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ECONOMIC ASPECTS OF DEVELOPMENT PROJECTS AS THEY RELATE TO INDUSTRY  
AND COMMERCE AND A BALANCED ECONOMY

by

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In trying to outline a subject as broad as "the economic aspects of development projects as they relate to industry and commerce and a balanced economy," I am struck with the difficulty of being specific and at the same time providing any kind of perspective. Accordingly, I will try to give a general picture of causes and effects, and will hope that the specifics will come out in the discussion. I would like to lay out this problem, and its principal aspects, in generalized terms--as the only way to cover the ground, the only way to see the situation as a whole. I think that such a group as this will be able to weigh and accept--or reject--the generalizations without the benefit of statistical tables and documentary notes.

As a matter of necessity in putting such a broad subject before you for discussion, I would like to try to do so in what appears to me to be some kind of logical order:

1. Where does the west stand; what are the essentials of its economy; what is its fundamental position now?
2. What are the logical goals for that economy; what are the logical developments to be sought?
3. What are the major economic problems, gaps to be filled, obstacles to be overcome?
4. What is the place of basic development projects in this connection:
  - a. What are the projects?
  - b. What are the general results to be expected from them?
  - c. What are the particular results to be expected in relation to industry, commerce and a balanced economy?

On the first question, I think most of us here have a good idea of where the West stands.

I believe we are thinking of the intermountain and Pacific West and its economy. Perhaps the eleven western states--or at least the seven western states plus considerable part of the next tier of four. Like the national economy, the regional economy is not a concept easy to grasp. It is a complex combination of geographical and political areas, institutions, industries, services and people. Yet it is a reality that must be clearly visualized in its main essentials as a basis for planning investment and development. The western economy is made up of a group of individual regional economies; yet these economies are similar enough, and the whole West is homogenous enough, and has enough common problems, to permit sound generalizations to be made about its economy and its needs.

We know the strategic position of the West on the continent's Pacific frontier. We know its outstanding physical and economic resources--in certain branches of agriculture, grazing, forests, essential minerals, water,

fuels, and various forms of energy. We know its broad problems in resource utilization, industrial location and development, market expansion, balance of trade, and attainment of a balanced development and economic maturity.

With reference to the last and vital point--economic maturity--we know we are still on the economically immature side. We are too largely extractors and producers of raw materials, timber, fuel, grain, farm products, livestock, wool, metals. A good part of this output goes out in native and semi-processed states, or in bulk--meat on the hoof, wool in the grease, and so on. Speaking generally still, the West is distinctly not a manufacturer or a merchandiser.

The West's trade is not well balanced. A large part of its exports are in the raw and semi-processed products of farms, forests and mines referred to, and a large part of its imports in manufactures. It is making gains in manufacturing and in economic diversity but has a long way to go.

The West is the great growing territory; it is considered the one of opportunity. It is, and will be, on the receiving end in migration. In fact there is a tendency for population growth in the West to run a bit ahead of actual economic opportunity--for the person to get here a jump ahead of the job. Unemployment tends to run at a rate higher than the national. The opportunities are here but development isn't as fast as migration. Which is one of the reasons for getting behind the basic development--the projects we are talking about.

The West lives well, as living standards go, but it subsists too largely for comfort on capital resources themselves rather than on "value added" through processing and manufacture. Which is one of the big reasons for the resource conservation and management we are also talking about.

The West faces some serious disadvantages in its progress toward economic balance and maturity: Lack of population in the home markets, and a freight-rate structure with the Nation's highest interregional levels and with schedules favoring shipment of bulk materials out from, and manufactured goods into, the region, and distributional shipments out of a few large port and jobbing centers.

The lack of home market hurts most in the development of production for wide distribution. The West has only one-tenth of the population. Therefore, the nation-wide distributor in the East has a relatively short cheap haul on nine-tenths of his output, while his competitor in the West has the long expensive haul on nine-tenths of his. Migration is gradually reducing the big margin, but more immediate solace than that must be sought. Full advantage must be taken (1) of the availability of raw materials and energy at low cost, (2) of lowest possible production costs, and (3) of expanding markets. The West does have a large share of the Nation's basic resources. Power is cheapest. It can attain lowest production costs in a number of fields. It should have the advantage of newer plants--of less obsolescence. Climatic conditions are favorable. Labor is productive. It has great potential markets on the Pacific--but, unfortunately, unstable political and economic conditions across the water delay the operation of that favorable factor.

