

CHAPTER EIGHT:

THESIS CONCLUSION

Chapter Eight summarises the main findings of this study and draws out their implications for industrial policy and labour strategy under conditions prevailing in Nicaragua during the 1980s. It thereby aims to enrich our understanding of this unique period in the country's history while demonstrating the value of the analytical approach. Parts One and Two pertain to productive adaptation and union-management relations respectively. Fundamental changes occurring since 1990 in Nicaragua and the international arena underline the historical specificity of these findings. After highlighting these changes, Chapter Eight concludes that an analytical approach which focuses upon micro-level adaptation remains relevant today as uncertainty and change represent the main points of continuity between the two decades. However, the main actors, power relations and categories of analysis, are distinct and must be derived from each research context.

PART ONE: PRODUCTIVE ADAPTATION

Part One relates research results on the nature of productive adaptation to the role of the state in transforming the Nicaraguan economy. It argues that government policies did generate forms of productive adaptation that furthered immediate production and social transformation goals under severe import constraints. However, these adjustment processes did not always coincide with those required to secure the long-term viability of the enterprise. Building upon the strengths and limitations of the Nicaraguan experience, Part One highlights and discusses three issues regarding productive adaptation essential to this type of strategy for social change and industrial development.

The first issue concerned the need to encourage forms of adaptation that would gear limited resources towards social transformation goals while enhancing the capacity of enterprises to generate value added in foreign exchange. The second related to efforts required to redirect and strengthen the capacity of enterprises to adapt to immediate resource constraints. The third pertained to the need to generate forms of demand-oriented adaptation that were closely tied to

buyers' requirements and could be sustained in the long term. These three issues were interrelated and had to be resolved simultaneously.

In the Nicaraguan case, the government played a central role in development efforts and exercised an overwhelming influence on firm-level adjustment processes. Part One outlines three measures that could have enabled it to enforce more effective forms of productive adaptation without forfeiting the objectives of its industrial development strategy. We aim thereby to provide a more precise understanding of the possibilities contained within this particular experience in social transformation. Organised by issue area, the following three sections discuss these research findings and outline alternative policy measures.

1. Financial Criteria and Social Transformation Goals

1.a. Research Findings

The first issue concerned the need to encourage forms of adaptation that would gear limited resources towards social transformation goals while enhancing the capacity of enterprises to generate value added in foreign exchange. The investment plans of Nicaraguan state enterprises were contingent upon the type of finance available to the country in any one period. Within these constraints, the central government was able to direct investment resources towards key development priorities based upon its control over foreign exchange. Deliberate development did not imply passive enterprises that merely implemented state directives. On the contrary, enterprises such as IMEP actively sought out investment opportunities within the parameters defined by government priorities and the availability of external finance.

Yet the immediate foreign exchange considerations facing firms diverged considerably from the central concerns confronting Nicaraguan industry. The manufacturing sector had to show a positive net balance in foreign exchange if it was to remain viable over the long term. Nevertheless, metalworking firms did not come under sustained pressure to show that the benefits obtained through effective import substitution would offset the cost of their investment programme. These findings indicated the need for greater financial control over the investment processes of enterprises as a necessary but not sufficient condition for resolving the first issue.

This measure alone would not generate effective investment patterns in those firms operating under severe import constraints. The country's dependence upon tied credit curbed the state's capacity to implement its industrial strategy based on its control over foreign resources. State strategy aimed to reactivate METASA and several other major firms established in the 1960-70s, in many cases around the utilisation of second-hand equipment. In the 1980s, their performance depended upon the effectiveness of maintenance and repair work, as well as efforts to rehabilitate their machinery park. Nevertheless, several enterprises tended to underinvest in these areas, which were crucial to their ability to meet current production objectives. Severe import constraints were at the source of this contradiction.

The nature of their production processes partially accounted for these contrasting patterns of investment among priority metalworking firms. IMEP employed general-purpose machinery organised on a workshop basis, while METASA's pipe section utilised specialised equipment in a continuous production process. The former facilitated the ability of Nicaraguan metalworking firms to shift to the new suppliers offering credit lines to this industry.¹

Similar findings applied to firms' current purchasing decisions. By controlling foreign resources, industrial planners influenced this form of adaptation given foreign exchange considerations and were able thereby to mobilise and direct scarce resources to social transformation objectives. Yet the purchasing capacity of state enterprises was not linked to their overall net balance in foreign exchange. Profit rates reflected the government's cost-plus pricing policy and did not indicate value added in foreign exchange.

To some extent, input-output coefficients could be utilised to enforce an efficient use of resources in those enterprises with well-defined product lines. Nevertheless, supply constraints continued to limit their capacity to meet output targets and lower scrap rates. These constraints would remain regardless of the rigour with which input-output coefficients were implemented. Likewise, enterprises would continue to maintain large raw material inventories and face constant input shortages simultaneously as long as the supply of materials remained dependent upon socialist-country credit lines. The latter left little room within which to develop the type of capabilities in inventories management required to secure long-term competitiveness.

In sum, Nicaraguan manufacturing firms operated under a strict foreign exchange budget loosened only by the availability of supplier credit lines. Their main purchasing and investment decisions represented a form of adaptation given these foreign exchange considerations. Based upon its control over foreign exchange, the Nicaraguan government was able to mobilise and direct resources towards key objectives but was less effective in securing their efficient use. These findings underlined the need to redesign the industrial policy environment to enable and enforce adaptations aimed at increasing efficiency. This would entail greater financial control over enterprises and simultaneous measures to improve their adaptive capacity in the face of severe supply constraints.

