EFFECTIVE INFRASTRUCTURE POLICIES TO FOSTER INTEGRATED ECONOMIC DEVELOPMENT

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INTRODUCTION

The concern here is with looking at the types of infrastructure policies that are important if there is to be integrated economic development across a number of countries. In doing this it looks not only at the more transparent issues of infrastructure investment, but also at the use made of infrastructure. No one wants infrastructure for its own sake. It is a means to an end. Consequently, successful policy must invariable embrace the terms on which people have access to infrastructure as well as the scale and nature of the infrastructure itself.

Transportation infrastructure is a primary focus of the paper. It is certainly not the only form of infrastructure and in many African countries it may not be the highest priority. But from the perspective of integrated economic development, effective transportation infrastructure policies are vital.

By way of illustration of some of the approaches that have been adopted to the creation of effective infrastructure policies during economic integration, the experiences of a number of coordinated initiatves will be drawn upon. Many of these have considerably higher incomes than most African nations, but their experiences highlight some of the important challenges that confront policy makers in Africa. Indeed, since these wealthier counties already have substantial infrastructure systems, and have often implicitly engaged in a degree of cooperative activity before moving to explicit integration, they may be seen as

reflective of easier paths. Nevertheless, however difficult it is for poorer nations, there is a need for effective infrastructure policies if the longer terms benefits of integrated economic development are to be reaped. There are generic lessons to be learned from what has gone before.

INFRASTRUCTURE AND ECONOMIC DEVELOPMENT

Integrated economic development involves coordinating the efforts of a number of independent nation states to coordinate in same ways their economic activities. In its simplest form this may involve coordination of just a few sectors or a limited number of economic instruments such as tariffs, but at the other extreme it can develop into a fully integrated structure bordering on a federal system.

Integrated economic development allows for a more efficient use of resources and the potential for the realization of higher living standards. In the traditional jargon of economics it allows for a higher level of exploitation of regions' and countries' comparative advantages. Political agreement between states to facilitate such integration is important in fostering the creation of larger markers and opening up the supplies of materials and the human ingenuity that allow economic development. But there is also the requirement of appropriate and well-managed infrastructure. The issue if often one of the role of this infrastructure and the form it should take.

There have been long standing debates about whether infrastructure provision actually fosters economic development or whether it is provided as a product of the economic development process (Button, 1998). The empirical evidence that has been collected from around the world does not provide a great deal of help in this matter. The data is certainly often not good. Further, for a technical perspective, testing for causality rather than simply correlation is an imprecise art at the best of times, and when there are significant

lags involved it moves into the abstract school. There are also issues of definition and considerations of how infrastructure is maintained and the ways in which it is utilized. Simple calculus seldom offers much assistance in examining what are often qualitative issues of judgement.

There are also the much larger issues of ‘sustainability’ (and in this context, ‘sustainable infrastructure’). This is term that until a decade or so ago was related to narrow ideas of economic accounting and National Income Growth. The publication of the *Brundtland Report* (1987) changed this to reflect a more holistic view of the world. In simple terms, just providing investment is not of itself enough to ensure the long term social and economic viability of infrastructure.

Further, infrastructure has no single definition. It is most commonly discussed in terms of its characteristics – longevity, scale, inflexibility, and higher investment costs – but that is seldom seem as satisfactory. Increasingly in the economically advanced parts of the world its meaning has also been shifting from one focusing on physical fixed assets such as roads, airports, sea ports, telecommunications systems, water distribution systems and sanitation (what might be called a ‘public utilities’ definition for shorthand). It now often embodies notions of softer types of infrastructure such as information systems and knowledge bases. The change is largely inappropriate for much of Africa. Here there is generally a shortage of public utilities type of infrastructure.

Where there does seem to be something of a consensus is that infrastructure, and transportation and communications in particular, is important to lubricate the wheels of trade and to allow the benefits of these economic gains to be distributed across those living in the nations involved in the integration process. While there is a tendency for emphasis to remain on the pure efficiency advantages of having a coordinated infrastructure policy, notions of sustainable social development also requires these gains to be spread in a socially acceptable manner.

Whilst the aim here is to be as general as possible, the topic of transportation infrastructure takes a central place. This is not just because of space limitations but is also because a more consistent argument can be made with reference to a single type of infrastructure. Further, transportation is very important in the economic development process acting as a lubricant for both domestic and international transactions. Investment in transportation infrastructure also constitutes a large part of multilateral and bilateral foreign aid contributed to economically developing countries. When it comes to developing integrated infrastructure policies, transportation also poses some of the most difficult challenges.