In consideration of the economy, resource distribution is also significant. Mineral raw materials are distributed over much of western territory--with especially significant concentrations of coal in mountain states, oil in adjoining high plains and southern seaboard, soil rebuilding phosphates in northern mountain areas. There is a significant concentration of

big hydro in the Northwest (which has two-thirds of the West's potential water power). Significant concentration of big timber in north coastal areas. Significant concentrations of specialized agriculture--grain, sugar, and fruits in scattered areas, citrus fruits in the south--with irrigation a common need for all of the states. With reference to all of the variations in resources and their distribution, from power to agriculture and from seaboard to interior, there are common opportunities in basic conservation and development and large advantages in reciprocal action.

On the second point--given this state of the western economy, what to do, where to go? In brief, the general purpose should be to add strength, balance, security and maturity to the economy of the West. It should be the purpose to accomplish this primarily through the conservation, development and use of resources--including those of land, water, minerals, and energy--and through the development of essential industries and services. In all of this the fundamental public and governmental purpose should be that of developing the resource base and the essential foundation for the expansion of industrial and other economic activity.

The over-all goal and problem break down into a series of problems and fields for public and private and cooperative development activity. In very short terms:

1. Multiple-purpose river basin development.
2. Land--soil, forest, range-management.
3. Mineral and raw material development.
4. Energy conservation and development.
5. Basic industrial development, and, requiring special attention under this heading--  
Fertilizer industry development.
6. Manufacturing, and light industry, development.
7. Transportation, including, for special attention--  
Lowering of freight rate barriers.
8. Marketing and merchandising development.
9. Continental and overseas development and trade, and, of high significance under this heading--  
Alaska survey and development.
10. Investment in development, public and private--a corollary problem in each of the above mentioned fields.

On the next question--what are the basic development projects--further generalizations must be made. I believe these are primarily the multiple-purpose river basin development projects, coupled, of course, with those for resource development and management. River basins are the cradles of human settlement anywhere and everywhere; where any degree of aridity prevails--as in our West--the life and security of an economy are especially dependent upon the river resources and their wise conservation and use.

The nature of river development programs can be adduced from the recent and pending reports on Columbia, Central Valley, Colorado, and Missouri river basins.

The Columbia development, long under study both by the Bureau of Reclamation and Corps of Engineers, may be taken as more or less typical of the large valley development programs. Storage and regulatory works, irrigation, power, navigation, flood control, fisheries, recreation, and

other water uses are involved. As seen by the Bureau of Reclamation and the Department of the Interior, the objectives are broad, covering--

1. Consideration of the water resources of the basin in their entirety, and the charting of an orderly course for their development.
2. Direction of the lifeblood of water resources into useful channels to attain needed economic growth of the region--to irrigate land, generate power, carry commerce, and realize the potential contribution to the Nation's economy through the creation of additional real and taxable wealth.
3. Wide and prosperous land, agricultural, industrial and community development.
4. A long range development plan, including 238 projects providing--
  - a. Irrigation water for 5.36 million acres, including 3.84 million acres not now irrigated.
  - b. Diking and drainage works to increase the utility of 534,000 acres.
  - c. Through irrigation, diking and drainage, at least 70,000 new farming opportunities.
  - d. Production of at least 55.6 billion kwh of firm electrical energy and 9.1 billion kwh of secondary energy annually, for wide and beneficial use in industry, commerce, community, home and farm.
5. A first recommended step for authorization of twelve projects and reauthorization of three projects, as a beginning toward achievement of goals.
6. A development estimated to cost a total of \$3.5 billion (based on 1940 cost levels), with annual costs estimated at \$200 million for retiring construction costs, and with large direct and indirect economic benefits.

The picture in other major basins is not dissimilar; there are similarities and differences in conditions but the objectives and the approach are similar.

All have water storage and irrigation as fundamental and vital elements.

Hydroelectric power is an important element in all, although the resources are much larger in the Pacific Northwest than in all the other basins.

Upstream-watershed protection--aspects are relatively more important, land and water management relationships more intimate, in some basins (such as the Rio Grande and Arkansas, and Colorado) than in the Pacific Northwest.

Silt control is also more important in such basins.

Salinity control is a problem in the tidewater section of the Central Valley, and ground water replenishment a major aim in that valley.

Recreation offers problems and opportunities in all basins.

Fishery and wildlife problems are general, with a particularly vital fishery resource being involved--perhaps very adversely--in the Columbia.

Navigation is most important in connection with the Columbia where an improved central regional trunk waterway is projected. Inland navigation is also important in the Missouri development, but primarily to central rather than western areas.

Flood control is an element of all major basin development projects.

Water supply and pollution abatement problems enter in a number of locations.

