



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org



DO 2421

United Nations Industrial Development Organization

Disc.
LIMITED
ID/WG.76/3
30 November 1970
ORIGINAL: ENGLISH

Working Group Meeting on Economics of Scale
in the Latin American Automotive Industry 1/
Santiago, Chile, 21-30 September 1970

THE ROLE OF INTERNATIONAL FIRMS IN THE
LATIN AMERICAN AUTOMOTIVE INDUSTRY 2/

by

Russell Martin Moore, Ph.D.

-
- 1/ Organized jointly by the Economic Commission for Latin America (ECLA), the Inter-American Development Bank (IDB) and UNIDO.
 - 2/ The views and opinions expressed in this paper are those of the author and do not necessarily reflect the views of the secretariat of UNIDO. This document has been reproduced without formal editing.

We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.

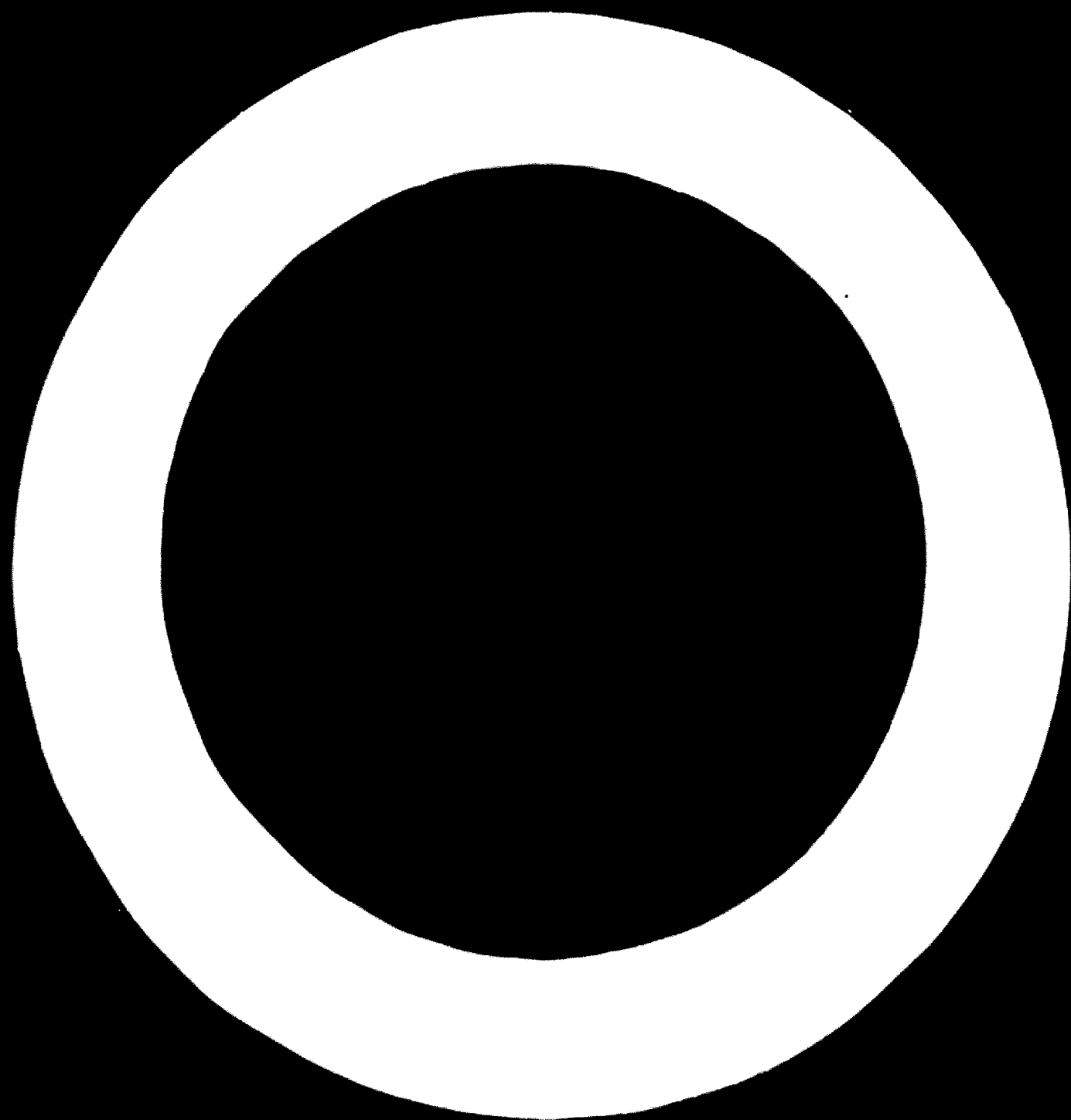


TABLE OF CONTENTS

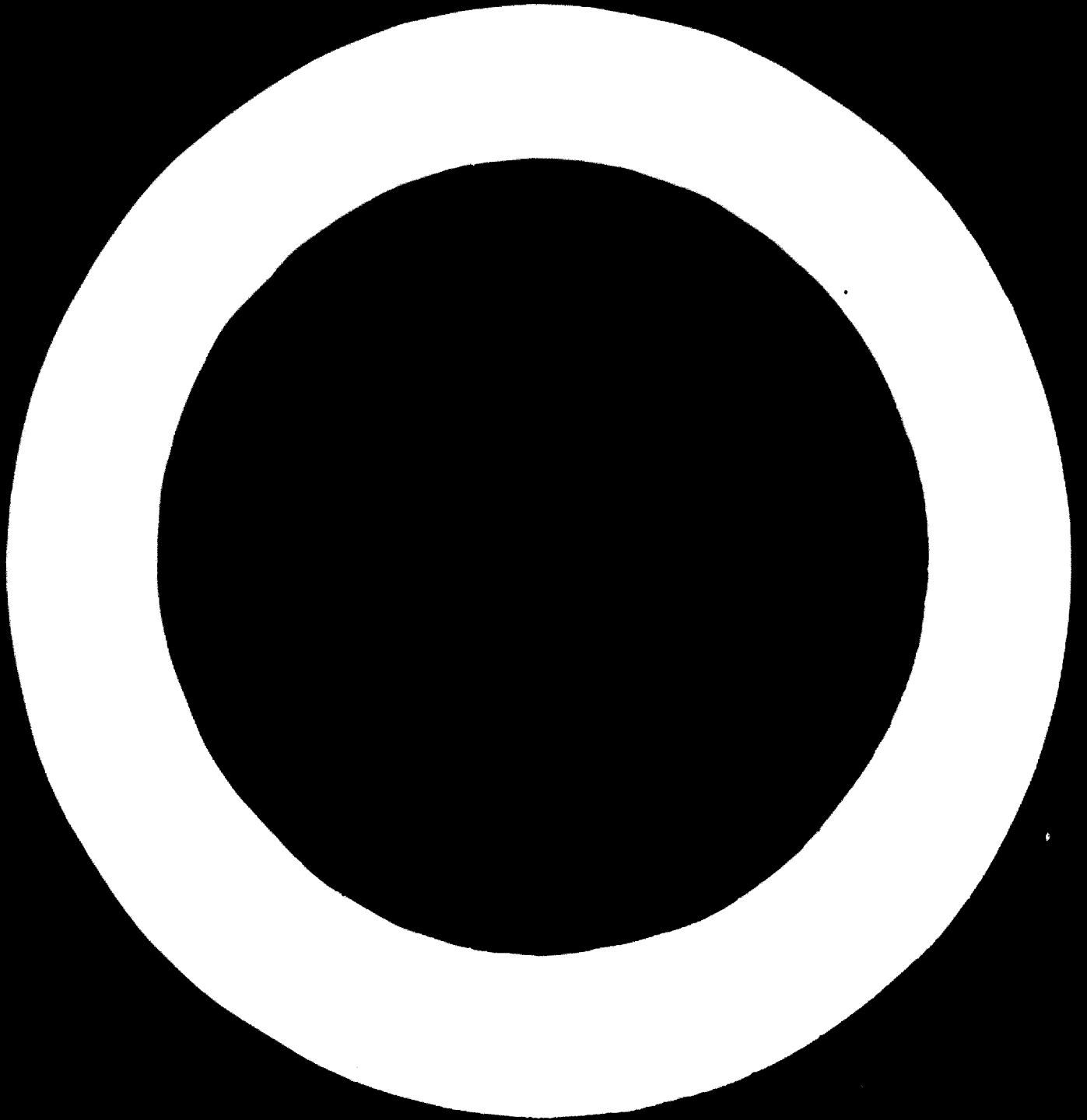
	<u>Page</u>
1. Introduction	1
2. Characteristics of the world automotive industry ...	3
3. The automotive industry in Latin America	4
a) Contributions and problems of the industry	5
b) Discussion of the basic problems	5
4. Analysis of the Brazilian case	7
a) The terminal manufacturers	9
b) The suppliers	12
c) The Government	15
5. Conclusions: policy recommendations	19
a) The terminal manufacturers	19
b) The foreign controlled suppliers	20
c) The locally controlled suppliers	20
d) The governments	20

Tables

Table 1	Vehicle manufacturers in Argentina and Brazil ..	10
Table 2	Loading automotive producing nations - 1968 ..	22
Table 3	Latin American automotive markets - 1965	23

Diagrams

Diagram I	Conflict between national development goals and means of achieving them	2
Diagram II	Decision structure for Brazilian automotive policy	17



THE ROLE OF INTERNATIONAL FIRMS IN THE LATIN AMERICAN AUTOMOTIVE INDUSTRY

by Russell Martin Moore *, Ph. D.

"The imperatives of technology and organization, not the images of ideology, are what determine the shape of economic society."