The aim is to look at some of the important considerations that surround the provision of suitable transportation infrastructure and to discuss some of the policies that have been tried to put such infrastructure in place within the context of an integrated economic framework. The attention is on broad issues and nothing is said about the vitally important micro-issue of project selection and appraisal. Since many of the successes are from outside of Africa, the examples given cover a wide geographical area. It is hoped that some of the general principles are transferable.

AFRICAN ISSUES

The infrastructure in Africa is in general inadequate and of poor quality when compared to Europe and North America. The problems are certainly not simply a lack of investment per se but also often reflect inadequate levels of maintenance of that which is provided and the use that is permitted of it. But within this general framework there are wide variations between countries and regions within them and between rural and urban areas more generally. In this latter context, for example, a recent study by Fishbein (2001) observes:

- Less than half the people in Sub-Saharan Africa have access to safe drinking water
- Over a third of Africa's population lack adequate sanitation
- Telephone lines serve primarily urban areas in Africa; few villages have a single telephone. The average disparity in telephone density between urban and rural areas in Africa is as high as 25:1.
- Only about 5% of Africa's rural residents have access to modern electricity, while over 95% are dependent on traditional fuels such as wood and cow dung for cooking, lighting and heating.
- Recent studies in Burkina Faso, Uganda and Zambia show that walking is the principal means of transport for 87% of the rural households; in most Sub-Saharan countries women account for about 65% of the time spent in movement for household and agriculturally-related chores.

The quality of the infrastructure of Africa has certainly impeded its ability to compete in the global market. The share of Sub-Saharan Africa in global exports was 3.1% in the mid-1950s but by 1990 this had fallen to 1.2%. A major problem in Africa is the movement of exports (often raw materials) to ports because of the poor quality of the national transportation networks that they must transverse. Consequently the c.i.f. prices may be 50% to 70% higher than f.o.b. prices and delays between production and delivery to final customers (and hence payment) can be extensive on the overland leg of movements. The overall trading situation of Africa is hardly likely to improve with many other parts of the world moving towards large integrated trading blocks (e.g., the European Union, the North American Free Trade Area and Mercosur). Africa's move towards an Africa Union is taking place at a slow pace but reflects something of a response to this situation.

Clearly, Africa will encounter serious problems in any move to economic integration as even institution structures such as the European Union have found it a challenging

process to bring about economic integration in circumstances where there is a relative abundance of resources for transfer payments. Infrastructure is but a small part of this whole but it is nevertheless an important part. Transportation, in particular, is vital to allow physical interactions and trade between countries. For this reason, it was no accident that when the European Union was formed in the late 1950s, one of the two major common policies contained within the Treaty of Rome was that for a Common Transport Policy. Perhaps, the experiences of the Union in creating not only this Common Policy but the infrastructure sub-component within it offers a key reflection of the difficulties that are inherent in the integration process.

THE FACETS OF EFFECTIVE COORDINATED INFRASTRUCTURE POLICY

Each type of infrastructure has its own features and each poses a particular set of challenges. Having said this, there are some important common threads that need to be considered. Hence, although transportation infrastructure is the focus here, there are parallel consideration relating to other types of infrastructure. Here the focus is on some of the important technical and institutional policy issues.

Although this paper is written in English it is perhaps helpful to resort to the bastardized jargon of the European Union to consider the requirements that are behind the creation of a success integrated transportation infrastructure approach. The topic of infrastructure policy for integrated economic developed has no-where been so thoroughly studied. While the context is different in so many ways to the situation Africa, there are still useful ideas that are transferable. The crucial issues are those of removing cross national border barriers to trade imposed by limiting transportation infrastructure factors.

The effort to remove cross border problems has led to the isolation of three key ingredients. There should be adequate ‘inter-operability’, inter-connectivity’ and ‘inter-

modality'. These are interrelated, multi-dimensional concepts that embody institutional as well as technical considerations.