On the whole the drainage basin approach to development is economically sound. It proceeds through physical and economic units that probably have more to do with the patterns of human settlement and with the definition of regional economies than any other factor. Improvement of the drainage basin improves the regional economy at its base. It deals realistically with the life sustaining element of water. Concerted resource planning, development and management on a drainage basin basis are necessary to bring the different elements of a program into a mutually supporting relationship, and to realize the potentialities of development in a way that would not be possible under piecemeal and uncoordinated procedure.

The next in the series of questions has to do with the general effects of the development projects--what do the river basin programs do?

Principally, they conserve our most fundamental resources, they widen the economic base, and they expand economic activity and, with it, private and public income.

An immediate effect is that on the construction industry and its related supply industries, and on related investment, business activity and employment both in the field and around the region and nation. This is not the deepest and most lasting effect--but it is not to be sneezed at. These industries account for a large--if somewhat variable--segment of the gross national product. In the more immature West the importance of construction activities and employment tends to be even greater relatively than for the nation as a whole.

However, the greater results of river basin development lie in the longer run and more lasting effects of expansion of the resource base, in the establishment of continuing opportunities for farm settlement and related employment, for commercial and service activities for the farm community, and for economic activities in agriculture, extraction, manufacturing, distribution, and trade, and in services to the consumer and to the economy generally.

The two principal keys to economic opportunity afforded by the river basin development are those of land and energy.

Large-scale land development in the West is a must on a number of grounds: National and world needs for food and fiber, including new population and rising standards of nutrition and general living. Offset for land gone and going below the margin. Land for westward migrants. Land for an agricultural balance to the new industrial and commercial development of the west. With the normal rainfall sufficient for efficient and

stable general agriculture in only a few relatively small sections of the West, water conservation, storage, and irrigation are indisposible to that essential land development.

Large scale energy development is also an essential. Millions of kilowatts of additional power must be developed to meet the West's inevitable growth in population, industry and economic activity generally. In spite of power resource potentials and the substantial development of power in recent years, the West faces the prospect of immediate and continuing power shortages unless river development is accelerated. The great needs in Pacific Northwest and Pacific Southwest have already attracted much attention. In the long run, shortages will obtain in interior areas also because of their more limited energy resources.

Without more energy, the growing needs of agriculture, industries, services, communities, farms and homes cannot be filled. A check will be placed on the expansion of economic opportunity and the coming of age of the West. The inevitable new population cannot be absorbed without losses in living standards.

Energy in the west means hydro. Because of the power resources, the nature of multiple purpose development with electricity as co-product or by-product, the low power costs, the fuel conservation permitted, and other factors, falling water will be considered the primary source of energy supply in the West.

This is not to say that hydro is looked on in any sense as an exclusive source of supply. Hydro resources are not evenly distributed, neither are fuel resources. The latter--oil, gas, and coal--will be a factor, even a primary factor in many fuel-favored localities. Ultimately at least, atomic energy will become a factor locally and even generally. On a cost and conservation basis, however, it is very unlikely to displace hydro at the base of the West's power system.

The basic energy development is not a matter of generation alone. Hydro energy is where the water falls; centers of gravity of consumption are at the larger communities and industrial locations. The primary transmission from one to the other on the economical basis that will permit progress toward our western objectives is an integral part of the basic development and an integral problem and project for the West. For optimum results, advancing high tension transmission over increasingly long distances, should be used for firming and supplementing power between adjoining areas and regions, and for the displacement or exchange of energy over longer distances. The integral and reciprocal consideration of energy of all kinds and the consideration, from the standpoint of the West as a whole, of production and consumption of energy and more advantageous and higher uses of fuel, will have large values to the western economy.

Efficient and economical transportation for goods and people is a twin contribution, with efficient and economical transportation of energy, to regional progress. Of course, the problem of transportation improvement goes far beyond river development. In the Pacific Northwest, however, river development is an important factor in regional transportation. A truly regional trunk inland waterway is provided through the heart of the Pacific Northwest. This will provide economical transportation for bulk goods in particular and will have its effects in land, mineral, industrial, commercial and community development.



Any focusing on the effects of river development for the major purposes of irrigation, power, navigation and flood control should not detract from the tremendously important purposes and results of resource management. Forest, range, soil conservation, watershed improvement, fish and wildlife conservation, protection and improvement of scenic and recreational values, are all fundamental improvement projects and all are related to a strengthening of the western economy. The exploration and development of mineral resources and processes--particularly as related to the more plentiful low grade materials and to substitutes for materials in short supply--is also of great importance in sustained productivity, national security, and strengthening of the western and national economies. Intensive attention to these matters is particularly necessary in the face of the pressures of development projects, industrial expansion, and population migration and settlement upon natural resources.

