

Strategic Projecting and International Development Projects : New Approach

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ABSTRACT

In order to implement strategies throughout the prioritized needs of an organization, we can better manage it via disciplined internal and external project management which will help more efficient tracking project deliveries, improvements, performances and monitoring systems. This strategic projecting can almost be done with the same approaches for the development of continents, countries and cities. While developing the strategies of a city or a sector, you have to focus to your needs according to your prioritization. These prioritizations will be listed from top to bottom and will convert to "projects and programmes" with the power level of that city or region through the scope, timeline and budgets; and will be again in parallel with the strategy. If you are doing these projects for national or international development, you will need to work with countries or international organizations such as EU and UN. As explained, I need to re-emphasize the importance of individuals, although they are not one of the triple constraints or strategic projecting model steps, they are the common heart of this model. They will be the ones who will manage the processes. When each project is completed, they will be the ones who will provide as feedbacks as an input for the better future strategy.

Keywords: Development, Industry, Technology, Projects and Programmes

I. INTRODUCTION

Today, design and innovation stand out as the two most important concepts of global trade. It has become so important today to produce products that are new, high-tech, respectful to the environment and easy to human life, at a time when it is important to produce products cheaper, produce more and sell more remote geographies. For this reason, all countries apply policies to change their production and to reschedule their business processes [1].

Since the days when societies existed, there has also been a search for innovation. While the societies that showed the innovations were developing rapidly, the follower societies developed more slowly; Those who cannot keep up with the changes are gone. Throughout the history of this change, our dynamism continues to increase. So much so that nowadays, electronic use and digitalization have entered into every aspect of the go to the world life, now the preparations for the "industry 4.0" are being made.

Turkey in a transition to medium-high technology: Turkey's eco-system in production and services; Established in order to contribute to the transition process to medium-high technology from the perspective by focusing on "technology and innovation", continues its activities within the frame of establishment of a convenient investment platform in accordance with international norms and a competitive market mechanism. Contemporary global economy is going through a revolutionary change called "industry 4.0" marked by a global "industrial digital transformation". Turkey is a part of this process and makes the necessary changes to ensure that its

economy is in line with this global transformation [2, 3]. Today we witness the changes in manufacturing methods of all sector from health, finance and energy to food, automotive and construction and the changes in the methods of doing business.

However, while Turkey is taking its place in the economic and social growth competition, it has not sufficiently taken into account the environmental dimension within the framework of the concept of sustainable development. Recognizing the fact that in our country the concept of sustainable development is based on neighborhoods, national strategies, objectives and practices should be shaped with this action.

Recent years have seen major changes in approaches to development assistance. With international events such as the end of the Cold War, terrorist attacks, and an unyielding number of poor people, many donors are increasing their aid. Central issues for discussion today are wide ranging from the relationship between reducing poverty and growing an economy to aid effectiveness, donor coordination, fiscal assistance, policy coherence, and ultimately, the relationship between poverty and world peace [4].

The Cold War ended in the 1990s, but conflicts occur frequently between and within developing countries, and since the mid-1990s, the international aid community has recognized critical issues how to put post-conflict countries on a smooth path to recovery and development and how to prevent conflict and promote development so that these countries will not fall back into the vicious cycle of conflict and poverty.

In this paper, we propose to classify poor countries by: relationship with the international financial system, presence or absence of a national development strategy and its quality, and causes of poverty. We will discuss how these differences should be reflected in the creation and implementation of poverty reduction strategy papers (PRSPs), and call for greater flexibility in its contents, modality, and procedures based on considerations of its relationship to existing development plans and the realities of poverty. This study was inspired by the country's unique geography and history, especially the surrounding Asian dynamism. Its development strategies based on growth aspirations should be fully examined not only in East Asia, but in other regions of the world as well.