- *Inter-operability* means that the operating equipment (trucks, trains, ships, etc.) can operate on either side of the border equally efficiently. This means common technical specifications, or at least sufficient flexibility in specifications to remove access to all components of the integrated network. It also means common institutions such as licenses, insurance, way-bills, computer and information systems, safety standards, and labor laws and practices. Without these features there is the needed for consignments or passengers to change carrier at the border even if the same mode is used on either side. In other words, it means equity of access, on comparable terms, to the entire integrated transportation infrastructure network.

- *Inter-connectivity* is largely, but not exclusively, a technical matter in its relationship to infrastructure. Railways require the same gauge on either side of a border to be efficient and, with electric locomotion, the same power system. Roads must be of comparable engineering quality to carry heavy trucks. The quality of cross border air service is only as good as the worst air traffic control systems on either side of the boundary. But there are also operational considerations. Time-tables for public modes of transportation using the integrated infrastructure network, for example, need to be coordinated across boundaries for full efficiency.

- The idea of *inter-modality* is not strictly only a trans-border concern but involves the more generic issue of being able to switch between transportation modes at minimal generalized cost (i.e., the full costs of movement including delay costs, transshipment, etc.). It concerns efficient inter-change between modes. In some cases this has little to do with cross-border traffic but does become particularly relevant when sea and airports are important elements in cross-border traffic. If these are the main gateways into a country, irrespective of how far they may be from the legal border, then these

are the *de facto* places where goods and people encounter a cross-border situation. To reduce friction at these points and to lubricate the overall transportation system, where a modal change is frequently required there is a need for efficient consolidation and transshipment facilities and procedures.

Confronting these necessary features on an integrated transportation infrastructure requires institutional as well as technical coordination. Further, while in some cases it is possible to isolate those elements of transportation infrastructure that are immediately important for economic integration, in the longer term the ability of this diminishes as economic growth takes place. Essentially, the production process itself becomes more integrated as populations become more deeply involved in a larger money economy. Thought, therefore, is required about ensuring that short term 'fixes' to overcome inter-connectivity, inter-operability and inter-modality problems do not at a later stage impede further integration and economic expansion. This is partly a technical issue but largely one of institutions.

The focus on infrastructure policy should also be tempered by considerations of how these matters of inter-connectivity, inter-operability and inter-modality within transportation fit with other transportation policies. In practice there is a need for cross-cutting, or at least policy coordination and recognition, policies that also embrace energy and communications. Developing an integrated infrastructure policy in one sphere can often be wasteful of resources without cognizance being taken of what is happening elsewhere.

FINANCING

Infrastructure generally involves significant initial outlays and continual on-going expenditures on maintenance and management. Most African governments are in no

position to provide this on any significant scale, especially where there is a need for items requiring foreign exchange outlays. This is one of the clearest reasons why international agencies have traditionally been major contributors to transportation infrastructure development.

More recently there have been attempts to better structure the ways in which local resources can be used. These have taken the forms of trying to attract more private sector finance and in trying to improve the management of finances by public agencies (Heggie, 1999). Such changes will be vital to ensure adequate infrastructure capacity within an integrated economic structure and to enable the system to be efficiently maintained and operated. The World Bank has come up with guidelines in the context of domestic transportation infrastructure financing that are applicable for the insurance of adequate international infrastructure. These concepts include:

- Contracting out more design and implementation work to the private sector or expose in-house work to competition from outside contractors.
- Increase revenue mobilization by simplifying road user taxes and charges, restructuring them and improving revenue administration to reduce avoidance, evasion and leakage.
- Allocating additional revenues from the government's consolidated budget. Financial plans need to identify where the additional revenues might come from and at what cost – whether by taking funds away from other sectors and/or raising clearly identified taxes and charges.

The additional problem with the financing of infrastructure that is fundamentally concerned with international trade is that of responsibility. Nationals from other nations who pay most of their taxes in their home state are often using the transportation infrastructure. The traditional method of handling this is via border charges. These tend to poorly reflect the subsequent use made of the infrastructure, give no guidance as to

where high rates of return are being enjoyed on the network and are inherently open to fiscal abuse.

Transparency is one way of reducing these problems in theory but in practice it is difficult to operate. Common accounting procedures for infrastructure finances across members of an integrated economic block offers a minimal first step forward towards this. Standardization with some autonomous authority (a super national road authority) is another theoretical option. Besides inevitable difficulties in independent nation states being unwilling to relinquish the sorts of authority this would entail, it also isolates the financing of specific elements of national economies from the other components. Ultimately, with complete integration, given the network nature of most infrastructure and the economies of scale inherent in its supply, such a super national agency responsible for at least parts of infrastructure systems seem inevitable.

