

PRINCIPLES FOR THE ASSIGNMENT OF PUBLIC ECONOMIC FUNCTIONS IN A SETTING OF MULTI - LEVEL GOVERNMENT

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1. Levels of Government

Here a first issue enters the picture: that of a higher versus broader level of government. The two normally coincide (at least in modern times) in a two-layer system where the broadest (i.e. that with the largest) jurisdiction is also the highest level of government : i.e. that with the «ultimate» political powers. This is so because in modern times local governments are not considered as the true source of political power of the country. But with three levels, the layer with ultimate powers does not need to coincide with the broadest jurisdiction. In a federation, members states may be the highest level even if they are not the broadest. As we will see, this may be important in the assignment analysis on the expenditure side, under the heading of the «homogeneity» criterion. It should be added that it is of more general importance for the assignment analysis on the revenue side : the highest level of government is that where the ultimate tax power lies and thus has the right to enter in any sphere of taxation and public debt which has not yet been given to the other levels of government. Also for public expenditures there may be a similar distinction. The highest government may be allowed to spend where it likes, unless the contrary is specified while the other may be prevented from doing so. But the case is not the same. One may have residual power of spending at more than one level since double spending is not considered a big issue, while double taxation it is. It may be that there is a constitution which provides for the assignment of the «ultimate» and of the «residual» powers in the area of taxation and of spending. In this case, no matter whether the constitution operates at the broadest level and is formed (and changed) through direct representation at that level, the highest level will still be that to which the constitution gives these

powers. This is so, because the constitution is «above» the various levels of government.

Another important difference in LG assignment analysis has to do with the number of entities in the given layers : it is different to diversify through five regions or through twenty five; and it is different to unify in a federation of five states or twenty five states. In the second case, there is a dramatic difference in size; in the first there is not. Some arguments relating to externalities, coordination, indivisibility, economies of scale which are clearly relevant in the second case may not be equally relevant in the first.

Whether the analysis concerns two or more levels, one should distinguish the federal and regional assignment theory from that pertaining to state or regional finance versus local finance. To include in economic federalism or regionalism local finance theory as a sub-case is too much even if they have several elements in common and seem to form part of a more general theory relating to diversification of levels of governments. The differences do not relate to issues of size but to issues having to do with the nature of governments. First and most importantly, local governments have to do with life of urban conglomerations while the other governments do not: local migrations and commuting are a normal feature, here—secondly local governments lack some legal political powers because they are not considered autonomous political bodies, with legislative powers.

2. Contents of the Allocation Function

The study of LG assignment has been mostly developed with reference to the supply of public goods in the narrow sense. However it can, and should, fruitfully be worked out as an unitary body, to the entire spectrum of public functions : on the public expenditure side to whatever can be included under allocation, distribution, stabilization and employment; and to the revenue side as well. But in addition allocation must be viewed more broadly than the mere problems of supply of public goods in the narrow sense. Under this broad expression one should distinguish four headings :

(i) functions relating to market economy efficiency, i.e. measures to ensure productive efficiency of the market process in production, trade and other tertiary services and finance;

(ii) functions relating to final destination of resources in the market process, i.e. measures ruling on the different consumption levels and on consumption as a whole;

(iii) functions consisting in the supply of public goods and services;

(iv) functions related to economic growth (i.e. to investments and structural policies of enterprises, and to governmental productive investments)¹.

1. Obviously this group of functions can be logically reduced to the previous three groups : however as a «complex» may deserve an autonomous consideration in modern public policy.

It is thus clear that allocational functions do not include only the supply of public goods and services, to which mostly refers the literature of LG assignment¹, but also governmental measures relating to allocational issues of the market process, i.e. to *markets' ruling*.

Markets' ruling functions may be realized either through regulations or through positive transfers (normally conditional grants) or negative transfers (indirect taxes, corporation taxes and related allowances, personal income, taxation of dividends etc) or through monetary and related powers. Obviously also the supply of public goods and services may be instrumental to the functioning of the market process both because there are regulatory public services which constitute the framework in which the market operates. This is important for the LG assignment analysis, particularly when focused on supranational federal issues, because the most important feature of such federation is normally a new «common market». Unifying the national markets and to keep them working united is an important task for a Federation.

We thus need now to consider a second distinction within the allocation functions, which has to do with the supply of public goods and services. Among these functions may be distinguished the supply of economic goods, and supply of regulations for the economy and society and their enforcement. For enforcement one requires goods and manpower, i.e. commodities and (personal) services. But the essence and importance of the regulation functions does not consist in the goods included in the enforcement activities, it consists in the powers embodied in them at each stage. One may conceive of the functions of regulation being carried out at one level, and its enforcement through bureaucracy, police and courts at other levels.

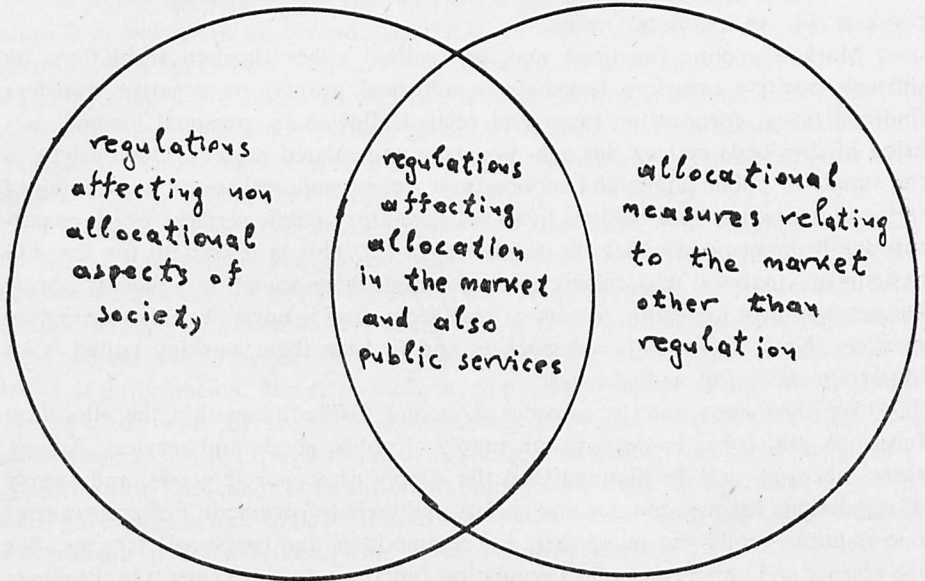
Regulation activity, carried on either through legislative or quasi legislative norms (rules) or through administrative specific acts (authority) and through judicial decisions, refers to the most diverse aspects of life : from distributional issues (such as those having to do with property rights, minimum wages, inheritance laws, right to strike and so on), to individual and family rights (the various personal freedoms and rights, marriage and divorce laws, abortion laws and so on), to moral and religious matters, to ruling of the market, to ruling for the supply and utilisation of public goods and for the general organization of governments. Within the broad realm of the functions consisting in regulations, thus, one can disentangle also those having to do with the market process, both in its (productive) efficiency and in its final destination of resources (consumption) aspects. But it should be recalled that while regulation functions have a broader coverage, ruling of the market process may be done also through different means : positive and negative transfers and monetary powers.

