

# A Study On Factors Influencing Foreign Aided Drinking Water Project With Special Reference To Japan Drinking Water Scheme

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## ABSTRACT

Sustainable development goal 6 targets, Clean water and sanitation for all. To improve the access of drinking water and sanitation, there needs to be invest in the management of freshwater ecosystems and water supply sources. Japan drinking water scheme is an improved source of drinking water source and it is the foreign direct investment of Japan to India. This study analyses the factors influencing foreign aided drinking water project with special reference to japan drinking water scheme. This study revealed that Japan drinking water scheme helps to get quality water at home and the schemes like this will helps the weaker sections of the society and backward areas of our country. So, the schemes like this are a way to achieve sustainable development goal 6. By introducing the scheme in the needy places was the sources of water are less. It will beneficial for the people and leads to increase the standard of their life and stimulate sustainable development in the regions.

**Key words:** Sustainability, Japan drinking water scheme, foreign direct investment, Sustainable development, Sustainable drinking water scheme.

## 1. Introduction

India is the second largest country in the world with a population of over 1 billion people. Our country is a developing country with large pool of villages and rural areas. Many of our rural areas and villages of our country lack proper infrastructural facilities and lag behind in development. In India, demand for water usage is increasing because of increasing population and economic growth, but, from a lack of infrastructure, the water supply shortage is becoming acute. Rural development is the key to the future sustainable development of the country. Sustainable development is defined as development that “meets the needs of the present without compromising the ability of future generations to meet their own need” (WECD, 1987). Among the 17 SDGs, Goal 6 seeks to “ensure availability and sustainable management of water and sanitation for all.” The goal is mainly related to drinking water supply and sanitation. Worldwide, 6 out of 10 people lack safely managed sanitation services, and 3out of 10 lacks safely managed water services. Clean drinking water, hygiene, and sanitation plays an important part in maintaining survival, health, growth and human development. Inadequate water supplies and poor sanitation and hygiene continue to contribute to disease and deaths, especially in lowincome countries and among children under

five (Troegeret al., 2017; 2018). Japan drinking water scheme is the foreign direct investment of Japan to India, the objective of this project is to provide safe and stable water supply service to meet the growing demand for water by installing water supply facilities in the state of Kerala in southern India; thereby contributing to improving living conditions of the local residents.

Foreign aid in its genetic sense is defined as a flow of capital from the developed to less developed or developing countries. Foreign Direct Investment is an important instrument in the process of sustainable development because, it plays important and growing role in global business. The primary focus of Japan drinking water scheme is the access of a minimum daily quantity of safe water for drinking, cooking and basic hygiene (Subedi,2005). Japan drinking water scheme is an initiative of government to satisfy the drinking water needs of the people and leads to meet the basic needs of people. Initiative in this direction could foster development in different spheres and pursue better life and enjoy the fruit of sustainable development. Efficient water management will not only contribute sustainable long-term economic growing but also the other goals such as poverty reduction, health and security, clean water and sanitation, sustainable cities and communities are to be achieved. Enhancing the capacity of the community in planning, implementation, development and maintenance of rural water supply schemes are the first and most important step towards the sustainable water supply system. The study focuses on the factors influencing foreign aided drinking water project with reference to japan drinking water scheme, it identifies the factors such as the awareness level, attitude of respondents, and the sustainability.

## **2. Statements Of The Problem**

Many studies have proved that the positive relationship between foreign direct investment, investment patterns and the economic development. Foreign Direct Investment itself is an indicator for sustainable development. In this context, the researcher aims to know the factors influencing foreign aided drinking water project with special reference to japan drinking water scheme a contribution to SDG 6 and has identified and included a set of variables under the study namely awareness level, attitude of respondents, and sustainable development. The study is relevant and brings under its purview of how FDI contribute to the enhancement of service and the schemes like Japan drinking water project is leads to sustainable development and thereby increases the standard of the poor people. Foreign Direct Investment (FDI) and the schemes like Japan drinking water projects plays a vital role in the development of the nation. The present study brings within its ambit role of Foreign aided schemes in bringing sustainable development to the country.