I would like to share my approach about strategic projecting from the international lessons learnt that I have seen the last 20 years. And, I would like you to think that for your corporates, or countries developments. Whether you are an individual or a corporate, you cannot do everything you wish for yourself or corporate immediately. You have to prioritize your wishes. You can also get to your wishes according to your power.

When we look from the corporate perspectives, we need to know and understand the corporate's priorities. These can really change from developing a new product, entering to a new sector, improving profit, increasing growth, merging corporates, supporting humanity, utilizing the efficiency of new technologies and this can go on. For each organization, these priorities will differ and needs to be directly in parallel with the strategy of the organizations. The power of an organization can be human resources level, willingness level or budget levels [5, 6].

For the strategic projecting, you will need to integrate the triple constraint approach. This triple constraint will be different than what we have seen at the project management institute's triple constraint as strategic projecting as they are at different levels where strategic projecting is mainly linking strategy with projects [7]. At the strategic projecting; the triple constraints are; strategy, operation, project and common constraint will be the individuals. Strategic projecting model steps will be from top to bottom; strategy, operation, portfolio, programme and projects. At each step of this model, there will be quite important themes to add value such as; processes, knowledge areas, tools, priority criteria, cultures, results, leaders, language, communications, sustainability methods, project management offices and solid targets.

As explained, I need to re-emphasize the importance of individuals, although they are not one of the triple constraints or strategic projecting model steps, they are the common heart of this model. They will be the ones who will manage the processes. When each project is completed, they will be the ones who will provide as feedbacks as an input for the better future strategy.

In that period where major changes and new trends in global and regional economic policies are emerged, it is important to observe and closely follow the dynamics. For this reason, quickly continuing the bilateral commercial and investment agreements increasingly developing around the world and having economic, legal and structural reforms, especially being in the progress for our country during the modernization process of customs union and in this respect growing of Turkish economy in consistent and more competitive platform for a medium term program and being in a quick and determined progress in order to increase the public welfare are critical [8].

II. MILLENNIUM DEVELOPMENT GOALS

There are various constraints that work against achievement of the millennium development goals (MDGs) technical constraints because the MDGs are numerical, operational constraints because they are time bound, and financial constraints because initial cost assumptions may prove false and some eligibility requirements are being imposed. There are many obstacles to overcome. While the target year is about 10 years in the future, several organizations have already voiced their pessimism about the prospect of achieving the goals. Recent discussions on MDGs are very much focused on Sub-Sahara Africa. Notably, the British government has indicated that is the duty of international community to achieve the MDGs in Africa [9].

Education is considered to be one of the most important areas for development aid from three economic research, perspectives trends in international development aid, and Japan's activities in the education sector. The visibility of the education sector has been very high in the past few years. For those involved in foreign aid, knowledge of this sector is very important not only because education is the second goal of the MDGs, but also the importance of education is recognized anew by the "endogenous growth theory" in the field of development economics. Evaluation is a topic that has been discussed more frequently in recent years. One of the important trends in development aid is an emphasis on results. As seen in the technical constraints to the MDGs, definitions, standards, methods, and lack of data and statistical methodologies are seen by some as problems. Joint evaluations and coordination are promising developments, and Japan is contributing in both areas.

Many other international meetings have addressed environmental issues and sustainability. Japan and other major international organizations and donors are aggressively providing assistance in the area of environment, but it is difficult to mainstream environmental issues in development strategies, partly because many developing countries and the United Nations (UN) do not recognize the critical importance of environmental issues [10, 11].

Water is an important issue for development in poorer countries. Needless to say, humans cannot survive without water, but it is also essential to advance agriculture, industries, and health care. The problem of too much water floods has been overshadowed by the problem of too little water. Floods are responsible for one-third of the economic losses and more than one-half of the fatalities caused by natural disasters in the world, and cause especially severe problems in the Asian monsoon region [12].