It is therefore interesting to consider the overlapping between allocation through ruling of the market process, and allocation through the supply of regu-

1. But see René Frey..., which emphasizes the functions of regulation of the market process.

lation activities. This overlapping (it may be said with a degree of simplification) gives the

Figure 1



area which fits conveniently as the core of a federation scarce of financial resources but rich in well-founded ambitions.

3. Criteria for Assignment of Functions by Level of Government

But let us come back to the general framework of the LG assignment analysis. The basic assignment criteria may be grouped as follows :

- (i) externality
- (ii) indivisibility and economies and diseconomies of scale
- (iii) unification, uniformity, coordination (as referred to the market, to social life or to public goods supplied)
- (iv) democratic control and flexibility : i.e. satisfaction of individual and small groups' preferences with a minimum of frustration; information and checks between the constituency, the political class and the administration; flexibility and speed in satisfying the emerging needs and in delivery of public goods and policies.
- (v) innovation, comparison and competition in the performing of existing functions and in developing (or choosing not to be developed) new functions.
- (vi) political homogeneity : i.e. necessity or compatibility of the function with the political powers of the LG considered.

These criteria should not necessarily be considered «all or nothing» criteria. They might lead to the «partial» assignment of a function or set of activities within a function to a given LG rather than to «complete» assignment. Furthermore,

their results may not be clear-cut and furthermore may be divergent so that one may distinguish «weak» and «strong» assignment cases. Finally, conflicts and changes may develop and solutions may be unstable.

These criteria may lead to the creation of a new level of government; or, conceivably, to the impoverishment and disappearance of an existing level of government.

4. Criteria for Public Goods

Before analyzing assignment criteria in relation to allocational functions, it is important to consider those criteria which make a good «public». As we shall see, there are differences between the criteria for the publicness of goods and the LG assignment criteria : but consideration of these differences is a fruitful starting point for deepening our analysis of LG assignment.

One must distinguish criteria through which a good *must* be public from criteria through which a good *may* be public.

In essence, a good *must* be public when it

a) can only be supplied by a public institution because of its political nature; enactment and enforcement of laws is a significant example; but also defence is relevant here, even if it comes also under the next heading¹,

b) cannot be divided in selling units, or the amount which can be appropriated to the supplier is small in comparison with the cost and this cannot be further reduced through the fractioning of supply : the exetrnality argument;

c) there is no private demand, even if the community believes that there should be some : merit goods.

Largely but not completely similar criteria can be used, to argue when goods *may* be public :

a) some goods are better supplied by public institutions, because, given their «public» nature, they ensure (or are supposed to ensure) a given quality : e.g. independence from particular pressure groups, and uniformity of standards²;

b) some goods are supplied by public institutions in a better quantity and

1. It should be noted that this «institutional» argument can also be applied to shew why some goods «must» be private : while criminal justice and defence «must» be public services, associations of entrepreneurs and workers unions cannot be of the government because a «state» labour union is no more a union. Similarly one can argue for «professional associations».

2. This line of analysis may also be applied in reverse to justify why a good may conveniently be supplied privately rather than publicly : e.g. in a state where religious differences are relevant the quality of certain kinds of private education may not be granted by the public authority. Instead of direct supply by the government of public goods, one might resort to public transfers to private persons who are enabled to consume given goods and to choose the kind of supply they prefer. But there may be also room for privately financed consumption, alongside with those financed by the government; a private doctor may provide a personalised service that publicly financed doctors are not able to provide.

because they can take account of indivisibilities and of external economies and diseconomies arising from the suppliers behaviours;

c) for some goods there is not enough market demand because of distributional reasons and because of «wrong» judgment by the consumers;

d) the size and scope of government may make possible, or more efficient activities which need a very large scale, a central coordination, a big financial base to cover very large risks.

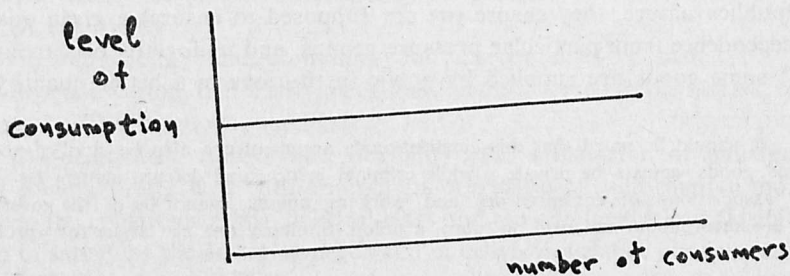
These later reasons are also relevant to explain public sector activities which are not public goods proper, because they are sold at a price and, therefore, cannot be defined as free goods. An important class of these public activities are those in the area of infrastructural services for which markets function : railways, post, local transport services, toll highways. In addition, public infrastructures may be characterized by externalities and great risks of monopoly exploitation if left to the private sector. Transfers and regulations, however, may be able to take care of these «market failure», better or as well as direct intervention by public enterprises.

5. Assignment of the Allocation Function

(i) *Spillover and externality*

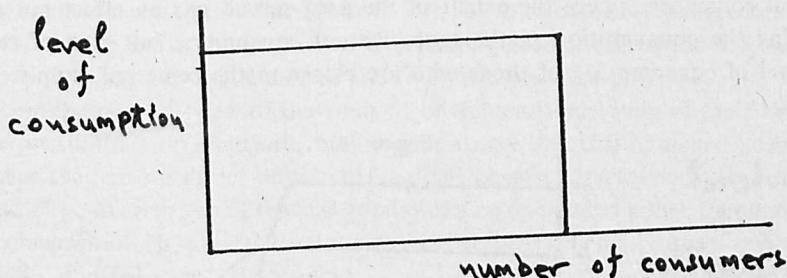
Public goods, from the point of view of the extension of the benefit, may be of different types. The first is a Samuelsonian «universal» pure public good, where everybody shares in equally and whose consumption does not reduce that of others :

Figure 3



A more frequent case of a pure public good however is that of a limited number of consumers who are in a given territorial area. The good is still «pure» (everybody shares in it equally without interfering with the consumption of others) but not «universal».