1.b. Alternative Policy Measures: Applying a Hard Budget Constraint in Foreign Exchange

Were there ways in which the Nicaraguan government could have resolved this first issue more effectively? Given the manufacturing sector's high import content, a hard budget constraint could have been implemented by expressing this in foreign exchange, as developed in FitzGerald (1988b, p.68-70).² Under this arrangement, border prices would provide the main reference point, thereby ensuring that prices were determined exogenously. Annual foreign exchange allocations would be linked to the enterprise's own net balance measured in foreign exchange. While enterprises could still obtain foreign credit to finance technology imports, they would be forced to demonstrate a return on this investment in foreign exchange. In other words, their current purchasing and investment decisions would become a form of price-enforced adaptation, albeit still influenced by the nature of external finance. The industrial development strategy would still define the priorities assigned to individual branches, enterprises and product lines. Financial criteria would be applied within this general framework. While these criteria could be eased in favour of social transformation goals, the cost to the national economy would be clearly calculated, thereby allowing for greater accountability on the part of policy makers.

By linking annual foreign exchange allocations to each firm's own net balance, this type of hard budget constraint could be expected to create an impetus for improvements in plant-level efficiency (FitzGerald, 1988b, p. 68). Yet this measure alone would not have eliminated supply

manufacturing firms. In Kornai's account, resource constraints stem from the expansion drive of state socialist enterprises operating under a soft budget constraint. The nature of the budget

Nicaraguan case, the soft budget constraint on state institutions and enterprises did contribute to the demand for scarce resources. Yet to some degree, resource constraints and supply

international conditions facing Nicaragua in the 1980s.

Enterprises were able to adjust to severe resource constraints and immediate demand pressures

would have less room to manoeuvre. Under these circumstances, the application of financial criteria in foreign exchange would have to be combined with positive measures aimed at

severe import constraints would be unlikely to meet strict financial criteria, leading to irresolvable tensions between these criteria and social transformation goals.

Adaptation to Resource Constraints

2.a. Research Findings

adapt to resource constraints. This would involve a highly selective expenditure of hard currency, whose objective would be twofold:

- to redirect firms away from those forms of adjustment that inevitably involved an inefficient use of resources, decline in product quality or other negative consequences; and
- to strengthen those adjustment processes that could save foreign exchange and contribute to technological development.

patterns of adaptation in IMEP and METASA, thereby highlighting the significance of this second issue. Both firms adjusted the volume of production to the current bottleneck with remained unutilised due to complementarity between inputs. This first form of adjustment stemmed directly from the nature of external finance, as well as government decisions effectively depended upon the availability of hard currency to secure complementary resources in the plant. This is Kornai's basic observation that shortage and slack appear

Kornai states that forced adjustments in output mix tend to contribute to the production of an assortment of goods that do not meet buyers' requirements. Yet this type of adaptation could composition between its main product lines according to available inputs and machinery, thereby minimising slack within its own operations. This form of adjustment contributed to demand. The consequences of this second form of adjustment would need to be evaluated within each enterprise, taking into account the nature of its production processes.

to cope with immediate circumstances, but that could not be sustained over time. Maintenance and repair work, simultaneously involving various types of forced substitution, enabled this pattern of adjustment eventually wore down its machinery park, leading to more frequent machinery-related problems and additional downtime. These findings indicated the need for a constraints upon enterprises and thereby halt the cycle of forced substitutions.

IMEP generally did not depend upon forced substitutions to keep its plant in operation, but enforced substitutions often interrupted its efforts to improve material usage, production organisation and its capacity to meet delivery dates on other contracts. These findings called for

manufacturing firms. The objective would be to minimise the need for demand-enforced substitutions that inevitably led to an inefficient use of resources or other negative consequences.

On the positive side, both firms carried out forced substitutions, having the potential to save foreign exchange and contribute to technological development. IMEP began to machine parts for its equipment line, while METASA produced spare parts for its own machinery. The circumstances that gave rise to this form of adjustment and its significance were distinct from that envisioned in Kornai's account. Nicaragua had not developed a formal capital goods sector prior to 1980, although the capacity to reconstruct equipment and fabricate parts could be found in small workshops and maintenance and repair shops throughout the economy. Neither the government nor private investors attempted to develop these capabilities on a significant scale in the 1960s-70s. Rather, enterprises continued to rely upon foreign suppliers for these items. These circumstances changed abruptly in the early 1980s as Nicaragua encountered severe constraints on its import capacity. In this context, forced substitutions could have positive implications for long-term industrial development.

This thesis has highlighted the need to ensure that short-term adjustment under crisis conditions enhances rather than undermines the long-term viability of enterprises and their contribution to industrial development. To this end, the Nicaraguan state metalworking division attempted to channel firm-level adjustment processes into a strategy for technological development. Entry into equipment production, the spare-parts production programme and accompanying investments in machining, casting and heat treatment facilities were still at the initial stage by the close of the period under study. While it was still too early to judge the effectiveness of this larger strategy, the case studies did provide relevant feedback. They indicated that specific policies aimed at technological development were only as effective as the overall adjustment processes within each enterprise. The Nicaraguan government shaped these patterns of adaptation in its role as industrial planner, main customer and regulator of economic activity. A strategy for technological development would have to build upon these distinct roles of the state within the economy.