Bilateral donors, international organizations, and nongovernmental organizations (NGOs) have undertaken many aid projects and activities related to water and achieved significant results. More than 2.4 billion people gained access to safe water during the past 20 years, but about 1.2 billion people have yet to secure safe water, and the number is expected to increase to about 2.7 billion by 2025. According to the World Water Vision prepared in 2000, the investment needed for water was \$70 to 80 billion in 1995, but will grow to \$180 billion by 2025, of which \$75 billion is estimated to be needed for water supplies and sanitation alone [13]. The importance of waterrelated issues will only grow in the future.

Turkey will be a future star with its young and dynamic population and strategic location. Our investments are a guarantee of our confidence in Turkey. With our successful Turkish team, we are a real part of Turkish fashion and are helping to sustain it. Turkey is a growing energy market and a candidate to be become one of the most important players in energy in its region by functioning as an energy hub for the European Union (EU) countries. Booming economy reaching \$857 billion in 2016, up from \$314 billion in 2003. Turkey is expected to be one of the fastest growing economies of the OECD members during 2014-2025, with an annual average growth rate of 4.9%. Turkey attracted \$180 billion of foreign direct investment during the past 13 years, whereas it attracted \$15 billion in the preceding eight decades.

A. What is PRSP?

The PRSP, a concept launched by the World Bank, is a three-year roadmap for the social and economic development of a poor country, produced under strong national ownership and broad partnership among various stakeholders. When the initiative was launched in 1999, it was intended as a tool to ensure that certain heavily indebted poor countries (HIPCs) would use the funds freed up through the enhanced HIPC initiative for poverty reduction. Later, all recipients of international development association (IDA) credits were asked to prepare a PRSP. MDGs were established as the primary development goals, while PRSPs were established as the procedural framework to prepare strategies. World Bank economists estimate that an additional \$40-70 billion is required annually to achieve MDGs [9, 14].

Turkey is perfect investment destination with its strategic location and its motivated and qualified workforce. Global investors are invited to be a part of Turkey's economic and social growth. The World Bank recently adopted a policy to strengthen the links between PRSPs and country assistance strategies (CAS), linking poverty reduction efforts with access to IDA funding. The bank is urging poor countries to use the PRSP as the main tool for development budgeting, prioritizing different sectors and projects, and selecting and evaluating individual projects. The bank is also urging other donors to adopt the PRSP as the vehicle for aid partnerships. As an assistance framework that involves all stakeholders, PRSPs are now exerting great influence on the development strategies of poor countries. Poor countries are highly diverse in their social, economic, and political conditions. In order to localize PRSPs, three criteria are especially important; the relationship with the international financial system, presence or absence of a national development strategy and its quality, and causes of poverty [15].

B. Relationship with the International Financial System

The first determinant of a PRSP is how a developing country is positioned in the international financial system. This relationship affects the restrictions on external financing, the country's independence and the power balance with donors, and positioning the PRSP in the country. These in turn affect a variety of policy options available to implement development strategies and the degree to which the country can maintain ownership through aid coordination. Three considerations are important:

- First is the existence or absence of direct links between the PRSP and debt relief. For many poor countries in sub-Saharan Africa and Latin America, preparation of a PRSP is a precondition for obtaining debt relief under the enhanced HIPC initiative. Equally for donors, it is an important tool to manage aid resources and evaluate development impacts. By contrast, in poor countries in East Asia, including Vietnam, debt forgiveness is not intended. For them, PRSPs are primarily motivated by the country's desire to access IDA financing which is less acute than the need for debt forgiveness. Because HIPCs also have limited potential to mobilize private funds, they have fewer policy options available than countries that can expect a higher level of external financing. The existence or absence of external financing restrictions is especially important when preparing and implementing growth strategies.
- Second, aid dependency and donor composition are important. Aid dependency in Vietnam is lower than the average in sub-Saharan Africa or Latin America. Higher aid dependency is or course associated with stronger pressure from the donor group. Moreover, the development strategy can also be affected by the views of the largest donor(s). In sub-Saharan Africa, prominent donors are the World Bank (IDA) and the Europeans, while in Latin America and the Caribbean, the World Bank (IDA) and the Inter-American Development Bank (IDB) are of primary importance. In East Asia, principal donors are Japan, the World Bank, and the Asian Development Bank (ADB).
- **Third**, donor composition can also affect aid modality. Vietnam receives about two-thirds of its

