

# **THE EFFECTIVENESS OF INDIA'S REVERSE BRAIN DRAIN POLICY**

**Meinar Anggraheni**

International Relations Department, Faculty of Social and Political Science  
Universitas Muhammadiyah Yogyakarta

## **Abstract**

This undergraduate thesis is aimed to described and analyze the effectiveness of India's reverse brain drain policy to prevent and or solve the brain drain phenomenon in India. Since 1960s, India loss many skilled people who decided to move from India and choose to work and stay in the U.S. Skilled people consists of scientists, doctors, engineers and bright student of India. The number of skilled people migrate to the U.S are increased rapidly every year. After the inauguration of Narendra Modi became the Prime Minister of India, the government of India began to look for a suitable solution to attract those skilled people who stay in the U.S to return to India and actively participate to develop India. To attract those skilled people, the government decided to improve the social and physical infrastructure of India and increase the minimum number of FDI (Foreign Direct Investment) by revising the FDI policy of India in 2014. This research found some factors that make the India's reverse brain drain policy become effective and could prevent and or solve the reverse brain drain phenomenon in India, 1) The promises from the government of India to give the NRIs a better social and physical infrastructure, a job that is suitable to their job specialization and a commensurate salary compared to that of U.S., 2) The increasing number of FDI and MNCs from the U.S that decide to establish their foreign subsidiary in India and look for the U.S trained skilled people to work in there.

**Keyword(s):** *Reverse brain drain, United States, India, Brain drain phenomenon*

## **Introduction**

India has been known as the second largest state with a huge number of population in the world. The total population of India in 2010 was more than 1 billion people including 1.780.000 people who migrated from India to other countries (known as Non-Residence of India or NRI). Before 2010, the number of India's people migrated significantly increased and faced the exponential growth in early 2000 (Zong & Batalova, 2015).

The increasing number of India's people migrated was triggered by several factors such as, the small opportunity of workspace in India, the limited proper job for their specification, the unequal amount of salary in India to their job proportions or things the people have done, and the limited technology and facility supporting their job. They seek a better job, better way of living to fulfill their needs and life's quality improvement.

Moreover, the NRI does not only consist of the common citizen of India migrated from their country to look for a better living condition abroad but comprises a highly educated people i.e. scientists, engineers, doctors and the bright students of India who seek for a better education in developed countries (in this case, the United States became the top destination for the NRI). It was begun in the 1960s, where there were a huge number of highly educated people from India migrated to the United States (hereinafter called the U.S). This is because, in that time, U.S gave the biggest opportunities for the citizens of developing countries, especially the highly educated people for instance scientists, engineers, and the bright students to get a better job, better life and

better education system in the U.S. This phenomenon was called “**brain drain phenomenon**”. The U.S government supported them by giving a lot of scholarships for the capable young people and gave a proper job specialization for the scientists, engineers, and doctors (Morning, 2001).

Many people of India in that time were attracted to those "American dream" offered by U.S government. It was proven by the enormous number of the immigrant from India to the U.S in that time. In the 1960s, the number of migration was around 12,000 from India to the United States (Zong & Batalova, Migration information source, 2015).

As the number of NRI migration was increasing from time to time, these phenomena became the concern for the government of India. The government started to feel insecure and anxious with this phenomenon, because India will lack good quality of human resources to build their infrastructure and economy if their citizen was more attracted to migrate from India to the U.S. In order to stop such phenomenon, the government of India begun their action to attract the NRIs to come back to India by some plans that later became a policy called **reverse brain drain policy**. India was the first country in the world starting the reverse brain phenomenon (Chacko, 2007).

The terms reverse brain drain or brain gain generally means people move reversely from the developed country to less developed country that is currently developing rapidly. In this case, those highly educated people from India who currently stay and work in the U.S before, are returning to their home country. By the returning of those highly educated NRIs, it offers a chance for India to

grow and to develop more in every sector of economy, social and physical infrastructures. Moreover, it strengthens the transnational relations between India and U.S (Chacko, 2007).