J. K. Galbraith

1. Introduction

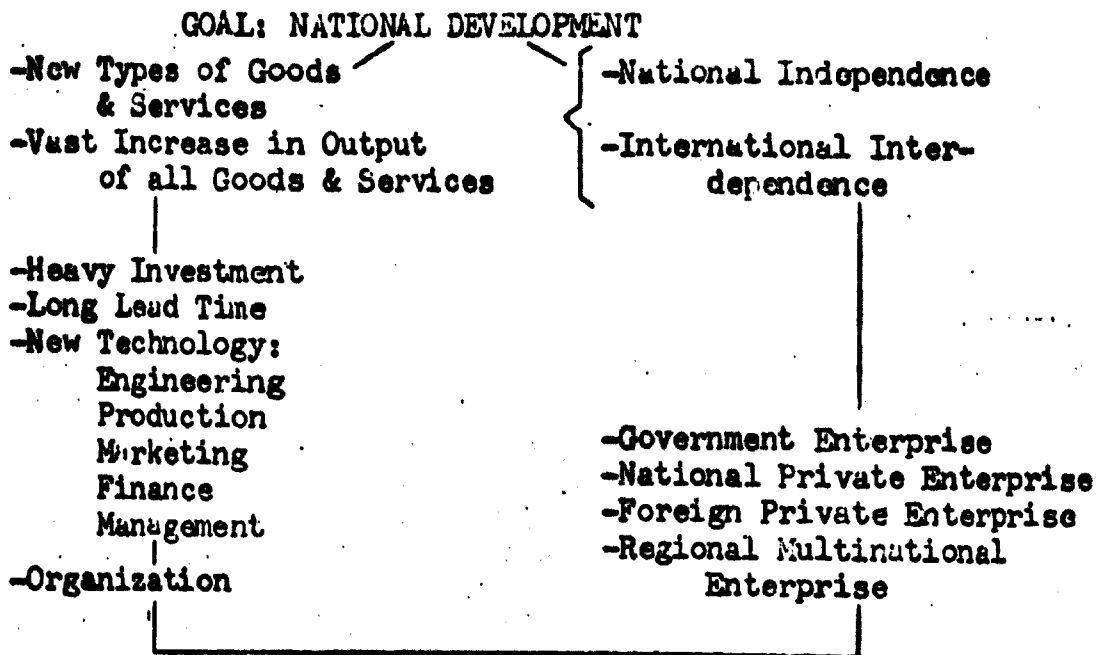
The desire of Latin American governments to promote social, economic, and political development can create the necessity for hard choice between sometimes conflicting sub-aspects of the general developmental goal. An illustration of this is the conflict between the objective of promoting a qualitative and quantitative change in the goods and services produced by their national economies, and the desire for increased national independence when defined as attaining complete autonomy of decision-making with respect to each economic sector. Such conflict stems from the technological implications of producing "modern" goods and services. To produce these goods efficiently it is imperative that the basic technical relationships of their production not be violated. This often implies heavy capital investment in product development, production process development, as well as long gestation periods and the establishment of extensive distribution networks. The key pre-requisite, however, is the organizational ability to develop, accumulate and co-ordinate the myriad physical and human resources necessary for producing the desired final output. A very high production volume is often required to permit the effective utilization of these technical and organizational inputs in terms of minimizing the unit costs of final output.

* Latin American Teaching Fellow, the Fletcher School of Law and Diplomacy, Tufts University, on assignment as Visiting Professor of International Economics, Escola de Administração de Empresas da Fundação Getúlio Vargas. The research on which this paper is based consisted of a series of 120 in-depth interviews with government, trade association and corporate officials in Brazil, Chile, Uruguay, Canada and the United States. In addition, the author was associated for several years with two international firms active in the Latin American automotive industry, one a supplier, one a terminal manufacturer.

