New methods for captive finance in project based companies using private sectors supply

Mehdi Mahdavi Adeli¹, Mahmoud Eskandari Malayeri¹, Omid Naghavi¹, Reza Akbari²

¹Department of Civil Construction Management, Shoshtar Branch, Islamic Azad University, Shoshtar, Iran; ²Polytechnic University, Pars Peyab Project Manager, Project Management Group

Abstract

Economic development in countries depends on implementing of infrastructural projects and services, furthermore, increasing efficiency and quality of offered services are of its purposes. Mention this fact that in developing countries finding the financial source is one of the main challenges that often faced up, cooperating with private sectors seems more important from day to day. The cooperative styles vary due to each project specific condition. In current research, the compilation of constructing types and financial recourse, briefly discussed in base of implementing andfinancing captivemethods, then with mentioning the legal limitation and specific conditions in our country, the appropriate methods in different projects including oil and gas, petro chemistry and water resources are revealed. Finally, essential conditions and characteristics of these offered corporations were expanded on, for using them efficiently to provide the essential fundamental by private resources that leads to economic development and improvement.

Keywords: BOT, Mutual Corporation, project implementing method, new financial resource, infrastructure

Introduction

Governors always struggle to provide fundamental facilities. From these facilities, the construction of mother industries like water, Energy, transport and communications are noticeable. As providing the financial supply always face with lot of difficulties, they reach to operate line with delay, as result, governors always look for solutions (Hadadi,

et al, 2009). In our countrythe same problem is obvious that occurs by budget limiting and lack of effective integration between design and implement. The methods of projects and plans implementing have undergone a dramatic global transformation. According to estimations, by using the two factor methods of plan and construction, the cost of project declines averagely 5% and project construction duration comes down approximately 33%. While supplying the financial resource remains one of big challenging problems for constructing of fundamental projects and deriving benefits of their products and services in developing countries like Iran.

One of the successful experiences in developed countries is making the creative cooperation between governmental and private sectors, in a way that government works as a supporter in projects and private sectors are accountable for implementing and technical scopes. Furthermore supplying the required financial resource will be done by private sector. In this developing process banks have elevated their own roles from money supplier to real broker that have the authority of share out and select the financial methods according to economic feasibility. While in current situation the implementation of new fundamental plans become highly complex, but technical and engineering capacity for them exists in Iran. The main problems in implementing of plans include lacking of governmental financial supplies, legal limitation of private investors and attraction of the interior and foreign investors, nongrowing markets, organs and financial tools in Iran. Mention these issues, using the different financial supply, domestic and foreign source is inevitable (MirShahi and Bayat, 2010). In recent years in our country, government tend to minimize their economic activities scoops and deposit some of them to

Corresponding author: Mehdi Mahdavi Adeli, Department of Civil Construction Management, Shoshtar Branch, Islamic Azad University, Shoshtar, Iran. E-mail: mehmahad@yahoo.com

private entrepreneurs, but they save their supervising role to control, attract and strength efficiency of this kind of companies. This attitude has increased the competition and has evaluated the private sectors abilities. When the private sectors show themselves more skillful than before, banks and financial institutions should be adopt with this improvement and use their tools and supply technics to support them (Hadadi, et al, 2009), which economic feasibility in the format of economic study and trade programming alongside with routine economical and technical surveying could be useful (MirShahi and Bayat, 2010). Reviewing the implement methods coincident with money supply method study could be very helpful to obtain the best choice for implementing method and diverse. As government has not enough resource to secure all required invests for projects, so distribute exist budget to different subsectors and projects that create extra postponement in projects, because of that sometimes it's delay exceeds8yaers by this dropping budget so project loose its economic and technical feasibility. In studies done about delay, mostly the financial problems have been known as important factors that influence the project duration, for example, Faraji believed that the most important issues include temporary statement pause, not being on time in earnest money paid to contractor and financial problems(Faraji, and Noori, 2009). Safavi studies showed that insufficient care about budget during the construction period is the most important factor that influences the process (Safavi, et al, 2010). Statistics revealed by World Bank shows an increasing growth in fundamental projects expenses rate in compare of GDP in Asians developing countries (Tsuneaki, 1992). In Asia, this rate has increased from 4% to 7% (The World Bank, 1994). The government's capacity for investing in infrastructure projects has strictly limited. To overcome this complicated situation, utilizing the modern methods has been offered that recently used in BOT projects wildly (Shiladitya, 1996).

