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SOMMARIO

Inflationary Price Controls (Controlli inflazionistici dei prezzi)
V.S. VARTIKAR Pag. 1

Multinational Institutions (Istituzioni multinazionali)
SIDNEY C. SUFRIN and JULIE SICILIANO » 7

Entry, Exit and Contestability (Entrata, uscita e contendibilità)
ELETTRA AGLIARDI » 27

La domanda come vincolo alla crescita. Il caso dell'industria meridionale dei beni di consumo, 1963-83 (Demand as a Constraint to Growth. The Case of the Consumer Goods Sector in Southern Italy, 1963-83)
FRANCESCO PIGLIARU » 53

Political Change and Public Enterprise Performance: Argentina as a Case Study (Cambiamenti politici e impresa pubblica: il caso dell'Argentina)
ROBERT E. LOONEY » 77

Recensioni (Book-reviews) » 93

Libri ricevuti (Books Received) » 96

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INFLATIONARY PRICE CONTROLS

by
V. S. VARTIKAR *

Price controls that are a part of a centrally planned allocation of resources, or those that are imposed on a free economy only for a short time, can eliminate inflation as long as the controls are in place. But long term price controls imposed on some industries in an otherwise free economy cannot help to reduce inflation. Not that such controls are always meant to control inflation. But whatever their social justification, they always tend to make the rate of inflation higher than what it would be otherwise. Free or semi-free economies, therefore, should avoid using price controls not so much because such controls are illiberal but because partial controls enhance the rate of inflation and destabilize the economic system. If the controls are meant to hold down inflation, they are counter-productive. If they are meant to achieve a different social objective, it may be worthwhile to find some other means to attain that goal.

In regulated industries, prices, dividends, salaries, and wages are seldom adversely affected by the price controls. In most countries, regulated prices rise at least as fast as, and often more rapidly than, the prices of goods that are determined in the free market. For example, in the U.S.A. the prices of natural gas, electricity, water, sewer service, garbage collection, public transportation, and most insurance rise faster than those of uncontrolled goods and services such as clothing, entertainment, electronic goods, and beverages. Air fares in the U.S.A. always kept pace with the overall consumer price index until 1977. That year the airlines were deregulated and since then the air fares have fallen much behind the rate of inflation. Most businessmen and labor leaders seem to know that price controls are

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The writer is grateful to Professor Donald L. Helms of Waynesburg College, Professor Raj Roy of the University of Toledo, and the referee for many helpful suggestions.

useful in keeping up the prices, even though such controls are meant to dampen inflation.

Although it can be shown that price controls are inflationary, a simple empirical proof of this phenomenon is difficult to construct because of the multicollinearity between a great many variables. In order to use refined statistical methods, it is necessary to quantify the extent and intensity of controls employed by various governments under constantly changing economic, political and social conditions. Such nebulous quantification cannot yield any reliable results. It is not possible even to define "price controls" with acceptable imprecision. Electricity is produced by using coal, gas, oil, nuclear fuel or a hydraulic source. And the economic impact of price controls on electricity will depend on how it is produced. Neither can we just count the number of controlled prices and conclude that one regime of controls is more severe than another. Furthermore, even if we identify two price controls to be exactly the same, they may work quite differently in different cultures. The purpose of this paper, therefore, is very limited: it only tries to indicate the possibility that price controls aggravate, rather than cure, inflation.

The basic cause of inflation is that a society tries to spend more than its current real income when production, for whatever reason, cannot be increased. The inability to raise real production may be due to full employment of men and machines, or it may be due to the rigidities and bottlenecks that restrict the full use of resources. A government budget deficit, for example, will lead to inflation unless the deficit is offset either by an extra private saving or by an import surplus. Deficit spending is not confined to public spending. Private economic units can invest more than the net social savings, and they can also export more than they import. If this net social deficit happens to be 5 percent of the net national product, prices have to rise by 5 percent assuming the necessary monetary adjustment or assuming, in other words, the real rate of interest to be constant.

A planned government deficit and an export surplus are measurable but ex ante savings and investment cannot be known. Assuming, however, that we can calculate all the planned excess expenditures, we can define the deficit of the whole economy as:

$$Y - A = D$$

where

$$A = C + I + G + (X - M)$$

the deficit being the difference between income and absorption, and absorption being the sum of consumption, investment, government expenditure,

and the export surplus. When $Y = A$, there cannot be any inflation; but when D is negative inflation is positive. So, if D is 5 percent of Y in a given year the prices that year will rise by 5 percent. Obversely, if prices are rising by 5 percent society must be trying to spend 5 percent more than the real output for that year.

If the government budget is balanced, and if the external balance is attained, inflation in a completely free economy must be due to the fact that the planned saving of the private sector is larger than the planned investment. If the rate of planned investment is larger by 5 percentage points than the rate of planned saving, actual savings and investment can be made equal only when the rate of inflation is 5 percent. If the monetary system does not allow such inflation, interest rate has to rise till the difference between planned investment and planned saving is reduced to zero. In other words, the difference between the rate of inflation and the measurable ex ante deficits (namely the budget and external deficits) indicates the magnitude of the excess rate of planned investment over planned saving in a free economy.

If the prices of some goods are held constant due to price controls, then the prices of other goods in the free market have to bear the whole burden of the deficit spending. Prices in the free market, therefore, will rise at a higher rate than the average rate of inflation indicated by the deficit. If one-half of the national income is subject to price controls and if the deficit happens to be 5 percent of the national income, the prices in the free market will rise by 10 percent. The overall rate of inflation, however, will still be only 5 percent because in the controlled market, which is assumed to be half of the total market, the price increase will be zero.

Long-run price controls imposed on a part of the economy, such as public utilities, assume that controlled prices have to be adjusted upwards from time to time. This is so because the controlled industries are not self-contained. They have to pay higher prices for their inputs that come from the uncontrolled industries; and they have to compete for all their resources with all the economic units in the society. Wages, interest, and profits in the controlled industries must keep pace with those in the unregulated part of the economy. In the absence of such parity the controlled industries will sooner or later collapse. Sometimes such a bitter result is accepted by the society: for example, rent control turns a nice neighborhood into a slum. But, generally speaking, the controlled prices are usually adjusted upwards.

Such adjustments have to be initiated by the producers, who must justify the price increase. Those who deserve a reduced price in spite of

general inflation are not expected to fight for a downward adjustment. Price controls, therefore, are often loaded in favor of inflation. If the regulators continuously supervise all controlled firms, impose uniform management practices, and replace all inefficient managers, then the price increases may be smaller than those desired by the producers, and some prices might even be reduced. But, the government then will be operating on the brink of a one-firm economy, which is not postulated by the partial price controls. Regulated prices, therefore, are generally allowed to rise to the level of free market prices. The upward price adjustment is made not by the overall rate of inflation but by the rate of increase in the free market prices.

Given an increase in costs, government officials are more likely to grant a price increase than even the board of directors of the regulated firm. If the price change is not granted at the right time, the company may go out of business and the bureaucrats may be held responsible for an inefficient, callous, and socially damaging administration of price controls. Officials, therefore, are generally reluctant to refuse a price hike; they can see that the probability of making a mistake is smaller when the hike is approved than when it is rejected. One can invite an investigation by one's superiors, the press, the lawmakers, and the public by refusing a price increase which can, at least superficially, be justified by the changing circumstances. As long as the price increase is not out of line, the officials can remain secure in their anonymity. Since any appearance of the misuse of power can jeopardize their jobs, the bureaucrats rapidly learn to be cautious and generous.

In the absence of price controls, the overall rate of inflation will be equal to the rate of deficit. But when partial price controls are in existence, the process of regulated prices catching up with free market prices inevitably raises the rate of inflation. If the controlled prices are to be adjusted every year (or month), only in the first year (or month) will the rate of inflation be equal to the rate of deficit. Thereafter the adjustment process will permanently raise the rate of inflation, depending on the extent of price controls.

Let F stand for a free market as a proportion of the whole economy, and Z for the overall rate of inflation; then a 5 percent deficit when F is one-half will make Z equal to 10 percent; and if F is one fourth, Z will be 20 percent. The overall rate of inflation varies directly with the rate of deficit and inversely with the size of the free market. In short:

$$D = FZ$$

Furthermore, the very process of managing the partial price controls tends to increase D and decrease F.

Even assuming an unchanged utilization of resources, price controls can reduce real income, because controls foster and reward inefficiency and the misallocation of resources. When a producer is sure to get a price hike, he cannot have a great incentive to resist an increase in his costs. His refusal to raise the price of his inputs seems like an uncharitable act. His effort to be efficient looks like a dog-in-the-manager attitude. He has nothing to lose by granting a wage increase or by not trying to exact the best effort from his workers. Even the voluntary wage-price guidelines sanctioned by the government, just like price controls, encourage waste and reduce real income. It seems mean for the employers to offer and foolish for the employees to accept less than what is set out in the guidelines or what is granted by the price controllers. Moreover, inefficiency may even be profitable, as most price controllers allow profits to be a fixed percentage of costs.

Price controls make it unnecessary for any enterprise to accept a loss; all increases in costs can be safely passed on to the consumer, because one can be certain that other competing firms will do the same. In the absence of price controls, competition is stronger and the inefficient firms have to fold up. The new firms using the old plants will have smaller fixed costs and no need to raise prices. In a free market inefficient firms are eliminated, resources are reallocated, prices are readjusted, and total real production is always maximized. But government controllers cannot arbitrarily force some enterprises to accept a loss, let alone extinction. Price controls, almost by definition, protect the inefficient and reduce the size of the real output.

It is well known that in inflationary times the rate of absorption is increased. The marginal propensity to consume is increased because the asset-holders feel wealthier due to the capital gains. Businessmen tend to hold larger inventories than are needed, and they also invest in plant and equipment that might not be profitable but for the impending inflation. Most often government expenditure also goes up in inflationary times because of the complementarity between private and public spending and also because of the fact that government expenditure is very labor-intensive.

More important than an increase in absorption is the fact that price controls create an atmosphere in which people accept inflation and, indeed, approve of more regulations. Once a price hike is granted by the officials, the new price is instantly seen as a just price. When an unregulated monopolist raises his price, at least some people grumble; some try hard to reduce the demand; distant competitors may try to invade the market; and even the government may be expected to break up the greedy monopoly. But when the increase is sanctioned by the price controllers, after an ostentatious

investigation, most people cannot fault the producers, and they routinely accept the controls and the inflation.

Sometimes, price controls create black markets, and the prices in such markets remain very high due to the extra risk of illegality imposed on these defiant traders. Black markets generally strengthen the inflation psychology and weaken the popular resistance to price controls, because people come to appreciate the lower prices in the controlled markets and falsely believe that in the absence of price controls all prices would rise to the black market level. When controllers are frustrated by rising prices, they naturally believe that more controls may help to stabilize prices. If a price has to be raised due to the increased costs, one can hold down the price by controlling the prices of the inputs. If the price goes up due to an increased demand or a decreased supply one can substitute rationing for a price increase.

If more controls mean an end of the free market, the problem of increasing prices can be eliminated, though repressed inflation may show up in the form of long lines of shoppers, or other types of inefficiencies. But, short of comprehensive central planning, additional regulations can only aggravate the problem of rising prices. What is needed for efficiency and price stability is a tax structure that will minimize deficit spending by all the economic units, and a legal structure that will maximize competition in the market place. Free societies can control inflation by expanding economic freedom, not by resorting to price controls.

CONTROLLI INFLAZIONISTICI DEI PREZZI

Scopo di questo lavoro è mostrare la possibilità che controlli parziali sui prezzi imposti in un'economia altrimenti libera aggravino il tasso di inflazione invece di ridurlo. Quando un anno la società cerca di spendere, per esempio, il 5% più della produzione reale di quell'anno, i prezzi salgono del 5%. Se i prezzi di alcuni beni sono mantenuti costanti dai controlli sui prezzi, allora i prezzi dei beni sul mercato libero devono sopportare l'intero peso della spesa in eccesso. Se metà del reddito nazionale è soggetto ai controlli sui prezzi, allora il 5% di spesa in eccesso accrescerà del 10% i prezzi sul mercato libero. Se le industrie controllate devono funzionare correttamente, i prezzi controllati devono essere aggiustati ufficialmente al livello dei prezzi del mercato libero. Dopo un tale aggiustamento annuale il tasso di inflazione sarà del 10% mentre sarebbe stato soltanto del 5% in assenza dei controlli sui prezzi. Se D rappresenta la spesa in eccesso come una percentuale del reddito nazionale, F il mercato libero come una proporzione dell'intera economia, e Z il tasso generale di inflazione, allora si può scrivere $D = FZ$. Inoltre, i controlli sui prezzi tendono ad accrescere D e a ridurre F.

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MULTINATIONAL INSTITUTIONS

by
SIDNEY C. SUFRIN* and JULIE SICILIANO*

I

Multinational corporations and operations have organizational problems peculiar to such undertakings. Such activities have more than one set of geographical and ideological linkages. A branch of a multinational located in a foreign country is conditioned and regulated by the hos country. We probably unduly limit ourselves in this comment. Law may actually be minor compared to other parameters. Labor unions, wage practices, education, the local transit system, the power of the multinational training, racial antagonisms, *et cetera* endlessly, are or may be parameters which limit the behavior and nature of our hypothetical firm. All the externalities we have listed are related to personnel policies. Obviously there are many other external linkages. But to limit the discussion to purely legal or legislated linkages is restrictive. The firm may have a contract with the government as to what it will produce and under what taxes or tax exemptions. Also the contract may provide for government participation or local participation in the ownership and earnings.

There are laws pertaining not only to taxes, but also to safety, wages, collective bargain, holidays with or without pay, insurance, competition, sale of securities, banking, and so on, which presumably all firms of a common category, as defined by statute, must obey. Reports and accounting procedures may be legislatively or otherwise required. Thus the multinational, like the national firm, is bound by external parameters and requirements, as well as by its own *internal* requirements of organization. The firm's local managers must be adjusted to certain modes of behavior including those

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which are peculiar to its new location. The commonly accepted principles of equity, fair play and appropriate behavior, not parts of statutes, may differ for the managers from a metropole and from the host country's perceptions.

Such a simple, seemingly trivial matter as time allowed away from the job during a workday are different in Great Britain, India and the U.S. The *idea* of a personal break from work in an office, factory or mine is a recognized phenomenon. But how the "breaks" are taken are peculiar to different countries and to different industries [1]. The duration of a break, the notices required to be given to supervisors, etc., are not common on a worldwide basis. Even in the U.S. state law, industrial customs and union agreements make it impossible to offer a general rule about personal breaks. Such a seemingly trivial matter, from the viewpoint of a large firm, may be a significant matter affecting production and labor relations. Strikes have resulted from disagreements over allowable breaks from work.

The multinational which carefully surveys the field of internal and external linkages before deciding upon the many policies it must make and practices it must follow to be successful, is conscious of how its managers need to adjust their thinking and behavior, and with whom consultation is advisable. However complete freedom of behavior is not possible. There are certain requirements, which differ in different industries and technologies which simply must be followed. A continuous production process has different needs than a productive process whose tempo and duration can be under the control of a supervisor or even working person. A steel rolling mill has a different tempo and requires a different practice about personal breaks as compared to say, a carpentry operation. A line assembly job is also different from assembly operations performed by single persons. The internal regulations of the labor force are different in a cigar factory with small production units (3-5) working on relatively small investments of machinery from a cigarette factory with a greater investment and a larger labor force.

The technical requirements must be met if production is to be worthwhile. The non technical requirements presumably must be acceptable to the work force, even if different from previous managerial experience. The freedom of the manager to set the limits or the rules of behavior is not very large if the technical requirements are great. All in all, the technical requirements may be taken as given, the remainder of the organizational rules

[1] DUNLOP (1958, Chap. 4).

are open to variation. The variation itself is restrained by cost and output considerations.

It is the latter, the area of permissable variations in organization, which becomes the major *internal* area of managerial choices and decision making. Similarly for the external choices of management, where law, official regulation and the market considerations of interest rates, technology, etc., are beyond the control of the manager, he must take them as givens. Where, however, management can intervene, management's choice and power can come into play.

II

Our major concern here is to comment on how the multinational organizations are, or perhaps need be, related to the three functional aspects we have outlined. These functions may be categorized as including:

1 – The discipline or operations of the firm generally viewed. All business, national, multinational or transnational must do bookkeeping, selling, managing, financing, etc. Such operations may be considered the disciplined operations, for they are taught as part of the discipline or method of business operations.

2 – The conceptual activities of business in its social setting. The conceptual functions of planning in the firm and the conceptual connections between a firm, any firm, and the society and conversely, the connections between the society and the firm are all involved. This is the general, conceptual role of business in society.

3 – The interactions of the several functions of the firm with each other. This is the firm's structure and organization. Then the interactions and linkages of the parts of the firm as a unity, and with the institutions, and hence personalities of the society, are of significance.

Our discussion has reserved for the firm and the several societies involved social areas wherein the firm must conform to both its own imperatives and the imperatives of the society. Business may be a revolutionary force in society, and indeed history shows it to be so. But the revolutions of business are not usually *imposed* on social institutions as political revolutions are. Business, if it is to avoid following a policy or practice of forcible impositions of its will on the society, a tactic involving violence and an authoritarian ideology, relies on evolution, on persuasions; e.g. advertising, lobbying, negotiation and explanation, rather than on force.

Fascism, communism, some religious or political authoritarianisms are

associated with forced social change, including business change. From time to time business, joining with governmental authority, has followed this authoritarian course; e.g. the mercantilist monopolies of olden times as the East India Company in the early nineteenth Century or the American slave trade in Africa in the 17th century. The modern or at least current social ideology, however, finds such social force unacceptable. Imperialism and authoritarianism are not in good repute nowadays anywhere in the world. Even regimes which eschew democratic ideals and ideology tend, in current times, to call themselves "Peoples' Republics" or "Democratic Republics", or "Socialist Republics" or such like titles to cover up the forceful nature of their regimes with the legitimizations expected in the world at large by the use of agreeable adjectives. Surely no one is fooled for long. The recent ideological revolutions in the Communist sphere indicate the people of these lands are not fooled, either.

Multinationals do not require that they conduct part of their operations in the less developed or newly developing countries (LDC or NDC). Nevertheless, as an historical fact multinationals have so grown. Trade with countries of approximately equal development has extended to trade with less economically and militarily developed countries. The societies not bound up in world trade are the exceptionally primitive societies.

INDEX OF WORLD TRADE

	1970*)	1973	1975	1978	1980	1983	1985
Developed MKT Economies	100	181	257	386	577	516	575
Developing MKT Economies	100	187	355	527	890	780	782

*) 1970 - base year

SOURCE: *1985 International Trade Statistics Yearbook*, Vol. 1, New York: United Nations, 1987.

African societies, South East Asian States, India, Latin American as well as rural parts of Europe and the Americas are playing host to great international companies. De Gaulle, the powerful if not always gently accommodative political leader of post WWII France, feared the power of foreign companies in France, itself a great industrial power. But De Gaulle never took France out of the world. The politicians of Italy, by and large, welcome foreign investment. The developing states in Africa, Korea, S.E

Asia and finally Great China simultaneously both welcome and are dubious about the idea of foreign corporations. The modern ideology of the world usually includes economic and thus political world involvement.

On the whole foreign capital has been welcomed under certain conditions designed to advance and protect the national interests of each country. How well such interests are advanced and protected is, of course, the subject of great academic and political debate. Let it suffice to say that the debacle in Bhopal India, as a catastrophic industrial accident in which literally thousands of Indians were killed and injured, made multinational corporations suspect the world over. And the suspicion was not only directed to the Corporation, in this case the "American" firm of Union Carbide, but also the doubt was directed against the Indian Government, state and federal. Could India protect its people, and would the foreign corporation protect the host's people? An interesting sidelight of Bhopal was its very minor general effect on multinationals by other host or metropole investors.

In a sense the developing countries tend to view the world as more status and connection bound, as more ideologically united, than does the developed world see itself. However isolation and inaccessibility are quite generally recognized in LDCs and NDCs. This is an adaptation of the isolated religious society vs. the accessible secular society of the cultural anthropologists [2]. On the other hand the modern corporation, based on technology and rationality, tends to see the society as more dynamic (accessible) and secular than in the past. Change is pervasive and the enforcement of contracts (including safety conditions) depends on the behavior of both parties. In the case of Bhopal the two parties were Union Carbide and the Government of India. The isolated, static, conventional religious society vs. the accessible, dynamic, technological, secular society or ideologies are, properly speaking, useful ways to classify the hosts of multinational business activities. But the polar views are not to be taken too seriously. To an increasing extent the polar differences become less marked with time, although convergence has failed to appear. The new China is not the US, not do American or European firms become Chinese even in China.

III

It is apparent to all who have even superficially examined state-bus-

[2] OPPENHEIMER (1922, Chap. VII).

iness relations that corporations generally tend to or try to affect state policies of business regulation. This occurs in developed as well as underdeveloped and developing countries. Great furor *pro* and *con* is raised in the West about the business interference with Governmental oil policy in countries which have that natural resource. Social unease directed against foreign intervention is almost commonplace since WW II. The Arab and Iranian policies vis à vis Israel as protected by the West are examples, as are the attitudes of the West toward the oil producing states. China, India even well developed Japan have policies which restrict foreign firms.

On the other hand Western firms and nations, for their part, feel restricted by the regulations imposed upon their activities, although often restricting foreign firms themselves. The mercantilism of Japan, the restrictions on foreign ownership in approximately all the LDC's and NDC's, the restrictive attitude toward imports which compete with domestic firms, the allowed graft and bribery required to get anything done, these and similar restrictions bedevil multinational business.

And both sides are correct in what they see with limited vision. No country, less developed or developed, wants a social revolution imported. Whether or not the multinational sees its actions as revolutionary, the host countries may see them just as that. A multinational may bring in a higher standard of living which may upset a social structure which has hitherto benefitted the few. But the few are the politically powerful. The multinationals also might bring in much higher income and power to the élite in power or which might be in power. The Army also stands to benefit if its power of violence is enhanced, for as military power in the society is enhanced, competing ideologies are cut down to size. Ordinary people tend to face unemployment as well and new job opportunities. They may well be apprehensive of the effects of multinational activity. If the short and the long runs are out of synchronization, the results may be chaotic.

Multinationals see the problems differently. Like the local elites, the multinationals are each concerned with its own welfare. The place they seek have advantages which beckon them. The advantages may be raw materials, location, cheap labor, low taxes, or any number of other advantages. Subject to the host country's being willing, the multinational attempts the new venture. Once in place, or almost in place, the managers of the new activity may discover hindrances not seen before. Roads or harbors are not efficient; training is more costly than imagined; dissatisfied élites become restive politically; conflicts of interest and ideology, etc., make life difficult. The firm in self protection may seek to correct the difficulties. This may imply political (lobbying) as well as non political, social action. Newspapers are

suborned, political parties and politicians bought, bribery resorted to; in short the multinational is imposing on the society a mode of behavior which benefits the multinational. The firm then has become part of an ideological system not in conformance with acceptable ideals of behavior, host's or metropoles'. The ideology and behavior of people in the host country are bent out of acceptable shape. A new type of imperialism has begun. And the metropoles of the foreign firms may seek ways to justify or correct the wayward behavior of the corporations by law or investigation. Under American law – American businessmen may not bribe foreign officials.

The outcome has been bad, at least in the short run, for all involved: the host government and part of its population, the multinationals, the government of the metropole. We say short run because in the longer period the improprieties may be corrected and the standard of life generally raised. Or the improper modes of behavior may become legitimate. There is evidence that the standard of living *has* been raised in many developed countries, even though the means were awkward. Surely Puerto Rico, Korea and Kenya, as examples, have enjoyed standard of living improvements in the past 30 years. But is that enough? What if the standards of governance have declined, what if the growth has been less than if *otherwise* managed? (Central and Latin American furnish examples). What if the full potential of government, the economy and the social development of the population have been severely impaired? Such considerations make short run benefits a poor guide for long run development and welfare.

Furthermore, social values change, class structure changes, the nature of the world in which a society is embedded changes. A policy designed for one time does not necessarily fit a policy and ideology for another time. A course of development action, for the peace and prosperity of the nation in question and for the world at large, requires flexibility as well as stability. Therefore short run changes can be costly or beneficial while long run changes, often growing out of the short run policies, can also carry beneficial or costly outcomes. The Middle East and Iran probably will be unpleasant places both for themselves and the rest of the world for a long time due to the bad fit of the secular (long run) development of the Islamic world and the rest of the world; as well as because of short run undertakings on both sides, East and West.

