A Brief Statistical Introduction of the Global Refugee problems with Data Analysis

April Yan Zhang

DePauw University

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A Brief Statistical Introduction of the Global Refugee Problems with Data Analysis

April Yan Zhang
DePauw University Honor Scholar Program
Class of 2019
Sponsor: Naima Shifa
Committee: Ophelia Goma
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Chapter 1: Introduction

Background information

The refugees' problem is a hot topic in contemporary society nowadays. Those refugees, no matter where they come from, no matter where are they going for their future settlement, no matter what their ethnicities are, no matter what their personal lives were used to be, this increasing refugees’ phenomenon is the results of the wars and conflicts which happened in some places around this whole world. Although the governments or the UN are trying their best to help those refugees, there is still a large amount of them left who do not have the appropriate help from either of these organizations.

According to the UNHCR (The UN Refugee Agency), by the end of 2017, there were 71.44 million persons of concern globally. Meanwhile, according to the World Bank website, we knew that there were 7.53 billion people (7530 million) globally by the end of 2017. By calculating, we can see that there are nearly 1% of the total population is a refugee. Which means, there exists one person who is a refugee out of 100 persons. It is outstanding and significant evidence to show that the refugee problem is getting more and more severe in recent years.

In this thesis, the main focus is to show what have affected the increasing refugees’ numbers in recent years and to show some brief statistical information about the global refugees nowadays. I will mainly focus on the refugees located in Europe and Africa, since currently, Germany is the country who has the biggest number of refugees not only in Europe but also in
the whole world. Meanwhile, I will also focus on the refugees who lived in the United States and comparing these two countries’ refugees in general and find out their common characteristics. Since the refugees receiving countries mainly located in Europe, and their refugees’ resettlement policies varies from each other, we found it hard to compare all of them in together. So, in this thesis, we will only compare the different policies in Germany and the US, and by using data analysis and try to determine the best plans for the refugees who are currently seeking for protection.

Since the developed countries already host many refugees in recent years, but we cannot ignore the developing countries. According to the United Nations Regional Information Centre for Western Europe (UNRIC) that the developing countries are hosting 80% of refugees. This result is unprecedented and surprising. It is evident for the refugees to seek help from the much more developed countries since they have better offers than the developing countries have. Therefore, in this thesis, I will also try to discuss why there are more refugees in developing countries quantitatively by using statistics.

In this thesis, I will try to show the outcomes and significant results by collecting data, showing the refugees' trends in graphs, and conducting some data analysis because the refugees have so many information which included their ethnicities, their family backgrounds, their marriage status, their children, their family income, etc. So, it will be visually significant to give people a much easier way to sense this information about refugees quantitatively. Data in nowadays is a powerful tool and supports us with a more efficient way to help us solve different
kinds of problem in life. Moreover, it will provide a more efficient way in quantitative view to sense the importance of helping these refugees nowadays in the world.

Besides by using data to analyze the conditions of refugees, it will give us a better understanding of how we could quickly recognized and understand the graphs of refugees flow from different countries to different countries. Therefore, in this thesis, both data analytics and statistical graphs will help us have a better understanding of the current global refugee problem and have a direct visual feeling about how severe the refugee problem has become recently. In this way, we will know how math and statistics can tell us information and held the refugees seek for a better future and a better living condition.

**The Intention of the Thesis**

Refugees issue is not a new social phenomenon in our society, it is keep growing, and we cannot just ignore it. Even the majority of the refugees come from the particular areas in this world, and there are also some particular countries who are trying to help them, but still, this is the responsibility of everyone in this society to have an awareness of this issue. Germany always came up with news of their refugee policies in recent years; it's clear that this country right now is going through some hard times on settling down their refugees. Which means there still exist much more choices for the refugees to choose for their settlement, but sometimes making this choice is more laborious.
Therefore, my intention of this thesis is trying to show people with the brief statistical information and graphs, and make them have a better understanding of the current refugee issue. Also, by conducting the regression analysis can help those refugees determine what are the indicators that has affected the number of refugees in recent years. Meanwhile, these basic statistical information will also help both refugee and countries to make a better and a more practical choice and offer better help by using statistical methods. Since statistics nowadays are a stronger tool for people to make a smarter choice and better decision, I decided to use data which I collected about the refugees' necessary background information, and I would like to conduct some data analysis trying to determine the significance and make better decisions for the refugees who are currently seeking help. In this way, we can understand that the statistics are not only a mathematical tool in real life but also can help us to solve some social issues.