ATTEMPTS AT CREATING INTEGRATED TRANSPORT SYSTEMS

The globalization and internationalization of production is inevitably leading to a growth in the demand for international transportation in all continents. This is compounded by a rapid increase in tourism in many areas as the industrialized world enjoys rising personal incomes; better health, longer retirements and people are more adventurous in their leisure pursuits. The result is increased amounts of international traffic and more international personal mobility. The forecasts are that the trend is far from being transient but that longer-term growth in international trade and in international travel will continue into the foreseeable future. Africa may not be at the forefront of these trends but they impact on most of the countries of the Continent and provide opportunities for parts of it to benefit significantly.

Transportation represents an impediment to international trade. Part of this is a natural function of the costs of distance (both money costs and movement time costs) but there are also institutional issues. In some cases national (or state) governments manipulate transportation rates or infrastructure provision to favor their own exporters. It acts as a non-tariff trade barrier and as a serious act of protectionism.

Borders have traditionally proved to be bottlenecks in the international transportation system. In generally there are few viable border crossing points and traffic must funnel through them. At the very least they provide relatively easy locations to control trade and collect revenues. They can also serve as a means of meeting other non-economic objectives such as the seeking of illegal drugs or the prevention of disease or harmful insects entering a country. In many cases the bottlenecks are, therefore, deliberate and deemed to be an effective way of meeting explicit non-transportation objectives. This does, however, still raise questions about the efficiency with which these border activities are conducted. In addition, borders constraints can serve as non-tariff barriers to trade of a less explicit type.

There have been a number of efforts to reduce the impediments associated with border crossings. While formalization of the above concepts is relatively new, there has been a steady movement to improve inter-operability, inter-connectivity and inter-modality. A major innovation that has reduced some of the technical problems of inter-operability (and also inter-connectivity and inter-modality) has been containerization.

More recently the emphasis has been on removing border-crossing restrictions within blocks of countries. The most notable of these has been the initiatives of the European Union and that of the North American Free Trade Area (NAFTA). There have been more limited efforts in Africa, such as the creation of the Maputo Corridor, that have focused on key cross border elements in transportation chains. These are discussed in some detail.

- *The European Union*

The up-surge of interest in supply-chain management, just-in-time production and the like has led to a wider appreciation of the general need to enhance the efficiency of European transport if the region as a whole is going to compete successfully in the global economy. The concern is that the effectiveness of transport logistics in the EU area are at least comparable with those elsewhere to ensure that the labor, capital and natural resources of member states can be exploited in a fully efficient economic manner.

It was against this broad background that the EU initially sought to develop a transport policy, of which the Common Transport Policy (CTP) has been but one element, designed to reduce artificial friction. It has taken time for the CTP and other elements of transport policy to come together to represent anything like a coherent strategy. The process has not been smooth and has involved a number of almost completely discrete phases (Button, 2000).

A simple examination of a map of the EU provides guidance to some of the problems of devising a common transport policy. At the macro level the EU does not geographically conform to an efficient transport market. Ideally transport functions most effectively on a hub and spoke basis with large concentrations of population and economic activity located at corners and in the center and with the various transport networks linking them. The overall distribution of economic activities, geographical separation of some states and the logical routing of traffic through non-member countries do not conform with this. This led to divergent policies on different sides of many borders. This is a pattern not dissimilar to that found within Africa.

To initiate a integrated system the policy makers focused on infrastructure from the mid-1970s. While there were some initial token gestures aimed at improving investment policies (e.g., the initiation of consultation across countries when planning new roads)

much of the attention was on opening access to the existing structure on terms that did not discriminate between states.

Road transportation is the dominant mode of freight and passengers in the EU. Initial efforts to develop a common policy regarding road transport, however, proved problematic. Technical matters were more easily solved than those of creating a common economic framework of supply although even here issues concerning such things as maximum weight limits for trucks tended to be fudged over. Economic controls lingered on as countries with less efficient road haulage industries sought to shelter them from the more competitive fleets. There were also efficiency concerns over the social and environmental costs of road transportation as well as narrower infrastructure utilization questions.