A general concept that must be built up and sustained in connection with regional and western development is that of integration and coordination. There is a very great need, if optimum and timely results are to be obtained, that river basin development and benefits be well distributed regionally. There is need for a balance in development among the regions of the West. There is need for close coordination between the "water in the river" projects and the watershed improvement and resource management aspects of drainage basin development.

This integration is essential in the interest of financial as well as general economic soundness. The various parts of basin development support each other. The better the synchronization of improvement with need and with related projects, the greater the soundness of investment, the greater the contributions to the economy, and the more assured the repayment of the reimbursable items of cost of power and irrigation.

Integrally planned and programmed, and well coordinated, basic regional development is essential if total national investment is to be maintained at a level that will provide expanding national productivity and full employment. It is extremely doubtful that the necessary high national annual investment level can be maintained, year in and year out, without a large, soundly conceived and planned program of regional development to strengthen and expand the national estate and the basis for economic activity.

The greater opportunities for this kind of investment in regional resource development lie in the relatively immature West. The new wealth and income created from this western investment accrues, however, to the whole national economy. The whole nation shares in the profits of development both through direct income and repayment and indirectly through inter-regional balances of payment effected in various ways. The development of the West is distinctly not a gift from the East; it has not been thus in the past and it will not be in the future.

The final aspect of the question of results of development projects relates to the effects on industry and commerce in particular. Those effects have already been indicated in a general way by the discussion of the relationships to the economy. A great deal of more specific material has been developed by the Federal agencies--the Bureau of Reclamation, the Corps of Engineers, the Department of Agriculture, the National Resources Planning Board, and, in the Pacific Northwest, the Bonneville Power Administration.

The effects of land reclamation are very direct in an across-the-board expansion of economic activity. The story is a long one and one very familiar to many of this group. A good view of the effects was given in a study of the results of reclamation in the Yakima Valley published by the Washington State Planning Council several years ago. Many of the twenty eight studies of the cooperative Columbia Basin Joint Investigations sponsored by the Bureau of Reclamation dealt, in a specific and through way, with the anticipated industrial and commercial results of the Columbia Basin Project--in relation to production, processing, manufacturing, marketing, transportation, and utilities, for example.

The effects of power development are also very direct and wide. Expansion of the energy base has had immediate effects in the expansion of production. In the case of the Columbia the expansion has gone both directly into large new industries (particularly aluminum) and into a large number of expanded industries through the utility systems. Some of the desirable effects of electrification--those on the diversification, decentralization and dispersion of industry--are yet to be felt in full measure. An illustration of the potential effect in a vital industry that should be new and decentralized, as well as big, lies in the phosphate and fertilizer field. The combination of outstanding natural resources and an ample supply of low cost power, coupled with great need and market for the product, makes practicable such industrial establishment in interior locations in Idaho, Montana, Wyoming and Utah. The reports of the Bonneville Power Administration--particularly a 1944 report on economic opportunities in the Pacific Northwest--illustrate the general range of industrial and commercial effects of the basic projects as seen for the Pacific Northwest.

If development and conservation programs are to have anything like optimum effect in industrial and commercial development, special attention must be given to raw materials and their sources in mines, farms and forests. Integrated exploration of such materials at home and abroad--and of the methods of their processing, marketing and use is essential if the West is to round and expand its industry and commerce and get where it should go.

The development of materials, land and energy together carry the insurance of an increasing strength and maturity in the western economy. The new population is coming--in fact increases are running somewhat ahead of development. The people will continue to come unless the lag in conservation and development should become too great--unless the West's great promise for the future should dim thereby. The land and energy are in the current and projected multiple purpose river basin improvements. The assurance of raw materials lies in conservation and utilization programs--in the wider use of foresight, intelligence, science and technology. These resource elements are the foundation of western development and progress. Moreover, these are the things that are distinctly in the realm of public interest and responsibility, and accordingly subject to a considerable degree of public planning, stimulation and control.

The West's industry and commerce will develop on such a base--provided we can maintain our national equilibrium and with it a high level of national investment, gross national product, employment, and buying power.

Together, public conservation and development programs and the private industry and commerce they support, mean employment and other economic opportunity for recent comers to the West, and for a number of millions more in the

next generation. These millions are a challenge that the West must accept by working to broaden the economic base and build opportunity, to absorb the new people without the usual, but not necessary ills--without spoliation and without congestion.

