Introduction

Infrastructure is arguably one of the most important things a government can build. It serves as the backbone of every economy. That is why it is crucial to building long-term infrastructure projects, especially in developing countries. Infrastructure is lacking in LEDCs.

It is not only LEDCs that are having problems financing infrastructure; some Medium Economically Developed Countries (MEDCs) have also decreased their investment into infrastructure to a point where they cannot even maintain their existing infrastructure. Therefore, the committee must find a solution for both LEDCs and MEDCs. Multiple factors influence the amount of investment but probably the most important is political interests.

Infrastructure is not attractive; maintenance is not attractive and infrastructure is very expensive. This means that there is no political incentive to build any kind of infrastructure. Long-term infrastructure is particularly hard to finance and maintain. While long-term investments are arguably the most important type of investments, they are usually the hardest to build, especially in developing nations.

Infrastructure investment is a key component of sustainable development goals. However, the interest around infrastructure is not new. Since the early 90’s there have been wide-reaching studies that attempt to show the economic development that comes from infrastructure. The studies have shown that improvements in infrastructure can raise productivity, stimulate private investment and facilitate domestic and international trade, thereby promoting sustainable growth.

In a few case studies, we will analyze how nations have used infrastructure and what impact they have had on their economy, thus exploring why they were built. Based on these case studies we can identify important information that will help you make an informed decision on how to stimulate the economy while investing in large and long-lasting infrastructure projects.
Definition of Key Terms

HDI

The Human Development Index (HDI) is a statistic comprised of multiple factors that measure a country’s development. It was developed by Pakistani economist Mahbub ul Huq. The UNDP’s Human Development Report Office uses this index to index countries and their development.

LEDC

A Less Economically Developed Country (LEDC) is a country with a less developed industrial base and a low HDI relative to other countries. There is no universal declaration of which countries fit with the designation of LEDC but most agree that LEDCs usually have some or all of the following attributes: a high birth rate, a high death rate, a high infant mortality rate, few people per doctor, low life expectancy, limited supply of housing, and a low literacy rate.

MEDC

A Medium Economically Developed Country (MEDC) is a country with a highly developed industrial base and a high HDI relative to other countries. There is no universal declaration of which countries fit with the description MEDC but most agree that MEDCs usually have some or all of the following attributes: a medium to low birth rate, a low death rate, a low infant mortality rate, numerous people per doctor, a high life expectancy, a supply of housing, and a high literacy rate.

Background Information

Infrastructure is arguably one of the most important investments any government can make. Without infrastructure, nothing works, no one can get to work, no products can be produced, and communication becomes very hard if not impossible. However, many investors see infrastructure as a bad investment, especially in rural areas. So, the questions arise as to how much infrastructure is enough and how much is not enough?
In order to answer these questions, we will look at multiple case studies and find suitable answers. One should keep in mind that every country and its territory is different and needs different solutions; these are just examples that allude to problems and benefits.

The Netherlands

The Netherlands has the inherent problem that large parts of its territory are under sea level and therefore it needs large amounts of infrastructure in the form of dikes, levees, and water management systems to keep its land dry. Since the Netherlands is the most densely populated country in the EU and one of the most densely populated countries in the world it also must deal with mass transit, public roads with a high capacity, and a large number of foodstuffs and water.

The Delta Works

The Delta Works are the Dutch response to water management. The Delta Works were a direct response to the massive floods of 1953 which killed 1,835 people and 300,000 animals. The massive water management and water defense project consists of multiple smaller projects which are placed at strategic points in the provinces of Zuid-Holland, Noord-Brabant, and Zeeland with ultimately one goal of shortening the coastline. A shortened coastline provides fewer ingress points for water.

1953 was just eight years after the end of the Second World War (WW2), which devastated large parts of Europe, including the Netherlands. Crucial dikes, levees, and coastal defenses were severely damaged by the bombing of the allied forces in WW2. But even before WW2 there were multiple studies suggesting that coastal defenses along the Dutch coast were insufficient. Based on these studies Johan van Veen published the “Verlandingsplan” in 1942 which was the foundation for the modern-day Delta Work plan. Even though the government knew the risks of flooding, they had “far more important” problems to tackle which resulted in the problem falling into oblivion.

The Delta Works are a prime example of a large investment in infrastructure that does not produce any “financial returns”. Yet they still had to be built otherwise large parts of the Netherlands would be in direct danger of flooding and destruction. These kinds of projects have the inherent problem of not being popular amongst the population whilst being key to the country’s security and economy. The Netherlands only started the Delta Work project after the massive floods of 1953.
Whilst many politicians and people in power recognize the necessity for these kinds of projects, they typically only become interesting after a catastrophic event, if they are in line with political interests, or if the governments have the capital to spend.

**The port of Rotterdam**

The port of Rotterdam is the largest in Europe. It used to be the busiest port in the world but was overtaken by Singapore and Shanghai. It covers 105 square kilometers and is near to 40 km in length. The port serves as a strategic shipping port for all of Europe. Most goods destined for and arriving in the European block pass through this port.