The Single Market initiative from 1987, also later influenced by the potential of new trade with the post Communist states of Eastern and Central Europe (Button, 1993), has resulted in significant reforms to economic regulation. Earlier measures had helped expand the supply of international trucking permits in Europe and a reference tariff system had introduced a basis for more efficient common rate determination. The 1990s were concerned with building on foundation and as part of the 1992 Single Market initiative, a phased liberalization was initiated that gradually removed restrictions on trucking movements across national boundaries and phased in cabotage.

Rail transportation is an important freight mode in much of continental Europe and provides important passenger services along several major corridors. Much of the important economic reform of European railways was undertaken in the early phase of integration by the ECSC with actions on such things as the removal of discriminatory freight rates. The Union has also instigated measures aimed at allowing the trains of one member to use the track of another with charges based upon economic costs. The implementation of the open access strategy has, however, been slow with limited impact.

Recent initiatives have been concerned less with issues of economic regulation and with operations and more with widening access to international networks and with technological developments, especially regarding the development of a high-speed rail network as part of the Trans-European Networks (TENs) initiative.

The Union has developed TENs for all modes of transportation with the aim of providing a sort of blueprint of the ideal transportation infrastructure for the integrated economic development. The plans were initially simply a merging of the ideas of individual nations and then refined in terms of a larger integrated strategy. They were also initially drawn up for each mode of transportation independently with limited effort at coordinated policy making across modes. Again, this process has subsequently been refined. The crucial lesson from this, is that there is a need to gradually bring together infrastructure plans and to devise a coordinated strategy. The lessons of the European Union in doing this is that often investments in other nations offer a higher return to a particular economy than do domestic actions. Understanding network effects and having an institutional structure to reflect them in actions becomes important in an integrated world.

The EU has traditionally found it difficult to device practical and economically sound common pricing principles to apply to transport infrastructure. With regard to railways, the gist of the overall proposals are for short run marginal costs (which are to include environmental and congestion costs as well as wear on the infrastructure) to be recovered. Long run elements of cost are only to be narrowly defined circumstances and in relation only to passenger services. This clearly has implications, especially on the freight side, if genuine full cost base competition is to be permitted with other modes over a complete EU system.

The difficulties that still remain with cross border rail transport reflect technical variations in the infrastructure and working practices of individual states that are only

slowly being coordinated. Some countries have pursued the broad liberalization philosophy of the EU and gone beyond the minimal requirements of the CTP, but in others rigidities remain and the rail network still largely lacks the integration required for full economies of scope, density and market presence to be reaped.

There has been something of a shift in the overall strategy of the EU in recent years. Rather than the modal based, network approach of the TENS, there has an increased focus on a corridor focused, multi-modal structure. Key corridors are isolated and the main modal links are determined with the aim of ensuring adequate capacity is provided with sufficient support from secondary modes. Inter-modal links are integral of this within this framework.

- *The North American Free Trade Area*

The NAFTA went into effect from January 1994 with the aim of opening the borders separating Canada, Mexico, and the US to the free exchange of goods and services. It is a very comprehensive agreement, covering not only tariff elimination, but a number of highly contentious issues including non-tariff barriers, direct foreign investment, trade and services, government procurement, and intellectual property rights. In transportation NAFTA sought to equalize the US-Mexico transborder operations to those practiced between Canada and US. Reciprocal entry in the trucking industry was to be permitted initially to zones in border states, later to border states, and in seven years to all states and all over Mexico.

Yet over half a decade into NAFTA, there remain many subtle and not so subtle barriers to cross border movements. Some of these involve labor issues that there are also infrastructure dimensions.

One of the most important problems is inconsistency in truck size and weight regulation across national borders. Size regulation refers to limits on the width of the truck and to its overall length and the lengths of it component parts (tractors, semitrailers, and trailers). Weight regulation refers to both the gross vehicle weight (GVW) and to the distribution of weight across axles. Truck size and weight regulations are imposed to avoid excessive wear and damage to road and bridge infrastructure; to ensure consistency with the geometric design standards of roads; and to promote safety, especially in relationship to the interaction of trucks and automobiles in the traffic stream.

Inconsistencies in these regulations can add significantly to the cost of cross border transportation. For example, suppose that the truck configuration typically used to ship lumber within Canada is not legal on US roads. Shipments going from Canada to the US must then either be transferred from one truck to another at the border, or be shipped via some lowest common denominator truck configuration that is legal in both countries. In the first case, considerable extra costs in terms of labor and delay are incurred. In the second, it may be necessary to use a truck configuration that is less efficient than the best option for shipping lumber in either country. Either way the outcome is the same – transport costs are higher than the costs of shipping the same load a similar distance within a single country.

