HUMAN CAPITAL DEVELOPMENT AND U. S. BILATERAL ASSISTANCE TO LDC's

by Howard L. Steele

Office of International Cooperation
and Development
United States Department of Agriculture

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INTRODUCTION

Perhaps twenty-two years working in the bilateral economic development arena qualifies me to make some observations about successes and failures of bilateral assistance. Although the goal of this paper is to stimulate thought and positive action, there may be readers who become defensive as they view some of the observations which follow as "kicking a sacred cow or two". My objective, however, is to focus on areas needing improvement; not on persons, institutions or proprietary development theories. I hasten to add that the points made are solely mine, as are the conclusions; neither the Office of International Cooperation and Development nor any other organization in the USDA is responsible in any way for these remarks. Any errors made are also my sole responsibility.

The basic premise of this paper is that the primary engine of development in less than developed countries, especially those that are predominantly agrarian or rural, is human capital improvement. Further, that human capital improvement is the necessary condition for sustaining all forms of sector development in LDC's, and that too much of the United States of America's bilateral assistance in recent decades has been aimed at ancillary development needs, most of which fall under "sufficient conditionality" categories.

I will develop the case that helping provide a sufficient cadre of trained human capital at all stages of the developing society should be the primary thrust of bilateral assistance, and that assistance directed at the ancillary needs, whether they be in infrastructure, finance, institution building, monetary or trade reforms, or other areas, cannot be successful uses of scarce development resources until the former necessary condition is fulfilled.

It will be shown that the successes of United States bilateral assistance in western Europe and Japan, following World War II, and on Taiwan and other basically agrarian beneficiary countries in more recent time periods, support my conclusions. A second premise to be developed is that very firm direction of the scarce, but changing, resource base must be exercised at the highest level of the society if economic and other benefits are to be realized in the LCD in the short run. Simultaneously participatory democracy and a freely operating market mechanism must be fostered and developed by the society leadership for the longer run well being of its people.

Underdeveloped areas

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SUCCESS OF THE MARSHALL PLAN AND POST WORLD WAR II BILATERAL ASSISTANCE

Often cited as the most efficient and successful of the United States of America bilateral development assistance efforts are the Marshall Plan for economic recovery in western Europe following World War II, and the United States supported Joint Commission For Rural Reconstruction (JCRR) in Taiwan in the 1950's. One wonders why most of the literature fails to mention the dramatic success in Japan at the same time as the Marshall Plan was operative in western Europe. Perhaps because of the authoritarian personage of the Allied Supreme Commander in the occupation of Japan, General Douglas MacArthur, and his subsequent removal by President Harry S. Truman during the Korean conflict, the economic recovery he helped engineer in Japan does not receive fuller acknowledgement.

Nevertheless these three examples have at least one common causal thread which, I submit, accounted for their outstanding successes. In each case a cadre of well trained and experienced professional managers, entrepreneurs, educators, scientists, and technicians of all types existed in the societies. Only finance, physical plant and machinery, trade realignments, and reorganization of the factors of production and distribution were missing. In short, the human capital was in place in each society, and was prepared, with external assistance, to place the economies back on stream. In my terms of reference, the ancillary factors were missing. Thus the necessary condition for development, human capital, was in place awaiting provision of the sufficient condition, i. e., provision of the ancillary factors.

It is true that western Europe and Japan would be classified as industrialized economies, paralyzed by the vicissitudes of a world war, while Taiwan was basically an agrarian economy. My basic premise is still valid; Taiwan's largely rural population of peasants, working primarily for absentee landlords, was inundated by an equal number of immigrants from mainland China in a very short period of time. The latter group included the educated scientists, technocrats, skilled laborers and entrepreneurs who had the good fortune, or financial ability, to escape to Taiwan with the Nationalist Government following the Communist victory on the mainland.