Before the reverse brain drain policy was implemented in India, the number of highly skilled NRIs who returned to India still very low, especially for the scientists. From 2007-2012, there are only 243 people who returned to India from the U.S. However, from 2012-2017 the number are increasing to 649 people (Bhattacharya, 2018).

Furthermore, after the three years of Narendra Modi became the Prime Minister of India, the development of India increased significantly. This case especially happened in the science and technology sector, proven by the number of the NRIs who worked as scientists returning to India in enormous number. Stated by the Union Minister of Science and Technology and Earth Sciences of India, Dr. Harshvardhan on May 23<sup>rd</sup>, 2017 that “India has moved from the era of brain drain to brain gain as over 1000 Indian scientists have returned from foreign countries to work in India.” The minister said that those returning scientists are the people who have a good intention to return to their home country and are interested in making betterment for India. (FE Online, 2017)

## **Theoretical Framework**

### 1. International Migration

Eisnstadt in Sinha (2005, p. 404) defined “migration as the physical transition of an individual or a group from one society to another”. The range of migration movement can be between rural areas to city, region to another region in one country and even one state to another state. The movement between one state to another state is called as international migration.

Furthermore, Çaglar and Maurice in Özden & Schiff (2006, p. 1) state that international migration is the movement of people across international boundaries which has enormous economic, social, and cultural implications in both origin and destination countries.

According to Lee (1966, pp. 47-57), the factors that lead to the migration are divided into 4 (four) factors. They are:

- a. Factors associated with the area of origin.
- b. Factors associated with the area of destination.
- c. Intervening obstacles.
- d. Personal factors.

Factors associated with the area of origin means that there are several factors influencing their decision to move from their place of origins, such as the improper infrastructures in their origin place and lack of job field. On the other hand, the factors associated with the area of destination are the factors that attract people to choose the country as their destination. The intervening

obstacles are the barriers that can hamper the migration process, for example, the distance between the destination place from their place of origins, or some restriction by the immigration laws. Personal factors are the individual reasons that encourage their decision to move (Lee, 1966).

Those highly educated people from India once decided to move and to stay permanently in the U.S, were trying to seek a better job with a better living condition there. Additionally, it was generated by the lack of proper social and physical infrastructure, the unsuitable working field with their job specialties and the low amount of salary in India (Carrington, 1999).

Since the inauguration of Narendra Modi as the prime minister of India, the government of India started to concern about the NRIs. They initiate to approach and discuss with the NRIs who left India to pursue their dream in U.S. According to Jitendra Singh in Mukherjee & Dey (2014), the minister of science and technology in India stated that the government begins to conduct a conducive environment for the NRIs who works as scientist an advancement of technology to attract them.

*These scientists, mostly coming back through different government fellowships, will be inducted in various reputed institutions and departments, including the Council of Scientific & Industrial Research, Jawaharlal Nehru Centre for Advanced Scientific Research, Bose Institute and many other research centers, mainly those funded by the government (Mukherjee & Dey, 2014).*

Furthermore, to attract the other NRIs, the government promised the development of physical and social infrastructure in India, the improvement of jobs field specialization, as well as the number of salaries that commensurate with their income in the U.S.

## 2. Foreign Direct Investment

FDI and MNCs are two terms which are sometimes linked to each other. MNCs are defined as enterprises that open their roles internationally and build up and run companies in the host country. FDI (Foreign Direct Investment) is a form of investment that can be done by specific people or groups to maintain their own activities and broaden their target in another country. The form of investment means that the major actors of FDI belong to MNCs.

According to Cohen (2007), FDI is defined as a financial phenomenon that takes place whenever a company acquires 10 percent or more of the voting stock in a commercial entity incorporated in a foreign country. He defines that one of the activities of the MNCs that is related to FDI is the acquisition or the merger of the company with the host country's company.