The port of Rotterdam provides a good insight on how to effectively manage infrastructure and adequately expand it. Formed in the first half of the 19th century, it adapted and evolved over time into today’s modern port of Rotterdam. The common saying “If it ain't broke, don't fix it” is very fitting in this situation.

While new infrastructure projects are flashy and usually bring good PR with them, they are not always the best solution for a problem. Upgrading old infrastructure may a better solution in many cases. Most importantly, every country needs to maintain its current infrastructure, a problem I will be alluding to later.

**The American Interstate Highway system**

The Dwight D. Eisenhower National System of Interstate and Defense Highways, or more commonly known and abbreviated as the “Interstate Highway system” is the American highway system. It was officially established in 1956 by the “Federal-Aid Highway Act of 1956” which laid the groundwork for the funding of the system and provided most of the necessary specifications for the newly built roads. The highways were heavily inspired by the German (Reich’s) Autobahn. The new regulation specified that the newly built roads were to be owned by the individual states, but the government would provide 90% of the funding. Note that this Act did not establish any sections pertaining to the repair and maintenance of the system.

Funding for the Interstate system was achieved through multiple means, but the primary source of income was the “Highway Trust Fund” which itself was funded by a federal fuel tax. Some highways were designed with tolls in mind and are maintained in large parts through these set tolls. The sections of the highway that have tolls usually have been funded through government-issued bonds that have to be repaid. After the bonds have been repaid the tolls are usually removed.
While the Act provided optimal conditions for the development and building of the system, they omitted multiple crucial criteria: the maintenance of the systems, expansion of the system (due to increase of demand), and rebuilding of the systems after catastrophes. While it is very understandable that politicians had no interest in agreeing on yet other criteria before completing the deal, it has created a very dangerous predicament for the system as a whole.

Uncertainty ensued; because the Act specified that the states would own the roads, the burden of maintenance fell on them. While many states were able to provide sufficient funds to maintain the newly built systems, some could not, especially states which were comparatively less economically developed. This led to the potential situation of having newly built roads slowly deteriorate to the point where the usability of the road was severely impacted.

In the early 70s, early built highways were reaching the end of their designed life and were showing considerable damage, leading to the creation of the Federal-Aid Highway Act of May 1976. The newly formed act finally provided federal funding for the maintenance of highways. Similar to the previously mentioned “Federal-Aid Highway Act”, 90% of the funds were provided by the federal government while 10% had to be provided by the state.

1970 saw large amounts of inflation while the economy remained stagnant (stagflation) in the USA; this meant that many parts of the American government were required to cut corners. One of these corners was infrastructure. While the Act of 1976 improved the situation dramatically, to this day there are still some sections of the system in dire need of work.

The predicament alluded to is not only applicable to the American highway system, but it also applies to any infrastructure project that does not set out concrete details on how to fund its individual parts. This is a very important lesson for policymakers around the world. Although at THIMUN we assume the UN has unlimited funds, it is highly advisable to ask fundamental questions such as, “How do we fund the maintenance of the new build project?” and “Who is responsible for the future of the newly established objects?” This way one will not end up having a situation where new build infrastructure is slowly falling apart because nobody takes care of it.

China

China is the largest newly industrialized economy in the world. It has developed an incredibly large and complex infrastructure project in record time. Through its Belt and Road Initiative (One Belt One Road) it has funded large-scale infrastructure projects in large parts of the world.

High-Speed Trains
China has the largest high-speed train network in the world. China built most of its high-speed rail (HSR) links in the last 15 Years. The Chinese state has perfected almost every aspect of the building process of HSR infrastructure. It uses a variety of methods to keep building and maintenance costs low and speeds high.

While many of these methods are worthy of studying and implementing around the world, it is important to keep in mind that China's geography and distribution of population make HSR very favorable. China has very densely populated cities in (relatively) close proximity to each other, meaning that it is often faster and more efficient to use HSR service in comparison to flying or traveling by bus. HSR services also provide an increasing amount of comfort, which makes them very popular with business travelers.

**Infrastructure cost**

It is worth mentioning that in general infrastructure in newly industrialized countries is far cheaper to build than in other countries around the world. This is due to multiple factors, the most important being lower labor costs and lower land acquisition costs.

**Labor costs:** It is no secret that labor costs tend to rise proportionally to the development of a country. Especially in rapidly developing countries, this phenomenon becomes a problem because infrastructure costs start to rise very quickly and thus lead to unforeseen costs. China is a perfect example of this phenomenon.

**Land acquisition:** The prices of land acquisition tend to skyrocket in the later stages of development in developing nations, making it very difficult to build large-scale infrastructure projects. This is especially the case in urban environments. China has solved this problem by building most of its infrastructure in urban areas on elevated platforms. While these measures increase building costs, it is far cheaper to build straight elevated bridges through cities than to build highways and train tracks at ground level.

**The Belt and Road Initiative**

The Belt and Road Initiative (BRI) is a global development strategy adopted by the Chinese government in 2013. It consists of multiple projects around the world. The “Belt” refers to the overland routes while the “Road” refers to sea routes. The project aspires to be “a bid to enhance regional connectivity and embrace a brighter future”. Critics state that the project aims to promote Chinese dominance in global affairs. The project consists of multiple large-scale Chinese investments in
infrastructure around the world. It seeks to restore the old silk road, which used to span from Asia to Europe, through modern infrastructure upgrades and building of new infrastructure.