Finally, Nicaraguan enterprises also carried out a series of initiatives that were not forced by immediate resource constraints. For example, these included the substitution of local materials for imported ones; a reduction in material wastage during the production process; and the use

of by-products previously treated as waste materials. While these measures alone would not programme aimed at rehabilitating the plant. The challenge would be to co-ordinate these types of shop-floor initiatives with the enterprise's purchasing and investment decisions so as to

2.b. Alternative Policy Measure: Redirecting and Strengthening Adaptive Capacity

Were there ways in which the Nicaraguan government could have encouraged more effective expenditure of hard currency aimed at redirecting and strengthening the capacity of enterprises to adapt to resource constraints. This could be combined with criteria regarding the priority

Enterprises would still have to fall within these general priorities in order to compete for hard currency based on criteria regarding adaptive capacity. The objective would be to develop a

Under this arrangement, enterprises would submit proposals to the state metalworking division, pinpointing those areas in which foreign exchange expenditure would have the greatest impact

general parameters, deciding which type of expenditure would produce the greatest benefit at any one point in time. They would also include an evaluation of their efforts to adapt to

initiatives aimed at improving performance. The government would review these proposals on a periodic basis, allocating foreign exchange as this became available.

overcoming resource constraints. Enterprises would thereby come under pressure to carry out an ongoing evaluation of their own adjustment processes, allocating scarce engineering

hard currency expenditure with technical assistance and training programmes aimed at strengthening positive forms of adaptation to resource constraints. This system recognises the

capacity. At the same time, it attempts to maintain some form of accountability between enterprises and industrial planners and to preserve the government's capacity to direct scarce resources to key objectives.

This system would be combined with the implementation of a hard budget constraint calculated in foreign exchange. This could be expected to enhance the ability of enterprises to identify those areas in which foreign exchange expenditure would have the greatest impact upon plant performance. Together these two measures would generate a new set of information requirements closely tied to the enterprise's own efforts to improve performance under prevailing circumstances. Finally, this system would reward those enterprises that demonstrated the capacity to adapt effectively to resource constraints. Under severe hard currency constraints, there would be inevitable conflicts between criteria based on adaptive capacity and that tied to priority of product. This reflects basic tensions between the capacity of the state to direct resources to key objectives and its ability to secure their efficient use.

How does this system compare with the recommendations of other studies on Nicaraguan industry in the 1980s? These studies focused on how the import dependence of Nicaraguan industry could be reduced through investment in select areas, as well as rationalisation measures aimed at reducing the use of imported inputs (see Brundendius, 1987; Jenkins, 1988; Harris, 1985). Researchers also argued for increased expenditure on efforts to maintain, repair and rehabilitate the machinery park so as to increase the output obtained from existing firms (Dijkstra, 1988; and Jenkins, 1988). This system would incorporate these recommendations in two ways.

First, planners would select areas of investment and current expenditure based upon an ongoing evaluation of firm-level adjustment processes. This should provide a strong impetus for increased expenditure on maintaining, repairing and rehabilitating existing plant. Second, they would reward those enterprises that successfully carried out rationalisation measures. Finally, this system would place greater emphasis upon efforts to improve the technical capacity of enterprises to anticipate resource constraints, pinpoint those areas of expenditure that would have the greatest impact upon adaptive capacity, and initiate minor improvements to product and process under severe import constraints.

3.

3.a. Research Findings

The third issue concerned the need to generate forms of demand-oriented adaptation that were at the centre of IMEP's and METASA's adaptive efforts during the period under study.

These firms did strive to meet specific product requirements set by their customers.

characterised by shortages, and the relatively passive role of domestic money. This stands in contrast to state socialist enterprise behaviour under seller's market conditions. Kornai states

therefore generally not responsive to buyers' requirements. He attributes the relative power of the producer-seller versus the user-buyer to chronic shortages and the soft budget constraint on

The case study findings provide three reasons for the degree of demand-oriented adaptation displayed by each firm. First, the state had a more significant impact upon current production

enterprises to meet its product requirements. As user firm, its bargaining strength exceeded that of customers organised under other enterprise forms. Under these conditions, the government

positive spillover effect to other non-state contracts. Otherwise, enterprises may be highly responsive to demand-side pressures from the central government at the expense of other

non-state sectors.³

centralised planning. These findings may not be applied across industrial branches as the nature of exchange relations was closely tied to contract type. Construction contracts were

quality and delivery schedules. This stands in contrast to exchange relations between producers and users of consumer goods within a shortage economy. Third, the demand for locally-

had traditionally been supplied by foreign firms. This is quite distinct from the demand conditions associated with chronic shortages as an institutional feature of the centrally-planned economy. Under these conditions, IMEP and METASA produced to customer demand but continued to dictate product and contract prices.

Price-enforced adaptation did not constitute a predominant form of productive adaptation in either firm. Each firm adjusted its product and contract prices to cover rising input costs in the inflationary period, and therefore was not forced to adjust in the productive sphere. There was not sufficient pressure from customers to generate a continuous process of adjustment aimed at cost and price reduction. The soft budget constraint explains each firm's room to manoeuvre in responding to immediate customer demand, as well as the main limitations of this adjustment process. These limitations became increasingly apparent over the period under study.

3.b. Alternative Policy Measures: Utilising State Contracts to Implement Industrial Policy

Were there ways in which the Nicaraguan government could have resolved this third issue more effectively by encouraging patterns of demand-oriented adaptation that could be sustained in the long-term? As one of the main customers of manufacturing enterprises, the central government could have implemented industrial policy through its purchasing decisions. For example, the central government could pursue its industrial strategy through direct contractual relations with those manufacturing firms producing construction inputs. Public investment projects would include a foreign exchange component within advance payments to domestic suppliers of construction inputs. This would be designated for maintenance and repair work and other efforts to overcome immediate resource constraints during work-in-progress on this contract. Domestic suppliers would include a specific proposal on how this foreign exchange would be spent in their contract bid. They would then compete for these contracts based on a number of criteria such as contract price, design capabilities, product quality and the ability to

meet delivery dates. In this way, the central government would introduce a form of managed protection.

The implementation of a hard budget constraint would pressure equipment producers to focus this measure itself would not create the domestic market required for product specialisation during this initial phase. In this case, the government could utilise its purchasing decisions to lines. Its decision to import or purchase locally would be influenced by its technological development strategy rather than price competition alone. As user firm, it would then purchasing output and providing access to imported materials, technical information and foreign technical assistance. A continuation of these supplier relations would be dependent and ability to meet delivery dates.