The three successful development cases cited all included a critical mass of educated, experienced human capital available to fuel the train of events necessary for basic economic development, in Taiwan's case, or economic recovery, in the case of western Europe and Japan. While this was a necessary condition for development or recovery, it was not a necessary and sufficient condition. In addition to the need for human capital, financial and physical capital, a redefined role of government, new laws and societal institutions became mandatory and had to be put into place.

Further, basic infrastructure must also be in place. These activities are all the proper function of an enlightened body politic organized for the benefit of all players in the society.

Trained human capital cannot organize the other factors of production nor participate successfully in a market economy under conditions of brute autocracy, duplicity or legal uncertainty. Thus, the stimulus for efficient productive enterprise is the relative freedom to choose between alternative courses of economic activity for proprietary gain. People will choose the alternatives that hold out the most potential gain for their interest given relative information about alternatives and freedom from fear of persecution; especially if they know that government is interested in their long-run well being, and rules of economic play are fair and well known by all players. Thus the body politic must be astute, adaptive, and also has the difficult task of establishing fair, but flexible, rules of play for the gain seekers who drive the economy through productive activities for personal gains and rewards. Economic growth and development will follow.

WESTERN EUROPE, 1947-1950

The basic success of the Marshall Plan, according to White, can be traced to the infusion of a new set of rules on both conquered and prostrate by the Allied High Command, or the United States administrators of the Plan, plus capital and trade liberalization, which permitted the indigenous human capital to act (White, Chapter 7). That author also documents what he considers to be the effects of rather firm assistance administration:

> "When I first reported Europe, shortly after the War, the British standard of living was roughly three times that of refugee-crammed West Germany. Britain, though it was pocked by the bombings, still functioned, while Germany was a moon-scape of desolation from the Ruhr to Silesia. Since then, somehow, England has gone its jovial way across its pleasant plateau of civility, but Germany has boomed. The average per capita income in victorious England has risen to $3,871., thirty years later, while in defeated Germany it had reached $7,336., and the gap was widening. Somehow the severity with which the Americans policed Germany and directed the flow of aid proved more fruitful than the affection and support we gave the free government of the English people to do as they wished with our billions. (White, p. 306)

JAPAN

The case of Japan contains many similarities to that of Europe. General MacArthur replaced the Emperor as authority figure,

commanding complete respect, and homage, if not reverence. Further, he gathered around him a group of economic and cultural advisors who set to work establishing martial laws and orders which directed the flow of capital assistance to reestablish the basic infrastructure and industry of the country. These advisors also capitalized on the innate work ethic of the Japanese people, and their veneration of the "wise men" who held power in industry and government. Economic militancy replaced militarism. Private enterprise, albeit a Japanese cartel model, flourished.

The Japanese Ministry of Internal Trade and Industry (MITI) and the Japanese External Trade Organization (JETRO) successfully replaced the Imperial War Council as Japan's most driving politico-economic forces, and arbitrars of internal disagreements over distribution of scarce input resources, external prices and trade relations. They also protected developing home industries from external competition, and in fact are still doing so today.

TAIWAN

Except for a strong leadership hand at the top, in the form of the Nationalist political leaders, other aspects of the Taiwan experience were quite different from the industrial recoveries of Japan or the Marshall Plan countries of western Europe. The doubling of Taiwan's population in 1949-1950 following Communist control of mainland China placed severe strain on the island's economy. Of primary concern; how to feed and house the expanded population. Secondly, how to provide employment for a labor force twice that prior to 1949.

The United States and other donor nations provided emergency aid through the Taiwanese Joint Commission For Rural Reconstruction (JCRR). More than doubling rice production in the near term became a quid pro quo for political stability and general economic development. Three factors played into the planners' and the island society's favor: (1) A rural population of landless peasants seeking land reform and who sincerely desired to stay on their land to till their small plots of soil; (2) the recently defeated Japanese had established efficiently run, although nationalized, agro- and other small industries as part of their long run colonization plan which were still in place; (3) the Nationalist immigrants from the mainland included highly trained and experienced scientists, agriculturalists, entrepreneurs and technicians desperately seeking gainful employment.