Harmonization of truck size and weight regulation is necessary in order to achieve the full trade creation potential of the elimination of tariffs under NAFTA. This effort is retarded by two factors. There is the complexity of truck size and weight regulation, requiring agreement on a wide range of engineering and safety issues. The second is the problem of jurisdictional fragmentation. In each of the three NAFTA partners, state or provincial governments have some latitude in setting their own regulations. This means that, in principle, a total of 64 jurisdictions are involved in the harmonization process. Given these problems, a complete consensus on regulations is not seen as a realistic goal.

Instead, a set of agreements and procedures that will minimize the impact of regulatory inconsistencies on cross border traffic is sought.

- *The Maputo Corridor*

The South African Development Community was established in 1992 in a cooperative effort of the governments of Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, Swaziland, Tanzania, Zambia and Zimbabwe. One of the problems of moving forward on the economic front way the poor state of transportation infrastructure between the Indian Ocean Port of Maputo in Mozambique and the industrial hinterland of South Africa. This was a well-established transportation route but had fallen into decay and disrepair during the period of sanctions. The Maputo Corridor project was thus a joint initiative of South Africa and Mozambique to reopen this route.

The plan was had four transportation infrastructure components within a multimodal structure. These were up-grading and construction of road links from Witbank to Maputo, improved rail service from Johannesburg to Maputo, along with lines connecting Maputo to Zimbabwe and Swaziland, up-grading port and harbor operations in Maputo and the establishment of a modern, integrated border post to speed movement between South Africa and Mozambique. Telecommunications were to up-graded to support the system.

Progress has been made, although it has not been evenly spread. The toll road is under development by a concession contract between the two governments and a private consortium, Trans African Concessions. The road is completed. The border post facility has yet to be initiated because of political disputes, apparently mainly between agencies with South Africa. The rail and port developments have been much slower, in part this may be attributed to significant differences in the initial quality of infrastructure in South Africa and Mozambique combined with the weaker government institutions in the latter due to civil war. There have also been difficulties in carrying through linked non-

transportation investments such as the Maputo Iron and Steel Plant that would make use of natural gas from the Pande fields in Mozambique.

Assessment of the difficulties of carrying though this corridor project highlight more generic problems for this type of approach (Laksmanan at al, 2001). The main one being not that the infrastructure package would not generate gains but rather the distribution of those benefits. The European Union may be able to switch to a corridor type approach to foster economic integration because it has resources and institutions mechanisms allowing for transfers. In the Maputo Corridor initiative, the Mozambique public and private sectors have concerns that the benefits of construction contracts etc. will benefit South Africa. Indeed, the original idea in 1995 of setting up a joint management enterprise (the Maputo Corridor Company) was not implemented in Mozambique.

The recent histories of the two countries and their internal economic structures have also posed problems. In particular, Mozambique has been through a period civil war and has a very labor-intensive public sector. The plan to transfer the port and rail activities from a public agency (Portos e Caminhos de Ferro de Mocambique) to private concessions would mean large labor redundancy in a region that saw mass immigration due the civil war. The institutions to cope with this, both in Mozambique and South Africa, do not seem in a position to cope with this (Linfield, 1999). Added to this, the initial responsibility for supplementary infrastructure investments (such as drainage, water supply, local roads/paths and coastal zone management) was in the hands of Transport Ministries that had very limited expertise or experience in these fields.

CONCLUSIONS

To say that the African economies have not performed well is perhaps to understate the pattern of recent history. One of the main economic difficulties is the dependence of

many of these economies on a limited number of exports. One of the potential advantages of integrating economies is to enjoy the synergies of risk sharing and lower overheads that can be generated. Integrated development almost inevitable requires coordinated and possible shared infrastructure policies. There are problems of creating institutions that can achieve this. One involves deciding on an efficient form of coordination. As seen, there are different approaches and even a relatively well established and resource rich structure as the European Union has changed it approach over time. Linked to this in many cases is the fact that almost without exception the type of infrastructure required to facilitate integrated economic development has asymmetric implications. Even if these are short term, they cannot be ignored, particularly in circumstances where the overall resource base is itself severely ljimited.

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