Practically, MNCs are planting their investment (FDI) in the host country in various ways. There are four types of the establishment FDI in the host country. Those are resource-seeking FDI, market-seeking FDI, efficiency-seeking FDI, and the asset-seeking FDI. Resource-seeking FDI is related to the activity of the MNCs to find a better resource and strategic foreign subsidiary. Market-seeking FDI is seek for the opportunity to broaden their foreign market in some countries. The efficiency-seeking FDI aim to reduce the cost of production. And the last is strategic asset-seeking which related to the competition between foreign company to acquire some or all assets to achieve their targets and minimize the competition in the host countries (Cohen, 2007).

The number of multinational cooperation in India has grown up significantly after the 1990s, it was stated by Chacko (2007, p. 134) “The liberalization of the economy in the 1990s encouraged foreign direct investment and the establishment of more offices by multinational firms in India”. It was proven that many giant industries and MNCs in three main sectors in India are established. Thus, they included IT, Energy, and Pharmaceutical sectors. In the IT sector, there were IBM, Qualcomm, and Microsoft. An example of the prominent MNCs on energy such as GE Energy. In terms of the Pharmaceutical sector, they were Procter & Gamble, Pfizer and Johnson & Johnson (Make In India, 2017). Those industries and MNCs. The establishment of branch offices in India improved the number of NRIs who returned and worked in India (Chacko, 2007).

### **Brain Drain Phenomenon in India**

The migration of highly educated people from India was influenced by the availability of better jobs for the engineers, scientists, and physicians. The government promise to give a better lifestyle for those highly educated people. The other reason was that the U.S faced a problem, they lacked medical personnel and engineers until the middle of the 1970s (Chacko, 2007). Because of those opportunity, many people in India, especially the highly skilled people decided to migrate from India to the U.S and stay permanently in there. Some of them even brought their family along.



The number of highly skilled people who migrated from India to the U.S still increasing. According to the National Center for Science and Engineering Statistics (NCSES), from 2003 until 2013 the number of scientists and engineers are increasing from 21.6 million to 29.0 million. In 2003, there are 16% approximately 3.4 million scientists and engineers are immigrants, while in 2013, there are 18% or approximately 5.2 million.

For the students, the number of students who migrated from India to the U.S in order to seek a better education also quite high. According to the Institute of International Education (iie), the number of students from India significantly increased. In 2016-2017, there are 17% student from India. By those number, India was the second place with the highest number of immigrant student in the world.

### **Reverse Brain Drain in India**

India became the first country where reverse brain drain phenomenon happened. There are several reasons that push the skilled NRIs from the U.S returned to India. The first reason was from March 11, 2000 until October 9, 2002, there is an incident called dot-com bubble or dot-com burst, where many internet-based companies were forcedly shut down due to an excessive growth in the usage and adaptation of the internet. This incident resulted in many talented ITs from India lose their job and choose to return to their home county (Chacko, 2007).

The second reason, post the 9/11 incident in the U.S, many immigrants from India face the discrimination from the western people because they were often get mistakenly recognize as Arabs immigrant. Therefore, many NRIs feels insecure if they remain to stay in the U.S.

And the last reason, many India's skilled migrant, usually the first generation of brain drain phenomenon who already spent more than 10 years in the U.S, prefer to return and stay close within their relatives. Therefore, they looked for job opportunity in India (Chacko, 2007).

In the late 1970s to the early 1980s, there is an early awareness in India because of brain drain phenomenon (Chacko, 2007, p. 131). From the brain drain phenomenon, India loss many of their skilled people to the U.S. Moreover, at that time, those people decided to stay permanently in the U.S rather than returned to India and take a contribution to develop their country. It leads to the disappointment of India's government. The government believes that brain drain phenomenon bring more harm than good for India. Also, the existence of those skilled people in the home country is the missing puzzle pieces for the development in India rather than the highest amount of remittances that they received.

According to Nasscom and Mc Kinsey report in 2015 (Chacko, 2007, p. 134), it estimated that only 25,000 of IT professionals who returned to India between 2000-2004. If we compare the number of skilled people who returned to the number of people who migrated, it considered to be less than 3% from

the number of people who migrated from India. Hence, the government of India plans to attract more skilled NRIs to return from the U.S to India.