**Structure of the Thesis**

The beginning of the thesis will start by introducing the background information of refugees and some basic concepts of refugees. Followed by the refugees’ policies and basic statistical information among different countries which here we are mainly focusing on Germany and America, and later in the chapter, I will conduct two line charts to show the growing trends of the refugees from Germany and the U.S. Then, a brief statistical information about the refugee children will be included in the chapter 4. In this chapter, we would get to understand better the current living condition of the refugee children and the common distribution of them geographically. In the last part, there will be a statistical overview and an overview of the flows
of refugee transporting from their origin countries to other receiving countries (the country who would like to host these refugees). An evaluation and an analysis will come up along with that information, and then a conclusion would be at the end of these chapters. Meanwhile, the code of the conducted regression analysis by R will be included in the Appendix part in order to know how I did the regression analysis.
Chapter 2. Definitions of Basic Refugees’ Concepts

Some Facts About the Refugees

1. What is refugee we are talking about nowadays?

First of all, we need to have a clear definition of the refugees we are talking about in this thesis. According to the UNHCR website, we knew that "a refugee is someone who has been forced to flee his or her country because of persecution, war or violence. A refugee has a well-founded fear of persecution for reasons of race, religion, nationality, political opinion or membership in a particular social group. Most likely, they cannot return home or are afraid to do so. War and ethnic, tribal and religious violence are leading causes of refugees fleeing their countries." We clearly understand now that the refugees we are talking about in this thesis are the people who are forced to leave in their country because of violence, war or persecution — these are the main reasons built up a whole group of refugees from different countries in this world.

2. Who are Stateless Persons?

The meaning is evident when we say stateless person, which means these group of people does not have their identification of any other countries. According to the UNHCR, "stateless persons are defined under international law as persons who are not considered as nationals by any State under the operation of its law." Which means that the stateless persons do not belong to any country; therefore, it makes the condition even worse when a person is considered as a stateless person. They are hard to be categorized, and it is even harder for the receiving
countries’ governments to determine the ways to help them. As a stateless person, their living condition will appear to be worse than any other refugees who have a nationality.

3. What is the Receiving country?

A receiving country in the refugees' concepts is a big world. According to the UNHCR, a receiving country is "the country of destination or a third country. In the case of return or repatriation, also the country of origin." The receiving country is also called as the host country for those refugees who are looking for help. The UNHCR also defined that "country that has accepted to receive a certain number of refugees and migrants yearly by the presidential, ministerial or parliamentary decision." So the receiving country is the place where the government decides to give supports for those Asylees under their regulations.

4. What is the difference between a refugee and migrant?

Since there is no formal definition of a migrant, but according to the UNHCR, we know that "an international migrant is someone who changes his or her country of usual residence, irrespective of the reason for migration or legal status." This is the crucial distinction between a refugee and a migrant. Moreover, it is essential to know that not all refugees are called as migrants in the refugees' transportation from different countries.

5. Where do they come from?

Since the causes of becoming refugees are violence, war or persecution, we can infer that these refugees most likely coming from the countries where war happened frequently and not in peace as well. Therefore, according to the UNHCR, "two-thirds of all refugees worldwide come
from just five countries: Syria, Afghanistan, South Sudan, Myanmar, and Somalia. We can see some outstanding results from these countries. Surprisingly, Myanmar is the only country which lies in the southeastern part of Asia. Also, the rest of these five countries, all of which have been known for their frequently war happenings. So, in the following thesis, I will keep discussing these few countries since they have the most considerable amount of refugees in total. Which means they will show the most valuable results and useful results at the end. Besides these five largest refugees countries, Afghanistan, Congo, Sudan, Iraq, Eritrea, and the Central African Republic are also the rest of the top countries of origin for refugees and asylum seekers. The chart below also gave us a visual view of the top countries of origin.

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1 Source: United Nations High Commissioner for Refugees Statistical Database and author’s calculations
6. Where do they go?

