasis on the domestic gift market and the tie-up with a line of coordinated chinaware are, then, merely tactics in support of that strategy. There is, however, room for argument. This can also be seen as an example of how a number of strategies which are (at least in theory) independently viable need not necessarily be incompatible with each other. In that case, given the necessary resources, a number of distinct strategies can be jointly , and perhaps synergistically, implemented.

8. ADJUSTMENT EFFECTIVENESS AND PROSPECTS

Any conclusions regarding the fate of the Tsubame stainless steel flatware industry and its participants must be speculative as the adjustment process is by no means complete. It is, nevertheless, possible to make a tentative assessment.

8.1 Apparent Effectiveness Of Adjustment Strategies

While Tsubame cannot be said to have completed an adjustment process and arrived at a new period of growth, or even stability, the adjustment strategies that have been adopted have already had an impact.

Overall, the unit volume of production had, by the end of the decade, recovered to approximately the peak level reached in 1970. Profitability, too, had returned to more normal levels following a steep decline that lasted through most of the decade. While we have little direct information on the effectiveness of cost-reduction efforts, the industry was able to reduce the yen price (in real terms) of low-grade flatware exported to the Mid East and Africa region; the one market in which low-cost, price-competitive lines continue to account for almost all sales.

So, too, efforts to move production into new markets less exposed to Korean competition had some effect. The share of the Mid East and Africa region in Japanese exports rose from 10% to 23.4%, by volume, and from 6.4% to 15.3%, by value, between 1970 and 1979. Similarly, the share of the domestic market in total production rose from 11.5% to 18.6%, by volume, and from 15% to

30.5% by value over the same period. The relatively greater increase by value reflects the move towards higher-priced lines of flatware.

As against this, however, the revival in Japanese production in 1979-1980 was undoubtedly helped by Korean inflation and exchange rate controls that supported the exchange value of the Korean Won. Japanese production, just as surely, could be expected to be adversely affected by the subsequent devaluations of the Korean Won. Moreover, whatever the trends in Japanese production levels, producers in Korea and Taiwan continued to gain, and the Japanese to lose, in overall export market share. Korean producers were also making substantial inroads into the Mid East and Africa markets by the latter half of the 1970's. They were, moreover, beginning to move into higher-priced lines of flatware by selling moderately-priced imitations of traditional Sheffield flatware patterns.

The variety of examples precludes any simple generalizations regarding migration into new businesses. It is fair to say, however, that some of the migrants appear to be now located in industries which face substantially less threat from LDC producers, both now and for some years to come. In other cases, the movement into a new business has not so clearly removed the threat of LDC competition; whether from LDC producers of flatware or of other products. Housewares is putatively the "new business" to which the largest amount of migration has occurred and already by the end of the 1970's this industry, too, was beginning to face competition from LDC

producers. Nevertheless, in 1980, it remained a more attractive industry than stainless steel flatware in this respect and continued to enjoy higher average levels of profit (a 5.9% return on investment versus the flatware industry's 0.5%). Firms seeking a major manufacturing role in the housewares industry, however, face not only the need for substantial product development efforts but also, along with even the minor subcontractors moving out of the flatware industry, severe competition from existing firms and from fellow would-be migrants.

8.2 Prospects

8.2.1 Tsubame Region

As the historical introduction pointed out, the Tsubame region has survived a number of earlier periods of transition in its industrial base and gone on to greater prosperity. Its survival, this time, is not in question. It is, rather, a matter of the degree of medium-term decline that the problems of the flatware industry might inflict on the region. This could well be minimal, provided only that the Japanese national economy does not founder.

Good, and improving, transportation and communications links with Japan's major urban centres and established status as a lower-cost industrial centre make Tsubame an attractive location for Japanese industry. Much of its existing labour force and firms offer subcontracting capabilities, such as metal forging, metal finishing, and die and mold production, of broad

utility. Many of these, moreover, are organized into separate, specialist firms which may have more inter-industry mobility thereby.

Aside from potential new industries, Tsubame has already a number of other industries on which to base future growth. These include, in addition to the businesses mentioned in prior discussion, the production of farm machinery as well as equipment and machinery used by the flatware and housewares industries themselves. In the latter case, the equipment and the firms producing it, have capabilities that do not limit their utility to the flatware and housewares industries.

Of course, these firms, like the specialist subcontractors and others presently linked to the flatware industry, are unlikely to casually abandon that industry. However great their inherent mobility, changing their allegiance to a new industry will pose many unfamiliar uncertainties. The recent course of the flatware industry has probably been sufficiently ambiguous to inhibit somewhat the search for greener pastures by some of these firms. Thus, given the potential inter-industry mobility of many of its firms, the greatest harm to the regional economy might come not from the decline, per se, of the flatware industry but from a slow and irregular decline which had the effect of unnecessarily delaying what would probably be, from the regional perspective, a rapid and successful adjustment.

8.2.2 The Flatware Industry

The expressed goal of the flatware industry association is, at a minimum, to maintain present export volume while reducing its present share of total output (about 75%) by 10% to 15% as the domestic market is developed. The hope, moreover, is to maintain the present emphasis (65% of exports) on a high volume of low-priced lines of flatware, while switching some of the balance of export capacity out of medium-price and into higher-price lines.⁸⁵ In my view, however, failing some spectacular, and exclusive, innovation in production technology, the Tsubame flatware industry is unlikely to maintain its existence as an industry of anything like its present size and structure.

Of the individual adjustment strategies discussed, only the move to higher quality lines and the potential domestic market appear to offer long-term prospects; and even these offer, at best, much reduced unit volumes. The higher-price lines of flatware are dominated by the famous western manufacturers and their position cannot be seriously eroded merely by a Japanese cost advantage. The expansion of the domestic market, as well, is likely to involve relatively small volumes of higher quality flatware and, thus, considerable competition from established western manufacturers. The best long-term prospects for Japanese flatware production are likely to be as a part of a wider range of jointly marketed, coordinated complementary

⁸⁵ Published interview with the director of the industry association. See, Kaigai Shijo 9/80 p 58.

products. Of the possible "partner-products", that which is most likely to facilitate Japanese production of higher-priced flatware is probably chinaware; a complementary product in which Japan has an established reputation both domestically and internationally.

Even if this is to be the future of Japanese flatware production, it is not clear that the existing flatware producers will themselves be the dominant figures. There are already a number of Japanese ceramics producers with established reputations and international sales capabilities in quality chinaware. They would appear to be the most likely candidates to dominate any such inter-industry collaboration, whatever organizational form (acquisition, subcontracting, etc.) it might take. They would also, moreover, be most free to switch to international subcontracting of the flatware component of a combined product line in the LDCs.

In any case, the prospect would appear to be for a flatware industry of greatly reduced size, perhaps as little as one-fifth of its present volume of production within ten years time. As earlier discussion indicated, however, the actual pace and form of change will be determined not solely by the strategies and tactics adopted within the Tsubame flatware industry but, also, by developments in the external environment; regionally, domestically, and internationally.

8.2.3 Industry Participants

Adjustment means different things to the various types of participants in the industry. Moreover, for any one type of participant, the necessity and prospects for adjustment depend on the nature of the surrounding pattern of adjustment in the industry and region. However, adopting the preceding prognoses for the region and the industry as a basis for discussion, one can consider the implications for the major manufacturers of flatware.

If the industry is to come to focus on the production of smaller volumes of higher-price and higher-quality lines of flatware, then the adjustment process will favour those companies which have the greatest in-house capabilities for integrated production and quality control. On the face of it, it might seem that this will clearly favour those firms which also have a substantial in-house design and marketing capability. If we posit, however, that higher-priced lines of flatware can best be marketed as a part of a broader line of complementary products, then it is less evident that those flatware producers with existing design and marketing skills will face the smoothest adjustment.

To elaborate on this point, we can take stainless steel housewares and chinaware as the most promising complementary products. In either case, there are alternative organizational modes of combining them with flatware in a line of complementary

products. For example;

1. Flatware producer incorporating complement
2. Complement producer incorporating flatware
3. Flatware-complement alliance (Flatware producer dominant)
4. Complement-flatware alliance (Complement producer dominant)

The flatware producer with substantial existing in-house design and marketing capabilities is likely to seek combination 1. or 3.; both because those capabilities make them more feasible and because of the desire for a return on the sunk investment in them. The producer without such in-house capabilities will, on the other hand, be more amenable to combinations 2. or 4. Thus, which of them proves to have the smoothest and most successful adjustment depends crucially upon whether the existing flatware producers or the existing complement producers are best positioned to exploit a broadened product line.

There is, however, the prior and crucial question of which complementary product, stainless steel housewares or chinaware, will prove the most effective. These two have different implications for the four modes of organizational combination. In particular, the housewares complement would seem to facilitate incorporation of the products within one firm (modes 1. and 2.), because of the basic similarities in production processes and the suitability of the local infrastructure (including related industries) for centralized production in

Tsubame. The distinctly different production processes for chinaware and flatware, and the likelihood of different infrastructural support requirements, would, on the other hand, be likely to favour some form of alliance (including acquisition) between geographically separate producers in the two industries (modes 3. and 4.).

In my own view, the most effective complement product for higher-priced flatware is likely to be chinaware. In that event, design and marketing capabilities (including existing brand recognition) are likely to favour the emergence of producers in the chinaware industry as the dominant partners (or parent companies) to the flatware producers, at least as regards production for export markets. With respect to the domestic market, there is scope for an alliance between flatware and the weaker chinaware producers in which the the flatware producers are either dominant (as in the case of Tsuin Bado Kogyo), or coequal.

Figure 11 indicates some of the various feasible coalitions between flatware and complementary products, in what I take to be their descending order of feasibility and likely effectiveness.

Whichever of these ultimately proves to be the most effective, it seems likely that, in the medium-term, a number of them will contend, along with foreign competitors, for market share. Thus, for integrated manufacturers who choose to remain in the flatware business, there is the prospect of a tumultuous decade ahead and the likelihood that only a few will be able to

Figure 11 - Alternative Forms of Coalition Between Flatware and Complementary Products

	Housewares	Flatware	Chinaware
1		S ←————— D	
2		D —————→ S	
3		S ←————— P	
4	P —————→ S		
5	S ←————— P		
6		P —————→ S	
7	D —————→ S		
8	S ←————— D		

- Notes:
1. P → S signifies a Parent/Subsidiary-type relationship with the parent (P) having managerial control.
 2. D → S signifies an alliance between firms in which one firm is dominant (D) and the other is subordinate (S) in the alliance.
 3. The ordering of the hypothetical coalitions is in what I perceive to be their declining order of feasibility and effectiveness.

succeed.

V. EVIDENCE FROM SOME OTHER INDUSTRIES

1. OUTLINE

The case study of the Tsubame stainless steel cutlery industry benefitted from a visit to Tsubame and discussions with the local industry representatives, bankers, municipal government spokesmen, manufacturers and wholesalers and from interviews in Niigata city with prefectural government spokesmen. It would be desirable to have carried out a number of comparative case studies of other industries at the same level of detail. Because of the constraints under which the field research was conducted, this was not possible.

It was possible, however, to develop briefer case studies of three other relevant industries on the basis of interviews, in Tokyo, with concerned industry and government officials and a survey of the literature, including government reports, regarding these industries. This present chapter presents these three additional case studies. They provide a useful basis for comparisons of the broad features of adjustment between each other and with Tsubame. Migration into new lines of business is a mode of adjustment regarding which there is relatively little empirical evidence available. The chapter concludes, therefore, with a discussion of further evidence regarding inter-industry variation in the pattern of migration into new lines of business.

2. NON-LEATHER FOOTWEAR

2.1 Introduction

The Japanese artificial leather footwear industry⁸⁶ is centred in Kobe and, in the early 1970's, was highly export-oriented. In 1970, the Kobe sanchi exported 40% by volume and 51% by value of its total production. Almost all of these exports (95%) were to the United States.

As a result of competition from producers in Korea and Taiwan, total industry exports to the U.S.A. fell from about 38 million pairs in 1971 to less than one-half million pairs in 1977. The total volume of annual production in Kobe fell to 46% of the 1971 figure over the same period. Despite this almost total loss of the traditional export market and a halving of the volume of production, the industry survived the period without any major bankruptcies or reduction in the number of manufacturers. All the more remarkably, the Japanese industry managed to increase the value of its production by 39% in nominal terms and by 11% in real terms over the period. This record of accomplishment makes the industry one of the most striking examples, to date, of successful adjustment to LDC

⁸⁶ The discussion here is based on an interview with representatives of the Small and Medium Enterprise Promotion Agency regarding their internal studies of the industry and on the following sources: "Senshinkunigata Sangyo e no Michi -Kobe Kemikaru Shuzu Sanchi" in, Chosa Geppo August 1979; "Kobe Kemikaru Shuzu Sangyo ni Miru Yushutsu Sangyo no Naiju Sangyo e no Tenkan" in , op. cit. Sept. 1979; Sanchi Chusho Kigyo Shinko Bijion (Kawasei Hakimono Seizogyo) (Tokyo, Shokobu, Tokyo, undated [1979?])

competition by Japanese industry.

2.2 Background

The widespread diffusion of western-style footwear in Japan is largely a postwar phenomenon. Domestic demand accounted for almost all of Japanese production in the early postwar period. Substantial volumes of exports to the North American market began around 1961 and by the end of the decade accounted for 40% of the volume of national production.

The high priority which the Japanese government placed on the development of a modern chemical industry led to the rapid development of a domestic supply of a wide variety of low-cost substitutes for natural leather in footwear production. Artificial leather footwear soon came to dominate Japanese footwear production and accounted for nearly 70% by value of total production in 1970.

The Japanese western-style footwear industry is centred in sanchi located in Tokyo, Shizuoka, and Kobe. These sanchi specialized, respectively, in natural leather footwear, ladies sandals, and casual footwear made of artificial leather. In reflection of the dominance of artificial leather footwear in Japanese production, Kobe has been and remains the largest of the three sanchi.

The development of the industry in Kobe was undoubtedly aided by its established status as a centre for the production

of rubber goods, including rubber boots.⁸⁷ Additional factors were the ready access to raw materials by reason of its port facilities and propinquity to the petrochemical facilities of the the Tokyo-Hiroshima industrial belt, as well as the presence in the immediate vicinity (Osaka-Kobe) of a large proportion of the Japanese consumer market.

2.3 Industry Structure

The Kobe footwear industry is characterized by a fine division of labour among a large number of firms. In 1978, the industry centred around the 298 manufacturing firms (down from 304 firms in 1971) which comprise the membership of the Japan Chemical (sic) Shoes Industry Association. These firms employed 6,860 workers (an increase of 3% over 1971) and are involved in the final assembly, finishing and packaging of footwear. An additional 8,600 workers are employed in about 80 smaller manufacturing firms which are not members of the association and in nearly 1,000 other firms engaged in subcontracted intermediate stages of production or in parts production for the manufacturers. The industry also utilizes around 5,000 urban cottage workers who carry out piecework in their own homes. Thus, in total, the industry consists of more than 1300 firms employing, directly or indirectly, over 20,000 people; about 15% of the Kobe industrial workforce.⁸⁸

⁸⁷ The modern industry began as early as 1908-1909 when the first foreign direct investment in the industry was located in the Kobe area by Ingraham and Dunlop, of the U. K.

⁸⁸ Estimated from industrial workforce data given in, 1979 Chiiki Keizai Soran (Toyo Keizai Shinposha, Tokyo, 1979).

The labour force is rather elderly (average age is around 40), 70% female, and highly mobile (an annual rate of labour turnover of about 25%). Overall, wage levels are around the norm for large cities but they are higher for skilled female pieceworkers, who are in relatively short supply, than they are for design staff. Wages are higher in smaller firms (which utilize a higher proportion of pieceworkers) but fringe benefits, such as insurance and pension plans, are substantially worse in those firms.

While the structure of production in the Kobe footwear industry resembled that in other sanchi-based light industry, the structure of distribution and sales was somewhat different. Perhaps because the artificial leather footwear industry is of postwar origin, it did not have a strong and established set of dominant wholesalers. Many of the early entrants to the industry were migrants from the pre-existing rubber boots industry and relied on wholesalers tied to that industry for the distribution of their output. These wholesalers handled artificial leather dress and casual shoes as an adjunct to their main lines and did not typically have or seek access to specialist shoes retailers.

On the export side as well, except for the late 1960's when exports rose to a peak, the trading companies involved in selling to foreign markets were generally small trading houses dealing in a wide variety of miscellaneous rubber goods. There was, apparently, no substantial wholesale or trading firm involvement in the actual manufacturing operations of the

industry. The lack of specialized wholesalers had adverse implications for the domestic effectiveness of the distribution system. Concern that the industry needed to develop its own "dedicated" distribution capabilities first arose, therefore, in the early 1960's, long before LDC competition posed a problem for the industry. This early awareness and effort to develop such capabilities undoubtedly facilitated the more urgent efforts to do so following the advent of LDC competition and the rapid decline of the export market.

2.4 Adjustment Strategies

There appear to be two major strategies that have contributed to the Kobe footwear industry's remarkable adjustment to Asian NIC competition; one in the export market and the other, by far the more important, in the domestic market.

2.4.1 Export Markets

As mentioned earlier, the export market accounted for almost one-half of production in 1970 and about 95% of those exports were to the U.S.A. market. Competition from Korea and Taiwan reduced Kobe's exports to the U.S.A. to less than 2% of 1971 levels by 1978. Total exports from the Kobe sanchi declined, however, to only about 56% of the earlier figure. This preservation (in nominal terms) of the major part of export value was due to a rapid increase in exports to the U.S.S.R., a market largely unavailable to Taiwan and South Korea because of antagonistic foreign relations. Exports to the U.S.S.R.

increased by over 3,000 percent between 1971 and 1978 and, in the latter year, accounted for 98.6% of total exports.

2.4.2 Domestic Market

Ameyoko is located between the Akihabara electrical goods district and Ueno Park in Tokyo and is a bazaar of contrasts. Strung out along and under the elevated railway line that encircles central Tokyo is a warren of shops and outdoor stalls. The narrow passageways ring with the shouts of hawkers trying to bully, humour, or otherwise persuade the passing throng of browsers to buy the mackerel or mushrooms, seaweed or soya sauce, that, they insist, they are "practically giving away". Interspersed with these traditional Japanese foodstuffs are merchants peddling more exotic fare; bananas and kiwi fruit, Rolex and Tissot watches, U.S.A. army surplus battle fatigues and California Highway Patrol officer's badges; and an endless variety of imported clothing, handbags, and footwear.

It was here, in 1973, that the president of a Kobe footwear firm saw shoes that his firm had produced and exported to the U.S.A. marked "Made in U.S.A." and being sold at unbelievably high prices to trendy young adults. This, at a time when his company was rapidly losing export orders to Taiwan and Korea and was being rebuffed by the traditional domestic retail shoe stores to which it was desperately trying to gain entry.

The 1970's saw the emergence into young adulthood of a new and affluent generation of Japanese and of new businesses to serve them. Among the more striking of the latter were two new genres of popular magazines; one, specializing in weekly

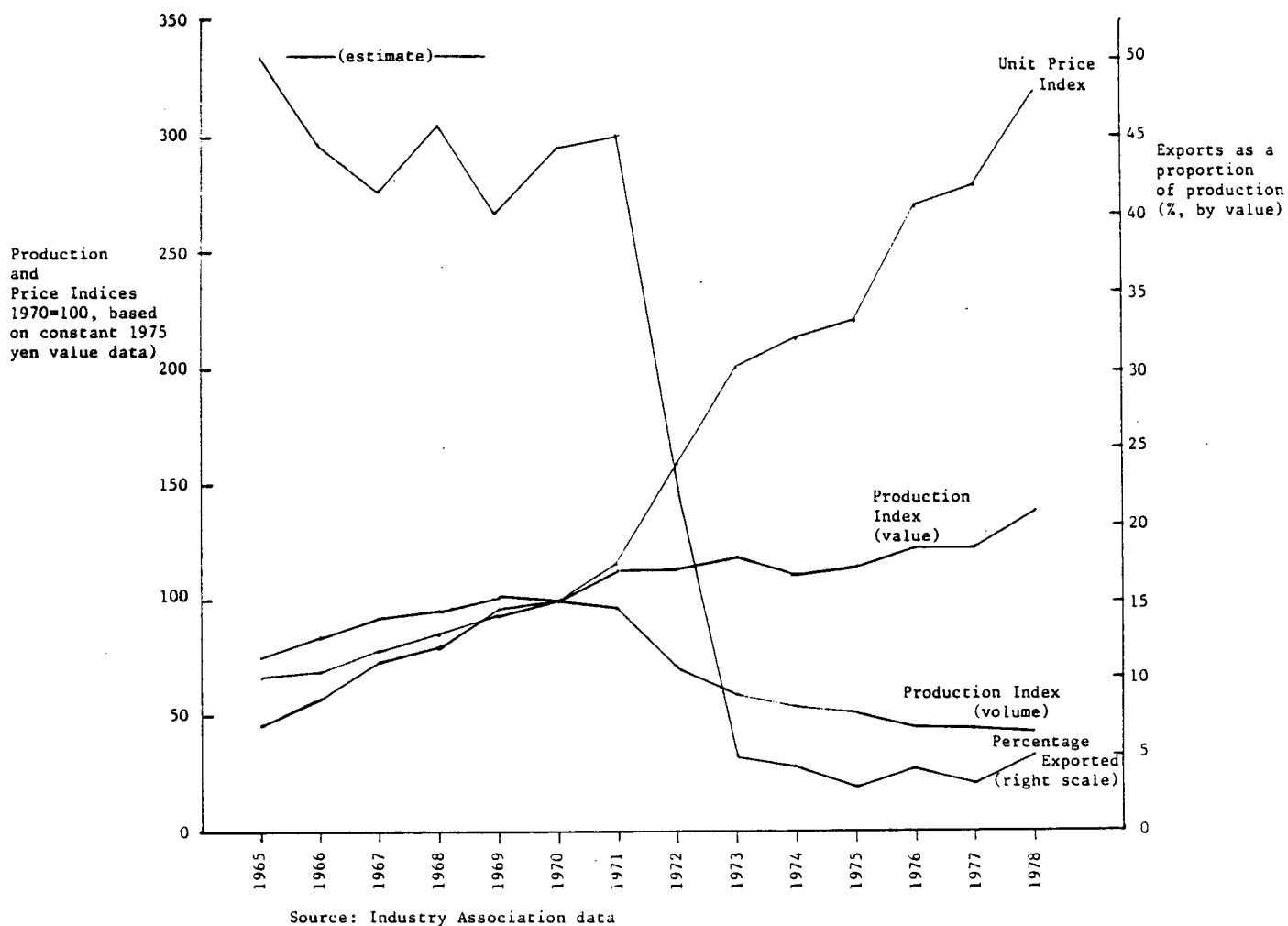
listings of part-time jobs, to help them earn pocket money (e.g., "Torabaiyu", "Arubeito Nuzu") and another, specializing in up-to-date information on the latest fads in California and elsewhere (e.g., "Popeye", "City Boy"), to help them spend it. The emergence of casual footwear as an item of personal adornment for a large population of trendy and affluent young people was a fortuitous development for the Kobe footwear industry. As the industry was driven out of the major export markets, adjustment primarily had to take place within the confines of the domestic market. The industry managed to do so by means of a change to higher quality and more fashionable lines of footwear selling at much higher prices per pair and, often, by bypassing traditional shoe stores for small fashion boutiques catering to the young adult.

Figure 12 illustrates the main features of the resulting adjustment. The volume of production and the proportion of production exported both declined rapidly. The unit price of the footwear produced showed an even more rapid increase, however, so that the average price in 1978 was, in real terms, more than three times that in 1970. As a result, the value of production showed an actual increase during the 1970-1978 period.

i. Product and Design

Firms rely largely on internal designers or external design specialists and do practically no production to customer specifications. Most of the information for new designs is

Figure 12 - Trends in Artificial Leather Footwear
Production, Exports, and Unit Prices



gathered from foreign fashion magazines and from wholesalers, except for a very few firms which have established retail sales outlets, and thus have direct feedback from the consumer. In light of the importance of design to their operations today, the firms do not appear to invest much in their design operations (around \$35,000 per year including salaries and fees for designers, in one survey) and this is not yet an area of established strength in the industry. Some firms have obtained licenses for specific product lines from foreign manufacturers or designers. Most do not have the financial resources to adopt this approach.

A notable example of cooperation is the Ramigo Group which operates as a consortium of six separate companies that jointly design and market footwear (often, in conjunction with apparel manufacturers), dividing production among the group members.

The move towards more expensive and fashionable lines of footwear has also involved an increased use of leather and other materials (textiles, natural fibres) in shoe designs and the proportion of purely artificial leather footwear in the industry's production has fallen from 98% to 53.5% between 1971 and 1978. In reflection of demographic trends, there has been a large decrease in the proportion of production devoted to infant's and children's shoes (down from 36.4% to 24.4%) and a larger increase in the production of Lady's and Men's shoes (up from 48.9% to 72.4%).

ii. Production

The industry has been and still largely is characterized by a high degree of dependence upon subcontractors who are highly mobile between client manufacturers. The labour force, as well, has tended to be highly mobile. These characteristics may have been useful when large and irregular export orders were a major feature in the industry but they have not suited the needs of the new markets being served.

The domestic market for fashionable shoes requires the maintenance of a degree of quality meeting the high standards of the Japanese consumer. At the same time, an extraordinary variety of footwear must be provided. The larger manufacturers may produce more than 1,000 distinct items in a year (including variations in colour and size) and the average retail shoe store in Japan, according to industry sources, carries two or three times more items in stock than would a comparable North American store. Furthermore, because of the emphasis on fashionability and the unpredictability of demand for any given item, an ability to rapidly fill orders via new production is essential.

All of this has called for a much higher degree of coordination between the operations of subcontractors and manufacturers in order to meet delivery schedules and maintain quality standards. Some manufacturers are dealing with the problem by reducing their reliance on subcontractors, so far as this is possible, or by forming clusters of related firms under their control. Others, less able to adopt these approaches, are

making efforts to maintain a more steady flow of work to selected subcontractors (even at some cost to the rate of utilization of their own in-house capacity) and to include subcontracting firms and their employees in company celebrations and recreation activities. Overall, the effort is to make more intensive use of a smaller number of more intimately integrated subcontractors.

The increased use of materials other than artificial leather has increased the need for labour-intensive production stages somewhat and this has supported a greater emphasis on cottage industry types of activities, especially those involving sewing and other decorative operations. The recently depressed state of the shipbuilding industry in Kobe has also apparently served to increase the supply of such workers and to moderate increases in the rates of pay for cottage-based piecework. Thus, these workers are likely to continue to be an important part of the industry for the foreseeable future. Some of the larger firms have imported new equipment from Germany and Italy, but there is some evidence that it is not being efficiently utilized and will not be unless and until it is integrated into a much more heavily mechanized (and capital-intensive) overall production process.

iii. Sales

The relatively recent formation of this industry meant that there was no specialized set of wholesalers to effectively

handle the distribution of its output.⁸⁹ In reflection of this, the industry began efforts to develop its own distribution networks as early as the mid-1960's and had the benefit of government assistance (under the SME Modernization and Advancement Programme) for those efforts. The efforts of individual, larger companies were more effective and some, such as Kobe Leather Cloth, even established retail sales outlets in the mid-1960's. The problem of developing domestic distribution channels took on its greatest urgency, however, with the loss of export markets in the 1970's. Kobe Leather Cloth, for example, expanded its retail sales network to a total of 43 stores by 1979. Other, smaller firms have adopted other approaches, such as cooperative marketing and tie-ins with apparel producers.