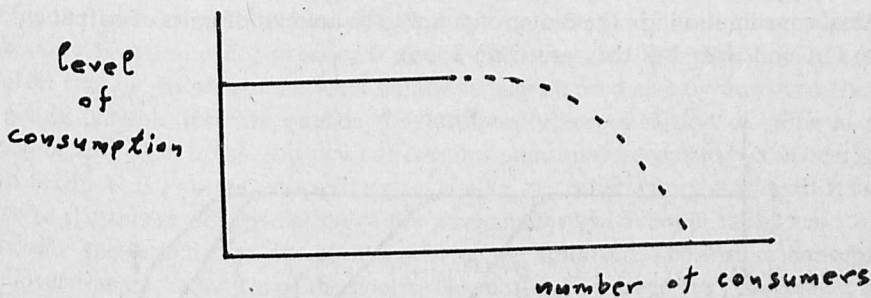
Figure 4



The area may be given by the technological characters of the good (e.g. a lighthouse or an elementary school) which cannot give its services beyond a certain territorial sphere; and/or by regulations (laws, byelaws and administrative decisions) on its supply (e.g. police service which is operating within a given jurisdiction dealing with given offenses or offenders; an higher education school which enrolls students coming from a given district); or by regulations and contracts (as scientific research program whose know-how is reserved to a defined group of members, the others who do not sign the contract, being excluded by the patent law); or by political commitments (a national defense system may protect a given list of allied nations).

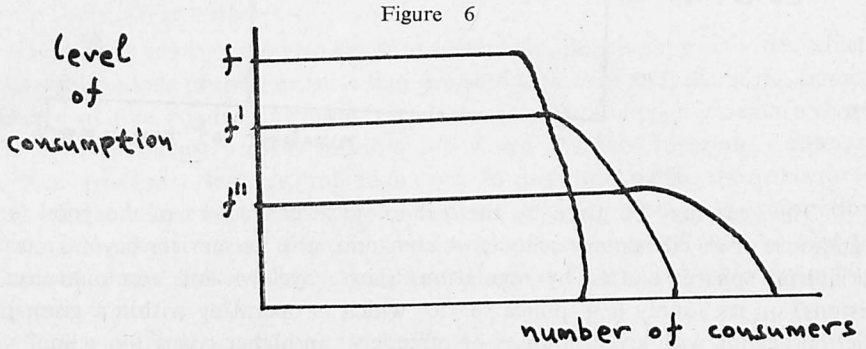
But this was still the hypothetical case of a «pure» public good where the consumption is equal for everybody and the addition of new consumers does not affect the level of consumption of the others. More realistically, consumption declines with the distance of the consumers from the place where the good is supplied or originates¹. Here it is more difficult to identify the proper territorial area.

Figure 5



1. When is the consumer that has to move to get the good (as in the case of school and medicare services), one may argue that the consumption does not decline with the distance, it is its utility which declines because of the cost of movement. However, we can also say that consumption net of the transfer costs declines. We find this approach more convenient, since in this way we keep as separate the question of different marginal utility of consumption of identical units of goods by different peoples.

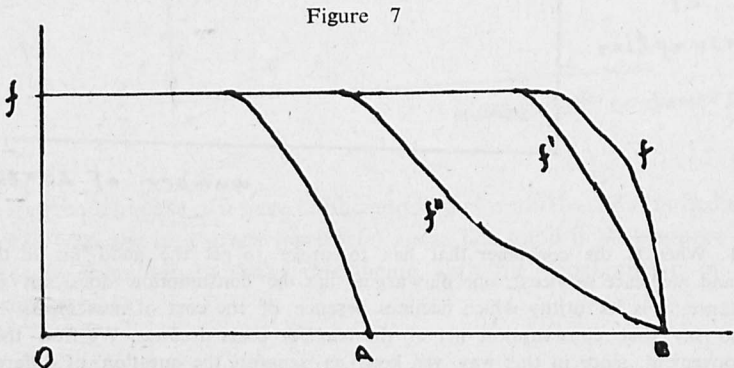
But the individual consumption may be reduced also by the number of additional consumers : here the extent of the area served has an effect not only of reducing the consumption of the more distant consumers, but also of reducing the level of consumption of those who are closer to the center of supply.



Assuming a given expenditure, the individual level of consumption may be f or f' or f'' ... f^n according to different degrees of congestion, due to the different extent of the area served.

If, as we have assumed previously, one could always consider the supply of a definite, indivisible amount of a given good or if one could assume that marginal costs are constant as a function of the size of the expenditure, the problem of the proper size of the good supplied would not complicate the picture of the choice among different levels of jurisdiction. But in real life often there are increasing and decreasing costs. Thus the question of the proper size of the good supplied becomes important.

Suppose that with a given amount of expenditure E and a given level of individual consumption f in the center of supply, the amount of units of output enjoyed are OA and with $2E$ they are $OB > 2OA$



Suppose further three different cases for the supply of AB : the curve of consumption is alternatively ff or ff' or ff'' . In the third case decreasing costs make it unprofitable to move the service to a broader jurisdiction, in the second they have both OA and OB the same; in the first OA must be preferred.

From the point of view of the analysis of the territorial map of their benefits and the possibilities of exclusion, public goods may be distinguished according to whether they give a direct physical (tangible) benefit to somebody or not. The first kind of goods (let us call them B goods) can be consumed either through individual consumption (B_i goods) or through «collective» (normally quasi collective) i.e. «joint» consumption (B_j goods).

There are a number of cases in which the consumption consists of a basket of B_i and B_j goods : e.g. schools. B goods may cause spillovers through the fact that they may give also an indirect intangible benefit. The territorial map of the direct tangible and of the indirect intangible benefits either technological or pecuniary do not necessarily coincide : normally the second is much broader than the first and less easy to draw than the first, because these intangible benefits are generated not only through actions of the receivers of the direct benefits but also through actions of persons and entities coming in relation with them. Education and care of infectious diseases are examples of this. Most B public goods have spillovers : if not of a technological kind, of a pecuniary kind, in the sense that, because of the (free) supply of public goods, supplies of other commodities may become better and cheaper (though taxes to pay for these goods have a contrasting, compensating effect, their territorial map may be different).

Education has spillovers which normally enclose the entire area of mobility of educated labour supply. It can be the entire market; but it can also be less than it if different languages are spoken in its different areas in a monopolistic way; and it can be more than the given market if emigration outside it is relatively easy. This, again, among others, is related to language.