After the refugees decided to leave their home countries to seek help from other host countries, there are some choices for them to choose from. According to the UNHCR, Turkey, Germany, and the US are the most popular host countries for the asylum seeker so go. By the end of 2017, from a global total of around 23 million refugees, Turkey was by far the largest host nation with around 3.8 million. The reason for this is that Turkey is the neighbor country of Syria, and we already knew that Syria is the country with the most asylums; therefore, the more natural way for them to seek help is to go to Turkey and settle down there. Also, besides the top 3 host countries for the asylums to choose, Pakistan, Uganda, Lebanon, Iran, Bangladesh, Sudan, and Ethiopia are the rest of the top host countries for the asylums to seek help from. Surprisingly, there are only two developed countries in these choices. The rest of them are all developing countries.

Source: United Nations High Commissioner for Refugees Statistical Database and author’s calculations.
7. What is Asylum Seeker (Asylees)?

Despite talking about the refugees in general, there are also other definitions we need to know about. An asylum seeker is the other most important concept we need to understand. According to the UNHCR, an asylum seeker is "when people flee their own country and seek sanctuary in another country, they apply for asylum - the right to be recognized as a refugee and receive legal protection and material assistance. An asylum seeker must demonstrate that his or her fear of persecution in his or her home country is well-founded." Therefore, we know that there are some significant differences between a refugee and an asylum seeker. An asylum seeker is people who are seeking for help from other countries and which means once they found themselves a host country to stay, their transition from asylum-seeker to refugee is completed. Therefore, the difference between an asylum-seeker and a refugee is distinct.

8. What is the Displacement?

Regarding displacement migrants, displacement can be divided into two different categories. The first one is called merely displacement and the second one is called forced displacement, sometimes it is referred to involuntary displacement. Forced displacement which can also be called a displaced person frequently happened among refugees. There is also a common distinction we need to recognize the distinction between conflict-induced and disaster-induced displacement.

Conflict-induced displacement always caused by humans while the disaster-induced displacement always caused by natural disasters. Under the displacement category, there exist a
group of people who are called an internally displaced person (the “IDPs”). According to the Guiding Principles on Internal Displacement, internally displaced persons are “persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized border.”

The following chart is called the trend of global displacement (2007 - 2017), from this chart, we can see that the circle is getting longer and longer by the year changes. The most significant changes are the internally displaced persons, the number of them in 2007 was roughly 26 million, but by the end of 2017, there were already nearly 40 millions persons of the, which almost doubled the quantities of the year 2007. Among these internally displaced persons, the majority of them came from Europe, middle east parts and some American countries.

9. What is Assimilation?

According to the UNHCR, assimilation is “an adaptation of one ethnic or social group - usually a minority - to another. Assimilation involves the subsuming of language, traditions, values, mores, and behavior or even fundamental vital interests” Recently, the refugees in Europe are experiencing a new trend of flowing to other receiving countries. This movement is called the refugee integration which we will discuss later in the thesis.

10. What is a Refugee Camp?

Once a person becomes a refugee, it seems most likely that they will remain to be a refugee for a long time. According to Wikipedia, “a refugee camp is a temporary settlement built to receive refugees and people in refugee-like situations. Refugee camps usually accommodate displaced persons who have fled their home country, but there are also camps for internally displaced persons.” Which means that a refugee camp will give the initial support for the persons who became as either a refugee or a displaced person. A refugee camp is an essential place for persons whom first time went through these horrible experiences. However, the locations and conditions of most of the refugee camps in most countries are indeed, and the surrounding environment is pretty bad. It is still an unsolved problem for those refugees so far.

11. What is the Reception Center?

Asylum-seekers may sometimes seek host countries from time to time. During the transition from different host countries, the reception centers are essential places for them to stay
while they are seeking. Reception facilities provide temporary homes for them no matter they come in there as an individual or as families. After they fill their asylum claims, those asylum-seekers stay in these facilities until their claims are processed. Also, the next step is to be recognized as refugees so that they are allowed to stay in the reception centers for the transition period. Therefore, the reception center is an essential step during the transition. Meanwhile, the reception centers provide sufficient help such as housing, food, primary health care and pocket money for their inhabitants. Since the UNHCR is continually changing their standards of the reception centers, the quality of the refugees' life is frankly guaranteed.