The change to a focus upon the production of fashionable shoes for the domestic market has meant a change (relative to earlier production for export) to small-lot production of a wide variety of styles. This too, has complicated the distribution problem and has created a complex inventory control problem for manufacturers. The switch from export to domestic markets has also meant a change in the operating capital requirements of firms. While almost all exports were paid for in cash at the time of shipment, firms must now wait, on average, for more than 130 days to receive payment from wholesalers and 30 to 45 days to receive payment from retailers.

⁸⁹ The manufacturer, mentioned at the outset of this section, who was trying to break into the domestic market had to begin by literally putting his product into a bag and going from door to door in the retail shopping districts.

Almost all (96.9%) of production is under the brand name of the manufacturer but, in practice, company brand names do not have any wide recognition among consumers. Thus, success is largely dependent on catching the secular swing of fashion (not creating it) and getting the right product out to the retail level more quickly than competitors.

The perception of imports of competitive shoes from South Korea and Taiwan is rather favourable, in terms of their quality, among retail store managers. Thus far, however, they have a poor image in the mind of the consumer and do not presently pose an important threat to Japanese producers in the domestic market. The lack of established brand names and the derivative nature of the design process in the Japanese industry today suggest that the unfavourable image of Asian NIC consumer goods in the mind of the Japanese consumer may be all that is holding back considerably greater competition from producers in Taiwan and South Korea. This may suffice for some time but it is a slim hope to build on. The stronger firms, if not the industry as a whole, seem aware of this and continue to attempt a strengthening of sales capabilities and a more overt shift of the corporate focus away from "production" and onto "design". It is possible that some of these firms will eventually, on the basis of a strong domestic position, be capable of exporting some lines abroad. Indeed, in one of the factories visited, the current production run of ladies shoes was destined, of all places, for Southeast Asia, where they enjoy something of a reputation as "high-style imported luxury goods", at a price the

locals can afford.

2.5 Summary

In summary, the industry has adjusted by means of a change to the production of small lot-size, high variety lines of shoes for the domestic market. It has been aided by an increase in the domestic demand for such shoes. In line with the move to more fashionable and higher-priced shoes, the industry has moved away from the exclusive use of artificial leather and now uses a more varied range of materials, including natural leather. The change has not simply required the introduction of a stream of new designs. It also has implications for the organization of production and distribution and for the financial and managerial operations of the firms involved.

While it has been a notably successful adjustment to date, it seems clear that much remains to be done before the industry has been truly transformed into a stable "fashion"-based industry. Materials costs as a percentage of total costs have not decreased, contrary to what one might expect in an industry seeking to increase value-added. Moreover, at present, despite the universal use of brand names, the manufacturers themselves do not have a high degree of recognition among customers.

Thus, to a considerable extent, the Japanese industry is protected from LDC competition in its home market primarily by market characteristics such as small lot-size, volatile demand, and complex distribution channels; as well as by the presently poor image of Asian NIC products among Japanese consumers. These provide formidable protection to Japanese producers but

much less than they would enjoy if they also had more substantial in-house design capabilities and strong brand-recognition among consumers.

3. UMBRELLAS

3.1 Introduction

In 1970, Japan was the world's largest producer and largest exporter of umbrellas.⁹⁰ The Japanese industry enjoyed one of the world's largest domestic markets and, moreover, had exported a record 15 million units, a figure that was almost matched in the following year.

Eight years later, in February of 1979, the Japan Umbrella Industry Export Association closed its doors for lack of business. The industry had been driven out of its traditional export markets by competitors in the Asian NICs. In the U.S.A., for example, Japanese exports fell from 8 million units in 1971 to 441,000 units in 1978. The industry, moreover, was rapidly losing its domestic market to these same competitors who, by 1977, were exporting almost as many units to the Japanese market, alone, as the Japanese industry had exported to the entire world in its peak year of 1970. There must be few industries which have faced a more rapid decline in the face of LDC competition, or a more desperate need to adjust.

⁹⁰ The discussion here is based on interviews with representatives of the Small and Medium Enterprise Promotion Agency regarding their internal studies of the industry and with representatives of the MITI Seikatsu Sangyokyo and representatives of the Osaka Prefecture Economic Research Institute of Commerce and Industry and on the following sources: Fushita no Chushokogyo no Kokusaikan Kyoso no Shomondai to Jittai, V 2 (Osaka Prefecture Economic Research Institute of Commerce and Industry, Osaka, 1971) pp 69-91; "Yogasa" in, Kaigai Shijo July, 1979.

3.2 Background

Western-style umbrellas were first manufactured in Japan in the early 1890's and, very early on, producers escaped the confines of the domestic market by means of exports. In the early 1900's most exports were to Korea and Manchuria but grew to include more distant markets in Hong Kong, India, and Africa. Pre-Second World War production peaked in 1937 with a total output of 1,350,000. umbrellas, of which around 40% were exported.

In the postwar period there was a rapid growth in the size of the domestic market as western-style umbrellas gained in popularity at the expense of the traditional Japanese-style umbrellas made of bamboo and oiled paper. By 1955 the two industries employed about the same number of workers but by 1963 the western-style umbrella industry employed nearly ten times as many people as the traditional industry.

There were also major changes on the export side. While sales of finished umbrellas to former export markets in Asia declined, they were replaced by a rapid growth in sales of umbrella frames (the metal skeleton of the umbrella) to these same markets. At the same time, exports to North America commenced and by the end of the 1950's accounted for as much as 50% of total industry exports. By 1961, Japan accounted for about 88% of total U.S.A. umbrella imports.

Japanese producers were also capturing market share from domestic U.S.A. producers who lobbied for government protection from Japanese competition. In response, Japan, in 1959, formed

the Japan Umbrella Industry Export Association which was charged, among other things, with the responsibility of regulating "voluntary" export restraints vis-a-vis the U.S.A. market. With these restraints on growth in the U.S.A. market, the industry directed increased attention to markets in Europe and by the mid-1960's held a dominant share of umbrella imports in a number of European countries.

Here, too, they encountered protectionism and the need to impose restraints on the rate of growth of their exports to those markets. In 1964, however, the U.S.A. government rejected, for the second time, domestic producers' demands for protection and this freed the industry for a more vigorous effort to sell to the U.S.A. market. In Europe too, the local producers had accepted the inevitable and began to source semi-finished umbrellas in Japan. By the late 1960's, Europe accounted for 32% of Japanese exports of umbrellas and for 49% of its exports of umbrella frames.

The Japanese industry has accounted for numerous inventions and innovations in umbrella design, resulting in over 200 patents and "utility patents".⁹¹ Most of these are of minor value and not enforceable internationally. Moreover, even in the domestic market, many of them will expire in the next few years. The most important innovation, in terms of subsequent popularity, was the introduction of the one-touch "automatic"

⁹¹ Japanese utility patents ("Jitsuyo Shin'an") are a proprietary right granted for ten years for minor innovations and on the basis of criteria less rigorous than those required for patents.

umbrella. This originated, outside of the industry, in a promotional idea of the Toyota automobile sales subsidiary; it was devised as a convenience for people when getting out of cars in the rain. The industry has also apparently developed some particularly effective ways of waterproofing nylon fabric, to the extent that the technique is now being applied to mountaineering tents.

3.3 Structure Of The Industry

Tokyo and Osaka are the two largest centres for umbrella production but Osaka has traditionally been the more dominant and accounts for around 90% of Japanese exports and 50% of total production. Thus, while both centres have been strongly affected by LDC competition, it is the Osaka sanchi that has been hit first and hardest. Moreover, as the Osaka region has long been more dependent on light industry than Tokyo, a larger proportion of the total industrial base has been adversely affected by LDC competition. This makes adjustment in any single industry, such as umbrellas, a more acute problem. In either case, however, the structure of the industry is such that the implications of LDC competition and the potential for firms to adjust to it, vary considerably among the industry participants.

This industry, like much of Japanese light industry, utilizes a fine division of labour; in which various stages of production are carried out by distinct sub-industries under the coordination of a smaller number of wholesalers or wholesaler/manufacturers. The industry relies heavily on urban

"cottage" workers who operate out of their own homes in lower-income neighbourhoods (especially for much of the assembly and sub-assembly operations). These workers are not usually detected in official statistics. In 1977, for example, the national industrial census indicates a total of about 6,000 employees in the industry, whereas industry association data shows a total of about 50,000 people were occupied in the industry as a whole. About 75% of these workers were privately engaged in at-home piecework production. Many, if not most, of them were probably involved in the industry on a part-time basis only.

This traditional pattern of production remains the most important to the industry but, with the rapid growth of production volumes in the late 1950's, some of the larger wholesaler/manufacturers established final assembly plants in surrounding rural areas for the production of high-volume, large lot-size lines of umbrellas. Table 11 indicates the distribution of companies and workers across the various stages of production, circa 1977. Figure 13 illustrates the overall patterns of production in the industry. A number of features deserve special mention.

Most wholesalers, to one degree or another, act as wholesaler/manufacturers in the sense that they are involved in coordinating the production process. The distribution network from these firms to the retail level is quite direct and in many respects is similar to the pattern in some apparel industries. Most sales are directly to individual stores at the retail level

Table 11 - Distribution of Firms and Workers in the
Umbrella Industry, circa 1977

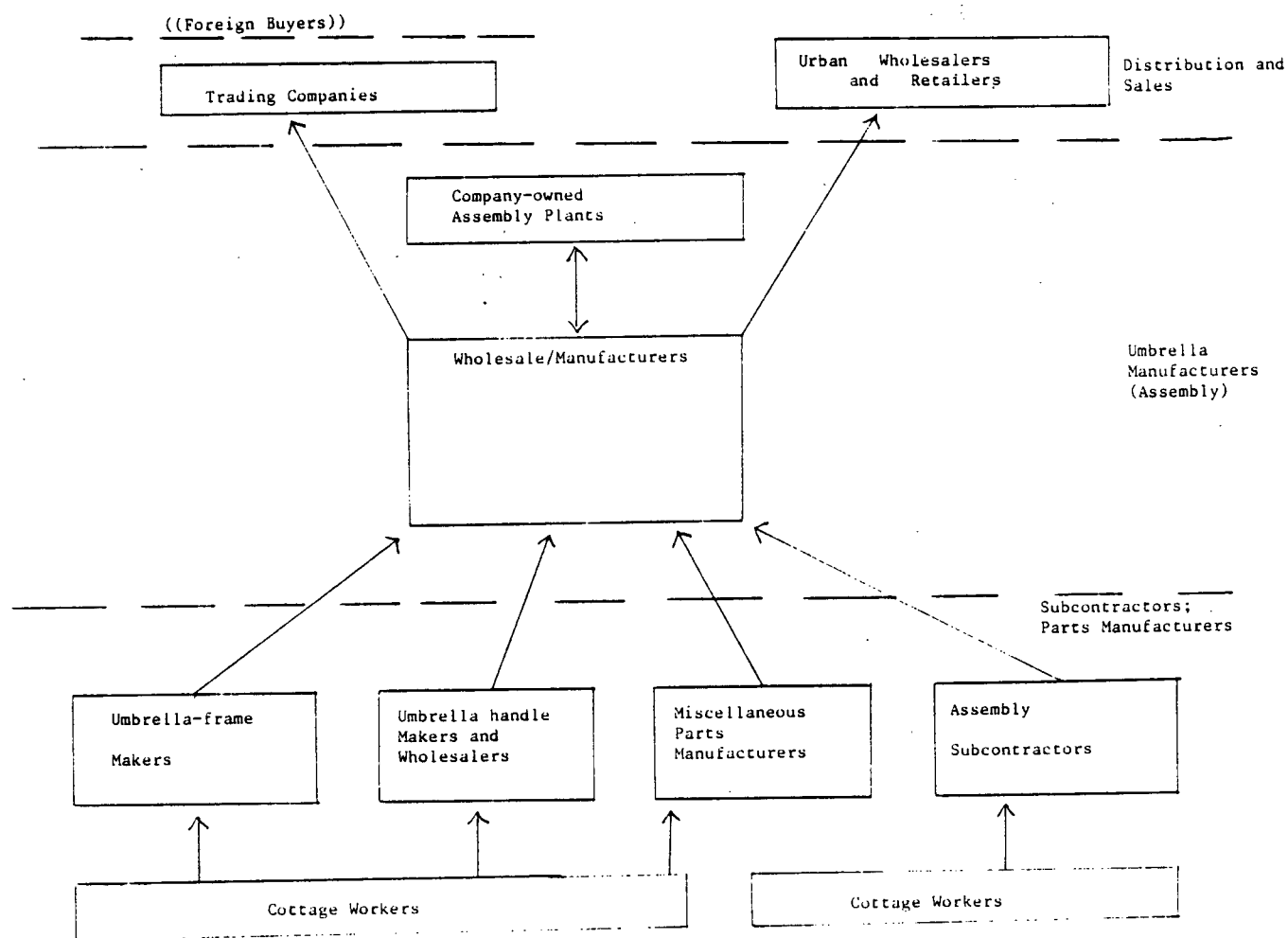
Industry Participants	No. of Firms	No. of Workers	Workers per Firm
Umbrella Manufacturing	1,100	20,100	/
Manufacturers	450	6,600	14.7
Subcontractors	650	1,500	2.3
Cottage workers	/	12,000	/
Umbrella Frames Manufacturing	340	30,051	/
Manufacturers	92	2,081	22.6
Subcontractors	248	1,970	7.9
Cottage Workers	/	26,000	/
Umbrella Handles and other parts	99	820	/
Manufacturers	39	220	5.6
Subcontractors	60	160	2.7
Cottage workers	/	440	/
Totals	1,539 ¹	50,971	8.1 ¹

NOTE

1. Manufacturers and Subcontractors only

Source: 1977 Industry Association survey

Figure 13 - Pattern of Production and Distribution in the Umbrella Industry



Source: Industry Association data

(for the domestic market) or to export trading companies (for foreign markets). Practically all retail outlets and most of the wholesaler/manufacturers are not specialized in umbrella sales. They generally deal in a number of other personal accessories such as scarves, mufflers, shawls, etc.

The umbrella frame manufacturers have a distinct sense of independence from the umbrella manufacturers. They are, in fact, categorized as a separate industry in national industrial statistics. Many of the firms are as large as or larger than finished umbrella manufacturers and they have, as an industry, much more of a "production-" than a "sales-" or "demand-orientation. However, as almost all of their production is sold to the wholesaler/manufacturers they are, despite a nominal independence, structurally dependent on them. Only a few of the frame producers are engaged in the production of other products, such as light pipe for agricultural use and racks for drying clothes.

The producers of parts and accessories such as handles, clips, and locking mechanisms generally employ equipment and skills which are particular to the industry and not readily transferable to other uses. The average age in this segment of the industry, moreover, is around 50 and the people involved have little opportunity to enter new lines of work.

The approximately 75% of the workforce which falls into the cottage worker category largely works out of private homes in the poorer urban residential areas utilizing minimal equipment (a couple of sewing machines, for example). Their role is

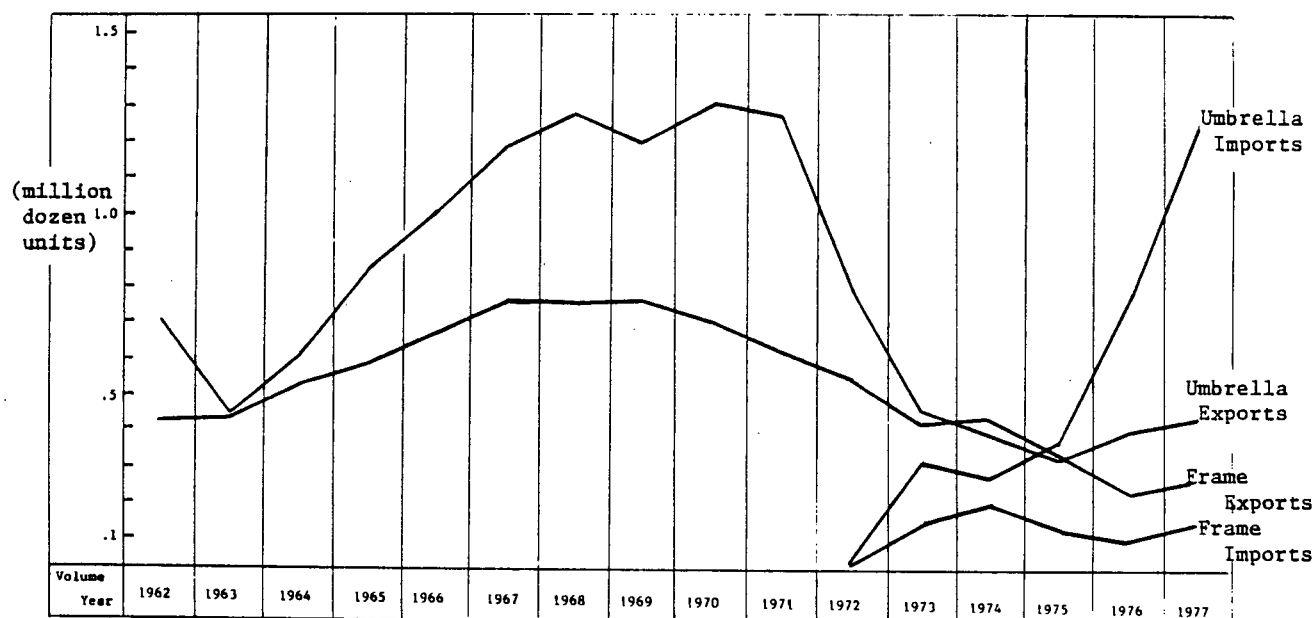
similar to that of piecework cottage workers in the apparel industry.

3.4 Advent Of Asian NIC Competition

In part because of the export restraints under which they were operating, the Japanese producers began to lose share to Asian NIC manufacturers in the first half of the 1960's. Thus, Japan (as the largest supplier) was forced to agree to "voluntary" export restraint, while other smaller supplier countries faced no, or fewer, such restrictions on their exports. The initial competition came from Hong Kong but South Korea and, especially, Taiwan soon came to be of far greater importance. None of these countries, initially, face the "voluntary" export restraints imposed upon Japanese producers.

While Japan's share of the U.S.A. import market declined from 88% to 50% during the 1960's, the absolute volume of exports to that and other foreign markets continued to increase throughout the 1960's. It was not until the early 1970's that exchange rate changes, the introduction of preferential tariffs for LDC manufactures, and a surge in Japanese labour costs led to a rapid deterioration in the Japanese competitive position. Figure 14 traces the changes in Japanese exports and imports for the period from 1962 to 1977. As can be seen in the figure, Japanese exports rapidly declined and imports increased from 1972 onwards. By 1977, imports nearly equalled total Japanese exports in 1971 and exports had fallen to one-third of the earlier level. Asian NIC imports had captured about 40% of the total Japanese market (by volume) in 1978. About 60% of these

Figure 14 - Trends in Japanese Exports and Imports of Umbrellas; 1962-1977



Source: Industry Association data.

imports were from Korea and 35% from Taiwan.

3.5 Adjustment Strategies

We will discuss separately adjustment strategies which have general relevance for the industry as a whole and those which have a more differential impact on the various participants in the industry.

3.5.1 Larger Wholesaler/Manufacturers

There is considerable division in the industry with respect to the impact of Asian NIC production. At the root of this division is the fact that wholesaler/manufacturers have much less of a direct stake in domestic production facilities than do other participants in the industry. Thus, many of them have been able to maintain their sales volumes (in the domestic market) by means of imports from the Asian NICs, which they market through their existing direct network of contacts at the retail level. In fact, about 70% of Japanese imports from Taiwan and South Korea are carried out by major wholesaler/manufacturers within the Japanese industry. This reflects, at least in part, the fact that eleven Japanese firms established overseas manufacturing facilities (7 in Taiwan and 4 in South Korea) between 1970 and 1974. While details are unclear, it appears that almost all of this overseas production is for export to Japan. In 1977, about 60% of Japanese imports were from Korea and 35% from Taiwan. Conversely, exports to Japan accounted for about 62% of total Korean exports but only a few percentage points of the much larger Taiwanese industry.

This means of "adjustment" to Asian NIC competition has only been possible for the wholesaler/manufacturers because their involvement in domestic production, while central, was largely based not on equity but on control and coordination. The bulk of the investment of the major wholesaler/manufacturers was in facilities and skills relevant to distribution and sales and these can be supported as well by imports as by domestically produced umbrellas.

3.5.2 The Industry As A Whole

For the industry, per se, there appear to be four major adjustment strategies that have any prospect of long-term viability; one for the export market and the others for the domestic market.

i. Export Markets

As sales to the major traditional export markets went into a steep decline in the early 1970's, the industry refocussed its export efforts on the eastern bloc nations, especially the U.S.S.R. The timing and amount of sales to the U.S.S.R. have been a major counterbalance to the decline in exports to the U.S.A. Because of the antagonistic foreign relations between the U.S.S.R. and both Taiwan and South Korea, Japan has faced no competition from them in this market.⁹² This antagonism is

⁹² Though it is worth noting that some small proportion of exports to these countries apparently consists of Taiwanese or South Korean production that has been "laundered" by passing through the hands of a Japanese wholesaler/manufacturer.

liable to continue for the foreseeable future and, to the extent it does, this represents a viable strategy for the medium-term. Of course, should the advantage of lower cost production pass to other LDCs with which the east bloc countries have better relations, Japanese exports to these markets would rapidly evaporate.

ii. Domestic Market

The domestic Japanese market is large (in excess of 3 million dozen per year) and contains a substantial stable core of demand for more fashionable or higher quality umbrellas selling at higher prices. Production to meet this market involves large variety, small lot sizes, and prompt delivery to retail outlets. In addition, the major department stores, which are important retail outlets for this type of product, usually sell on a consignment basis with no restrictions on the return of unsold goods to the manufacturer. These factors will continue to favour the continued existence of some volume of domestic production; though considerably less than current capacity. Thus, a pervasive problem underlying the whole issue of adjustment is the need to reduce capacity down to levels commensurate with the size of this smaller market. Against this background, there appears to be a limited repertoire of strategies; all of which ultimately hinge on a suitable reduction in overall industry capacity.

- Brand Differentiation and Recourse to Patent Protection

The bulk of patents and utility patents in the industry were developed by umbrella frame and parts manufacturers and they have, respectively, pooled their rights into two cooperatives. Each of these cooperatives attempts to differentiate the production of member firms from the general run of production by means of a cooperative association seal, the use of which is administered by the cooperative. Beyond that, the cooperatives act to inhibit the importation of umbrellas incorporating, without approval, any of the features on which proprietary rights are held. It is not clear whether this has been more effective in terms of creating product differentiation for domestic production or legal barriers to imports or, indeed, if it has been very effective at all. In any case, many of the proprietary rights involved are due to expire in the next few years and, despite various efforts, no major new innovations have arisen in recent years.

- Change of Business Activity

Most of the wholesaler/manufacturers have long been involved in the distribution of "related" products such as scarves, mufflers, etc. The challenge of Asian NIC umbrella imports is not so great for these firms, insofar as they co-opt the challenge by importing and distributing Asian NIC output.

Nevertheless, firms with direct investment in those countries are better equipped than others to adopt this approach⁹³ Thus, some of the wholesaler/manufacturers have been led to expand their lines of related products or, at least, to place greater emphasis on their existing ones. Some of those who had earlier been export specialists, and did not have extensive domestic distribution capabilities, have withdrawn entirely from the business.

This strategy has been more fundamentally linked to the issue of industrial adjustment, however, in the case of frame producers and smaller subcontractors; some of whom have moved "downstream" into the production and distribution of finished umbrellas. This has been a means of supporting their investment in production facilities which have experienced a decline in orders from the large wholesaler/manufacturers; who are relying on imports or on a proportionately greater use of their own in-house facilities.

- Maintenance of Price-competitiveness

While the ability to compete in the lowest-priced lines of umbrellas is probably lost forever, there is some expectation that price-competitiveness is still an important factor in some portion of the vast medium-priced range of umbrellas and that it can be maintained by means of cost reductions and productivity

⁹³ Though even they face the threat of being bypassed through direct imports by large retail chains. While this has already occurred, the volumes involved are still trivially small.

increases.

The major producers of both frames and umbrellas have apparently not increased the unit fees paid to subcontractors and parts producers for eight years or more. This has meant a considerable reduction in the real income of these firms. Many of them have, in consequence, been unable to hold onto their employees and have been reverting to smaller-scale, family-based operations utilizing a higher proportion of family members in their workforce.

In addition, there have been efforts by the major producers of both frames and umbrellas to lower costs and improve productivity by shifting the location of production, domestically. This has generally taken the pattern of moving the bulk of lower-priced umbrella production into nearby rural areas and, at the same time, moving the production of higher-priced lines away from subcontractors and into internal, urban production facilities. This has contributed to the development of a population of displaced smaller firms and ex-subcontractors in urban areas which, for the moment at least, engage in the production of the lowest-priced lines of umbrellas in direct competition with Asian NIC producers.

The cottage workers have, of course, also been strongly affected by adjustment taking place in the industry. The utilization of such workers has apparently been declining fairly rapidly. Data regarding this group of workers are sparse but it appears that most of them have a high degree of inter-industry mobility. Those involved in the production and installation of

umbrella fabric are especially mobile, as they can readily switch to the apparel industry. In reflection of their favourable alternative opportunities, the piecework rates paid to those of them who have remained in the industry have steadily increased, even when they were working for subcontractors who had not received an increase in their fees.

4. CERAMIC TILE

4.1 Introduction

The Japanese ceramic tile industry⁹⁴ has had remarkable success in international markets. During the 1960's, the Japanese industry came close to monopolizing exports to a number of major foreign markets. In 1969, for example, Japan's share of the mosaic tile import markets in the U.S.A., Canada, and West Germany were, respectively, 98.5%, 94.2%, and 97.5%. Japan was also the dominant foreign supplier to the far smaller markets in surrounding developing countries such as Korea and Taiwan, where the "infant" local industries could not meet the needs of the domestic construction industries.

In the early 1970's, however, the Korean industry came of age and began to export mosaic tile. Korean gains of market share were rapid and were almost exactly matched in major markets by a corresponding Japanese loss of market share. As a result, Japan's share in the import markets of the U.S.A., Canada, and West Germany had by 1979 fallen, respectively, to 44%, 25%, and 22%. The absolute volume of Japanese exports

⁹⁴ The discussion here is based on interviews with industry association representatives in Tokyo (August, 1980) and on discussions with representatives of JETRO and of the Small and Medium Enterprise Promotion Agency regarding their internal studies of the Japanese and Korean industries and on the following sources: 1. "Nagoya no Yushutsu Tojiki" in, Shoko Aichi May, 1979 ((Aichiken Shokobu), 2. "Endakashita no Tojiki Sangyo" in, Joho Chosa Repoto No. 394, 1979 (Chushokigyo Joho Senta), 3. "Tojiki Kogyo no Kyoteki Shomondai" in, Seramikusu No. 5, 1979, 4. Itakura, K. (ed.), Jiba Sangyo no Machi (Furuima Shoin, Tokyo, 1978), pp174-186, 5. MITI, Showa Gojunendo no Seikatsuyohin Sangyo (MITI, Tokyo, 1976) pp374-386.

continued to increase until 1973 but by 1979 had been reduced by one-half, as had total Japanese production. Over the same period, around 20% of the firms in the Japanese industry disappeared through bankruptcy or closure and employment fell to about 40% of the level at the beginning of the decade. Despite this, the industry was reckoned in 1979 to still have excess capacity of the order of 40% to 50%. In reflection of this, the entire industry was operating at marginal profitability and was expected to continue to do so until such time as the number of active firms was substantially reduced or the challenge of LDC competition had been successfully met.