A successful project is a project that carried out in estimated duration with specific acceptable expense according to identified specifications; furthermore it should meet all parties' profits and finally set winwin relation between them (Parchami Jalal, 2006).

Implementation methods

Implementing organization showed the current tools, responsible distribution and communica-

tion models between them for creating or extending the exact installation and services. The distribution of responsibility is a kind of sharing off the risk of project between all project interest parties. The most usual methods include, trust and common or 3 factorial and two factorial. In general view the factors that influence choice of capable method are:

- 1- Cession of client responsibility area
- 2- Client
- 3- Project specification
- 4- Control method and quality guarantee
- 5- Payment method
- 6- Work referring methods
- 7- Flexibility
- 8- Investing method and source

Trust method

In this method client directly takes responsibility for technology, methods and other required materials like data collection, design, equipping and project construction. It strongly depends on client budget and staffs.

From advantages of trust method, having the smooth work running, lake the two parties' problems and claims in compare of other methods could be noted. Insufficient money source, high requirement to human resource, enlargement of client organization, increase the construction duration and decline the project quality are some disadvantage of this method.

Common or three-factorial method (DBB)

In This method that is most common in implement of civil projects, the design service is done by consulting company and by putting it to tender, contractor is chosen and take the responsibility of project and a consulting engineering company (not necessary the same company) is chosen as supervisor. Familiarity of all parties with this method and having complete monitoring are two of its advantages. From its disadvantages, increasing the project duration because of parties' separation and insufficient money resource in right time, managing and coordinating issues and furthermore the variety of claims between parties could be mentioned.

Two-factorial method

This method is based on deposit design and construction to a designer-builder unit. The most interesting aspect is that client should monitor just one unit, so risk of work markedly declines. Usual-

ly in this method client handle the project from beginning to end (feasible study to putting it to tender. The different ways of doing are following:

Design, Provide and Construction (EPC): This method also named 'turnkey' is that designer-builder's working area extends to base design, he meanwhile collaborate in finance providing, if contractor takes responsibility, in same time, for designing, providing, constructing and temporary collaborating in finance and running the project, it called Package-Deal and mostly used for industrial plans like desalinization plants and hydropower plants that have less dark points.

Design and Build (DB): Another two factorial method is DB that adding to EPC responsible, includes client experts' training and temporary operating and maintaining the project. From its advantage we could remark time minimizing, cost declining, fixing on schedule, constructing and innovating elevation, decreasing the claim and so on. Regardless to financial supply difficulty, it has no mentionable disadvantage.

Four-factorial agreements in project running

It means that during the document preparation, asking contractor to offer a quality control method for the project implementation and getting client to approve it. So as upper vision unit with less staffs that enjoy good background could monitor the contractor work and compare them with technical and implementing standards and laws.

Financing method

Financing methods can generally be divided into two parts;debt based methods and non debt based techniques. The main differences in these two techniques are acceptance of investment risks, including technical risks, manufacturing, marketing, operations, disaster management, technical knowledge, and return rate of the original investment.Indebt basedmethod, investor accepts no risks and just enters in process after obtaining the suitable government guarantee. While in non-debt based, all risks are on investor responsible with limited government guarantee that provide safe atmosphere for finance. Currently, a wide amount of financing in water and wastewater are related to general government budget. Using this method of financing has created problems for the project, including the following:

· Limited financing for meeting projects re-

quirements during the construction period that result in project's extension.

- Allocation of Annual funds beyond that of construction times works as an obstacle to proper finance management.
- Insufficiency in time of allocation of funds that increases the construction cost of the plan cause frequent annual adjustments.
- Longer construction period for mentioned reasons causes losses of expected profits.

Therefore, by considering the above issues, using the public funds cannot be a good choice.

Debt techniques

In this method government guarantees exact return of finance, unconditionally and regardless to the project income. Amount of credit, return duration and other conditions like type of guarantee are depending on the evaluation of project success rate, performance and client authority. The main feature of this method of financing is based on two main axes; 1) complete government guarantee for repayment, 2) independence from projects outcome and its fate.