In Latin American societies there are four general sources of organizational ability: the government, the national private sector, the foreign private sector, and, potentially, regional multinational enterprises. For many product lines only the international firm currently possesses in relatively fully developed form the broadly defined organizational capacity to produce the desired modern goods. The choice of one of the other three alternatives as the prime productive agent rather than the international company may involve a substantial increase in short and medium term costs when viewing the choice in economic terms. But to rely on international firms to produce the desired goods and services may imply the social and political cost of accepting a relatively high level of international interdependence, which seems to conflict with the other developmental goal of increasing national independence. One compromise often adopted has been to utilize international firms but maintain national control of decision-making by attempting to cut the national market off from the international market. Unfortunately, this policy often leads to violation of one of the requisites for productivity: the necessity for high volume in order to reap the benefits of economies of scale in engineering, production, marketing and finance.

Diagram I

CONFLICT BETWEEN NATIONAL DEVELOPMENT GOALS
AND MEANS OF ACHIEVING THEM



/The point

The point of view suggested in this paper is that acceptance of a higher degree of policy interdependence with respect to individual sectors may ultimately increase the overall independence of the various countries in the sense of their being able to generate the resources necessary to elevate the well-being of their citizens. The following impressions regarding the Latin American automotive industry illustrate the foregoing point of view.

2. Characteristics of the world automotive industry

A striking characteristic of the automotive industry is its rapidly increasing international interdependence. Vehicle production in the western market economies is concentrated among fifteen firms which supply approximately 90 per cent of total output. International movements of products, production techniques, financial resources and managerial talent is increasingly the rule among the industrialized countries. Competition in this international market seems to be forcing a continually higher degree of industry concentration, with some observers suggesting that in the near future it will be difficult for any firm with an annual output of less than two million units to survive. The implication is that any country - including one with the technological abilities of the Soviet Union - will have to accept some sort of collaboration with the dominant international companies if it is to have an automotive industry for a reasonable cost.

A second important characteristic of the automotive industry is the heavy reliance of the terminal manufacturers on independent suppliers of parts and components. It is often more efficient for the terminal manufacturers to rely on outside suppliers (who can reap the scale economies of selling to the entire industry) rather than to produce items internally. Not only do the specialized suppliers often have production cost advantages, but they also assume some responsibility for the technical development of their products. Most independent suppliers are relatively small firms, but some highly diversified suppliers specializing in the most complex parts have developed into giant international firms in their own right: Borg Warner, Joseph Lucas, Eaton, Robert Bosch, North American Rockwell, TRW, Clark, Zahnradfabrik Friedrichshafen, and Dana, to name a few of the most prominent.

/Relationships between

Relationships between terminal manufacturers and parts suppliers are extremely close, in conformity with the close coordination required to successfully mass produce products as complex as motor vehicles. Nevertheless, one of the factors contributing to efficient vehicle production seems to be the strong competitive relationships which also exist between terminal manufacturers and independent suppliers. The threat of vertical integration forces suppliers to constantly attempt to lower their costs and improve their products. Additionally, the terminal manufacturers are anxious to have at least two sources for all components in order to play competing suppliers (or suppliers and their own divisions) off against each other, as well as to provide insurance against supply disruptions. Terminal manufacturers and suppliers are in a situation of strong mutual dependency, but the terminal manufacturers in the industrialized countries clearly are dominant in the relationship.

3. The automotive industry in Latin America

In the past fifteen years several Latin American governments have taken steps to encourage the development of automotive manufacturing activities within their national economies. There have been three basic motivations for this policy: firstly, balance of payments constraints have often made it difficult to maintain vehicle imports at a level sufficient to supply the transportation necessities of growing economies; secondly, automotive manufacturing activities have been presumed to impart considerable developmental benefits in terms of backward and forward linkage effects on the overall economy; and thirdly, local production has been encouraged to reduce political and economic dependence on the industrial countries. To force the industry to migrate from its traditional centers in Europe and North America import substitution policies have been implemented which have explicitly accepted the high short term costs of infant industries in order to reap the long term gains resulting from structural change in the various Latin American economies.

The enterprises participating in the Latin American automotive industries are a mixed group of international and national firms, although in some cases state-owned enterprises have been utilized. International firms have become increasingly dominant in the terminal manufacturing

/sector because

sector because of their lack of financial, technical, and managerial resources. The reliance on foreign investors to supply much of the entrepreneurial ability in the various Latin American automotive industries has maintained the ties with the world industry in terms of finance, engineering, and general organization, but the extremely restrictive protective barriers have minimized production and marketing coordination with the outside world.

(a) Contributions and problems of the industry

The automotive import substitution programs have had impressive success in encouraging manufacturing activities. Substantial levels of output and employment have been achieved, and it is obvious that the technical and managerial resources of the various national economies have increased. Four interrelated problems still surround the activities of the industries, however: vehicles produced in Latin American countries continue to cost from 30 to 150 per cent more than similar vehicles produced in the industrial countries;^{1/} the range of consumer choice is relatively limited; product quality is sometimes below international standards; and foreign exchange earnings beyond import savings are practically nil. To maximize the benefits deriving from automotive manufacturing activities new policies must be developed to deal with these remaining problems which go beyond the original conceptions of the import substitution programs. The question is, how can a legal framework be created which will lead to a steady progression from infant industry to adolescent to adult?

(b) Discussion of the basic problems

There seem to be two fundamental reasons why production costs for Latin American produced vehicles are comparatively high. Firstly, the limited size of each isolated domestic market, and the large number of producers within each market, mean that the basic conditions for individual producers to achieve efficiency do not exist. Most studies indicate that

^{1/} For examples of comparative production costs on motor vehicles produced in Argentina, Brazil, Mexico and the U.S., see Jack Baranson, Automotive Industries in Developing Countries (unpublished World Bank Report N° EC-162, May 31, 1968), pp. 29-31.

/optimum production

optimum production volume for motor vehicles is at least 100 000 units annually.^{2/} In all of Latin America only one producer, Volkswagen in Brazil, has been able to expand production beyond this level. The average volume for other major producers in Argentina and Mexico is approximately 25 000 units, and in Brazil around 40 000 units per year. Even this volume is often divided among several vehicle types. Likely rates of market growth indicate that it will be at least five to ten years before additional producers can raise their volume to the probable optimum level, unless substantial export sales of components and/or finished vehicles can also be generated.

Secondly, the tendency to compartmentalize each national market behind protective barriers has tended to limit competition. Increased competition between terminal manufacturers, parts suppliers, and terminal manufacturers and suppliers would have the salutary effect of squeezing out possible monopoly profits, and forcing an improvement in product quality. A controlled increase in imports might be a possible way to effectively increase competition.