## **3. Review of Literature**

Kimengsi, gur, &Gwan (2018) carry out a study on Sustainable Water Supply in Rural Communities, the research proposes a model for sustainable water supply (Mbah, Nkenyi, &Fru, 2019) by indicating the opportunities that exist for internal and external actors to galvanize their resources to ensure adequate water supply in this fast-developing rural community. It was found that insufficient resources such as material and also financial is the major setback in the achievement of this goal.

D M, Lorhemen, Otun, & Alfa (2014) published an article regarding the “Provision of Sustainable Water Supply System in Nigeria: A Case Study of Wannune -Benue State” The article evaluates the existing water supply system at Wannune-Nigeria based on an onsite-physical inspection and discussion with some stakeholders. The study found out that the existing water supply systems broke down due to poor and/or lack of proper operation and maintenance practice and the result of the study point out that this led to the dependence by residents on water from unprotected wells, rivers and streams and capable of causing some sanitation and water related diseases like cholera, diarrhea, among others. The study throws light on a provisional design of a water supply system for Wannune was done. The scope extended to providing designs of suitable water supply systems that would help in addressing the existing water supply problems.

Marks, Komives, & Davis (2014) conducted a study on “Community Participation and Water Supply Sustainability: Evidence from Handpump Projects in Rural Ghana” The study investigates the extent to which different forms of community participation explain variation in hand pump sustainability. Involvement of community members in management-related decisions is prominent in the sustainable management of water supply system.

Mwnagi& Daniel (2014), conducted a study on “Assessment of Factors Affecting Sustainability of Rural Water Supply Schemes in Nyandarua County, Kenya: A Case of Kangui Water Scheme” the aim of the study is to examining the factors affecting sustainability of water supply schemes in Nyandarua County. The study points out that the water supply scheme must be completely get rid of illegal water connections and ensure to take necessary actions for leakages. If the system is not functioning properly then, it should be repaired in time and also be careful about the water supply system including the meters are fully and always functional.

Many studies have been conducted on the basis of foreign direct investment but the study related to the factors influencing foreign aided drinking water project with special reference to japan drinking water scheme, there is no related studies and variables tested till date. The foreign aided scheme Japan drinking water project can play a constructive role in development and growth of our nation in term of clean water and sanitation and it also helps us to build a healthy human resource. Moreover, the implementation of this type of schemes would help the people in different sectors is the availability of adequate safe water for drinking, cooking and other needs on a sustainable basis.

#### **4. Objectives Of The Study**

1. To identify the awareness of respondents regarding drinking water scheme.
2. To discuss the attitude of respondents towards drinking water scheme.

#### **5. Hypotheses**

*H<sub>0</sub>: Awareness level of respondents does not differ based on gender.*

*H<sub>0</sub>: There is no significant difference among the age group with regard to the attitude of respondents.*

## 6. Methodology Of The Study

Data analysis and interpretation means the process of assigning meaning to the collected information and determining the conclusions, significance and implications of the findings. The analysis and interpretation of valuable information that has been received from the well-structured questionnaire distributed to the users of Japan drinking water scheme in different places. The first part of the questionnaire consists of demographic profile of the respondents and the rest of the questionnaire focused on the specific questions related with the factors influencing foreign aided drinking water project with special reference to Japan drinking water scheme. The data for the study is collected from 60 respondents and are analyzed using appropriate statistical methods. The responses are recorded in tabular form, and respective interpretation of each are given. Hypotheses testing are done with the help of SPSS 20 and MS Excel by applying relevant statistical tools such as T- Test and One-way ANOVA.

## 7. Analysis And Interpretation

### Testing of Hypothesis I

#### Awareness level - T test based on gender

*H<sub>0</sub>*: Awareness level of respondents does not differ based on gender.

*H<sub>1</sub>*: Awareness level of respondents differ based on gender.

**Table 1: Result of t-test on Awareness level of respondents based on gender**

Gender	N	Mean	S. D	t value	Mean difference	Sig value
Male	29	4.09	0.60	2.41	0.29	0.01
Female	31s	4.39	0.30			

Source: Primary Data

N=60

It is observed from table 1 that at 5% level of significance as the p value is less than 0.05 ( $p = 0.01 < 0.05$ ) null hypothesis is rejected. It means that awareness level of respondents differs based on gender.