The case study results do not support a role for the state as wholesale distributor of equipment adaptation; that is, the degree of direct communication between producer and user firms. Rather, the government could strengthen these direct relations among both private and state

By influencing the nature of demand-oriented adaptation, the third alternative policy measure provides the necessary complement to the former two. By applying a hard budget constraint in producers (FitzGerald, 1998b, p. 31). Yet this measure itself would neither enable nor enforce the kind of continuous quality improvements required to secure long-term competitiveness.

Nicaraguan enterprises were forced to lower product quality or increase scrap rates.

The second measure would begin to overcome this problem through a selective expenditure of firm to press for quality improvements while simultaneously providing access to foreign

resources required for specific state contracts. This would compensate somewhat for the absence of competitive pressures within a small protected market. Together these three measures would reshape the policy environment, placing greater emphasis upon ongoing improvements in plant-level efficiency, product quality, and customer service. These measures would thereby aim to generate forms of demand-oriented adaptation that may be sustained in the long term.

Finally, these three alternative policy measures have each addressed the foreign exchange-constrained nature of the economy. Together, these measures would integrate the role of the state as industrial planner, customer and regulator of economic activity, while securing a more active role for the state banking system. This approach would aim to secure an optimal use of scarce foreign exchange while directing this to a well-defined set of objectives. The effectiveness of this alternative approach would still depend upon the amount of liquid foreign exchange available to the country. Hard currency shortages constituted the main constraint upon Nicaraguan manufacturing production. By reinforcing this constraint, US measures drastically reduced the room for a strategy of social change and industrial development within Nicaragua during the 1980s.

PART TWO: UNION-MANAGEMENT RELATIONS

Part Two relates research findings on adaptation and union-management relations to two main issues that faced unions within peripheral socialist economies. The first concerned the extent to which unions should assume responsibility in the productive sphere. The second pertained to tensions between efforts to develop independent labour organisations and the need to strengthen a progressive state and the political alliances on which it was based. These issues were rooted in the nature of revolution within developing countries and subsequent political ties between the state and labour organisations, as discussed in Chapter One.

Drawing upon the case study findings, Part Two outlines a distinct approach to these two issues. This approach would promote the development of strong shop unions capable of adapting to a changing external environment. Unions would set out to strengthen the role of workers in effective forms of productive adaptation, thereby improving their bargaining position within the factory. They would identify and press for those measures that could

maximise workers' capacity to cope with crisis or represent an investment in labour as a productive resource. At the same time, their federations would strive to gain an independent power base from which to negotiate with employers and the state, and reform labour law. Part Two argues that this approach could have provided an effective avenue through which to pursue labour objectives in Nicaragua during the 1980s.

1. Favourable Conditions for this Approach

Workers played a significant role in the main processes of productive adaptation found in priority state metalworking firms, providing the first set of conditions favouring this approach. Productive adaptation depended upon their ability to acquire new skills and train others through the apprenticeship system and with technical classes. Each union drew upon its own authority and organisational capacity to promote in-house training programmes. Meanwhile, severe resource constraints and supply uncertainty generated a persistent demand for shop-floor problem-solving capabilities, thereby confirming an initial hypothesis drawn from studies of state socialist enterprises (Burawoy and Lukács 1985, Galasi and Szirácski 1985, Sabel and Stark 1982). Nicaraguan state metalworking firms were also under pressure to meet the changing product requirements of domestic user firms, which reinforced the need for this problem-solving capacity.

By strengthening participatory fora, IMEP's and METASA's unions improved the ability of their enterprises to meet these requirements. In this way, they enhanced labour's position as a productive resource and secured a direct means by which employees could affect their immediate work environment. Coercive work practices were partially replaced by cooperation between area supervisors and workers around efforts to respond to daily difficulties and challenges in the productive sphere. Workers gained greater knowledge and control over the production process, thereby furthering socialist goals. The effectiveness of this approach then depended upon the capacity of unions to derive bargaining strength from this enhanced role for labour in the productive sphere.

Labour market and political conditions favoured this strategy. Workers did gain bargaining power from their role in productive adaptation under tight labour market conditions. To this degree, they resembled their counterparts in state socialist enterprises. Studies of

Eastern European factories tended to focus upon informal bargaining between workers and managers under political conditions that provided little room for active unions (Burawoy and Lukács 1985, Sabel and Stark 1982). In contrast, the Nicaraguan political environment favoured a strong role for shop unions in negotiations around non-wage issues, dispute resolution and efforts to resolve production and labour issues within the factory. These conditions provided the balance of power required to sustain both formal and informal bargaining on a continual basis.

The case studies indicated that this approach could create a chain reaction between measures aimed at furthering production and labour goals. For example, IMEP and METASA introduced training programmes to meet new skill requirements generated in the course of productive adaptation. Yet workers could utilise their newly-acquired skills to obtain higher-paid jobs in state investment projects and the informal sector, leading to a classic conflict of interests. In response, these unions identified and pressed for specific benefits to compensate for abrupt changes in the cost and availability of basic goods and services, thereby improving workers' capacity to cope with crisis. Factory social welfare policies, which improved workers' nutrition, health and education, in turn represented investment in labour as a productive resource under these crisis conditions.

Throughout the period under study, the Sandinista Workers' Federation called upon their member unions to assume production and labour objectives, while opposition federations gave sole priority to workers' economic demands. On the shop floor, these two positions intersected within a strategy that aimed to strengthen labour as a productive resource and to bargain on that basis. This approach could enable unions to maintain the dual role of promoting production goals and representing labour demands. Yet the conditions for this dual role would be distinct from that set by the Sandinista Workers' Federation, which were essentially of a political nature.