The stakes of the Latin American governments in solving these problems are extremely high. If their respective automotive industries are not forced to become more productive, transportation equipment which has the highest priority in development programmes will continue to be unnecessarily expensive; scarce resources will continue to be allocated to the inefficient vehicle industry at the expense of other priority sectors; and their most important modern industry will continue to contribute almost no earnings of foreign exchange.

The key to solving the problems of the Latin American automotive industries seems to be the creation of policies which would allow a reasonable degree of integration of the various industries into international markets. No Latin American automotive industry is completely ready to meet the full blast of international competition: costs are still

^{2/} See, for example, Chapter VI in George Maxcy and Aubrey Silberston, The Motor Industry, Cambridge Studies in Industry (London: George Allen and Unwin, Ltd., 1959).

/too high

too high, quality still needs to be improved, and saleable products must be developed. As an interim measure to deal with "adolescence" the creation of a regional or several sub-regional Latin American automotive markets would seem to have good possibilities. But the maze of direct and indirect protective measures which surround each Latin American automotive industry does not permit meaningful regional integration in spite of much verbal support for such a development which has been given by governmental officials, private sector spokesmen, and representatives of international agencies over the past fifteen years. Export incentives have become abundant, but reciprocal treatment which would also give special incentives to a substantial level of regional imports has generally not been given. With everyone desirous of exporting, but reluctant to allow imports on a preferential basis, such regional trade as does exist has been insufficient to generate a positive impact on costs. The rationale of regional integration would be to allow international specialization, realization of economies of scale, lowering of costs and prices, and a resulting output expansion much greater than would be possible without specialization. In the long run the investment generating and employment creating effects of the automotive industry in individual countries would be greater if the industry were able to perform on a more efficient cost basis.

One reason for lack of progress toward creating a regional market has been the difficulty in unravelling the complex interests of governments, national firms, and international firms. The following analysis of the Brazilian case will illustrate how these sometimes conflicting interests and objectives create obstacles to the integration of the Brazilian automotive industry into a regional industry.

4. Analysis of the Brazilian case

Some of the many barriers to establishing regional trade in automotive products are derived from general environmental factors: lack of transportation infrastructure, endemic inflation, unequal rates of external currency devaluation, and periodic political uncertainties. However, in the writer's view these problems are of a secondary nature, and the primary

/barrier to

barrier to trade within the region is derived from the complex nature of the interrelationship between the institutions most involved in the question of establishing a regional market: the governments, the terminal manufacturers, and the suppliers.

The automotive import substitution policy in Brazil has been a spectacular success in many ways. Volume in 1970 can be expected to exceed 400,000 units, allowing the Brazilian industry to retain its ranking as the eleventh largest producer among countries with market economies. Some optimistic observers believe that industry volume will achieve 1,000,000 units by 1980, and that market saturation is not in sight. Local content in Brazilian produced vehicles is close to 100 per cent computed on a weight basis. The major criticisms of Brazilian industry performance are that vehicle prices continue above world market levels, and export volume is extremely limited.

Extensive government incentives are available to all industrial product exporters including those in the automotive industry, but as of this writing there has been relatively little response from either the terminal manufacturers or parts suppliers.^{3/} The main barrier to increasing Brazilian automotive exports to the industrial countries is that costs (and sometimes quality) do not yet meet international standards. The reason why Brazil is unable to achieve significant export volume to Latin American countries is that its existing local content legislation precludes meaningful imports of vehicles or components from any source. If local content regulations were relaxed in a way which would give preference to the automotive products of other Latin American countries - matching already existing legislation in many of these countries - important trade prospects would exist, especially with respect to Argentina, Venezuela, and Mexico.

^{3/} For example, in 1969 only 68 vehicles were exported compared with a total production of over 350,000 units. Interestingly, all companies interviewed expressed strong interest in exporting (with no restrictions as to which particular markets).

/(a) The

(a) The terminal manufacturers

The terminal manufacturers have been the strongest advocates of creating a regional automotive market, but even their advocacy has been relatively uncertain, for three reasons: firstly, competitive interests between the various companies differ with respect to integration; secondly, internal organizational factors have tended to limit the effectiveness of efforts to promote integration; and thirdly, the reluctance of governments and suppliers to accept regionalization, which has sometimes increased in response to terminal manufacturer advocacy, has limited practical results of terminal manufacturer proposals.

Table 1 below illustrates the potential conflicts which may exist between terminal manufacturers on the issue of possible integration of the Argentine and Brazilian automotive industries. Volkswagen of Brazil is clearly in a class by itself in terms of annual production volume. The other major producers - Ford, General Motors, Fiat, Renault, Chrysler, Peugeot, and Citroen - all have similar volume ranging from approximately 15,000 - 30,000 for individual vehicle types.^{4/} It is likely that all of their cost structures are fairly similar to each other's, but differ substantially from that of Volkswagen, which would seem to have a tremendous potential cost advantage due to internal economies. Complete integration of the Argentine and Brazilian industries allowing free trade in vehicles and components would change the picture. Ford and General Motors, as well as Chrysler and Mercedes Benz, would have great potential gains because of the possibility of rationalizing their existing duplicate facilities. Fiat, Renault, Peugeot, and Citroen would have new market opportunities and new supply sources, but would not have the same possibility of benefitting from internal rationalization because they are one country producers. Additionally, they would be confronted with new competition from Volkswagen, which

^{4/} Mercedes Benz is considered to be a special case because of its concentration on medium and heavy commercial vehicles rather than passenger cars and light-to-medium commercial vehicles.

Table 1
 VEHICLE MANUFACTURERS IN ARGENTINA AND BRAZIL
 1969 Production levels
 (Thousands of units)

Company	Argentina	Brazil	Total
Volkswagen	-	178.2	178.2
Ford-Willys	36.1	88.8	124.9
General Motors	30.4	52.8	83.2
Fiat	49.5	-	49.5
IKA - Renault	34.3	-	34.3
Chrysler	17.9	11.8	29.7
Mercedes-Benz	5.8	17.3	23.1
SAFRAR (Peugeot)	20.6	-	20.6
Citroen	15.3	-	15.3
I.M.E.	7.7	-	7.7
I.A. Santa Fé (DK)	1.0	-	1.0
FNM	-	2.2	2.2
Scania Vabis	-	1.0	1.0
Toyota	-	0.9	0.9
Magirus Deuts	-	0.4	0.4
Puma	-	0.3	0.3
DECA I.C.S.A.	0.1	-	0.1
<u>Total</u>	<u>214.7</u>	<u>353.7</u>	<u>572.4</u>

Source: Argentina: Asociación de Fábricas de Automotores,
 Informe Estadístico N° 351, Enero 14, 1970.

Brazil: Notícias da ANFAP, N° 137, Janeiro 1970.

/probably benefits

probably benefits from a considerably more favourable internal cost structure. A widened market might also lead a potentially strong competitor such as Toyota, presently doing little more than "showing the flag", to enter the market in earnest.