4.2 Background

4.2.1 The Tokai Ceramics Region

Japanese porcelain has been internationally renowned for centuries and has even had an influence on the designs of European producers. Indeed, even some individual sanchi within Japan, such as Kutani, have become well-known outside of Japan.⁹⁵ There are a far larger number of individual sanchi which have established reputations, within Japan, for the production of distinctive styles of pottery. The Japanese word "setomono", meaning "pottery", is in fact derived from the name of one such sanchi which is centred on the town of Seto, located 20 kilometres inland from the port of Nagoya. It is a fitting choice of synonym as Seto is one of the most prominent pottery

⁹⁵ The Royal Doulton company in the United Kingdom, for example, has a "Kutani" line of porcelain in its product line.

producing towns in the Tokai region, where the bulk of Japanese ceramics products are manufactured.

The Tokai ceramics region straddles the border of Gifu and Aichi prefectures near the large port city of Nagoya on the Inland Sea. The region has, historically, benefitted from a location along the Tokaido route linking the major cities of Japan and from plentiful supplies of fresh water, clay, and red pine forests for firewood. With the opening of Japan to international commerce following the Meiji restoration, the port of Nagoya facilitated the establishment of the region as a producer of pottery and chinaware for export. It was not, however, until World War I temporarily cut the dominant European producers out of the world market that the industry was fully established as a major international supplier.

The nature of foreign demand was varied and led the Tokai manufacturers into a much wider variety of production, including copies of the pottery and chinaware styles associated with other regions of Japan. This required the development of proficiency in a wide variety of distinct production techniques. Eventually, the technical competence of the region came to include almost all of the traditional production techniques of the various, geographically dispersed, pottery-producing regions of Japan.

4.2.2 The Ceramic Tile Industry

In the aftermath of the Second World War the Tokai ceramics industry underwent a rapid revival and further diversification beyond the traditional pottery, ceramic novelty items, and roofing tiles. Production of ceramics for the growing domestic electrical goods industry and of such items as ceramic drain pipe, sanitary fixtures, and tile to support the reconstruction and modernization of buildings and housing all contributed to growth. The ceramic tile industry showed particularly rapid growth with the commencement of substantial exports in the early 1960's. By 1969, Japan held 69% of the total U.S.A. import market for ceramic tile of all types.

4.3 Industry Structure

The Japanese tile industry can be broadly divided into three main product types; mosaic tile, interior wall tile, and exterior and flooring tile. These correspond, roughly, to three distinct sets of manufacturers, though some firms do produce some quantities of other types as a supplement to production of their speciality. Table 12 indicates the relative volume of production, circa 1968, for each type of tile by market.

4.3.1 Tile Types And The Role Of Exports

In the postwar period the Japanese have displayed a particular affinity for the use of tile on the exterior of new buildings and houses. It is not unusual to see the exterior walls of entire buildings, and even private homes, completely surfaced in tile. This has supported the development of a large

Table 12 - Volume of Ceramic Tile Production by Type and Market, circa 1968

Market	Mosaic (Market %)	Indoor Wall (Market %)	Exterior (Market %)	All Tile (Market %)
Domestic Type %	(22) 3743.5 15.8	(47) 7550.3 31.9	(96) 124065 52.3	237000 100
Export Type %	(78) 135873 60.4	(53) 8378.6 37.2	(4) 5273 12.4	224932 100
Overall Type %	(100) 173308 37.5	(100) 159289 34.5	(100) 129338 28.0	461935 100

Data Source: Chushokigyo Shinko Jigyodan, internal export, 1976.

domestic market for exterior tile. Interior wall tile has enjoyed a more limited, but still substantial, domestic market, primarily for application in bathrooms and kitchens. In contrast to the other two types of tile, mosaic tile has had a relatively small domestic market.

In terms of export markets, however, the situation was reversed; with mosaic tile having the largest export market, followed by interior wall tile. Exterior and floor tile exports were small both in absolute terms and relative to total production.

4.3.2 Different Production Processes And Firm Characteristics

The three types of tile involve somewhat different production processes. Interior wall tile requires two firings at different temperatures and, thus, two distinct sets of tunnel kilns are used. Its production process is the most capital-intensive of the three types and firms in this sector are much larger than those producing the other two types. Practically all of the interior wall tile producers engage in continuous line production.

The production of exterior and floor tile requires only one firing and utilizes presses and, occasionally, injection molding equipment (to produce special surface effects) to form the tile. The majority of the firms in this part of the industry also engage in line production and tend to be integrated across all production stages from clay preparation to finished product. Average firm size is smaller than for wall tile but larger than that of mosaic tile manufacturers.

The production of mosaic tile does not utilize injection molding equipment but, aside from this, the production process for the individual tiles is essentially the same as for exterior tile. The major difference is that the finished product, in the case of mosaic tile, is not the individual tile, itself, but an array of such tiles attached to a paper or net backing for ease of installation. This means that once the individual tiles have been produced they need to be arranged into the desired pattern and glued to the backing material. This is a highly labour-intensive stage of production and accounts for a substantial proportion of total production costs.

In the production of mosaic tile there is a division of labour among firms of three types; clay production and preparation specialists, kiln operators producing the individual tiles, and firms specializing in aggregating the individual tiles into a finished product. There are some kiln operators who also engage in the assembly of the finished product. The most prominent participants in this final stage of production are, however, local wholesaler/manufacturers who rely extensively on local labour and subcontractors for the production of mosaic tile sets. In reflection of this division of labour and relatively high labour-intensity, the average size of mosaic tile producers is smaller than for producers of the other two types and productivity is both lower and has grown more slowly. Productivity (in tons of annual output per employee), among mosaic tile manufacturers in 1965 was only one-half that of interior wall tile manufacturers and this fell to

one-third of that standard by 1975.

4.3.3 Sales And Distribution

There are also substantial differences among manufacturers of tile in terms of the sales and distribution channels used. These differences, however, do not correspond exactly to the three different tile types.

Domestically, the manufacturers of interior wall tile and the larger firms among the manufacturers of exterior tile generally sell their output either directly to construction contractors or to urban wholesalers. In contrast to this, the mosaic tile manufacturers and the smaller exterior tile producers sell the bulk of their output (say, 70%) to local, sanchi-based wholesalers, some of whom are also involved in producing finished mosaic sets out of individual tile. These local wholesalers then market the tile to construction contractors or to urban wholesalers serving the construction industry.

With respect to exports, manufacturers of all types of tile are highly dependent upon trading companies but only the producers of interior wall tile and mosaic tile have had any major dependence on export markets. Of these two, the producers of wall tile are, by far, the least dependent on trading companies and appear to sell as much as 40% of their total exports directly to importers in foreign markets. Mosaic tile producers, on the other hand, are almost totally dependent on trading companies and it appears that a substantial proportion of the output destined for export involves a further,

intermediate, dependence on sanchi-based wholesalers.

4.4 The Advent Of LDC Competition

The major competitors of the Japanese ceramic tile industry in international markets (aside from local, domestic suppliers in foreign markets) are producers based in Korea. The Korean industry enjoys, in addition to a low-cost, highly educated labour force, a plentiful supply of the necessary clay materials and an even longer ceramics tradition than that of Japan. Indeed, the direct antecedents of Japanese fine ceramics lay in the traditional Korean industry, from which they derive.⁹⁶

Korean production of ceramic tile, however, is of relatively recent origin and began its major growth in the 1960's in response to the expanding domestic construction market. It was protected as an "infant" industry and imports, largely from Japan, were permitted only in order to meet the shortfall between domestic demand and production. Expansion of the industry apparently involved the importation of substantial amounts of plant and equipment from Japan. These latter imports benefitted from low-cost financing provided, among others, by the Asian Development Bank and by the Japan Export-Import Bank.

Production of mosaic tile in the Korean industry, compared to that in Japan, is carried out by fewer, and much larger, firms; as Table 13 indicates. The four largest firms account

⁹⁶ See, for example, the discussion of the connection between the introduction of Korean pottery and other artisanal techniques and the dissemination of Buddhism to Japan from Korea; in W. T. de Bary (ed.), Sources of Japanese Tradition, Volume 1 (New York, Columbia University Press, 1958) pp 92-93.

for somewhat less than 50% of total production. The balance of production is carried out by seven other firms which, while smaller, are larger than the norm in the Japanese industry.

By the late 1960's, the Korean industry had supplanted most imports and had begun to export mosaic tile to the U.S.A. market. The volume of exports was fifteen times the 1971 level by 1975 and the export share of total mosaic tile production rose from about 8% to over 54% over the same period. Mosaic tile continued to dominate Korean exports and accounted for 89% of total exports by volume in 1975. As in Japan, mosaic tile was produced primarily for export markets and about 90% of total production was exported.

As Table 14 indicates, the growth of Korean tile exports rapidly eroded Japanese market share in foreign markets. Indeed, by some estimates, the Korean producers of mosaic tile had overtaken their Japanese counterparts in export markets by 1979. What is more certain is that the development of the Korean industry was the most immediate cause of the rapid decline of the Japanese industry during the 1970's.

4.5 Adjustment

4.5.1 The Impact Of LDC Competition

The impact of foreign competitors on the Japanese ceramic tile industry has been almost wholly limited to export markets. It has, moreover, differed considerably among the three types of tile.

The volume of exterior and floor tile exports actually

Table 13 - A Comparison of Firm Size in the Korean and Japanese Industries

Firm Size (No. of Employees)	Korea				Japan	
	All Tile		Mosaic		Mosaic	
	No.	%	No.	%	No.	%
50 or less	4	17	2	17	172	76
51 to 200	13	54	5	46	41	18
201 or more	7	29	4	36	14	6
Total Firms	24	100	11	100	227	100

Sources: Korea; JETRO internal report
Japan; Industry Association data

Table 14 - Trends in Japanese and Korean Market Share in
Some Major Markets

	U.S.A.		Canada		W. Germany		Australia		4 Country Total	
	J A P A N	K O R E A	J A P A N	K O R E A	J A P A N	K O R E A	J A P A N	K O R E A	J A P A N	K O R E A
1969	98.5	.3	94.2	.2	97.5	.6	93.9	3.5	97.2	.7
1970	98.4	.0	93.1	.0	97.7	.0	93.6	3.3	96.7	.6
1971	98.0	.0	90.2	.0	98.8	.0	95.9	1.2	97.2	.2
1972	94.1	4.4	87.3	.0	89.3	6.9	95.1	.2	92.1	3.7
1973	89.8	10.0	83.0	2.4	60.0	30.3	98.7	.0	84.0	11.1
1974	78.8	17.8	68.8	5.5	38.4	46.7	98.0	.5	77.5	14.3
1975	71.4	22.4	56.1	6.0	26.3	61.0	95.5	1.5	64.4	23.2
1976	64.1	28.2	53.4	18.1	20.2	54.0	87.9	7.9	63.4	23.7
1977	58.6	34.7	47.8	26.4	18.0	47.6	87.0	8.9	60.6	26.6
1978	59.1	36.7	34.6	17.8	15.9	30.0	82.9	10.1	55.3	24.7
1979	43.9	52.7	25.5	23.6	22.2	16.7	81.2	12.2	49.6	33.5

Source: Industry Association data

increased between 1965 and 1975 by 35%, though the proportion of output exported fell from a mere 6% to only 3% over the same period. Interior wall tile manufacturers, on the other hand, faced competition, beginning in the mid-1960's, from producers in Brazil, Mexico, and the Philippines. As a result, they experienced a 45% drop in the volume exported between 1965 and 1975. This was more than counterbalanced, however, by an increase in domestic demand and total production grew by an average annual rate of 10% for the period. Accordingly, the volume of production in 1975 was more than two and one-half times that of 1965..

Mosaic tile manufacturers also experienced a substantial decline in export volume but its timing was much later and corresponds closely to the entry of Korean producers into export markets in the early 1970's. In fact, the volume of Japanese mosaic tile exports continued to register increases until 1973 and exports in 1975 were only down by 15% from the level in 1965. Between 1973 and 1975 alone, however, export volume fell by 44% and by 1979 was only 49% of the 1973 level. Thus, the adjustment problem posed by Korean producers is primarily the problem of the mosaic tile manufacturing sector.

4.5.2 Adjustment Strategies

Adjustment activities in the mosaic tile industry can be conveniently grouped into three categories related, respectively, to the areas of sales, product, and production. Each of these corresponds to the major dimension of change for at least one adjustment strategy.

i. Change of Market (Sales)

• Export Markets

The pattern of Japanese exports by destination has shown considerable change since 1965. In particular, there was a decline in the proportion of exports destined for North America and an increase in the corresponding figures for Europe and Australia. Most of this shift in the destination of exports by market occurred prior to the advent of Korean competition. Most probably, it reflects a gradual expansion into, for example, European markets that were initially less accessible to Japanese producers and also the impact of various "voluntary" export restraints implemented in response to protectionism in different export markets. More speculatively, it may have been an effort to stay a step ahead of the oncoming wave of competition from Korean producers in the traditional export markets. There was some further change of this type following the advent of Korean competition but, among the major export markets at least, this was not due to any expansion of exports but, rather, to different rates of decline in exports by market. Thus, it is not evident that a purposive change of markets has been a successful adjustment strategy, with respect to exports, for the industry as a whole.

• Domestic Market

As indicated earlier, interior wall tile manufacturers faced severe competition in export markets from LDC competitors

but were able to adjust because of a rapidly expanding domestic market. Mosaic tile producers also increased the proportion of their output sold on the domestic market following the entry of Korean competitors into international markets. To a large extent, however, this change reflected the decline in exports rather than any major increase in domestic sales. Domestic sales volume did increase by 41% (from a relatively small base) between 1972 and 1979 in response to increases in domestic construction.

Despite an increase in absolute volume, however, mosaic tile producers, in contrast to interior wall tile producers, faced a deteriorating domestic market. The rate of utilization of mosaic tile (in kilograms per construction start) had, by 1975, fallen to only one-quarter of the level in 1965. Growth in overall domestic construction activity overcame the relative decline in the popularity of mosaic tile but the increase in absolute domestic sales volume counterbalanced only about 25% of the decline in export volume between 1965 and 1975 and 42% of the decline between 1973 and 1979.

It is likely, moreover, that a substantial portion of these domestic sales were the result of extremely low prices due to over-capacity in the mosaic tile sector in the latter half of the 1970's. When the price of mosaic tile falls low enough, it can take sales away from interior wall tile (and, presumably, from other finishing materials as well). This seems to account for some of the increased sales volume on the domestic market. Profitability figures for the ceramic tile industry also support

this interpretation. Profit as a percentage of sales fell for all three types of tile between 1970 and 1976, but the drop was greatest for mosaic tile producers, followed by interior wall tile producers. In comparison, the manufacturers of exterior tile experienced a more moderate decline in profitability.

ii. Change of Product

- Change to Higher-priced Lines of Mosaic Tile

All mosaic tile is not created equal and the variety ranges from unpatterned, unglazed tile of standard size and shape to tile incorporating more or less novel patterns, glazes, sizes and shapes. The latter are generally more difficult to produce and command considerably higher prices. They also provide more opportunity for the individual manufacturer to differentiate his output from that of others.

The most readily measurable distinction is between glazed and unglazed tile. The Japanese industry has, since 1965, moved steadily out of the production of unglazed tile and into the production of the higher-priced and less commodity-like glazed tiles. Here too, the basic pattern of change predates the advent of Korean competition. Moreover, in the face of Korean competition, exports of both types declined. Nevertheless, exports of glazed tile declined more slowly and even showed some increases in markets in Southeast Asia, such as Singapore and

Hong Kong.⁹⁷

- Change of Product Type

While the three types of tile correspond roughly to distinct sets of manufacturers, there has always been some overlap among the three groups in terms of their production. Because of the similarity in production processes, the greatest degree of overlap has been between the producers of mosaic tile and producers of exterior and floor tile. The movement of the larger mosaic tile manufacturers into the production of exterior tile during the 1970's has been substantial and has had the effect of transmitting the impact of LDC competition onto that sector, even though it is not directly exposed to LDC competition. The available figures indicate that, by 1976, at least 46% of the mosaic tile manufacturers were also producing exterior tile.

Aside from this major trend, there was apparently also some effort on the part of smaller producers to utilize mosaic tile in the production of consumer goods such as clocks, lampstands, and other items of interior decoration.

iii. Changes in Production

- Change of Location (Foreign Direct Investment)

⁹⁷ Though in Singapore, but not in Hong Kong, Japan continued to lose market share to Korea.

It is not clear what role, if any, foreign direct investment in LDCs has played in the adjustment activities of participants in the Japanese mosaic tile industry. However, of the 24 Korean producers of ceramic tile in 1976, one was a wholly owned subsidiary and another a joint venture of a Japanese company. These two firms both specialized in the production of mosaic tile and accounted for around 28% of total Korean mosaic tile production in 1975. Both firms are quite large (360 and 336 employees, respectively) but there are at least two Korean-owned mosaic tile producers of equivalent size and it does not appear that Japanese FDI dominates the Korean industry or is the basis of its success. Direct evidence for the years since 1976 was unavailable but one source indicated that such Japanese FDI had increased.

Whatever the level and trend of Japanese FDI, there is considerable doubt as to whether it represents adjustment to, or merely a manifestation of, the problem of LDC competition. The nature of the Japanese participants in the Korean industry circa 1976 is uncertain but they appear, by their names, to be Japanese trading companies or wholesalers based, respectively, in Tokyo and Nagoya. They are known to have exported at least some of their Korean output to Japan.

Given the excess production capacity in the Japanese industry, it is conceivable that individual Japanese manufacturers might try to solve the managerial problem by means of a transfer of production and production equipment to Korea. There was, however, no direct evidence of this sort of activity.

It seems more likely, therefore, that Japanese FDI in this industry is being carried out not by tile producers but by tile wholesalers or trading companies with established sales networks but without any major stake in domestic production facilities.

- Change of Production Process

- a) Automation

The advantage of the Korean industry over the Japanese industry lays primarily in its much lower labour costs.⁹⁸ The Japanese industry has attempted to develop ways to overcome the Korean advantage by means of changes in the production process. The most labour-intensive operation in mosaic tile production is the arrangement and attachment of the individual tiles into patterned mosaic panels. This, then, has been the focus of the most concerted effort to develop new technology.

By 1979, a joint government and industry association project had succeeded in developing automated equipment capable of carrying out this stage of production. This was expected to result in a dramatic reduction in industry production costs, if it were widely adopted. The rights to the technology were apparently held by the industry association and, thus, there was some prospect, though no certainty, of preventing its adoption by Korean producers. This might, then, enable the Japanese

⁹⁸ The larger average firm size and a more recent vintage of plant and equipment may also yield some advantage to the Korean industry.

industry to retrieve some of its lost competitiveness in export markets.

The task of diffusing this technology within the industry was complicated, however, by the presence of massive overcapacity, low prices, and low levels of profits. Only the largest and strongest firms were likely to be able to adopt this equipment in the best of circumstances. Even they found it difficult to justify, and finance, its utilization; given the existing proliferation of small firms and excess capacity in the industry.

b) The "Trivialization" of Production and Overcapacity

The persistence of a large number of small firms in the industry apparently reflects a relative lack of opportunities in other product lines for such firms and a considerable capacity for small, family-centred firms to endure depressed business conditions. The available adjustment alternatives in the industry, to the extent that they were effective, had the greatest relevance for the larger and more sophisticated firms. The smaller firms generally have less specialized equipment and this should afford them a greater ability to migrate into other ceramic products, such as dinnerware and ceramic novelty items. In fact, however, these most natural alternative industries were also facing severe LDC competition and resulting overcapacity. Indeed, some of the smaller mosaic tile manufacturers were apparently firms that had earlier migrated from these industries into the mosaic tile industry.

The vicissitudes of the 1970's have, in fact, had the most evident adverse impact on the middle-sized companies. They are believed to account for the largest part of an approximately 20% reduction in the number of firms in the industry as a result of bankruptcies and closures between 1970 and 1975.⁹⁹ A considerable number of other middle-sized firms remained in the industry but were reduced drastically in size. Thus, between 1972 and 1979, the proportion of firms employing more than 200 employees was reduced by only 1% from 6% to 5% of the total but the proportion of middle-sized firms (51 to 200 employees) fell from 26% to 18%.¹⁰⁰ In contrast, the proportion of firms employing 50 or fewer employees rose from 68% to 77% of the total.

c) Capacity Reduction and Automation

The mosaic tile industry association has adopted a novel approach to the related problems of overcapacity and the need to introduce labour-saving equipment.

The association has purchased automated equipment which it leases out to manufacturers wishing to employ it. These are, apparently, the larger firms. At the same time, the lease payments are deposited into a special fund to buy up excess capacity from firms wishing to reduce or eliminate their involvement in mosaic tile production. These are, typically,

⁹⁹ "Endakashita no Tojiki Sangyo", op. cit. p 9.

¹⁰⁰ Industry Association data.

the smaller and weaker firms in the industry.

At the time of the field research it was unclear as to the effectiveness of this programme. It is notable, however, in that it represents a creative attempt to directly address the problem of reconciling the divergent interests and opportunities of the various participants in an industry faced with LDC competition. Also of interest is the fact that the programme is apparently operated by industry participants themselves (through their industry association), rather than by a government agency.

5. THE MIGRATION MODE OF ADJUSTMENT

5.1 The Scarcity Of Comparative Data

The mode of adjustment for which information is most difficult to obtain is adjustment by means of a change to a new line of business, or "migration". This reflects the fact that the majority of sources and informants relevant to a given industry facing the problem of adjustment are oriented to the industry, per se. Thus, to the extent that adjustment by means of migration takes place; to that extent, the firms involved are removed from the purview and awareness of those sources and informants.

For this reason, obtaining information on this mode of adjustment requires a relatively intensive examination of the individual industry and its participants. This is all the more true when the relevant examples, as in the present research, are small, privately-owned firms for which there is a limited amount of publicly available detail regarding business operations. The circumstances under which the present research was carried out precluded the detailed examination of a large number of industries. At the same time, it seemed important not to restrict the investigation to a single, perhaps idiosyncratic, industry.

In the event, it was decided to examine one industry (stainless steel cutlery) relatively intensively and to carry out a number of less detailed examinations of some other industries. In reflection of this, the case study of the

Tsubame stainless steel cutlery industry was able to provide some information on the migration mode of adjustment. The studies of the other industries, in contrast, provide relatively little evidence regarding this mode of adjustment. This does not mean that this mode of adjustment is less important in those industries. That may or may not be the case. It does reflect the fact that direct evidence regarding this mode of adjustment requires a more intensive and intimate exposure to the individual industry and its participants than was possible for these less detailed case studies.

It is especially important therefore, to consider any alternative sources of comparative information that might be available regarding this particular mode of adjustment. Fortunately, the introduction of the SME Change of Business Programme in 1976 has established this mode of adjustment as a matter of some official concern. This, in turn, has given rise to a small, but growing body of government records regarding concrete instances of change of business adjustment in a wide variety of industries.

5.2 Government Data On Adjustment Assistance

5.2.1 Aggregate Patterns

The 1980 survey of SME policy¹⁰¹ presents a summary of activity under the SME Change of Business Programme. This source indicates that, of all the manufacturing firms receiving

¹⁰¹ Chusho Kigyo Shisaku no Aramashi op. cit., p 126.

assistance up to December of 1979, only 47% were migrating to a new manufacturing business while 53% were moving out of the manufacturing sector and into the trade and services sector. In view of the rather narrow, production-oriented, skills of most firms in the industries examined in the case studies, the high level of migration into trades and services is somewhat surprising. In any case, it would be helpful to know not merely what broad economic sector the firms migrate to but also what is the degree and type of linkage with the old business.

5.2.2 Linkages By Broad Economic Sector

In an effort to shed some further light on these issues, a copy of the SMEA case-by-case internal report on approvals was obtained. This report provides information only as to the date of approval, the prefecture in which the subject firm is located, and brief descriptions of the old and new businesses. The report makes no attempt to provide any commentary on the underlying rationale of the change of business. This is an admittedly shallow data base for examination of patterns in this mode of adjustment. It does, however, provide the only available comparative data with considerable breadth of coverage across industries. As such, it affords some basis for a speculative analysis of migration adjustment patterns.

Table 15 summarizes change of business adjustment for 107 manufacturing firms which migrated from industries in which there is arguably some degree of LDC competition. The cases are cross-classified between the economic sector of the new business (Manufacturing or Trade and Services) and four categories of

Table 15 - Linkage Patterns in Change of Business Assistance Approvals up to April, 1980

[no. of cases, (%)]

New Business	Linkage with Old Business	Know-how/Technology		Land or Buildings	Other	Totals
		Product specific (related to prior product)	Skill specific (unrelated to prior product)			
Manufacturing	a)	14 (13)	b) 25 (23)	c) 0	d) 14 (13)	53 (49)
Trade and Services	e)	3 (3)	f) 0	g) 29 (27)	h) 22 (21)	54 (51)
Totals		17 (16)	25 (23)	29 (27)	36 (34)	107 (100)

Notes:

1. Examples of Classifications

- a) Weaving → Woolen Garments; Lumber → Wood furniture; Cotton Textiles → Outerwear; Ladies and Children's Wear.
- b) Matches → parts for musical instruments. Stainless Steel Cutlery → Lighting Fixtures.
- d) Cotton Spinning → Electronic Parts; Cotton Textiles → Ceramic Planters; Textiles → Candymaking; Oil for Marine use → Sushi Shop Counters.
- e) Wholesaling of Previous Product (e.g. socks); Shipbuilding Subcontractor → Shipwrecking and Repair.
- g) Textiles → Tennis Courts; Swimming Pool; Hotel; Building Rental Lumber → Taxi Company.
- h) Textiles → Retail Grocery; Coffee Shop; Noodle Shop.

- 2. The linkage categorizations are based on brief descriptions of the prior and new business for each case and are highly speculative.
- 3. This table covers only the subset of cases which originated in LDC-competitive industries.

Source: Summary reports on the Change of Business Assistance Programme (S.M.E.A., April 1980). [internal report].

linkage with the original business.

Where a prior business was perceived to incorporate some knowledge or skills relevant to the new business, the linkage was classified as "Know-How/Technology". A further distinction was then made between cases where the new business, itself, was apparently linked to the previous business ("Product-specific") and those where it was not ("Skill-specific"). In the absence of a perceived "Know-How/Technology"-linkage, we considered the possibility of a linkage on the basis of land or buildings. Where this did not seem to be an important point of linkage, we classified the case in the "Other" category. The notes to the table provide some illustrative examples of the resulting classifications.