Domestic and government debts: It is another way of borrowed methods. These loans have allocated to certain projects without bail and just deal with the state government regarding the mutual obligations. Loan principal and interest are under government's official obligations that are issued by state ministry of Finance on behalf of the Government. Generally this kind of repayment has been mentioned in budget laws from public income.

Publishing Rial bond: Other ways of financing the borrowing procedure are published in local papers. In this way, the required funds are obtained by selling bonds in the domestic market. Rates of local bonds has been determined by the central bank, in terms of policy of network of banking in different years.

Detikfinance: Although in this method the sources of finance are allocated to a specific project, there is no link between the reimbursement obligations of the products or the fate of the project. Terms of internal financing is noted in the form of the attached amendment to Article 56 of the Law of regulations of state economic. Finance guarantee and incidental expenses shall be guaranteed by the Deputy of Strategic Planning and Control.

Nondebt methods

Non-borrowed financing are methods which

provide investment funds in which investor accepts the risk of project and expects his profits by project operating act. It is based on two pillars: First, the risk of investment undertaken by the investor. Second he expects principal and interests from financing activities.

Direct investment

By direct investment, we mean direct participation of shared capital (registered capital) of running companies. The fiscal sponsors share their investment with client capital and earn per shareas operation will be.

Compensating transactions: These kinds of deals are the ways in which suppliers of funds, receive his benefits without direct capital share, by receiving his right from products or equivalent products. This method is different in form but all mechanisms follow a single pattern.

Other finance grouping

Funded projects can be divided into other ways in which considerations are involved in implementing and managing the project from the perspective of a more rational classification.

Financing ways of company based methods: Various methods to secure debt financing methods such as internal and external financing, bank loans (domestic and foreign development) methods are intended to pay back the loan and the costs associated with incidental income is the plan. This method of financing is given to the executive agencies and companies and they will have to implement their respective projects. Actual increase in company's debt in the coming years is therefore called the 'delayed financing method ' (Eslami Milani, and Esmaili, 2009).

Financing ways of project based methods: The main features of this method are none or limited dependence on project sponsors. Its main principal is credit obtaining just done in the base of project property, belongings and project outcomes and selling benefits; without any dependence on investors or state organizations. The project based finance is more adjusted to non-debt based projects as in this methods investor get his benefit from project's products.

Implementing and financing compilation methods

Some methods have some specifications that seem to be implement methods in one hand and fi-

nance method in the other. Generally, in integrated methods the concession of development and operating of project is transferred to a private company (called Project Company) for a certain period of time. In some cases this company undertakes the responsibility of design, finance and operating during this time. At the end points, company become project owner or transfers it to introduced project owner.

The rating is primarily based on the period of time that is necessary to revenue of facilitate, compensation of the company's costs and provide an acceptable interest compared to the risks associated with projects.

In most cases, in these methods use turnkey contract for design and implementation for fixed-price. The compilation techniques are not just for projects, but are known as project's finance obtaining method. Implementation and financing of the common methods of synthesis methods include:

Build, operate, own: It is the same with BOT, Except that ownership of plan is transferred to finance provider. Results obtained from the performance of this contract, are resulted in its implementing in the sectors of water and electric power plants and large projects in the most developed countries (11). in Iran, transfer of oil and gas ownership to foreign investors is illegal and dealing with foreign parties are based on fixed periods of time and after that it transfers to client.

Design, built, operate and obtain (DBOM): Design and construction of the project added with the maintenance and operation are done under this type of financing. On the other hand, like BOO and BOT it could be done with or without ownership transferring. However in this method emphasis is on design responsibility plus financing and construction

The advantages of using a compilation method

- Using private sector capital based projects cause Acceleration in the implementation of projects that are financed through public funds or debt based projects.
- The financial obligations of these methods has no direct impact on government debts, which has led to the reduction of government debt and as a result, credit growth in the country.
 - Transfer of risk to the private sector.
- Financial, technical and economic feasibility of the project are thoroughly checked by experts.