official development assistance (ODA) as concessional loans, while 70% of ODA to sub-Saharan Africa is grants. Corresponding ratios for Latin America and the Caribbean are somewhere between the two groups. These differences are related to the aforementioned restrictions on external financing (especially the existence or absence of access to development financing through concessional loans), as well as considered when discussing harmonizing aid modalities [16].

Does a developing country have its own development plan? If so, how mature is it and how effectively does it govern budget allocations and investment programs? These factors greatly affect how an imported PRSP is treated domestically. This issue is closely related to how strongly the government takes ownership of the PRSP and the extent to which it is integrated into existing decision-making processes. Although the relationship between existing development plans and a PRSP is complex and highly specific to each country, two prototypes are illustrative (Figure 1).

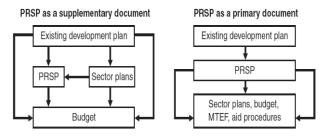


Figure 1. Poverty reduction strategy papers used in two different ways [17]

As a supplementary document, the PRSP is confined to complementing and reinforcing the existing national development strategy and sector plans. It offers an in depth poverty analyses, a cross-cutting approach to poverty reduction, and broadens the participatory process. In this case, the most desirable and practical involvement for donors would be to respect and support the existing policy configuration rather than reject or replace it. Areas of assistance do not have to be constrained by a PRSP-donors should be encouraged to support high priority areas in the country's overall development, regardless of a PRSP.

While the goal of poverty reduction is shared globally, the nature of poverty differs from country to country. Reducing poverty requires a specific approach in each country. Poverty situations vary even within a country, depending on age, gender, family, occupation, region, social strata, etc. Insights into the countryspecific causes of poverty are crucial if we are to succeed in reducing poverty [10, 17]. Causes of poverty may include:

- Limited national budgets and income opportunities because the underlying economy is not strong.
- Lack of or insufficient consideration for equity in policy design; an inadequate redistribution mechanism.
- In efficiency or corruption by the government in social service delivery.
- Breakdown or even complete absence of mutual assistance mechanisms at the community level in cases of disease and disaster.
- Restricted economic opportunities/discrimination based on gender, race, ethnicity, caste system, etc.
- Economic stagnation caused by policy failures such as economic control and "Big Bang" approaches.
- Emergence of more poverty due to domestic and international economic crises and responses that may include macroeconomic austerity and structural reforms.

These causes include failure of the underlying society, policies, and implementation. They overlap and are interconnected. One can easily imagine that poverty in a country has multiple causes.

On the other hand, there are countries where past experience has shown that economic growth alone will leave certain groups behind. For a country that wants to have the principle of social equity take root or wants to improve the implementation aspect of social services, it is important to establish an effective poverty reduction mechanism. If foundations for such a mechanism do not exist domestically, it may be a good idea to incorporate a foundation provided by an international organization, either as is or with some adjustments. In this case, the central challenges include efficient planning and implementation of propoor policies in addition to a growth strategy [18].

At the crossroads of Europe and Asia, Turkey's geography has much to offer to investors. Turkey is an essential transport corridor, offering excellent access to global trade routes by air, land and sea. Bordered by the Marmara, Black, Aegean and Mediterranean seas, in addition to various land boarders [3]. Turkey offers convenient access to Europe, Asia and North Africa. All global companies and brands would like to be in Turkish market and grow here. Turkey is a market with a high pace of improvement for global brands and allows penetration to the regional markets. Today the growth potential is not at the developed markets like USA, EU, Canada, Australia, Japan, but it at the developing markets like South America, Asia Pacific, Middle East and North Africa. Turkey's impressive economic performance over the past 14 years has encouraged experts and international institutions to make confident projections about Turkey's economic future. Low inflation and stable conjuncture of the developed economies cause companies to focus on costs, not investments. However, in developing markets like Turkey, there is a potential growth rate up to 4.9% and the need for new investments [19, 20].