Not surprisingly, the vast majority (74%) of migrations into other fields of manufacturing was accompanied by a high degree of Know-How/Technology linkage to the characteristics of the previous business. For cases where migration was into the trade and services sector, the predominance (94% of all cases) of linkage other than Know-How/Technology is also not surprising. One would not expect, for example, that the majority of firms in the industries for which case studies were carried out would have many (previous) business-linked skills relevant to the trade and services sector, given their relative lack of downstream distribution and marketing capabilities. For the same reason, however, it is surprising to find that, again, a majority of firms (51%) migrate into the trade and services sector.

5.2.3 Differences By Industry Of Origin

It is possible to subdivide the cases further on the basis of their previous industry. Doing so reveals some distinct inter-industry differences in the nature of the apparent linkage between previous and new businesses and in the destination of migration as between the manufacturing and the trade and services sectors. Table 16 presents the data organized into three groups of industries.

As the table indicates, there is a difference between industries even when we restrict comparisons to cases where migration is to other manufacturing industries. Here, the most important linkage is, of course, to Know-How/Technology attributable to the previous business activity. For the Textiles-Footwear group of industries, however, the linkage is associated with movement into the manufacture of a related (downstream) product (11 out of 13 cases). For the Metalworking and Machinery industries, however, the majority of migrations (16 out of 22 cases) were into the manufacture of less obviously related products.

This reflects the fact that the Textiles, Textile Products, and Footwear sector has a larger proportion of intermediate goods than the Metalworking and Machinery sector. For an intermediate good, such as Textiles, there are likely to be a relatively larger number of related (downstream) products into which the firm can migrate.

There is a major difference, as well, in the propensity of firms from various industries to migrate into the manufacturing

Table 16 - Linkage Patterns by Industry of Origin

[no. of cases, (%)]

APPARENT LINKAGE									
Industry		Know-How/Technology			Land or Buildings	Other	T O T A L	Proportion(%)	
OLD	N E W	Vertical	Horizontal	Sector				Overall	
Textiles; Textile Products; and Footwear	M	7 (11)	1 (2)	0 (0)	8 (13)	16	26	15	
	S	2 (3)	0 (0)	24 (39)	19 (31)	45	74	42	
	T	9 (14)	1 (2)	24 (39)	27 (44)	61	100	57	
Metal Manu- factures; Machinery & Equipment	M	6 (20)	16 (53)	0 1(0)	4 (13)	26	87	24	
	S	0 (0)	0 (0)	2 (7)	2 (7)	4	13	4	
	T	6 (20)	16 (53)	2 (7)	6 (20)	30	100	28	
Miscellaneous Other Manufactures	M	1 (6)	8 (50)	0	2 (13)	11	69	10	
	S	1 (6)	0 (0)	3 (19)	1 (6)	5	31	5	
	T	2 (12)	8 (50)	3 (19)	3 (19)	16	100	15	
Totals	M	14 (13)	25 (23)	0 (0)	14 (13)	53	49	49	
	S	3 (3)	0 (0)	29 (27)	22 (21)	54	51	51	
Grand Total	T	17 (16)	25 (23)	29 (27)	36 (34)	107	100	100	

Note:

1. The "New" industry is indicated as "M" (Manufacturing) or "S" (trade or Services). Their sum by sector and linkage is given as "T".
2. The indicated linkages are speculative and based only on an examination of brief descriptions of prior and new business.

Source: Summary reports on the Change of Business Assistance Programme (S.M.E.A., April, 1980). [internal report].

sector as opposed to the trades and services sector. Thus, while the overall figures show an approximately even division of migrations between the two sectors, in the stainless steel cutlery and housewares industry, for example, 91% of the firms were migrating to other manufacturing industries. The pattern in that industry is repeated in the other metalworking industries and in the machinery and equipment industries.

In contrast, the pattern in the Textiles, Textile Products (lace, apparel), and Footwear industries is almost reversed, with a strong majority of the migrations (74%) being into the trade and services sector. The pattern in a miscellany of other industries lies between the other two, though it is most similar to the pattern in the Metalworking and Machinery industries. This may reflect a more pervasive infiltration of LDC competition into some broad sectors of manufacturing, such as textiles. On the other hand, the production skills implicit to some industries, such as stainless steel cutlery, may have an inherently wider range of industrial application within developed countries.

5.2.4 Implications Of Adjustment Assistance Data

In some cases, as when a textile manufacturer becomes the operator of a noodle or coffee shop, the new service business may appear trivial in relation to the previous manufacturing business. One is tempted to term such change not "adjustment" but decline (or even quasi-extinction).

It is possible that the proportion of migrations into the trades and services sector which involve a substantial reduction

in the size of operations is greater than is the case for migrations within the manufacturing sector. To the extent that this is so, the unexpectedly high level of migration into the trade and services sector is more understandable; it includes both cases of successful adjustment and cases which are closer to representing business failure than successful adjustment. Without more detailed information regarding, for example, the relative scale of the prior and new businesses, it is not really possible to assess their commensurability and, thus, the extent to which the change represents adjustment rather than business failure.

If there is one clear indication to emerge from this data, however, it is that firms in different industries can face distinctly different migration opportunities. An implication of this is that one should be cautious in generalizing from the experience with this mode of adjustment in the Tsubame stainless steel cutlery industry. In particular, it seems likely that firms in many industries will face far fewer opportunities to migrate to new manufacturing businesses and those opportunities which are available to them will often be more closely related to the previous product than appears to have been the case in Tsubame.

VI. LESS-DEVELOPED COUNTRY COMPETITION AND FOREIGN DIRECT INVESTMENT

1. THE NATURE OF THE LDC COMPETITIVE CHALLENGE

1.1 The Role Of Exogenous Change

The emergence of Asian NIC producers as a serious threat to the Japanese industries examined was, obviously, importantly related to the respective comparative advantages and national development policies of those countries. What is more striking is the apparent role of exogenous change in the international political economy.

In each of the industries examined in this study the competitive threat of Asian NIC producers dramatically increased in the early 1970's. This was importantly related to two distinct changes in the international economy; the end of a regime of fixed exchange rates¹⁰² and the introduction of preferential tariff for LDC manufactures. Both of these changes served to improve the competitive position of the LDCs. A third change, the energy crises of the 1970's, had a more mixed impact but to the extent that LDC production is not only more labour-intensive but also less energy-intensive it may have favoured LDC producers of some goods.

While each of these changes had economic antecedents and implications the changes, themselves, were more political than

¹⁰² The currencies of the Asian NICs thereafter tended to depreciate relative to the Japanese Yen.

economic in nature. Each was the result of political decisions and actions taken in the context of international organizations. On balance, these changes dramatically altered the relative competitive strength of Japanese and Asian NIC producers in many industries; yet they were not triggered by conditions in those specific industries and countries.

While the specific event was quite different from those which benefitted the Asian NICs in the 1970's, a similar sort of phenomenon was evident in the prewar development of many Japanese industries. The First World War temporarily cut the traditional European suppliers out of international markets for many goods. This provided the opportunity for many Japanese light industries to dramatically improve their position in world markets. Most of them were subsequently able to maintain or extend this improved competitive position following the cessation of hostilities. Just as in the 1970's, the events and their causes lay outside of the affected industries yet they had profound implications for their international competitive position.

The striking rapidity with which Asian NIC producers improved their competitive position in the 1970's is due, in large part, to the discontinuous nature of the exogenous changes that took place. The more general implication, however, is that such exogenous changes in the international political economy, whether discontinuous or gradual, have had and will continue to have profound implications for the relative competitive positions of LDC producers. The current drift towards

protectionism in the DCs is but the most obvious current example. Major change in international trading arrangements (arising, say, as a result of endemic defaults on international debt) or a shift in relations between China and the O.E.C.D. countries or in Chinese policy on inward foreign investment are other, hypothetical, examples of possible exogenous change that would affect relative competitive positions. Exogenous changes such as these will inevitably have important impact on the future competitive position of the Asian NICs and of those other LDCs which would follow in their footsteps.

1.2 Japanese Complicity In Asian NIC Competitive Development

There has been some concern in Japan that Japanese FDI in the Asian NICs would, through subsequent exports to Japan and to third-country markets, be a primary cause of decline in the corresponding Japanese domestic industries. Empirical studies at the macro-economic and at the broadly defined industry sectoral levels indicate that this, so-called "boomerang", effect of FDI is not an important feature of Japan-Asian NIC economic relations.¹⁰³ It appears to be relatively unimportant in the more narrowly defined industries examined in the present study as well.

Only in the umbrella and in the mosaic tile industries was there clear evidence of Japanese FDI. Even so, the timing of the investment and the apparent volume of the resulting exports,

¹⁰³ See, for example; N. Suzuki (ed.) , op. cit. and T. Watanabe , op. cit. .

relative to the decline in Japanese production, indicate that this was of marginal importance as a cause of that decline (the broader issue of FDI as an adjustment strategy is discussed later in this chapter).

In the mosaic tile industry there was, however, evidence of more indirect Japanese complicity in Asian NIC competitive development, in the form of exports of plant and equipment by the Japanese capital goods sector. These exports, moreover, benefitted from low-cost finance provided by the Japan Export-Import Bank. This sort of activity is probably quite widespread, given the close economic ties between Japan and the Asian NICs and the experience and competitive strength of the Japanese plant and equipment manufacturers in supplying the needs of the relevant light industries.

Both with respect to FDI and to plant and equipment exports (whether or not concessional financing is involved), there were, however, non-Japanese sources among the other developed industrial countries that were also available to the Asian NICs. Thus, whatever impetus was thereby provided to Asian NIC competitive development, it was not ultimately dependent upon specifically Japanese activity.

A more important and uniquely Japanese factor relevant to the Asian NICs' competitive positions is the impact of earlier Japanese competitive strength on developed country markets. All of the Japanese industries examined in this present study made their most substantial increases in production over the postwar period by means of an expansion of exports to various O.E.C.D.

countries. As the prevalence of "voluntary" export quotas in the examined industries indicates, the capture of market share that accompanied this Japanese expansion was not only at the expense of third-country exporters but, substantially, at the expense of domestic producers in those markets.

Over the course of the postwar period, this appears to have caused significant change in the conditions of supply and demand in those markets. Many of the competing domestic industries were reduced in terms of the number of firms and employees involved and in their absolute production capacity. This not only increased the absolute amount and proportion of the national market which the domestic industries had, de facto, conceded to imports; it also reduced the ability of those (now, smaller) industries to lobby against further erosion of their competitive position. Moreover, in some industries, such as the stainless steel cutlery industries in West Germany and the U.K., the domestic industry had implemented an adjustment process that had largely removed it from direct competition with low-priced imports. At the same time, the consumers and the institutional arrangements for distribution had become far more "import-oriented".

Thus, to a large extent, the Asian NIC producers in the 1970's, relative to their Japanese predecessors (indeed, because of them), faced a more receptive market in the O.E.C.D. countries. The receptivity of distributors and consumers to

imports¹⁰⁴ and the absolute size of the import market were much greater. Moreover, to the extent that Asian NIC gains in market share were at the expense of the Japanese, and not the domestic O.E.C.D. producers, they were less likely to provoke a protectionist reaction. It is this Japanese "contribution", more than any other, which likely accounts for the rapidity with which Asian NIC producers in the examined industries were able to expand their exports to O.E.C.D. markets following the exogenous changes in the international environment in the 1970's.

1.3 The Course Of LDC Competitive Development

1.3.1 Products And Production Technology

Comparative advantage theories of trade suggest that LDC competitive strength will begin in production activities which require the intensive use of relatively unskilled labour and proceed, with development, towards more capital- and skill-intensive production activities. Product life-cycle theories emphasize, on the other hand, LDC progression from standardized products and production processes towards those which are more differentiated. The two propositions are not antagonistic. Rather, they emphasize two different dimensions along which LDC competitive development proceeds.

¹⁰⁴ The geographical propinquity of Korea and Taiwan to Japan may also be relevant. Once a distributor, or brand-name manufacturer, from an O.E.C.D. country has accepted the idea of sourcing production in Japan it takes no great leap of imagination, or of airfare, to consider the alternatives offered by producers in Korea or Taiwan.

It was not the purpose of this study to assess either of these propositions regarding LDC competitive development but, on the basis of the evidence encountered, the industries examined are broadly consistent with them. They have, relative to DC country norms, low levels of capital- and skill-intensity and utilize fairly standardized production methods to produce standardized products. Moreover, the pattern of decline in, for example, the Japanese tile industry (first, unglazed and, then, glazed tile) is also consistent with the progression of the Asian NIC producers from simple to more complex production processes and from standardized to more varied products.

It was rather unexpected to find in the cutlery and ceramic tile industries, for example, that Korean producers were much larger and had a more integrated organization of production than that found in their Japanese counterparts. In the absence of comparative data on the scale and organization of production in these same industries in, say, Europe or North America, it is not clear whether it is the Japanese or the Korean pattern that is unusual.

It does seem likely, however, that the highly directive nature of industrial policy in Korea (and in other LDCs, as well) might favour the establishment of a limited number of large integrated firms, if only as a matter of administrative convenience. It may be, as well, that basic managerial skills are in relatively shorter supply in LDCs and that a more integrated organization of production serves to economize on the use of these skills. More certainly, any effort to quickly

establish a manufacturing capability in a novel export good, even on entirely private initiative, is likely to require a more integrated form of organization than that which grew out of the long industrial traditions of, for example, Tsubame in Japan.

1.3.2 Other Dimensions Of Competitive Development

Evidence from the industries examined in the present study indirectly suggests that, in addition to factor-intensity and the stability of product and process characteristics, there are two other dimensions along which LDC competitive strength may develop. These are, functional competence and markets.

iv. Functional Competence.

The industries examined in this study were selected because they faced severe competition from the Asian NICs and a related adjustment problem. It is significant that we found, in each of these industries, that Japanese producers characteristically had only modest internal design and distribution skills and that even these limited skills were recently acquired. The bulk of design and distribution activity in these industries, especially in the early development of Japanese exports, was carried out by firms other than the manufacturers.

These were, in other words, industries in which at least for some portion of the product range the design and distribution functions could be provided by sources external to the manufacturer. This suggests the possibility that there is an heirarchy of business activities through which LDC competence

develops and that the easiest, and first to develop, of these is production, per se. Thus, the fact that LDC competition arose in these industries may be in part explained by their accessibility to firms which are narrowly based on a, relatively easily acquired, competence in production and lacking in the necessary, but more difficult to develop, design and distribution competence. This would, of course, be particularly true if the LDC domestic market is small or non-existent or if it demands a markedly different product variant from that appropriate in export markets.

"Functional Competence", then, could be another dimension along which LDC competitive strength develops. If this is so, one would hypothesize that, in the earlier stages of industrialization, an LDC will develop competitive strengths in industries which facilitate their narrow specialization in production. In industries, that is, where the distribution function, for example, can be provided by external organizations and the design function can be similarly externalized; either through reliance on third parties, such as design consultants, distributors and foreign manufacturers (i.e., subcontracted production), or by reliance on "the market" (made-to-order or

standardized products).¹⁰⁵

One would also expect a similar phenomenon to take place within any given industry; with LDC producers developing from product variants where distribution and design functions are available externally (or are unimportant) towards those where reliance on the external provision of these functions is less feasible or less effective. Many of the large Japanese consumer goods manufacturers relied on external distribution and sales specialists to serve foreign markets until the 1960's. Similarly, some Korean and Taiwanese firms are now extending their internal functional competences downstream into distribution and sales.

v. National Export Markets

The case studies suggest that the pattern of growth in Japanese exports to various national export markets was not uniform. Growth occurred earlier, or proceeded more rapidly, in some markets than it did in others. The general sequence of export market penetration was from North America to Western Europe and, then, to Eastern Europe.

¹⁰⁵ The product life cycle approach also relates product standardization to LDC production, but in a quite different way. There, the argument is that as product characteristics become standardized, price-competitiveness becomes a dominant consideration and favours the transfer of production to locations affording the lowest production costs, often these will be in the LDCs. The focus is, therefore, on the conditions of demand in consuming nations. Here, we are emphasizing, instead, a progressive change in conditions of supply among LDC producers (functional competence development). In reality, both (DC) demand and (LDC) supply conditions are relevant.

Similarly, the pattern of decline in Japanese exports to these various markets was not uniform. If we infer the development path of LDC competition from the general pattern of Japanese decline, they also seem to have penetrated different markets at different times and with different degrees of rapidity. Moreover, the sequencing of Asian NIC penetration of DC markets seems to have been broadly similar to that experienced earlier by Japanese producers.

In general, such differences among national markets in the relative degree of exposure or receptivity to LDC competition, or in the rate at which this increases over time, can undoubtedly be explained in part in terms of the dimensions of competitive development already discussed. It may be that, say, the French market relative to the U.S.A. market has, for example, unique design requirements (regarding which there are no independent consultants) or lacks distribution specialists (e.g., wholesalers) to handle the product and thus requires that this function be carried out by the manufacturers, themselves. These conditions would not favour producers in the LDCs whose competence was narrowly centred on production alone.

It seems likely, however, that even where the export markets for the specific product are essentially identical, producers in any given LDC will have quite different ease of access to them due to the particular pattern of the country's overall ties with various foreign countries. Even if we assume, for example, that the product-specific market and institutional features of France and the U.S.A. are identical, we would

expect LDC producers in, say, Algeria and the Philippines to have quite different patterns of export expansion into these two markets because of differences in the cultural, economic, political, and historical links between the countries.¹⁰⁶

This may be manifest quite directly in terms of differences, perhaps even product-specific differences, in market access resulting from bilateral agreements between the countries concerned. More certainly, there are likely to be major differences among LDCs in the local availability of market information and general cultural and linguistic "know-how", and of financial, commercial, and other trade-related institutions relevant to the different developed country markets.

The similarity in the apparent patterns of market penetration for Japanese and, later, Asian NIC producers suggests, however, a generally similar hierarchy of accessibility among the various DC markets. The broad similarity in the sequence of export market penetration by Japanese and Asian NIC producers is, however, perhaps best seen not as indicating a universal market penetration sequence for all LDCs but rather, as an indication of the similarity of Japanese and Asian NIC ties with the various DC countries.

Of particular importance is the postwar U.S.A. presence in Asia. While motivated by a complex of broad political and

¹⁰⁶ In this example, there is of course the element of geographic proximity; though transport costs appear to be relatively unimportant for many of the relevant products. Postwar advances in communications, including transportation, have also been reducing the absolute importance of geographic proximity.

economic factors, unrelated to the specific industries examined in this study, the postwar dominance of the U.S.A.'s presence in Asia has probably, as a by-product, made the North American market, relative to other markets, more accessible to Asian producers in those industries. Thus, the patterns of export market expansion proceeded from North America to Western Europe and, within Western Europe, from Germany to other European countries. Were these same industries to become internationally competitive in Malaysia, Africa, or the Mediterranean; where there are relatively stronger links with European countries, the pattern of progression into the various DC markets would likely differ from those displayed in the cases of Japan and the Asian NICs.

The general point is, then, not that producers in all LDCs will follow the same sequence in DC export market penetration. It is, rather, that there is likely to be some such sequence for any given LDC and that it will be strongly influenced by the pre-existing pattern of overall cultural, linguistic, political, and economic ties of the LDC with the various DCs. This then is another, "market", dimension along which LDC competitive strength can be expected to develop.

1.3.3 Specificity-Generality Of Industrial Skills

The fact that an internationally competitive industry has been established implies that, at a minimum, a certain amount of relevant production skills have also been established. The cases examined in this study indicate such skills are often relevant with respect to other, quite distinct,

product/industries as well.

Thus, cutlery producers in both Japan and Korea, on the strength of their general metalworking skills, have moved readily into the production of a variety of metal housewares. Similarly, the problem of LDC competition in the Japanese mosaic tile industry appears to be but one manifestation of LDC acquisition of skills relevant to the production of ceramics products in general. The data on Japanese new business adjustment assistance also suggests that industries differ considerably in terms of the extent to which the production skills which they implicitly require are also relevant to other products and industries.

The cutlery industry in Tsubame, in particular, and the metal working and machinery industries, in general, appear to incorporate production skills of quite general relevance within the manufacturing sector as a whole. Firms within these industries which received adjustment assistance migrated into a wide variety of new businesses within the manufacturing sector. The skills possessed by firms in the textile and footwear industries, in contrast, seemed to afford them a much more limited amount and range of migration opportunities within the manufacturing sector. The majority of these firms moved out of manufacturing entirely and into the trades and services sector.

This suggests the importance of considering LDC competitiveness, and the direction and pace of its development, not only in terms of the product life-cycles, functional competences, and markets in which it becomes established, but

also in terms of the underlying production skills it implies. Analysis which focuses on the relative inter-industry (or product) transferability of these skills can serve to further clarify both the direction and pace of development of LDC competitive strength.

2. THE ROLE OF FOREIGN DIRECT INVESTMENT

2.1 Introduction

Data on Japanese foreign direct investment activity indicates that the proportion of total FDI attributable to SME has been increasing in recent years and, by 1978, accounted for fully one-half of all cases.¹⁰⁷ Moreover, much of the financing for this FDI by SME is provided by financial institutions operated by the Japanese government.¹⁰⁸ This suggests that many firms and (in view of the government financing involved) the Japanese government, itself, feel that FDI is responsive to the needs and opportunities not only of large corporations but also to those of some SME.

This does not necessarily mean, however, that FDI is responsive to the needs and opportunities of firms in industries which face the need to adjust to competition from producers in the LDCs. Indeed, in the industries examined in the present study, FDI (specifically, the equity-based establishment of production facilities inside the competing LDCs) does not appear

¹⁰⁷ SMEA, Chushokigyo no Kaigai Toshi no Genjo, Igi, Oyobi Mondaiten (Chushokigyocho, Tokyo, 1980) p21

¹⁰⁸ See, Shokokumiai Chuo Kinko, Kokusaibu, Chushokigyo no Kaigai Toshi Jittai Chosa (Shokokumiai Chuo Kinko, Tokyo, 1979) p11.

to have been an important aspect of adjustment. Moreover, such FDI as did occur was dominated by firms which were, domestically, either totally specialized in design and distribution activities or which had a relatively strong involvement in those activities, as opposed to production, per se. These were precisely the firms, in other words, in which existing business activities were, for the moment, least exposed to direct competition from (narrowly production-oriented) LDC manufacturers and which faced the least immediate need to adjust. The overall impact of FDI by such firms was to act as a conduit for the existing adjustment problem, not as its solution.

The industries examined pose two distinct questions; why did relatively little manufacturing FDI take place? and why was that which did occur dominated by firms primarily involved in distribution rather than production? The existing Japanese literature does not appear to directly address either question; partly because it deals with aggregate data and partly because, in any case, it treats FDI in isolation and not in relation to the overall activities of the firm or industry.¹⁰⁹ We encountered no literature which concretely relates FDI to the

¹⁰⁹ See Chushokigyochō, 1980, (, op. cit., p21) and Shokokumiai Chuo Kinko, 1979 (, op. cit., p11) and, for example: Sakamoto Yasuhiro, "Kokusaika no Shinten to Shitauke Chushokigyo no Kaigai Shinshitsu" in, Chushokigyo to Kumiai No. 4, 1980, pp4-9; Kurii Takashi, "Chushokigyo no Kaigaitoshi no Doko to Tokuchō" in, Kinyu Zaisei Jijo June, 1979, pp40-44; Kanayama Norio, "Chushokigyo no Kokusai Tekioryoku" in Shoko Jianaru July, 1978; Kitamura Murahiro and Mori Ken (eds.), Wagakuni no Kaigai Toshi to Kokusai Bungyo o Meguru Shomondai (Ajia Keizai Kenkyusho, Tokyo, 1979), pp175-200;

problem of adjustment in firms and industries facing LDC competition. We can, however, offer some hypotheses regarding the two questions.

2.1.1 The Dearth Of FDI

Current theorizing about FDI suggests that it will occur only when the investing firm believes certain conditions are present.¹¹⁰ These are:

- i. That the firm has exclusive possession of (or superior access to) internationally transferable assets (such as capital, equipment, patents or know-how) that provide it with an advantage over local, LDC, entrepreneurs. These are termed, "ownership advantages".
- ii. That it is in the best interests of the firm to internalize the use of these ownership advantages (whether by direct utilization or by "rental" of them) rather than dispose of them on the open market. These are termed "internalization advantages".
- iii. That the foreign country (e.g., LDC) affords superior immobile, or location-specific, endowments (e.g., the markets for inputs, including labour, or the local

¹¹⁰ See, for example; Rugman, A. M., "Internalization as a General Theory of Foreign Direct Investment: A Reappraisal of the Literature" in, Weltwirtschaftliches Archiv V 116, 1980, pp365-379 and Dunning, J. H., "Explaining the International Direct Investment Position of Countries: Towards a Dynamic or Developmental Approach" in , op. cit. , v 117, 1981, pp30-64.

tax/incentive regime). These are termed, "locational advantages".

The last of these conditions, LDC locational advantages, is clearly present in the industries of relevance to this study. The relative dearth of FDI in the industries examined might be explained, however, by the absence of one or the other of the other two conditions. Of these, the first, ownership-specific advantages, is a precondition of the second and, in any case, seems the most pertinent.

If LDCs are not merely the passive recipients of assets which DC firms decide to transfer to them, if they are, in other words, actively involved in developing their industrial capacity (as they clearly are); then ownership-specific advantages are a wasting asset and the element of time is crucial. Prior to LDC acquisition (by purchase or FDI from third-parties, by industrial espionage, by "re-invention", etc.) of the requisite skills and equipment, ownership-specific advantages may exist and FDI may be viable. However, as these (or, more exactly, their equivalents) are acquired by the LDC through other means, the ownership-specific advantages vanish and the viability of FDI is lost.

The present study is concerned with industries which face the problem of adjusting to existing competition from LDCs. Such industries are, by definition, ones in which the LDC producers have already acquired much of the relevant skills and equipment. To the extent that this is so, the Japanese

producers will possess a smaller, and perhaps no, advantage in LDC production over the existing LDC producers. This explanation, however, begs the question of why the Japanese producers did not engage in FDI prior to LDC acquisition of the requisite skills and equipment.

Such FDI would have to be made in anticipation of LDC competitiveness and would require some ability to finance the FDI until such time as the competitiveness of LDC production is realized and the costs of the FDI are recovered. The aggregate data on FDI by Japanese SME show fairly rapid profitability, with 61% of all SME recovering their investment within five years.¹¹¹ Nevertheless, the implied financial burden probably exceeds the capability of many SME¹¹² and certainly exceeds that of most of the firms in the industries examined in the present study.

The rapidity with which LDC competitiveness revealed itself probably made such prospective FDI less likely. In most of the industries examined, Japanese FDI was probably most feasible in the mid- to late-1960's; but this was generally a period when domestic production was expanding and LDC competition seemed a relatively remote threat.

Moreover, the fact that LDC producers in these industries

¹¹¹ See Shoko Kumiai Chuo Kinko, (1979, , op. cit.). Such performance, of course, may not have been possible, even under the best of circumstances, in the industries examined in this present study.

¹¹² The combination, in at least some SME, of a potential for profitable FDI and a limited capacity to finance it presumably accounts for the extensive government involvement in the financing of FDI by Japanese SME.

appear to adopt an integrated mode of production, suggests that this is the most efficient form of production for these countries. If this is so, then the fragmented nature of the Japanese industries, due to the intra-industry ("social") division of labour employed, may have also limited the potential for FDI. For, in any of these industries, while the industry as a whole may have incorporated "ownership-specific advantages" which, at some time, constituted the necessary amalgam of skills and resources to engage in FDI; there were few individual firms which incorporated them all and had the relevant expertise regarding integrated production management. Moreover, as the mosaic tile industry case study indicated, the capital equipment required may be available from outside of the industry itself, and on terms which are, due to Japanese government export assistance to machinery producers, perhaps even better than those available to firms within the Japanese industry.