In spite of these competitive considerations it seems that there has been a gradual evolution of terminal manufacturer policies in both Argentina and Brazil in favour of some form of beginning to integrate the markets. This trend has become stronger as the weaker firms such as Venag and Willys in Brazil have been forced into mergers with stronger companies more capable of co-ordinating their international operations. Nevertheless, integration is still supported with differing degrees of enthusiasm by the various terminal manufacturers. The general advantages to them of a regional market are the possibilities of: 1) avoiding investment duplication; 2) expanding their model lines; 3) obtaining more plentiful and dependable supply sources; 4) lowering costs and improving quality; 5) increasing market penetration and volume; and 6) eventually earning more profit. Integration means change and risk. Only the most self-confident organizations are likely to welcome the great potential gains resulting from disruption of present competitive stability.

Progress toward regional integration has also been slowed due to factors internal to the various international companies: the co-ordination from headquarters has been somewhat ineffective, while individual country managements have not given integration possibilities the highest priority. Understandably, the potential long term gains of integration have received less attention than the pressing short term problems of complying with government regulations calling for constantly increased local content. Co-ordination of regional operations has been relatively limited, due in part to the pressure of circumstances which has led to general facility duplication throughout the region. Most importantly, even though similar vehicles are often produced in the various Latin American countries, their detailed specifications often differ substantially, making trade in components difficult without additional engineering co-ordination.

Participation in regional sectoral meetings and in intra-country negotiations on the question of regional trade have sometimes been treated more as

a public relations problem than as a process which could radically change the structure of the Latin American automotive industry. Financial and personnel resources necessary to adequately plan and co-ordinate regional production have begun to be allocated only in the past few years, and continue to be inadequate. A consistent attention to the detailed problems and potentiality of a regional market on the part of the basic corporate decision structure has been absent. Some basic objectives of Brazilian development policy are: 1) maximization of employment; 2) maximization of investment; 3) increasing national power over economic decisionmaking, and 4) strengthening the Brazilian private sector. Regional integration would seem likely - superficially - to reduce the rate of increase in employment and investment, reduce national autonomy, and jeopardize the national private sector. Only a strong proof that integration would increase employment, lead to increased output, and strengthen the national private sector could possibly be expected to lead to acceptance of the inevitable increase in interdependence in formulating automotive sector policy. However, instead of generating hard facts and analysis of an economic nature, the various complementation agreements and "IAFTA Content Decrees" have been suggested to the government by the terminal manufacturers as more or less blank cheques.

Apart from the Lukewarm corporate commitment to regionalization on the part of the terminal manufacturers there has also been a certain lack of innovation in dealing with the special problems and concerns of a more social and political nature. Both the government and national parts suppliers have serious reservations as to the impact of the creation of a regional market on the level of terminal manufacturer vertical integration, and on the tendency toward "denationalization" of the automotive sector. A key issue in this regard seems to be the inflexibility of foreign controlled terminal manufacturers on the question of allowing local participation in their equity.

(b) The suppliers

While there are ten terminal manufacturers in Brazil with a total employment of approximately 65,000, there are over 1,500 suppliers in the industry, employing an estimated 150,000 workers. These suppliers can be

/divided into

divided into three groups: foreign controlled firms, small locally controlled firms, and medium-to-large locally controlled firms.^{5/}

Most of the major international suppliers have manufacturing facilities in Brazil producing at least one of their many product lines. These companies have relatively little active impact on the determination of supplier sector policy with respect to regional integration, although their attitudes generally favour such a development. Regional integration is not viewed as a threat by foreign controlled suppliers because 1) they have production facilities spread throughout Latin America; 2) maintaining good relationships with the terminal manufacturers in industrialized countries is more important than possibly impairing their relationships by resisting integration in Latin America; 3) losses in a single product line due to increased competitive pressure could be compensated for by introducing new products "off the shelf" which are not presently produced in Latin America, and 4) the corporate resources of these firms are large enough so that competition does not have to be feared. In spite of general support of regional integration, however, the foreign suppliers do not effectively promote it. Their investments are sometimes already duplicated in the region, their operations are unco-ordinated, and importantly, they sometimes have conflicting license and joint venture arrangements in different countries which force them to acquiesce to a continued compartmentalization of the regional market.

The vast number of small locally controlled suppliers tends to resist proposals for regionalizing the auto industry, due to fear of competition and lack of perception of the potential benefits. These companies have limited technical, financial, and administrative resources, and little interest for broader issues such as regional integration. The capital and technology that they do possess has often been supplied by the terminal manufacturers, desperate to find local sources. Many of the product quality problems of the Brazilian industry can be traced to the deficiencies of firms of this type. Nevertheless, in the view of sectoral leadership, it is quite important to avoid accepting a new foreign trade framework for the industry which would create difficulties for the small locally controlled companies.

^{5/} See Dorival Teixeira Vieira, Pecenas e Médias Indústrias de Autopeças (Sao Paulo: Programa Delft, 1967), two volumes.

The most active group in the determination of supplier sector policy is comprised of the large and medium sized locally owned companies. The performance of these firms is generally excellent from the standpoint of quality and dependability, although (in the view of the terminal manufacturers) their selling prices tend to be excessively high. Several companies of this type have already begun to export to the industrial countries and to Latin American markets without the benefit of trade preferences. Similar to the small locally owned companies, the large local firms are normally family enterprises, but have successfully adopted the organizational techniques and behaviour patterns of professional management. The owner-managers are often important leaders of the Brazilian private sector because they are at the head of some of the largest and most productive enterprises in Brazil. The official position of the supplier sector leadership is that regional integration for the automotive industry would be a useful development and should be adopted. They have strong reservations, however, as to how integration would affect the Brazilian private sector, and feel that proper safeguards and restrictions have not yet been devised which would allow implementation of a complementation agreement. The basic reservation is that the competitive abilities of foreign (extrazonal) and locally controlled companies are so inherently unequal that the increased competition of a widened regional market would prejudice the survival possibilities of many Brazilian firms, and be contrary to basic Brazilian interests in promoting a strong national private sector. In particular, a regional market might lead to "denationalization" from two avenues: firstly, the terminal manufacturers would have greater possibilities for internal economies and would tend to increase their level of vertical integration; secondly, new foreign suppliers might enter the market, or existing foreign suppliers might be encouraged to add new product lines. Although the performance of many Brazilian suppliers is quite good at present, even the largest companies have a limited degree of diversification and thin technical and managerial resources. It is probable that their ability to innovate quickly in reaction to the competition foreign trade would bring is somewhat less than that of their foreign controlled competitors. In spite of reservations with respect

/to competition

to competition with extranational organizations, most suppliers are confident that on a price and quality basis they would be able to compete with any other Latin American companies. The key to acceptance of regional integration seems to be the neutralization of the unequal competitive situation between foreign and local organizations with respect to parts production.