Apart from «intangible» (technological and pecuniary) spillovers, whose area may be very broad and not precise, B goods may give also «tangible» spillovers of a direct type i.e. B spillovers : local highways may be used also by transit traffic, thus giving tangible benefits outside the community; repopulation of game and fish may benefit other areas; low price or free museums may be visited by outsiders; and so forth. This concept of «spillovers» unlike the other is conventional. It is relative to the sphere of jurisdiction of the government which supplies the service. The smaller the jurisdiction, the greater will be the spillover. The former concept of spillover was in the nature of the goods. No matter how large the government's jurisdiction, there are B goods which entail intangible benefits for others than their direct consumers.

But there are also public goods (let us call them S goods) which do not give any direct tangible benefit and consist of joint consumption of externalities as such : defense or crime prevention are examples.

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tangible benefit and consist of joint consumption of externalities as such : defense or crime prevention are examples.

An intermediate frequent case is that of S goods which, from time to time, materialize also in some B goods : in the case of public order, people, whose life or property have been endangered by a crime, may receive specific services through the public action, even if the true essence of the service consists in discouraging crimes and it is thus jointly consumed by the entire community.

In case of S goods the territorial map of the «spillovers» is conventional since it relates to the area of legal-political action of the considered level of government. This area normally—but not necessarily—identifies with its jurisdiction. Defense may be granted by a government not only to the territory of its jurisdiction but also to those of other countries in which it has a strategic interest. One can then say that, while the benefits given to the first community by its defense are the consumption of an S good by its members, the S benefits accruing to second communities are spillovers. Much the same may be true with SB goods : prosecution of criminals who are found in a given area and committed their offences in other areas, may give B and S spillovers to the members of this other area. This is an important reason why public order activities tend to develop at the broader level of government : i.e. that which has jurisdiction on the entire common market, if this is really characterized by free movement of persons, i.e. abolition of the internal borders. Other public order activity at the broader level in the realm of justice, may be justified with a similar argument : the territorial indivisibility of the S part of the considered SB or S good. Violations of regulations relating to the entire area affect its enforcement everywhere and therefore should be judged at the broader level. Here, however, another argument enters the picture : that of the uniformity of the service. Supplies at lower levels may lack uniformity, and this, because of the amplitude of the S components of the public good, may interfere with the unification of the area.

It may be very hard to define the broader S area of S or SB goods in a permanent and less than approximate way, since much depends on the scope of the regulations and policies relating to their supply. In principle, some of them—such as scientific research—may have a cosmopolitan map: but most spillovers can be prevented, here, as noted, through regulations and policies.

(ii) *Indivisibility and economies of scale*

Externalities in the supply of public goods, as seen, are nearly always unavoidable. However this does not imply that there is always a condition of under-supply if the goods are supplied through a «wrong» level of government (and not that sometime the «right» does not exist, here, because would be broader than the existing maximum jurisdiction). Actually one may distinguish three kinds of externalities. Those which, because of their relative size, do not allow the good to be supplied at all; those which because of their importance at the margin of decision

cause an undersupply; and those which have distributional implications but do not influence the rise and the size of the supply.

Some times exclusion is possible and potential externalities are «wasted». More communities provide a facility which could be provided.

It is then easy to figure cases in which underconsumption (and under supply) exist.

Economies of scale are, conceptually, a sub-case of indivisibility and can be dealt with accordingly as a LG assignment criterion. In principle, the difference between the one and the other is that absolute indivisibility implies a finite good of a given size, while economies of scale imply the possibility of varying the size of the good.

That the addition of other units of supply to the first ones implies economies of scale of administration is a proposition that needs careful specification. It seems to be true until a given size and thus, for instance, may be an argument to prevent too small units of government. However, after a given size, which may correspond to relatively small governments, costs of administration may become increasing because of the technical problem of coordination and of the difficulties of transmission of information in a big organization and, more important, because the bigger the bureaucracy, the larger is the incentive to shirking and resistance to change. It may be argued that unit costs may artificially increase and the level of output may increase over the desired level (and quality may decrease too), when a large organization supplies the goods, because it is more difficult for the citizens and their representatives to control a large bureaucracy. Thus what may be, technically, not true—i.e. that unit costs *must* rise because of the size of the organization *necessarily* entailing diseconomies of scale *at that size*— may become practically true.

Note, however, that this is not necessarily an argument for devolution to lower levels of government. It is properly an argument for reducing the size of the government under criticism. Thus it may also lead to devolution to a now, higher level of government whose bureaucracy is smaller than that of lower levels : as it may be the case for a new federal state vis-à-vis the national states; or for a new regional government vis-à-vis big local governments ruling on large metropolitan areas. And devolution from the given level to a higher level of government may be better than devolution to lower levels, where indivisibilities in administration costs are relevant.

Diseconomies of scale of administration may be important for specific functions where there are repetitive units of the service, without a greatly relevant problem of coordination between them, so that the cost of administering them through a highly centralised system is not (appreciably) compensated by decreasing costs of the units of supply or by the possibility of more efficient and less expensive coordination (elementary schools and health and hospital services may be the case). However, this may also lead to a bipartition of the activities of the considered fun-

tion : general regulation and basic choices to one higher LG and actual activity to lower LGs.

Indivisibilities and economies of scale are said not to be an issue per se in the assignment analysis since through «transactions» or organizational activities among the various governments, the surplus capacities may be allocated either horizontally to other governments at the same level or vertically to lower or higher levels of government. However, this is not always the case. A first reason why not is that there are services which cannot be shared because they imply a direct exercise of the decision-making power. A small government cannot share in most of the administration activities of larger governments, because they would then be managed by these other in a tutorial way. A second reason is that there are services which imply a delicate problem of power, that neither party would like to share : a government cannot lend (nor another hire) its police services while it can lend (or hire) its fire protection services. A third reason is that a prestige element may be associated with a given service : it is not the same thing for a given community to have its own university or hire the services of that of another community.

In many cases of joint usage, there is the question of setting the plans and the rules for the service. If they are different for the different governments this may lead to very difficult situations for sharing in the service. Finally, those governments who hire the goods or services of another are not certain whether in the future they will be able to get them; and certainly may be an essential character of some public goods.

Costs are, in any case, involved in the transactions designed to make the sharing possible; and bargaining may rule it out even if it is convenient to both parties, because they do not reach agreement.