Finally, it is not enough that a firm possess ownership-specific advantages at a single point in time, it must maintain them. The skills possessed by the Japanese firms in these industries could be and were eventually acquired by LDC producers with or without Japanese FDI. Thus, to maintain ownership specific advantages the Japanese firms would have to be able to regenerate them by, for example, developing new product or process designs. This is precisely their area of greatest weakness.

For these reasons, it is not surprising that there was relatively little FDI in the industries examined. It should be

noted, however, that even if there had been a great deal of FDI it would only be of direct relevance to those of the industry's (or the firm's) assets that were internationally mobile, and met the other criteria for FDI. It would appear that many, and perhaps most, of the assets of these industries did not fall into this category.

2.1.2 FDI By Wholesaler/Manufacturers

In the industries examined, the FDI which did occur was dominated by distribution specialists. This FDI clearly aggravated the LDC competitive challenge faced by the Japanese producers. It is less clear how such FDI benefitted the distribution specialists that conducted it.¹¹³ It is not evident why these firms, unlike other similar firms, did not simply switch their source of supply to existing LDC firms operated by local (LDC) entrepreneurs. What seems to be the most likely explanation is that these firms perceived an opportunity to utilize ownership-specific advantages regarding design and distribution for the Japanese domestic market as a means of acquiring assets in the LDCs on favourable terms. One survey¹¹⁴ indicates that, overall, about 17% of Japanese SME manufacturing FDI is conducted by commercial (i.e., non-manufacturing) firms.

¹¹³ It may be, of course, that it did not benefit them. There appears to have been a "bandwagon" effect in Japanese FDI in the early 1970's with considerable FDI being undertaken on the basis of only superficial analyses of its merits. In the absence of detailed information on FDI in the industries examined in the present study, one cannot tell whether it was misguided; but that is a distinct possibility.

¹¹⁴ See, Shoko Kumiai Chuo Kinko, (1979, , op. cit.) p23.

One should probably include all firms which are primarily distributors, including those which are only nominally manufacturers (i.e., the wholesaler/manufacturers), in the same category. If these wholesalers/manufacturers were included the figure might be much higher. Unfortunately, no explicit examination, by industry, of the relative proportions of manufacturing FDI carried out by distribution and production specialists was uncovered.

The issue would seem worthy of investigation. It would be interesting, for example, to know how much of Japanese government financial assistance to FDI by SME goes to distribution-based firms and, in effect, thereby exacerbates the adjustment problem of the actual producers in the industry.

2.1.3 FDI And LDC Functional Competence Development

The preceding explanations of the FDI patterns encountered in the examined industries is consistent with the concept of LDC functional competence development introduced at the beginning of this chapter.

At some point, say in the late 1950's, entrepreneurs in the Asian NICs may have possessed, or had access to, essentially none of the requisite production skills and equipment and may have even been unaware of the existence of the product and its export markets. At that point, Japanese producers undoubtedly had greater ownership-specific advantages, though locational advantages probably favoured Japanese production. Over the years, the balance of locational advantage between Japan and, say, Korea changed but, at the same time, the access of Korean

entrepreneurs to the relevant information, skills, and equipment also improved.

As these parallel changes take place they may have created a "window of opportunity" for FDI by Japanese producers but, once Korean competence in production had been established, this opportunity was foreclosed.¹¹⁵ At that point, FDI may still be possible for Japanese firms; but only for those possessing higher-order competences not yet established in Korea, such as functional competences in design and in foreign distribution. These latter Japanese firms, it should be noted, are able to delay their FDI to a later time period and, therefore, can base it on more certain evidence of LDC competitiveness in production.

¹¹⁵ While, in the example given, the opportunity for FDI in Korea is foreclosed, FDI may still be possible elsewhere. FDI which "leapfrogs" the Asian NICs and is aimed at less industrialized LDCs, such as Malaysia and the Philippines, was not, however, observed.

VII. ADJUSTMENT ALTERNATIVES

1. ADJUSTMENT AND VALUE-ADDED

The case studies revealed a variety of concrete adjustment activities. In the context of a particular industry or firm, these concrete activities can be seen to be clustered into more or less coherent sets of activities which define distinct adjustment strategies. In the case study of the Tsubame flatware industry these were characterized as;

i. Revival of Price Competitiveness

ii. Shift to New Markets

iii. Shift to Higher-grade Lines

iv. Move to a New Business

These adjustment strategies do appear to have a relevance that goes beyond that particular case study. Analogous strategies can, for example, be seen in the industries for which briefer case studies were conducted.

Nevertheless, in a general discussion of adjustment alternatives it would be imprudent to assert that what was observed in these case studies exhausts the entire range of possible adjustment strategies, much less of concrete activities

relevant to adjustment. What is needed for a general discussion of adjustment alternatives is, therefore, a conceptual basis for relating strategies and concrete activities such as those observed; to adjustment, to each other, and to other adjustment activities and strategies that did not happen to be observed in the particular cases examined. The concept of value-added provides this.

Value-added is the difference between the price of an output (product) and the costs of the inputs used in generating it. It is a measure of the value created by a set of one or more economic activities. A sidewalk artist, for example, may use ninety five cents worth of paper and five cents worth of charcoal to produce a portrait which he sells for ten dollars. The value-added of this economic activity is, then, nine dollars [$\$10.00 - (\$.95 + \$.05) = \9.00]. The value-added of any given activity can change over time with changes in the costs of inputs and the price of outputs.

The number and complexity of the economic activities involved is obviously far greater when we consider not a sidewalk artist but a manufacturing firm, an industry, or an entire country but the basic principle is the same. In a company or industry, value-added can be divided into two components; profits and wages.¹¹⁶ The former provides a return to the capital invested and the latter a return to the labour.

¹¹⁶ Rent and interest are also explicitly included in the economist's definition of value-added but we omit them here for simplicity's sake. Their inclusion would not importantly change the analysis.

For an economic organization, seen as some particular combination of labour and capital, it is necessary that the returns to each of them match those they could obtain elsewhere. If they do not, one or the other will become unavailable to that organization and it will cease to be. Even with constant material input costs and output prices a rise in the wage rate will increase the wage share of value-added at the expense of the return to capital unless there is a corresponding increase in total value-added. The adjustment problem, therefore, can be seen as the problem of re-establishing a situation whereby the organization can provide adequate returns to both the labour and the capital it employs. We can categorize adjustment activities, then, in terms of the way in which they affect value-added, which is simply the sum of the returns to these two factors.

Adjustment activities can increase or restore the level of value-added by

i. Improving (increasing) prices

or

ii. Improving (lowering) costs

or by some combination of the two. The definition of adjustment, however, includes the possibility of a change to a different business activity (function) or to a different product and these, too, can improve value-added.

In the case of a move to a new product or functional activity, however, it is not meaningful to make a distinction between improvements in costs and prices as there is no logical basis for comparing the costs or the prices relevant to the two different products or functions. Here, only a comparison of the difference in value-added is possible. To distinguish the terminology for improvements in value-added due to a change of product or function from those due to improvement in prices or costs (for a given product and function), the former can be termed, "margin-improvement"; where the "margin" referred to is but another term for value-added, but is reserved for the case of product or function change.

Thus one can consider activities relevant to adjustment under the three distinct categories of Cost-improving, Price-improving, and Margin-improving. A strategy, in turn, consists of a coherent set (perhaps a set of one) of such activities. The concrete activities associated with a given strategy need not all fall into the same category but they must, collectively, make a coherent contribution to improving value-added.

The following sections discuss, under each category, the major findings of the case studies regarding adjustment activities.

2. COST-IMPROVING ADJUSTMENT

The case studies reveal two major types of activity in this category; change of production technology and the (domestic) transfer of production.

2.1 Change Of Production Technology

2.1.1 The "Deus Ex Machina" Syndrome

In the case studies, both the ceramic tile and the flatware industry revealed concerted efforts to develop and introduce innovative production technology as a means of adjustment. The field research, however, dealt with many more than the four industries for which case studies are presented and suggested a quite general instinct to look for a solution to the adjustment problem in a change of production technology. The instinct to look for such solutions is understandable if only because a central lesson of the past 200 years is that productivity (the ratio of outputs to inputs) and, thus, value-added can be increased by a change of production technology.

Beyond that instinct, however, there seems to be a widely held perception that this sort of solution is likely to be the least traumatic.¹¹⁷ New and improved machinery is wheeled into the factories and, in one fell swoop, the threat of LDC competition is vanquished, value-added is restored to requisite levels, and the industry or firm, aside from the change in production technology, reverts to "business as usual". While few would perceive matters quite so simplistically, the basic appeal of a discrete, technical solution to the adjustment

¹¹⁷ There is also the fact that, largely due to recent developments in micro-electronics, the possibility and potentials of highly automated production systems are increasingly evident. Thus, the apparent technical credibility of the approach has increased.

problem rests in part on some variation of this "Deus ex Machina" scenario.

Despite widespread evidence of the appeal of this approach to the adjustment problem, and of efforts to implement it, we encountered no striking examples of its success.¹¹⁸ In many cases, this is undoubtedly because the adjustment process began fairly recently and the efforts to implement a technical solution are incomplete and their results, as yet, inconclusive; as in the mosaic tile and flatware industries. We did however, encounter anecdotal evidence of apparent failures.

2.1.2 Failures

The most striking of these is in the men's shirt industry.¹¹⁹ There, the industry began to feel competition from LDCs in export markets as early as the mid-1960's and in the domestic market towards the end of the 1960's. The domestic market, in one respect, was more vulnerable than many export markets because of the nature of demand. Japanese businessmen were, quite literally, "white collar" workers as Japanese men almost invariably favoured plain white dress shirts both away from work and in the office.

This uniformity of style and the relative technical simplicity of constructing shirts from unpatterned shirting

¹¹⁸ However, it should be noted, the selection procedures were not oriented towards finding industries which had successfully completed adjustment (by whatever means) but, rather, those which were facing an adjustment problem.

¹¹⁹ The account here is based on discussions with a representative of the Japan Shirts Association and with spokesmen for MITI's Seikatsukyoku in June and August of 1980.

material both served to make the Japanese market, at least on the basis of demand characteristics, more exposed to LDC competition than that of any other developed country. Between 1969 and 1972, a substantial effort was made to overcome this threat by the introduction of specialized high speed shirt-making equipment (produced, apparently, in West Germany). This "modernization" of production equipment was facilitated by the provision of low-cost financing through Japanese government agencies.

In fact, the 1970's saw a dramatic change in Japanese men's fashions and a rapid diffusion of patterned shirts into the wardrobe of most men. As a consequence, the men's shirt industry (like much of the Japanese apparel industry) was in a relatively healthy state by the end of the 1970's. Adjustment had been based, however, on promoting and adapting to an increased fashionability in men's clothing, not on undercutting LDC prices on standard white shirts by means of more capital-intensive production technology. Thus, by 1975-1976, most of the newly acquired specialized production equipment was idled and awaiting disposal.

A somewhat different, but related, problem is exemplified by the introduction of automated sharpening/polishing equipment into a sanchi specialized in the production of scissors.¹²⁰ There, there were apparently a relatively small number of firms

¹²⁰ This example is based on a discussion with a factory cooperative manager in Sanjo, a hand tool sanchi near Tsubame, in August, 1980.

engaged in polishing and sharpening. Here too, the introduction of more efficient equipment was perceived to be the most effective means of responding to LDC competition. As a result (again, with the benefit of government financial assistance), all firms acquired automated equipment and the industry ended up with an enormous overcapacity in this stage of production.

In this case, unlike the men's shirt industry, it is not (at least, not yet) evident that equipment modernization is an inappropriate response to LDC competition. What is evident, however, is that there can be considerable risk of competitive capacity expansion and resulting overcapacity when improved technology is being introduced.

The examples cited also provide some anecdotal evidence that government intervention can stimulate uneconomic equipment investment. This may arise because government financial assistance obscures the underlying economics of the situation. In addition, it is possible that such assistance also triggers a competitive necessity to make otherwise uneconomic investment. Thus, while a firm may be worse off after the investment has been made, it may be less worse off than if it had refrained from the investment while its competitors went ahead with their new (government-assisted) equipment investment.

2.1.3 Developing And Diffusing New Production Technology

The men's shirt and the scissors industries involved the introduction of existing equipment. Thus, the general technical performance characteristics of the equipment, its cost, and the fact that it had previously proven economically viable elsewhere

were all known beforehand. Despite this reduction of uncertainty, these efforts to introduce a technical solution to the adjustment problem were not successful. The overall level of uncertainty regarding technical and economic feasibility in the mosaic tile and flatware industries was presumably much higher as both cases involved efforts to newly devise production technology.

Aside from uncertainty regarding technical and economic feasibility, however, the cases also indicate uncertainties relating to the diffusion of the new technology into the industry. There is, first, the fact that no matter how attractive the new technology is in the technical and economic sense, it counts for nought unless the firm or industry (in whole or in part) can finance its acquisition. In all four cases, if we can judge by the provision of government financial assistance, this was seen as a problem.

Secondly, there is the problem of how the various participants in the industry will react to the introduction of new technology. In the footwear case study, there was some evidence that modern equipment introduced at one stage of production could not operate efficiently unless and until other stages (presently in the hands of different participants) were suitably modernized as well. In the scissors industry, all competitors adopted the technology and this led to substantial overcapacity; none could operate profitably. Even when not all firms adopt the new technology the impact on those who do not, and their reaction, can affect the profitability of those who

do. If, for example, they accept lower profits and continue to produce, returns to the entire industry, including those firms that have adopted the improved technology, will be reduced. Moreover, when the development and diffusion of the technology is being carried out on a cooperative basis, or with government assistance, differences among firms in the net benefits of its introduction need to be reconciled. In the mosaic tile industry, this problem received explicit attention. There, access to the new technology required, in effect, a contribution of funds to assist the adjustment of those firms which did not adopt the technology.

Thus, the cases suggest four, interrelated, types of uncertainty involved in the development and diffusion of new production technology. These are;

i. Technical Feasibility

Is the contemplated system of production technologically feasible?

ii. Economic Feasibility

Given the present and anticipated (e.g., Japanese) economic environment, would the implied new investment, in the absence of the existing industry, be attractive relative to alternative investments?

iii. Financial Feasibility

Can the firm or the industry (in whole or in part)

finance the acquisition of the new production system?

and,

iv. Intra-industry Feasibility

Would the net benefits of introducing the new production system vary among industry participants and, if so, can these differences be (equitably) resolved while preserving overall feasibility?

The concern for equity, in the last of these, is of practical relevance only where the new technology is being developed and diffused by means of cooperative (or government) action and not by a single firm. Even an individual firm, however, would need to be concerned with the effect on other industry participants and their likely reactions to its introduction of new production technology, because of their potential impact on overall feasibility.

2.2 Domestic Transfers Of Location Of Production

The costs of production within Japan are not uniform between regions or between firms. Thus, one way of adjusting to LDC competition is to try to shift the location of production into lower-cost regions.

The umbrella industry provides the clearest example of cost-reducing adjustment by means of the geographic transfer of production to lower-cost regions of the country. Cost differentials among regions can be due to differences not only

in the prevailing industrial wage rates but also in the costs of land, construction, pollution abatement, services, etc. The overall cost differentials can be substantial.

Considering only regional differences in income levels, the index of per capita income in 1977 ranged from below 60 in southern Kyushu and Okinawa to, respectively, 100, 112, and 140 in Shizuoka, Osaka, and Tokyo. Some of the more rural regions in southern Kyushu have indices below 40. What is even more striking are the differences between even geographically close regions. The more rural regions of Chiba prefecture near Tokyo, to which umbrella production was transferred, have indices in the 70's and low 80's; not much more than one-half of the average in the urban-industrial Tokyo region.¹²¹

3. PRICE-IMPROVING ADJUSTMENT

The cases suggest two major types of price-improving adjustment, product differentiation and a shift of markets.

3.1 Product Differentiation (Product Variants)

As an alternative to price competition, product differentiation is a standard competitive tactic. By substantially distinguishing the firm's product from that of its competitors the firm may be able to command a premium price for it. A change in the customer's perception of the product will typically involve the use of a brand name, unique style or packaging, and advertising.

¹²¹ All indices cited are from, Chiiki Keizai Soran, 1979 (Toyo Keizai Shinposha, Tokyo, 1979) pp 462-499.

This sort of product differentiation is likely to be difficult or impossible for some products in which LDCs develop competitive strength. In consumer goods, such as footwear, umbrellas, and flatware, however, it is one possible avenue for adjustment. Thus far, in these industries, the approach only appears to have met with some success for a few of the firms in the flatware industry; and, even there, only in a few markets.

While its effectiveness is unclear, there was an effort in the umbrella industry to legally differentiate production by enforcing, in the domestic market, patents granted for various construction features of umbrellas. A somewhat similar situation apparently exists in the wire rope industry. For this product, there are numerous administrative requirements relating to industrial safety for wire rope that is to be sold to the construction or forest industries. The red tape involved in obtaining certification for sale to these industries has apparently served to deflect most LDC competition into industries, such as the fishing industry, where there are fewer such administrative requirements.

These latter, legal/administrative forms of product differentiation can be exploited but, unlike demand-based differentiation cannot, in general, be generated by an industry in order to reduce LDC competition and improve prices.¹²² In any case, they will have their greatest relevance for domestic as

¹²² Where this is done, it is more properly seen as the erection of a non-tariff barrier than as product differentiation.

opposed to export markets.

As this last example suggests, whether the product differentiation is based on demand or on legal and administrative factors, it is not always necessary that the firm newly create product differentiation. The effect is the same if the firm, or industry, simply places increased weight on existing product variants that enjoy a higher degree of differentiation from LDC production.

3.2 Shift Of Markets

The earlier discussion of LDC market penetration sequences implied that the extent of LDC competition will, at any point in time, differ among the various national markets. This also implies that the depressing effect of that competition on prices will vary among national markets. A shift of exports into markets facing relatively less LDC competition was observed in the industries examined.

3.2.1 Temporally Protected Markets

It is possible to make a broad distinction between market shifts of two types. The first of these involves a shift into markets in which LDC producers can be expected to improve their competitive position over time but have not yet seriously penetrated. A simple shift of marketing emphasis from say, North America to Europe or to the domestic (Japanese) market would fall in this category. In these cases, there is no inherent reason why the LDC producers cannot, eventually, penetrate these markets but, given their present capacity and

relative linguistic, cultural, and institutional access to the various national markets, their best opportunities presently lie elsewhere.

A pattern consistent with this type of adjustment seemed to underly changes in the country distribution of exports in all of the industries examined. It is debatable, however, as to the extent to which this pattern was, in any given industry, merely the result of sequential export market penetration by LDC producers; rather than an adaptive response to it. Clearly, however, a firm which did shift its sales effort so as to stay a step ahead of the LDC market penetration sequence would enjoy superior prices and profitability.

3.2.2 Structurally Protected Markets

The second type of market shift involves a shift to markets which are inherently less susceptible to the LDC competitors. In these cases, Japan will offer some locational advantage over LDC production. The efforts in the umbrella and footwear industries to expand exports to Eastern European markets which were not open to South Korean and Taiwanese producers would fall in this category. In general, however, such structurally protected markets will be found within the domestic market and the locational advantage will not be a matter of world politics but of communications.

The response time to orders for new production for the domestic Japanese market differs considerably between Japanese and Korean producers; despite relatively favourable communications links between Japan and Korea. The difference of

three or four weeks in the lead time required for such orders will not always be of major importance to the customer.

Where, however, fashionability is important and unpredictable or where there is a strong seasonality to demand or, in general, where there is a necessity for prompt adjustment to a customer's changing requirements, a three or four week difference in response time can provide domestic producers with an insurmountable advantage over LDC competitors. Adjustment of this type appears to account almost entirely for the successful adjustment of the footwear industry. It has apparently also been important in many of the apparel industries, as well.

4. MARGIN-IMPROVING ADJUSTMENT

Either a change of function or a change of product, or both, can improve value-added. However, apportionment of the source of this improvement between costs and prices is not meaningful as one is not comparing like with like. Here, total improvement resulting from a change of function or of product is termed "margin-improving" adjustment.

4.1 Functional Change

A change in business function can involve either divestment of existing functions or entry into new functions. Both types were observed in the case studies.¹²³

¹²³ This topic has also received some attention in the strategic management literature. See, Kreiken, Jan, "Effective Vertical Integration and Disintegration Strategies" in Glueck, Wm. F., Business Policy and Strategic Management (McGraw-Hill, New York, 1980) pp 256-263.

4.1.1 Divestment Of Existing Functions

Aside from regional disparity in costs of production, there were apparently substantial intra-industry disparities in the industries examined. There was an elaborate social division of labour and extensive use of subcontracting observed in Tsubame and, at less detail, in the other cases as well. In the industries examined, the subcontractors were, in general, both able and willing to carry out additional production activities at less cost than the downstream manufacturers. This appears to be due less to any differences in their material input costs than to a willingness to accept lower returns to capital and/or labour by the owners and employees of these subcontractors.

In any case, LDC competition appears to have triggered a shift of some production activities from manufacturers to subcontractors. In the case of Tsubame, this process had already been carried near to a limit and many of the major "manufacturers" were little more than coordinators of production carried out in other, subordinate, organizations.

Thus, this form of adjustment can also be seen as, in effect, a strategic retreat to a higher-order functional competence (i.e., production coordination, design, primary distribution) by the firms "shedding" production, itself, to subcontractors. It is, then, in contrast to the geographical transfer of production discussed earlier, an organizational transfer of production to lower-cost (organizational) locations.

4.1.2 Entry Into New Functions

Entry of a pure manufacturer into a new function, such as design or sales, can be necessary in order to create or develop new markets (Market Change) or to distinguish the firm's product from that of others (Product Differentiation). It can also, however, be a response to the perception that higher returns are available in that end of the industry. To some extent, the attempts of manufacturers in the examined industries to move downstream into the distribution function may have had this motivation.

While the problems of divestment of an old function and entry into a new function are different at the level of implementation, they can have the same motivation; to shift the firm's activities into areas where value-added is higher.

4.2 Product Change

As with a change in functional activity, margin-improving adjustment may be possible through a change of product. The data on the Change of Business Assistance Programme suggests a useful distinction can be made between change of product adjustments in terms of the relatedness to earlier production.

4.2.1 Vertical Product Change

Here, the strongest link with previous production appears to be with the specific product, rather than the production skills. This could conceivably involve movement into, say, the production of machinery and equipment for the prior industry. The Change of Business Assistance Programme data do not reveal

that particular type of change but do indicate substantial movement of textile producers into downstream activities that are more apparently linked to the prior product than to the prior set of production skills, per se. Examples include movement from textiles manufacture into apparel, sundry textile products, linen supply, and dry cleaning.

4.2.2 Horizontal Product Change

Here, the strongest link with the prior business activity appears to be with the skills it embodied rather than with the specific product. The Change of Business data indicate that this sort of product change was particularly common in the machinery and metalworking industries but quite rare in the textiles and some other industries.

VIII. THE ADJUSTMENT PROCESS

1. INTRA-INDUSTRY VARIATION AND ADJUSTMENT

1.1 Intra-industry Variety

Differences among firms in terms of their particular strengths and weaknesses have important implications for their strategic position, behaviour, and performance in the presence of environmental change affecting an industry. The variety among firms within an industry depends, in the first instance, upon how one defines the industry and it is by no means obvious how this should be done. Adopting the perspective of some specific individual firm facilitates the identification of a relevant set of "competitors". The participants in an industry are not, however, simply a set of incumbent competitors.¹²⁴

There are also upstream (supplier) and downstream (customer) organizations with which firms have collaborative relations; as well as potential new entrants to the industry and producers of substitute products with which they have

¹²⁴ The importance to the firm of interactions with suppliers, customers, potential new entrants and producers of substitute products or services is a commonplace of the literature on strategic management. They are, however, often treated as being environmental, or external to the industry, per se. The view, here, on the other hand, is closer to that of M. E. Porter [Competitive Strategy, The Free Press, New York, 1980), pp32-33] who stresses the arbitrary nature of such distinctions. See also; on the role of potential competition (as opposed to incumbents), Baumol, Wm. J., "Contestable Markets: An Uprising in the Theory of Industry Structure" in, American Economic Review V 72 No 1 March, 1982; and, on upstream/downstream interactions, Williamson, O. E., Markets and Hierarchies: Analysis and Implications for Antitrust (The Free Press, New York, 1975).

competitive relations.

A shift of perspective from one firm to another located, say, upstream, would at the very least change the classification of other firms as between competitor, customer, etc. It might even change the actual roster of industry participants considerably. Thus, if one is not, or not only, interested in a specific individual firm or category of firms, then the classification of "industry" and of "industry participants" become very slippery tasks indeed.

The case studies presented in this research all deal with a final good and the underlying focus has been biased towards the firms which carry out the final stage of production for those goods. This bias was not motivated by a desire to limit the examination of adjustment to those firms but, rather, by the pragmatic necessity to adopt some perspective from which to define the industry. Concern for adjustment, in contrast, encompasses the whole of the industries thus identified. In the event, these industries, and our concern for adjustment, generally extend from a point slightly upstream from the final good "manufacturer" downstream to the level of distribution.

This present section considers some of the more important dimensions of difference among this set of collaborative and competitive participants, or "stakeholders", in the industries examined.

1.2 Industry Substructure

Differences among participants in an industry can be identified at a number of levels and all of these differences can affect the position, behaviour, and performance of the firm with respect to the adjustment problem.

1.2.1 Differences Among Competitors

Firms that carry out the same functional activity with respect to a given product are competitors. While they carry out the same basic functional activity, however, they can differ in many ways. In the industries examined in the present study, however, there were two dimensions of difference that seemed to be particularly important ; industry exposure and organizational motivation.

i. Industry Exposure

Clearly one factor influencing adjustment behaviour is the extent to which a firm is exposed to the affected industry. In the Tsubame flatware industry, for example, some manufacturers produced only flatware while others produced housewares as well. In the mosaic tile industry some producers also produced outdoor tile, while others did not and, in the umbrella industry, wholesalers varied in the proportion of their sales accounted for by umbrellas relative to other goods they distributed. Those firms with proportionately more direct and extensive exposure to the affected industry have a greater motivation to adjust.

ii. Organizational Motivation

All of the industries examined were dominated by privately-owned firms and most of these are apparently owned by the founder and his family. Beyond this, however, there was a substantial number of family-centred , smaller firms, in which a family (or kinship group) provides not just the capital and management but also a significant proportion of the labour employed as well. These latter firms appear to be common in the smaller and more subordinate ranks, where monetary returns are generally lowest. In the mosaic tile industry there was, moreover, a clear shift to this form as the industry conditions worsened.

In a family-owned firm, the owner/manager is not likely to have a purely dispassionate attitude towards the firm and this may partly explain the presence and persistence of some such firms in the face of objectively adverse conditions. Moreover, in the family-centred firms, the family workers may derive more than just monetary returns from their labour. The obvious parallel is with the *gesellschaft-gemeinschaft* dichotomy. The family-centred firms, in these terms, would lie closer to the *gemeinschaft* end of the spectrum and would be characterized by the predominance of primary, non-contractual relationships and kinship ties. Such firms may be able to endure lower economic returns because they also provide participants with substantial social and psychological returns.