12. The Asylum Process

There always is some distinction between a refugee and an asylum seeker. Since we already made that distinction clear in the previous chapter, we will focus on what exactly is the Asylum process before they can get the proper protection of refugees. “Before someone can be given the protection of refugee, they must first seek asylum.” according to the Refugees Deeply.

We already knew that an asylum seeker is an independent individual who fled from their home country due to the conflicts, persecution, or wars happened in their home country and seeks help and request protection as a refugee in other countries. According to the Refugees Deeply, "a person declares him or herself an asylum seeker, while a government or the UN determined that someone is a refugee." Therefore, we know that once this person is an asylum seeker, he or she will be determined as a refugee as well. An individual outside of their home
country who requests protection as a refugee in a new country, due to fear of being harmed or persecuted in their own country.

After the Regional refugee conventions broaden the definition of refugee, the 1969 OAU\(^4\) Convention created a more specific definition of what kind of people can be recognized as a refugee under various kinds of circumstances. Such as the 1969 OAU Convention was created to address specific aspects of refugees issues in Africa and the 1984 Cartagena Declaration\(^5\) Recognized people fleeing generalized violence, such as civil war. Therefore, in some specific regions, it is much easier for an asylum seeker to be recognized as a refugee under these regional conventions.

When a person claims Asylum, the country they claim does not need to be the first country they decide to go and to live there forever. While there are few exceptions "which include the EU countries. According to the 2003 Dublin II regulation\(^6\) determined which E.U. member state is obligated to process an asylum claim; if an asylum claim is made within 12 months of arriving in the E.U., the first E.U. country in which the asylum seeker arrived is responsible for processing the claim (after that, it’s the E.U. country where the person has lived for at least five

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\(^4\) The 1969 OAU Convention: The Organization of African Unity (OAU) was established in 1963\(^1\) and the OAU Convention Governing the Specific Aspects of Refugee Problems in Africa (the OAU Refugee Convention) was enacted in 1969 and came into force in 1974.

\(^5\): The Declaration has since incorporated into the national laws and state practices of 14 countries. The declaration is the result of the "Colloquium on International Protection for Refugees and Displaced Persons in Central America, Mexico, and Panama," which was held in Cartagena, Colombia from 19 to 22 November 1984.

\(^6\) The Dublin II Regulation was adopted in 2003, replacing the Dublin Convention in all EU member states except Denmark, which has an opt-out from implementing regulations under the area of freedom, security, and justice.
Once the person claims his/her asylum, the asylum assessment process starts which is called refugee status determination (RSD).

The government officials of the officers of UNHCR will start their interviews about the refugees' background information, their country of origin and the circumstances they were under when they decided to claim as an asylum. Once the assessment is confirmed which means these people have been officially recognized as in need of refuge. This is the whole process of how to determine an asylum. Once all of these steps have finished, the host country of these asylum-seekers cannot force them to go back to their home country, and the governments should also prepare enough supports for them. According to the 1951 Convention⁷, which was to as the principle of non-refoulement, is an essential part of customary international law. This principle prohibits returning someone to a country where they may be returned.

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⁷ The 1951 Convention: relating to the Status of Refugees and its 1967 Protocol clarify the rights of refugees and the obligations of states that are a party to these instruments. The Convention does not apply to Palestine refugees "who are at present receiving from [UNRWA] protection or assistance", unless "such protection or assistance has ceased for any reason, without the position of such persons being definitively settled in accordance with the relevant resolutions adopted by the General Assembly", in which case they "shall ipso facto be entitled to the benefits of the Convention."
Chapter 3. Basic Statistics about the Refugees

Intention

In order to get a better understanding of how refugees flow changes globally in recent years, this chapter will start by showing the brief statistics of different countries which included Central African Republic, Congo, Chad, Central America Area, Europe, Iraq, Syria, and Ukraine these few countries and areas. The brief statistics will include the number of refugees in these countries and areas, the histograms and graphical maps, etc. All of this necessary statistical information will give us a more clear mind of how refugees flow changes in recent years in the countries where the refugees grew up or most likely to move. In this way, we could understand better why people would become refugees and what caused them to leave their home countries and what affected their minds to choose the country they want to live for a better future with a better environment.