The Initiative is comprised of six Economic corridors: (1) the China-Mongolia-Russia Economic Corridor; (2) the New Eurasian Land Bridge; (3) the China–Central Asia–West Asia Economic Corridor; (4) the China–Indochina Peninsula Economic Corridor; (5) the China-Pakistan Economic Corridor; and (6) the Bangladesh-China-India-Myanmar Economic Corridor. (View Appendix II)

**Major Countries and Organizations Involved**

**OECD**

The Organization for Economic Co-operation and Development (OECD) is an intergovernmental economic organization with 36 members which are mostly MEDCs. The OECD states on their website that their goal is to “shape policies that foster prosperity, equality, opportunity, and well-being for all”. The OECD originated from the Organization for European Economic Co-operation (OEEC), which was established in 1948 to administer the Marshall Plan. The Marshall Plan consisted of large-scale economic programs in Europe with the aim of rebuilding Europe after WW2, and a large amount of financial aid from the USA. In 1961 the OEEC was reorganized into the OECD which allowed non-European states to join. The budget of the OECD is derived from its member states which all contribute a different amount of money to the organization; the budget of the OECD was 374 Million € in 2017.

**WTO**

The World Trade Organization (WTO) is an intergovernmental organization that regulates international trade between nations. It was officially formed on the 1st January 1995 by the Marrakesh Agreement and replaced the General Agreement on Tariffs and Trade (GATT), which was formed in 1948. The WTO regulates trade between member nations and provides a framework for trade agreements and dispute resolutions. The WTO's budget is derived from its member nations; the operating budget in 2018 was 197.2 Million Swiss francs (~ 209 Million US$).

**World Bank**

The World Bank is an international financial institution that provides grants and loans to governments around the world that belong to the World Bank Group. It consists of multiple institutions, the most important of which are the International Bank for Reconstruction and Development (IBRD) and
the International Development Association (IDA). The IBRD is a global development cooperative owned by 189 member countries. It provides loans, guarantees, risk management products, and advisory services to countries in need. The IDA oversees only the world’s poorest countries; it provides loans and grants for programs that boost economic growth, reduces inequality, and improve people’s living conditions. The IDA is a complement to the IBRD. While the IBRD was designed to be a self-sustaining business, the IDA is designed to help nations to recover, providing large amounts of donations and lending money on concessional terms.

**Timeline of Events**

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<tr>
<th>Date</th>
<th>Description of event</th>
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<tr>
<td>July 1944</td>
<td>The founding of the World Bank</td>
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<td></td>
<td>The GATT was signed by the 23 members of the International Trade Organization</td>
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<tr>
<td>October 30th 1947</td>
<td>Organization in Geneva. The GATT was, however, only put into action January 1st 1948</td>
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<tr>
<td>September 30, 1961</td>
<td>The founding of the OECD</td>
</tr>
<tr>
<td>January 1st 1995</td>
<td>The end of the GATT, which leads to the creation of the WTO</td>
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**Relevant UN Treaties and Events**

- Action plan on infrastructure development in Asia and the Pacific, April 13th 1994 *(E/ESCAP/RES/50/2)*
- Sustainable Development Goals Goal 8 UN Resolution, January 1st 2016, *(A/70/1)*
- New Partnership for Africa’s Development (NEPAD): progress in implementation and international support, September 10th 2019 *(A/73/L.96/Rev.1)*

**Previous Attempts to solve the Issue**

The Belt and Road project.

One might consider the World Bank, OECD, and WTO to be solutions, but these organizations do not directly contribute to the solving of the problem at hand. While the World Bank has started granting more generous loans it is not specialized in long-term infrastructure development.
The UN relies upon the World Bank, the OECD, and the WTO to provide solutions. Therefore, there are no concrete solutions presented. However, sustainable development goals do mention infrastructure in goal eight.

**Possible Solutions**

*Note: This section is designed for issues that have an inherent problem or are currently in a situation that needs solving. This issue does not involve anything in that regard, but the here-suggested “solutions” are still important for debate.*

It is highly recommended that countries establish a well-funded and well-staffed agency to monitor infrastructure that has already been built.

The committee should pass a resolution outlining how member nations can fund, manage and use institutions to maintain their infrastructure.

Creating a framework for international cooperation to build transnational infrastructure is highly recommended.

The committee should try to attract private investors in any way possible. It might be advisable to create a legal framework for private investment and cooperation. Especially large-scale projects can benefit from such cooperation.

While every country has different requirements for their needs, it is highly recommended that countries use expertise from other countries to resolve the problem.

**Bibliography**


Appendix or Appendices

(I) “America’s infrastructure is decaying — here’s a look at how terrible things have gotten”


(II) "The Belt and the road"

“Most infrastructure spending in the United States comes from state and local governments”

https://www.pgpf.org/chart-archive/0274_federal_state_local_infrastructure_spending.com