It is apparent that foreign trade and multinational corporate-government activity are on a long path whose end is not known. The world is increasingly one world. Nationalism, economic parochialism and restricted markets seem to be going out of style in most of the world. Whether nationalism, economic parochialism, as measured by mercantilism, protection-

ism and restrictions on the corporate form will become a new style is not at all clear. One can guess, however, that the past is finished and that *new* social forms of business behavior will slowly continue to emerge. One can also guess, with a fair likelihood of success, that internationalism, both economic and political, will persist in seeking a greater share of social ideology all over the world. This view, of course, may be only wishful thinking, but its benefits are too obvious to be missed by the wheelers and dealers for long. What is interesting is that the changes in business are not always associated with the intercountry convergence of other social forms. These change but in different ways. If each company is restrained and takes its shape from both internal as well as external pressures, it is reasonable to attempt to identify the common elements. That there are internal commonalities to business organization is pretty obvious. Firms operate with fairly well defined common labor pools, technology inventories and knowledge. In general the products of the pools may be fashioned by the rules and practices of each company. But the raw materials: labor, capital, "know how" and social expectations are also fashioned in the social pools which are the resources of the society. So the internal and the external are constantly being joined and mixed. There is no beginning and no end to the structure and quality of the economy and its business parts. The raw material pools vary from society to society and are important reasons why foreign trade and multinational undertakings, international divisions of labor, are increasingly relied on by the developed and developing worlds.

The uniqueness and peculiarities of companies, if the companies are to retain their individualities, do withstand some of the social pressures, unless the internal and external forces are accepted and legitimated by managers, governments, and other concerned parties, as warranting change. Such developments can be noted in the oil campanies' policies with respect to output, mergers, hiring practices, and accepting host government participation and regulation in government controlled oil producing countries. The internal governance and social organization of factories operated by multinational or foreign companies in new national locations also have consciously designed practices to make them acceptable to the novel environment. Japanese auto companies operating in the U.S. adopt old ways of doing things to fit the new American scene. The companies are no longer strictly Japanese in behavior. Nor are they traditional American. Such almost trivial matters as daily physical exercise, not uncommon in Japanese factories, are modified, sometimes to non existence in America. In the Japanese-American workstation division of labor has to an extent been modified by the Japanese experience, which presumably built on the older

American experience. A new reliance on robotics and the less intense, minute division of labor seem to have resulted in a decline in manhours needed to build an automobile in the new multinational factories. The natural American companies, of course, will copy the new ways if costs and returns justify the changes in their plants. What may be a "bottom line" decision starts as ideological conception.

IV

But the internalities are not our major concern. That concern is more with externalities which affect internal behavior. *First*, we suggest, is the need to place international industries and businesses on an agreed on, effective, universal legal-administrative base. We are not the first to suggest this.

The social contract, the acceptance of people generally of agreed on rules and practices in individual and group behavior is not a business agreement as a contract to deliver a thousand pairs of shoes of given design, price, color, and quality at a given date. The private contract is enforceable at law. The acceptance of social rules is part of a *social contract*. The parties to the private contract agree, by implication, to settle their differences in a way which has *social* approval. The contending parties, if the contract is breached, may "settle out of court", that is, compromise their differences. Or either party can (even simultaneously) sue the other in a government court of law, or they may, as the law permits, have their differences mediated or arbitrated by third parties. In some matters one involved party may publicly boycott the other, as in a labor dispute. The point is that the social contract is a view of an *orderly* and ordered society in which the monopoly of violence (the police, and military) is in the hands of Government or better stated, the government is but the representative of an idea – the state.

But violence by the state to insure the carrying out of explicit and implicit contracts, is not the ordinary way of the state's enforcing the private contract. Custom, fear of market reaction and desire to get along with customers, competitors, and the world at large, usually enforce business contracts. Generally speaking contracts are willfully carried out because both parties benefit. In short, ideologically, the sanctity of contracts is generally assumed. One hears and reads of grossly improper contracts and of the failure to complete a contract, but these are, in the whole space of

things, rare and aberrant. Buying a quart of milk; or going to a theatre to see a motion picture after buying a ticket, and having the movie shown in a standard movie theater is a contractual matter. Such matters as doing one's job, getting married or the limits of behavior in public, or sometimes private, places are contractlike in nature.

Doing one's job is overtly contractual. A person who is ineffectual as an employee may be fired. In the opinion of the employee – the buyer of the effort – the employee has failed. Hence the dismissal for breach of contract. But the employee may demur and file suit in a court of law. Then the private behavior and contract are evaluated by the state, the guardian of the social contract.

The example given points to the idea of private contract being enforceable. To be sure a private contract which requires the employee to sell cocaine, or some other illegal drug would not be enforceable at law. The social contract forbids the sale or even use of the drug, except under the extraordinary circumstance of a physician's order. The private contract is limited by the social contract.

The social contract has no beginning and no end. The word contract is, perhaps, misleading. It gives the idea that people consciously draw up a comprehensive agreement as to what and should not be done. The United States, after its extremely successful experience with a written contract – the Constitution – has led some to see such documents as desirable. A written constitution seems a reasonable choice after a political revolution removes from power an authoritarian regime. The rights of individuals and groups, in the new regime, are spelled out as protective measures as in the Bill of Rights of the U.S. Constitution. The rights of individuals and the constituent states of the United States are stated as limits of the federal government's and later the state government's behavior in law making and administration. But the Bill of Rights does not directly protect children from being abused. That is in the unwritten, or interpreted parts of the document, the ideological parts.

Great Britain, unlike the U.S. has not a written Constitution, but its unwritten Constitution too has worked well, as measured by the continuity of elective government. The U.S. has had its constitutional governance (1789) tested by the Civil War in the 1860s. Great Britain has had the internal flexibility to persist, at least since 1688, the year of the Glorious Revolution. Both constitutions, The American and The British, have turned out to be flexible. By that is meant the capacity to adjust and accommodate to changing times, values and institutions.

The corporate form of modern business, with its special needs implied

in the firm's relation to shareholders, government, buyers, sellers, accounting, etc., has been largely successful in both nations. In Great Britain the difficult issue of nationalizing (and later denationalizing) large scale industries has been accomplished. To be sure these were and are attacked from left and right. But the integrity of the government and of governance was never in doubt. In the United States railroads were nationalized, banks and public utilities regulated and slavery abolished without destroying the continuity of government and governance. Furthermore both nations have enjoyed a fairly persistent economic growth as well as suffering from disturbing economic problems.

What both countries have accomplished is a way for business to solve problems under the aegis of government; i.e., common law and ideology, as well as by direct government legislative action. For both nations the constitution is an ideal and ideological structure. That structure changes in shape and content as the society changes. The changes do not often solve the problems to everyone's satisfaction. There is a kind of agreement to disagree and to continue or initiate political pressures for new policies. But during the period the legitimated policy is in force, its requirement persists at least legalistically. We say legalistically because if no one is sufficiently concerned to insist on the enforcement of a law, it simply is not enforced.

From the point of view argued above, constitutions and their offspring, the laws of the land, are essentially statements of ideology. Since ideology is rarely of a piece, various bodies interpret and apply laws differently. For a business to operate, however, requires some limits to uncertainty. Lacking limits of certainty can easily lead business and government officials to work out "deals" legitimated neither by ideology nor law. The two groups, in effect, take on the function of governance. This is perhaps the greatest harm of conspiracy among businesses and between business and government officials. Rules are made and sometimes enforced without ideological, which is to say constitutional, legitimation. The authority of the State is thereby reduced and evaded. A private ideology supplants the general ideology.

In LDCs and NDCs the complexity of industrialization and new social forms of behavior sometimes run ahead of, or at least are not synchronized with ideology, administration and law. Hence the range of uncertainty is greater than for developed countries. Both business managers and government administrators lack rules and experience of how to behave. The results, even if leading to some synchronization of ideology, law and administration with business needs and social needs, create chaotic (hopefully short run) situations.

Now if two societies have sufficiently different value systems with

respect to business; and if a multinational based on one area operates in another with a different ideological attitude toward business, especially foreign business, the results may be lamentable and disruptive. Hence the need for some formal constitutional, i.e., ideological value system, which provides for various degrees and methods of adjudication which are less formal than going to court. Matters of contract, labor relations, health and safety measures, advertising, fair trading, weights and measures, relations between buyer and seller, government and supplier, social responsibility, and so on almost endlessly require some constitutional, ideological base on which people can agree and disagree in a communicative way.

It is only a dozen years or so that the U.S. developed a Universal Commercial Code by each state, more or less agreeing, to rules of trade and contract. In 1964 the UN adopted a convention to consider and arbitrate international contracts between firms whose international contracts were, for one reason or another, in dispute. It is generally agreed that this (Hague Sales) convention is not very broad in its conception.

In 1980 after years of hearings, discussions and consideration, the United Nations Commission on International Trade approved a document called the U.N. Convention on Contracts for the International Sale of Goods. Representatives of sixty two states attended the meeting in which the convention was unanimously approved. In the U.S. the draft was sent to the U.S. State Department which recommended it to the President for ratification, but limiting the convention to contracts between principals in two subscribing States. Thus U.S. courts would apply the convention only to sales with an international character between parties whose countries accept the convention. The question of jurisdiction of courts is a sticky one, not totally covered by the convention. Presumably the contracts or contracting parties would choose the jurisdiction.

In general the convention follows the U.S. Uniform code. Herein lies a problem. The U.S. Uniform Commercial Code as such, is an advance against the hodge podge of contractual rights and requirements of the several states prior to the Code. However in the U.S. as in other developed countries *third party* rights are protected by other statutes than those dealing with matters under the Uniform Code. Third parties as labor, other suppliers, consumers, users, as well as other affected people have legal protections (and obligations). The U.S. code is then based on a complex system of laws which are seemingly independent of the Commercial Code, but in truth supplement it. Effects of a contract on third parties, e.g., safety and health, suppliers rights, priority of claims, etc., are protected or at least considered in specific legislation other than the Code. If a worker is injured due to

faulty machines or material, or a consumer is harmed due to faulty products, some sort of redress is available.

The U.N. Code on sales alone connot be expected to cover all such contingencies which are essential in a developing or developed society. An infrastructure is lacking. The idea of a legal code, which, in a sense, deals with such contingencies as recounted above, we suggest, is desirable, and even necessary. The U.N. code is a necessary first step for further also required steps [3]. The cost effects of ancillary regulations on growth and welfare are vital issues which must be considered, case by case, for each LDC or NDC.

The conclusion is that some more or less agreed on organon of law affecting business would be desirable for all concerned in multinational activity, from suppliers to buyers, from sellers to consumers. How less difficult the aftermath of the Bhopal experience would have been if the rights, duties and obligations of management and government, of the internal administration of the Indian plant and the labor force, had been known, publicized and enforced beforehand. The complexity of modern business in its multifacets simply requires known and enforced rules. To speak of competition adjudicating all such problems is simply nonsensical in the short run, although competition is a tool to be used in governance. All these matters are essentially matters of the legal systems in their broad meaning. Laws are the rules or implied rules of the game.

V

Another social requirement of agreement is in the field of *management*. Let us begin this part of the discussion by admitting to a broad definition of the concept. Management comprehends the responsibility for and the direction of the entire operation in all its phases. General management, in operating fact, has great authority but limited jurisdiction. Specific management and administration has great jurisdiction but little general authority.

It is in the less devoloped lands that the force of the multinationals are relatively greatest. We say relatively because the great size of the national economies of the developed world translated the multinational growth into relatively small percentages of national growth. Using the U.S. as an example, foreign trade grew from about 10% of GNP to about 15%

[3] Letter of trasmittal, September 21, 1983, from the President to the U.S Senate. Reproduced from U.S. Congress, Senate (98th Congress, lst Session), Treaty Document N° 98-9, September 21, 1983, pp. iii-vii and 1-22.

or more between World War II and the 1980s. As we have suggested foreign trade encompasses multinational activity. In 1985 it was almost a quarter of GNP. In the 1980s foreign investments in the U.S., largely in U.S. government securities as well as private securities, amounted to about 17% of American investments. It is believed by some that the enormous growth of American government debt of the 1980s was financed in appreciable part by Japanese and West German financial transfers.

During the period of LCD growth (1950 onward), the West and Japan supplied great capital to those developing countries. The Point Four Program of the U.S. implemented by U.S. Government's technical and economic assistance programs and the programs of Great Britain, Sweden, France, the Soviet Union, etc. provided a great fraction of the psychic and real energy for the NDC growth. Hong Kong, Korea, S.E. Asia and some other economies responded magnificently and became vital forces in the World's growth. Some LCDs did show only modest growth. The confluence of political change and economic change appears to be a joint phenomena. What appears in the internationalization of business is that the scope of management has been extended beyond the traditional managerial function to a broader orientation.

FLOWS OF DIRECT FOREIGN INVESTMENT AS A PERCENTAGE OF GROSS DOMESTIC FIXED CAPITAL FORMATION IN DEVELOPED ECONOMIES

Country	Outflow			Inflow		
	1960	1970	1979	1960	1970	1979
North America	3.1%	4.2%	5.5%	1.0%	1.2%	2.3%
United States	3.3	4.5	5.7	0.4	0.9	1.9
Canada	0.6	1.8	3.6	7.9	5.0	2.9
Western Europe	1.4	2.1	2.7	1.1	2.3	1.7
Japan	0.6	0.5	0.9	0.1	0.1	–
Southern hemisphere	0.5	1.2	1.3	9.1	9.7	4.8
Australia etc.	0.5	1.2	1.3	9.1	9.7	5.4
TOTAL	2.2	2.7	3.2	1.2	1.7	1.6

Source: FAYERWEATHER J., *International Business Strategy and Administration.* Cambridge, MA: Ballinger Publishing Co., 1982, p. 37.

VI

A few words explaining our concept of management may clarify the thoughts expressed here.

The control over business activity, in detail and on a broad scale including planning, is, in our use, management. Management, personified as the manager, is the responsible agent of business. An error may be made in production by a single worker or in inspection or in planning. The manager, who may not have any personal involvement, is, however, responsible. Excluded are only illegal actions by subordinates, but even in such matters, the manager is assumed to have set up safeguards and checks to catch illegalities or rule infractions before they affect the business or the public. Management extends throughout the enterprise, but with differing functions. At one level of managerial activity is administration. In a general sense administration sees to it that rules are *applied*. This is not wholly correct because rules cannot prescribe the actions and measures to be taken in *all* circumstances. Administration must be allowed to exercise judgment. In some personnel matters, in some aspects of consumer relations, in dealing with a sudden, pressing problem not covered by managerial rule, the lower level of management, i.e. administration, must make an on the spot decision, or even set in train a behavior which may became a standard of behavior. Negotiating a contract up to a certain value is often within the administrative province. Judgement and common sense are not negated by organizational authority. How much and what kind of judgement, either common or uncommon, to serve all situations cannot be foretold. Mistakes by administration and administrators may and will be made under the best organizational system. Both correct judgments and useful commonsensical ones will also be made. Business, just as all other social institutions, is not totally rigid. All institutions allow for some flexibility. Some are very rigid, some freer in allowing administrative discretion.

At the top levels of management, the manager is concerned with matters of planning for the future, with general organizational issues and with grave decisions of the nature and direction of the firm. In recent years these upper level, major decisions have been called strategic, and indeed they are. The short run decisions are largely tactical; i.e., how to solve and overcome a current problem. Strategic planning or managing is more concerned with emerging issues and what the future is likely to hold. To be sure upper managers, from time to time, become involved in administrative problems; e.g., choosing a department head or financing a decided upon merger. Such matters may even take up a lot of time. But the essence of management is

making rules and setting the course of business. This includes responsibility for managing the firm, but also for overseeing the linkages of the firm to other aspects of society. Advertising departments do not set the course of business, top management does that. The international firm, of course, has its ultimate authority in the head office, usually in a metropole.

As one can readily see the functions of The Manager (head executive) in all firms are not the same. The size, nature and linkages of the parts of the firm within the confines of the firm, or the inter departmental contacts are different, in detail, for a steel mill or a cosmetic plant. Management problems differ. Now put the steel mill or cosmetic firm in an overseas or foreign setting, give it international shareholders with expectations based on their own national habits, give it new connections with different governments, consumers, labor, suppliers, etc., with their own national ways, then the role and goals of the manager change. These change and develop as time goes on, and as the issues of success and failure become defined.

The manager still guides the ship of business, but first in uncharted seas, and then, later, in charted seas. But unlike ships at sea making for some defined port on a well navigated body of water, the firm, structurally and functionally may be changed by the voyage, and its destination also may be changed. The foreign firm must adapt to the environment. Whether the adaptations arise out of administrative necessity or managerial strategy, the process of adaptation is likely to be faced by the foreign or multinational firm in a new host country. As time runs its course, both host and firm adapt, not through threats of violence or by the imposition of rules, but by planning and mutual consent.

The memory of imperialism, the unrealizable ideals of nationalism, the learning process, however, often tend to delay and hinder the processes of adaptation. The issues are made difficult because so often multinationals operate in more than one host country. A clothing manufacturing operation may have plants in three or four less developed countries, and sell in five or six countries. Ownership may reside in a dozen lands. The coordination of the various parts of the firm, and its relations with the many host countries is clearly a managerial set of problems. Thus the management's mind set cannot be parochial if the firm is to be successful. Nor can the several *host* countries be rigid and parochial if they are to get benefits of multinational trade and production. The mixing of ideologies, public and private is a difficult process, especially if the multinational managers have an aura of success about them. It is the host who is seeking a place in the sun.

VII

Now we come to the value or ideological issues of appropriate behavior. The most elusive part of the environment of multinationals is ideology. Ideology is the web of values which set the course of society and people. Ideology is composed of values which, in their abstract way, are at the same time supportive and conflicting. They both contradict and affirm each other. In brief they are conceptual legitimations of *personal* and *public* behavior. An ideologue is one who tends to follow but one value, forgetting the alternatives open to him and to society. An ideological society is one which denies the values other societies find to be useful legitimations.

Ideology may be divided into two parts which make up the whole. The first part is the social ideology; the second personal.

The values, ways of behaving and considerations of appropriateness of an entire society, do not make up a unity. Rather social values are quite mixed and often contradictory. If we speak only of one country, or even one part of one country, we find values and customs to be diverse and discontinuous. The Soviet Union provides shattering examples, but nearly every nation has its class and geographic value differences.

Christians are, as an ideological matter, exhorted to love one another. Nevertheless sect and liturgical divergences tend to justify behavior which is often quite unrelated to love. Northern Ireland, the United States, South Africa and the Arab States are alarming examples of ideological divergencies.

That honesty is the best policy, as Ben Franklin taught, is neither always followed, nor is the meaning clear. What does "best" really mean? Best for business, best for social values, best for self respect, and so on. Values are honored by frequent breaches rather than universal observance in business as well as in other undertakings.That truth, i.e., learning about truth, leads to freedom is well known, but does not prevent children (with parental and governmental approval) from dropping out of school at early ages, nor does it prevent governments from engaging in operations kept secret from their own people long after putative enemies know all about the operations. Similarly ideology includes such ideas as "thou shalt not kill", while at the same time honoring soldiers, especially victorious generals, of the army. Rationality is idealized but astrologists and other merchants of mystery continue to make good livings.

But many important ideological factors operate positively. Schools *are* publicly provided; attempts *are* made at social security, health care and ridding the world of war and poverty. The implementation of good social

values are often hindered by their enormous costs and by a lack of knowledge of just what to do to gain the good goals. To be sure some ideologies are, from our viewpoint, dysfunctional. Bigotry, discrimination, arrant nationalism may serve the interest of the few but they deny others basic values and legitimated rights.

Public and private values are endlessly diversified indicating that if the social ideology (ethic and mode of behavior) is the fountain of the outpourings of private views, a person or corporate entity has a wide choice of values as guides to behavior. The person or social entity can also combine and select the parts of the social value system to follow. It is in the realm of social values or personal ideology that free choice is most apparent. To argue that a person wanting to earn income in an honest, which is to say approved, fashion can either pray for wealth or study, learn, take risks, and engage in some market activity, is to fail to understand the probabilities involved. Praying may be satisfying but it is not an efficient way to proceed. Other modes have greater chance of success.

Economic theory often makes the error in reverse. It tends to argue that the goal of economic activity is reached by efficiency. It then goes on to define efficiency in an input-output or purely market sense. This approach negates the *social* setting of the activity. Market activity is scarcely pure and markets are social institutions not natural phenomena. Laws, custom and values both social and private invade economic purity. For example monopoly, cartels, robbery, insider trading, public standards of quality, honesty in advertising, treatment of labor, etc., endlessly invade the application of pure economic theory with a reality which reduces the relevance of the logic for which economic theory is famous [4].

So it seems as if the patchwork, often with contradictory values of the social ideology is constantly face to face with the complexity of private ideology, or better ideologies, of people and corporations. The tension between the public and private values creates value laden behavior. Societies can change, remake, and subtract their values as can individuals. Some values change but slowly, others fairly rapidly. An American example is the consideration of the care of children of pre school age whose mothers work. In the 1980 and again in the 1984 elections, the majority view in the U.S. seemed to be that the federal government should *not* intervene by using funds or setting standards. The issues were considered state or local not federal ones. By 1987, however, vitually *all* U.S. politicians at all levels of government, federal, state, and local seemed to agree on the necessity of

[4] Cfr. GALBRAITH (1987).

federal support and regulation when, as, and if needed. The ideological shift occurred before the end of the Reagan non-interference administration. The only questions were what to do and how much to spend. A few very conservative ideologues demurred, but the public ideology had passed them by. This constitutes a fairly rapid change in public and private ideology.

Now let us turn to the multinational business scene. Substantial ideas and ideals of contract, of labor relations, and other labor matters, of national *vs* international ownership of the means of production, of government regulation, and so on, are not at all common in the several developed and less developed countries. Nor is there much agreement of what effective social or private ideologies "should" be in order to develop effective, efficient (in the broad sense), and fair economic and social systems.

That changes, all over the world, are necessary if international business is to grow and make all the societies better, happier and more just is apparent. But what to do and how to do it are vague. All we can urge at this point is that:

The Managerial function
The Legal function, and
The Appropriate behavior function (ideology)

all need to be adjusted, changed, added to, subtracted from for all the societies of the world. The role of multinationals and of markets generally is included in the ideological revolution. The ideological aspect connot be directly changed. Value systems are legitimated not *created* by legislation. However, experience, managerial and legal changes do have mighty effects on ideological values.

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ISTITUZIONI MULTINAZIONALI

Le istituzioni multinazionali devono confrontarsi con una serie di vincoli geografici e ideologici. Poiché le loro operazioni si estendono in più di un paese ospite, la mescolanza di ideologie pubbliche e private diventa un processo difficile. I risultati non sono sempre stati favorevoli per i paesi ospiti o per le imprese

multinazionali. I problemi possono essere ascritti alla mancanza di una base giuridica comune, a uno scarso accordo nella dirigenza relativamente alle responsabilità operative e strategiche nell'ambito internazionale e a differenze su quanto è considerato comportamento corretto. Se l'internazionalismo economico è destinato ad aumentare a vantaggio dei vari paesi, i cambiamenti manageriali e giuridici dovranno certamente provocare una rivoluzione ideologica.

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ENTRY, EXIT AND CONTESTABILITY

by
ELETTRA AGLIARDI *

1. *Introduction*

The analysis of market behaviour often takes market structure as given. Such analysis is unsatisfactory, because it does not give any indication of whether or not the behaviour of the firms within the market is consistent with the assumed structure.

The assumption of free entry, according to which entry will occur into an industry as long as there are positive profits to be made there, makes the market structure endogenous: that is, the final number of firms in the industry is obtained from the condition of zero profits and therefore it depends upon the behavioural assumptions made. While free entry does not simply take the industry structure as given, it yields the unsatisfactory result that only zero profits can be earned in equilibrium in an industry. Especially, it does not take into account that there may be actions available to the firms within the industry to prevent entry by potential rivals.

An alternative approach to market structure endogenisation is the recent work on "contestable markets" which has been developed by Baumol, Panzar and Willig. This work offers an analytic framework within which the fundamental features of demand and technology determine market structure, provided that the assumption is made of frictionless entry and exit. Such theory argues that a market which is vulnerable to entry by firms with "hit-and-run" strategies may lead to a type of competitive equilibrium with desirable welfare consequences, even though there may be only one active firm in equilibrium. This work, as well as the free entry doctrine, provides a way of making market structure endogeneous, even if under very restrictive conditions.