Globally Overview

The causes of being a refugee are varied from different reasons, but according to the UNHCR, "there are 68.5 million individuals who have been forcibly displaced worldwide as a result of persecution, conflict, violence or human rights violations." So far, this number of refugees is the highest level of displacement on record in history. Later in this chapter, I will introduce some basic statistics about the refugees who were forced to leave their home country due to the above reasons. The following is a chart from the UNHCR which showed that the trend of numbers of refugees from the year 1950 to the year 2015.
From this chart, we can see that before the year 1990, the number of refugees showed an increasing trend, and then during the period between 1990 and 2003, the number of refugees showed a slightly decreasing trend. Moreover, then from the year 2003 to now, the number of refugees is growing at a faster speed than before. The global trend is increasing in recent years which is a significant phenomenon that we need to be aware of. Also, in these 68.5 million individuals, there are 25.4 million refugees in the world which is still the highest ever seen. There are also 40 million individuals who are internally displaced people, and the rest of the 3.1 million individuals are still asylum-seekers. Therefore, we can conclude that the prevailing trend of refugees recently is growing faster and becoming more and more dangerous.

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Statistics by Region/Country

The Central African Republic

Besides the global trend from recent years is noteworthy, there are also some other significant outcomes from different regions from all over the world. First of all, in the Central African Republic, there are nearly 1 million men, women, and children who have fled from their homes to ask for refuge within mosques and churches.

From this chart, we can see that the Central African Republic area is not the most substantial part of the whole African Continent countries. However, compared to its neighboring countries, the Central African Republic still carries a pretty large amount of refugees which is nearly 866,948 persons of concern.

Cameron, Congo, Chad

Not only in the Central African Republic, but some neighboring countries also have a pretty amount of persons who came from Cameroon, the Democratic Republic of the Congo, Chad and the Republic of the Congo. These few countries also have a large number of people seeking refuge within their regions.

From this graph, we can see that the Democratic Republic of the Congo is the largest country in the central area in Africa continent, and Congo also has the most significant number of refugees, which is nearly 5,144,932 persons of concern. This number is nearly six times the number of refugees in the Central African Republic. In this graph, we can see other African countries all have a pretty large amount of refugees, due to the historical and geographical reasons, we knew that Africa had not been a peaceful place for people to live, the wars always

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happened there, the local governments always have not been in peace, they had conflicts frequently because of the leaders changes. Therefore, the residents needed to leave their home countries, or they were forced to leave to seek other safer places to live for their future. Moreover, these are the primary reasons why there is such a massive number of refugees every year in African countries.

Central America

In Central America, the number of persons who fled from their own homes to seek help has grown by almost ten times in the past five years. Another interesting fact about refugees from the Central America part is that 90% of asylum-seekers in Mexico are from NTCA countries. Meanwhile, the number of violence by organized criminal groups (maras) has increased dramatically in recent years in El Salvador, Guatemala, and Honduras.

From this graph of the country of Colombia, we can see that this is the largest country in Central America with the most significant number of refugees. Colombia has always been a country with different conflicts happened in their government. The GDP of their country has always been lower than in other Central American countries. The residents sometimes need to leave their country in order to find a better place with a better government to live and make money. Therefore, this is the main reason why there is a more significant number of refugees in the country of Colombia.

Europe

From the graph above, we can see that European countries have different numbers of refugees. For example, German has 1,413,127 refugees by the year of 2017, which is a pretty

large number. Since a lot of European countries are the neighbor of Middle East countries and Middle Eastern countries, have always been in various wars and conflicts in recent years, which means that the wars and conflicts will lead to the increasing numbers of refugees in those Middle East countries. Also, the most straightforward way for those refugees to get out of their homelands is to go to their neighbor countries. Therefore, nowadays, European countries have the most significant number of refugees in the world, especially in Turkey and Germany.

In Europe, the unregulated boarding laws have allowed so many new refugees crossed the border fearlessly to seek help in European countries. According to the UNHCR Refugee Crisis in Europe, it's said that "by the end of 2016, nearly 5.2 million refugees and migrant reached European shores, undertaking treacherous journeys from Syria, Iraq, Afghanistan and other countries torn apart by war and persecution." and "in 2017, more than 170,000 people risked their lives trying to reach Europe by sea; more than 3,000 of them drowned."