Following carefully planned cadastres, land reform and a financing scheme to encourage former landlords to invest in agribusinesses and other needed entrepreneurial activities left from the Japanese era, the scientists, technicians and other trained immigrants from the mainland went to work in the rural areas with the new peasant

landowners. This was "hands on" technology transfer and education/training of human capital in its most basic form. But it worked very well in helping make the peasants' small land holdings productive

A multiplier effect was realized throughout the economy. Soon Taiwan began a diversification effort by promoting the development of fisheries and fruit and vegetable enterprises as rice production increased to self sufficiency, then became an export industry. A marginal agrarian economy became a very productive one, then transitioned to a labor intensive, light industry economy with a growing positive trade balance for its exports of agricultural, fisheries, textiles, plastics, and small electronic components. Unemployment and underemployment disappeared, and the levels of living increased to the highest in Asia, only surpassed by those of Japan, and later by South Korea. The South Korean model was very similar; Brazil's experience in Latin America was also similar, but space does not permit detailed analysis of the variables in this paper.

BILATERAL ASSISTANCE LESSONS APPLIED TO LDC'S

Perhaps the United States became intoxicated by its successes in western Europe, Japan, Taiwan, and somewhat later in South Korea and Brazil. More probably the United States was thrust on the arena of world leadership before it was prepared. Nobody can deny that events, in what has now become popular to call the "third world", accelerated at a quickening pace, fueled by the political demise of colonialism (which the United States pushed as a desireable democratic goal), world Communism's militancy, and the atomic age.

India, Africa, Asia and Latin America registered shocking population growth rates and in most cases economic growth lagged significantly behind. The former colonial networks of administrators, planners and managers had returned to their home countries. The United Nations turned into a debating society. Could the United States apply its resources and know-how in a concerted effort to turn the situation around in the LDC's? It would try, but its development theorists had a number of "game plans" to be tested, none of which were proven in practice in basically agrarian societies with little experience in self-government, with limited or undeveloped resources, and masses of untrained people. The first efforts were designed to <u>try and transfer constitutions and democratic forms of government</u>, nearly identical to that in the United States, <u>to the developing countries</u>.

These efforts largely failed; and, it should not have come as a surprise. After all, democratic systems like that of the United

States which took the western countries several hundred years of trial and error to develop, could not be grafted successfully on the newly emerging nations in the short run. The United States and other donors still insisted in the attempt, often with both disappointing and disastrous consequences.

Owens and Shaw have observed that this should not have been a shock to the bilateral planners; after all, the societies were dominated by elite groups, the new politicians lacked experience in democratic institutions, and the levels of illiteracy and the ignorance of a national framework on the part of the vast majority of the people foretold of such failures. (Owens, p. 151) A number of corollary factors such as graft and corruption, competition between immature political parties who promise the public so much more than they can possibly deliver, and lack of effective participation in the selective processes by the public at large can also be cited as contributory factors.

The lack of viable democratic political systems in these emerging countries inevitably has led to frequent military coup d'etats, dictatorships and/or one-party states. This writer witnessed ten different persons claim to be president of Bolivia between November 1977 and September 1980. That poor Andean country of six million people had, during one "national election" in 1979, 53 registered political parties campaigning in 13 loosely federated associations. Sustained economic and other needed development cannot take place in such a climate of political chaos. Later events in Bolivia's chaotic political history, culminating in a year and a half of the Silas Suazo regime when national inflation reached more than 3,000 percent per annum, confirmed the difficulty of trying to transfer participatory democracy from the United States model directly to an LDC in the short run.