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In the contestable markets literature the process of entry and exit in an industry is examined without defining a game model precisely. The purpose of this paper is to make clear through a game-theoretic analysis of entry and exit the assumptions under which the theory of contestable markets works, and to show the consequences of dropping such assumptions as regards entry, exit and the resulting market structure. To this aim a few issues of the recent literature in Industrial Organization are discussed.

A word of warning: this paper is not a comprehensive survey of recent models of entry and exit. There are already excellent surveys in theoretical Industrial Organization on the process of competition, struggles for entry, market power and continuing survival. Fudenberg-Tirole (1986a) survey applications of dynamic games to oligopoly models; Wilson (1987) and Roberts (1987) examine game-theoretic models in which informational asymmetries are crucial ingredients to explain various sorts of aggressive pricing behaviour and battles for market dominance; Gilbert (1986) surveys the role of pre-emptive competition.

In this paper the emphasis is given only to those issues of recent models which help in clarifying the "unpalatable hidden assumptions which may be necessary to obtain Baumol, Panzar and Willig conclusions" [1].

This paper is organised as follows.

In section 2 two simple examples of entry and exit are presented in order to give the general framework throughout the paper. Section 3 contains a discussion of the relevant assumptions of contestable markets, with special regard to those on firms' reaction time: in particular, the price-response lag hypothesis is discussed in section 4 and some examples to show the consequences of dropping it as far as entry is concerned are then developed. Section 5 discusses the fundamental conflict between potential competition and competition after entry has occurred and section 6 shows the necessary conditions which have to be imposed in order to obtain the "hit-and-run" strategy as a unique subgame perfect equilibrium (SPE) solution of a repeated game with infinite horizon. In section 7 final remarks and some insights for different possible research strategies are presented.

2. *A General Framework for Entry and Exit*

The two following examples represent basic models to examine entry and exit. They constitute the general framework throughout the subsequent analysis.

[1] Brock (1983, p. 1059).

Example 1. Consider the general problem involving an incumbent firm already established in a market and a potential entrant who is considering entering the market.

The entrant's choices are to enter or not. Following entry the incumbent can either acquiesce ("play soft") or respond aggressively ("play tough"). The standard example describing this situation is the chain-store game studied in Selten (1978). The extensive form of the game is displayed in Figure 1:

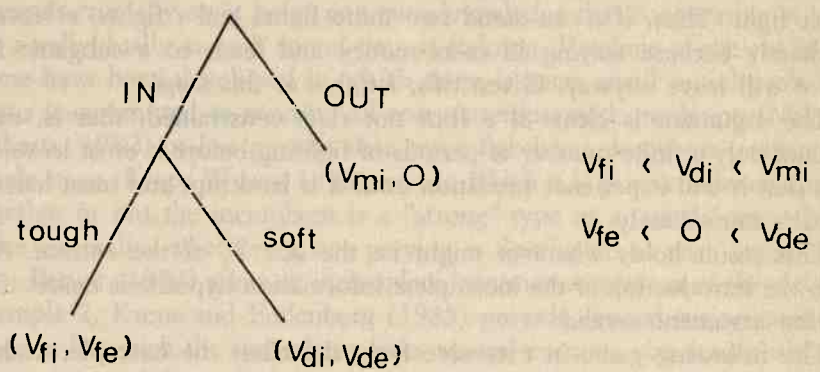

FIG. 1

where $V_{.j}$ $(j = i, e)$ denotes the present value of j's payoff. Whether or not entry occurs, a sequence of events may occur, but here all the follow-on events are encapsulated in a static description that uses present values to represent subsequent income streams.

It appears in this situation that the entrant wants to enter, expecting the incumbent to act in his own best interest to share the market: that is, both (In, soft) and (Out, tough) are Nash equilibria, but (In, soft) is the only SPE. Moreover, if this situation is repeated between incumbent and entrant (invoke, for example, the idea of a multiproduct conglomerate selling in several markets) for a finite number of periods, then the backward induction argument applies and this outcome persists: the two firms adapt to coexistence. In order to avoid the backward induction logic one can allow infinite horizon, for example, or introduce incomplete information to permit reputation effects.

Example 2. Suppose now that the entrant can survive an aggressive response for only a limited number of periods, say T_y, while the incumbent can respond aggressively ad infinitum (or at least for a larger period than T_y); and assume that both the incumbent and the entrant know what T_y is,

that the horizon is unlimited, and that the incumbent is surely willing to respond aggressively if the entrant can be driven out in one period.

In this situation the entrant's optimal strategy is not to enter (and if it does it capitulates immediately and exits), for the incumbent to play tough. This story has been formalised by Benoit (1984) and can be proved by induction.

Indeed, if the game reaches a point where e can stand only one more fight then i will be willing to fight and e will exit to save itself the cost of the last fight. Thus, if e can stand two more fights and i fights, e leaves immediately because staying in costs money and leads to a subgame in which e will leave anyway. Given this, i fights at this stage.

The argument is clear: if e (but not i) is constrained, that is, can withstand only a finite number of periods of fighting before it must leave, e knows that it will experience predation until it is bankrupt and must leave; so e exits immediately.

This result holds whatever might be the size T_y of the entrant. As before, the introduction of the incomplete information hypothesis makes the induction argument invalid.

The following game in extensive form describes the example, under the assumption that all the follow-on events collapse into a single period:

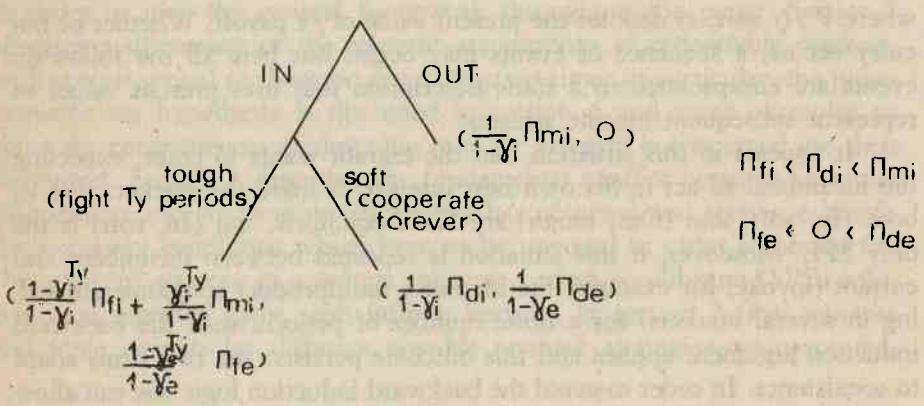

FIG. 2

where γ_i, γ_e are the discount rates for i, e, and $\pi_{.j}$ denotes the profit to j, $j = i, e$.

The two examples above can be enriched in several directions. In Figure 1 and Figure 2 representing games in extensive form the post-entry play has been collapsed into a single period. On the contrary, the game

should allow the incumbent the option whether or not to continue fighting each period and the entrant whether or not to stay in each period.

In example 2 an asymmetry in the strategy space has been assumed. The entering firm can decide whether or not to be in the industry, but must passively accept the incumbent's decision on whether or not to fight. The incumbent, moreover, does not consider the possibility of exiting.

The previous examples have been analysed according to the incomplete information version. The argument leading to the conclusion in example 1 depends crucially on it being common knowledge that cooperating is better for i individually at each round than is fighting. Versions of the chain-store game have been developed in which there is some small initial probability that i is committed to meeting all entry attempts with predation (Milgrom-Roberts, 1982) or has payoffs that make fighting a dominant strategy in a single stage (Kreps-Wilson 1982), and in which it is private information to i whether or not the incumbent is a "strong" type or a "weak" one (that is, more generally, whether or not preying is dominated at each stage).

Benoit (1984) gives an incomplete information version of the model in example 2. Kreps and Fudenberg (1985) provide several major extensions to cases in which the incumbent faces several entrants simultaneously or in succession, and depending on whether entrants who have exited can re-enter if the incumbent is revealed to be weak.

One element we are interested in is the sequence of moves made. That is, whether the incumbent or the entrant moves first, or move simultaneously. The point is important because any discussion of entry must make specific the process by which entry occurs: indeed, the specification that entry occurs sequentially or simultaneously may lead to different conclusions. In particular, when firm e can take advantage and obtain positive profits against firm i not fighting in a given period, then we say that firm i is committed to its decision and has a "first-move disadvantage". This case is of special interest for our purposes, since it permits us to formalise the "contestable markets" story. This point will become clearer in the following pages.

3. *The Assumptions on Entry and Exit of Contestable Markets*

The theory of contestable markets offers an analytic framework within which the fundamental features of demand and production technology determine the industry structure and many of the characteristics of industry prices. The theory accomplishes this via a process of simplification:

1) all producers have access to the same technology;

2) the technology may have fixed costs, but *not sunk costs* [2];

3) there is *no entry lag*, that is, a potential entrant can enter at any scale instantaneously;

4) *the incumbent's adjustment price lag is greater than the exit lag,* that is, a potential entrant can enter the market, make a profit and exit before the incumbent can react to entry. In other words, the theory "strips away through its assumptions all barriers to entry and exit and the strategic behaviour that goes along with them both in theory and reality" [3]. In particular, assumptions 3) and 4) are relevant in that they capture the idea of "hit-and-run entry", which represents a fundamental element in disciplining active firms. Indeed, a crucial issue of this literature is the extent to which potential competition is able to serve the role that actual competition does in traditional economic models: under the assumptions above, potential competition can be as effective as actual competition in disciplining the industry.

While some works [4] have emphasised the non plausibility of assumption 2) – and accordingly, a parallel literature in Industrial Organization showing that sunk costs have a substantial effect on industry structure and its performance makes it apparent that the assumption of any productive activity which does not involve some sunk cost is completely unsatisfactory –, the role of assumptions 3) and 4) has not been stressed enough in the literature which provided criticism to the contestable markets theory. Actually, the presence of these temporal lags is evidence, in itself, of sunk costs: if firms cannot respond instantaneously to entry by lowering their prices, then the pricing decision is like a sunk investment decision. If firms can leave the market only after a fixed period of time, even if it is small, then such exit lag represents a measure of the "degree of sunkness".

The need of making assumptions 3) and 4) explicit in modelling contestability and the consequences of dropping them as regards entry and exit are

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[2] The distinction between fixed costs and sunk costs is the following. Fixed costs persist only as long as production continues, but are, strictly speaking, independent of scale. Pure sunk costs continue as a liability forever. That is, they are incurred with or without production. While the entry-deterring role of sunk costs is not controversial, the deterrent that fixed costs create is one of the subjects of the "natural barriers to entry" literature: BAUMOL, PANZAR and WILLIG (1986) and GROSSMAN (1981) maintain that incumbency gives a firm no privileged position if its costs are merely fixed rather than sunk.

[3] BAUMOL-WILLIG (1986, p. 10).

[4] See, for example, BROCK (1983), SHEPHERD (1984), WEITZMAN (1983). For empirical appraisal see the works surveyed in SCHWARTZ (1986), BAUMOL-WILLIG (1986).

shown in the following pages. This issue is examined within a game-theoretic perspective.

However, nowhere in the contestable markets literature is a game precisely defined. Baumol, Panzar and Willig claim that their notion of contestability avoids the ex-post oligopolistic interactions: perfect contestability would be by its very construction immune from considerations of strategic behaviour "by dint of its assumption of the absence of economically sunk costs and irreversible commitments necessary for entry" [5]. They argue that the oligopolistic indeterminacy, and hence the need of making assumptions about entrants' conjectures, is avoided in the presence of perfectly reversible and frictionless entry.

However, Baumol, Panzar and Willig require some argument for this claim because they impose the assumption that entrants expect that incumbent's prices remain fixed [6].

Recent models [7] investigate what forms of game and what formulations of dynamic strategic oligopoly yield outcomes that are consistent with contestability. These works are relevant not only because they establish a compatibility between game theory and contestability, but also because they help clarify the role of assumptions in the theory of contestable markets. Indeed, a complete specification of the incumbents' behaviour in anticipation of and response to potential entrants is necessarily required when entry and exit are considered.

4. *A Model of Limit-Pricing with Sunk Costs and Price Response Lags: The Role of Rapid Price Responses*

In this section the need of assuming both (i) absence of sunk costs and

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[5] BAUMOL-WILLIG (1986, p. 14).

[6] Indeed, they consider "price sustainability" (see BAUMOL, PANZAR, WILLIG, 1982). BROCK (1983) introduces the notion of "quality-sustainability" and shows that the resulting equilibrium does not have the strong social desirable properties of the "price-sustainable" case.

[7] KNIEPS and VOGELSANG (1982) for the single-output case and MIRMAN-TAUMAN and ZANG (1983) for the multi-product case show that the notion of sustainable monopoly can be obtained as a Bertrand-Nash equilibrium solution.

MASKIN and TIROLE (1986) model an infinite horizon sequential duopoly game where the two symmetric firms move alternatingly but fixed costs of operation per period are so large that the market can sustain only one firm per period. They show that perfect contestability emerges as an equilibrium outcome only when the rate of discount of future profit goes to zero.

(ii) a positive price-response lag is shown in order to get the implications of contestable markets. To this aim the following model is considered.

Denote the incumbent firm by i and the potential entrant by e. Firm i sets its price at time $t = 0$ and entry by the rival can occur at any $t_e \geq 0$. Suppose that i may not be able to respond instantaneously to entry by lowering the price: i must announce any price change T periods in advance, T being called the *price response lag.* In other words, T denotes the temporal lag when e produces at its optimal scale $p_i \geq c$ where p_i is the incumbent's price and c is the average cost.

After time T, i and e compete in some way which is not precisely specified now, (possibly one of them will leave the industry). Write W_e for the present value at date T of firm e.

Suppose that s (≥ 0) is the *sunk cost* necessary for e to enter the market. If i is pricing p_i and e enters pricing $p_e = p_i - \epsilon$ ($0 < \epsilon < p_i - c$) which yields profits π_e, then the present discounted value of the entrant's profit is:

$$V_e = \int_0^T \pi_e e^{-rt} dt + W_e e^{-rT} - s \qquad (1)$$

with r being the interest rate. Of course, e will enter if $V_e > 0$. If $V_e = 0$, then e is indifferent between staying out and entering.

Consider now the case $W_e = 0$. This is the case normally considered in the theory of contestable markets: if the entrant's best strategy is to "hit-and-run", then certainly $W_e = 0$. Alternatively, this may occur as a result of the "war of attrition" game firm i and e might find themselves in after T.

The case of contestable markets is characterised by conditions $s = 0$, $T > 0$: indeed, from (1), any price $p_i > c$ makes i vulnerable to entry, $\forall r \geq 0$.

Here we want to "test" the robustness of the theory to small changes in assumptions (see also Farrell, 1986). As Baumol, Panzar and Willig (1983) claim: "when there are almost no sunk costs, markets are almost perfectly contestable".

A. *Sunk-Cost Approach.* – Baumol, Panzar and Willig propose the following representation of imperfect contestability. In their approach exit can take place anytime, but a sunk cost s is lost if exit occurs.

Consider expression (1) with the assumption $W_e = 0$. Therefore,

$$V_e = \pi_e \frac{1 - e^{-rT}}{r} - s \qquad (2)$$

and in this formulation any exit costs have been included in the sunkness of s. The entry-preventing price, which is denoted by p^*, is such that (2) becomes zero, i.e.:

$$p^*: \pi_e = \frac{sr}{1 - e^{-rT}}$$

If $s = 0$, then $p^*: \pi_e = 0$, i.e. the entry-preventing price is the average-cost price. This is the result obtained under perfect contestability, where $T > 0$ and $s = 0$.

Consider now the "almost contestable" case, in which $s > 0$ and $p_i = \min(p_M, p^*)$, where p_M is the monopoly price, and p_i is the incumbent's price if entry is to be deterred.

The following proposition is in keeping with Baumol, Panzar and Willig's claim, according to which "where there are almost no sunk costs, markets are almost perfectly contestable":

P.1 (A) *If* r, T > 0, *for any* $\delta > 0$ *there exists* $s_\delta > 0$ *such that* s $< s_\delta \rightarrow 0 < \pi_e < \delta$.

(Indeed, take $s_\delta = \frac{1}{2}\delta\left(\frac{1 - e^{-rT}}{r}\right)$. Then $\pi_e = \frac{s_\delta r}{1 - e^{-rT}} = \frac{1}{2}\delta < \delta$).

Notice that if $T \rightarrow 0$, $s \rightarrow 0$ then the level of π_e depends on the relative speed to zero of T and s. If T goes to zero more rapidly than s does, then $|\pi_e| \rightarrow \infty$ and so the market is not "almost" contestable even if there are almost no sunk costs.

B. *Exit-lag Approach.* – An alternative way of modelling imperfect contestability is obtained by assuming a positive exit lag, say T_x, due, for example, to contractual obligations.

Consider the possibility that e can recover the cost s if it leaves the market after time τ, where $\tau = T + T_x$, instead of leaving at time T without recovering anything. Suppose that $W_e < 0$, e.g., the two firms incur a price war after T which ends up with negative profits for both firms, say $-F_j$, $j = i, e$, s.t. $W_e = -\int_T^{\tau = T + T_x} F_e\, e^{-rt}\, dt$, where

$F_e (1 - e^{-rT_x}) e^{-rT} \leq rs$ (otherwise e will prefer exiting at T). Expression (1) becomes:

$$V_e = \pi_e \frac{1 - e^{-rT}}{r} - F_e \left(\frac{1 - e^{-rT_x}}{r} \right) e^{-2rT} \tag{3}$$

and the entry preventing price p^{**} is obtained setting expression (3) equal to zero:

$$p^{**}: \pi_e = \frac{F_e (1 - e^{-rT_x})}{(e^{rT} - 1) e^{rT}}$$

Notice that if $T_x \to 0$, $\forall T > 0$, then $p^{**}: \pi_e = 0$, that is, the entry-preventing price is the average cost price..

P.1 (B) is the analogue in the exit-lag approach of P.1 (A):

P.1 (B) *If* r, $T > 0$, *for any* $\delta > 0$ *there exists* $T_x(\delta) > 0$ *such that* $T_x < T_x(\delta) \to 0 < \pi_e < \delta$.

(Take $T_x = -\frac{1}{r} \log (1 - \Delta)$, where $0 < \Delta = \frac{\delta (e^{rt} - 1)}{2F_e e^{-rT}} < 1$, and so $T_x(\delta) > 0$. Then $\pi_e = \frac{F_e (1 - e^{-rT_x(\delta)})}{e^{rT} (e^{rT} - 1)} = \frac{1}{2}\delta < \delta$).

P.1 (B) states that a short exit lag implies that exit from the market is easy, therefore making it easy to "hit-and-run" and the market more contestable.

Notice that for suitable combinations of (T, T_x) expression (3) is always negative and so p_i can be raised to p_M while deterring entry. Again, if $T \to 0$, $T_x \to 0$ and T goes to zero more rapidly than T_x does, then the market is not "almost" contestable, even if there is almost no exit lag.

Both the sunk-cost model A and the exit-lag model B show that instantaneous price responses can enable the incumbent to ignore entry threats and set the monopoly price. Model A is continuous in s and model B in T_x, when the price response lag $T > 0$ is fixed. However, both models reveal an essential discontinuity at $T = 0$, if the equilibrium limit-price, and hence the entry decision, are seen as a function of T and s (or T_x) jointly. In other words, the relationship of price to average cost cannot be predicted only from the smallness of s (or T_x) and the positivity of T, but their relative "weight" is to be known too.

C. *Entry Accommodation.* – Consider now expression (1) with the assumption $W_e > 0$. For this case to be obtained, e must expect (i) that i will leave the market at T, so that e could become the incumbent, or (ii) that the two firms could share the market and make a profit.

Case (i) is examined in Farrell (1986). Obviously, this case is not contemplated by the theory of contestable markets, since this theory assumes that the incumbent faces both a price response lag and an exit lag, that is, exit is not frictionless to the incumbent: in this way the threat of hit-and-run entry can constrain the incumbent's behaviour. Indeed, if the possibility of exit was allowed to the incumbent, he would price monopolistically to exploit any entry lag and hence potential competition would be completely ineffective.

Examine now case (ii), i.e., the incumbent, rather than fight entry may seek to accommodate it. If firms were instead to collude, potential competition would not benefit consumers, it would merely encourage entry, as monopoly profits would be redistributed among firms. It is therefore significant to explore under what conditions it is possible to have a result of collusion. Such collusion is of course a strong possibility in infinitely repeated games.

Consider the following game which has an infinite horizon. Each period that firm i monopolises the industry it gets $\pi(p_M) > 0$. If both firms are in the industry there are two possibilities, which correspond to "fighting" and "cooperating", according to the following strategy: announce the price p_M (monopoly price) at each $t \geq 0$ so long as both firms have announced p_M up to $t -$ in this case the two firms e and i share the market according to γ and $(1 - \gamma)$ respectively, where $\gamma \in (0, 1) -$ and announce a permanent move to the competitive price c should either firm deviate from p_M. Suppose for simplicity constant returns to scale. Since the incumbent is assumed to have a price response lag T, the permanent move to the competitive price may follow e's deviation from monopoly price: for example, e can choose $p_e = p_M - \epsilon$, $(0 < \epsilon < p_M - c)$, i.e. can undercut the incumbent. Assume that there is an entry cost $s > 0$.

The question arises whether there is a subgame perfect equilibrium where the incumbent pursues the strategy above and the rival enters and pursues the same pricing strategy, i.e. *whether it is possible to have a result of tacit collusion.*

Suppose players discount the future by a factor $r < 1$. Then for entry accommodation to be an equilibrium outcome it must be:

$$\sum_{t=0}^{\infty} r^t \gamma \pi(p_M) - s > \sum_{t=0}^{T-1} r^t \pi(p_M - \epsilon) - s \quad \text{for } e \tag{4}$$

and

$$\sum_{t=0}^{\infty} r^t (1 - \gamma)\, \pi (p_m) > \sum_{t=0}^{\infty} r^t\, \pi (p^*) \qquad \text{for } i \qquad (5)$$

where p^* denotes entry-deterring price. In particular, $\pi (p^*) = \frac{s (1-r)}{1-r^T}$ [8]. Therefore, expression (5), that is, $\frac{(1-\gamma)\, \pi (p_m)}{1-r} > \frac{s}{1-r^T}$, implies that for entry accommodation to be an equilibrium outcome the entry cost must be small, $\gamma \neq 1$, and $T \to 0$ must not be the case.

From expression (4) these conditions follow:

if $T = 0$, then $\frac{1}{1-r} \gamma \pi (p_M) > 0$. Therefore it is always more convenient for e to collude, provided that $\gamma \neq 0$.

If $T > 0$, then $\log_r (1 - \gamma) > T$ for entry accommodation to be an equilibrium outcome; that is, T should not be too large.

If both expressions (4) and (5) hold, then the market is served at monopoly price: therefore the familiar perfectly contestable outcome, that is, price set at the competitive level, is not attainable. *The result holds even if* $s = 0$. Notice that the instantaneous price response makes the incumbent prefer entry deterrence rather than entry accommodation. Therefore, a *collusive outcome is never achieved if* $T = 0$.

Finally, observe that the result obtained here holds under the assumption that there is one potential entrant only. If there are multiple entrants a collusive outcome may not arise: in particular, with a large number of entrants (e.g., moving simultaneously) it is possible that none of them would enter.

The results obtained in this section show that instantaneous response lags can enable the incumbent to ignore the threat of entry. More generally, the problem relates to continuous vs discrete formulation, that is, to the fact that the period length during which firms can change their actions matters, and so some behavioural rules which cannot be supported as solutions to discrete formulations can be supported in games where players can change

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[8] The entry-deterring price p^* is obtained by setting e's present value equal to zero: $V_e = \sum_{0}^{T-1} \pi_e r^T - s = 0$, where $\pi_e = (p - c)$ in our example.

Therefore the profit i can obtain while deterring entry is given by $\pi(p^*) = (p^* - c) = \frac{s(1-r)}{1-r^T}$.

their actions instantaneously. Put another way, the problem in this formulation is in the incumbent's "cost of adjustment", which is extreme. Indeed, the cost of changing price before the commitment period has elapsed is in effect infinite, after which it drops to zero. It would be interesting to study the effects of introducing a smoother schedule of the adjustment cost.