Having observed all this, it should, however, be added that it is likely that intergovernmental sharing of provision of public goods takes place on a much smaller scale than that which could be justified, because of jealousies of their apparatus and their ambition to expand their size. These motives obviously should not be considered relevant, but rather opposed by the citizens and their representatives. The same point can be made, however, as for the resistance to devolution to different (new) governments of functions of a given LG.

(iii) *Uniformity and system of services*

A peculiar case of indivisibility has to do with the need for certainty and uniformity of the service rendered. This need in turn may be found both in the supply of goods in the narrow sense and in the supply of regulatory services. This last may depend on the characteristics of the goods supplied (i.e. regulation required for certain kinds of public goods) or from the characteristics of the regulatory activity relating to the market process and to other aspects of social life where certainty and uniformity appears a positive value. Here one may observe, again,

that the issue of certainty and uniformity as a case for LG devolution may simply resolve itself in the problem of transaction or organizational costs, because the various governments may permanently and generally agree on providing «the same service» and in harmonizing, in the same permanent and general way, their activities with those of the others. But to be sure of this result, one must count on superior power (i.e. a higher LG) which permanently enforces this «uniformity through harmonization». The problem here is not only that of organization of the uniformity and its stability : it is also that of choosing the ones who must renounce their preferences and to compel them to do so continuously.

Thus if what is involved is a complex regulation with a wide element of discretionary power and dynamics of change, true uniformity can be better assured by the superior government by direct action. Otherwise it would be obliged to perform detailed controls of inferior government activities, which may be time-consuming and cause too much interference with the service itself.

Lack of uniformity of the service, may in some cases, be tolerated or even be considered a positive value, to make life more varied.

However, it may play a role together with another aspect of indivisibility, i.e. strong interdependence of given activities, performed in different parts of the given area which may be viewed as being elements of a system whose efficiency will increase if they are actually integrated. Coordination by a broader LG should be weighted against its direct activity. Thus railways, postal services, airlines and highways of different countries closely related may be coordinated with each other or unified in a unitary system at the highest LG. If the autonomous entities to be coordinated are too many and each performs too many activities, coordination may become too difficult a job; furthermore, the superior authority, being external, may not have enough detailed knowledge and effective power to perform the task.

An important concept in the LG assignment (leading to higher, broader LGs) is that of a «system» of services requiring coordination and some certainty and uniformity. This may have to do with a «complex» of goods or with a sphere of regulatory powers or with a combination of them. The «system» concept may lead to the fact that an activity which, *per se*, could be most properly assigned to a given LG, is better assigned to another because it is part of a system of which the other already takes care.

Among these «systems» emerges that of the complex of rules for assuring the functioning of the market. This complex includes the rules for assuring uniformity of institutional conditions (taxes and other burdens and benefits by governments) in competition; the rules for protecting the consumer in an identical way everywhere; the rules for insuring the freedom of movement of labour, capital and commodities and of settlement of new initiatives; rules and authority for business entities (corporations and the like) and for financial markets; rules for standardization of products. One may develop these sets of regulations separately in the various countries belonging to the same market to satisfy different preferences and traditions of different communities. But if the idea of a unified market

has some overriding importance, they should be at least harmonized under the same power to avoid contradictions and inconsistencies; and this can be done properly only at the level of the government which covers the entire market area. Sometimes a two levels regulations system may be too complicated and the case may be made for complete devolution of this ruling complex to the broadest LG.

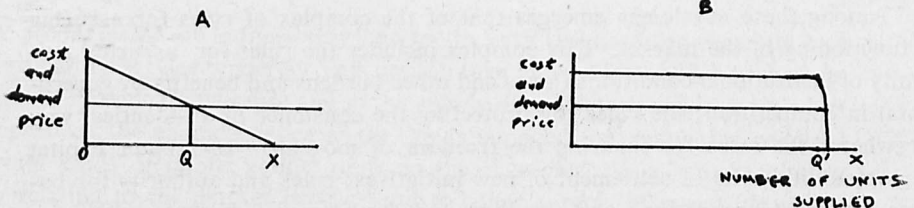
«Basic rights» may be another important frame of reference to nuclearize «systems» of regulations and of services which require coordination and some degree of uniformity. Thus a system may be that relating to the effective possibility of circulation to peoples within a given community : which has to do both with the rights to move and with the provision of communication and transportation facilities. Another system may be that relation to the freedom of expression and of communication of thought and of information, and here again both the protection of basic rights and services are called in. It should be noted that the facilities in question may not be public (or freely provided); but they are, in any case from this point of view, a matter of public concern for regulation.

Other basic rights may be those of basic education and basic health protection. Here distributional arguments enter strongly into the picture together (as for education particularly) with straight externality arguments. But what we are considering at this point is not whether the goods should be publicly provided and which government can more properly take account of the map of the benefits. We are considering the theme of «uniformity» as a character of the services conceived as «systems».

Disequality of provision in different areas may create distortions in the allocation of population, artificially stimulating migrations to more affluent areas where a better level of these services (among others) is granted. This apart, it may appear unjust. It may be taught that each citizen of a given community should be entitled to a given share of some goods designed to provide him with a starting point in its life and activity and to satisfy his basic needs. It should be observed that unification of these provisions will normally result in an average increase of the level of supply, since one can scarcely conceive that the harmonization could take place not only raising the less favoured areas to a «normal» standard but also deteriorating the standards already granted to some more favoured populations.

It should be observed, however, at this point that this movement to insure uniformity in satisfaction of basic needs may be an insidious movement. Bureaucracies and personnel involved in the provision of these services may be interested in emphasizing the social virtues of their supply in satisfying «basic needs», in order to increase their output as far as possible.

Figure 8



In Fig. 8A a normal collective demand curve for a given public good is depicted, with cost (assumed to be constant) crossing it at OQ , which is much less than what citizens would consume at zero price (cost). With a «social» collective demand curve as depicted in 8B, the quantity consumed with the same price (or cost) is OQ' , which is nearly the amount consumed at zero price. This «plateau» demand curve implies, however, that each «need» covered by it is a «basic» need for which everybody is entitled to satisfaction and the community, because of its inherent value, is ready to pay a much higher price than its unit costs. Where this «plateau» demand curve exists, it may be easy to argue that a zero price and an expansion of supply to satisfy all the wants arising with zero prices is a correct choice. And the cost may also be substantially increased—as may happen through a centralization which increases the standards of the services uniformly to the higher standards—without affecting the size of the supply.

(iv) *Democracy and the decentralization theorem*

In general, it may be said that the uniformity and coordination criterion, if valid (a thing which must be carefully checked), *prima facie* leads to centralization while that of democratic control (as we will see better) entails a presumption of decentralization.