C. At the Country Level

The millennium development goals reports (MDGRs) are not expected to reflect original research. Staff is encouraged to draw freely on existing information, particularly PRSPs of the World Bank, the national human development reports (NHDRs) of united nations development programme (UNDP), and the common country assessment (CCA) of the UN system. The MDGRs are to be updated regularly, thus the existence of monitoring capacity within the government is considered critical. Pervading all country level efforts is a sensitivity to local leadership. There is an awareness that if local interests, including but not limited to the central government, do not embrace the goals, little can be accomplished. For that reason, attention is devoted to encouraging ownership without usurping it [21, 22].

- **Monitoring:** Preparing a baseline MDGR is the first step determining where the country is in relation to the relevant goals and targets. It is recognized that at the county level, relevance of goals will vary according to the situation. The baseline report then serves as a benchmark against which progress can be assessed. An underlying objective of the MDGR, in particular the baseline report, is to clarify the goals, advocate for them, and by creating "ownership" to bring the government into the process. They are not intended to be policy recommendations or action plans. Rather, goal by goal, they clarify the situation within a particular country which indicators are relevant, how they will be monitored, what the cost is likely to be, what will be its source, and how achievement of the goals can and should proceed. UNDP in country staff take the lead in this process. However, the entire united nations country team (UNCT) is involved, including staff of all UN agencies assigned to a country and in some cases staff of sister organizations such as the World Bank.
- **Campaign:** At the country level this component is not standardized with uniform structure. Like the MDGRs, it will be country specific, determined by "local actors according to their needs and country conditions". Like the millennium campaign at the global level, each national campaign will be directed toward building and retaining support for attainment of the MDGs.

- Analysis: At the country level analytic work looks at innovative practices, policies, institutional reforms, implementation issues, and financing options. The UNCT coordinated by UNDP works closely with the local government in scheduling, designing, and implementing studies. In addition to the considerable cross-support among these teams exchanging ideas, experience, and information they can draw on the expertise of the global millennium project and other available sources.
- Operations: It is a tenet of the UN core strategy that "the UN, as a privileged partner of government, has an opportunity and an obligation to provide leadership at the country level to support national partners". However, operations on the national level require treading very carefully so that there is no encroachment into governmental purview. The UN has an assortment of mechanisms that it coordinates to identify programs for which it can then help the government to implement. These mechanisms include the MDGRs, the CCA, and the UN development assistance framework (UNDAF). Attention is also given to the interface between the UN MDG effort and the development approaches and strategies of other organizations such the World Bank's PRSPs as and comprehensive development frameworks (CDFs).

D. Technical Problems

One problem is defining indicators that reveal success. The following questions illustrate the confusion that in many cases continues to exist [23];

- Is there an accurate and precise definition of poverty gap ratio?
- Can the data be based on national income rather than national consumption?
- What is the correct underweight cut for children?
- Is the minimum level of dietary energy consumption defined by the country itself?
- What is the definition of "improved water source", "improved sanitation", and "secure tenure"?

Another problem is whether each goal is to be satisfied at the country level or at the global level. This problem becomes clear in looking at goal, considered by most observers to be the most fundamental. A reduction in poverty levels in several very high population countries such as China, India, Indonesia, and Brazil would probably reduce the number of people whose income is less than one dollar a day by one-half on a global level. However, it would still leave the population of many countries, perhaps all sub-Saharan Africa, below that line [24].