1.2.2 Differences Among Functional Groups

As the case studies indicate, there is considerable variety in the functional activities embodied in a product. The industries examined highlighted the fact that, even within the general functional category of "production", there can be extensive further differences in activity. Whatever the relevant set of distinct functional activities in a particular industry, firms can be grouped on the basis of their functional affiliation. Some firms may integrate more than one functional activity and have multiple functional affiliations.

There can, of course, be systematic differences among functional groups in terms of the factors already mentioned. In the Tsubame flatware industry, for example, firms specialized in polishing operations were typically much more family-centred than those carrying out other functions. Similarly, the degree of exposure to the umbrella industry was typically less among wholesalers than among umbrella frame manufacturers.

Distinct from this however, different functional activities, per se, can differ in terms of the significance of LDC competition. The most dramatic example of this was provided by the umbrella industry, where Japanese wholesalers could take the LDC producers as a new, and lower-cost, source of supply while the Japanese producers faced them as direct competitors. Moreover, even within the general functional area of production, the umbrella frame makers appear to have faced a more direct competitive threat from LDC production than did the firms engaged in installing umbrella fabric to produce the finished

product. These latter firms had the option of sourcing umbrella frames in the LDCs.

The concept, introduced earlier, of a functional competence development path suggests that the degree of exposure to LDC competition will differ among functional activities at any point in time¹²⁵ and that it will increase, over time, in a more or less determinate way. This means that, within an industry, a firm's degree of exposure to LDC competition will depend in part on its pattern of functional activities in relation to LDC functional competence development at any given point in time. Those DC firms whose functional specialization enables them to react to LDC firms as potential collaborators will be least adversely affected by their competition.

1.2.3 Differences Among Functional Coalitions

i. Internal Functional Variety

Because the various functional activities necessary to an industry may be carried out within separate firms, an industry can be characterized by one or more forms of coalition among functionally complementary firms.

Table 17 shows seven different hypothetical types of

¹²⁵ In this respect, then, a shift of the burden of adjustment from, for example, wholesaler/manufacturers onto smaller, and more labour-intensive subordinate firms should not be seen merely as the exploitation of superior bargaining power by the wholesaler/manufacturers. It may also reflect (and be justified by) the higher degree of direct functional competition with LDC producers among the latter firms.

participant in an industry, distinguished from each other in terms of their functional internalization. An industry might contain any or all of these types.

Thus, the anatomy of a particular industry may be characterized by many sub-contractors producing for Design-specialist firms which market their end products through independent Wholesale and Distribution firms. Alternatively, the industry might be characterized by Designer-Producers relying on independent Wholesale or Distribution firms for sales of a product which they design and produce internally. More generally, one might expect to find that a given industry contains participants which, respectively, have different strategic roles with respect to the business and that relations between two participants may be collaborative or competitive in nature.

ii. Natural Coalitions Among Firms

Relationships between firms of complementary types (i.e., no functional overlap), if they exist, will be collaborative. Relationships between firms of the same or of rival types (i.e., with functional overlap) will be competitive.

At a more aggregate level, one can identify certain "natural coalitions" among firm types. Thus, in the previous table, while a firm of type 3. (DP) is not viable in isolation, it can exist in a collaborative pairing with a firm or firms of type 7. (S). Table 18 lists the five natural coalitions that combine the necessary set of functional activities. Firm type

Table 17 - Hypothetical Internal Functional Variety Among
Industry Participants

D = Design, P = Production, S = Sales (marketing/distribution)

<u>Type</u>	<u>Description</u>
1. P ;	Subcontractors
2. PS ;	Design-dependent producers
3. DP ;	Designer-Producers
4. DPS ;	Full-function Producers
5. DS ;	Designer-Marketers
6. D ;	Designers
7. S ;	Marketing-Distribution Specialists

Source: Compiled by author

Table 18 - Natural Coalitions in an Industry

D = Design, P = Production, S = Sales (marketing/distribution)

	General Case	Standardized/Custom-Ordered Product
I	{1(P), 5(DS)}	
II	{1(P), 6(D), 7(S)}	IIb) {1(P), 7(S)}
III	{2(PS), 6(D)}	IIIb) {2(PS)}
IV	{3(DP), 7(S)}	
V	{4(DPS)}	

Source: Compiled by author

IV (DPS) is an internal coalition. The variants IIb and IIIb are feasible when the product is either standardized or custom-ordered and the Design function is therefore irrelevant or, one might say, "provided by the market".

A particular industry may be characterized by one or more of these natural coalitions among firms. Where there is more than one type of coalition, in addition to the inter-firm rivalry previously discussed, there will be a structural form of rivalry between the coalitions.

iii. Implications in Adjustment

When the industry environment is relatively stable, one would expect an industry to contain those coalitions that are most efficient in that environment and that the pattern of coalitions would be fairly stable.¹²⁶ With environmental change, such as the advent of LDC competition, the viability of various coalitions may differ.¹²⁷ Adjustment may, for example, call for a higher degree of coordination among functions and, in that case, existing coalitions which group the functions into a smaller number of firms or into a single firm (e.g., IV and V) may be more viable than those which do not (e.g., II). In that case, two otherwise identical production specialists may face

¹²⁶ See Williamson, O. E., Markets and Hierarchies, op. cit. . Williamson suggests that a dominant pattern will be found in any given industry when the environment is stable.

¹²⁷ See, Kreiken, Jan, "Effective Vertical Integration and Disintegration Strategies" in Glueck, Wm. F., op. cit. pp 256-263. Kreiken has considered the impact of environmental change on inter-functional integration and "dis-integration".

different adjustment prospects on the basis of their existing coalition memberships. A firm that is already affiliated with a semi-integrated coalition would be more favourably positioned than one which is not.

1.3 Interaction In Adjustment

1.3.1 Underlying Principles

The preceding section outlined some ways in which firms can differ both within functional groups and between functional groups as well as in terms of the functional coalitions within which they operate. Differences at all of these levels can be relevant in the adjustment process. Specifically, they will determine differences among firms in: the degree of congruence with the characteristics of LDC producers (and thus the implicit degree of exposure to competition from them) and the nature and range of alternative adjustment opportunities available to the firm. These differences will affect the nature of collaborative and competitive interactions within the industry in adjusting to LDC competition.

1.3.2 Interaction With Collaborators

If, for example, the most attractive strategic option for the non-integrated manufacturers in Tsubame involved staying in the flatware business and the continued utilization of sub-contractors, it would be necessary to secure the continued collaboration of those sub-contractors. They, however, might face a distinctly different set of strategy options and, even if the manufacturers' proposal offers them their best prospects

within the flatware industry (and it might not), they may have more attractive options outside of the industry.

Something like this seems to be evident in Tsubame. Thus, it seems probable that many of the firms that have moved into the subcontracting of parts for other (different) industries were not "rejected" by the flatware industry but, rather, saw better opportunities elsewhere and decided to pursue them. In Tsubame, at least, many of the subcontractors, however dependent they are within the industry, are less dependent on the industry (face lower exit barriers) and have a mobility that affords them a broader range of options than those of the manufacturers.

Of particular importance are the downstream collaborators involved in distribution. The local wholesaler/coordinators, in Tsubame, would appear to be highly vulnerable to the changes taking place. On the one hand, many of the smaller firms are moving into the subcontracted production of parts for larger firms in different manufacturing industries. On the other, the larger firms remaining in the flatware industry appear to be moving towards a more integrated form of operation which includes an extension of their own distribution and marketing capabilities. In either case, the utility of the local wholesaler/coordinators is declining.

Further downstream, the wholesalers and trading companies based in urban areas, while they are exposed to the same changes, are less dependent on the flatware business and because of their location and related expertise have, in any case, more adjustment options with respect to the flatware business itself.

In particular, with respect to the domestic market, they have the option of switching their allegiance to lower-cost flatware producers in Korea and elsewhere. Thus, they can readily change from a collaborative to a competitive relationship (in coalition with Korean producers) with the Tsubame industry.

1.3.3 Interaction With Competitors

There are, of course, also competitive interactions among firms of the same type (manufacturers, wholesalers, specific sub-industries, etc.). It is important to note, however, that in the adjustment process the scope of their competition expands. They compete, that is, not only for business within the existing structure but also in the implementation of adjustment strategies.

Thus, for example, there may be room for a certain number of firms to survive and prosper in the production of higher priced flatware but not room for all of the potential candidates for that form of adjustment. Similarly, this means that the option to move out of, for example, the flatware industry and into a specific new business can involve competition not only with the incumbents in that business but also with one's cohorts in the flatware industry; to whom that particular adjustment option might be equally attractive. This means that, for participants in a type of industry (such as small foundry operations) which is composed of many near-identical cohorts, unless the number of adjustment opportunities is proportional to the number of potential candidates (e.g., migrants) there will be considerable "crowding" and competition for viable adjustment

niches will reduce the returns from them. It would seem likely that the movement from the flatware and into the housewares industries has approximated this pattern with the number of migrants being great relative to the number of opportunities and the resulting benefits of making the change accordingly reduced.

2. DIFFUSION AND DURABILITY IN THE ADJUSTMENT PROCESS

2.1 Diffusion Of The Adjustment Problem

The competition among firms for adjustment "niches" depends on the degree of congruence between them in terms of: 1. their resources (e.g., skill endowments) and 2. their perceived opportunities.

This competition can occur within the industry itself as firms seek to implement similar adjustment strategies aimed at repositioning within a given industry. It can also occur in different industries as firms from an adjusting industry attempt to migrate to niches within different industries.

As was noted, this competition reduces the benefit accruing to any one adjusting firm. In the case of competitive migration to a different industry, however, it can also reduce the returns to the incumbents within that industry. Thus, there can be diffusion or "leakage" of the adjustment problem into industries which do not (or, not yet) face direct competition from LDCs.

This leakage of the adjustment problem into other industries was evident in both the flatware (migration into housewares) and mosaic tile (migration into outdoor tile) industries. In the latter case there was some evidence that, in

addition, there had been some prior diffusion of an adjustment problem from elsewhere in the ceramics industry (ceramic dinnerware) into the mosaic tile industry.

In these cases the diffusion of the adjustment problem between industries reflected a high cross-elasticity of supply between the industries. Producers in one of the industries, in response to relatively higher returns in the other industry, could fairly readily switch production. The mosaic tile case also points out, however, how a high cross-elasticity of demand can have a similar effect. Thus, while mosaic tile producers could not readily move into the production of interior wall tile, the overcapacity and subsequent price reductions in mosaic tile, which were the symptoms of the adjustment problem in the mosaic tile industry, apparently reduced sales volume and profitability for the interior wall tile industry.

2.2 The Durability Of Adjustment Niches

Because the adjustment problem can be transmitted over time to potential adjustment niches, within or outside of the original industry, adjustment strategies can differ in their durability. Among the DC industry participants, an adjustment niche for a firm can be eroded due to infiltration of that niche by its cohorts within the DC industry. The period of time for which the adjustment niche is viable will depend importantly on the degree of overlap between the skills and perceived opportunities of the firm and those of its cohorts.

For the DC industry as a whole, the equivalent issue exists with respect to its LDC competitors. The industries examined in

this study indicate that adjustment niches differ considerably in terms of the duration of the period of relief they are likely to provide from Asian NIC competitors. Within the flatware industry, the strategy of seeking new export markets was seen to provide only brief respite from such competition. In the housewares industry, to which many flatware industry firms have migrated, Korean producers (many from the flatware industry) already pose a general competitive threat in export markets as well as in the Japanese market for less bulky items (such as mixing bowls, which can be nested for shipment). Even in the apparently more remote industries to which some of Tsubame's firms have migrated (such as eyeglass frames and watchbands), competition from lower-cost LDC producers has quickly reasserted itself as a problem.

At the root of this rapid erosion of the effectiveness of many adjustment strategies is a major overlap in the capabilities of the Japanese firms and their Asian NIC competitors. In selecting an adjustment strategy any firm must build on its existing resources and capabilities. At the same time, however, the very fact that their Asian NIC competitors have been so successful indicates that, in many important respects, they have a similar set of resources and capabilities. Thus, many of the most obvious and easily implemented adjustment strategies are likely to also provide some of the most obvious and easy avenues of development for Asian NIC competitors. To the extent that this is so, they may not provide very durable relief from that competitive threat.

2.3 Successful Adjustment Strategies

2.3.1 Successful Adjustment

One would not expect any adjustment strategy to provide a "final solution" to all of a firm's problems. It would be hoped, however, that successful adjustment would leave a firm in a position where, for some period of time, success would depend upon a standard set of operating and managerial efficiencies and on strategic interactions with a relatively stable set of competitors and collaborators facing approximately equivalent environments. At a minimum, successful adjustment to the challenge of Asian NIC competition should provide relief from that particular environmental threat.

2.3.2 The Distance-Durability Dilemma

The fact that adjustment niches can differ in the duration of relief provided affects the relative opportunities they present. That is to say, the relative attractiveness of two adjustment niches must be discounted to take account of such differences. All else being equal, the adjustment niche that provides the longest duration of relief, and thus the greatest attraction, will be precisely that which serves to place the greatest distance between a firm and both its DC cohorts and its LDC competitors. This, however, may be the most difficult and expensive niche to move to.

2.3.3 Determinants Of Successful Adjustment

Some firms, perhaps fortuitously, will be better positioned than others to move to an attractive niche. If we assume, however, that a firm and its cohorts have equal endowments and face an objectively identical environment, then relative adjustment performance will depend upon differences in the ability to perceive opportunities in the environment and on the implementation of the resulting adjustment strategies.

In the case of the DC industry as a whole, adjustment to LDC competition will similarly depend on effective use of any differences in endowments between DC and LDC firms. Here, however, even if we assume identical firm-specific endowments, the overall locational and environmental endowments and opportunities will necessarily differ considerably between DC and LDC firms. The considerable differences between the overall DC and LDC socio-economic environments are, thus, the greatest source of durable adjustment opportunities for DC firms.

In some instances the DC environment will provide opportunities that are simply not available to LDC producers. The trade and services sector is the prime example, but analogous examples can exist within the manufacturing sector. The overall adjustment process in the footwear industry, and in much of the apparel industry as well, relied on entry into product/markets where the volatility of fashion requires local (DC) production.

In other cases, the DC environment will support more advanced industries that do not exist, or are not as

competitive, in the LDCs. Such industries may include some activities involving lower skills or more labour-intensive production techniques or may be prepared to take subcontractors into an "apprentice" system whereby their skills can be upgraded. Thus an adjusting firm may be able to forge a symbiotic tie with the more advanced sector and enjoy some of the invulnerability to LDC competition possessed by the more advanced industry. For example, in the Tsubame flatware industry, firms which moved into the production of parts for machinery or automobiles appear to have enjoyed a more durable adjustment than have firms which moved into the production of eyeglass frames or housewares.

The essence of effective adjustment, therefore, appears to lie in creating a divergence between the firm and both its DC cohorts and its LDC competitors in terms of the firm's resources and business activities. This clearly requires a considerable degree of adaptability both to provide the entrepreneurial insight needed to perceive favourable adjustment opportunities and to manage the effective implementation of the adjustment itself.

2.3.4 Adaptability In Adjusting Industries

There is reason to believe that adaptability will often be relatively low in industries that face LDC competition. As an industry matures, the most efficient firms are likely to be the most successful, at least insofar as the industry's product is

not differentiable. Williams¹²⁸ has argued, however, that there is an inherent trade-off between efficiency and adaptability. Thus, as an industry matures it is likely to be increasingly dominated by firms which have chosen efficiency over adaptability. This can exacerbate the adjustment problem when environmental change necessitates a fundamental adjustment.

A corollary of this is that, within an industry, the firms with the greatest resources to finance adjustment (the successful, efficient firms) may well be the least able to perceive new opportunities and move towards them. We might expect, therefore, that the most effective adjustment patterns will be displayed by firms which, for one reason or another, happen to have a relatively "adaptive", as opposed to "efficient" configuration, in addition to the resources required to finance adjustment. For example, all else being equal, firms which are relatively recent, but financially successful, participants in an industry might be expected to outperform older, more established firms.

This is precisely the pattern demonstrated by Tsuin Bado Kogyo in the Tsubame flatware industry. This firm has implemented one of the most fully elaborated and, apparently, effective adjustment strategies within the industry. It is not, however, one of the old, established firms and is a relatively

¹²⁸ See, Williams, Jeffrey R., Strategic Equilibrium in the Multi-product Firm (Working Paper, Carnegie-Mellon University, Graduate School of Industrial Management, Pittsburgh, 1980). Williams makes the argument for an environment of changing technology but it can plausibly be extended to cover other environmental change.

recent (mid-1960's) migrant from the automobile parts industry, where it had specialized in subcontracted chrome plating for a large automobile manufacturer.¹²⁹ The move to the flatware industry was motivated, moreover, by the owner's desire to establish a more independent corporation; again, an indication of the entrepreneurial spirit that the adjustment process seems to demand.

2.4 Transnational Decoupling Of Functional Competences

The postwar era has seen enormous progress in communications and transportation. This has vastly expanded the horizons of industrial enterprise and has, for example, been an important pillar in the expansion of multinational manufacturers over the period. The impact has, however, not been limited to multinational manufacturers. The same developments have also facilitated the operations of non-manufacturing organizations.

Thus, trading companies, large retailers, consulting firms, and governmental commercial intelligence organizations have all enjoyed a growing capacity to operate effectively in the global environment. To a very great extent, the skills and functional activities of such organizations complement the narrow, production-centred skills and activities of LDC manufacturers. There has been, therefore, extensive opportunity for symbiotic ties between LDC producers and international firms in the trade

¹²⁹ This is somewhat ironic for, as was noted in the Tsubame case study, some firms in the flatware industry sought to adjust by moving into subcontracted production for the automotive industry.

and services sectors through international subcontracting, production to order, and joint ventures. Such international coalitions serve to speed up the effective competitive progress of LDC producers by making higher-order skills or information (regarding, for example, business functions or markets) available to them through the market long before they are able to develop this competence internally.

Within the manufacturing sector, itself, a similar phenomenon is evident. Here, less technologically demanding and more labour-intensive stages of production can now more readily be ceded to LDC producers, whether through the intermediation of trade and services specialists or directly, by the manufacturing firms.

In either case, the effective "decoupling" of functional activities or of stages of production activity can serve to expose a wider range of DC firms to competition from LDC producers. Thus, while the Korean or Taiwanese finished automobile industry is unlikely to ever pose a serious challenge to the Japanese industry, automotive parts producers or subcontractors carrying out labour-intensive production processes face a much higher likelihood of eventual LDC competition than would otherwise be the case.

In many instances the market may not provide the relevant expertise, or may not provide it on terms acceptable to the LDC firm or government. Even here, however, the potential can be exploited by the development, within the LDC, of specialist organizations to provide the necessary skills to complement

indigenous producers. The Japanese general trading companies (sogo shosha) have, historically, filled that role for many Japanese manufacturers and similar organizations have been fostered, for example, by the Korean government as a part of the national industrial development policy.

3. INDUSTRIAL RETROGRESSION

3.1 Alternative Perspectives On Adjustment

3.1.1 The Perspective Of The Firm

The emphasis thus far has been on adjustment whereby the firm restores the level of value-added to that which prevailed prior to LDC competition, or improves upon it. This will not always be possible or necessary.

The mosaic tile industry provides the clearest example. There, the ranks of the middle-sized firms were depleted while the large (and most economically efficient?) firms and the small firms survived. The number of small firms, in fact, grew rapidly, as medium-sized firms that had made extensive use of wage-labour collapsed around a much smaller core of managers and workers within which ties of kinship were important.

It was suggested that the continued viability of such small, family-centred organizations was due in large measure to the social returns that were provided to members. The family members that formed the core of the middle-sized firms were, probably, enjoying surplus returns within the medium-sized organization; substantial social returns as well as superior economic returns, prior to LDC competition. Thus, the reduction

to a smaller, family-centred firm probably entails a net loss in their total (social plus economic) returns, but, implicitly, is still perceived to leave them with total returns in excess of those they could obtain elsewhere.

Such "retrogressive" adjustment does not remove these firms from the path of LDC competitive development and they are likely to face continued erosion of their economic returns. At some point, these total returns may be reduced (or their alternative opportunities expanded) to the point where migration out of the industry occurs. It is important to note however that, all else being equal, the migration will most likely be to an activity which (just as did their initial "retrogressive" adjustment) provides lower economic returns than they enjoyed prior to LDC competition.

3.1.2 The Perspective Of The Industry

The discussion to this point has centred on the perspective of the firms within an industry facing LDC competition rather than on the industry, itself. The distinction is not always important. When, for example, the firms in an industry adjust by remaining in it but employing more productive technology, the adjustment of the firms and of the industry, as such, are inseparable.

As has been noted, however, firms can adjust by leaving an industry and, in that case, what happens to the firms and what happens to the industry are separate matters. Moreover, as the preceding section pointed out, some firms that remain in the

industry may undergo retrogressive adjustment that, whatever its attractions for the individual firms, appears to bode ill for the ultimate viability of the industry, itself.

3.2 Industrial Retrogression

The earlier noted pattern in the mosaic tile industry involved a transformation of firms from medium-size, wage-labour organizations to small, family-centred organizations. From the perspective of the industry, however, it is unimportant whether the additions to the ranks of the small, family-centred firms come from among the participants in the pre-existing industry or not. The important point is simply that the industry's survival has been based in part on a shift to a structure more heavily dependent on small, family-centred firms.

The industry perspective can be applied, more generally, to the phenomenon of geographical and organizational transfer of production activities, discussed earlier in the context of adjustment alternatives for the firm. Adjustment in some instances involves the transfer of production to more geographically remote, rural regions which afford lower costs, including labour costs.

This was observed directly in the umbrella industry case study but was also evident in the Tsubame flatware industry where the pre-existing structure of production was based on the utilization of remote pockets of rural industry in the surrounding region. Similarly, part of the challenge to Tsubame's flatware industry was competition in the local labour market from other industries moving into the region in an effort

to reduce their production costs. As was noted in the discussion of Tsubame, the diffusion of industry from the industrial "centre" to the rural "periphery" was, in fact, a general feature of Japanese postwar development.

The organizational transfer of production to subcontractors, cottage-workers, and to smaller firms in general, was also observed in the case studies; most notably in the flatware and umbrella industries. Here, the transfer is not (or not only) between geographic regions but between types of economic organization. In Japan, at least, a movement from larger to smaller organizations is often equivalent to a shift to a lower-wage, less elite, labour force. Here, the movement is not from a geographic, but from a socio-economic "centre" to the "periphery".

This movement of an industry from the centre to the periphery (whether geographic, socio-economic, or some mixture of the two) can be termed "industrial retrogression".

3.2.1 Retrogression And Development In The Periphery

There is no reason to suppose that the general phenomenon of industrial retrogression is peculiar to Japan. One imagines, for example, that the firms and workers in the textile industry of 19th Century New England were much closer to the status of a contemporary industrial elite than are those in North and South Carolina, today. The same could be said in a comparison of the U.S.A. or Canadian automobile industries of 1920 and 1980.

Similarly, in the context of today's LDCs, the textile, footwear, and mass consumer electronics industries today command

a relatively high proportion of the industrial elite, and are more prominent in the industrial heartland of those countries, than will likely be the case one hundred, or even twenty, years hence.

Despite the negative connotations of the term, industrial retrogression is not a negative phenomenon in itself. For, while the process affords the industry lower production costs it also must provide the firms and labour force of the periphery with an improvement in their earnings sufficient to draw them away from their pre-existing activities. It is, therefore, the heart of a process whereby the benefits of industrialization are diffused from the elite and the centre to the less privileged areas and people at the periphery of the economy.

3.2.2 Characteristics Of Movement Towards The Periphery

As industries adjust by moving towards the geographic and socio-economic peripheries they can, and usually will, come to be composed of a different set of firms and a different labour force. Such industrial retrogression will likely occur where the industry produces price-competitive goods and to the extent that movement towards the periphery can continue to yield savings sufficient to maintain price-competitiveness.

As movement towards the periphery is motivated by the need to meet lower prices it must be accompanied by either a reduction in (non-labour) input costs or by a reduction in the returns to labour or capital. Input costs need not, and often will not, be lower in the periphery. It is relevant, therefore, to consider why firms or employees in the periphery might accept

lower returns. The general answer must be that they have lower opportunity costs ; more attractive opportunities are not available to them. Put the other way, they have very low mobility towards the more attractive opportunities that exist closer towards the centre. If they did not, they would move towards them.

At the limit, industries operating at the periphery will tend to be located in the most remote and undiversified rural hinterlands and to employ those (such as the unskilled, the uneducated, married women, disadvantaged minority groups) who are least mobile. It is this relatively low mobility which underlies their low opportunity costs and creates the conditions which attract the retrogressing industry.

The economic advance of these regions and people is, to a large extent, passively dependent upon the continued transfer of new, and marginally more productive, industries to them. To the extent that their industrial base is thereby continually refreshed and maintains, or improves, their standard of living relative to the economy as a whole, their lack of mobility does not pose a problem.

3.3 LDC Competition And The Immobile Periphery

As industries operating in the periphery tend to be those which produce price-competitive and labour-intensive goods, they are inevitably exposed to competition as LDCs industrialize. When the development of LDCs (such as the Asian NICs) is notably faster than that occurring in the DCs, the pace at which the industrial base in the DC periphery is refreshed falls behind

that necessary to replace industries in which competitive strength is lost to LDCs.

At that point, it is no longer enough to rely on the transfer of industries to the periphery; the periphery must be moved towards the centre. It is then that the very immobilities (and attendant low opportunity costs) that attracted the besieged industries to the periphery in the first place, become problematic.

The economist's view of LDC industrialization and DC adjustment to it, is that there is only an adjustment problem if factors of production face immobilities which inhibit their adjustment. This is true as far as it goes. It can, however, be easily interpreted to mean that change and development in the DCs and LDCs have no necessary connection with factor immobilities and, thus, there is no a priori reason to predict an adjustment problem. This interpretation takes factor immobilities as an essentially random phenomenon that may, but need not, be present.

The argument presented here, in contrast, suggests that relatively high DC factor immobility is not a random but a structurally characteristic feature of industries competing with LDC producers. Thus, it is in the nature of industries that cannot keep pace with overall DC environmental change (especially, changes in average productivity levels) to retrogress into the DC periphery to take advantage of the lower costs (because of lower mobility of factors) available there. This industrial "rearguard" is precisely that which is most

exposed to competition from industrializing LDCs and, at the same time, comprised of the relatively least mobile factors of production.

IX. CONCLUSIONS

It is not the purpose of exploratory research to establish the generality of the propositions which it derives. The findings of this study, therefore, should be viewed with considerable caution regarding their generality and their practical implications. Nevertheless, ultimate interest is not in the particular industries examined but in the issue of DC adjustment in general. Thus, it is appropriate to offer some comment on the likely generality of the findings and their possible implications.

1. GENERALITY OF THE FINDINGS

The study has generated findings at a number of different levels. The case studies (chapters 4 and 5) variously present findings at the level of some specific industries. Subsequent chapters (chapters 6 and 7) present, at a more abstract level, some inductively identified features of adjustment that the examined industries appear to have in common. An effort was also made to integrate these common features into a comprehensive adjustment process framework (chapter 8).