In this connection there has also been formulated a «decentralization theorem». However, the issue is a complex one and must be analysed in its different elements. These appear to be : the easiness of «delivery» argument; the expression of diversified preferences (or minimization of frustration) argument; the effective transmission of preferences and wills argument, and that of a better check of efficiency of the public administration.

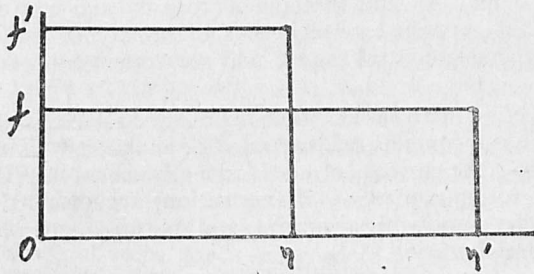
The first argument is rather obvious : the closer a government is to the area where the needs arise, the quicker will be its administration in satisfying it; the more flexible will be the service to the variation of the needs; the smaller the cost of procurement of local means to satisfy it. This, however, applies only to some public goods. An analogy here may be drawn with business operations, having to do with certain kinds of market oriented industries, where a high degree of decentralization is needed to cope with the varied and ramified demands. But the same analysis suggests that this is not necessarily an argument in favour of a lower LG; it may simply be an argument for territorial decentralization of the structure of a given activity of a higher LG. As there are large national corporations which serve local consumers in diversified markets through a great decentralization, the same may be conceived for a large national (or federal) government. Or one may conceive the lower government as a mere executor of the higher level of government, which appears useful only because of its capilarity.

The second argument is much more important. It is certainly true that, if smaller communities are more homogeneous in tastes and criteria of choice, due to the impact of the common environment and cultural tradition, than the larger communities of which they form a part, the «frustrated» minority will be smaller, since it will be possible to differentiate (subject to the constraints of the «uniformity» criterion for the larger community) the public supplies to adhere to the different tastes and criteria of choice of the different communities. Also those who want to participate in a majority in a large community may be obliged to renounce the peculiarities of their preferences. However, there are functions where differen-

ces in tastes and criteria of choice are not related to the differences in the environment and cultural traditions of the different territorial communities, but to differences in income, sex, age class, ethical beliefs, education, profession, and several other factors which are dispersed on the territory of the broader community. In this case, the frustrated minority may not be smaller in the smaller community. Furthermore, there is a problem which is very difficult to solve, in considering the degree of frustration, i.e. the intensity of frustration versus the number of frustrated people.

Suppose first that the number of frustrated people is on with a unit (or per head) degree of frustration of' referring to their loss of utility as it can be observed. Suppose then that the number of frustrated people is $on' = 2on$, while their unit degree of frustration is $of = 1/2 of'$. According to the assumption that lower governments are better because they frustrate less people, the degree of frustration should be measured only in terms of numbers of people: thus the second case (where unit frustration is of) should always be considered worse than the first (where

Figure 9



unit frustration is of'). But this is a faulty reasoning. Nearly all citizens have some degree of frustration even if they belong to the ruling majority, because their preferences cannot be fully reflected in the standardized supply of public service or activities. Thus by necessity one must introduce the notion of intensity of frustration. Then, however, one should consider that with a more heterogeneous majority, as the large size communities are assumed to be, a less sharp contrast between majority and minority will exist and a lesser degree of frustration of the minorities may emerge. Obviously if there is a very high mobility, frustration may be reduced through it (voting by foot), as in the familiar Tiebout theorem.

To sum up, even if in principle valid, the thesis that «minimization of frustration» supports devolution to a lower LG does not always appear true or unambiguous: the degrees of frustration of different people must be assessed and weighted one against the other.

Another point should be made: democracy entails a «cost of participation» for those involved in it, if nothing else at least through the time and attention required to «participate». This aside, the fact that decentralized choices need coordination is also a cost. Costs of democracy should be weighted against that of frustration due to the fact that the constituency is large. Ideally, one might conceive a multiplication of levels of government to take account of the variation of preferences which leads to decentralization together with the factors which, in many

cases, lead to centralization. However, this multiplicity entails costs and therefore must be limited. The same argument applies also for other benefits of decentralized or participatory democracy which we are going to explore now.

The «decentralization theorem» states not only that at the lower level there may be a lesser degree of frustration, but also that it is easier to communicate preferences if the government and its administration is closer to the people; that it is easier to obtain services and policies closer to the changing local needs, that those who consume the public supply can better control it, and that small size bureaucracies may also be better controlled by the politicians. This is true. However, the argument is not without limits. First of all, it should be noted that it does not necessarily work «in a continuum» from smaller to larger size jurisdictions. There may be a level at which the size is large enough to exclude a «personal» relationship between the citizens and the government. A big municipality may already be in that range. At the broader levels of a federation in respect to large national states, the difference of size may no more be relevant. Furthermore, the degree of this relationship depends also on the institutions and on the degree of participation. An active federal parliament where interest groups cannot easily combine may perform a more efficient control than defective representative bodies of a large local administration.

Finally, one must distinguish between G goods and S goods : the first give a tangible benefit and may be the object of a material check by the local consumers. They are mostly «localized» goods which operate with a distribution on the territory according to the places where their users are resident, live and work. Thus the check by the local consumers is also (even if not always because of commuters tourists and transit traffic) a check by the local voters.

S goods do not have this character. Often consumers do not enter into contact with their supply through their usage; therefore they cannot express judgements by direct experience. When they enter into contact it may be occasional. A technical, informed intermediation by a political class, by the parliament, by the press, by professional people involved in this activity may thus be the only or most relevant element for effective, specific choice and control. And there is no reason to imagine that this is done better at the local level. Furthermore, they may have a territorial distribution which does not coincide with the local community where the service is performed (thus justice, much of police, scientific research and so on) : and therefore decentralization is not a legitimate choice system. Finally, as noted, broader governments need not be «bigger» governments.

(v) *Innovation and competition*

An important argument favouring the development of a number of governments (i.e. of regions or of a federation), as against unitary states, is that of *innovation and of comparison*. Competition among different governments may lead to more innovation, both in the quality and kind of services and in the efficiency of performance and administrative aspects. Improvements may be obtained through comparison (relative innovation). The argument may also be applied to local bodies, even if here there may be less scope for innovation, because of their limited autonomy.