To increase the number of the professionals to return to India, the government established the industrial, financial and commercial hubs in the cities of Mumbai, Kolkata, Delhi, Chennai, Bangalore, and Hyderabad who were left behind and change their status into modern metropolitan cities. This establishment created an opportunity for the skilled migrant to return to India and took the advantages to form it. In additions, there are also some skilled migrant in the first generation of the brain drain phenomenon, established the start-up company using their work experience, entrepreneur skill, and the global networks. Their company mostly about technology, research & development, and economic business sectors (Chacko, 2007).

Furthermore, in the Education sector, since 2006-2007 the government of India under the Ministry of Overseas Indian Affairs (MOIA) launched a program called “Scholarship Programme for Diaspora Children” (SPDC) devoted to the Persons of India Origin (PIOs) and Non-Resident Indians (NRIs) from 40 selected countries (table 3 3.1) to attract and accommodate them to pursue the higher education in India. This scholarship provided to 100 (hundred) selected students with the distribution of 50 (fifty) seats for PIOs candidates and 50 (fifty) seats for NRIs candidates. However, if there are no suitable PIOs candidates the remaining seats can be offered to the other candidates and conversely. The selected students are awarded with US\$ 4000 of scholarship amount for payment of tuition fee, admission fee and post

admission services for under graduate courses (Ministry of External Affairs Government of India, n.d.).

### **Factors that Influences the Effectivity of India's Reverse Brain Drain Policy**

According to Mohammed bin Rashid Al-Maktoum (2014), the Vice President and the Prime Minister of the United Arab Emirates, there are 2 (two) main components to conduct the reverse brain drain phenomenon successfully. The first component is **the opportunity**. The government of the home country should create a suitable economic condition to attract foreign investment to their country. By attracting foreign companies to invest in their country, the government create an opportunity for their citizens to enterprise and raise their competitiveness.

The second component is **the quality of life**. Brain drain phenomenon happened mainly because the people seek for a better job opportunity and a better social and physical infrastructure, especially in the education sector. Therefore, the government should create a better environment that could fulfill their life's quality.

#### **A. The Promises of India's Government**

To attract the skilled NRIs to return to India, the government of India decided to develop a conducive environment for them. In 2005, the government began to develop the Bangalore and Hyderabad city to become a high-tech city that suitable for the skilled NRIs. Both of Bangalore and Hyderabad have good social and physical infrastructure and a lot of job

opportunity with the amount of wages that commensurate to that in the U.S. Hence, there are a high demand to develop housing and even new township for the returning NRIs (Chacko, 2007).

Therefore, the government of India plans to develop six new townships for the returning NRIs near Hyderabad. This project finished in 2011, one of this new township called 'Fortune NRI Township'. The development will continue as the number of returning NRIs increase (Chacko, 2007).

Furthermore, in the education sector, the government under the Ministry of External Affairs (MEA) conducted a scholarship program specifically for the diaspora children, called as 'Scholarship Programme for Diaspora Children' (SPDC) in 2006. Mention in chapter III that this program aims to attract and accommodate the Indian diaspora children (both PIOs and NRIs) to pursue their higher education level in India (Overseas Indian Affairs, n.d.).

In the beginning, this scholarship program was available only for PIOs and NRIs children with 100 quotas available from 40 selected countries. However, in the academic year 2015-2016, this program was revised with an extension from 40 selected countries to 66 countries (including 17 ECR countries), the number of quotas available for the scholarship recipients increase to 150 seats and the children of Indian workers in ECR (Emigration Check Required) countries allowed to apply for this scholarship. Until 2017,

there are approximately 800 candidates awarded with this scholarship program (Overseas Indian Affairs, n.d.).

On April 2018, the Ministry of Human Resources and Development (MHRD) launched 'Study in India' program. Aim to attract many international students to achieve their higher education in India. The government launched this program with an intention to make Study in India program become a solution to reversing the brain drain phenomenon by introducing the India diaspora children to the roots of their origins. Through this program, the government hopes that it could strengthen India's position in global level and it would improve the global education ranking of India (Ranjan, 2018).