The question of discrete vs continuous formulations has been developed particularly within the repeated games literature.

Anderson (1985), for example, uses a "quick response" argument in a different context. He considers a discrete approximation of a continuous game, where players incur adjustment costs in changing their actions from one period to the next. He considers the limit of ϵ-SPE of discrete games as ϵ and the length of period approaches zero and shows the role of quick price responses in sustaining cooperative equilibria in repeated games where the payoff matrix has a prisoner's dilemma structure. He also shows that price-matching policy for oligopolistic firms and thus kinked-demand equilibria can be supported as quick-response equilibria.

A similar argument is in Marschak and Selten (1978) for "inertia supergames", where inertia in decision making is formalised through the cost of changing one's action, say $M(\cdot)$. The payoff is defined as:

$$\lim_{T \to \infty} \inf \frac{1}{T} \sum_{t=1}^{T} \{\pi_i(p^t) - M(p_i^t, p_i^{t-1})\}$$

where

$$\begin{cases} M(p_i^t, p_i^{t-1}) = 0, \text{ if } p_i^t = p_i^{t-1} \\ M(p_i^t, p_i^{t-1}) > 0, \text{ if } p_i^t \neq p_i^{t-1} \end{cases}$$

They study the solution to a simple version of the oligopolistic model in terms of their "convolution" notion, and then turn to a large economy, by allowing entry and exit. Closely related to these works is Sabourian (1985) on conjectural equilibria.

All these methods of studying dynamics, which represents a fundamental aspect of oligopoly, consist of incorporating intertemporal features (such as reactions) implicitly in the choice of solution concepts, which remain essentially static.

5. *Pre-Entry and Post-Entry Competition*

In the previous pages assumption 4) has been discussed, that is, the

idea that response lags in pricing decisions are much larger than those concerning entry and exit. This assumption, however, seems to be implausible, given that adjustment costs associated with pricing decisions are generally much shorter than those associated with production decisions – and in particular those concerning entry and exit. Accordingly, most literature has concentrated on models which reflect the latter claim on relative adjustment speed.

The reason why assumption 4) is introduced in the contestable markets is that it represents one way – and given the other assumption made, the only way – of limiting post-entry competition and hence intensifying pre-entry competition.

However, as it is shown in section 4.C, the assumption on response lags is alone an ineffective means of limiting post-entry competition; alternatively, other conditions are required if the aim is to ensure pre-entry competition.

The conflict between pre-entry competition and post-entry competition has been well stressed by the literature on entry barriers which emphasises the role of commitments: under certain circumstances firms will commit themselves to actions which, in the absence of potential competition they would not, simply in order to affect post-entry conditions and deter entry. For example, if the market is "ex-post" contestable, so that anyone can enter when profitable to do so, the incumbent will change its pre-commitments to affect the probability of actual entry, i.e. to change the "degree of contestability" of the market.

The possibility that a player in a game may be able to gain an advantage by committing itself in some investment before other players have a chance to move has been stressed by Schelling (1960). Spence (1977) introduces the idea that capital may be able to act as a commitment to deter entry. Following on this, Dixit (1979) shows that by choosing an appropriate capital stock, an incumbent may alter post-entry equilibrium in such a way that no firm would want to enter. Later work by Spence (1979) and Fudenberg-Tirole (1983) in a continuous time framework, show that capital considered as an irreversible investment can be used to deter entry, having the incumbent started to invest first. Dixit (1980) identifies the importance of credibility in any investment designed to deter competitors.

In these models the story usually goes like this. Consider the problem of entry as a two-stage non-cooperative game. In the first stage ("strategic stage") firms choose strategic variables (such as R&D, capacity, advertising) – denoted by k –, while in the second stage ("market stage") competition refers to market variables (price or quantity). If the level of k established by

the incumbent is such that the entrant expects to incur losses, then there will be no entry and the incumbent firm gets the monopoly profit. On the contrary, if the entrant enters, then in the second stage the "market" variables are determined and so are the duopoly profits to the two firms. Notice that the choice of the incumbent's strategic variable determines the resulting market structure.

The basic idea behind these works of the "capital-commitment" literature is easily understandable. By committing itself to some kind of aggressive post-entry action, an incumbent firm is able to circumvent the "perfection" – or credibility – problem associated with limit-pricing strategy. As is well known, the voluminous limit-pricing literature dating at least to Bain, makes the point that pre-entry pricing might be the instrument of an entry-deterring strategy: potential entrants are assumed to expect that, should they enter, incumbents will maintain constant either their pre-entry price or quantity. A powerful criticism of this literature is that quantity and prices are fairly easy to change. Therefore, a potential entrant will not learn much about the profitability of entry by observing pre-entry levels of these variables, but should instead look to the oligopoly interaction expected to prevail post-entry. This observation obviously leads to deemphasise pre-entry price and to stress pre-emptive investments and sunk costs, which constitute credible deterrents.

The predictions of the "capital commitment" literature about the effect of threat of entry on price and welfare differ markedly from those of contestability theory. This happens because the assumptions of the contestable markets are quite opposite with respect to those of the "capital commitment" approach. Indeed, in a contestable market all firms have access to the same technology and there are no sunk costs. The only entry barrier – that is, the fear of price reactions by the incumbent firms – is removed by assuming the "hit-and-run" strategy. Therefore, post-entry competition is absent and hence pre-entry competition has its most effectiveness.

Accordingly, the operative force of contestability is threat of entry, not actual entry. To illustrate, suppose contestability is taken to mean that actual entry will occur fairly rapidly if price is set high. Obviously, the relevant variables become the number and size of existing firms and the interaction among them, while potential entry becomes irrelevant. Suppose the market cannot profitably accommodate another entrant, due to scale economies and/or the nature of the oligopoly interaction: then entry will be followed by some firm's exit and another period of high prices. Finally, suppose, e.g., that both firm's are active after entry: productive efficiency is sacrificed when the technology is a natural monopoly.

In short, the disciplining effect of potential entrants is weaker, less predictable and less efficient when actual entry, rather than threat of entry, must be invoked.

6. *The Exit Decision: The "Hit-And-Run" Strategy as a Result of Subgame Perfection*

In the following pages the question is examined whether the "hit-and-run" strategy is the optimal one for the potential entrant, or, alternatively, at what date the entrant decides to exit, should it enter the industry. Obviously, this question relates to post-entry competition, but the analysis of the optimal strategy for the potential entrant may have interesting implications on the incumbent's pre-entry behaviour too. It is generally argued that the reason why the potential entrant exits at time T (i.e. before the incumbent can react to entry) is that the industry structure which is particularly studied within contestability theory is natural monopoly. However, this argument does not exclude the possibility that the incumbent and not the potential entrant is bound to exit, neither it helps understand which is the optimal strategy for the potential entrant when the prevailing industry structure is an oligopolistic one. Under the assumptions of contestable markets the exit decision is easily understandable. The "hit-and- run" strategy is the optimal one given that after period T the incumbent reacts to entry and is assumed not to exit from the market. In other words, the three conditions of complete information, price war incurred by firms after T and larger "staying power" for the incumbent (i.e. number of periods of fighting the firm can endure before exiting) settle the issue. Indeed, when there is complete information the solution is straightforward [9]. There is no reason to fight if the firms' staying power is common knowledge: the one with the smaller "staying power" exits immediately, that is to say, the optimal strategy for the potential entrant is to "hit-and-run". Obviously, the result is not straightforward if incomplete information is introduced [10], for example, on the firms' staying power. If it is not common knowledge that the incumbent never exits, then e's optimal exit time will depend on the probability distribution e assesses for i's staying power. Finally, it is not straightforward that the "hit-and-run" strategy is the optimal one when the

[9] See for example the solution in GHEMAWATT and NALEBUFF (1985) to the exit decision in a complete information version.

[10] See ROBERTS (1986) and FUDENBERG-TIROLE (1986b) for the analysis of the exit decision in "wars of attrition" with incomplete information.

possibility that both firms can coexist after e's entry is considered and the post-entry game is modelled as a repeated game with infinite horizon, because in such contexts collusive behaviour may arise.

In this section the following question is tackled: Is it possible to get the "hit-and-run" strategy as the optimal one when both firms are allowed to coexist after e's entry? Put another way: can an entrant "voluntarily" exit (i.e. before i actually reacts to entry) in an industry where both "fight" and "cooperation" are i's possible strategies after e's entry?

This question is studied by modelling a repeated game with infinite horizon. Then, it is shown how the conclusions are affected by allowing an entrant to re-enter the industry after playing "exit".

Consider an industry with two firms i and e. Firms act in discrete time and the horizon is infinite. Periods are indexed by t ($t = 0, 1...$) and T is the time between two consecutive periods.

Firms move sequentially: in each period i moves first (that is, it commits itself to an action for one period), deciding whether to "fight" or "cooperate", after which firm e moves deciding whether to stay in or to exit. Let H_t denote the history of the moves taken by firms i and e from period 0 to, but not including, period t. Let H_t^+ denote the resulting history in period t when the aggressive response, that is "fight", occurred in period $t-1$, let H_t^- indicate that "cooperation" occurred, and let H_t^o indicate that exit occurred.

Let $\mathcal{H}_t$ denote the possible histories of play up to period t. Then a strategy for firm i consists of the following maps:

$$\mathcal{H}_t \rightarrow \{F,C\}, \qquad t = 0,1,...$$

where F denotes "fight" and C "cooperation", and for firm e:

$$\mathcal{H}_t \rightarrow \{\text{Exit, In}\}, \qquad t = 0,1,...$$

where In means that firm e stays in the market.

Assume that there is a preliminary period -1 in which firm e enters for sure, making positive profits. (Suppose, for example, that e undercuts firm i during period -1 given that i cannot react to e's entry in this period, because of a response lag of length T). Allow e the faculty of exiting before i can react. Call period -1 the "hit-and-run" period.

In the sequel only the subgame after e's entry is examined (see Figure 3).

Firms e does not incur any exit cost and earns 0 profits when it plays exit. Let $F_i(E)$ and $-F_i$ be i's one period net profit if i plays "fight" when e

follows with exit and if i plays "fight" when e actually stays in, respectively. Let $-F_e$ be e's one period net profit if e stays in after i's "fight". Denote with $C_j \geq 0$ the one period net profit of $j = i, e$, when both firms stay in with "cooperation" and with π_{Mj} the profits when firm j ($j = i, e$) operates alone in the market.

Firms discount future profits with the same interest rate r. Thus their discount factor is $\alpha = \exp(-rT)$.

The following assumptions hold:

A.1 $-F_i < 0 \leq F_i(E) < \pi_{Mi}$

A.2 $-F_e < 0 \leq C_e < \pi_{Me}$

A.3 $-F_i + \sum_{t=1}^{\infty} \alpha^t \pi_M \geq \sum_{t=0}^{\infty} \alpha^t C_i$, that is, fighting one period and then earning monopoly profit is better than cooperating forever.

In this formulation firm e is not allowed to re-enter after exiting: later this assumption will be dropped.

Figure 3 describes a portion of the game.

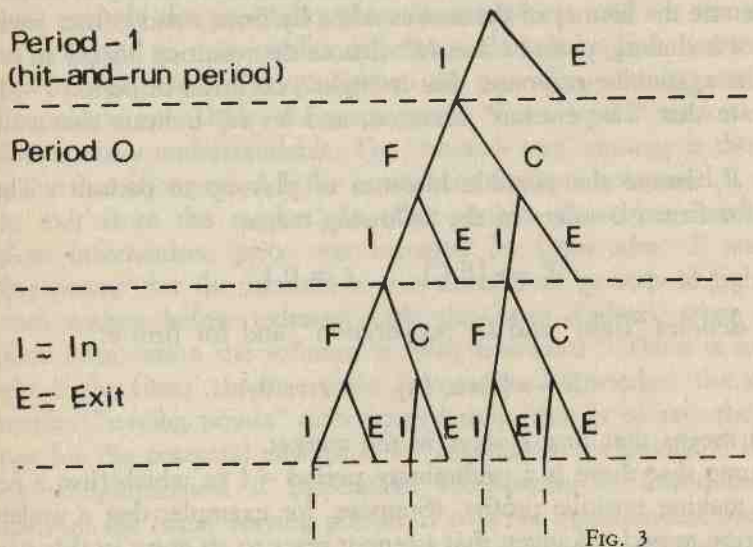

FIG. 3

The following result holds:

Proposition I [11]: *Firm* e *exiting before* i *reacts (i.e. before period 0 starts),*

[11] The result in Proposition I is the same as the one of the infinitely repeated "chain-store-paradox" (see for example the claim in MILGROM-ROBERT, 1982, Appendix A) when the game is "reverted", that is, when it is interpreted as a problem of exit and not of entry.

staying in with cooperation forever, staying in with cooperation for a finite number of periods, all form part of SPE.

Proof: Denote the play at t by h_t, where $h_t = +1$ denotes "fight", $h_t = -1$ denotes "cooperation".
Now the following strategies constitute a SPE:

firm i: if $h_1, \ldots h_{t-1} > 0$, and e is In at t, then fight

if $h_k = -1$ for any $k < t$, and e is In at t, then cooperate

firm e: if $h_1, \ldots h_{t-1} > 0$, then exit

if $h_k = -1$ for any $k < t$, then In

That is, (a) e will stay in if cooperation has occurred in the past, (b) e will exit otherwise.

Indeed, suppose i is cooperating. Then e has no incentive to deviate from In, since playing In instead of Exit yields a higher stream of future gains (given that $C_e \geq 0$). If e always plays In, then i's best response is to play cooperation, since by playing fight it would incur losses ($-F_t < 0$) which it will never recover as e never exits. This holds in every subgame and hence (In, cooperation) defines a SPE.

If i's strategy is always to fight, then e's best strategy is to exit: e has no incentive to deviate from its strategy given that $-F_e < 0$.

If no cooperation has occurred in the past, then i faces the choice between fighting one period and driving e out of the market (according to e's strategy) and cooperating forever. Given assumption A.3, firm i is acting optimally by fighting. Since this holds in every subgame, (fight, exit) defines a SPE.

These two equilibria can be used to construct SPE in which a finite amount of cooperation takes place.

For example, firm i plays cooperation and firm e plays In every period up to period k; in period $k+1$, if no fights have occurred prior to period k, then i plays fight and e plays exit.

At $k+1$ firm e is induced to leave because of a subgame equilibrium which is essentially the one in (b).

This game has certain features of a supergame of repeated games theory, even if it is not quite a supergame as it can end at any time with firm e's exit.

Nevertheless, a multiplicity of SPE similar to the Folk Theorem of repeated games theory arise. Especially, besides the "hit-and-run" strategy, cooperation is a possible equilibrium solution to this game.

Suppose now that firms can endure "fight" only for a finite number of periods, say t_y – in other words, firms will be certainly driven out of the

market after t_y periods of fighting –; and assume that:

A.4 $(t_y)_i > (t_y)_e$

Alternatively, $(t_y)_i$ may be infinite. The assumption that $(t_y)_i = \infty$ is made in the theory of contestable markets since firm i never exits.

The following result holds:

Proposition II: *Under A.1, A.2, A.3, A.4, the "hit-and-run" strategy is the unique SPE.*

Proof: [12]. The proof follows from this remark: since subgame perfection requires e playing In following any cooperation branch (indeed playing exit yields zero, playing In yields at least $C_e \geq 0$), then by A.3 i does not choose cooperation because e does not exit unless i fights and it is common knowledge that e will certainly exit after $(t_y)_e$ periods of fighting. Therefore, consider i always playing fight. At $(t_y)_e$, if i fights, after fighting all previous periods, then e will be driven out of the industry. Therefore e will play exit. Now consider period $(t_y)_e - 1$: again if i fights after fighting all previous periods, then e will exit, since playing In brings it to period $(t_y)_e$ where it plays exit. By repeating the same argument for each period, e chooses to exit before i can react to e's being in (i.e. e exits before time 0 starts). The only SPE is therefore the "hit-and-run" strategy.

Firm e enters in period -1 and then "voluntarily" exits, following a "hit-and-run" strategy. Of course, this exit is not voluntary since e exits only because i is threatening its fight. However, to an observer it would appear voluntary as no fights have actually taken place.

Notice that in order to get the "hit-and-run" strategy as a unique SPE a strong asymmetry between incumbent and potential entrant is to be imposed. The entrant can decide whether or not to stay in, but must passively accept the incumbent firm's decision on whether or not to fight, that is, the incumbent is assumed to move first; moreover, the incumbent never exits, i.e., assumption A.4 must hold.

Observe that the result in Proposition II depends on i knowing that it would never actually have to fight at all. Like in bargaining models, the equilibrium solution is set at the beginning of the game. Therefore, it does not matter how large $(t_y)_i$ is: the crucial thing is that $(t_y)e$ is smaller than $(t_y)_i$.

If $(t_y)_i < (t_y)_e$, the "hit-and-run" strategy may not result as a unique SPE. Indeed if $\sum_{t=0}^{t_{yi}-1} \alpha^t(-F_e) + \sum_{t=t_{yi}}^{\infty} \alpha^t \pi_{Me} > 0$, then e never exits: i,

[12] The proof is by induction as in example 2 in section 2.

therefore, never plays "fight".

Consider now the possibility that e can re-enter after exiting without incurring any sunk cost (alternatively, interpret it as many potential entrants that enter sequentially, where the kth entrant enters after the $(k-1)$th one has exited, and so on). In other words, in the game tree in Figure 3 one would have to draw branches extending from nodes in which e has played exit (See Fig. 4).

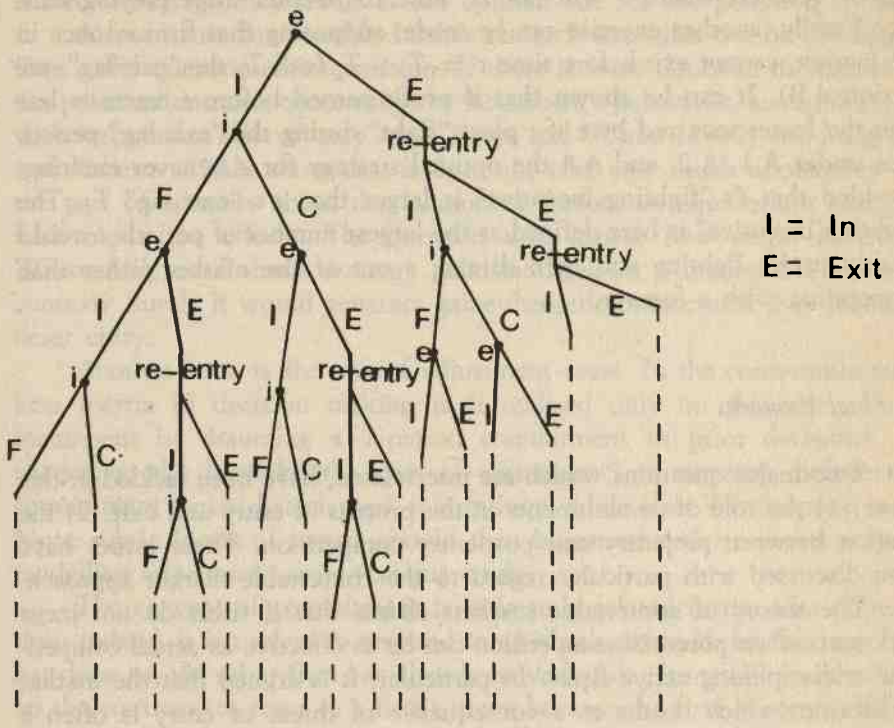

FIG. 4

In this case, firm i will be able to keep e from ever actually staying in only by playing "fight" in every period. Indeed, if e reenters after exiting and i fights, e will play exit, given that staying in yields $-F_e$ and exiting yields 0.

This repetition of exiting and re-entering can go on indefinitely under the assumption that the entrant is able to re-enter and exit without incurring any sunk cost. Whether the strategy of playing "fight" in every period is optimal for e, it depends on $F(E)$.

Under assumption A.1 it follows that it is not optimal for i to play

"fight". In this case it may be worthwhile for i to deter entry at any period. On the contrary, if firm e can re-enter only for a finite number of times (for example because of sunk costs which have to be incurred while exiting and re-entering), then the result of Proposition II still holds.

Indeed following period $(ty)_e$, if e re-enters and i fights, e will be driven out of the market if it stays in, and so again it will play exit. After a finite number of repetitions of this exiting and re-entering process a period will be reached where e will not be able to re-enter after playing exit.

Finally, another exercise can be made, supposing that firm e, once in the market, cannot exit before time $\tau = T + T_x$ (call T_x the "exit lag", see section 4.B). It can be shown that if profit earned before i reacts is less than the losses incurred by e if i plays "fight" during the "exit lag" period, then under A.1, A.2, and A.4 the optimal strategy for e is never entering, provided that i's "fighting incentive" is larger than e's "exit lag" T_x. The "fighting incentive" is here defined as the largest number of periods i would weakly prefer fighting and then driving e out of the market rather than cooperating with e forever.

7. *Final Remarks*

Two major questions, which are interrelated, have been tackled in this paper: 1) the role of commitments in the process of entry and exit; 2) the relation between pre-entry and post-entry competition. These issues have been discussed with particular regard to the contestable market approach.

The theory of contestable markets claims that if firms do not incur sunk-costs, then potential competition can be as effective as actual competition in disciplining active firms. In particular, it is argued that the market equilibrium which results as a consequence of threat of entry is often a welfare optimum subject to the break-even constraint. Moreover, perfect contestability is considered to be a useful benchmark even when the conditions for perfect contestability are not satisfied and markets are only "almost" contestable.

In this paper it has been shown how sensitive these conclusions are to the assumptions: in particular, it has been argued that costlessly reversible entry by itself does not lead automatically to the nirvana of social optimality.

Indeed in section 4 it is shown that with small lags in response, only small costs are required to act as entry deterrent; with infinite lags in response there will probably be entry, but prices may remain high. More-

over, actual competition may not act as a welfare-enhancing instrument, because entry may not be deterred but accommodated through a tacitly cooperative arrangement maintained as a non-cooperative perfect equilibrium. In these circumstances, consumers are not better off because prices remain high and productive inefficiency may result if the industry structure is a natural monopoly.

Finally, in section 6 the conditions are examined under which the "hit-and-run" strategy may result as the optimal one for the potential entrant.

A few issues for possible further research strategies can be identified. One is the question of information. If there is some doubt in the minds of the potential entrants concerning the incumbent's behaviour, an equilibrium with "reputation effects" may arise. Kreps and Wilson (1982) and Milgrom and Roberts (1982) show that it does not take very much uncertainty on the part of entrants about the incumbent, before an equilibrium emerges with reputation effects. The question then arises: how might a Kreps-Wilson-Milgrom-Roberts strategy manifest itself in a contestable markets context? Surely it would generate game-theoretic interactions if it does not deter entry.

Another issue is the one of adjustment costs. In the contestable markets inertia in decision making is formalised only on the side of the incumbent by assuming a T-period commitment to price decisions. In particular, the incumbent's "cost of adjustment" is extreme: before the commitment period has elapsed, it is infinite, while after T it drops to zero. More subtle forms of inertia should then be introduced since this way of modelling adjustment costs remains crude.

The concept of commitment is intimately related to the idea of reaction: indeed, it is useless to respond to another's action if, by the time one has done so, the other firm has already moved again; it may be worthwhile, on the contrary, to react to a firm's move because the firm is committed to that move, at least for a short time. The simplest way of accomplishing these concepts is to assume that firms move sequentially.

In order to get contestability results we have to assume sequentiality as the only possible timing of moves: in particular, it matters whether the incumbent or the entrants move first (see section 6) and whether the incumbent is allowed to exit or not. Contestability theory imposes an asymmetry between entrants and incumbents: the entrant can decide whether or not to be in the industry, but must passively accept the incumbent firm's decision on whether or not to fight; furthermore, the incumbent is not allowed to exit. In this sense perfect contestability theory does not seem to be "robust" in some meaningful way.

As far as the question of robustness is concerned a final remark is in order. Perfect competition is "robust" in the sense that the solutions of precisely formulated market games converge to perfect competition as the number of players goes to infinity. That is, in large player games players are "forced" to treat prices as parametric and beyond their control. This conclusion is generally independent of the rules of play, and results are available that suggest that the speed of convergence is quite rapid.

As far as perfect contestability is concerned, limit theorems must be found which ensure that perfectly contestable allocation are approached as the conditions of imperfect contestability go to zero: as Schwartz (1986) claims, this question is not solved, both theoretically and empirically.