In fact, one could build a plausible case for the support of a "benevolent dictatorship, demonstrating dedicated social consciousness" in the short run in many LDC's such as Bolivia. This was the case of the General Hugo Banzer rule in Bolivia from 1970 to 1977 when inflation was about equal to that in the United States, growth in Bolivia's GNP exceeded population growth, and there was reasonable social harmony in the country. The case of the military governments in Brazil is a longer run example of the same; neither case is held out as an ultimate solution to assisting the formulation of viable transitions to participatory democratic institutionalism in LDC's. However, they are supporting evidence of situations showing that sustained economic and other development cannot take place in a climate of political chaos no matter how well-meaning the United States policy of fostering improved human rights and participatory democracy may be in theory.

The next development mistake the United States made was the effort to rely on industrialization as the key to development of all types in the LDC's. This is the so-called "trickle down" theory of development. Basically the premise behind the theory is that industrializing makes an economy self sufficient in manufactured goods that otherwise would have to be imported at high cost, and utilizing scarce foreign exchange. Further, the argument goes, industrialization creates jobs in the urban areas at higher wages than can be earned in the rural sector, and draws surplus rural populations to the new employment centers from the higher birthrate interior. Eventually everyone benefits; more jobs at higher wages; more manufactured goods at lower prices than if imported; less population pressure on the land; higher levels of purchasing power; more consumption; higher levels of living, etc.

This was the AID model for India in the early days of India's independence. But planners, indigenous and expatriot alike, had to abandon the model. Agricultural development fell drastically behind. In actuality, unemployment increased, especially in the teeming cities and villages. Accelerated migration to the urban areas - in hope of finding high paying jobs - took place, but unskilled peasants were not being hired in the capital-intensive enterprises. Food production and marketing systems were still subsistence and archaic, and they could not provide sufficient food for the teeming masses of underemployed or unemployed in Calcutta, Deli, Bombay, etc. Further, essential services such as housing, water, sanitation, medical and educational were not available in the urban areas to serve the growing numbers of people there.

Thus the strategies of the 1950's, which were largely attempts to increase industrialization, and were basically capital intensive, assigned agriculture a very passive role. Employment to be generated by industrial development was expected to generate food demand and to draw agriculture and the rural sector into greater developement. But the new technologies promoted were so capital intensive that little employment was generated and the effort failed before it started.

Finally by the late 1970's it became evident that food serves a critical role in supporting any kind of growth in other economic activity and in other sectors of a society. A second truism is that increases in disposible income in the rural sector, because of the high average and marginal propensities to consume on the part of rural families in LDC's, play a critical role in driving general economic activity in these countries. This should not have come as a shock; more than one half of the populations in these countries live in rural areas; agriculture contributes between 20% and 40% of gross domestic product, 60% or more of foreign exchange, and probably at least one half of the value added on the average. Of even more significance, agriculture probably accounts for between 50% and 80% of the labor force and employment.

Two other strategies were tried which will be mentioned here only briefly. One was the belief that saturating specific LDC sectors with large quantities of monetary resources would somehow "kick off" the development process. Multisectorial, integrated development programs were tried in a number of countries; they failed. One reason cited, and the most logical one from the point of view of this paper, was that the indigenous institutional structure did not contain either the quantity or quality of trained manpower to manage and monitor such gigantic efforts. Quite often there were bright, capably trained people at the higher levels of leadership, but below them the cadre of human capital resources was very thin to say the least; most often it did not even exist. Perhaps we in the United States adopted this model because it had been a key element in the "Great Society" program domestically during the Lyndon Johnson administration of the 1960's. That program also failed, even though it was a well-meaning attempt to wipe out poverty among the urban poor, in pockets of rural poor, and among the elderly. As one laymen put it: "You can't solve complex problems like these by throwing massive bundles of money at them".