This program is offering the fee waivers (scholarships) like General Scholarships Scheme (GSS) for the international students from Asia, Africa, and Latin America. The other scholarship is the Scholarships Programme for Diaspora Children (SPDC) for the PIOs, NRIs and the children of India workers in ECR countries. Thus, make the SPDC no longer be part of Ministry of External Affairs (MEA), but it became the part of Study in India program under the Ministry of Human Resources and Development (MHRD) (Ranjan, 2018).

## **B. The Increasing Number of FDI and MNCs in India**

Foreign Direct Investment (FDI) plays an essential role in supporting the economic development in India. It considered as the main monetary

source for their economic development. The existences of FDI in India started in 1991, where the liberalization of economy happened. After that event, the number of FDI and a foreign subsidiary in India slightly increased (Make in India, n.d.).

To encourage more foreign investment and MNCs to India, the government took an initiative to revise the FDI policy in 2014. The government was increasing the limit for foreign investment in the insurance sector from 26% to 49%. They also launched a program called 'Make in India' to improve their manufacturing sector. Hence, in 2015 the FDI inflow in India has increased by 48% and successfully attracted investment of \$31 billion. Thus, make India became the country with the biggest amount of investment in the world (Singh, 2015).

Furthermore, to accommodate a lot of FDI and MNCs in India, the government decided that the development of industrial and commercial sector should be centralized in the city of Bangalore and Hyderabad. In Bangalore, since the development of the first Software Technology Parks of India (STPI) was established in the early of 1990s, there has been a distribution of technology parks in the urban centers across India. The role of STPI is like the export processing zones for software development in India. They provide infrastructure and tax exemptions to the software company that established in there for five years. The development of STPI in Bangalore created an opportunity for both U.S and local Indian IT software companies to establish the headquarter there and offering

numerous job opportunities for the returning NRIs. The STPI in Bangalore was built in the 330 landscaped acres of land located in the suburb area (Chacko, 2007). In 2006 recorded that the total of STPI units are 47 units. Since 2006 until 2018, the total number of STPI units that registered in Bangalore reach 529 units (Member Units, n.d.)

Meanwhile, in Hyderabad, most of the development has taken place in the northwest area, in the city of Madhapur, Gachibowli, Nanakramguda, and Vatingunapally. The government is actively promoting the Hyderabad as the high-tech city to attract the skilled NRIs especially the scientist and engineer. To successfully promoting the Hyderabad, the government of India established Hyderabad Information Technology Engineering Consultancy City (HITEC) City, facilitate with is the famous campus of information technology, engineering, health and bioinformatics in India. (Chacko, 2007, p. 137).

The establishment of HITEC City encouraged a lot of MNCs and local Indian IT sector to establish their companies there. There are more than 1300 IT companies that provide an employment for 407,000 people. There are some notable MNCs and local Indian companies that establish their offices in Hyderabad such as Microsoft, Apple, Amazon, Google, Facebook, IBM, Yahoo!, Polaris, Wipro, Infosys and Tata Consultancy Services (TCS). Those leading IT companies look to hire the returning skilled NRIs from the U.S to work in the middle and top-level position in their companies. Due to the efforts from the state and city government in India to attracts a lot of



foreign investment, the development of IT sectors and R&D sectors in Bangalore and Hyderabad successfully attract approximately 200,000 NRIs from the U.S to return to India every year (Chacko, 2007, p. 137).

## **Conclusion**

There are 2 (two) factors that could influence the effectiveness of India's reverse brain drain policy, the promises from the government of India to develop the social and physical infrastructure in India and the increasing number of FDI in India. To prevent the brain drain phenomenon in the future, the government of India should increase the quality of their social and physical infrastructure to fulfill the needs of Indian citizens and provide a lot of job opportunities in there.

From this study, the author believes that the implementation of FDI concept in the government plans to attract the highly skilled people is effective. This should become the example for the other government from the developing countries about the importance of the highly skilled people for the development of their countries and the strategies to attract them back.

Undergraduated Thesis Advisor



Bambang Wahyu Nugroho, M.A.

NIK : 19660426 199409 163027

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