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ENTRATA, USCITA E CONTENDIBILITÀ

In questo lavoro vengono discusse e criticate le assunzioni sulle quali poggia la teoria dei contestable markets. In particolare, viene criticata l'ipotesi secondo cui il tempo di reazione delle imprese presenti nel mercato è maggiore del tempo di reazione dei potenziali entranti, cosicché un rivale può entrare sul mercato, fare profitti e uscire dal mercato, prima che l'"incumbent" reagisca all'entrata (ipotesi di "hit-and-run entry"). Inoltre si mostrano le conseguenze sui processi di entrata, uscita e sulla risultante struttura di mercato qualora si indeboliscano tali assunzioni. A tale scopo, vengono esaminati alcuni temi della letteratura più recente di Economia Industriale, secondo l'approccio di teoria dei giochi: in particolare, l'esame del conflitto esistente fra concorrenza potenziale e concorrenza effettiva è oggetto del paragrafo 5. Nel paragrafo 4 vengono discusse le condizioni di imperfetta contendibilità e se ne studia la tendenza asintotica quando i sunk costs, i tempi di reazione e i "ritardi di uscita" tendono a zero. Inoltre si mostra che la concorrenza potenziale può non rappresentare un mezzo per aumentare il benessere, perché l'entrata anziché essere impedita, può essere permessa, attraverso un accordo tacito di collusione, ottenuto come soluzione di equilibrio di un gioco non cooperativo infinitamente ripetuto.

Infine, nel paragrafo 6, la Proposizione II individua le condizioni che devono essere soddisfatte perché la strategia di "hit-and-run" sia quella ottimale per il potenziale entrante.

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LA DOMANDA COME VINCOLO ALLA CRESCITA IL CASO DELL'INDUSTRIA MERIDIONALE DEI BENI DI CONSUMO, 1963-83

di
FRANCESCO PIGLIARU *

1. *Introduzione*

Se si guarda al divario economico tra Centro-Nord e Mezzogiorno attraverso l'indicatore della produttività del lavoro dell'industria manifatturiera, si trova una importante conferma di un fatto che, nella letteratura, è stato spesso messo in evidenza sulla base dei dati sul reddito pro-capite (per esempio Guglielmetti, 1983; Sylos-Labini, 1985): negli anni settanta, dopo un lungo periodo di costante diminuzione, il divario ha ripreso a crescere [1].

Lo scopo che qui ci proponiamo è di contribuire all'analisi di questa preoccupante inversione di tendenza attraverso lo studio di una delle sue numerose componenti: il rallentamento della crescita della produttività nell'industria dei beni di consumo del Mezzogiorno.

La scelta di questo particolare settore dell'industria meridionale richiede una breve spiegazione. All'origine c'è, innanzitutto, la necessità di non utilizzare dati troppo aggregati perché l'industria meridionale, come è noto, è caratterizzata da un proprio, particolare tipo di dualismo. Da un lato esistono, infatti, alcune branche manifatturiere la cui *performance* è stata notevolmente influenzata dalla politica economica regionale, soprattutto at-

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[1] Nel corso dell'intero lavoro le serie della produttività manifatturiera sono definite come valore aggiunto per addetto, mentre quella del reddito meridionale è data dalla somma tra il prodotto interno lordo ai prezzi di mercato e le importazioni nette. Per una descrizione delle fonti statistiche si rimanda alla nota 10; i dati riguardanti le singole variabili sono riportati nella Tabella 4.

traverso massicci investimenti diretti, in gran parte spiegabili, appunto, con le scelte attuate dalle autorità economiche statali. Dall'altro, separate, le produzioni dei beni di consumo [2], che hanno tradizionalmente rappresentato (e tutt'ora rappresentano) la gran parte dell'attività industriale « indigena » della regione: lo strumento di industrializzazione basato sull'investimento diretto ha infatti riguardato solo marginalmente questi settori [3].

Sulla base di questa distinzione diventa poi chiaro che una parte del problema posto dal rallentamento della produttività, quella che riguarda il primo gruppo di industrie, è già disponibile nella letteratura: si veda Giannola (1986), in cui il rallentamento che si è avuto in quel gruppo, e nelle industrie direttamente collegate, è messo in relazione con il brusco arresto della politica di industrializzazione attuato a metà degli anni '70.

Meno soddisfacente è lo stato della ricerca sul settore delle industrie dei beni di consumo, per il quale, infatti, sono state avanzate ipotesi che spaziano da eccessi di ottimismo ad eccessi di pessimismo. Più in particolare, non è tuttora chiara la ragione per cui si registra, anche in questo settore, un rallentamento della produttività caratterizzato da un profilo temporale simile a quello del primo gruppo (Giannola, 1986): in questo caso infatti non si può fare riferimento, per i motivi appena accennati, ad una spiegazione basata su una relazione *diretta* tra intensità della politica regionale (in termini di investimenti industriali) e *performance* del settore.

Diventa quindi interessante indagare sul meccanismo economico che lega le *performances* di due gruppi così diversi: la risposta a questo problema può contribuire, seppure in modo parziale, a rendere più soddisfacente l'interpretazione complessiva del rallentamento relativo dell'economia meridionale, o almeno della sua industria manifatturiera.

Scopo di questo lavoro è suggerire, e valutare empiricamente, l'esistenza di un possibile legame basato sull'ipotesi che la domanda locale giochi un ruolo determinante nello stabilire il tasso di crescita della produttività di queste branche. La diminuzione nell'intensità dell'impegno statale a favore

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[2] Il settore dei beni di consumo si riferisce alle branche Alimentari e Tabacco, Vestiario e Calzature, Pelli e Cuoio (di fatto, comprende anche la branca Tessili, che, sulla base dei dati Istat di contabilità nazionale, non può essere separata dal Vestiario; una precedente serie Istat, che si ferma al 1971, indica però che il suo peso relativo in termini di valore aggiunto sul totale settoriale era, tra il 1969 e il 1971, molto basso (13%)). Il settore così definito rappresentava gran parte dell'industria meridionale pre-esistente all'intervento di industrializzazione, e può quindi essere definito, in questo senso, « tradizionale ». Tutt'ora, esso include la maggioranza delle imprese a proprietà meridionale (GIANNOLA, 1986).

[3] Secondo alcune attente analisi, queste produzioni sarebbero state semmai esposte senza sufficiente protezione alla concorrenza esterna in un mercato in rapida crescita (GRAZIANI e PUGLIESE, 1979; FAINI, 1983); si veda anche il paragrafo 6.

del Mezzogiorno, che spiega « dal lato dell'offerta » il rallentamento della produttività nel primo gruppo (investimenti incompiuti, ristrutturazioni non effettuate, ecc.), implica un rallentamento nella crescita del reddito regionale, e quindi della domanda locale. Quest'ultimo, tramite il noto meccanismo che va sotto il nome di Legge di Verdoorn, spiega « dal lato della domanda » il rallentamento della produttività del secondo gruppo.

2. *Reddito e produttività nel Mezzogiorno*

Come si è detto, l'obiettivo di questo lavoro è di contribuire a spiegare l'aumento del divario Sud/Centro-Nord che, come si può vedere nella Figura 1, è stato registrato dai dati sulla produttività del settore dei beni di consumo a partire dai primi anni settanta.

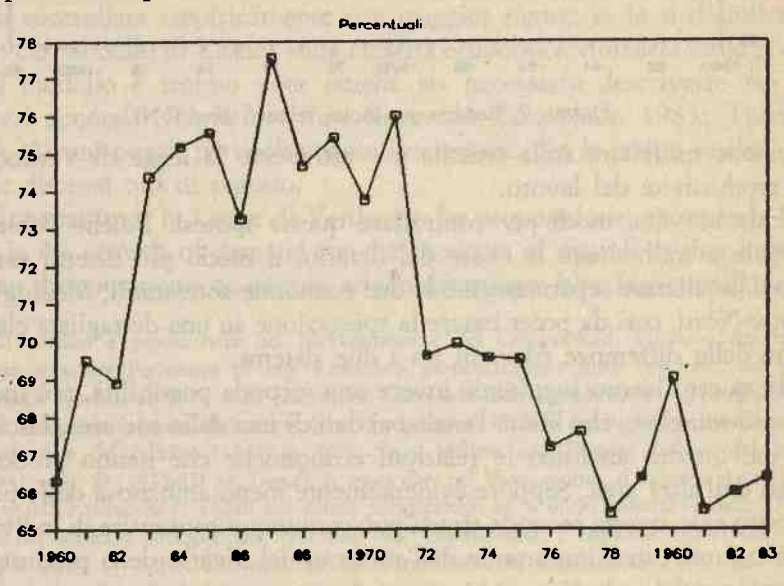

FIGURA 1. Produttività relativa (Sud/C-Nord)

Il punto di partenza di questo tentativo è dato dalla constatazione che almeno una parte della tendenza negativa della serie della produttività relativa avviene in coincidenza con il declino della variabile che descrive l'andamento del reddito (procapite e non) relativo (si veda la Figura 2). Una ipotesi che può quindi essere formulata è che tra i due fenomeni esista una relazione basata sul ruolo di vincolo che le componenti esogene della doman-

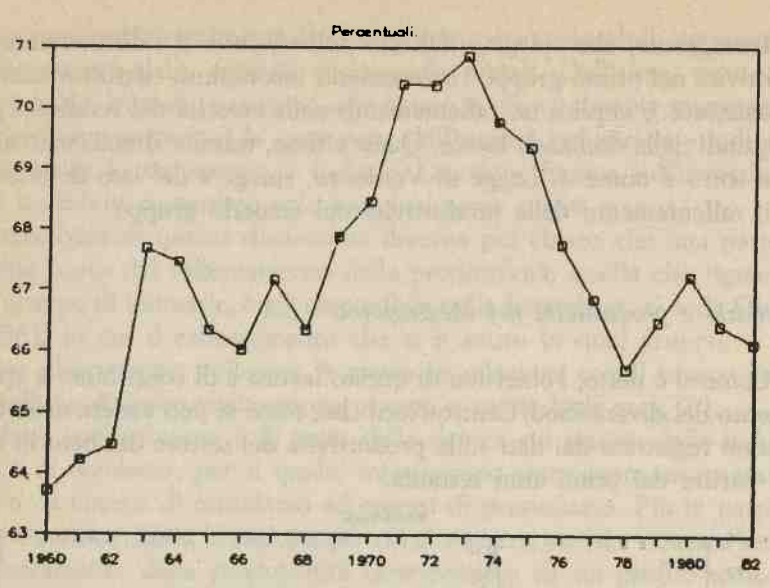

FIGURA 2. Reddito pro-capite relativo (Sud/C-N)

da possono esercitare sulla crescita e – attraverso la legge di Verdoorn – sulla produttività del lavoro.

Esistono due modi per controllare questa ipotesi. Poiché l'obiettivo principale è individuare le cause del divario, il modo più diretto sarebbe quello di analizzare separatamente le due economie sottostanti, Mezzogiorno e Centro-Nord, così da poter basare la spiegazione su una dettagliata classificazione delle differenze rilevanti tra i due sistemi.

In questo lavoro seguiremo invece una seconda possibilità, più indiretta ma più semplice, che limita l'analisi ai dati di una delle sue aree, lasciando fuori dal quadro analitico le relazioni economiche che hanno prodotto i risultati dell'altra area. Seppure evidentemente meno ambiziosa della prima, nel nostro caso questa seconda strada può comunque consentire di individuare almeno una causa importante dell'aumento del divario della produttività. Vediamo perché.

Un confronto attento fra i dati del Mezzogiorno e quelli del Centro-Nord consente di mettere in luce una importante differenza: qualunque sia il modello sottostante la crescita del Centro-Nord, gli scostamenti che si sono registrati, in questa area, tra il *trend* degli anni sessanta e quello degli anni settanta sono significativamente più limitati di quelli avvenuti – in diminuzione – nel Sud [4].

[4] Consideriamo gli scostamenti intervenuti durante gli anni settanta nei *trends* delle

La tendenza negativa rivelata dai dati *relativi* durante gli anni settanta è quindi fortemente influenzata dallo specifico rallentamento avvenuto nell'economia del Mezzogiorno: per questo motivo una spiegazione soddisfacente del divario, e soprattutto della sua tendenza ad aumentare negli anni settanta, può almeno in parte basarsi sullo studio dei soli dati meridionali.

I risultati di questo tentativo sono presentati nei paragrafi 4 e 5; prima è però necessario discutere brevemente il modello teorico che verrà utilizzato per impostare l'indagine empirica.

3. *Kaldor, la domanda e la produttività del lavoro*

L'ipotesi secondo cui il rallentamento della produttività dipende principalmente dal rallentamento della domanda locale può essere precisata, e quindi controllata empiricamente con maggior rigore, se la si definisce per mezzo del modello di Kaldor sulla crescita economica vincolata dalla domanda. Il modello è troppo noto perché sia necessario descriverlo nei suoi caratteri generali (*Journal of Post Keynesian Economics*, 1983; Thirlwall, 1986). Alcuni punti, particolarmente interessanti per la nostra analisi, sono invece discussi qui di seguito.

Innanzitutto, la Legge di Verdoorn. La proposizione, secondo la quale « [i]t is the growth of demand for the products of manufacturing industry, and not the constraints on supply, which determines how fast overall produc-

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variabili reddito e produttività del Mezzogiorno e del Centro-Nord. Iniziamo dal reddito: vogliamo mostrare l'esistenza di una « rottura » particolarmente forte nel *trend* del reddito meridionale intorno al 1974. Ciò può essere fatto stimando semplicemente il coefficiente di *trend* (e valutandone la stabilità nel tempo) in regressioni OLS la cui variabile dipendente è un numero indice del reddito (1963 = 100). Se si utilizza una Dummy (slope) del tipo [*D* (1963-74) = 0; *D* (1975-83) = *Trend*], si trova che, nel Mezzogiorno, il valore del coefficiente è pari a 0,061 (Student-*t*: 17,50) nel primo sottoperiodo ed a 0,050 (Student-*t* della Dummy: −4,37) nel secondo sottoperiodo. Nel caso del Centro-Nord, i rispettivi valori sono 0,063 (16,33) e 0,055 (− 3,05): ciò dimostra che l'andamento in diminuzione della serie relativa certamente non dipende da accelerazioni nella crescita del Centro-Nord ma da un rallentamento particolarmente significativo del meridione.

Tutto questo significherebbe poco, per il nostro lavoro, se niente di analogo avvenisse nelle serie della produttività. Ma in realtà qualcosa di analogo avviene: i dati meridionali sono caratterizzati da una diminuzione nel *trend* di crescita, localizzata anche in questo caso negli anni settanta (più precisamente, il fenomeno è qui anticipato di due-tre anni rispetto alla serie del reddito). Anche qui la stima e lo studio della stabilità del coefficiente di *trend* aiutano a precisare il punto. Utilizzando una Dummy (slope) appropriata [*D* (1963-71) = 0; *D* (1972-83) = *Trend*], si trova che il valore del coefficiente meridionale passa da 0,069 (7,23) a 0,058 (− 1,50). Al contrario, il coefficiente del Centro-Nord risulta stabile durante l'intero periodo intorno al valore di 0,070 (25,42).

tivity and hence total output will grow in an advanced country » (Kaldor, 1978, p. xviii), può basarsi, tra l'altro, sull'esistenza di una stretta relazione nel settore manifatturiero tra la crescita del prodotto e la (conseguente) crescita della produttività del lavoro. Si tratta dunque della seguente relazione

$$[3.1] \qquad \pi = \alpha + \beta q; \qquad \beta > 0,$$

dove π è la produttività, q l'output (le variabili sono espresse in differenze prime relative) e β il coefficiente di Verdoorn che, in molte stime empiriche, assume valori intorno a 0,6 [5].

Esiste ormai una ampia letteratura sull'interpretazione dell'equazione di Verdoorn (per una rassegna aggiornata si veda Bairam, 1987). In particolare, gran parte del dibattito ha ruotato intorno al significato del coefficiente β, e alle informazioni che se ne possono trarre per valutare il tipo di rendimenti di scala dell'industria che si studia (Kaldor, 1975; Rowthorn, 1975a-b, 1979; Thirlwall, 1980). Nel nostro caso questa discussione è in gran parte irrilevante, perché la presenza nel Mezzogiorno di un alto tasso di disoccupazione ufficiale e nascosta dà forza all'interpretazione originaria di Kaldor, secondo cui β descrive una precisa relazione tecnologica che lega la crescita della produttività a quella del valore aggiunto (si veda in particolare McCombie, 1986).

C'è invece un secondo problema che riguarda più da vicino il presente lavoro, rendendo non semplice l'interpretazione di β e, di conseguenza, del tipo di influenza che la domanda esercita sulla produttività. La legge di Verdoorn descrive una relazione di lungo periodo, con la domanda che è all'origine dell'acquisizione di rendimenti di scala irreversibili. Ciò impone di tener distinta questa influenza da quella che deriva dall'andamento ciclico della produzione manifatturiera nel breve periodo (McCombie e de Ridder, 1983; Stavrinos, 1987). Quando il ciclo della produzione si combina con una certa rigidità verso il basso dell'occupazione, le fasi di ripresa ciclica sono caratterizzate da una relazione positiva tra domanda e produttività che non ha niente a che fare con l'aumento di efficienza di lungo periodo

[5] Come è noto, la legge di Verdoorn ha, nel modello di Kaldor, il ruolo di rendere possibili i processi cumulativi in seguito ad uno squilibrio iniziale (Thirlwall, 1986). Non è però l'analisi degli effetti della « legge » che qui interessa, quanto la sua efficacia come spiegazione, basata sulla domanda, della crescita della produttività manifatturiera. Conviene quindi approfondire questo aspetto, senza fare per ora ulteriori riferimenti all'ipotesi di causazione cumulativa. (Su questo punto si rimanda a Pigliaru, 1983, 1987; inoltre, nelle *Considerazioni conclusive* di questo lavoro si discute brevemente la rilevanza dell'ipotesi per il Mezzogiorno).

trainato dalla domanda (essa infatti riflette il funzionamento della legge di Okun).

Per questo motivo, in quel che segue si è cercato di tener conto di questa distinzione scomponendo la variabile « produzione manifatturiera » in una componente di *trend* (VTR) e una, residua, di ciclo (VCU). L'equazione di Verdoorn diventa allora

$$[3.2] \qquad \pi = \alpha + \beta_1 \, vtr + \beta_2 \, vcu; \quad \beta_1, \beta_2 > 0,$$

dove il coefficiente di Verdoorn è ora β_1 (le variabili sono espresse in differenze prime relative).

La valutazione complessiva del ruolo svolto dalla domanda richiede che l'equazione di Verdoorn sia affiancata da un'equazione sulle determinanti della produzione. È infatti importante, per l'interpretazione qui proposta, che le variazioni della produzione risultino spiegate in gran parte da quelle della domanda (se così non fosse, e se per esempio i prezzi relativi assumessero il ruolo centrale, una interpretazione « dal lato dell'offerta » sarebbe certamente più adatta al caso – si veda Riedel (1984) per una attenta discussione di questo punto). L'equazione è dunque

$$[3.3] \qquad q = \Phi + \Theta y + \gamma p; \qquad \Theta > 0, \ \gamma < 0,$$

dove y è il reddito regionale, p un indice dei prezzi relativi (Sud/Centro Nord), Θ l'elasticità della domanda per beni locali rispetto a variazioni del reddito locale, e γ l'elasticità della stessa domanda rispetto a variazioni della posizione competitiva nel mercato locale.

Infine, al contrario di quanto avviene nel modello kaldoriano standard, il problema della esogenità della domanda non è qui risolto dal legame tra reddito « mondiale » ed esportazioni, ma da quello tra reddito e produzione « locali ». Nel nostro caso, la non violazione della condizione di esogenità di y rispetto a q [6] è – almeno a priori – garantita dal fatto che gli andamenti di y sono in gran parte legati *direttamente* alle decisioni delle autorità di politica economica [7], mentre quelli di q (che, in livelli, rappresenta una piccola

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[6] Per una più precisa definizione di q si rimanda al prossimo paragrafo.

[7] Le vicende del rapporto tra intensità della politica economica a favore del Mezzogiorno e andamento del reddito meridionale sono state ampiamente discusse nella letteratura (si veda in particolare GRAZIANI e PUGLIESE, 1979): qui è sufficiente richiamare il dato sintetico rappresentato dal rapporto tra il reddito pro-capite meridionale (compresi i trasferimenti) e quello del resto del paese.

La Figura 2 nel testo mostra il profilo temporale del reddito relativo. Si notano facilmente le conseguenze positive dovute alle due principali fasi dell'intervento statale per industrializzare la regione, che si sono concretizzate soprattutto in investimenti diretti: si tratta degli anni

componente del reddito regionale) possono subire solo un'influenza *indiretta*, appunto attraverso il reddito.

Il risultato di questa discussione è un modello estremamente semplice, soprattutto nell'equazione della produttività. Per esempio, non è modellata alcuna sostituzione autonoma (rispetto alle condizioni della domanda) tra capitale e lavoro [8]: l'ipotesi è che anche l'approfondimento di capitale sia funzione delle dimensioni del mercato (Young, 1928; Kaldor, 1972), e quindi che gli investimenti siano in gran parte endogeni [9]. Di conseguenza, non si tiene neanche conto del potenziale di crescita autonoma offerta, alle imprese meridionali, dalla presumibile esistenza di un significativo *technology-gap* (Sassu, 1987).

Questo ed altri aspetti del modello lasciano naturalmente spazio a critiche di eccessiva semplificazione. Ma critiche di carattere generale non inficiano necessariamente le capacità di spiegare esperienze singole; il modello di Kaldor sembra infatti adeguato agli scopi dell'esercizio qui proposto, che vuole limitarsi ad isolare e valutare il ruolo svolte dalla domanda.

4. *Le stime econometriche* [10]

Legge Verdoorn. Come si è detto, si è proceduto a scomporre q in una componente di *trend* e una ciclica. Si sono adottate due diverse procedure. La prima è quella *peak-to-peak*, per stimare la crescita della capacità produttiva; la seconda si basa sulla stima OLS del *trend* della serie sulla produzio-

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iniziali del periodo e di quelli a cavallo tra gli anni '60 e '70 (si veda Del Monte e Giannola, 1978, cap. VII). Si notano anche i due periodi che sono in genere considerati di *policy-off*: quello tra il 1963-64 e il 1967-68, e, ben più importante sia in termini quantitativi che per i nostri scopi, quello successivo al 1973.

[8] Questo può essere contestato sia sulla base di un approccio neoclassico sia, cosa forse più interessante in questo contesto, sulla base del modello di Sylos-Labini, che pure ha molti punti in comune con quello di Kaldor (si veda per esempio Sylos-Labini, 1983-84).

[9] Nella stima econometrica si utilizzerà comunque una *proxy* della crescita del capitale, per controllare l'eventuale misspecificazione del modello (si veda il paragrafo 4).

[10] Fonti statistiche: i dati qui utilizzati sono, per gli anni 1970-83, dati Istat (*Annuario di contabilità nazionale*, vari anni); per il precedente decennio sono stati utilizzati i dati elaborati dalla Svimez sulla base di una precedente serie Istat (pre-SEC), e resi compatibili con la nuova serie 1970-83 (*Studi Svimez*, 1985). La serie sul costo del lavoro è formata da dati Istat per il 1970-82, e da dati del Ministero del Lavoro e della Previdenza Sociale (*Statistiche del lavoro*, vari anni) per gli anni '60 (nessun dato Istat era disponibile, per questo primo periodo, ad un sufficiente livello di disaggregazione). I livelli delle principali variabili sono riportati nella Tabella 4.