(c) The Government

The automotive industry is one of the most important symbols of the surging dynamism which has characterized the Brazilian economy in the past twenty years. The industry saves foreign exchange, provides employment, diffuses new technology, increases national self-sufficiency, and is a reassuring example that Brazil can "do anything to which it sets its mind." Suggestions that the level of compulsory national content should be reduced in order to improve efficiency are received with skepticism: with a vast national market and an industry which has been growing at an average annual rate of approximately 15 per cent per year for the past decade, "Why share the market with outsiders?" This line of reasoning exists to some degree within the interested general public, official circles, and even within the management ranks of terminal manufacturers who are charged with implementing corporate policies in favour of regional integration. It does seem evident that regional integration in the Brazilian case is a problem of making an already good performance better rather than saving an industry from the doldrums of market saturation, or establishing the minimum conditions for the existence of the industry. Automotive experts would be welcomed as a contribution to solving the foreign exchange bottleneck, but there is little motivation to accept imports in return if they would merely increase competition for existing Brazilian producers.

Apart from the somewhat justifiable complacency with respect to current automotive industry performance, many government officials do seem to have an interest in reducing the high cost levels in the industry. Two policy alternatives proposed by the terminal manufacturers which are said to be likely to lead to reduced costs are: 1) increasing volume through tax reductions (which presently amount to over 40 per cent of passenger car retail prices) and/or 2) increasing specialization and

/competition through

competition through reduced protection. Both alternatives imply that scale economies could be realized if volume were increased, and that the price elasticity of demand for vehicles in Brazil is high. If economies of scale do exist, and if demand elasticity is high, then the short term reduction in government revenue resulting from tax reductions, or the sharing of new investment and employment with a trading partner, would have the long run effect of increasing tax revenue, output, investment and employment from the automotive industry. If unrealized economies of scale do not exist, or if demand elasticity is not high, then the reduction of taxes or increase in trade would be likely to benefit special industrial interests (including many foreign companies) but not general Brazilian interests. With respect to choosing between tax reductions or reductions in protection, the second alternative has the advantage of allowing the government to retain its present rate of taxation and still achieve vehicle cost reductions and volume increases.^{6/}

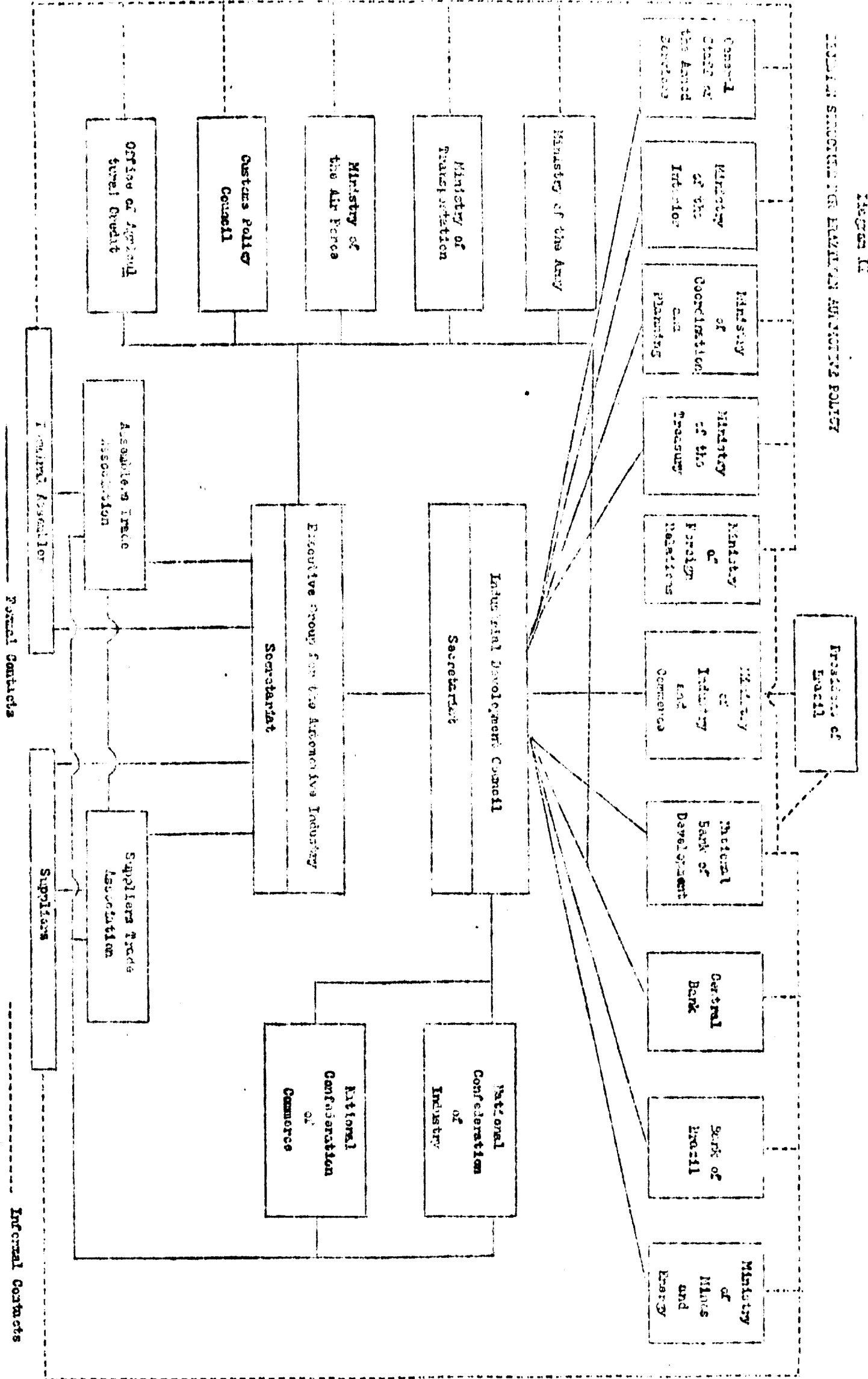
Non-economic arguments opposing regional integration will continue to carry weight in the measure that firm economic data on economies of scale and demand elasticities are not developed. Such arguments include considerations of national control of economic decision-making, maximizing national defense capabilities, protecting national entrepreneurship, and avoiding interference with general foreign policy objectives.