The Sandinista federation viewed itself as part of a larger revolutionary movement whose power base resided in the state. By assuming responsibility in the productive sphere, unions contributed to state-led efforts to meet the revolution's main economic and social goals. Under this alternative approach, the political will of government to overcome poverty and advance workers' interests would provide a significant but not sufficient condition for this dual role. The latter would be viable to the degree that workers and

managers could make adjustment processes in the productive and labour spheres work together and mutually reinforce one another. In other words, the conditions for this dual role would have to be achieved within each factory on a continual basis.

2. Asserting Autonomy Amid Institutional Pressures and Constraints

In the 1980s, neither the state nor national labour federations set out to establish a system of industrial relations based primarily upon strong independent shop unions. Yet in the absence of national pay bargaining and labour law reform, shop unions gained a type of autonomy by default as their activities became closely tied to workers' daily struggle to cope with crisis. The 1984 national wage system blocked direct wage negotiations between unions and managers, thereby posing constraints upon both the capacity of unions to pursue labour objectives and the ability of enterprises to meet new labour requirements generated in the course of productive adaptation. To overcome these constraints, manufacturing firms moved towards plant bargaining around social benefits and incentive pay. New legislation in the 1980s authorised the Labour Ministry to oversee collective bargaining, serve as an arbitrator in management-labour disputes, and enforce its incentive policies. Yet enterprises required a significant degree of autonomy to adjust incentive and other labour policies to constant changes in production conditions and workers' economic situation. These factories were able to function under crisis conditions precisely because they resisted external intervention from the Labour Ministry when negotiating these policies.

The potential for paternalistic relations existed throughout the period under study as various government ministries depended upon shop unions to implement their social welfare policies. The amount of leadership time dedicated to this end posed a potential constraint upon the ability of unions to set labour's own agenda within the factory. Government social policies could have undermined shop unions if these benefits had remained divorced from workers' struggle both in the organisational and productive spheres. This scenario did not occur in IMEP and METASA because plant bargaining around social benefits formed part of broader efforts to strengthen labour's power and status within the workplace. Furthermore, each union pressed for a series of specific benefits aimed at resolving workers' immediate economic problems while also implementing government social

programmes. These emergency social welfare systems required both worker participation and a considerable degree of autonomy for shop unions. They could not have functioned effectively if workers had restricted their role to that of mere recipients of social benefits.

The Sandinista government, party and workers' federation promoted a series of participatory programmes within the factories. However, this study showed that these programmes alone could not change the patterns of daily relations between workers, union leaders and management. Rather, they tended to be incorporated into existing patterns of union-management relations, which varied significantly between enterprises.⁴ To develop participatory relations, union activists had to customise their strategy for each factory, taking into account its particular labour history. In IMEP and METASA, participatory programmes were effective to the extent that they were linked to such specific strategies.

The Sandinista federation called upon its member unions to mobilise workers' support for government policies and the war effort. Several Sandinista unions did organise workers' participation in political rallies, seminars and other aspects of national politics, as well as in voluntary militia battalions. Yet union activists did not equate political support for the revolution with unquestioning approval of government labour policies. Such blind acceptance would have undermined rather than strengthened the factories as a support base for Sandinista political power.

In Nicaragua, party backing alone did not secure a leadership position for union activists. Rather, they continually had to seek workers' support in production, plant bargaining and participatory fora, as well as in annual elections for union posts. In response to these internal pressures, IMEP's and METASA's unions developed autonomous processes of plant bargaining and worker participation, enabling each factory to cope with crisis and advance workers' interests simultaneously. They thereby gave continuing significance to the revolution, even as the war and economic crisis undermined many of the social gains achieved in the initial years.

Finally, the state, Sandinista party and workers' federation did not constitute a single monolithic power exerting pressure upon unions. Rather distinct institutions often exercised a contradictory influence over them. For example, Sandinista party leaders encouraged direct negotiations with management even when their outcome often defied Labour Ministry policies.

To some degree, distinct government ministries competed for the attention of unions as they promoted their policies within the factories. A certain degree of chaos gave unions greater room to define their own role within the factory, thereby contributing to their viability under crisis conditions.

At the society-wide level, the Sandinista Workers' Federation emphasised the need to strengthen a progressive state and the political alliances on which it was based, while opposition federations prioritised efforts to develop independent labour organisations. Within the factories, these two positions overlapped as unions required a significant degree of autonomy to be effective within a larger political movement. Only then could they work through daily tensions between workers' demands and broader social and political concerns, deciding upon the relative priority of each under changing external circumstances.

Shop unions were in the best position to shape specific labour strategies because of their proximity to workers' daily struggle both in the productive and economic spheres. Working class families, solely dependent upon wage earnings, were not common in Nicaragua. Rather, urban households tended to move their members among formal and informal commercial and productive activities in response to changing economic conditions. Immersed in this reality, union activists could identify and press for specific policies that met the changing demands and requirements of workers. This short-term adaptive capacity provided a necessary but not sufficient condition for achieving labour objectives.

The severe decline in real wages remained at the source of numerous production and labour problems throughout the 1984-87 period. As they worked through these difficulties, enterprise unions adapted to an external environment over which they had little control. During this period, there were increasing tensions between state social spending, public sector investment, support prices to agro-exporters and defence, leading to a fiscal deficit and high inflation rates. The Sandinista Workers' Federation did not take an active and independent stance in the resultant policy debates, even though wage earners were paying the inflation tax and facing the consequences of reduced social spending. Opposition federations pressed for pay rises but did not acknowledge the severe tensions between the demands of distinct sectors under conditions of extreme scarcity. Faced with constraints on collective industrial action, they did not define an alternative terrain on which workers could challenge government policies. To some degree,

enterprise bargaining remained a form of forced substitution in the face of constraints on the ability of organised labour to influence government policy.