TABELLA 1

LEGGE DI VERDOORN. MEZZOGIORNO, 1963-83

Num.	Per.	Costante	Vtr_t [dummy]	Cu_t	k_{-1}	Statistiche
			Metodo *Peak-to-peak*			
[1]	63-83	0,002 (0,501)	0,999 (11,15)	0,964 (18,53)		$*R^2 = 0,96$ $SEE = 0,0114$ $DW = 1,28$
[2]	63-83	0,016 (2,191)	0,488 (2,069) 0,382[A] (2,303)	0,952 (20,25)		$*R^2 = 0,97$ $SEE = 0,0103$ $DW = 2,25$
[3]	63-82	0,019 (1,798)	0,509 (1,906) 0,393[A] (2,225)	0,956 (17,89)	− 0,052 (− 0,431)	$*R^2 = 0,96$ $SEE = 0,0108$ $DW = 2,29$
			Metodo *Trend*			
[4]	63-83	0,001 (0,277)	1,037 (11,60)	0,922 (19,17)		$*R^2 = 0,96$ $SEE = 0,0112$ $DW = 1,40$
[5]	63-83	0,013 (1,501)	0,506 (1,442) 0,398[A] (1,559)	0,923 (19,93)		$*R^2 = 0,97$ $SEE = 0,0107$ $DW = 1,97$
[6]	63-82	0,014 (1,308)	0,547 (1,353) 0,386[A] (1,396)	0,924 (17,90)	− 0,036 (− 0,244)	$*R^2 = 0,96$ $SEE = 0,0114$ $DW = 1,97$

I valori tra parentesi sono t di Student; $*R^2$ è l'R^2 corretto.
[A] Dummy = vtr per t = 63-70.

ne [11]. In ambedue i casi, la componente ciclica viene ricavata come residuo tra la serie effettiva e quella stimata.

[11] La scomposizione della serie Valore Aggiunto del settore « beni di consumo » in *vtr* e *vcu* è stata effettuata con due diversi metodi. Il primo è il metodo *peak-to-peak*. Gli anni scelti

Le stime dell'equazione [3.2] sono riportate nella Tabella 1. Come si vede, le stime [2] e [5] danno un risultato statistico particolarmente buono [12].

Più in particolare, c'è, nel modello di base (le stime [1] e [4]), autocorrelazione di primo ordine, che sembra dipendere da un *break* strutturale del modello localizzato a metà del periodo. L'utilizzo di alcune *dummies* per controllare la stabilità dei coefficienti produce infatti il risultato delle stime [2] e [5], nelle quali il coefficiente della componente *trend* diminuisce dallo 0,9 degli anni '60 allo 0,5 degli anni '70, e il *DW* assume valori che permettono di accettare l'ipotesi nulla.

Questo tipo di instabilità non può sorprendere. Intanto, è lo stesso andamento della serie sulla produttività a suggerire che la componente *trend* è più importante nel primo sottoperiodo che nel secondo (si veda la Figura 3 nel paragrafo 5). Ma c'è un altro aspetto da considerare: durante l'intero periodo qui analizzato, l'economia meridionale è stata sottoposta a continui e forti stimoli (l'apertura del mercato, la struttura degli incentivi allo sviluppo e le sue frequenti modifiche), che alcune volte portano a risultati di non facile interpretazione. Uno di questi è che la serie dell'occupazione nelle industrie meridionali dei beni di consumo mostra, all'inizio degli anni '70, una inversione di tendenza, da negativa a positiva. Una analisi delle cause di questo fenomeno va oltre gli scopi di questo lavoro [13]; ma certo la sua

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per definire il *trend* dell'output potenziale sono i seguenti: 1960, 1963, 1967, 1974, 1980 (si veda la Tabella 4, che mostra la serie osservata del Valore aggiunto).

L'altro metodo, che lascia meno spazio a scelte arbitrarie, è quello di calcolare una stima OLS del *trend*. La serie Valore Aggiunto risulta formata dalla unione dei due seguenti *trends*:

$$\text{1960-67:} \quad \text{Val.agg.} = \underset{(-\,4{,}033)}{-\,136{,}14} + \underset{(21{,}35)}{52{,}63\,T} \qquad {}^{*}R^2 = 0{,}98$$

$$\text{1968-83:} \quad \text{Val.agg.} = \underset{(5{,}392)}{320{,}00} + \underset{(11{,}03)}{25{,}36\,T} \qquad {}^{*}R^2 = 0{,}89$$

(Il periodo 1968-83 non è invece ulteriormente divisibile perché il valore del coefficiente di *trend* risulta stabile). La due corrispondenti serie *vcu* sono state poi calcolate come residuo tra queste teoriche e quella osservata.

[12] Le stime effettuate sulla base dei due diversi metodi danno risultati molto simili. Nel prossimo paragrafo si utilizzerà il metodo « trend » perché riduce il grado di soggettività nella definizione della serie di lungo periodo.

[13] Una possibile spiegazione può basarsi su un'ipotesi avanzata in PIGLIARU (1987) (ma si veda anche SIRACUSANO et al., 1986), dove si suggerisce che gli opposti andamenti di occupazione e produzione meridionali segnalano la presenza di una profonda ristrutturazione settoriale. Se, come è possibile, in questo processo scompaiono le piccole imprese artigianali, mentre quelle industriali crescono anche per mezzo di aumenti dell'occupazione, un punto verrà

presenza aiuta a fornire una spiegazione della diminuzione del valore del coefficiente di Verdoorn negli anni '70 [14].

Infine, si è utilizzato il rapporto investimenti-output come *proxy* del tasso di variazione dello stock di capitale. La non significatività di k (si vedano le stime [3] e [6]) è coerente con l'idea di Kaldor e Young secondo cui gran parte degli investimenti sono (normalmente) endogeni in un processo di crescita trainato dalla domanda. Risultati analoghi sono stati ottenuti in quasi tutti i lavori sulla legge di Verdoorn in cui si è cercato di introdurre indicatori variamente costruiti dello stock di capitale – si veda la rassegna di Bairam (1987).

Domanda locale e valore aggiunto. – Prima di discutere il significato dei risultati appena descritti è opportuno cercare una conferma dell'interpretazione « dal lato della domanda » della legge di Verdoorn nell'analisi della relazione tra reddito e valore aggiunto – o, più precisamente, tra reddito e « valore aggiunto al netto delle esportazioni », così da includere esplicitamente nel controllo anche l'ipotesi riguardante la domanda locale. Purtroppo, la scarsità di dati disponibili non consente di sottrarre le esportazioni dal valore aggiunto totale: ciò costringe a lavorare con una relazione meno precisa di quanto sarebbe desiderabile.

Un paio di motivi possono però essere brevemente richiamati per giustificare, nonostante tutto, l'utilità per i nostri scopi della relazione « al lordo » delle esportazioni. Il primo motivo proviene dall'esistenza di numerosi studi empirici che confermano l'ipotesi secondo la quale una delle caratteristiche più rilevanti delle imprese manifatturiere meridionali è quella di fare principalmente riferimento al mercato locale piuttosto che a quello nazionale o estero, così che il valore aggiunto complessivo dovrebbe rappresentare una utile *proxy* di quello al netto delle esportazioni (si veda per esempio il recente rapporto IASM Confindustria, 1986, in particolare pp. 32-34 e la Tavola 3/A-B-C-D, pp. 185-188).

C'è poi un secondo motivo che rafforza questa conclusione. L'andamento del reddito meridionale è significativamente diverso da quello del reddito del Centro-Nord. Questa constatazione è importante, perché garantisce la possibilità di individuare con precisione, separandole, le correlazioni tra

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prima o poi raggiunto in cui la somma algebrica tra perdite e aumenti occupazionali diventerà positiva.

[14] Si può notare che, non sorprendentemente, il coefficiente di Verdoorn assume un valore simile a quello « normale » nel periodo in cui output ed occupazione riprendono a crescere insieme. Nel periodo precedente, β assume valori più alti perché la domanda, oltre a stimolare l'adozione delle economie di scala che Kaldor ha associato alla « legge », provoca una ristrutturazione in senso industriale del settore (che, dunque, implica un « effetto composizione » intra-settoriale: si veda la nota precedente).

valore aggiunto meridionale, da una parte, e la domanda del Centro-Nord e quella « locale » dall'altra. L'evidenza empirica dimostra che la correlazione del valore aggiunto con la domanda locale è notevolmente maggiore di quella con il reddito del resto del paese (la domanda esterna): l'$^*R^2$ è pari rispettivamente a 0,55 e 0,36 per il periodo 1963-82. Inoltre, l'utilizzo contemporaneo dei due tipi di domanda come variabili esplicative del valore aggiunto dà il seguente risultato:

$$\begin{array}{lccc} \text{1963-82: Val. agg.} = 0{,}0004 + 1{,}492\, y_m - 0{,}316\, y_{c-n} & & & {}^*R^2 = 0{,}53 \\ & (0{,}028) & (2{,}680) & (-0{,}495) \quad DW = 1{,}64 \end{array}$$

(le variabili sono espresse in tassi di variazione; i valori fra parentesi sono i t di Student).

In sintesi, questi risultati indicano che la componente di esportazioni nel valore aggiunto meridionale non è tale da rendere improponibile la relazione tra valore aggiunto « lordo » e reddito meridionale come approssimazione attendibile di quella tra produzione e domanda nel mercato locale.

La Tabella 2 dà dunque i risultati che riguardano la stima dell'equazio-

TABELLA 2

VALORE AGGIUNTO E REDDITO. MEZZOGIORNO, 1963-82

Num.	Per.	Costante	y_t [dummy]	y_{-3}	p_t [dummy]	Statistiche
[1]	63-82	0,014 (1,189)	0,953 (4,043)		− 0,589 (− 2,948)	$^*R^2 = 0{,}68$ $SEE = 0{,}0320$ $DW = 1{,}72$
[2]	63-73	0,031 (1,601)	0,570 (1,736)		− 0,630 (− 3,520)	$^*R^2 = 0{,}66$ $SEE = 0{,}0270$ $DW = 0{,}74$
[3]	74-82	0,002 (0,097)	1,584 (2,987)		− 0,216 (− 0,331)	$^*R^2 = 0{,}69$ $SEE = 0{,}0380$ $DW = 1{,}98$
[4]	63-82	− 0,015 (− 0,954)	0,749 (3,337) 0,854[A] (2,754)	0,546 (2,714)	− 0,550 (− 3,179) 0,540[B] (1,277)	$^*R^2 = 0{,}79$ $SEE = 0{,}0267$ $DW = 1{,}57$ [Rho = 0,233 (0,879)]

I valori tra parentesi sono t di Student; $^*R^2$ è l'R^2 corretto.
[A] Dummy = y per t = 74-82; [B] Dummy = p per t = 73-82.

ne [3.3] (y è il reddito meridionale, p il rapporto tra il costo del lavoro per unità di prodotto meridionale e quello del Centro-Nord, sempre in differenze prime relative).

Anche qui i risultati econometrici sono complessivamente buoni (stima [4]). Inoltre, nonostante l'assenza di immediati indizi di « misspecificazione » (si veda il valore del *DW* nella stima di base [1]), i coefficienti sono caratterizzati anche in questo caso – così come per la [3.2] – da una significativa instabilità: si vedano le stime [2] e [3]. In particolare, ciò che avviene nel passaggio dagli anni '60 al decennio successivo è una perdita di peso di p ed un aumento del peso di y.

Anche questo *break* sembra dipendere da un aspetto specifico, e limitato nel tempo, del periodo sotto analisi: infatti, l'abolizione delle gabbie salariali tra Mezzogiorno e Centro-Nord ha provocato, negli anni a cavallo tra le due decadi, un rapido aumento relativo del costo del lavoro meridionale. Esaurita questa spinta, ciò che sembra emergere è una situazione più tipica nei casi di squilibrio regionale, nei quali le dinamiche dei prezzi relativi sono generalmente più contenute rispetto ai casi di squilibri tra economie nazionali, e la loro influenza sul risultato complessivo meno marcata.

Non sembrano dunque esserci dubbi su un punto importante. I risultati della Tabella 2 mostrano che, complessivamente, l'influenza esercitata dal reddito è maggiore di quella dei prezzi relativi – questa conclusione è particolarmente rilevante per il secondo sottoperiodo, che è quello che più interessa il resto del presente lavoro.

Abbiamo ora un quadro sufficientemente completo dell'influenza esercitata dalla domanda locale sulla produttività: come abbiamo appena visto, la relazione tra domanda locale e valore aggiunto appare forte, così come statisticamente forte è anche la relazione tra valore aggiunto e produttività del lavoro.

L'evidenza empirica qui presentata è quindi in linea con l'ipotesi discussa nei paragrafi precedenti: il rallentamento della domanda locale rappresenta una importante concausa del rallentamento della produttività che si è registrato nel Mezzogiorno negli anni settanta.

5. *Il ruolo della domanda: un esercizio con la produttività relativa*

Si può ora cercare di fare un ulteriore passo avanti. Il paragrafo 2 è servito a mostrare che, anche limitando lo studio ai soli dati del Mezzogiorno, si può comunque contribuire alla spiegazione del divario perché ci si

trova di fronte ad un fenomeno abbastanza importante e sistematico da condizionare in modo netto anche i dati relativi.

Ora disponiamo delle stime econometriche dei parametri che descrivono la relazione tra domanda locale e produttività del lavoro meridionale. È a questo punto interessante farsi un'idea, per quanto approssimativa, dell'impatto che il rallentamento della produttività meridionale, dovuto al rallentamento della domanda, può aver avuto sul divario.

Più precisamente, la domanda che incuriosisce è: quale sarebbe stato l'andamento della produttività meridionale (e quindi della produttività relativa) se il rallentamento del reddito meridionale fosse stato simile a – e non, come invece è stato, maggiore di – quello del Centro-Nord?

La risposta non è semplice: qualunque metodo si adotti si rischia di abusare della condizione di *ceteris paribus*. Così, per esempio, la descrizione di ipotetici cambiamenti nei sentieri di crescita della produttività meridionale deve basarsi sull'esclusione di ogni loro possibile influenza sui dati che riguardano l'altra economia, il Centro-Nord.

Tenendo conto di queste doverose avvertenze, qualche indicazione può comunque essere ottenuta attraverso un esercizio in cui, utilizzando i coefficienti del modello appena stimato ([3.2/stima 5]-[3.3/stima 4]), possiamo calcolare una serie « teorica » della produttività meridionale assoluta (*PRDM**) e relativa (*RPRD**), sotto l'ipotesi di assenza di differenze fra la crescita del reddito meridionale e quella del resto del paese [15].

I risultati dell'esercizio sono riportati nella Tabella 3 e nella Figura 3. Da esse si possono trarre le seguenti conclusioni (con tutte le cautele del

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[15] Più in dettaglio, l'esercizio si compone di questi semplici passaggi: (i) sostituiamo il reddito meridionale con quello del Centro-Nord nell'equazione [3.3/4]; (ii) sulla base dei tassi di variazione q^* così ottenuti e di un valore iniziale (il 1970), calcoliamo i livelli dell'output teorico (Q^*); (iii) stimiamo il *trend* di Q^*, del quale calcoliamo poi le differenze prime relative *vtr**; (iv) sostituiamo *vtr* con *vtr** in [3.2/5]; (v) calcoliamo π^* e i corrispondenti livelli di *PRDM** (anno base 1970); (vi) calcoliamo la produttività relativa teorica *RPRD** (*PRDM**/produttività Centro-Nord).

Il punto (iv) richiede un breve commento. La congettura « cosa sarebbe accaduto se le imprese del Sud avessero fronteggiato una domanda simile a quella del Centro-Nord » va qualificata con quanto sostenuto nel paragrafo 3. La domanda che qui interessa è quella di lungo periodo, nel senso lì definito: la sostituzione avviene quindi solo per questa componente della domanda complessiva, in modo che le differenze tra la produttività osservata e quella teorica siano imputabili, senza ambiguità, alla sola differenza dei *trends*.

Per lo stesso motivo (garantire una corretta interpretazione dei risultati), è stato effettuato preliminarmente qualche controllo sul modello stimato. In particolare, si è calcolato lo scostamento dovuto all'utilizzo dei soli dati meridionali tra livelli osservati e teorici della produttività (ciò richiede di ottenere una serie *PRDM** sulla base dei passaggi (ii)-(v) descritti sopra). Nessuna importante distorsione è stata messa in evidenza da questo controllo.

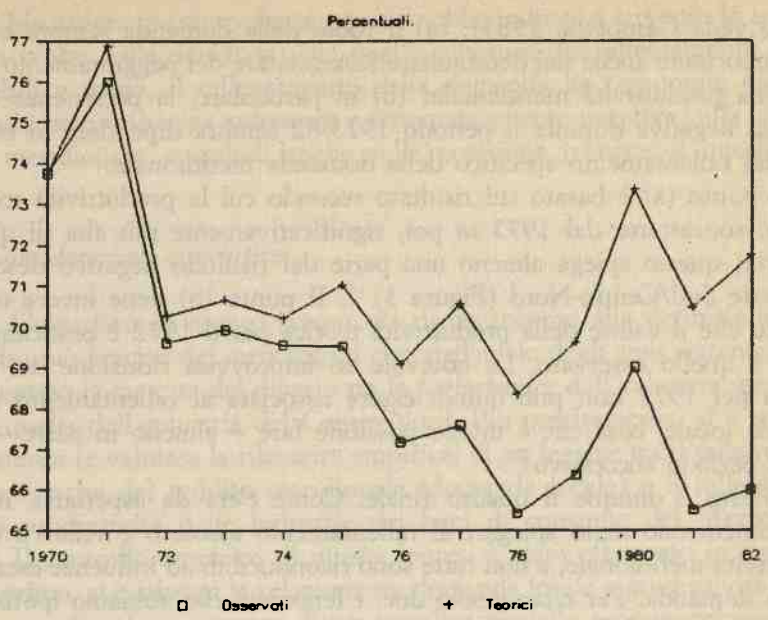

FIGURA 3. Produttività relativa (Sud/C/Nord)

MILIONI 1970 TABELLA 3

Anni	Produttività		Produttività relativa	
	Oss.	Sim.	Oss.	Sim.
1970	1,81	1,81	73,76	73,76
1971	1,91	1,93	76,00	76,88
1972	1,89	1,91	69,62	70,27
1973	2,04	2,06	69,94	70,67
1974	2,10	2,12	69,57	70,22
1975	1,99	2,03	69,54	71,04
1976	2,23	2,29	67,17	69,10
1977	2,22	2,32	67,59	70,56
1978	2,14	2,24	65,42	68,36
1979	2,39	2,51	66,37	69,63
1980	2,54	2,69	69,02	73,35
1981	2,46	2,64	65,50	70,48
1982	2,46	2,67	66,00	71,75

caso: si veda Gambetta, 1983): (a) il ruolo della domanda sembra essere stato importante anche nel determinare l'ammontare del peggioramento relativo della produttività meridionale; (b) in particolare, la persistenza della tendenza negativa durante il periodo 1973-82 sembra dipendere in buona parte dal rallentamento specifico della domanda meridionale.

Il punto (a) è basato sul risultato secondo cui la produttività teorica diventa, soprattutto dal 1975 in poi, significativamente più alta di quella osservata; questo spiega almeno una parte del risultato negativo descritto dalla serie Sud/Centro-Nord (Figura 3) [16]. Il punto (b) tiene invece conto del fatto che il valore della produttività teorica per il 1972 è praticamente uguale a quello osservato. La notevole ed improvvisa riduzione del dato relativo nel 1972 non può quindi essere associata al rallentamento della domanda locale, cosa che è invece possibile fare – almeno in parte – per l'intero periodo successivo [17].

Questo è dunque il quadro finale. Come c'era da aspettarsi, molte cause concorrono nello spiegare il rallentamento assoluto e relativo della produttività meridionale, e non tutte sono riconducibili ad influenze esercitate dalla domanda. Per citarne solo due, i fenomeni che abbiamo ipotizzato essere all'origine della caduta della produttività relativa nel 1972, o della diminuzione del coefficiente della variabile *vtr* nella stima [3.2/5], rimandano presumibilmente a cambiamenti istituzionali, tecnologici, strutturali che non possono essere ridotti ad una semplice spiegazione dal lato della domanda.

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[16] Il punto (a) può essere mostrato anche per mezzo di un semplice calcolo. Prendiamo come valore iniziale un dato del periodo precedente al rallentamento: usiamo la media annuale della produttività relativa durante il triennio 1969-71, il cui valore è 75,06%; confrontiamolo con i valori medi (osservati e teorici) degli ultimi tre anni del periodo. Circa il 60% della perdita percentuale del periodo (5,01% su un totale di 8,22%) risulta allora associato al rallentamento della domanda. Il rimanente 40% è invece dovuto ad una diminuzione autonoma della produttività relativa meridionale avvenuta in un singolo anno, il 1972.

[17] Nel 1972 sembra sommarsi l'impatto di due fenomeni, uno specifico del Mezzogiorno e l'altro del Centro-Nord. In sintesi, il Sud registra una diminuzione dell'output (– 2,1%) indipendente dalle condizioni della domanda (che continua a crescere ad un ritmo piuttosto elevato, 3,3%), mentre la caduta dell'occupazione procede con ritmi normali per il periodo (– 1,2%): tutto ciò implica una leggera flessione della produttività. Nel Centro-Nord sono invece in azione dei meccanismi di altro genere: domanda e output crescono secondo gli standard del periodo (3,7% e 4,2% rispettivamente), mentre l'espulsione di manodopera dal settore tocca livelli inconsueti (– 3,6%), così come, di conseguenza, la crescita della produttività. Così, mentre nel Centro-Nord prosegue a ritmi rapidi la ristrutturazione, il Mezzogiorno incontra il primo anno di flessione produttiva, attribuibile probabilmente al peggioramento della posizione competitiva dovuta all'abolizione delle gabbie salariali. Infatti, la stima dell'equazione [3.3/4] coglie bene la flessione del 1972 – un risultato dovuto a p piuttosto che a q.

Ma questa consapevolezza non dovrebbe indurre a ignorare lo specifico ruolo svolto dalla domanda: che quelle concause del rallentamento fossero evitabili o meno, il rallentamento della domanda ha comunque esercitato una ulteriore influenza autonoma e sistematicamente negativa sulla produttività meridionale, e quindi anche sulla posizione relativa di quest'ultima.

6. *Considerazioni conclusive*

L'obiettivo di questo lavoro era di contribuire alla definizione di un quadro più preciso dei meccanismi che, dall'inizio degli anni settanta, hanno alimentato la crescita del divario tra la *performance* dell'industria meridionale e quella dell'industria del Centro-Nord. Più precisamente, si è suggerita l'esistenza (e valutata la rilevanza empirica) di un legame tra il rallentamento della crescita del reddito meridionale (domanda locale) e il rallentamento della produttività delle industrie dei beni di consumo del Mezzogiorno.

Il controllo empirico di questa ipotesi è stato effettuato in due stadi. Nel primo, si è stimata la relazione tra domanda locale e produttività del settore meridionale per mezzo di un semplice modello econometrico *demand-oriented*, che ha permesso di attribuire alla domanda locale una forte influenza sul rallentamento della produttività registrato dalle imprese meridionali negli anni settanta. Nel secondo stadio, i parametri così stimati sono stati utilizzati per un esercizio sulla produttività relativa. Si è simulato l'andamento del divario di produttività imponendo al Sud il *trend* di crescita del reddito del Centro-Nord: il risultato conferma che il ruolo della domanda è importante per spiegare anche l'andamento della serie che descrive il divario della produttività.

Naturalmente, la domanda non è l'unica determinante dell'aumento del divario, e nemmeno del rallentamento della produttività meridionale (l'influenza di alcune delle altre determinanti è risultata evidente anche nei nostri risultati empirici): ciò che qui si è voluto sottolineare è che la domanda locale svolge un ruolo importante che è stato spesso trascurato nella letteratura. Il riconoscimento di questo ruolo ha tra l'altro evidenti conseguenze sul piano analitico e su quello della politica economica. Vediamo i due punti separatamente.

La competizione nel mercato meridionale. – L'evidenza empirica che abbiamo presentato pone alcuni interessanti problemi e indica possibili direzioni di ricerca. In particolare, alcuni dei risultati permettono di sottolineare la necessità di ulteriori approfondimenti per individuare con maggiore precisione il tipo di competizione che ha luogo, nel mercato meridionale, tra le

imprese del Mezzogiorno e quelle del Centro-Nord. Infatti, se da una parte l'evidenza empirica conferma l'inadeguatezza di modelli competitivi troppo semplificati (un esempio è quello della causazione cumulativa), dall'altra lascia aperta la questione di quale schema interpretativo sia effettivamente adeguato.

Analizziamo brevemente questi due punti.