- Management of international standards during project implementation and operation.
- Transferring the benefits of the project after the expiration of concessions to government.
- Jobs without investment from the government.
- The use of new technologies in order to further the company's profit in the profit sharing plan is implemented.
- High quality of implementation, cause Executive is responsible for the operation of the scheme.

The disadvantages of using a compilation method

- Projects that are carried out using this method are very complicated from legal, financial and technical consultants' aspects and they need to conduct a high level of project manager with capability and experience in similar projects
- Additional costs of public services to consumers who previously were supported by government subsidies
- Contrary to the objectives and priorities of the private sector in the national interest that may be due to national interests and social effects of a project

Results

According to statistics presented in the following two decades, developing countries and global emerging markets, allocated approximately 4% of GDP to develop infrastructure facilities. Furthermore, statistics shows the investment in infrastructure's development to a third over the last forty years. Where the high cost of government does not leave adequate funding in public services, the low capacity of the public sectors, weak governance structure, lack of motivation to create or increase efficiency, failure of increased entrepreneurial performance as substantial problems in this area are considered. However cooperating of governmental and private sectors are not considered as the only solution but approved that it is very influential for recognizing the non-efficiency activities and provides the organization's improving capacity, because the growth of infrastructure motivates external finance. Prolong the construction period, increases the possibility of change of executives and state governors that influence the official policies that obviously make the process more complicated and finally project misses the feasible justification. In this case, the justification has to be seriously questioned.

The inability to finance projects and delays in the frequency repayment to contractors create many problems. Between domestic and foreign banks in the credit relationship there is some important issues:

First, the credit lines due to country risk assessment and their classification that depends on economic and political stability and security is very important to the lender as the payment of the loan plays an important role is bound up. In Iran, because of the sanctions in recent years and due to the lack of adequate international political interactions, there are more sensitive to this issue and more attention on the part showed by lenders. Ontime repayment has high importance issue that strongly depends on exact following of project time table for construction and operating, on other case the expense markedly increases and make increasing the interest and delaying in reimbursement. In Iran due to improper project managing, this kind of issues is inevitable. Indirect investing in Iran associated with high risk demand so mostly tends to direct investing for having complete monitoring on all project's sections.

Due to problems with privatization, governor is responsible for mostly all of financing in Iran and sometimes its decision due to specific conditions could effects project's process and prevents direct investments in critical and strategic projects such as oil, nuclear and defense and so on issues.

Regarding to above mentioned, different strategies for finance are undertaken:

Iran's oil industry contracts are mostly used BuyBack models. By definition, these contracts are mainly used in oil and gas projects and repayment of principal and interest are done from petroleum products. The contract runs in those countries that ruled out any private or foreign ownership in the oil industry.In BuyBack contract the foreign investor transfer all operate and selling rights to oil ownership and received his capital and company benefits from oil products. The major concern is until we have not strong fundamental structures, lose our products and imports oil based product with higher price. This type of contract with regard to the fact that in shared oil fields, time is an important factor; any delaysshould be considered as possible losses.

High percentage of projects in the petrochemical industry finances by finance and international banking facilities. The main issues in these projects are related to delay and prevent project develop-

ment according to time table. Timely repayment of loans must be done while not having efficient project progresses to schedule, refinancing will be required and problems associated with it be occurred.

In water project and related plans the most notable problems are regard to their governmental identity that associated with financing problems. First, they are totally governmental and governor is the only purchase and products will eventually be sold to people with the price set by the government, other issue is the high differences between final cost and sale's price. Governor should mention all this gaps and required facilities by his limited budget. In ability to provide complete required invest for this kind of projects has encountered this company with lot of financial difficulties. Also, in these projects foreign invest could not be useful, as there is no chance for timely reimbursement. Furthermore, the domestic bank system lost its confident to return loan and ignore to pay short time loans unless complete settle of previous ones that make increasing the interest rate and prolong the administrative steps. Government uses the bonds and private or public partnerships as a way to go over a part of this problem in water section. To gain good results from bonds should be considered a good time. World Bank as financial and developing institute with the aim of improving the administrative facilities has cooperated in some of water projects but Iran requires further cooperation in this field. Integrated methods such as BOO, BOT, DOT and DBOM are complete ways for design, construct and operation and financing that could be utilized in line with Article 44 of the constitution in order to temporary or permanent transfer of the project.