A third problem, related to the previous two, is how to assemble measurable data so that progress and/or achievements can be determined. The united nations statistics division is monitoring country level data for each MDG "for each of the world's countries, areas and regions, to the extent data are available", but there are gaps in data as well as problems of comparability. The identification of useful indicators against which change can be assessed is highly contingent on the compilation of reliable data for analysis. The absence of complete and reliable data on the national level forces analysis back to the regional level where gaps can be filled, even though the quality of the gaps is unclear because the data are lacking.

At the outset of the millennium declaration there was a 17-year time period over which the goals were to be attained. To reach the goal, however, and avoid extending the target date (as encountered by previous declarations from previous conferences), it was important to gain momentum as quickly as possible. Technical problems posed by poor data impinge on operational measures because they affect ability to establish a baseline and to accurately measure deviation from it.

E. Carbon Fund

The World Bank began operating the prototype carbon fund (PCF) in April 2000 (the operational period is until December 2012). The Kyoto Protocol,

adopted at the third conference (COP3) in December 1997, set greenhouse gas reduction targets for developed countries with specific numbers, and at the same time tried to increase the flexibility of regulations by providing provisions for joint implementation (JI), clean development mechanism (CDM), and emission trading (ET) because these targets are difficult to achieve with only domestic efforts. The PCF represents an attempt to implement these flexibility measures by creating a market for reducing greenhouse gases (World Bank Tokyo Office, 2002) [8, 25, 26].

The PCF is supported by contributions from governments and the private sector. Funds are invested in projects to reduce greenhouse gas emissions in developing and transition countries. Reductions in emissions created by the projects are verified and certified by a third party and returned as certified emission reductions (CERs) to contributors based on their contribution ratios (Figure 2). Six governments and 17 corporations participate in the PCF. Japan is represented by the government and eight corporations, providing more than one-third of total funding (\$180 million).

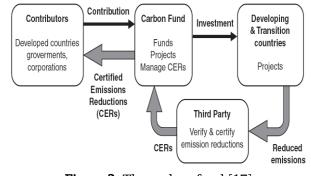


Figure 2. The carbon fund [17]

Developed countries can partner with developing and transition countries that are not bound by numerical targets to implement greenhouse gas reduction projects and obtain the resultant reduction as CERs and use them as their own emission quotas. The cost of greenhouse gas reduction is more than \$50 per ton of carbon in developed countries, but there are many opportunities in developing countries to do the same for \$5 to \$15. For this reason, developed countries can obtain emission reductions cheaply by participating in the PCF and then use them to achieve the reduction targets set out by the Kyoto Protocol. On the other hand, developing and transition countries can profit from selling potentially large emission reductions to developed countries and obtain technologies to address global warming at the same time [26].

III. RESULTS AND DISCUSSION

Over the next 30 years, much of the environmental change that will occur has already been set in motion, and by the same token, many of effects of environmentally relevant policies put into place over the next 30 years will not be apparent until long afterward. Under this circumstance, options for future actions include [27]:

- Rethink environmental institutions because they need to adapt to new roles and partnerships to fulfill present obligations and confront emerging environmental challenges.
- Strengthen the policy cycle so that it becomes more rigorous, systematic, integrated, and able to develop policies that are better attuned to specific localities and situations.
- Provide an enhanced international policy framework to overcome the fragmentation and duplication inherent in the present system.
- Use trade more effectively for sustainable development to capitalize on new opportunities provided by trade liberalization.
- Monitor policy performance to improve levels of implementation, enforcement, and compliance.
- Harness technology for the environment and manage the associated risks to maximize the potential of new technologies to deliver substantial environmental and social gains.
- Adjust and coordinate policy instruments, including legal frameworks and measures such as

valuing environmental goods and services, to ensure that markets work to promote sustainable development and voluntary initiatives that will develop appropriate packages which work more effectively for the environment.

• Re-define and share roles and responsibilities among local, regional, and global levels to provide efficient solutions for managing complex situations at different scales.

Programs are designed to align with agency-level objectives: sustainable management of natural resources, conservation of biological diversity, environmentally sound and efficient energy use, sustainable urbanization, reductions in the threat of global climate change.