3. Measures Aimed at Strengthening Shop Unions

The case study findings point to four areas in which national federations could have strengthened this dynamic of plant bargaining and worker participation while compensating for its limitations. In each area, the labour movement would require an independent power base from which to negotiate with employers and the state, and bring about labour law reform. The objective would be to construct a legal and policy framework that would enable unions to develop as autonomous organisations while also facilitating collective action at an industry-wide level. Independent labour federations, comprised of strong shop unions, would be in the best position to negotiate with the government and other sectors of society while maintaining close relations between their own leaders and workers.

First, the Sandinista government provided positive political conditions for union organising, plant bargaining and worker participation. Through national settlements and legislative reform, labour federations could have secured these conditions independent of the current state administration. Second, Part Two has highlighted the significance of a strategy that aimed to strengthen labour's role as a productive resource, and bargain on that basis. To develop this approach further, unions would have to obtain the power to influence investment and other decisions affecting labour performance, many of which were taken outside the enterprise. They would need to play a more active role in debates around government policies, ranging from education and health spending to industrial development strategy. Shop unions would require the backing of their national federations to assert greater influence over government policies, and to develop a consensus around the importance of this expanded participatory role for labour.

Third, Part Two has highlighted the positive dynamic aspects of direct negotiations between shop unions and management. This provided a necessary but not sufficient basis for the build-up of a national labour movement. In the 1980s, bargaining strength was limited to the factory and remained dependent upon immediate circumstances facing enterprises. In several firms, workers' gains were included in collective bargaining agreements, giving them legal status over

a two-year period. Yet this provided few guarantees to workers over the long term. Workers had little protection against changes in labour market and financial conditions that might have reversed gains obtained within the factory. In contrast, national labour settlements and legislative initiatives could have set minimum standards and guaranteed labour rights irrespective of place of employment and the current conditions facing their firm. In this spirit, labour, industry and the state could negotiate basic parameters to guide plant bargaining around wage and incentive policies. National federations would then lend their political and organisational strength to workplace struggles around labour's right to share in the benefits obtained through improved production performance. This two-tier approach could have proved particularly relevant as firms came under greater financial control.

Fourth, there are inevitable trade-offs between adaptive capacity and fairness criteria in a system of industrial relations that leaves considerable room for plant bargaining. Under the latter, the extent of workers' gains varies considerably between enterprises and depends upon numerous variables beyond their control. This stands in contrast to the principle of equal pay for equal work which guided the national wage system. National labour settlements and legislative initiatives could have compensated somewhat for this limitation. In addition, federations could channel solidarity between unions. While solidarity strikes would remain a measure of last resort, federations could also seek additional means of strengthening the position of workers. For example, unions could promote or provide technical assistance and training for workers employed by their suppliers, thereby strengthening labour's position as a productive resource in both parent and supplier firms.

In sum, shop unions and their federations together would aim to meet labour objectives within the workplace, while enhancing the capacity of enterprises to adjust to a changing external environment. They would simultaneously strive to gain greater control over external conditions affecting workers. In other words, they would combine firm-level adaptive capacity with the political power to influence government policy and legislation.

PART THREE: CONCLUDING REFLECTIONS ON ANALYTICAL APPROACH

1. A Radically-changed Environment

Part Three considers the relevance of an analytical approach that focuses upon micro-level adaptation under a radically-changed environment. The paradigm of the peripheral socialist economy pertained to an era extending from the post-World War II years to the early 1990s. During that period, several developing countries attempted to transform dependent economies according to a socialist strategy. The state was the major actor in their efforts to overcome poverty and external dependence, and the critical issues confronting these societies concerned its role. Often fought on the terrain of peripheral socialist economies, the Cold War posed insurmountable constraints upon this mode of development, while also offering certain financial and trade opportunities. Today developing countries, whether capitalist or socialist in name, must design strategies aimed at enhancing their capacity to compete in global markets.

The new international environment has scaled down the size, scope and ambitions of national governments. Economic independence remains beyond the reach of governments in much larger economies due to the growing power and instability of financial markets. Budget constraints have reduced the power of governments to eliminate poverty even in countries where there is still the political will. New experiments in social provision are thus required to press the case for citizen entitlement to health care, education and other basic services. In industry, trade liberalisation has intensified and changed the nature of competitive pressures upon enterprises, demanding that governments develop new ways to promote domestic production. Strategies once pursued by peripheral socialist economies are of historical rather than current relevance.

In Nicaragua, changes in the role of the state occurred amid a fierce struggle over the distribution of economic power following the end of the Sandinista revolution. Elected in 1990, the Chamorro government privatised state-owned enterprises and liberalised domestic prices, the financial system and foreign trade. It thereby relinquished the instruments by which the previous government had attempted to plan and regulate the economy. Property disputes extended to the former state enterprises as new legislation

soldiers from both sides of the armed conflict.

Structural adjustment measures succeeded in reducing inflation, enabling managers to targets as the main performance indicators. Yet Nicaraguan enterprises faced severe financial constraints due to restrictive credit policy and high interest rates. On the demand competition from imports. Local firms found it difficult to compete with the price of imported items, given the rapid reduction of tariffs and overvalued exchange rate. productive activities also reduced the demand for domestic manufactured goods. Production declined, and some branches almost disappeared, in the absence of industrial study suggest a missed opportunity for government and manufacturers to redirect and strengthen productive adaptation to meet new challenges in the 1990s.

the power of shop unions, while financial constraints narrowed the scope of plant bargaining. At the society-wide level, national federations assumed a more belligerent role which had previously mobilised their members around a state-led process of social transformation and defence, now focused upon sector-specific demands. A new labour incorporating other gains obtained at factory level in the 1980s. Yet foreign-owned firms in the new export processing zones prohibited union organising and collective bargaining,

Relevance of Approach

Despite this turn of events, the analytical approach remains relevant as uncertainty, change and often severe resource constraints continue to characterise the industrial production environment in several developing countries. Supply uncertainty and resource constraints stem from poor domestic supplier capabilities and inadequate infrastructure. The lack of an efficiently-organised ports and customs system also leads to frequent delays in the supply of imported materials. Manufacturing firms still face a series of technical constraints associated with obsolete machinery and poor plant conditions generally. Financial constraints limit their capacity to rehabilitate the machinery park and may also interrupt the supply of raw materials, components and spare parts. Efforts to redirect and strengthen the capacity of enterprises to adapt to these resource constraints are likely to have a significant impact on manufacturing performance.