The argument may be used to favour the assignment to a multiplicity of governments of functions formerly or elsewhere assigned to one government; and there-

fore also to favour the creation of a new level of government with many entities which take over functions from the superior layer. It might appear that it cannot be used to favour the emergence of a federal level of government, since in this case functions which formerly were given to several governments will be assigned to one government alone. However, this is not correct. If devolution does not concern an entire function but only a part or an aspect, what really takes place in respect to that function is the increase in the number of governments involved in it and therefore the energy potential devoted to innovation. Furthermore, there are general aspects of government and administration, in which a fresh unit of government, creating new, modern criteria, may offer important elements of comparison.

More generally, innovations depend also on the capacity of innovating. The scale of technical qualification of government may be an important element in it together with its age. The innovative characteristics of the U.S. federation in respect of its states has often been recognized.

Thus also some degree of centralization (in a broader layer of government), particularly if related to a (level of) government which is young and therefore more modern and elastic, may be conducive to innovation and fruitful comparison.

6. Assignment of the Stabilization and Employment Function

Allocational functions, as is well known, are only a part of the list of functions of a government; LG assignment must deal also with distributional objectives and stabilization and full employment functions. The LG assignment analysis can follow here the spectrum of criteria that we have sorted out for allocation. All of them seem relevant both for full employment and stabilization and for distribution. But whatever the specific criteria here are, one cannot overlook the connection of these functions with the allocational ones. A too small federal government may not have enough scope to perform stabilization and full employment activities; thus arguments for the assignment of allocational functions with an important spending effect to a new broader central government may be derived from the opportunity of enabling it to perform stabilization functions which are better suited to this level. On the other hand a sub-federal state may be so big and may cover so large a share of the common market to be able to carry on its fiscal policy even if it may be thought better to have this function performed mostly at the central-federal level. As we will see there are also specific reasons why national governments may be preserved or granted functions in the area of stabilization and full employment policy.

Allocational functions may have an important impact on distribution. This fact may provide the government which performs them with good arguments to justify its role in distribution: either to exploit the opportunities furnished by these effects or to counteract them, if they are considered to be in the wrong direction.

Finally, growth policies, which are an important part of allocational functions, are strictly related with fiscal policies for stabilization and full employment, and also with distributive functions, particularly in the area of regional policies.

Several arguments seem to lead to devolution of fiscal policy to the broadest level of government. The externality criterion requires that stabilization policies would be done at the broadest LG as measured in relation to the extent of the involved market area because, as is well known, multipliers of fiscal policy actions

exert themselves on the entire market area. But even more important, to assign this function to the broadest level of government, i.e. in an economic union to the central-federal level, is the unification and uniformity criterion as related to the functioning of the market economy. If effective fiscal policy at this level was not carried out and contradictory policies were executed at the national levels, the market could be broken by changes in the currency parities and by interference with movements of commodities, capital and labour within the area. This consideration provides also important motives to carry on regional and sectoral policies for employment and growth at the central-federal level in case they are not enough at the sub-federal states level : without those, it is likely that different national monetary and fiscal policies will be retained and waged in conflicting ways, thus leading to lack of unification and uniformity in basic monetary and credit conditions and perhaps to backward steps in the functioning of the market¹. To sum up, to make a workable substantial devolution of monetary policy powers to the central-federal level, one requires regional and sectoral employment and growth policies. And without this monetary policy devolution, one cannot keep the market functioning unified and uniform.

The innovation and competition criterion, however, may lead to some devolution down, given the bad experiences of «huge» national governments in these areas.

In favour of devolution of monetary and fiscal policy to a broad «new» government and parliament such as that of the Federal European Community, an important argument may be that of fresh ideas and energies found here vis-à-vis the existing states and parliaments. But this, obviously, is more valid in comparison with some of the member countries than with others. The homogeneity criterion, however, may contradict the others : monetary policy is a jealous prerogative, which politically may appear inappropriate, both to lower (regional) governments as well as for broader new federal levels. And thus also fiscal policy in its relationship with monetary policy (particularly public debt).

Also the criterion of democratic choice and control may lead to refusal of devolution from the nation state to either inferior or higher layers of government. As for the lower governments, one may believe that they lack appropriate democratic control on fiscal and money matters because they lack a true parliament, or skill in this area. As for the higher, new federal level of government, one may recognize that they may have the proper democratic decision-making bodies, when federal structures such as the parliament chosen through direct election are created. It may further be recognized that they can acquire the proper skills, but it may be argued that basic differences do exist among preferences in the various nation states for the rate of inflation versus the rate of employment, for the rate of growth and for the rate of inflation versus the fiscal burden, affecting both the direction and size and the relationship between monetary and fiscal policy².

Here we find a dramatic problem of devolution theory which has not been explored enough : that of a clash of criteria. Disequilibrium may emerge, because

1. As seen in the discussion of allocational functions relating to growth, one may justify regional policies also in terms of externality : because to develop less developed regions may reduce the congestion and external diseconomies of more advanced regions.

2. The indivisibility or decreasing return argument could be applicable to centralisation of fiscal policy and sectoral policies for growth and employment only when small versus large governments were confronted.

of that clash, if a *sharp* solution is chosen. A second-best and weak solution may appear preferable, thus leading to partial assignment.

7. Assignment of the Distribution Function

As for distribution, the externality argument here applies in several related ways : the first is the «solidarity» among individuals, i.e. the altruistic disposition through which utility functions of different people are interdependent; the second is the «public order» argument, i.e. the egoistic motivation that redistribution prevents disorder and thus protects from violence and disruption and fosters improvements of inferior classes, thus helping to promote better economic conditions and hence more trade; the third is the insurance or choice under the veil of ignorance argument, i.e. the uncertainty argument about the situation facing ourselves or our children in the future, such as for our income and our needs (which are also related to the health conditions). Everybody else's altruism is aiding us in solving these problems, as ours is aiding the others : thus a prisoner's dilemma may arise, since we personally are a small entity which does not affect much with its «avaricious» or «generous» behaviour the degree of «solidarity» existing in society. To apply this reasoning, which is an application of the externality theorem¹ to the broadest LG relating to a given common market area, one has to have given conditions under the above three arguments. «Strong» solidarity may be limited to our own region or nation : with the more distant populations, even if members of the same common market or economic union area, only a «weak» solidarity may exist. This fact may limit the willingness to undertake internal redistribution on solidarity grounds. However, it does not constitute a limiting factor as for external solidarity, i.e. that vis-à-vis the third world : all nations of the union are here on the equal footing of a «weak» generosity. The externality argument operates in favour of doing this at the federal-central level since here the external effects of behaviour of other nations may be «internalized» and the prisoner dilemma and free rider problems reduced². Also the public order argument may apply in a «weak» way to distant populations belonging to the same market area. It may be objected that disruptions of the existing order may affect the union, if they lead to separatism from the common market. But one may reply that there are more efficient methods than mere redistribution to avoid this. One perhaps may dare to say that the consideration of this problem may constitute a case for the assignment to the central-federal level of sectoral and regional policies implying some redistribution, but emphasizing allocational and stabilization objectives rather than mere redistributive policies. Clearly, as for international order problems outside the economic unions, nations will share a common interest : here again the externality arguments suggest assignment of the distributive functions to the central-federal LG.