The descriptive validity of the findings is undoubtedly greatest at the level of the individual case studies. We are, however, confident that the findings at the more abstract levels, also, are broadly valid with respect to the industries examined. These industries are clearly not typical of industry in the developed industrial countries. What is more important, however, is whether they are typical of industries facing LDC

competition in those countries. We do believe they are highly representative Japanese industries presently facing the problem of adjustment to LDC competition. Whether they are also representative of (i.e., similar to) analogous industries in other developed industrialized countries is a question of more general interest.

The case studies focussed on industries selected from a set of Japanese industries which were identified by informants as facing the problem of adjustment to LDC competition. Studies of LDC competition in other O.E.C.D. countries have identified as "LDC-competing" such products as leather goods, textiles, knitted goods, clothing, footwear, some types of electrical and electronic appliances, and wood products.¹³⁰ These are all among the set of industries identified for Japan.

The examined industries are, relatively speaking, characterized by the intensive use of low-wage labour in the production of undifferentiated products. These overall characteristics have been identified for competitive LDC exports to other O.E.C.D. countries as well.¹³¹ There is also some evidence that LDCs are most successful in competing against DC industries where average firm size is small.¹³² Thus, in terms

¹³⁰ See, for example; Matthews (1980) op cit, O.E.C.D. (1979) op cit, and United Nations Conference on Trade and Development [UNCTAD] Dynamic Products in the Exports of Manufactured Goods From Developing Countries to Developed Market Economy Countries, 1970 to 1976 [UNCTAD/ST/MD/18] (UNCTAD, Geneva, 1978).

¹³¹ See, for example, Helleiner, G. K., "Industry Characteristics and the Competitiveness of Manufactures from Less-developed Countries" in Weltwirtschaftliches Archiv V 112, 1976 pp 507-523.

¹³² ibid.

of product categories, overall product characteristics, and firm size, there is some basis for assuming that the representativeness of the examined industries extends beyond Japan to other O.E.C.D. countries as well.

In two important respects, however, the broad generality of the findings is clearly open to some question. First, the selection procedure seems likely to have favoured the nomination by informants of product/industries which are currently facing the most visible problems in adjusting to LDC competition. This would have biased the set of identified industries towards worst-case examples and towards industries which are geographically concentrated (thus posing a noticeable regional economic problem), narrowly specialized in an LDC-competing product category, and in which the major (or only) source of recent environmental change is the advent of LDC competition. This may have systematically excluded some relevant and yet distinctly different examples of DC adjustment.

Second, the intra-industry structure of the industries examined may not be typical of adjusting industries in general. The fine division of labour among various specialized functional groups had important implications for the process of adjustment in the examined industries. Casual inquiry suggests that the cutlery industries in Sheffield, England and in Solingen, West Germany also had this pattern but they, too, may be atypical. If an adjusting industry were to display a higher degree of vertical integration within its constituent firms, then the adjustment process might differ significantly from that observed

in this study.

2. IMPLICATIONS FOR BUSINESS

The nature of the adverse environmental change which confronts an industry appears to have major implications for the severity of the adjustment problem. Miles'¹³³ study of adjustment to declining demand in the U.S.A. cigarette industry due to the "smoking and health" controversy, identified three major categories of strategic reaction; domain defence, domain offence, and domain creation. In brief, he found the following activities in these categories:

- i. Domain defence (cooperative action)
 - Industry pro-smoking (anti-"anti-smoking") lobbying and advertising
 - Industry support for "smoking and health" research
- ii. Domain offence (competitive action)
 - Introduction of low-tar cigarettes
 - Brand proliferation
- iii. Domain creation (independent action)
 - Internationalization of cigarette business
 - Entry into somewhat related businesses
 - Entry into unrelated businesses

While Miles deals with all three categories of strategic behaviour his emphasis is on domain defence and, especially, on domain creation (entry into new business or, in our terms,

¹³³ Miles (1982) op. cit.

"migration"). As it happens, the cigarette industry remained highly profitable during the period covered by Miles' study. For that reason, domain creation activities in his study faced relatively few financial constraints and were not seriously inhibited by the problem of converting existing assets and skills to new uses.¹³⁴ In some instances, in fact, domain creation activities differed little from those of a conglomerate investor.

Harrigan¹³⁵ also examines strategic adjustment to declining demand and, while she does give explicit attention to the narrow issue of the timing of withdrawal from the adversely affected industry, in Miles' terms, she examines only the domain offence category of strategic reaction. That is to say, she focuses on competition within the adversely affected industry; and by implication views the problem of domain creation (as does Miles) as a conceptually or empirically separate issue.

In the industries examined in this present study, however, the adverse environmental change was not declining demand but the advent of LDC competition; and the actual process of transition from an adversely affected business to a new business was a central problem. Thus, the problem of converting existing skills, assets, and know-how to new uses was of major strategic importance. Of course, in the absence of profitability in the existing business, there is no inherent reason why the same

¹³⁴ Miles does, however, find the issue of applying existing managerial skills and experience to the new businesses to be of importance.

¹³⁵ Harrigan (1980) op. cit. .

problem could not be of major importance in a situation of declining demand as well. Thus, while this feature distinguishes the particulars of the cases examined in the present research from those in Miles' and in Harrigan's research, it does not represent a point of fundamental difference between the adjustment problems presented by declining demand and LDC competition.¹³⁶ There is, however, a point of profound difference between the two situations which is related to this issue of converting existing skills and assets to new uses.

Where a firm moves from one business into another as a strategic adjustment to the problem of declining demand in the original business, the problem of converting existing skills and assets to new ends is of major importance. There is, in other words, necessarily a high degree of linkage between the competences implicit to the original and the new businesses. There is, however, no necessary linkage between the original problem (declining demand) and the prospects of the new business. Thus, the strategic reaction to declining demand for, say, stainless steel cutlery, might be to move into the production of stainless steel lighting fixtures and this would

¹³⁶ Note that, in any case, it is not just the occurrence of rapid, adverse environmental change (e.g., declining demand or LDC competition) that occasions strategic adjustment. In the case of the cigarette industry studied by Miles, for example, actual cigarette consumption did not rapidly decline (in some part, perhaps, because of the industry's adjustment activity, e.g., the introduction of low-tar cigarettes). Adjustment, in that case, was triggered more by the threat of decline than by its actuality.

reflect a strong linkage between the competences implicit in the original and new businesses. There would be no reason, however, to expect the original problem of declining demand (for stainless steel cutlery) to imply a decline in the demand for stainless steel lighting fixtures as well.

The need for linkage to the competences implicit in the prior business is also present in the case of adjustment to LDC competition. Here however, the original problem is, itself, a result of an overlap in DC and LDC producers' competences. Thus, the necessary linkages with the firm's prior competences represent, at the same time, a linkage to the problem (LDC competition) of the original business. Therein lies a profound difference between the problem of adjusting to LDC competition and that of adjusting to declining demand; in the case of the former, the problem (LDC competition) is highly likely to chase after its own solutions (e.g., migration to a new business).

The presence of substantial overlap (congruence) between the underlying competences of a DC firm and its LDC competitors is a central problem in strategic adjustment to LDC competition. For this reason, a fundamental pre-requisite to effective adjustment is a detailed and accurate assessment of the present and prospective strengths of LDC competitors. The DC firm must examine adjustment "opportunities" not just from their own perspective but also from the perspective of their competitors. This is a commonplace of strategy formulation but, where the competitors include LDC producers, the task of assessing competitors strengths vis-a-vis a given opportunity will be much

more difficult.

Aside from linguistic and logistical barriers to obtaining the relevant information, there will be the further and more novel problems of prospectively assessing the role of potential third-parties (such as international distribution specialists) with whom LDC competitors might collaborate and the likely direction and pace of development of the overall environment in the LDC itself (including the impact of that development on LDC wage levels and exchange rates).

Such analyses of LDC competition would reveal areas of present and prospective congruence and divergence between DC and LDC producers. This would not only suggest areas of potential DC producer vulnerability, but also areas for potential durable adjustment by DC producers. While the basis of such adjustment would, in its particulars, differ considerably from case to case, it is in general likely to be linked to divergence in the DC and LDC environments. This would include, for example, structurally protected markets and products (where locational advantages favour manufacture within the DC) and service industries, in general.

It is, of course, also possible for a firm to react through a continuous process of incremental adjustments that do not remove it from the path of LDC competitive development but which do keep it effectively, and profitably, further down that path than its LDC competitors. Here too, however, a detailed and accurate assessment of present and prospective LDC competitive development is necessary.

3. IMPLICATIONS FOR GOVERNMENT

The study has implications for instances where government deems it advisable, for economic or political reasons, to assist the adjustment process in affected industries.

There would appear to be, first, a potential role for government in raising the awareness level in affected DC industries of the nature, pace, and overall direction of the present and prospective problem posed by LDC competition. This would appear all the more necessary to the extent that the DC industry is domestically oriented and insulated from current competition because of protective tariffs or quotas. Such government activity should include, for example, the sponsorship of research aimed at assessing, in some detail, present and prospective development of participants in relevant LDC industries (including development outside of their present industry) and dissemination of research findings among participants in the corresponding DC industries.

Second, where adjustment involves capacity reduction, rationalization of industry structure, or joint development of new products or production technologies, government may be able to serve as an honest broker or mediator to monitor or guarantee intra-industry equity. At the very least, there may be the need for government to provide (and monitor) temporary relief from anti-trust regulations in order to facilitate joint intra-industry adjustment activity.

Third, more direct government involvement in the adjustment process need not mean that government must formulate "solutions"

to the adjustment problem. In the Japanese case, there was considerable and apparently effective use of joint business-government institutions and of procedures which placed (or left) the generation of specific (government-assisted) adjustment strategies with the affected firms themselves. These were then reviewed for feasibility and appropriateness by joint government/(third-party)business administrative committees. This pattern seems particularly appropriate, given the apparent importance of entrepreneurial motivations and insight in the adjustment process.

Fourth, the study points out the potentially high degree of variation within an industry in terms of the impact of LDC competition, relative opportunities for adjustment, and specific adjustment assistance needs (e.g., information, advice, training, finance). This implies that government assistance policy should be explicitly formulated to accommodate the variety that exists among participants in the affected industry.¹³⁷

Finally, we should note that the ability and willingness of the Japanese government to be responsive to the preceding issues was rather high and that this is due, in part, to the pre-existence of a complex network of institutionalized government-business interaction and consultation. There may be some doubt in other O.E.C.D. countries as to the feasibility and

¹³⁷ This, of course, is totally lacking in what is, in many O.E.C.D. countries, the most common form of adjustment "assistance", protective tariffs and quotas on imports from LDCs.

advisability of creating similar institutions and patterns of interaction. This issue would seem, however, to be inextricably tied up with the prior question of government intervention. If government is to intervene in the adjustment process, it had best be informed intervention. This is only possible with extensive and effective input from participants in the affected industries.

4. AREAS FOR FURTHER RESEARCH

This exploratory study of adjustment to LDC competition suggests some priorities for further research. First, the problem would clearly benefit from further and more focussed studies of DC adjustment in Japan and elsewhere. Studies which focussed on the level of the individual firm, on the migration mode of adjustment, and on the presence and implications of intra-industry participant variety would be especially valuable.

Second, longitudinal studies of the evolutionary development of LDC competitive strength would provide a firmer basis for assessing the relevant direction and dimensionality of LDC competitive development over time. This would facilitate the formulation of effective adjustment strategies for DC firms.

Finally, there appears to be considerable scope for the conceptual integration of studies of the DC adjustment problem with research, such as that of Miles¹³⁸ and Harrigan,¹³⁹ which, in the abstract, deal with an identical issue; "adjustment to

¹³⁸ Miles (1982) op. cit. .

¹³⁹ Harrigan (1980) op. cit. .

adverse environmental change".

APPENDIX A - GOVERNMENT POLICY ON SME ADJUSTMENT: INSTITUTIONS AND PROGRAMMES

5. THE INSTITUTIONAL FRAMEWORK

5.1 Structure Of The Bureaucracy

About 0.6% of the Japanese national budget is explicitly devoted to SME programmes and this figure rises to about 1.0% if we include the budget for the SMEA, itself. The percentage would be considerably higher if we were able to include the proportion of the internal MITI budget expended on SME-related work. About 77% of the national budget allocation for SME programmes is administered by MITI and its subordinate agency, the SMEA, with the balance being administered by the Ministry of Finance and the Ministry of Labour. Taking MITI and its subordinate agencies as a whole, around 16% of the ministerial employees are involved in some regular and direct fashion with SME policy and programmes although only a small proportion of those employees (say, 7%) are members of the SMEA.¹⁴⁰ The SMEA acts as the external agent of the MITI for SME policy and administrative guidance. Despite its relatively small size, therefore, the SMEA plays a pivotal role within the matrix of governmental and non-governmental organizations concerned with SME problems.

There are a number of other organizations devoted to SME

¹⁴⁰ These figures are suggestive only and were estimated from data in Chushokigyo Seisaku no Gaiyo (SMEA, 1980) and in Table of Organization of the Government of Japan (Prime Minister's Office, 1974), pp. 18-19.

policy formulation and development and they can be grossly divided into the three categories; "financial", "organizational", and "deliberative". We will briefly outline the composition of these three groups.

5.2 Financial Institutions

5.2.1 "The Big Three" (San Kikan)

iv. SME Financial Corporation

(Chusho Kigyo Kinyu Koko)

This corporation was founded in 1953 with 100% federal government capitalization but now also utilizes private capital via the issuance of bonds. It provides a source of long-term capital funds for equipment and operating capital for SME, which have difficulty obtaining such financing from the mainstream financial institutions. Its lendings outstanding as of March, 1980 totaled 3,860 billion Yen and it maintains around 900 offices nationwide.

v. Citizen's Financial Corporation

(Kokumin Kinyu Koko)

This corporation was established in 1949 with 100% federal government capitalization. It provides start-up and operating capital for individuals wishing to operate independent businesses and for whom the mainstream financial institutions are not readily accessible. As of March, 1980 it had around 3,461 billion Yen in loans outstanding and maintained about 800 offices nationwide.

vi. Commercial and Industrial Cooperative's Central

Financial Corporation

(Shokokumiai Chuo Kinko)

This corporation was established in 1936 and is a joint venture between the federal government and private capital. The private capital ownership is in the hands of participating industrial and commercial Cooperative Associations, whose constituent membership must be predominantly composed of SME. In addition to the contributions of government and of the participating cooperative associations, the corporation takes deposits and issues bonds as a means of acquiring funds. Its mandate is to provide finance for the participating associations and their membership. As of March, 1983 it had a total of 5,001 billion yen in outstanding loans and a total capitalization of 1,097 billion yen. Both of these figures are roughly comparable to, or somewhat in excess of, those of the larger commercial banks in Japan.

5.2.2 Other Financial Institutions

i. Credit Guarantee Association

(Shinyohosho Kyokai)

ii. SME Credit Insurance Financial Corporation

(Chushokigyo Shinyohoken Kinko)

The first of these two organizations is not a single entity but, in fact, a generic type of regional association of which there were in March, 1980 a total of 52 examples,

plus a national umbrella organization to which the regional associations belong. These associations provide financial consultation for SME in their regions and serve as guarantors of their loans from the mainstream financial institutions. The second of the above two organizations underwrites the credit insurance for the guarantees made by the regional associations and serves as their source of operating capital. In 1979, this latter organization insured 4,206 billion Yen of loans and provided 175 billion Yen to the regional credit guarantee associations.

iii. SME Investment Development Corporation

(Chushokigyo Toshiikusei Kabushikikaisha)

This corporation makes equity investments in SME and provides managerial and technical consulting services with the aim of facilitating the development of the concerned firms to the point where they can successfully make a public stock offering.

5.3 Organizational Institutions

5.3.1 Central Assembly Of SME Cooperative Associations

(Chushokigyo Dantai Chuokai)

This organization is primarily concerned with providing guidance and training for the establishment and operation of SME cooperative associations.

5.3.2 Commerce And Industry Conference Hall

(Shokokaigisho)

5.3.3 Conference On Commerce And Industry

(Shokokai)

These are generic types of regional organization with each of the former (475, in all) being located in independent premises in one of the major administrative districts of Japan and the latter being similar organizations (2,852, in all) established at the municipal or village level and generally operating out of the local government's office facilities. The activities of the two are similar and focus on providing for the local business community; educational training workshops, information and survey research, promotional exhibitions, mediation services for business disputes, and consultative services with respect to finance, tax, industrial relations, and general management. SME are the dominant clientele with respect to this last, consultative, service.

5.3.4 SME Promotion Organization

(Chushokigyo Shinko Jigyodan)

This corporation provides finance and organizational assistance for the development of industrial parks, cooperative or condominium factories, and jointly-owned physical assets for groups of SME. It also administers the SME mutual aid, or benevolent, association system and the Textile Industry Structural Renovation Program and provides a wide range of consultative services aimed at upgrading SME.

5.3.5 National Association For The Advancement Of Subcontracting Firms

(Zenkoku Shitaukekigyo Shinko Kyokai)

This national umbrella organization for 47 regional associations was only just established in 1979. It aims to promote the modernization of the subcontracting system and to establish national standards for subcontracting on an industry-by-industry basis.

5.4 Deliberative Councils

5.4.1 Council On SME Policy

(Chushokigyo Seisaku Shingikai)

This council of 21 persons drawn from business, academia, and government is headquartered in the Prime Minister's Office and is concerned with the broad range of SME policy.

5.4.2 Council On SME Modernization

(Chushokigyo Kindaika Shingikai)

The composition of this council is similar to the preceding but totals 34 persons and is headquartered in MITI. It has responsibilities with respect to a number of laws dealing with modernization, structural reform, and change of lines of business in SME-dominated regions and industries. It is this council which, for example, specifies which industries and regions are to be deemed eligible for the special treatment accorded by these laws.

5.4.3 Council On SME Stabilization

(Chushokigyo Antei Shingikai)

This council, composed of 31 persons, is concerned with general conditions within SME cooperative associations and their constituent firms. It surveys these conditions and makes general recommendations. It, too, is lodged within MITI.

5.4.4 Council On SME Business Field Regulation

(Chushokigyo Bunya Chosei Shingikai)

This council of 21 persons is concerned with regulating the activities of large companies with respect to fields of business activity which have been legislatively identified as requiring administrative protection for the incumbent SMEs.

6. AN OUTLINE OF SME POLICY

6.1 Policy Overview

Table 19 provides a general overview of Japanese SME policy. There is a variety of policy instruments employed to implement the various policies; ranging from the relatively passive device of providing information and consultative services to SME, through to active equity participation in SME.

Of the range of SME policies shown in the table, three programmes appear to be, in practice, most closely linked to industries which have faced LDC competition. These are;

1. SME Modernization and Advancement Policy,
2. SME Change of Business Policy

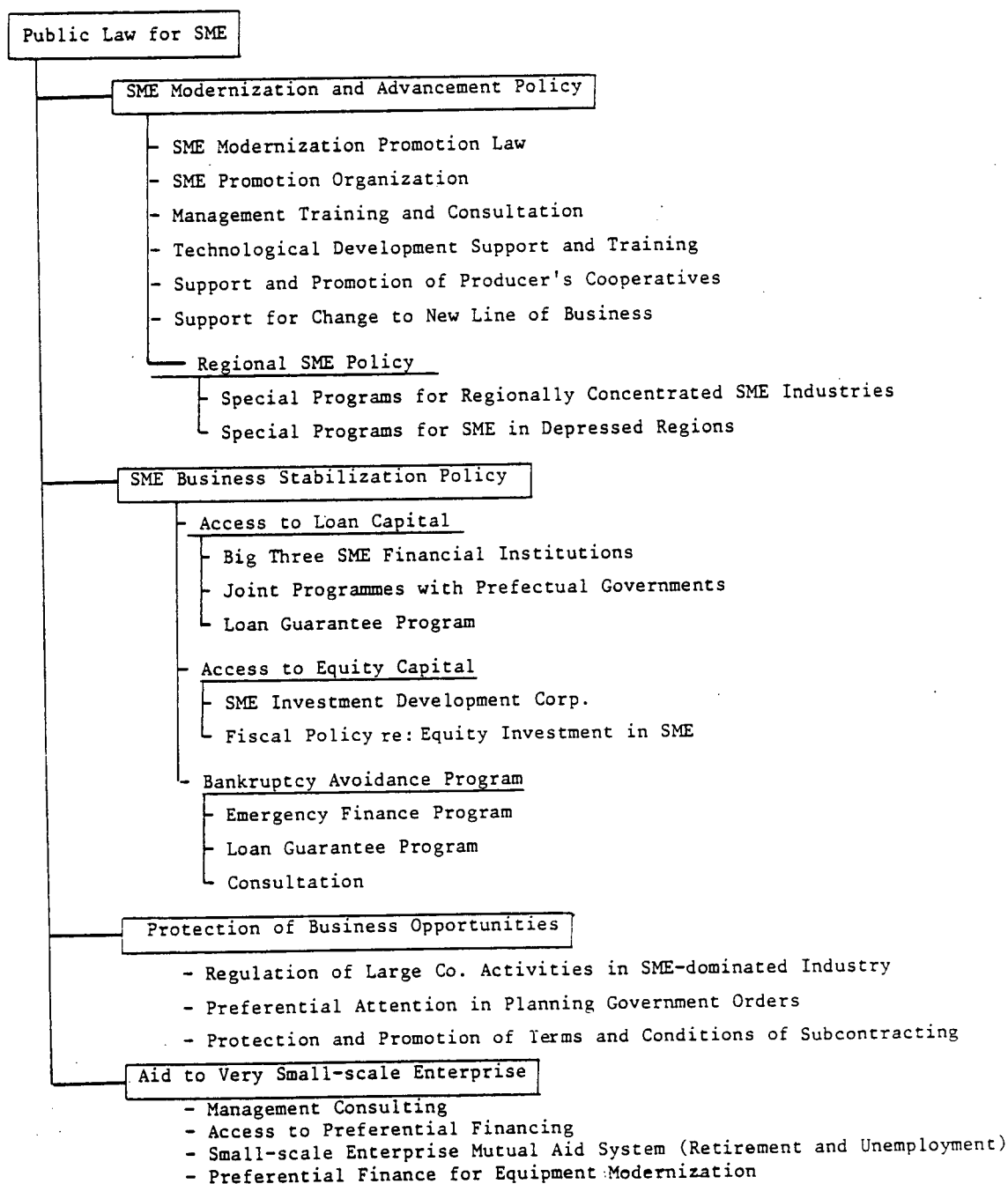
and,

3. Depressed Regional Industry Policy.

The implementation of all three of these programmes utilizes a largely common set of policy instruments comprised of loans, loan guarantees, tax provisions, grants, etc. Table 20 outlines some of the major instruments employed under each of the three programmes.

The programmes display some differences in the mix of policy instruments employed and in the specific (favourable) terms offered with respect to individual instruments. The major areas of difference in the programmes, however, is in their goals and eligibility criteria. Our discussion of the three programmes will, therefore, focus on these aspects of each of them.

Table 19 - An Overview of Japanese SME Policy Measures



Source: Chushokigyoshisaku no Aramashi-Gojunendo (S.M.E.A., Tokyo, 1980, p. 5)

Table 20 - A Comparison of Policy Measures Employed in
Three Adjustment Programmes

Policy Measures	MODERNIZATION Programme	CHANGE OF BUSINESS Programme	DISTRESSED REGIONAL INDUSTRY Programme
Consultative	X	X	X
re: Government Bureaucracy of Policy	X	X	X
re: Plan Development & Imple- mentation	X	X	X
re: Information Services	X	X	X
Financial	X	X	X
Loans on Preferential Terms			
SME Financial Corporation	X	X	X
Citizen's Financial Corporation	X	X	X
SME Promotion Organization	X	X	X
Loan Guarantees	X	X	X
Higher Proportion of total loan		X	X
Lower Insurance fee	X	X	
Fiscal			
Favorable Treatment of R & D Expense	X	X	X
Waiver of Merger-related Registration fees	X		
Waiver/Reduction of Property and Business Taxes	X	X	X
Accelerated Depreciation	X	X	X
Other			
Grants			X
Development Planning			X
Development Plan Implementation			X
Personnel Development			X
Internal Promotional Activity			X
New Market Development			X
Approvals	X	X	X
Cooperative Reduction of Excess Capacity	X	X	X
Production Sharing	X		
Employment Stabilization funds		X	

Source: Chusho Kigyo Shisaku no Aramashi-Gojunendo

(S.M.E.A., Tokyo, 1980)

6.2 SME Modernization Policy

This programme is based on the SME Modernization Promotion Law of 1963 and its 1975 revision. The policy consists of three programmes dealing with;

- i. Modernization
- ii. Entry into new lines of business
- iii. Reform of industrial structure

These programmes take, respectively, as their base unit;

- i. The individual SME
- ii. Small groups of SME within an industry
- iii. Industry-wide SME groups

In all cases, the SME individual or group must be presently operating within an eligible industry as designated by the Council on SME Modernization. The fundamental goals of the programme are to promote modernization of products and production processes, reform of the industrial structure, and improvement of the international competitiveness of the designated industries.

6.2.1 Modernization

As of 1980, there were 57 designated industries (more finely subdivided into 69 industries for policy implementation), most of which were in the manufacturing sector. Table 21 lists some representative designated industries in the manufacturing sector. The central administration of the programme is carried

out by Modernization Councils established at the national (i.e., industry-wide), regional, and municipal levels as required by the nature of the particular industry.

These councils establish the general guidelines for modernization plans, consult in the preparation of plans for submission to the council, and review and approve specific proposals submitted by individual SMEs.

The content of guidelines and specific proposals varies considerably from industry to industry and from enterprise to enterprise but could include such matters as; new products, new technology, equipment modernization, change in the scale of operations, and proposals to alter the nature of relations with competitors or with suppliers or customers.

6.2.2 Entry Into New Lines Of Business

This programme applies to SME in industries which have been designated at the ministerial level to be eligible. The industries designated need not be dominated by SMEs but the SMEs within the industry must have suffered severe adverse impact from;

- i. Changing consumer demand;
- ii. The advent of competitive products

or,

- iii. Changes in the supply of basic raw materials

The programme is available to groups of SME within the industry

Table 21 - Modernization Policy: Some Representative
Designated Industries

MODERNIZATION POLICY:
SOME REPRESENTATIVE DESIGNATED INDUSTRIES

MODERNIZATION PROGRAMME (in total 57 industries)	STRUCTURAL REFORM PROGRAMME (in total 40 industries)
Plywood (including Laminated Lumber)	X
Nails	X
Gears and Sprockets	X
Steel Castings	X
Small Springs	X
Printed Circuit Boards	X
Diecastings	
Metallic Thermometers	
Leather Tanning and Dyeing	X
Matches	X
Wooden Furniture	X
Ceramic Tile	X
Book Binding	
Paper Manufactures	
Shoes of Manmade materials	X
Bags, Briefcases, Suitcases	X
Wooden Boats	X
Small and Medium-Sized Steel Boats	X
Cabinets for Electronic Products	X
Hand Tools	X

Source: Chushokigyo Shisaku no Aramashi: Goju Go Nendo, op cit.,
pp 8, 9, and 12. (S.M.E.A., Tokyo, 1980)

but groups need not consist of the bulk of SME within the industry; though all SME in the industry must be eligible to join the group if they wish to do so.