Due to the nature of water resources development projects and schemes have been proposed that these methods primarily run in small and medium projects such as hydro-electric plants and the desalination plants and after appropriate experience be set for implementation in great plans and actions.

Conclusion

Private sector participation has several benefits for the public and private sectors. Some of them include:

- A) Public benefits:
- Private sector capital injections
- Operational Efficiency
- Risk allocation optimization
- Better management of public finance:

- The government will only pay when the service is performed.
 - Ensure budget
 - Efficient use of resources in the public sector
 - B) Private benefits:
- An attractive framework for entering new markets or expanding current ones
 - Attractive returns
 - Government legal and financial guarantee

On the other hand, private participation has many benefits in the creation of value for money:

- Ability of money providing for private partnerships results projects to be manageable.
- Private sector accepts the risk of the life cycle cost.
- Take advantage of the expertise of the private sector
 - Requiring the parties to risk evaluation
- Public section's general emphasize from commence
- Incentive's creation for optimality during project

These partnerships have features that need substructuring:

- Public sections identify required services for long time period (mostly 15 -30 years) with detailed specification and implementation standards without any exact time of finalizing.
- Repayments will be done only if property transferred and if it was below of mentioned standards no payment will be done.
- Private sector is responsible for design risk according to decision on temporary service transfer under required standards; also he is owner of properties and effective activities.
- Public section has done any financial supply during construction period and extra cost risks and delay also are on private sectors accountable.
- Public section should transferred responsible for monitoring the property and related benefits for service deliver to the point that private sector takes the risks and also allocate all owner related benefits to this entrepreneur.

There are different models for public — private partnership that differ from country to country. In fact, private sections association have been performed and developed in different ways. Some countries like Netherlands have had special sector for partnership management of private sectors, some other countries have done this cooperation only for special partnership. Some countries like Australia and USA have it done by states or munic-

ipals. Some of this method's specifications are as following:

- Participation
- Communication
- Sourcing
- Apportionment of liability risk
- Continuity

For picking the best finance option for implementation method, their dependence to several items should be estimated including the following items:

- Economic and financial feasibility of the project
- Reputation and experience of project owners
- Validation and qualification of contractors
 - Conditions and the type of contracting
 - Project purchaser
 - Nature of the products
- Finally, the outlook for supply and demand for buyers to identify who and under what circumstances purchases the products.

These studies should be evaluated in terms of technical, economic and financial studies and supported business plan should be carried out-that in the framework of this review is not available.

So, assuming these studies have done for the project or projects based, borrowing methods (agent-based) or non -borrowing (project-based) can be attributed to them. Thus, in the specific circumstances of each project must be considered all above to be more complete and more accurate to use the private sector.

References

- Eslami Milani, P. & Esmaili, Sh. (2009). *Review of Finance Method and Ways*. 1st International Conference on Iran Financial System development.
- Faraji, H. & Noori, S. (2009). *Research of Items Lead to Delay in Civil Projects and the Way to Decline It*.5th International Conference on Project Management.
- Hadadi, J. Keshtiban, Y. Fekri, &A. Hadadi, M. (2009). Project Based Finance from Iranian Bank View, threat or Chance. 2ndInternational Conference of Development of Iran Finance.
- MirShahi, A. &Bayat, M. (2010). Research on adopted finance methods for water divisions and implementing organizations. 3rd International Conference of Development of Iran Finance.
- Parchami Jalal, M. (2006). Survey and Criticize on contract's common conditions of design, built and turnkey feedbacks and their use in different projects. 3rd International Conference on Project Management.
- Safavi, S. Eshtehardian, A. Nasrazadani, S. & Alikhani, A. (2010). *Research of Reasons Lead to Delay in Urban Civil projects*. 6th International Conference on Project Management.
- Shiladitya Ch. (1996). Recent Experience in private financing of Infrastructure in Asia, *Asian Development Bank*, 1-10.
- The World Bank. (1994). Infrastructure for Development, *World Development Report*, 1-12.
- Tsuneaki Y. (1992). *Japan Experience in Infrastructure Development and Economic Growth*. chapter 8. Doctoral Dissertation at University of Tokyo.