The next strategy was aimed at what became called in AID the "Basic Human Needs" approach. Its essential elements included a combination of increased provision to the poor of such productive resources as land, water, fertilizer, seeds, tools and credit. It stressed increased investment and production in activities that employ unskilled labor. It also attempted to expand services of health, nutrition, family planning and education that, over time, improve the productive capacity and employment potential of the poor. This approach, finally, was beginning to get to the real heart of the development dilemma. Two problems emerged, however: 1.) What role did the private sector have in these activities, or more precisely, what role should the private sector play in these activities vis a vis that of the overburdened and/or super inefficient public sector, and 2.) how could technology be transferred to large numbers of people in the rural sector who most logically needed it and could put it to work to generate higher productivity and thus spur basic development in the absence of either delivery systems and institutions or basic education skills such as the ability to read, write and do simple arithmatic calculations?

This leads full circle back to the basic hypothesis of this paper that the development of human capital is the very necessary condition for any correct model of basic development in the LDC's. Let us take a look at the various types of educational programs that USAID and other bilateral donors have tried, and then try to conclude which models seem to hold out the best promise for the 1980's and 1990's and beyond.

What type of education? How is human capital generated, and how is it applied to development in the rural sectors of LDC's ? If some plausible answers to these questions can be discerned, it may be feasible to couple them with the various other aspects of our "necessary and sufficient" conditions for true, sustained development in the LCD's. Such programs should then be successful in generating better levels of living over time, not only for rural populations, but for other sectors of the society as well. Certainly bilateral aid and technical assistance programs should also be able to demonstrate more efficient use of scarce resources and success stories

Apparently early efforts to overcome the shortage of trained manpower in the developing countries, which had not been a problem in western Europe or Japan, nor later in Taiwan as explained earlier, overemphasized formal education, according to Owens and Shaw (Owens, p.151) Primary education, literacy, was seen as the essential ingredient of any democratic system. Vocational and university education were felt necessary, too, if institutions and development were to be fostered. Unfortunately, a basic mistake was made in our early bilateral programs of assistance; we tried to transfer our educational institutional models and curricula to the poor countries without much adaptation to the social and economic context into which they were being introduced. In other words trained manpower, the need to supply adequate human capital, is essential, is crucial to success, but we did not help provide it properly because our training programs were faulty.

I recall vividly my negative feelings when I discovered that none of the 37 nationals sent to one of the most prestigious midwestern land-grant universities in the United States for training at the Master of Science level from a middle east country over a 15-year period chose the M.S. research/thesis route. These young ministry of agriculture officials were to be the planning and development cadre for their developing country's rural sector, yet none of them were trained in how to plan, organize or carry out - let alone interpret results of -research in their country's agricultural sector. (Unless such ability has been obtained from other sources.) What a pity that it was not incorporated as a part of their formal educational program at that university where they could have obtained an outstanding exposure to modern research methodology and problem solving in agricultural disciplines.

A second problem relates to a disappearance of many thousands of participants from developing countries whose training programs USAID or other bilateral donors financed; the participants never returned to the vocational positions they left. USAID admits that their academic training follow-up research shows that as many as 20 percent

of the academic trainees never return to their home country following completion of AID sponsored studies. Of the remaining 80 percent, a majority find employment in other organizations upon returning. One can argue that for the latter group such training is not lost to the developing country no matter what institution - private or public - the trainee returns to. In the present context of this paper, however, their talents are needed most urgently in the rural or agricultural sectors.

There is also a tendency for too many returning trainees to use their diplomas from AID sponsored academic training (or that financed by other donors) as licenses for political appointments or position mobility up and away from the development oriented positions they left for further training in their specialties. There are also some societies in which advanced training in the United States or other countries places a stigma on the returnee; some of this is because of jealousies and suspicions on the part of officials. "Turf protection" is a strong force in many institutions! In other cases the indigenous institutions' personnel policies are not keyed to sufficiently reward advanced training obtained elsewhere. Of course there are notable exceptions to the above; a case in point is the fine cadre of development specialists in the Dominican Republic who received most of their expatriot training sponsored by USAID at Texas A. & M. University, and have established outstanding programs in the rural sector of their country.