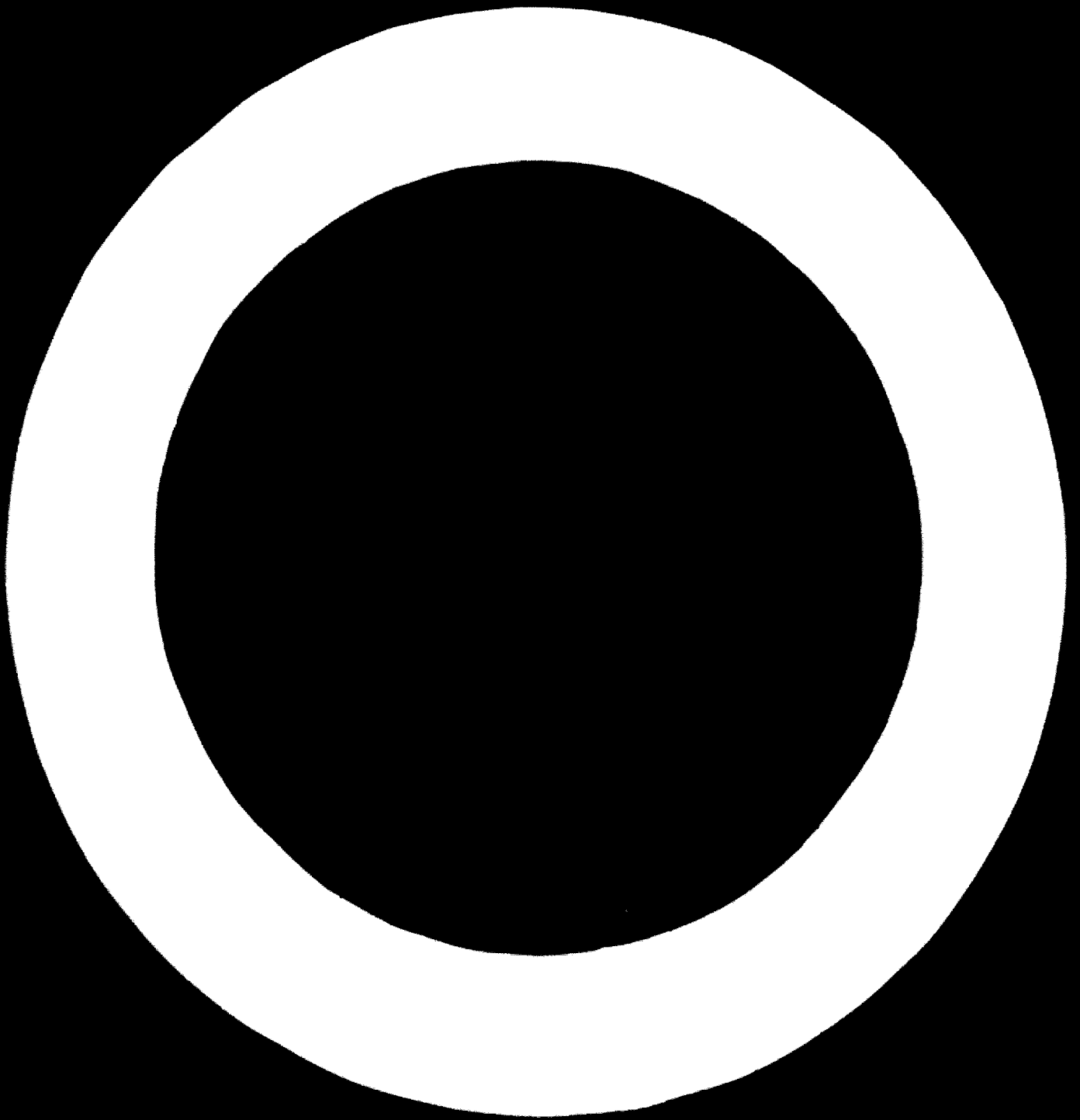
Diagram II on the next page shows the large number of ministries and agencies which participate in the formulation of automotive policy. Proponents of integration have indicated to the writer that decision-making authority with respect to an automotive complementation agreement is either undefined or diffused to the point that advocacy of such an agreement becomes extremely frustrating. It may be that the apparent problem with complicated bureaucracy is nothing more than a reflection of a lack of cogent economic arguments on the part of integration proponents.

^{6/} A second important advantage would be the creation of external economies for other sectors with good export prospects, through the development of "export infrastructure."

FIGURE 11

INDUSTRIAL STRUCTURE FOR BALANCE OF PAYMENTS POLICY





5. Conclusions: policy recommendations

Aside from rhetorical support for the desirability and potential benefits of regional integration of the automotive industry, there has been relatively little practical progress toward making it a reality. Such integration as does exist is generally bilateral between one large and one small trading partner, and is so circumscribed with limitations and restrictions that the effects of specialization on costs are small. Two steps are necessary to make regional integration a reality: firstly, a resolution of the technical issue of why costs are high in Latin American automotive industries, and above all, what is the true importance of scale economies; and secondly, the institutions with interest in the integration issue must creatively compromise their sometimes divergent viewpoints. Detailed discussion of the cost issue is beyond the scope of this paper. Assuming that economies of scale are an important explanation of cost levels, and that a regional integration program would be a means for their realization, several useful policy modifications of the institutions involved are outlined below. They are intended to indicate some ways in which the vague general consensus can become operational in practical programs.

(a) The terminal manufacturers

It is suggested that a greater emphasis be given to the co-ordinated planning of regional operations, especially in terms of product design and specification, and investment. Moreover, a greater disclosure of the economic basis for supporting regional integration should be made available to the interested governments. As a practical measure it would be useful if more specific integration projects and trade proposals were developed and submitted to governments.

Several measures could contribute to resolution of the foreign vs. local capital conflict: 1) special assistance in export marketing both in regional markets and in the industrial countries might be given to locally owned suppliers; 2) suggestions on beneficial mergers between local suppliers could be made available to the governments and relevant trade associations; 3) general efforts to increase the capabilities of suppliers should be continued and intensified. Finally, meaningful attention should

/be devoted

be devoted to opening the capital of foreign controlled terminal assemblers to local investors, possibly on a regional rather than country-by-country basis.

(b) The foreign controlled suppliers

The modification of license agreements which restrict export marketing would be a positive step. A second useful development would be a gradual reduction of investment duplication in the region, and the implementation of more complementary investment policies.

(c) The locally controlled suppliers

The critical modification of the policies of locally controlled suppliers would be an increase in the willingness to merge with other suppliers in order to create stronger, more diversified enterprises. An outgrowth of such a trend would be improved managerial capabilities, equal to the dual challenges of export marketing and adjustment to increased competition.

(d) The governments

The basic prerequisite is that Latin American governments focus on their total economies rather than each sector individually. This would lead to their accepting the advisability of co-ordinating their automotive policies in order to reap the economic benefits of specialization. While the policy of the individual sector would be made more interdependent with that of other countries, general national self-sufficiency would be increased because of the higher level of productivity which would be possible. The absorption of fewer resources by the automotive industry would mean more resources freed for use in other areas.