Per quanto riguarda la causazione cumulativa e i modelli ad essa collegati (Graziani, 1978; Faini, 1983), che hanno esercitato una importante influenza sulla ricerca sul Mezzogiorno, la loro inadeguatezza è messa in evidenza dal ruolo sistematicamente positivo giocato dalla domanda nei confronti delle imprese locali (si veda anche Pigliaru, 1987). Questo ruolo positivo ha infatti permesso che, pur in presenza di un prolungato rapido aumento della dimensione del mercato locale, la quota meridionale nel valore aggiunto italiano del settore dei beni di consumo sia rimasta da più di trent'anni pari al 18%, con oscillazioni molto limitate intorno a questo valore. Tutto ciò è – appunto – ben difficilmente spiegabile attraverso un modello di causazione cumulativa, secondo cui la crescita dell'economia che gode del vantaggio iniziale in termini di costi (il « Nord ») implica necessariamente un rallentamento nella crescita dell'economia che ne è priva (il « Sud ») o addirittura, in casi estremi (si veda per esempio Faini, 1983), una riduzione della sua base produttiva [18].

Rimane ora da accennare a due ipotesi di lavoro che sono invece compatibili con i risultati descritti fin qui, ed in particolare con il caso di una crescita del mercato locale con ripartizione costante delle quote tra le imprese locali e le imprese « esterne ».

(i) La variabile che descrive la competizione da prezzo nel modello che abbiamo stimato potrebbe risultare poco appropriata al caso del mercato meridionale, nel senso che non tiene conto della possibilità che operi, a fa-

[18] I risultati qui presentati dunque da un lato confermano la rilevanza di un'idea centrale del modello di Kaldor (la domanda come vincolo alla crescita), dall'altra smentiscono la principale previsione associata all'ipotesi di causazione cumulativa. Per quanto possa apparire sorprendente, questo risultato può essere spiegato sulla base delle nostre stime econometriche. Formalmente, infatti, un modello di causazione cumulativa si avvicina tanto più a quello « solo domanda », quanto più l'elasticità della domanda da reddito domina quella da prezzo. (In generale, nei lavori di Kaldor le due ipotesi coesistono perché il ruolo dominante della domanda è garantito dal maggiore peso dell'elasticità da reddito rispetto a quella da prezzo (KALDOR, 1975). Nei suoi ultimi scritti sull'argomento Kaldor sembra aver dato un peso sempre maggiore al primo tipo di elasticità (per es., KALDOR, 1978, pp. XXIV-XXV)).

Una parte della risposta può dunque essere individuata nella scarsa significatività dell'elasticità da prezzo messa in evidenza dalle nostre stime, che di fatto assegna alla componente di *feedback* [$\pi \rightarrow p \rightarrow$ domanda] della relazione circolare un ruolo ancora più marginale di quello ipotizzato dalla teoria.

vore delle imprese meridionali, qualche tipo di « protezionismo » dovuto a motivi istituzionali: per esempio, la complessa struttura degli incentivi per l'industrializzazione, o un livello del salario tenuto di fatto basso da un mercato del lavoro particolarmente informale (Giannola, 1982).

(ii) In tutt'altra direzione, una seconda possibilità è quella di considerare insufficienti i modelli basati sull'omogeneità del prodotto, in cui l'unica forma di competizione che può aver luogo è quella da prezzo, e studiare invece la concorrenza tra Nord e Sud per mezzo di modelli con prodotto « verticalmente differenziato », nei quali la quota di mercato delle imprese è determinata in base alla qualità del loro prodotto, dati i gusti dei consumatori e la distribuzione del reddito (Falvey e Kierzkowski, 1984; Flam e Helpman, 1987). Per questa via sembra possibile dar conto di una persistente segmentazione del mercato e quindi di una crescita a « quote costanti ».

La politica economica. – Per quanto riguarda la politica economica, non molto può essere detto in assenza di uno schema interpretativo più soddisfacente, che sia per esempio capace di discriminare tra le ipotesi (i) e (ii) appena descritte. Va però considerato con attenzione il fatto che, nei nostri risultati, la domanda che gioca il ruolo fondamentale è quella « locale », la cui caratteristica è, nel Mezzogiorno, di dipendere in gran parte dalle scelte delle autorità centrali di politica economica. Il tipo di sviluppo descritto è quindi, in questo senso, uno sviluppo « dipendente ».

In altri termini, ciò che la nostra evidenza empirica sembra suggerire può essere così sintetizzato: primo, il problema per le imprese meridionali operanti nel settore non è quello di una possibile accelerazione troppo rapida della domanda (con la conseguente eccessiva apertura del mercato), ma semmai il contrario; secondo, un importante problema di lungo periodo è dato dal tipo di domanda che ha finora guidato la crescita.

La combinazione di questi due problemi consente, una volta di più, di sottolineare l'importanza della domanda per esportazioni nel processo di sviluppo [19]. Un compito essenziale della politica economica è, in questo contesto, quello di aiutare le imprese del settore a poter fare riferimento alla domanda per esportazioni oltre che a quella locale. Una maggiore importanza relativa della domanda esterna rappresenta la condizione per migliorare la situazione anche dal punto di vista del secondo problema: per rendere cioè

[19] Esiste ormai una vasta e qualificata letteratura sul rapporto tra esportazioni e sviluppo, e più in particolare tra esportazioni manifatturiere e cambiamento strutturale. Oltre ai numerosi lavori di tradizione kaldoriana, si vedano, per esempio, BALASSA (1978) e CHOW (1987). CHENG e TANG (1987) presentano interessante evidenza empirica sulla maggiore efficienza tecnica che caratterizza le imprese esportatrici rispetto a quelle che producono per il solo mercato locale, nel contesto di un'economia in via di sviluppo.

TABELLA 4

VALORE AGGIUNTO, PRODUTTIVITÀ E REDDITO PRO-CAPITE. MILIONI 1970

Anni	Mezzogiorno			Centro-Nord			M/C-N (%)	
	V.A. [x 100]	*PRD*	*Ypc*	*V.A.* [x 100]	*PRD*	*Ypc*	*PRD*	*Ypc*
1960	3780	0,76	5,48	17430	1,14	8,60	66,30	63,71
1961	4340	0,89	5,90	19390	1,28	9,19	69,50	64,21
1962	5020	1,03	6,30	22860	1,50	9,77	68,89	64,46
1963	5760	1,18	6,86	24510	1,59	10,14	74,39	67,68
1964	6080	1,24	6,97	25230	1,64	10,34	75,17	67,47
1965	6490	1,34	6,97	26630	1,77	10,51	75,54	66,35
1966	6860	1,44	7,35	29000	1,96	11,13	73,25	66,02
1967	7620	1,60	7,92	30700	2,06	11,80	77,56	67,16
1968	7740	1,64	8,31	32830	2,19	12,52	74,67	66,34
1969	8110	1,76	8,92	35750	2,33	13,14	75,42	67,87
1970	8330	1,81	9,43	38240	2,46	13,78	73,76	68,46
1971	8560	1,91	9,69	38240	2,51	13,77	76,00	70,39
1972	8380	1,89	9,97	39840	2,71	14,17	69,62	70,38
1973	9100	2,04	10,65	42780	2,91	15,03	69,94	70,85
1974	9490	2,10	10,88	43990	3,02	15,60	69,57	69,77
1975	8970	1,99	10,28	41420	2,86	14,83	69,54	69,34
1976	10120	2,23	10,73	47780	3,31	15,84	67,17	67,75
1977	10160	2,22	10,73	47180	3,28	16,05	67,59	66,85
1978	9710	2,14	10,84	46890	3,28	16,49	65,42	65,71
1979	10870	2,39	11,41	51240	3,60	17,16	66,37	66,48
1980	11660	2,54	11,99	52140	3,67	17,83	69,02	67,23
1981	11320	2,46	11,86	52600	3,75	17,86	65,50	66,42
1982	11350	2,46	11,76	52020	3,72	17,78	66,00	66,13
1983	10800	2,36		48550	3,56		66,39	

Fonte: Istat (*Ann. Cont. Nazionale*), Svimez (*Studi Svimez*, 1985).

la crescita del settore meridionale meno dipendente dai trasferimenti di reddito dal resto del paese, i quali, nel lungo periodo, non possono che assumere un carattere sempre più assistenziale [20].

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DEMAND AS A CONSTRAINT TO GROWTH. THE CASE OF THE CONSUMER GOODS SECTOR IN SOUTHERN ITALY, 1963-83

The aim of this paper is to assess the role played by local demand in the recent worsening of the Mezzogiorno's relative position in terms of labour productivity in the consumer goods sector.

To this aim, an econometric estimation of a Kaldorian demand-oriented model on the determinants of labour productivity and a counter-factual exercise based on that estimation are carried out. The outcome strongly supports the view that an exogenous – specific to the South – slow-down in local demand indeed plays a major role in explaining why the gap between the Mezzogiorno and the rest of the country has been increasing since the mid-seventies.

In the final section of the paper, the consequences of our results for the design of regional policy in Italy are briefly discussed.

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POLITICAL CHANGE AND PUBLIC ENTERPRISE PERFORMANCE: ARGENTINA AS A CASE STUDY

by
ROBERT E. LOONEY *

1. *Introduction*

One of the major areas of public enterprise in several Latin American countries is the defense industry. Argentina's military industrial complex, "Fabricaciones Militares", has an annual turnover of $ 2.2 billion, making it the largest firm in Argentina and one of the largest companies in Latin America (Waisman, 1986). Depending on the source one uses, Brazil ranks as sixth or seventh among world arms producers and exporters.

Of the twenty-one Latin American and Caribbean countries, nine (Neuman, 1984) are producers of major weapons systems, and in each case the major companies involved in production are either government-owned enterprises or are joint government-private endeavors. The growing importance of these defense-oriented public enterprises in Latin America has led to increased concern with the impact of their operations on foreign exchange use, government budgets and the overall economic performance of the economy (Looney and Frederiksen, 1987). There is a growing awareness that public enterprises in general, and particularly those in the defense area, can be a major source of macroeconomic problems (Gray, 1984).

In fact, the literature (Gillis, 1980) usually depicts public firms in developing countries as somewhat notorious for their extremely weak economic performance. Many public enterprises run chronic deficits; some are vehicles of political corruption; most appear prone to capital-intensive and import dependent technologies; few of them play any positive role in developing exports; many have been involved in uncontrolled foreign borrowing on scales that have caused great economic and political strain.

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In contrast to the usual stereotype, Jones and Mason (1982, p. 19) conclude that public enterprise has "an institutional comparative advantage in specific market conditions within developing countries". Its comparative advantage is associated with markets in which the firm is necessarily large relative to both product and factor markets. In particular, public enterprises have an advantage over their civilian counterparts in markets where capital requirements are beyond the reach of most private domestic investors, labor markets are strongly affected by the individual firms, and product markets are not large enough to permit significant competition.

Clearly, if the negative factors listed above are as extensive and pervasive as claimed and if, in fact, the positive factors associated with public enterprise development are also real and diverse, any net assessment concerning their role in developing countries becomes largely an empirical matter.

There is, however, a shortage of analytical work on the macroeconomic role and, in particular, the impact of public enterprise defense industries on stabilization effects. A related issue is the degree of control exercised over public enterprises by the central government. More specifically, are military governments more capable than their civilian counterparts of integrating public enterprise performance into an overall stabilization program? If so, are all military governments alike in this regard?

Perhaps the dearth of literature in this area can be explained in large part by the lack of consistent historical data on public enterprise performance. Fortunately, the release of a World Bank document (1985) containing a detailed account of public enterprise performance in Argentina opens up the possibility of empirical research in the area.

Using Argentina as a case study, the purpose of this paper is to determine the manner in which public enterprise performance is affected by regime change and, in particular, the manner in which public enterprises may contribute to national stabilization efforts.

2. *Macroeconomic Problems of Public Enterprises*

While disaggregated public enterprise data does not exist in Argentina, it is readily apparent that the country's public enterprises as a whole have constituted a serious source of deficit spending. More specifically, their deficit before transfers (Table 1) rose from an average of 2% in Gross Domestic Product (GDP) in 1968-71 to 5% of GDP in 1980-83 (World Bank, 1985, p. 37).

The World Bank (1985, pp. 49-51) contends that many of the enter-

TABLE 1

ARGENTINA: PUBLIC SECTOR REVENUES, EXPENDITURES AND DEFICITS, 1961-1983

	1961-63	1964-67	1968-71	1972-75	1976-79	1980-83
Consolidated Public Sector						
Revenues	28.6	27.0	29.0	27.0	33.1	34.0
Expenditures	33.6	30.3	30.6	36.2	40.7	47.1
Balance	− 5.0	− 3.3	− 1.6	− 9.2	− 7.6	− 13.1
Central Government						
Revenues	13.5	13.1	14.6	13.7	15.2	16.0
Expenditures	12.7	13.1	13.7	16.0	17.4	20.9
Balance	0.8	0.0	0.9	− 2.3	− 2.2	− 4.9
Provincial and Municipal Governments						
Revenues	5.4	5.6	6.1	4.9	7.8	7.9
Expenditures	6.2	6.3	6.8	8.3	9.5	11.3
Balance	− 0.8	− 0.7	− 0.7	− 3.4	− 1.7	− 3.4
State Enterprises						
Revenues	9.7	8.3	8.3	8.4	10.1	10.1
Expenditures	14.7	10.9	10.1	11.9	13.7	14.9
Balance	− 5.0	− 2.6	− 1.8	− 3.5	− 3.6	− 4.8

Source: THE WORLD BANK, *Argentina: Economic Memorandum, Volume 1, The Main Report*, Washington, D.C.: IBRD, 1985, p. 36.

prises' financial problems resulted from macroeconomic policy decisions rather than from their own intrinsic inefficiencies. The economic ministries and secretariats (Economy, Finance, and the Central Bank) have frequently regarded enterprise tariffs primarily as tools for influencing short-term inflationary expectations, rather than as price signals for allocating resources or as user taxes intended to mobilize investment finance. Shifts in real tariff levels have at times been abrupt, as, for example, in the period of December 1981 to July 1982, when a six-month freeze on nominal tariff increases in the midst of rapid inflation resulted in a 40-50 percent decline in real tariffs.

The enterprises were also used as magnets to attract foreign capital inflows needed to equilibrate the overall balance of payments and support the exchange rate. From 1978 to early 1981, enterprises were strongly encouraged by economic policymakers to borrow in foreign currency even as the peso was becoming increasingly overvalued. Initially, this was done to reduce the burden on the treasury of financing enterprise deficits, and later

to help defend the peso against a wave of capital flight stimulated by fears of a major devaluation. The foreign currency indebtedness of state enterprises tripled from US $ 1.1 billion at the end of 1977 to US $ 9.2 billion in March 1981 (World Bank, 1985, p. 50).

Based on this brief sketch, Argentina's public enterprises' pattern of debt and deficits appears to be similar to that found in other comparative studies (Baumol, 1980). There does however appear to be an association between public enterprises performance and the nature of the political regime in power at the time. For example, Gantt and Dutto (1968) demonstrate that in the 1960s public enterprises' in Latin America were particularly prone to deficits. But starting with the Brazilian military coup of 1964, followed by somewhat similar military-economic regimes in Chile from 1973 and Argentina from 1976, several patterns of public enterprise performance changed. In Brazil the government began to use these organizations much more actively as a vehicle of growth under domestic ownership. The Brazilian public firms were redirected toward dynamic profit-seeking behavior, capable of accumulating capital at rates closely comparable to private enterprise (Baer, Kerstenetzky and Villela, 1973).

Beginning with the first Peron government, Argentina has swung back and forth three times between populist and reactionary authoritarian regimes. The role of public enterprise has changed with the regime each time. In fact, Horacio Bono (1980) has documented a consistent pattern: public enterprise remains important under both kinds of regime, but in the populist periods the prices of the firms are held down in real terms, the firms run persistent deficits and they are on labor relative to output.

In the conservative authoritarian periods, they change over toward higher value added with reduced labor input (Bono, 1980). Public enterprise is used primarily for economic growth in the conservative periods, and primarily for redistribution in the populist periods. Public enterprise prices and wages serve as "macroprices", like interest rates and exchange rates: they function as instruments to change resource use and income distribution according to the preferences of the regime (Sheahan, 1981).

The changing nature of public enterprise priorities with regime type appears especially strong in Argentina, but much of the analysis in this area remains somewhat anecdotal and impressionistic. The question remains as to the extent to which these patterns can be quantified. Can we identify distinct regime types in terms of their policies as they relate to public enterprise performance? In particular did the post 1976 military regime pursue policies that produced distinctly different economic performance on the part of the country's public enterprises? These issues are examined in detail in the following sections.

3. *Bureaucratic Authoritarianism and Stabilization*

The rise of military regimes in Latin America over the past two decades has, in fact, produced a wide literature on this form of authoritarianism, termed "bureaucratic authoritarianism" (O'Donnell, 1973). Following coups in Brazil (1964), Argentina (1966, 1976), Chile (1973) and Uruguay (1973), the prevailing political trend in Latin America appeared to be military authoritarian regimes, despite earlier analysis that had concluded that accelerated economic development in these countries would be associated with greater democratization.

In contrast to prior "caudilistic" dictatorships and the unstable succession of military intervention in politically unstable countries, the new military dictatorships were less personalistic, more effectively institutionalized, and emerged not in the most backward countries but rather in those at a relatively higher level of development (Richards, 1985, p. 155-56).

Richards' (1985) explanation of the rise of bureaucratic authoritarian regimes focuses on the management policy of domestic demand within the constraints implied by economic openness. In countries where political stability is contingent on the maintenance of continuous growth, there are powerful political constraints on the ability to impose monetary and fiscal restriction; the recessionary costs of disinflation either prevent systematic stabilization from taking place leading to endemic price volatility, or tend to destabilize governments that successfully impose restraints because of losses in real economic activity.

Whatever the role of other factors, the overthrow of democratic systems by the armed forces cannot be understood without some reference to macroeconomic policy. More specifically, the breakdown of democracy typically has taken place during periods characterized by simultaneous recession, major accelerations in the rate of inflation (sometimes attaining hyperinflationary proportions), and exchange rate depreciation crises.

To sum up, several main strains of literature point to the positive role that public enterprises can play in national stabilization efforts. If the bureaucratic authoritarian model is correct, we should expect increased efforts at stabilization on the national level and more growth-oriented policies at the public enterprise level under military regime.

More specifically, the performance of public enterprises should alter markedly with regime change and be in conformity with national stabilization policies during periods of military rule.

The following section develops an empirical test of these propositions.

4. *Empirical Results*

A number of measures indicative of public sector performance over time (1961-1981) in Argentina have been compiled by the World Bank (1985). These include the following financial ratios:

1) Current savings/physical investment.
2) Current expenditures/current revenues.
3) Capital outflows/current revenues.
4) Financing requirement/current revenues.
5) Debt amortization/current revenues, and
6) Debt service/current revenues.

In addition, indices exist for financial performance indicators such as:

1) Current income.
2) Current expenditures.
3) Salaries and benefits, and
4) Capital outlays.

To test for public sector policy shifts associated with regime change, each of the variables listed above were regressed on a series of dummy variables representing regime changes in Argentina over the 1961-81 (Table 2).

Preliminary results indicated that two dummy variables DUME and DUMF produced results consistently superior to the other dummy variables. DUME distinguishes between the first and second military regimes (and their civilian counterparts) while DUMF views the first military and civilian regimes as pursuing similar policies vis a vis the public enterprises.

The regressions are specified as distributed lags [1]. That is, each ratio is assumed to adapt over time to movements in the control variable.

Using the current expenditures of the public enterprises as a control variable, the first set of regression equations (Table 3) attempted to determine the extent and manner in which regime change had affected various aspects of public sector performance.

The political dummy's were introduced in two general forms:

1) As a shift variable depicting structural shifts with regime change, and

2) As a slope variable depicting changes in the slope of the regression equation with regime change.

[1] The statistical significance of the distributed lags in the regression equations indicate that the economic adjustments of public enterprises in Argentina are spread out over time in a geometrically declining fashion (PINDYCK and RUBINFELD, 1976). The equations are estimated with a Cochrane-Orcutt estimation procedure that generates a rho variable to correct for possible serial correlation.

TABLE 2

ARGENTINA, POLITICAL DUMMY VARIABLES, 1961-1982

YEAR	DUMP	DUMA	DUMB	DUMMY Variable DUMC	DUMD	DUME	DUMF	DUMG
1961	0	0	0	0	1	1	1	1
1962	0	0	0	0	1	1	1	1
1963	0	0	0	0	1	1	1	1
1964	0	0	0	0	1	1	1	1
1965	0	0	0	0	1	1	1	1
1966	0	1	1	2	2	2	1	3
1967	0	1	1	2	2	2	1	3
1968	0	1	1	2	2	2	1	3
1969	0	1	1	2	2	2	1	3
1970	0	1	1	2	2	2	1	3
1971	0	1	1	2	2	2	1	3
1972	0	1	1	2	2	2	1	3
1973	1	2	0	1	0	0	0	0
1974	1	2	0	1	0	0	0	0
1975	1	2	0	1	0	0	0	0
1976	2	3	1	2	2	3	2	2
1977	2	3	1	2	2	3	2	2
1978	2	3	1	2	2	3	2	2
1979	2	3	1	2	2	3	2	2
1980	2	3	1	2	2	3	2	2
1981	2	3	1	2	2	3	2	2
1982	2	3	1	2	2	3	2	2

Note: 1961-65 period of democracy
1966-72 first military regime
1973-76 Peronist regime
1977-82 second military regime

In the second case, the dummy variables were formed by multiplying the political dummy in Table 2 (DUME and DUMF) by the control variable, public enterprise current expenditures.

The results (Table 3) indicate that:

1) Regime change had a statistically significant effect on public enterprise performance in Argentina in four major areas:

a) The ratio of current savings to physical investment;

b) Current expenditures/current revenues.

ARGENTINA: IMPACT OF POLITICAL CHANGE ON PUBLIC ENTERPRISE PERFORMANCE, 1961-1981 TABLE 3

Public Enterprise Performance Variable (Equation)	Current Expenditures	Lagged Dependent Variable	Shift		Slope		RHO	Statistics		
			Political DUME	Dummy DUMF	Political DUME	Dummy DUMF		r^2	F	DW
Current Savings/Physical Investment	− 0.09	0.50	10.25				0.25			
	(− 0.53)	(2.82)	(2.76)				(1.13)	0.554	6.22	1.58
	− 0.16	0.51		15.65			0.41			
	(− 0.83)	(2.56)		(2.43)			(1.99)	0.442	3.96	1.48
	− 0.20	0.51			0.07		0.30			
	(− 1.18)	(2.83)			(2.72)		(1.37)	0.529	5.62	1.56
	− 0.26	0.52				0.10	0.41			
	(1.29)	(2.63)				(2.50)	(1.96)	0.454	4.15	1.51
Current Expenditures/Current Revenues	0.06	0.45	− 4.44				0.32			
	(0.82)	(2.61)	. (− 3.04)				(1.49)	0.546	6.02	1.70
	0.14	0.39		− 2.01			0.61			
	(1.53)	(1.96)		(− 2.65)			(3.34)	0.442	3.95	1.64
	0.11	0.46			− 0.03		0.74			
	(1.53)	(2.58)			(− 2.96)		(1.78)	0.517	5.34	1.71
	0.18	0.39				0.43	0.60			
	(1.98)	(1.99)				(− 2.63)	(3.28)	0.438	3.90	1.70
Capital Outlays/Revenue	0.14	0.66	3.79				− 0.70			
	(2.69)	(5.05)	(2.89)				(− 4.25)	0.810	21.31	2.11
	0.14	0.55		5.63			− 0.62			
	(2.51)	(3.65)		(2.34)			(− 3.46)	0.771	16.78	1.85
	0.10	0.62			0.03		− 0.68			
	(1.85)	(4.62)			(2.84)		(− 4.01)	0.804	20.57	2.05
	0.11	0.54				0.04	− 0.62			
	(1.78)	(3.59)				(2.43)	(− 3.44)	(0.775)	17.19	1.87
Debt Service/Revenue	0.11	0.91	3.76				− 0.88			
	(2.20)	(6.63)	(2.69)				(− 7.97)	0.797	19.61	1.98
	0.11	0.82		5.31			− 0.83			
	(1.86)	5.36		(2.14)			(− 6.69)	0.763	16.17	1.71
	0.08	0.88			0.03		− 0.87			
	(1.30)	(6.35)			(2.67)		(− 7.65)	0.794	19.35	1.93
	0.07	0.82				0.04	0.84			
	(1.14)	(5.37)				(2.27)	(− 6.75)	0.770	16.75	1.73

Source: See text for definition of symbols: ( ) = t statistics; F = F statistic; r^2 = correlation coefficient; DW = Durbin Watson Statistic.

c) Capital outlays/revenues, and
d) Debt service/revenues.