### Findings No 1

The awareness level of respondents differs based on gender. Gender of the respondents has impact on the awareness level.

### Testing of hypothesis II

#### Attitude - One-Way ANOVA based on Age

Attitude of respondents based on age is tested, the following hypothesis is formulated.

*H<sub>0</sub>*: There is no significant difference among the age group with regard to the attitude of respondents.

**H1:** There is significant difference among the age group with regard to the attitude of respondents.

**Table 2: Result of One-Way ANOVA on Attitude of respondents based on age**

Age	N	Mean	S.D.	F-value	Sig Value
Below 20	2	1.55	1.46	3.65	0.08
20 – 30	38	3.65	0.72		
30-40	16	3.31	0.85		
Above 40	4	3.64	0.49		

**Source: Primary Data**

**N=60**

Table 2 shows that at 5% level of significance the p value is greater than 0.05 ( $p=0.08 > 0.05$ ) and therefore the null hypothesis is accepted which means there exist no statistically significant difference among the age group of respondents with regard to attitude.

### Findings No 1

There is no significant difference among the age group with regard to the attitude of respondents.

## 8. managerial implications

1. Japan drinking water scheme helps to get quality water at home and the schemes like this will help the weaker sections of the society and backward areas of our country. By introducing the scheme in the needy places where the sources of water are less, it will be beneficial for the people and leads to increase the standard of their life and stimulate sustainable development in the regions.

2. Japan drinking water scheme can be utilized as the effective way to solve the problem of scarcity of drinking water in various regions.

## 9. Limitations Of The Study

1. The sample size is limited to 60 respondents only. Hence the result of the study may not be generalized to the whole users of the drinking water scheme.

2. Due to lack of time and resources, the study does not cover the entire district, where the users of the drinking water scheme.

3. The inherent limitations of statistical tools also affected the study.

4. The validity of result depends upon the information given by the respondents.

## 10. Scope For Further Research

Sustainable development is a tool to eliminate the evils and misconceptions of a society and make our place better to live in. This study will help to identify, sustainable investment in order to attain long term, inclusive and sustainable growth. Moreover, being a developing concept, the scope of this concept among the academicians is very high as there is no related studies and variables tested till date. The government could recognize the growing significance and role of clean drinking water and sanitation for all and thereby devise appropriate strategies to capitalize on the innovation to develop sustainable development. Moreover, the implementation of this type of schemes would help the people in different sectors is the availability of adequate safe water for drinking, cooking and other needs on a sustainable basis. The results of the study could motivate and drive to form Japan drinking water scheme and reduce the problem of scarcity of drinking water in regions. It can draw the attention of investors, government, and academic communities towards building up a sustainable model of development and offer a panacea to the existing ills and evils. Moreover, the findings of the study could provide an insight and input in the public formulation.

## 11. Conclusion

Access to safe drinking-water and basic sanitation is essential to human health and survival. But for many people living in low-resource settings, these vital services remain out of reach. Japan drinking water scheme plays a constructive role in supply of drinking water. In order to improve rural service levels in the water and sanitation sector of a developing country the scheme has to be implemented that is by necessity, low cost and within the affordability and community based. Project designs should take into account the following; First, that popular mass participation by the community is essential in order to mobilize the required resources for sustainability (Mazumdar, 2004). Improved health and economy through the provision of improved water, sanitation and hygiene education in a broad rural development framework and adopting integrated holistic approach linking with health, education, income generation, irrigation and watershed projects in which provision of drinking water supply can be the entry point (Government of India, 2007). Government should create an enabling macro-economic policy environment that is conducive for poverty eradication and sustainable development in rural areas by according high priority to incorporate broad integrated rural development strategies designed to reduce rural poverty and improved health into the national and state planning and policy framework. Japan drinking water project was the means to sustainable water supply system as a way to foster sustainable development in different spheres and it will lead to solve the problem of water scarcity and enjoy the benefit of sustainability.

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