Most of the discussion above relates to <u>academic training</u> away from the host country as financed by the bilateral donor. In-country training, short-term observational training, well-planned seminars and subject-specific, non-academic training in more recent years probably yield the highest development benefits in the short or intermediate term. I am also convinced that on-the-job training by well qualified expatriot counterparts, who speak the indigenous language well, is an excellent approach that is not emphasized enough in bilateral agreements. The major problem seems to be in providing such expatriot counterpart technical assistance on a one-to-one basis for sustained periods of time to be effective. It is costly; it is "low key", and some obviously think is not showy enough to be impressive to others. The host country often does not want to agree to such expatriots spending long periods in their countries because of the high cost of the trainer. The disparity between the incomes of the expatriot trainer and the trainee (or what is worse, the <u>trainee's superiors</u>) may cause unnecessary stigmas that are difficult to overcome in attempts to expand the quantity of this type of technical assistance.

SPECIFIC TYPES OF TRAINING TO GENERATE BETTER HUMAN CAPITAL

It seems axiomatic that more sustained effort should be placed on improving the primary and secondary educational systems in the rural areas of LDC's. Similarly, vocational and technical training for adults engaged in agriculturally oriented activities in rural areas should receive more assistance than at present. Again, it is unfortunate that there is a tendency in LDC's for indigenous teachers to migrate out of rural areas to the higher paying positions in growing urban areas. Somehow bilateral agreements must promote policy changes in host LDC countries that will foster improved working conditions and facilities for the educational systems in rural areas where they are most needed for basic development.

Mellor has summarized the critical role of education - in its broadest context - for effective development to take place. His specific reference is to education in the agricultural sector:

> "Although education is not in itself a sufficient condition for development of agriculture, it is certainly a necessary condition. Nearly all elements of the development complex are based on improvements in the labor force which are in turn the product of education. Trained manpower is the basic bottleneck to development; to a significant extent, agricultural development programs have foundered because they are ill conceived, and they are ill conceived for lack of adequate training and education of the planners. Even if development plans are well conceived, they often fail in execution for lack of personnel with requisite skill and training." (Mellor, p. 345)

I must return to the original hypothesis, however; that is, human capital changes - improvements - are needed at every step in the development process. Training is a crucial part of any planned action. I submit that it does not receive sufficient support nor proper emphasis in bilateral development agreements. My criticism is that both the quantity and quality of training are not sufficient to support efficiently run development programs by indigenous nationals in the intermediate or long run. Too much emphasis is placed on short-term technical assistance in United States bilateral agreements. The following statistics are presented in support of this hypothesis.

An analysis was made of four recent USAID project agreements in two Central American countries representing $86.5 million in U. S. loans and grants. The quantity of technical assistance funded in these agreements was $30.8 million, or 35.7% of the total. Included in technical assistance were special studies, feasibility analyses, engineering specifications and cost/benefit and other types of economic analyses by expatriots. The total training to be funded - both long-term and short-term-

was only $17.9 million, or 17.32% of the total. It is my contention that the percentages should have been reversed. Further, I would expand the training time frame up to 10 years in most project agreements instead of the usual USAID practice of limiting it to a maximum of five years or less. And, I would have training funds committed and "locked in" up front, even if disbursed and required to be invested in a controlled escrow account to protect against inflation and devaluation of those funds. The latter will result in a reduced quantity of human capital development over the life of the project if not corrected for.

1. Long-term academic training: In one sense of the word this is "training the trainers". Certainly the cadre of future leaders in the LDC should come from this group. This is surely as true of those in highly specialized disciplines such as agricultural biochemistry and other biological sciences as it is in economics, in business administration or in public policy. Certainly it is also true in the various fields of education, basic and applied, such as in agricultural extension and communications for example.

Given the nature of many of the institutions of higher learning in LDC's, some method must be found to help improve the quality of academics country by country. This is not to say that all LDC academic institutions are found lacking, but there are so many that desperately need quantum jumps in the quantity and quality of offerings. One alternative that has not received enough attention, in my opinion, in bilateral programs is the academic exchange model. Here selected academic leaders in the host country universities are exchanged for an extended tour (2 to 4 years) with counterpart academicians from the expatriot sister institution. They may be called visiting professors, adjunct professors, or sabbatical exchanges.