The programme assumes that a pattern of fragmented, small, firms is a prime cause of SME problems in these industries and, for this reason, requires that proposals to enter new lines of business involve a considerable element of cooperation or consolidation among the firms within a group. The emphasis is on development and entry into new (alternative) product lines.

6.2.3 Reform Of Industrial Structure

This programme was established in 1969 and revised in 1973 and 1975. It applies to a subset of the industries eligible for the Modernization Programme, discussed above. These are industries in which it has been deemed that the extent or pace of change required to meet the modernization objective is such as to demand industry-wide cooperative efforts aimed at structural reform. As of 1980, this group consisted of 40 of the 57 industries in the Modernization Programme. Some of these are indicated in the immediately preceding table. The programme requires formation of an industry-wide plan for reform developed by an industry organization which; consists of 50% or more of the incumbent SME, is capable of overseeing implementation, and plausibly reflects the views of SME within the industry.

The content of proposals made under this programme, again, vary a great deal from case to case but might include the

following features; new product and technology development; adjustment of average scale and efficiency via merger, cooperative production, intra-industry specialization, and cooperative disposal of excess production capacity; reform of distribution and sales networks; and adoption and promotion of a common brandname or trademark. The 1975 revision of this programme expanded its coverage to SME in related (upstream or downstream) industries not specifically designated in the Modernization programme.

6.3 SME Change Of Business Policy

6.3.1 Outline

In recent years there have been rapid changes in the industrial environment; many of which have had adverse impact on SMEs. Some SME have successfully responded to such environmental change by switching to a new line of business. Given Japan's relatively slower rate of economic growth nowadays, the task of switching to a new line of business has become considerably more difficult for SME. The Japanese SME Change of Business Policy is aimed at assisting SME which, on their own initiative, seek to make the transition to a new line of business.

The policy is applicable to individual SME in designated depressed industries in which external structural change has had adverse impact on SME within the industry. Four types of structural change are considered in designating eligible industries. These are:

- i. Change in international patterns of trade leading to decreased exports or increased imports
- ii. Technological change creating an advantage for competitive products whether on the basis of productivity, quality, product characteristics, or price
- iii. Changes in international markets such that it becomes difficult to acquire necessary raw materials
- iv. Changes in safety and environmental protection legislation such that it is physically or financially impossible to comply with regulations

As of 1980, 101 industries have been designated on a national basis and 9 industries on a regional basis. In the case of the 9 regionally eligible industries, only relevant SME located within the designated regions are eligible. A large number of the designated industries appear to be ones in which LDC competition has had an adverse impact on Japanese producers. Table 22 lists some of these.

Individual firms in these industries, or other firms which can demonstrate that they face the same circumstances as those firms, can apply to their regional government for approval of their eligibility for assistance under the programme. All applicants must demonstrate a drop of 5% or more in their level of sales during the past three year time period and provide complete financial statements for the period as well as a detailed plan for changing their line of business.

Table 22 - Change of Business Policy: Some Representative Designated Industries

Lumber	Spinning Industries
Plywood (Decorative & construction goods)	Cotton Yarn and Thread
Wire and Cable Products	Wool Yarn and Thread
Electroplating	Other Yarn and Thread
Plastic Film Sheet	Weaving Industries
Artificial Leather	Cotton and Wool Woven Fabrics
Christmas Decorations & Accessories	Knitted Fabrics
Plastic Shoes, Sandals & Accessories for same	Woven Fabrics of Artificial or Natural Silk
Rubber Footwear & Accessories	Underwear (except Japanese Style)
Leather Gloves	Innerwear (except Japanese Style)
Wooden Boxes and Containers	Outerwear (except Japanese Style)
Stainless Steel Cutlery	Stockings
Plastic Housewares and Containers	Cotton Gloves
Ceramic Novelties & Knick Knacks	Hats and Caps
Ceramic Tiles	Handkerchieves
Matches	Jade
Natural & Artificial Bamboo Window Shades	Steel Castings
Bricks & Paving Tile	Products of Steel Wire or Rod
Boats, Equipment & Accessories	
Wooden Kitchen and Diningware	
Electrical Wire & Cable	
Textile Machinery	
Scarves & Mufflers	
Ceramic Planters	
Metal Housewares	
Artificial Pearls	
Skis	
Buttons	
Western Style Umbrellas	

Source: S.M.E.A., 1979 [internal report]

6.3.2 Eligibility Criteria

In approving the eligibility of an applicant, the regional government must be satisfied that;

- i. The applicant's proposal will result in the elimination of most of the current line of business and that the new line will account for a substantial proportion of the firm's total business when the plan is implemented
- ii. The proposal is appropriate to the capabilities of the applicant
- iii. The new line of business is objectively quite distinct from the present line of business; especially where the Japan Standard Industrial Classification will remain the same and,
- iv. It is in the public interest to assist the applicant into the particular new line of business proposed. It should not, for example be a business liable to affect public morality nor should it be another officially designated depressed industry.

6.4 Distressed Regional Industry ("Sanchi") Policy

The difficulties posed by sanchi in distressed industries often have a dramatic impact on their local communities. Changes in international exchange rates and increased competition from developing countries during the 1970's pushed a large number of sanchi into crisis. In response to this situation, special legislation was passed in 1979 and expanded

in 1980 to provide assistance to designated sanchi. As of 1979, there were a total of 77 designated sanchi eligible for assistance under this programme. In addition to the types of assistance indicated for the programmes discussed earlier, the federal government shares with the relevant prefectural governments the costs of developing long-range adjustment plans and also underwrites the costs of developing and implementing programmes to upgrade the skills of managerial, technical, and shop-floor personnel.

The programme is formulated and implemented in conjunction with sanchi producer's cooperatives but some of the assistance provisions are available to individual SME which are members of the cooperatives. The general thrust of the policy does not differ substantially from that of the preceding two policies discussed but it is aimed at giving an especially high degree of attention and support with respect to the severe problems found in some sanchi.

6.5 Trade Policy And SMEI

While it is less a matter of adjustment assistance than protectionism, it is relevant to consider whether the Japanese government has, under the rubric of trade policy, attempted to intervene on behalf of SME which face competition from the Asian NICs.

Under the General Agreement on Tariffs and Trade (G.A.T.T.), there is a commitment to free trade and removal or

reduction of trade barriers. Moreover, in recent years, the formal commitment to an especially favourable treatment of exports from LDCs has been strengthened. Nevertheless, restrictions and limitations on imports of LDC manufactures which compete with domestic producers are, in practice, a common feature of DC trade practices. The G.A.T.T. does provide, under Article XIX, for the alteration of tariffs and the imposition of quotas in cases of "market disruption" in which domestic industry has been or threatens to be seriously injured.

If waivers under Article XIX were the preferred means of inhibiting imports from LDCs, then the record of waivers would provide a reasonably objective means of assessing the relative degree of Japanese protectionism with respect to our selected set of SMEI. In fact, "Countries have increasingly tended to abjure invoking Article XIX when establishing import restraints...(and)...A common tactic has been to negotiate often-secret 'voluntary export restraints', which are undoubtedly more common than invocations of Article XIX."¹⁴¹ Thus, there is no ready means of objectively assessing the relative degree of protectionism as between products and countries.

There are, however, a number of factors which, in the case of Japan and with respect to the identified set of SMEI, suggest that such protectionism has not been an important feature.

¹⁴¹ J. A. Finlayson and M. W. Zacher, "The G.A.T.T. and the regulation of trade barriers: regime dynamics and functions" in International Organization, Autumn 1981, pp. 561-602.

First, Japanese industry has, itself, been a protesting target of pressures from western industrialized countries for "voluntary" quotas and export restraints and the economy, as a whole, has a substantial interest in limiting the occurrence of such practices. Perhaps in reflection of that, Japan aligned itself with the LDCs during the Tokyo Round of G.A.T.T. negotiations in pressing for efforts to curb such arbitrary restraints on trade. Moreover, my informants in affected industries invariably minimized the prospects for such government protection either because they did not feel the government would consider it to be in the national interest or because they themselves, facing similar threats of imposed restraint in their export markets, did not consider it to be in their industry's best interest.

Indeed, the most persuasive reason for discounting the role of government-imposed import restraints in the adjustment of our set of SMEI is precisely that so many of them are highly export-oriented and face their most crucial competition in foreign, not domestic, markets.

BIBLIOGRAPHY

ENGLISH-LANGUAGE MATERIAL

1. Adelman, Irma, "Some Thoughts on the Restructuring of North-South Interaction" in Journal of Policy Modelling V2 No2 1980.
2. Altman, Edward, Corporate Bankruptcy in America (Lexington Books, Lexington, Mass., 1971).
3. Ansoff, H. Igor, "The Changing Shape of the Strategic Problem" in Schendel and Hofer (eds.), (1979).
4. Argenti, John, Corporate Collapse: The Causes and Symptoms (Wiley, New York, 1976).
5. Australian Government Publishing Service [A.G.P.S.], Study Group on Structural Adjustment, Report March, 1979 Volume I (A.G.P.S., Canberra, 1979).
6. Balassa, B., "Prospects for Trade in Manufactured Goods Between Industrial and Developing Countries, 1978-1990" in, Journal of Policy Modelling V2 No3, 1980.
7. Balassa, Bela, "The 'New Protectionism' and the International Economy" in, Journal of World Trade Law V12 No5 Sept/Oct 1978.
8. Baumol, Wm. J., "Contestable Markets: An Uprising in the Theory of Industry Structure" in, American Economic Review V 72 No 1 March, 1982.
9. Blackhurst, Richard et al, Trade Liberalization, Protectionism, and Interdependence (General Agreement on Tariffs and Trade[G.A.T.T.], Geneva, 1977).
10. Cohen, Stephen D., "Changes in the International Economy: Old Realities and New Myths" Journal of World Trade Law V12 No4 July/August 1978.
11. De Bary, W. T. (ed.), Sources of Japanese Tradition, Volume 1 (New York, Columbia University Press, 1958).
12. Development Centre, Organization for Economic Cooperation and Development [O.E.C.D.] Interdependence and Development (O.E.C.D., Paris, 1979).
13. Donges, J. B., "A Comparative Survey of Industrialization Policies in Fifteen Semi-industrialized Countries" in, Weltwirtschaftliches Archiv V 112, 1976 pp 626-657.
14. Dunning, J. H., "Explaining the International Direct Investment Position of Countries: Towards a Dynamic or

- Developmental Approach" in, Weltwirtschaftliches Archiv V 117, 1981.
15. Finlayson, J. A. and Zacher, M. W., "The G.A.T.T. and the regulation of trade barriers: regime dynamics and functions" in, International Organization , Autumn 1981.
 16. Fox, Harold, "A Framework for Functional Coordination" in Atlanta Economic Review November/December 1973.
 17. General Agreement on Tariffs and Trade [G.A.T.T.] International Trade 1979/80 (G.A.T.T., Geneva, 1980).
 18. Giersch, Herbert (ed.), The International Division of Labour: Problems and Perspectives (J.C.B. Mohr, Tübingen, 1974).
 19. Ginman, Peter J. and Murray, T., "The Generalized System of Preferences: A Review and Appraisal" in Sauvant, K. P. and Hasenpflug, H. (eds.), The New International Economic Order (Wilton House, London, 1977).
 20. Glaser, B. G., The Discovery of Grounded Theory: Strategies for Qualitative Research (Aldine, Atherton, Chicago, 1967).
 21. Glaser, B. G., Theoretical Sensitivity: Advances in the Methodology of Grounded Theory (The Sociology Press, Mill Valley, 1978).
 22. Glueck, Wm. F., Business Policy and Strategic Management Third Edition, (McGraw Hill, New York, 1980).
 23. Harrigan, K. R., Strategies for Declining Businesses (Lexington Books, Lexington, Mass., 1980).
 24. Harrigan, K. R., "Exit Decisions in Mature Industries" in, Academy of Management Journal V2 No4, 1982.
 25. Helmstadter, G. C., Research Concepts in Human Behaviour (Meredith, New York, 1970).
 26. Herman, B., The Optimal International Division of Labour (International Labour Organization, Geneva, 1975).
 27. Hofer, C. W. et al, Strategic Management: A Casebook in Business Policy and Planning (West, New York, 1980).
 28. Hofer, C. W., "Towards a Contingency Theory of Business Strategy" in, Academy of Management Journal December, 1975.
 29. Jackson, John H., "The Crumbling Institutions of the Liberal Trade System" in, Journal of World Trade Law V12

No2 ,March/April 1978.

30. Kreiken, Jan, "Effective Vertical Integration and Disintegration Strategies in Glueck, Wm. F. (1980).
31. Krueger, Anne O., "Restructuring for Import Competition from Developing Countries, I: Labour Displacement and Economic Redeployment" in, Journal of Policy Modelling V2 No2 1980.
32. Lary, Hal B., Imports of Manufactures from Less Developed Countries (National Board of Economic Research, New York, 1968).
33. Lloyd, P. J., "A Knightian Model for the Analysis of Structural Adjustments by Firms" in, Weltwirtschaftliches Archiv V117, 1981.
34. MacBean, Alasdair, A Positive Approach to the International Economic Order, Part I: Trade and Structural Adjustment (British North-American Committee, London, 1978).
35. Matthews, R. A., Discussion Paper No 172, Canadian Industry and the Challenge of Low-Cost Imports (Economic Council of Canada, Ottawa, 1980).
36. Matthews, R. A., "Industrial Viability in a Free Trade Economy" in, Regional and Adjustment Aspects of Trade Liberalization (University of Toronto Press, Toronto, 1973).
37. Mickwitz, Gosta, "The New International Price Competition" in, European Journal of Marketing V13, No. 4, 1979.
38. Miles, M. B., "Qualitative Data as an Attractive Nuisance: The Problem of Analysis" in, Administrative Science Quarterly V 24 No 4, December, 1979.
39. Miles, Robert H., Coffin Nails and Corporate Strategies (Prentice-Hall, Englewood Cliffs, N.J., 1982).
40. Mintzberg, Henry, "Policy as a Field of Management Theory" in, Academy of Management Review January, 1977.
41. Moore, W. E., Social Change 2nd Edition (Prentice-Hall, Englewood Cliffs, N.J., 1973).
42. Mutti, John H. and Bale, M. D., "Output and Employment Changes in a 'Trade Sensitive' Sector: Adjustment in the U. S. Footwear Industry" in, Weltwirtschaftliches Archiv V117, 1981.
43. Organization for Economic Cooperation and Development

[O.E.C.D.] The Impact of the Newly Industrializing Countries on Production and Trade in Manufactures (O.E.C.D., Paris, 1979).

44. Organization for Economic Cooperation and Development [O.E.C.D.], The Case for Positive Adjustment Policies (O.E.C.D., Paris, 1979).
45. Porter, M. E. , Competitive Strategy , The Free Press, New York, 1980).
46. Prime Minister's Office, Japan Table of Organization of the Government of Japan (Sorifu, Tokyo, 1974).
47. Ross, Joel E. and Kami, M. J., Corporate Management in Crisis: Why the Mighty Fall (Prentice-Hall, Englewood Cliffs, N.J., 1973).
48. Rugman, A. M., "Internalization as a General Theory of Foreign Direct Investment: A Reappraisal of the Literature" in, Weltwirtschaftliches Archiv V 116, 1980.
49. Runkel, P. J. and McGrath, J. E., Research on Human Behaviour (Holt, Rinehart, and Winston, New York, 1972).
50. Schendel, Dan E. and Hofer, C. W. (eds.), Strategic Management -A New View of Business Policy and Planning (Little, Brown, Toronto, 1979).
51. Schendel, Dan E. and Patton, G. R., "Corporate Stagnation and Turnaround" in Journal of Economics and Business Spring/Summer 1976.
52. Shinohara, M., The Japanese Economy and Southeast Asia, I.D.E. Occasional Papers No. 15, (Institute of Developing Economies, Tokyo, 1977).
53. Spender, J. C., "Commentary" in Schendel and Hofer (eds.), (1979).
54. Steiner, George A., "Contingency Theories of Strategy and Strategic Management" in Schendel and Hofer (eds.) (1979).
55. Strange, Susan , "The management of surplus capacity or how does theory stand up to protectionism 1970's style?", in, International Organization V. 33, NO. 3 (Summer, 1979).
56. Tsoukalis, L. and Ferreira, A. da Silva, "Management of industrial surplus capacity in the European Community", in International Organization V. 34, No. 3 (Summer, 1980).
57. United Nations Conference on Trade and Development [UNCTAD], Adjustment Assistance Measures [TD/121 and

supplements] (UNCTAD, Geneva, 1972).

58. United Nations Conference on Trade and Development [UNCTAD], Adjustment Assistance Measures [TD/B/C.2/171] (UNCTAD, Geneva, 1977).
59. United Nations Industrial Development Organization [UNIDO], "The Impact of Trade with Developing Countries on Employment in Developed Countries: Empirical Evidence From Recent Research" in, Working Papers on Structural Change, No. 3 (UNIDO, Vienna, 1978).
60. United Nations, Restructuring of World Industry (U.N., New York, 1978)
61. United Nations, Structure and Change in European Industry (U.N., New York, 1977).
62. United Nations, U. N. Yearbook of International Trade Statistics (United Nations, New York).
63. Van Maanen, John (ed.), Administrative Science Quarterly V 24 No 4, December, 1979 [special issue on qualitative research methodology].
64. Warnecke, S. J., International Trade and Industrial Policies (Holmes and Meier, New York, 1978).
65. Wilcox, Jarrod W., "The Gambler's Ruin Approach to Business Risk" in Sloan Management Review Fall, 1976.
66. Williams, Jeffrey R., Strategic Equilibrium in the Multi-product Firm (Working Paper, Carnegie-Mellon University, Graduate School of Industrial Management, Pittsburgh, 1980).
67. Williamson, O. E., Markets and Hierarchies: Analysis and Implications for Antitrust (The Free Press, New York, 1975).
68. Wolter, Frank, "Restructuring for Import Competition from Developing Countries, II: The Case of the Federal Republic of Germany" in, Journal of Policy Modelling V2 No2 1980.
69. Yamazaki, Mitsuru, Japan's Community-based Industries: A Case Study of Small Industry [English-language version of Yamazaki (1977); see Japanese-language material] (Asian Productivity Organization, Tokyo, 1979).

JAPANESE-LANGUAGE MATERIAL

70. Chushokigyo Keiei Kenkyusho, Osaka Keizai Daigaku Chusho Kigyo Kenyu [Bibliography on small- and medium-sized enterprise research] (Nichigai Asoshietsu, Tokyo, 1978).
71. Department of Commerce and Industry, Tokyo Sanchi Chusho Kigyo Shinko Bijion (Kawasei Hakimono Seizogyo) (Tokyoto, Shokobu, Tokyo, undated [1979?]).
72. Department of Industry, Aichi Prefecture "Nagoya no Yushutsu Tojiki" in, Shoko Aichi May, 1979 (Aichiken, Shokobu, Nagoya).
73. Hayashi, Yujiro (ed.), Sekai ni Kakeru Nihon no Gijutsu (Kogakusha, Tokyo, 1972).
74. Ikeda, S, (ed.) Niigata-ken no Kinzoku Kako Sangyo [limited distribution] U.N.U. Document No. HSDRJE-51J/UNUP-356 (United Nations University, Tokyo, 1982).
75. Itakura, K. (ed.), Jiba Sangyo no Machi (Furuima Shoin, Tokyo, 1978).
76. Japan Economic Research Institute of Commerce and Industry "Jiba Sangyo Rida no Okina Chie" in Shoko Jianaru August, 1980 (Nihon Shoko Keizai Kenkyusho, Tokyo).
77. Japan Export-Import Bank Kaigai Toshi Kenkyu Shoho V 7 No 9, 1981 (Nihon Yushutsunyu Ginko, 1981).
78. Japan External Trade Organization [JETRO] Kankoku ni Okeru Kinzoku Yoshokki Sangyo [limited distribution] (Nihon Boeki Shinkokai, Tokyo, 1979).
79. Japan External Trade Organization [JETRO] "Sekai no Jiba Sanchi" in, Kaigai Shijo September, 1980.
80. Japan External Trade Organization [JETRO] "Eikoku Sheffield no Kanamono/Kinzoku Yoshokki Sanchi" in, Kaigai Shijo Sept. 1980 (Nihon Boeki Shinkokai, Tokyo).
81. Japan Metal Flatware Industry Association Kinzoku Yoshokki no Enkaku [mimeo] (Nihon Kinzoku Yoshokki Sangyokai, Tsubame, undated).
82. Kanamori, H., Kanamori Hisao no Nihon Keizai Kogi (Nihon Keizai Shinbunsha, Tokyo, 1979).
83. Kanayama, Norio, "Chushokigyo no Kokusai Tekioryoku" in Shoko Jianaru July, 1978 (Nihon Shoko Keizai Kenkyusho, Tokyo).
84. Kitamura Murahiro and Mori Ken (eds.), Wagakuni no Kaigai

Toshi to Kokusai Bungyo o Meguru Shomondai (Ajia Keizai Kenkyusho, Tokyo, 1979).

85. Kurii, Takashi, "Chushokigyo no Kaigaitoshi no Doko to Tokucho" in, Kinyu Zaisei Jijo June, 1979.
86. Ministry of Finance (Kanto Office) Chiho Jisei Geppo (Okurasho, Kantokyoku, Tokyo, August, 1978).
87. Ministry of International Trade and Industry [M.I.T.I.] Waga Kuni Kigyo no Kaigai Jigyo Tenkai (Tsushosangyosho, Tokyo, 1974).
88. Ministry of International Trade and Industry [M.I.T.I.] Tsusho Rokuho (Tsushosangyosho, Tokyo).
89. Ministry of International Trade and Industry [M.I.T.I.] Sangyo Tokei Kenkyu Hokoku: Sengo Wagakuni Kogyo Choki Doko Bunseki (Tsusho Tokei Kyokai, Tokyo. 1978).
90. Ministry of International Trade and Industry [M.I.T.I.], Shohin Bunrui-hyo (Tsushosangyosho, Tokyo, 1979).
91. Ministry of International Trade and Industry [M.I.T.I.] Showa 49 Nenpan Waga Kuni Kigyo no Kaigai Jigyo Katsudo (Tsushosangyosho, Tokyo, 1974).
92. Ministry of International Trade and Industry [M.I.T.I.], Showa Gojunendo no Seikatsuyohin Sangyo (M.I.T.I., Tokyo, 1976).
93. Ministry of International Trade and Industry [M.I.T.I.] Nihon Kigyo no Kokusaiteki Tenkai (Tsushosangyosho, Tokyo, 1973).
94. Mitsui, Kozo et al "Tojiki Kogyo no Kyoteki Shomondai" in, Seramikusu No. 5, 1979.
95. Nabeta, Mitsuo, Seni Gyokai (Kyoikusha, Tokyo, 1978).
96. Nakamura, Shuichiro "Kobe Kemikaru Shuzu Sangyo ni Miru Yushutsu Sangyo no Naiju Sangyo e no Tenkan" in, Chosa Geppo Sept. 1979.
97. Osaka Prefecture Economic Research Institute of Commerce and Industry Fushita no Chushokogyo no Kokusaikan Kyoso no Shomondai to Jittai, V 2 (Osaka Furitsu Shoko Kenkyusho, Osaka, 1971).
98. Osono, Hideo et al (eds.), Chiho no Jidai to Kogyo Saihaichi (Toyo Keizai Shinposha, Tokyo, 1980).
99. Research Department, Citizen's Financial Corporation "Senshinkunigata Sangyo e no Michi -Kobe Kemikaru Shuzu

Sanchi" in, Chosa Geppo August 1979 (Kokumin Kinyu Koko, Kenkyuka, Tokyo).

100. Sakamoto, Yasuhiro, "Kokusaika no Shinten to Shitauke Chushokigyo no Kaigai Shinshitsu" in, Chushokigyo to Kumiai No. 4, 1980.
101. Shokokumiai Chuo Kinko, Kokusaibu, Chushokigyo no Kaigai Toshi Jittai Chosa (Shokokumiai Chuo Kinko, Tokyo, 1979).
102. Small- and Medium-sized Enterprise Agency [S.M.E.A.], Chushokigyo Seisaku no Gaiyo (Chushokigyochō, June, 1980).
103. Small- and Medium-sized Enterprise Agency [S.M.E.A.] Chusho Kigyo Shisaku no Aramashi, 1980 (Chushokigyochō, Tokyo, 1980).
104. Small- and Medium-sized Enterprise Financial Corporation "Kankoku no Oiage to Tsubame Sanchi no Taio" in, Chushokigyo Kinyu Koko Geppo 1979, 1-6 (Chushokigyo Kinyu Koko, Jigyo Chosaka, Tokyo).
105. Small- and Medium-sized Enterprise Agency [S.M.E.A.] Chushokigyo Seisaku no Gaiyo (Chushokigyochō, 1980).
106. Small- and Medium-sized Enterprise Information Centre "Endakashita no Tojiki Sangyo" in, Joho Chosa Repoto No. 394, 1979 (Chushokigyo Shinko Jigyodan, Tokyo).
107. Small- and Medium-sized Enterprise Agency [S.M.E.A.], Chusho Kigyo Hakusho (Okurasho, Insatsukyoku, Tokyo).
108. Small- and Medium-sized Enterprise Agency [S.M.E.A.] Chushokigyo no Kaigai Toshi no Genjo, Igi, Oyobi Mondaiten (Chushokigyochō, Tokyo, 1980).
109. Suzuki, N., "Ajia Chushinkogyokoku no Kogyoka to Yushutsu no Yakuwari" in N. Suzuki (ed.), NIRA OUTPUT NRC-78-22 : Ajia Shokoku no Kyusokuna Kogyoka to Waga Kuni no Taio (Sogo Kenkyu Kaihatsu Kiko, Tokyo, 1980).
110. Suzuki, N. (ed.) NIRA OUTPUT NRC-78-22 : Ajia Shokoku no Kyusokuna Kogyoka to Waga Kuni no Taio (Sogo Kenkyu Kaihatsu Kiko, Tokyo, 1980).
111. Tadara, Toru "Yogasa" in, Kaigai Shijo July, 1979 (Nihon Boeki Shinkokai, Tokyo).
112. The Nihon Keizai (ed.), Asu no Raibaru (Nihon Keizai Shinposha, Tokyo, 1978).
113. Tokyo Chamber of Commerce and Industry, Nihon Shoko Keizai Dantai Meiran (Tokyo Shoko Kaigisho, Tokyo, 1978).

114. Toyo Keizai Shinposha Keizai Tokei Nenran, 1980 (Toyo Keizai Shinposha, Tokyo, 1980).
115. Toyo Keizai Shinposha 1979 Chiiki Keizai Soran (Toyo Keizai Shinposha, Tokyo, 1979).
116. Watanabe, Toshio (ed.), Ajia Kogyoka no Shinjidai (Nihon Boeki Shinkokai, Tokyo, 1979).
117. Watanabe, Toshio, Ajia Chushinkoku no Chosen Nikkei Shinsho, (Nihon Keizai Shinbunsha, Tokyo, 1979).
118. Yamazaki, Mitsuru, Nihon no Jiba Sangyo (Daiyamondosha, Tokyo, 1977).