The «insurance» argument may justify redistribution through the central-federal level if disequalities of incomes and economic opportunities among the dif-

1. Note that «altruistic» people may be happy «to give», even if the others do not give; however, they may be reluctant in giving because of fear that no result will be reached because the others do not give (because of the same fear). If we consider «egoistic» people who give for egoistic motivations only, an additional «free rider» reasoning will be applicable : they do not give because they expect that all the others will give and the small addition of their gift will not add significantly to the total.

2. Fear that the aid might be «wasted» may limit the solidarity. This is a delicate point for internal aid in a federation, if member nations who give are not allowed to administer aid. It is not an issue centralizing foreign aid.

ferent regions do not appear stable and/or if very high mobility exists also from the rich to the poor areas. This may, for instance, justify a central-federal programme for aid to unemployment¹.

The indivisibility and economies of scale criterion is very important in justifying redistribution by a higher level of government if specific projects have to be undertaken, whose size overrides the capabilities of a given smaller level community. Assignment of foreign aid to the central-federal government is a clear case here, since there are many nations to be aided and «big pushes» are needed to reach significant results². This may also be the case for some specific projects within a given economic union, even if one should remember that a preliminary condition must here be met i.e. that there is a willingness by the majority of the community belonging to the union to do so.

Uniformity and coordination³ may be a strong argument to centralize redistribution activities, since many LGs acting in this area may lead to an overlapping of interventions in favour of certain groups and areas while others are unequivocally overlooked. This is a powerful argument for assigning the foreign aid functions to the central-federal level. It may also be an important criterion for having the central-federal level government completing the member states and the lower LGs in their redistributive activities, in order to assure certain uniform standards. It should be noted that disequality in distributional policies in different areas of the same community may entice artificial migrations to the more advanced areas, thus congesting them. They may also increase the room for free rider behaviours, stimulating rich «egoistic» people to leave areas with higher tax rates, while they still enjoy the benefits of the redistribution made possible with the high taxes levied on others. However, it should be noted that if a broader LG «unconditionally» completes a standard left incomplete by a smaller LG, this may result in an incentive for «egoistic» governments at this other layer to reduce their standards.

Political homogeneity is involved in the redistributive issue indirectly through the fact that spending requires a power to tax. This power may not be given to a new government for broad redistributive activities (e.g. to a new federal government which may be given allocational or other «economic» functions) because it may interfere too much with given political equilibria and property rights. Redistribution may appear homogeneous only if contained within given limits. It should be noted that this argument is not relevant for foreign aid by developed countries since it is already conceived as a function with a rather limited scope.

The democratic control criterion, as usual, pushes towards «decentralisation». Preferences in such a delicate matter as redistribution may be very different in the different countries. However, for foreign aid it seems that what generally exists is mostly a «weak» solidarity, together with limited appreciation of the public order argument. Here homogeneity of preferences is not much related with territorial distribution of the population. It should be noted that, in this area, control at the national or local level of the results of the expenditure is not possible for those paying for it, since the aid is spent outside the country, while as for domestic aid the case is the opposite: decentralization may help in checking that the aid is not wasted.

1. This argument is not relevant for foreign aid, if consideration is limited—as here—to that of developed to underdeveloped countries.

2. Note that here the issue of redistributions changes in a problem of allocation of resources for growth; however, what matters for the budget of the donor countries is the distributional activity, since the allocational functions made possible by it are done in the recipient countries.

3. The unification of the market criterion coincides with the «public order» argument under the heading of «externality».

The innovation and comparison argument may allow distributive activities to be practised by a number of governments and also by smaller LGs. However, one must remember that the risk of waste is thus increased. This may be a particularly important consideration for foreign aid since the amount that developed countries are willing to transfer is very limited in comparison to that which seems to be required by underdeveloped nations for a significant reduction in income disparities.

8. Partial Assignment Solutions

Having explored the LG assignment criteria one may come to the conclusion that in many instances no satisfactory solution may be found because the different criteria support different conclusions. To mitigate this pessimism, however, one must consider two points. The first is that every decision, in general, entails opportunity costs. Clearly in the area of private versus public supply and free offer versus pricing for the public good it is so. That this is the case with LG assignment too, therefore, should not constitute a surprise.

The second point is that functions may be broken down in different components assigned to different levels of government. Actually when they are performed entirely by a given LG, they are often carried on by different functions.

Participation in a given function by different LGs, i.e. partial assignment, might be the proper choice which maximizes the constrained objectives.

We may distinguish between vertical and horizontal participation in assignment: the first being that where different stages of the given activity are assigned to different LGs in a different position of power, and the second that where different LGs cooperate in the same function on an equal basis.

An assignment of functions table, like that elaborated by Breton, may thus be built (in the positive or in the normative sense) with further complications. To Breton's cases 0 and 1, which indicate no performance and performance of a function by the given government (either in the positive or in the normative sense), one may add other cases relating to vertical, and horizontal participation in a function.

The assignment table thus modified can show not only the presence of the various governments in the various functions but also, to a point, their degree of presence and autonomy in its exercise, and their regulatory and financing activity as contrasted with the execution of the functions.

To arrive at this *functions* assignment table, another kind of assignment table may be constructed, i.e. the *criteria* of assignment table. This will give the various LG assignment criteria in the rows, and the various LG called in discussion for assignments in the columns, with the various types of assignment under analysis: complete or partial assignment; and in this second case, assignment of a controlling or an executive type. For each case one must distinguish at least two possibilities: yes or no. But the analysis might be refined distinguishing three cases: a strong positive solution, a weak positive solution and the negative. It is worth noting that one does not necessarily need to build an «assignment criteria» table complete for all the levels of government. One may concentrate on a given level, e.g. the central-federal, leaving the others not distinguished. Similarly, it can be done as for the «assignment of functions» table: even if this approach may be objected to because of its appearing as a partial equilibrium analysis, one must note that, in a dynamic setting, it may be a very useful approach because it concentrates on marginal choices, i.e. on the elements under change, rather than on the general system.