Manufacturing firms in many countries continue to operate in a highly unstable macro-economic environment. Several developing countries remain vulnerable to traditional sources of instability such as fluctuating international prices for primary commodities and changes in the terms and conditions of foreign finance. In the 1990s, the volatile nature of foreign capital flows to developing countries has contributed to the high degree of uncertainty characterising these economies. The effects of crisis following a sudden withdrawal of foreign capital from any one country quickly spread to other economies in a more tightly-integrated world. Pressures and constraints on industrial production are subject to constant change, requiring an ongoing evaluation of firm-level adjustment processes.

In the 1990s, the pace of change has accelerated in domestic and export markets, placing a premium on adaptive capacity. Questions on the nature of productive adaptation and criteria of effectiveness become more urgent as the determinants of competitiveness move beyond price to encompass product quality, reliability, improved variety, speed of delivery and product innovation. These questions are logically prior to those regarding the degree of adaptability displayed by enterprises. The new competition is knowledge-intensive: it requires considerable information on changing markets, specific user needs and the strategies of competitors, both at home and abroad. Yet in designing its strategy, an enterprise also requires an understanding of its existing patterns of productive adaptation and its capacity to change them by altering its external environment or its own response.

This local knowledge may become particularly important as enterprises attempt to introduce manufacturing practices which have proven to be successful in comparable contexts (see Kaplinsky 1994; Humphrey ed. 1995). An understanding of an enterprise's daily adjustment processes may indicate the potential for organisational change, patterns of adaptation incompatible with this endeavour and measures internal and external to the firm required to change them.

This focus upon micro-level adaptation also provides a useful approach to the study of union-management relations in enterprises encountering these more exacting market conditions, persistent resource constraints, and abrupt changes in the macro-economic environment. Industrial relations have their own dynamic and grow out of quite particular labour histories. Yet they also evolve as enterprises come under a changing set of pressures in the productive sphere. What are the main pressures on labour use and work organisation generated in the course of productive adaptation? To what extent and how do enterprises adjust their labour policies in response to these changing requirements? How do these adjustments interact with changes in union-management relations which are responding to a broader set of circumstances? These questions remain significant in the 1990s.

In a highly unstable production and economic environment, the factory may also become a significant arena of adjustment from labour's perspective. Abrupt changes in the macro-economic environment have immediate implications for workers and their families, affecting access to jobs, health and education and the cost of basic goods and services. To be effective, unions have to achieve a delicate balance between enhancing the capacity of workers to cope with immediate crisis and attempting to change the external environment through political action and legislative reform. In principle, both sides have a stake in developing patterns of union-management relations that can facilitate adjustment processes in the productive and labour sphere. In practice, the feasibility of such efforts depends upon power relations in the factory, sector and economy, as discussed further below.

Conjunctural Nature of Approach

This approach is designed to capture the interaction between specific patterns of adjustment and the unique combination of political, economic, social and technological

conditions prevailing at a particular point in time. While the results of such research are context-specific, the approach itself may be applied to quite distinct economies and time periods. Two basic features, which contributed to its explanatory power in the Nicaraguan case, suggest its potential relevance in a radically-changed environment. First, this approach identified the relevant economic actors, outlined their goals and mapped out power relations between them. Second, it selected analytical categories that were closely matched to this research context and thus were capable of capturing the main issues and providing guidelines for policy analysis.

In this case study, the state owned and managed the enterprises and defined their strategies while shaping external pressures and constraints on production. The main questions then concerned the interaction between the dynamic of daily adjustment and the diverse roles of the state in the economy. We also considered the ability of the state to design and implement its development strategy, given constraints associated with the country's position in the international arena. The actors, goals and power relations will be fundamentally distinct in the case of private enterprises striving to achieve international competitiveness in the 1990s. The enterprise itself is likely to play a more predominant role. In principle, its competitive strategy can influence the changing market conditions to which it must adapt and the supply conditions and government policies to which it remains vulnerable. Yet the ability of an enterprise to select its external environment in this manner depends on its access to markets and information on changing user needs, and on the type of constraints under which it operates. An assessment of its options requires an understanding of the nature of power relations affecting these variables.

As the factory is a basic unit of economy and society, a working knowledge of its adjustment processes should inform the policies and decisions of those who shape its external environment. Yet, the effectiveness of such a feedback system depends on a series of conditions more of a political than technical nature. It depends to some degree on a shared understanding of the goals of industry. For example, in the 1990s, it requires that government and other economic actors are committed to shaping a policy environment that facilitates the competitive strategies of domestic manufacturing firms.

Yet industrial policies provide an arena for political struggle over the distribution of scarce resources, whose outcome will depend on power relations in industry, finance, commerce

just two of the relevant variables subject to these struggles. The responsiveness of the state to the adaptive efforts of enterprises also depends on its ability to control macro-economic meet in the 1990s. These issues are inseparable from questions concerning the ability of enterprises to select or influence their external environment and thereby reorient their set of power relations relevant to the enterprises under study.