Within the European Commission, the Directorate-General for International Cooperation and Development (DG DEVCO) is in charge of development cooperation policy in a wider framework of international cooperation, adapting to the evolving needs of partner countries. This encompasses cooperation with developing countries at different stages of development, including during the transition period between low income countries and upper middle income countries.

DG DEVCO works closely with other Commission services responsible for sectoral policies, as well as with the European external action service and commission services on external action, so as to facilitate and help ensure a consistent approach. DG DEVCO implements cooperation policy in a devolved way through EU delegations. For this purpose, it defines, establishes and runs the management, supervision, support, evaluation and control systems required to ensure the highest levels of regularity, quality, impact and visibility of the programmes implemented. DG DEVCO strives to be a learning organisation promoting the capitalisation of knowledge and expertise, and also implements an

information and communication policy in order to raise awareness among EU citizens and partner countries regarding the action taken by the EU for supporting development [13].

IV. CONCLUSION

Governance has become central in recent discussions about development aid. The definition of governance is not set in stone. Different donors have different definitions or emphasize different factors. In general, political governance includes various elements of democracy such as separation of powers, free elections, rule of law, freedom of the media, and respect for human rights. Economic governance includes fiscal balance, government spending and tax revenues, performance of public enterprises, tariff rates, decentralization, administrative efficiency, degree of corruption, transparency.

Efforts are underway on many fronts to meet the goals set at the millennium summit. Technical people are working on data collection, statistical capacity building, and measurement. Strategists are planning, coordinating, and adapting approaches to the general problems and particular circumstances of poor countries and their impoverished populations. Operations professionals are incorporating MDGs into development projects. Among all this activity, it is still difficult to tie operations on the ground to particular MDGs or targets. In a general sense, all development operations aim generally to achieve the goals, but there is little evidence yet that operations are being designed specifically to approach them.

Nonetheless, it is hard to conceive of any successful judgment of MDGs if the performance of sub-Saharan African countries is not improved. Since other countries in other regions are making some progress in some areas, sub-Saharan Africa has been spotlighted as the critical region. Barring global events that might derail the process, widespread movement toward the goals in many regions can be expected to continue. In sub-Saharan Africa, however, it seems that movement must still be started [28].

The most significant impact has been selective assistance extended to countries with good governance. In terms of governance policies, these organizations place particular emphasis on improving fiscal administration, eliminating corruption, and supporting democratization. More recently, some attempts have been made in fiscal assistance through structural adjustment lending designed to improve governance and in devising indicators to measure the level of governance across countries.

Writing policies and institution building efforts must be tailored to individual countries because the causes of poverty and socio-economics are so diverse. The variations of, and appropriate matching between, alternative strategies and individual countries have not been sufficiently discussed. As poverty reduction enters the implementation stage, we need to strengthen intellectual input to effectively translate lofty global targets into realistic and concrete actions at the country level.

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VI. REFERENCES

- A. M. Jaeger, "Organisational development and national culture: where's the fit?," Academy of Management Review, vol. 2, no. 1, pp. 178-190, 1986.
- [2]. A. Erdem, "YASED annual report 2016," International Investors Association, Istanbul-Turkey, 2016, p. 136.
- [3]. E. Jang, M. Park, T. Roh and K. Han, "Policy instruments for eco-innovation in Asian countries," Sustainability, vol. 7, no. 9, pp. 12586-12614, 2015.
- [4]. J. F. Cox and S. J. Clark, "Material requirement systems development," Computers and Industrial Engineering, vol. 2, no. 3, pp. 123-139, 1978.
- [5]. D. S. Sink, "Productivity management: planning, measurement and evaluation, control and improvement," John Wiley and Sons, New York, 1985, p. 518.
- [6]. P. Ekins, "System innovation for environmental sustainability: concepts, policies and political economy," in. Bleischwitz et al. (Eds.), International Economics of Resource Efficiency, Springer-Verlag, Berlin Heidelberg, 2011, p. 184.
- [7]. N. Quastel, "Political ecologies of gentrification," Urban Geography, vol. 30, no. 7, pp. 694-725, 2009.
- [8]. B. Davarcioglu and A. Lelik, "A study on the need for research and eco-innovation in digital technology," International Journal of Scientific Research in Science and Technology, vol. 4, no. 2, pp. 739-750, 2018.
- [9]. S. Devarajan, M. J. Miller and E. V. Swanson, "Goals for development: history, prospects and costs," World Bank Discussion Paper No. 2819, 2002.
- [10]. S. Ishikawa, "Poverty reduction or growth promotion?: revision of international aid policy