2) In general, the results are in conformity with what might be anticipated from the discussions above: military regimes tend to stress increased savings, reduced expenditures, greater capital formation and increased debt.

3) DUME consistently outperformed DUMF, indicating that the first civilian and first military regimes pursued somewhat different policies vis a vis the public enterprises.

4) Shift dummy variables were slightly superior to slope variables in depicting the role of political change.

Similar results (Table 4) were obtained for the major financial variables:

1) Military regimes tended to produce higher public enterprise incomes, lower salaries and benefits, and greater capital outlays.

2) The second military regime was more successful in obtaining these results than the first military regime.

The impact of the central government deficit on public enterprise performance was also tested. In general (Table 5):

1) The political change dummy variables produced results similar to those obtained above. Hence, there is reason to believe that the political change variable is fairly robust.

2) Increased central government deficits appear to reduce the ratio of public enterprise expenditures to reserves and capital outlays to revenues.

Based on the last result, it appears that public enterprises may, in fact, perform something of a stabilization role; i.e., there tends to be a negative relationship between the central government's deficits and the expenditures-capital outlays to revenue ratio of the public enterprises. That is, public enterprises appear to reduce their expenditure to revenue ratios in response to increased central government budgetary deficits.

Two additional indices of public enterprise produce the same picture (Table 6):

1) Central government budgetary deficits produce significant reductions in public enterprise salaries and benefits.

TABLE 4

ARGENTINA: IMPACT OF POLITICAL CHANGE ON PUBLIC ENTERPRISE FINANCIAL INDICES, 1961-1981

Public Enterprise Financial Indices (Equation)	Current Expenditures	Shift		Slope		RHO	Statistics		
		Political DUME	Dummy DUMF	Political DUME	Dummy DUMF		r^2	F	DW
(1) Current Income	0.99 (7.13)	8.10 (2.73)				0.36 (1.69)	0.790	30.14	1.63
(2)	0.59 (2.63)		8.09 (1.54)			0.50 (5.80)	0.332	3.97	1.63
(3)	0.87 (5.57)			0.05 (2.45)		0.44 (2.15)	0.739	22.69	1.66
(4)	0.47 (2.10)				0.04 (1.38)	0.84 (6.87)	0.268	2.93	1.65
(5) Salaries and Benefits	0.68 (9.64)	− 13.26 (− 7.46)				− 0.07 − 0.29	0.890	64.00	1.99
(6)	0.78 (6.14)		− 22.38 (− 5.64)			0.40 (1.89)	0.795	31.10	1.86
(7)	0.83 (9.98)			0.10 (− 7.34)		0.12 (0.52)	0.878	7.72	1.86
(8)	0.89 (7.20)				− 0.15 (− 6.36)	0.47 (2.33)	0.821	36.75	1.80

TABLE 5

ARGENTINA: IMPACT OF CENTRAL GOVERNMENT DEFICITS AND POLITICAL CHANGE ON PUBLIC ENTERPRISE PERFORMANCE, 1961-1981

Public Enterprise Performance Variable (Equation)	Central Government Deficit	Lagged Dependent Variable	Shift		Slope		RHO	Statistics		
			Political DUME	Dummy DUMF	Political DUME	Dummy DUMF		r^2	F	DW
(1) Savings/Investment	− 0.84	0.48	10.16				0.24			
	(− 0.44)	(2.73)	(2.74)				(1.10)	0.556	6.26	1.57
(2)	− 1.28	0.50	15.06				0.39			
	(− 0.60)	(2.51)	(2.37)				(1.82)	0.448	4.04	1.48
(3)	− 6.07	0.53			2.83		0.38			
	(− 2.15)	(2.78)			(2.62)		(1.80)	0.482	4.63	1.65
(4)	− 6.03	0.52				4.33	0.38			
	(− 2.18)	(2.75)				(2.68)	(1.79)	0.489	4.79	1.65
(5) Expenditures/Revenues	0.83	0.42	− 4.40				0.32			
	(1.12)	(2.52)	(− 3.07)				(1.47)	0.566	6.51	1.65
(6)	1.14	0.40		− 6.70			0.47			
	(1.38)	(2.46)		(− 2.70)			(2.34)	0.476	4.55	1.62
(7)	3.02	0.42			− 1.06		0.50			
	(2.72)	(2.46)			(− 2.48)		(2.52)	0.4421	4.00	1.79
(8)	3.01	0.42				− 1.63	0.50			
	(2.75)	(2.47)				(− 2.53)	(2.50)	0.453	4.5	1.80
(9) Capital Outlays/Revenue	2.41	0.37	4.22				− 0.53			
	(3.03)	(3.98)	(3.05)				(− 2.70)	0.793	19.14	2.09
(10)	2.79	0.38		6.74			− 0.32			
	(3.00)	(2.15)		(2.45)			(− 1.50)	0.722	12.98	1.87
(11)	3.02	0.42			− 1.06		0.50			
	(2.72)	(2.16)			(− 2.48)		(2.52)	0.442	4.00	1.79
(12)	3.00	0.42				− 1.63	0.50			
	(2.15)	(2.17)				(− 2.55)	(2.50)	0.453	4.15	1.80
(13) Debt Service/Revenues	1.94	0.85	4.02				− 0.78			
	(2.55)	(6.07)	(2.88)				(− 5.38)	0.798	19.81	2.00
(14)	1.86	0.76		5.64			− 0.72			
	(2.19)	(4.23)		(2.25)			(− 4.52)	0.759	15.76	1.70
(15)	− 1.12	0.63			1.90		− 0.65			
	(− 0.09)	(4.21)			(3.43)		(− 3.70)	0.811	21.48	1.99
(16)	− 1.01	0.64				2.86	− 0.64			
	(− 0.83)	(4.30)				(3.51)	(− 3.67)	0.814	21.91	2.06

Source: See text for definition of symbols: ( ) t statistics; F = F statistic; r^2 = correlation coefficient; DW = Durbin Watson Statistic.

TABLE 6

ARGENTINA: IMPACT OF POLITICAL CHANGE AND CENTRAL GOVERNMENT DEFICIT ON PUBLIC ENTERPRISE FINANCIAL INDICES, 1961-1981

Public Enterprise Performance Variable (Equation)	Central Government Deficit	Lagged Dependent Variable	Shift		Slope		RHO	Statistics		
			Political DUME	Dummy DUMF	Political DUME	Dummy DUMF		r^2	F	DW
(1) Salaries and Benefits	8.40	0.06	− 11.65				− 0.35			
	(4.75)	(0.35)	(− 5.52)				(− 1.67)	0.862	31.30	2.00
(2)	7.74	0.16		− 17.67			− 0.17			
	(3.83)	(0.93)		(− 4.54)			(− 0.74)	0.802	20.29	1.89
(3)	15.67	0.06			− 4.20		− 0.19			
	(6.23)	(0.35)			(− 5.54)		(− 0.82)	0.847	27.89	2.09
(4)	15.73	0.04				− 6.40	− 0.22			
	(6.47)	(0.26)				(− 5.78)	(− 0.97)	0.859	30.55	2.12
(5) Capital Outlays	14.48	0.63	17.67				0.75			
	(3.71)	(4.47)	(3.17)				(− 4.89)	0.945	87.44	1.76
(6)	15.55	0.58		25.65			− 0.50			
	(3.07)	(2.80)		(1.96)			(2.49)	0.905	47.87	1.50
(7)	0.634	0.45			7.73		− 0.21			
	(1.11)	(2.80)			(2.80)		(− 0.93)	0.885	38.48	1.68
(8)	6.27	0.44				12.17	− 0.23			
	(1.17)	(2.39)				(3.05)	(− 1.03)	0.895	42.68	1.72

Source: See text for definition of symbols:
( ) = t statistics;
F = F statistic
r^2 = correlation coefficient
DW = Durbin Watson statistic

TABLE 7

ARGENTINA: IMPACT OF CENTRAL GOVERNMENT DEFICITS AND POLITICAL CHANGE ON PUBLIC ENTERPRISE FISCAL PERFORMANCE, 1961-1981

Public Enterprise Performance Variable (Equation)	Central Government Deficit	Lagged Dependent Variable	Shift		Central Government Expenditure	RHO	Statistics		
			Political DUME	Dummy DUMF			r^2	F	DW
(1) Public Entreprise Deficits	− 0.25	0.47				− 0.03			
	(− 3.14)	(3.20)				(− 0.12)	0.712	19.75	2.24
(2)	− 0.25	0.50	0.12			− 0.17			
	(− 3.33)	(3.75)	(0.94)			(− 0.76)	0.776	17.35	2.16
(3)	0.24	0.52		0.14		− 0.15			
	(− 3.23)	(3.86)		(0.69)		(− 0.69)	0.766	16.32	2.17
(4)		0.55	0.14		− 0 02	− 0.17			
		(4.57)	(1.18)		(− 3.67)	(− 0.29)	0.797	19.59	2.08
(5)		0.58		0.18	− 0 02	− 0.15			
		(4.65)		(0.91)	(− 3.54)	(− 0.67)	0.782	17.95	2.09
(6) Public Enterprise Expenditures	0 36	0.61				− 0.57			
	(3.36)	(5.30)				(− 2.99)	0.820	36.49	2.21
(7)	0.36	0.61	− 0.01			− 0.57			
	(3.26)	(5.13)	(− 0.04)			(− 3.02)	0.821	22.91	2.21
(8)	0.36	0.61		− 0.01		− 0.56			
	(3.25)	(4.76)		(− 0.01)		(− 2.98)	0.819	22.76	2.21
(9)	0.03	0.62				− 0.60			
	(4.00)	(6.08)				(− 3.23)	0.850	45.44	2.23
(10)	0.03	0.63	− 0.07			− 0.63			
	(3.96)	(6.11)	(− 0.44)			(− 3.50)	0.857	30	
(11)	0.03	0.64		− 0.10		− 0.63			
	(3.94)	(5.78)		(− 0.34)		(− 3.51)	0.850		

Source: See text for definition of symbols:
( ) = t statistics;
F = F statistic
r^2 = correlation coefficient
DW = Durbin Watson statistic

2) These reductions are particularly severe during periods of military rule.

3) While military regimes tend to increase capital outlays over the levels that might be anticipated under civilian rule, central government budgetary deficits appear to result in austerity measures on the part of the public enterprises.

The overall impact of central government budgetary deficits and expenditures and regime change on public enterprise deficits and expenditures (Table 7) presents a slightly different picture:

1) Public enterprise deficits as a whole tend to move in the opposite direction from the central government budgetary deficits.

2) Increases in central government expenditures tend to be offset with reductions in the public enterprise deficits.

3) Increased central government deficits tend to reduce public enterprise expenditures.

4) Political change per se does not appear to affect the overall share in GDP of public enterprise deficits or expenditures.

In sum, the results obtained above indicate that in the net public enterprises have played a significant role in Argentina's stabilization efforts. Budgetary changes on the part of the public enterprises appear to be influenced in part by the desire of public sector managers to offset overall movements in the central government's budgetary position. Within this environment, military regimes have been consistently more investment and growth oriented than their civilian counterparts.

5. *Conclusions*

The literature on Third World arms production has often posed the question as to why developing countries undertake indigenous arms production. While reasons usually vary from strategic to political motives, the results presented above indicate that another powerful motive may exist – the creation of an industrial base under the direction of the public authorities capable of performing a powerful role in overall economic management. Within this context, the nature of the performance of the public enterprises will be significantly affected by changing political priorities.

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CAMBIAMENTI POLITICI E IMPRESA PUBBLICA: IL CASO DELL'ARGENTINA

Nonostante la crescente presenza di imprese pubbliche nel Terzo Mondo, si sa ben poco sui fattori che influiscono sulla loro efficienza economica. In particolare vi è una grandissima scarsità di analisi sul loro ruolo macroeconomico e in particolare sugli effetti di stabilizzazione delle industrie belliche pubbliche. Un problema collegato è il grado di controllo esercitato dal governo centrale sulle imprese pubbliche. Più specificatamente, i governi militari sono più capaci dei governi civili di inserire l'attività dell'impresa pubblica in un programma generale di stabilizzazione? Se così è, i governi militari sono tutti simili a questo riguardo?

Prendendo come esempio l'Argentina, lo scopo di questo articolo è di determinare il modo in cui l'attività dell'impresa pubblica viene influenzata da un cambiamento di regime e, in particolare, il modo in cui le imprese pubbliche possono contribuire agli sforzi di stabilizzazione nazionale.

I risultati di questa analisi indicano che nel complesso le imprese pubbliche hanno avuto un ruolo significativo negli sforzi di stabilizzazione dell'Argentina. Le variazioni di bilancio per quanto riguarda le imprese pubbliche sembrano essere influenzate in parte dal desiderio dei dirigenti del settore pubblico di compensare il movimento complessivo della politica di bilancio del governo centrale. Entro questo ambito, gli obiettivi dei regimi militari si sono orientati molto più dei regimi civili verso l'investimento e la crescita.

RECENSIONI

HARSANYI John C.: *L'utilitarismo*, a cura di Simona Morini. 1988, Milano, Il Saggiatore, pp. xxx + 170, Lire 25.000.

In questo volume si trovano per la prima volta riuniti alcuni importanti contributi di J.C. Harsanyi. L'edificio teorico concepito e realizzato da Harsanyi, attraverso circa quarant'anni di ricerche, professa di servirsi della moderna teoria delle decisioni per fare dell'etica una parte organica della teoria generale del comportamento razionale, secondo quanto lo stesso Harsanyi ebbe a scrivere in un suo saggio (*Social Research*, 1977). Una espressione di questo genere può in realtà suonare alquanto aggressiva, e perciò attraente, ma anche non priva di una certa qual « sproporzione concettuale » tra i termini impiegati.

In questa raccolta la posizione di Harsanyi viene argomentata con cura; proprio per sottolinearne gli aspetti e le implicazioni più generali sono stati scelti saggi adatti a un pubblico relativamente ampio di studiosi, pur senza trascurare anche le parti più tecniche della teoria. Il rinnovato favore incontrato in molti settori della ricerca politica (inclusa l'economia) dalle teorie della giustizia ha reso queste ultime particolarmente « popolari » negli ultimi vent'anni. Tra di esse hanno, ovviamente, grande importanza le concezioni utilitariste delle quali John Harsanyi è tra i principali esponenti. Economista del benessere e sostenitore di una completa integrazione tra teoria morale e teoria economica – come parti di una teoria generale del comportamento, ossia della *scelta*, razionale – Harsanyi si propone qui prima di tutto in veste di filosofo, presentando l'antologia come la prima raccolta dei suoi « contributi più importanti alla costruzione di una teoria etica di impostazione utilitaristica all'altezza dei problemi complessi che la nostra società deve affrontare per continuare a crescere nella prosperità ». La curatrice ha lavorato con intelligenza e rigore, dimostrando tra l'altro, specie con la sua introduzione, tutta la sensibilità con la quale il contributo di Harsanyi può venire accolto in taluni ambienti intellettuali italiani.

A partire dal primo saggio, « Verso una teoria generale del comportamento razionale » (*Advances in Understanding Rational Behaviour*, 1977) l'autore muove una critica al modello di razionalità mezzi-fini, sostenendo che esso è troppo limitato e deve quanto meno trovare estensione nel modello preferenze-opportunità, basato sul concetto di costo alternativo, per includere la scelta *tra* fini; quest'ultimo è appunto – occorre osservare – il modello consolidato in economia. Tuttavia un tale apparato teorico è limitato a condizioni di certezza. La sua generalizzazione ed altre situazioni comprendenti rischio e incertezza comporta, secondo l'autore, l'impiego della teoria bayesiana ossia della concezione soggettiva della probabilità (è questo il campo della « teoria della decisione »). È a questo punto – occorre notarlo – che Harsanyi pone la premessa di fondo della sua etica e si distacca al tempo stesso da altri teorici della giustizia, tra loro per altri aspetti assai diversi, come Rawls o Hayek, i quali ritengono invece inapplicabile in questo campo *qualsiasi* concezione di probabilità, compresa quella bayesiana.

Fatto questo passo, non è difficile intravvedere come la razionalità decisionale bayesiana, fatta propria da Harsanyi, si trasformi ben presto in razionalismo etico di stampo utilitaristico. Harsanyi distingue infatti – all'interno della teoria generale del comportamento razionale – tre branche o tre livelli: 1) la teoria dell'utilità, che riguarda l'individuo e include tanto il modello preferenza-opportunità quanto lo schema di « teoria della decisione »; 2) la teoria dei giochi, che estende il campo dell'incertezza al caso della interazione strategica tra *più* individui; 3) l'etica, come teoria dei giudizi di valore razionali, intesi come giudizi razionali di preferenza basati su criteri impersonali e imparziali.

In questo volume il secondo livello è accennato e discusso in vari luoghi, ma per lo più si rinvia a precedenti lavori e in particolare al ben noto volume del 1977 *Rational Behaviour and Bargaining Equilibrium in Games and Social Situations*, tradotto esso pure dal Saggiatore a cura della Morini nel 1985 (recensito in questa *Rivista*, 1985, vol. XXXII, pp. 1115-17). La presente antologia è soprattutto interessata al terzo livello, che è al centro della trattazione specie nei capp. 2 e 3, dedicati rispettivamente a « Teoria della decisione bayesiana e etica utilitarista » (*Bayesian Decision Theory, Rule Utilitarianism and Arrow's Impossibility Theorem*, 1979) e « Utilità individuali e etica utilitarista » (*Individual Utilities and Utilitarian Ethics*, 1986). In questi saggi l'autore si sente impegnato in un'opera di persuasore, con frequenti richiami alla diffusa resistenza nell'apprezzare le implicazioni del concetto di razionalità bayesiana nel campo dell'etica e dell'economia del benessere.

Sul piano etico, dunque, Harsanyi si richiama anzitutto al suo teorema – pubblicato nel *Journal of Political Economy* del 1955 e qui tradotto nell'Appendice « Benessere cardinale, etica individualistica e confronti interpersonali di utilità » (si veda però anche il cap. IV, *Morality and Social Welfare*, del volume già citato del 1977) – teorema col quale egli dimostra che i postulati di razionalità bayesiana assieme alla condizione paretiana e a un assioma di « simmetria » (ossia di egual trattamento di tutti gli individui) implicano una funzione del benessere sociale *utilitarista*, ossia additiva. In questo ragionamento Harsanyi introduce la distinzione tra le preferenze *personali* degli individui – che entrano nelle funzioni di utilità dei medesimi – rispetto alle preferenze *morali* che entrano invece nella funzione del benessere sociale. Come si può effettivamente applicare – ci si potrebbe allora chiedere – una tale distinzione tra l'aspetto personale delle preferenze e l'aspetto morale, che richiede imparzialità e presiede alla formazione dei giudizi di valore? Si tratta di un punto delicato ed importantissimo per il filosofo morale, poiché tocca da vicino il problema dell'universalità della morale di fronte al particolarismo individuale. Tale problema fu e rimane momento centrale delle concezioni kantiane: tuttavia, secondo il nostro autore, non è necessario aderire a queste ultime per darne una soluzione soddisfacente. Harsanyi appoggia la sua teoria sopra un duplice fondamento.

Da un lato egli formula un modello di equiprobabilità per i giudizi di valore e dall'altro egli sostiene che i giudizi di valore stessi debbono riguardare la scelta di *regole* di decisione anziché la decisione su atti singoli. Equiprobabilità qui significa che l'imparzialità del giudizio di valore viene garantita dal fatto che il giudizio stesso è formulato sotto un velo d'ignoranza, simile a quello rawlsiano, con la differenza di supporre qui che l'ignoranza conduca a un assunto di equiprobabilità per l'individuo di trovarsi in qualunque delle situazioni sociali possibili ed equiprobabili. Naturalmente questa posizione si basa sopra un'estensione – contestata, per esempio, da Rawls e diffusamente discussa – alla teoria morale dell'impiego dell'utilità cardinale di von Neumann-Morgenstern (nel senso di poter parlare di differenze di utilità nelle scelte *morali* in condizioni di incertezza) e sopra l'ammissione di confronti interpersonali di utilità (su quest'ultimo punto, che presuppone alla base della teoria morale una certa capacità di empatia degli individui, converrà tornare tra un momento).

In secondo luogo per la formazione di giudizi di valore, che siano accettabili per il loro

carattere distaccato e universale, occorre, secondo Harsanyi, parlare di utilitarismo delle *regole* e non degli atti. Si tratta di una distinzione spesso ricondotta, come anche Harsanyi ricorda, a un lavoro di Roy Harrod (« Utilitarianism Revisited », in *Mind*, 1936), ma che in realtà, bisogna riconoscerlo, è più antica (Hayek la faceva risalire a William Paley). Il concetto è ampiamente controverso e Harsanyi dedica molte energie a sostenere la validità della distinzione tra utilitarismo delle regole e degli atti come teorie morali *diverse* tra loro. In definitiva, secondo Harsanyi, l'utilitarismo delle regole sarebbe in grado di generare i desiderabili effetti di aspettativa e di incentivazione e, lungi dal creare quella sorta di « idolatria delle regole » (della quale Harsanyi accusa invece i kantiani) che talora viene ad esso attribuita, permette di identificare « quel particolare insieme di eccezioni a ogni data regola che, se consentite, massimizzerebbero l'utilità sociale ». In tal modo Harsanyi ritiene evidentemente di avere indicato, in buona sostanza, una « via di mezzo » tra l'utilitarismo (preso nella sua forma più immediata, che è quella degli atti) e le teorie di derivazione kantiana. A chi obiettasse all'utilitarismo di non interessarsi dell'uomo come persona, ma di considerarlo semplicemente come veicolo di utilità, Harsanyi è così in grado di opporre il temperamento di un consequenzialismo meditato e mediato attraverso l'utilitarismo delle regole. Egli giunge ad affermare, nel suo saggio su Rawls del 1975 (qui cap. 5), che la sua teoria è, agli effetti pratici, solo marginalmente superiore a quella di Rawls e che « nella maggior parte delle situazioni le implicazioni pratiche della teoria di Rawls non sarebbero molto diverse da quelle delle teorie utilitariste »: la differenza marginale è però importante quale insieme dei controesempi che indicano la cattiva prova del principio di fondo della teoria avversaria. Infine, ancora in polemica con Rawls, Harsanyi riprende la sua difesa dei confronti interpersonali di utilità: essi sono, in breve, il frutto di un procedimento empatico che, se indubbiamente « presenta delle difficoltà », tuttavia non può essere pretermesso in nessuna teoria morale ragionevole, perché appartiene necessariamente alla nostra esperienza di moralità. Questo sembra in effetti l'argomento di ultima istanza usato dall'autore: che non avrebbe cioè senso « negare la legittimità di una operazione mentale che tutti noi eseguiamo ogni giorno e di cui può essere data una analisi logica soddisfacente ».

Di fronte a una così appassionata perorazione dobbiamo dunque persuaderci a sposare i destini della teoria economica con quelli dell'utilitarismo? La questione è divenuta scottante. La teoria economica ha già sperimentato in forma almeno altrettanto seducente questa tentazione, di fronte alla quale occorre ammettere che i dubbi e le reticenze sono oggi certamente più forti di quanto fossero, per esempio, ai tempi di Sidgwick o di Edgeworth. La teoria generale della razionalità proposta da Harsanyi offre una prospettiva di grande interesse per l'economista, ma, certamente, non l'unica prospettiva possibile. L'economia politica come disciplina rimane presumibilmente compatibile con una molteplicità di posizioni etiche, a sottolineare il fatto che teoria etica e teoria economica restano campi distinti, perfino quando, come è il caso dei lavori di Harsanyi, fanno uso di procedure similari. Questa considerazione credo debba mettere in guardia contro troppo facili generalizzazioni correnti in tema di reinserimento della dimensione etica all'interno dell'economia politica. Se si tratta di rafforzare il senso della rilevanza della concezione etica per il lavoro teorico dell'economista, questo è certamente qualcosa che, metodologicamente e contenutisticamente, il volume di Harsanyi ci aiuta a ricordare e riscoprire; ma, naturalmente, un tal senso di rilevanza non scalfisce la posizione robbinsiana, che solo superficialmente può apparire toccata da tutto il razionalismo etico – non soltanto di matrice utilitarista – che attualmente domina la scena intellettuale. Il volume è dunque di grande interesse ed è utilmente servito dall'apparato editoriale ben predisposto dalla curatrice.

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