Likewise, this approach analyses power relations between unions, managers and those research highlighted patterns of industrial relations capable of enhancing adjustment processes in the productive and labour sphere. Can this approach point to similar which may be difficult to find as unions generally have seen their power decline in the 1990s.

subject to change. There is a strong argument for restoring the balance of power required to sustain negotiations aimed at strengthening both sides to their mutual benefit. This external conditions are forcing negative forms of adjustment from the production, labour and development perspective, thereby potentially informing efforts to change this constraints.

For example, the following two hypothetical scenarios suggest how unions and managers unemployment rates and immediate financial constraints, structural steel producers adjust to the fluctuating demand for construction supply by hiring and firing workers accordingly. work on major contracts while management modifies payment systems in an attempt to counter these practices. A growing reliance on temporary labour reduces the incentive of

The lack of stable employment affects the health, education and nutritional intake of workers and their families, thereby undermining the country's development perspectives.

Under an alternative scenario, unions and managers negotiate ways to enhance adjustment processes in the productive and labour sphere under these adverse circumstances, agreeing upon the following arrangement. The enterprise assists welders and assemblers to organise micro-enterprises which hire out to the firm during work on major contracts and service households and other customers in the interim. The enterprise union includes full-time workers and members of these micro-enterprises who negotiate training, marketing and technical assistance in exchange for improvements in production performance. This alternative requires considerable organisational and negotiating capacity, but does not necessarily involve a major investment. When financial constraints prohibit even these low-cost initiatives, enterprises seek support for their adaptive efforts from government, enterprise councils or non-governmental organisations, arguing that the benefits to industry and society are substantial and exceed that captured by the firm. This is merely a hypothetical case intended to illustrate the potential implications of the approach. Such solutions will only work if they emerge from the problem-solving efforts of those directly involved in production and union organising.

After identifying the relevant actors, goals and power relations, this approach selects analytical categories that reflect issues arising in this context. In principle, categories of productive adaptation can be applied to a set of political economies sharing similar features. In this study, a precise set of categories and arguments regarding their potential interaction were derived from theoretical work on institutional systems that no longer exist. This thesis drew upon select concepts from Kornai's analysis of the resource-constrained economy (Kornai 1980). It then modified them in light of key features shared by peripheral socialist economies (see FitzGerald 1985b; 1988b). Applying these concepts to industrial production issues, this thesis defined four categories of productive adaptation. Each category and type of productive adaptation provided a distinct angle on adjustment processes which were responding to numerous variables simultaneously. This provided a useful approach to questions concerning the processes by which external pressures and constraints came together to generate particular patterns of productive adaptation.

Although the basic approach still applies, a new framework is required to address issues of productive adaptation, hypotheses regarding their interaction and criteria of effectiveness must be derived from theoretical work and comparative studies relevant to framework should reflect existing types of productive adaptation, as well as those required to meet criteria of effectiveness. It can then serve to organise an enterprise's knowledge

This approach also demands a close fit between the research context and categories utilised to analyse the interaction between adaptation and union-management relations.

context-specific. Nevertheless, abstract types can provide a framework for analysing issues facing unions in countries sharing similar political economies. The meaning of terms

history of industrial relations in each factory, and patterns developed under pressure to adjust to current conditions.

labour policy and union-management relations is likely to differ significantly between economies, sectors and factories. Categories for analysing these processes are best

defined, questions regarding their potential interaction can be drawn from the insights of factory studies carried out in quite distinct contexts. In sum, Part Three has highlighted the

environment. Its conjunctural outlook accounts for the context-specific nature of the research findings and the broader applicability of the approach itself.

How can countries ensure that short-term adjustment under crisis conditions enhances rather than undermines their long-term development perspectives? This concern continues

resisting pressures to compete at the cost of their own human capital and human capabilities.⁵ Research on productive adaptation and industrial relations can form part of broader efforts to answer this basic question.

This study itself is primarily of historical relevance. It is one of several stories of a frustrated revolution which brought issues of social justice to centre stage, if only for a brief moment. Perhaps this narrative still has resonance today because it deals with fundamental issues that remain unresolved. This thesis offers no advice, as the best was stated some time ago:

God, give us the serenity to accept what cannot be changed;
Give us the courage to change what should be changed;
Give us the wisdom to distinguish one from the other. (Reinhold Niebuhr 1951)

In this case, serenity is not a passive stance, but rather an active approach to seeking out possibilities under current constraints. This is the essence of adaptive capacity. In the best case, it becomes a catalyst for change.

NOTES

¹ Conroy (1987) argues that the import capacity of Third World countries had become less vulnerable to coercive trade measures partly due to the growing substitutability among imports from various countries. This was relevant to the manufacturing sector where it was useful to distinguish between those production processes utilising general purpose machinery and those based upon specialised machinery and equipment. In the Nicaraguan case, the former allowed for more flexibility in shifting to new suppliers.

² FitzGerald (1988b) recommended this measure for the public enterprise sector generally. This recommendation was based upon his analysis of the origins of macroeconomic imbalance, which he attributed to problems of state enterprise behaviour under a soft budget constraint and the accumulation bias within peripheral socialist economies.

³ See FitzGerald (1988b) on other ways in which the state drew resources away from non-state sectors, thereby affecting the dynamics of production and accumulation. FitzGerald argues that the accumulation bias in centrally planned economies, along with the soft budget constraint in the public enterprise sector, tended to lead to the crowding out of petty producers by the state sector.

⁴ This may be seen as a variation on Ricardo Carciofi's argument that formally new institutions may be subordinated to the structural logic of the old system if unaccompanied by a strong impetus from below. See Carciofi, 1983, p.223-27 and White, 1983, p.22-23.

⁵ See Sen 1997; United Nations Development Programme 1996, 1997.