and developing countries," Nihon Gakushiin Kiyou, vol. 56, no. 2, pp. 91-131, 2002.

- [11]. O. M. Nankivell, "Productivity statistics: review of sources and uses in the United Kingdom," ILO Press, Geneva, 1985, pp. 1-83.
- [12]. L. D. Miles, "Techniques of value analysis and engineering," McGraw Hill, New York and London, 1972, pp. 14-50.
- [13]. European Commission, "Strategic plan 2016-2020," DG International Cooperation and Development – DG DEVCO, Brussels-Belgium, 2015, p. 54.
- [14]. K. Rennings, "Redefining innovation ecoinnovation research and the contribution from ecological economics," Ecological Economics, vol. 32, pp. 319-332, 2000.
- [15]. R. Peterson and A. Silver, "Decision systems for inventory management and production planning," John Wiley and Sons, Canada, 1979, p. 746.
- [16]. P. Jennings and P. Zandbergen, "Ecologically sustainable organizations," Academy of Management Review, vol. 20, no. 4, pp. 1015-1052, 1995.
- [17]. FASID, "New approaches to development and changing sector issues," Japan by the Foundation for Advanced Studies on International Development, Chiyoda-ku, Tokyo-Japan, 2005, pp. 9-188.
- [18]. J. G. Miller and L. G. Sprague, "Behind the growth in materials requirement planning," Harward Business Review, no. 9-10, pp. 83-91, 1975.
- [19]. T. Butler and R. Hackney, "Understanding digital eco-innovation in municipalities: an institutional perspective," 23rd European Conference on Information Systems, Munster-Germany, 2015, pp. 1-14.
- [20]. J. M. Harris, "Basic principles of sustainable development," Global Development and Environment Institute, Tufts University, Medford-USA, 2000, p. 139.

- [21]. F. W. Geels, "Technological transitions as evolutionary reconfiguration processes: a multilevel perspective and a case-study," Research Policy, vol. 31, no. 8-9, pp. 1257-1274, 2002.
- [22]. D. Swann, "MRP: Is it a myth or panacea? Key to answer is commitment of management to it," Industrial Engineering, vol. 15, no. 6, pp. 34-40, 1983.
- [23]. W. P. Anderson, "Energy and the environment: the new case for conservation," Energy Studies Review, vol. 6, no. 1, pp. 16-33, 1994.
- [24]. K. M. Eisenhart, "Building theories from case study research," Academy of Management Review, vol. 14, no. 4, pp. 532-550, 1989.
- [25]. J. Orlicky, "Net change MRP," IBM Systems Journal, vol. 12, no. 1, pp. 2-29, 1973.
- [26]. B. Davarcioglu and Y. E. Koc, "Climate change, industrial cleaner production approaches and some best practices in Turkey," International Journal of Recent Trends in Engineering and Research, vol. 3, no. 6, pp. 73-89, 2017.
- [27]. S. Eilon, B. Gold and J. Soesan, "Applied productivity analysis for industry," Pergamon Press, New York, 1976, pp. 76-151.
- [28]. J. Orlicky and O. Wight, "Structuring the bill of material for MRP," Production and Inventory Management, vol. 13, no. 4, pp. 19-42, 1972.