This type of training program would be in addition to the normal degree-completion scholarship program common in AID agreements, and would be supplemental to the academic training programs for younger professors and graduate students in the LDC institutions. The senior professors and administrators selected to exchange at both the LDC and expatriot sister institutions would: a. expect to spend 2/3'rds of their time abroad studying the identification of changing clientel and their future training needs, curricula change needs, academic administration, communication theories, institutional operations and controls, and evaluation theories. Only 1/3'rd of their time should be dedicated to studying in their particular fields of academic specialization.

b. Written into the exchange agreements would be protective clauses about position security upon return (given to the exchange professor by the LDC academic institution), and his certification to return to his institution for a minimum, specified term following the exchange. Further, both exchange professors should be assured by their respective universities that they will be eligible for, and will receive, normal promotions and /or salary advances while

serving abroad as if they were on their home campuses. The latter points have been perennial problems in both United States and LDC universities, and have made international development commitments less than attractive to qualified senior professors.

2. Short-term Training: There are three important components to this type of training of human capital; A. Observational, B. In-country Short Courses, and C. On-the-job Training

A. Observational training trips should be highly stratified or programmed to meet concrete participant needs in the developed country. Quite often this type of training trip, which is very costly per unit of time spent, has been little more than a "tourist trip" in the past. Content and participant inputs must be carefully programmed by planners who are knowledgeable of the participants' and their country's needs.

B. In-country short courses and seminars should be "tailor made" for a specific group of LDC technicians to be most effective. The total cost of such courses is generally much less than for a similar group to travel to a developed country. This is true on both a per student and per group cost basis. A further benefit is that the courses or seminars can be conducted in the local language. Liberal use must be made of visual aids from the developed country which demonstrate needed changes and methods; these must be carefully selected since they replace for the participants what they would see personally on site in observational training trips.

C. On-the-job training by expatriot specialists is probably the most costly of all the training methods, but, if properly programmed, has the potential of being the most effective type. This is true because of the daily working/training relationship between the expert and his trainee. In effect it is a master/apprentice arrangement, combining theory and practice, training, evaluation and corrective advice on a one-to-one basis. In my opinion USAID bilateral development agreements must place more emphasis on, and commit more funds to, this type of human capital training model in the future.

SUMMARY

Human capital improvement is a necessary condition for development to occur in all LDC's. It is not a necessary and sufficient condition for development, however, since what I choose to call ancillary development needs must also be coupled with the cadre of trained human capital at all stages of the society's institutions

for the LDC to take off developmentally. These ancillary needs vary from LDC to LDC. In some countries infrastructure development is the ancillary need - roads, harbors, communication networks, etc. In others it is financial stability, credit, capital machinery, or other productive assets. In some societies the need is for a new set of laws, a strengthening of the private sector, or the need for new governmental services such as grades and standards, market news services, or others. None of these can succeed without trained human capital

The recoveries experienced following adoption of the Marshall Plan in western Europe after World War II, the model in Japan during the same time period, and the later Joint Commission For Rural Reconstruction in Taiwan were cited as examples where the necessary condition of a cadre of trained, experienced human capital was available to fuel an economic recovery. Only the ancillary factors had to be supplied in order for the necessary and sufficient condition of development to take place. A comparison was made between these types of societies where the necessary human capital existed and the cases of most LDC's we work with today where neither the full complement of ancillary factors nor the human capital cadres exist in what are basically rural economies. Thus the provision of necessary and sufficient conditions, through bilateral and other types of aid as well as indigenous efforts of strength, make successful development efforts doubly complex, costly and time consuming. The conclusion was drawn that providing qualified human capital cadres at all levels of the developing country is the quid pro quo to true development; indeed the necessary condition, that receives too little emphasis in most bilateral assistance programs.

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