Complementary governmental policies also suggested are: 1) creation of a reorientation fund for workers and enterprises adversely affected by trade expansion; 2) incentives encouraging mergers between suppliers, both within individual countries and across national lines; 3) establishment of an international commission to control regional automotive production and investment; 4) co-operation with foreign companies in defining practical mechanisms for opening their capital to local investors; and 5) creation of infrastructure which would facilitate trade, from port facilities and roads to educational programmes on export techniques.

/The general

The general policy modifications outlined above are mutually reinforcing. Their implementation would change the trend in the Latin American automotive industry from a constantly increasing competitiveness and lack of co-ordination to one of cooperative long-term growth based on increased productivity. The eventual result to be hoped for would be the creation of industries in each member country able to confront international competition on a basis of equality. In the long run only such policies leading to ability to participate fully and equally in the world economy will allow any nation to resolve its potential conflicts between its national ambitions and the fact of increasing world economic interdependence.

Table 2

LEADING AUTOMOTIVE PRODUCING NATIONS - 1968

(Thousands of units)

Country	Total	Cars	Trucks	Buses
1. United States	10,809	8,848	1,961	a/
2. Japan	4,086	2,056	1,991	39
3. West Germany	3,107	2,862	234	11
4. United Kingdom	2,225	1,816	391	19
5. France	2,076	1,833	240	3
6. Italy	1,664	1,545	115	3
7. Canada	1,180	901	276	4
8. Belgium	632	605	26	1
9. Australia	418	346	71	0.5
10. Spain	365	276	85	3
11. Brazil	280	210	64	6
12. Sweden	245	223	20	2
13. South Africa	194	143	48	3
14. Argentina	181	128	51	2
15. Mexico	144	103	41	b/

Source: Automotive Industries, July 1, 1969, page 64.

a/ Bus production included in the truck figure.

b/ In 1968 Iron Curtain production totals were:

USSR - 801; East Germany - not available;
Czechoslovakia - 150; Poland - 80;
Yugoslavia - 72.

/Table 3

Table 3

LATIN AMERICAN AUTOMOTIVE MARKETS - 1969

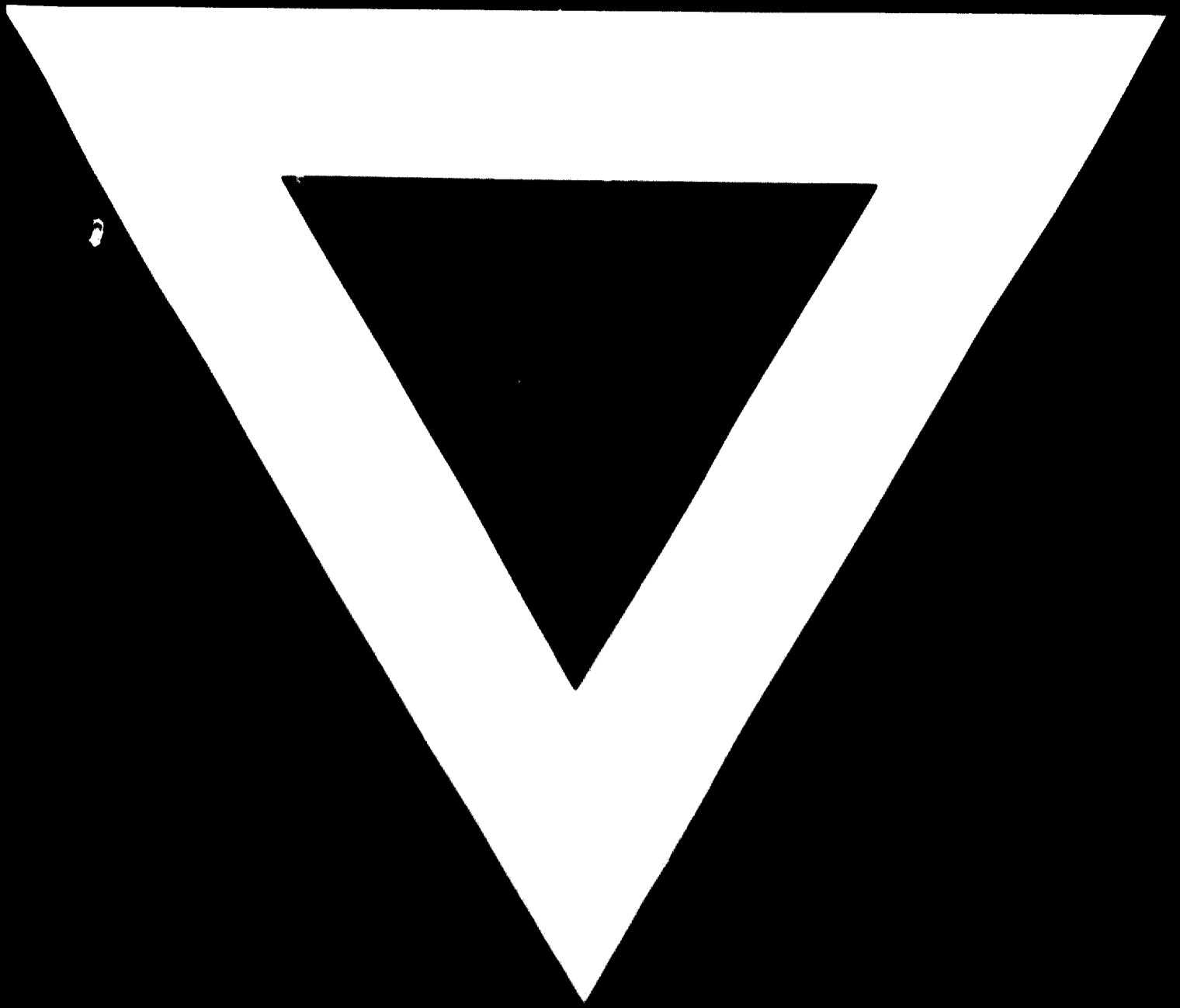
(Thousands of units)

Country	Volume	Local content (Percentage)
Brazil	354	99
Argentina	219	75 - 95
Mexico	167	65
Venezuela	65	30
Peru	32 <u>b/</u>	20 <u>a/</u>
Chile	22	20 <u>a/</u>
Colombia	20 <u>a/</u>	15 <u>a/</u>
Uruguay	2 <u>a/</u>	15 <u>a/</u>

Source: Publications of the automotive trade associations in Brazil, Argentina, Mexico, Peru and Venezuela. Estimates for Chile, Colombia and Uruguay based on data presented in La Industria Automotriz en la ALALC (Montevideo: Asociación Latinoamericana de Libre Comercio, 1969).

a/ Estimate.

b/ Includes imports of approximately 15,000 complete vehicles.



29. 6. 72