All of these numbers reflected a sad and shocking feeling to the people who have read the news about those dead refugees, since the unregulated laws and those equivocal regulations, more and more people who were trying to seek help are dead because of those, while those rising numbers still cannot stop them from trying, tragedies happened, and there will be more and more if this situation won't change in the future.
Iraq is a unique country which appears in this list since itself is also a country where wars and violence happened frequently. However, from this geographical map, we can see that there are nearly 4,501,786 refugees. According to the World Bank Website, there are 38.27 million people right now in Iraq. After calculation, there is about 12% of people in Iraq are a refugee. This number is shocking from my point of view, that means there exist at least 12 people out of 100 people in Iraq is a refugee.

According to the UNHCR, "more than 3 million Iraqis have been displaced across the country since the start of 2014, and more than 240,000 are refugees in other countries, including Turkey, Lebanon, Jordan, and Germany." Since Iraq lies in between Europe and the Middle East

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on the map, it gives their refugees more choices to cross the border. And since Iraq's geographical location is in the heart between Europe and the Middle East, so Iraq is a transition place for the refugees from other Middle East countries who want to go to European countries seeking help. Therefore, some of the refugees would stay in Iraq for a short period and based on the large numbers of refugees that already existed in Iraq, the number of refugees in Iraq will always be pretty significant.

**Syria**

From the graph above, we can see that there are nearly 7,033,119 persons of concern by the year of 2017. According to UNHCR, it tells us that “Syrians continued to be the largest forcibly

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displaced population in the world, with 12 million people at the end of 2016.” It is clear that Syria is the country that always has always been in a lot of wars, violence, government protests. All of these reasons caused such a huge amount of refugees fled from their home to other countries. Due to the large amount, most of these refugees could not get proper help in the other receiving countries.

Especially in Lebanon, there are no formal refugee camps for them to live, which has made these refugees' living and health condition much worse. Among these 12 million people, there is approximately 70 percent of Syrian refugees live below the poverty line. Meanwhile, there are over 660,000 Syrian refugees trapped in exile in Jordan according to the UNHCR. All these statistics have shown us a shocking visual scene of these refugees' living condition, especially in those middle east part countries.

Ukraine

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Despite the middle east countries, Ukraine is also country now having a large number of refugees there. Instead of frequently wars, the main reason that caused the appearance of their refugees is the conflicts. According to UNHCR, "More than three years of conflict have left more than 2 million Ukrainians displaced from their home. One million Ukrainians have sought asylum in neighboring countries. Many fled with barely in search of safety." Ukraine has always been a place with frequent conflicts which made the happenings of increasing refugees in recent years. Also, the living environments for those Ukrainians are also in bad shapes and made their life more miserable. It is said that "years of conflict have forced more than 2 million Ukrainians to flee their homes. Many live with shelling and bullets every day." Their living condition was also damaged.

Ongoing conflicts have left more than 2 million Ukrainians displaced from their homes including 66,000 people with disabilities. Fortunately, most of them (approximately around 300,000 according to the UNHCR) have sought asylum in neighboring countries. Comparing to the middle east countries, Ukraine showed quite a lot of advantages comparing to the countries we have discussed above, since most of their refugees already found places to get help and to live.

From the graph above, it shows that there exists nearly 1,844,785 persons of concern in Ukraine are refugees. Since Ukraine is a European country, and its location is pretty far away from western European countries. As one of the European countries, Ukraine is a standing out country that is not a host country for the refugees but is a country with plenty amount of refugees. Therefore, we can see that the wars are not the primary reason that caused refugee
problem; political issues such as conflicts are also an important reason when it comes to refugee problems.

**Statistics in Charts**

**Intention**

After showing the common trend, brief information and statistics of the refugee numbers by different region or countries, a chart will be more accessible for people to get a visual sense of how the refugee numbers change through the past ten years. So I collected the recent ten years refugee numbers who went to Germany, and the US seeking helps and put them into Excel and made two different line charts.

Since line charts are more accessible and more straightforward for people to see the trends and changes between different years, the line charts of refugees and asylum seekers in Germany and the US will show us how the numbers of them alter through different years. In this way, we can understand better about how severe and urgent the refugee problem's condition is becoming in recent years.

**Line Charts**
Refugees and Asylums-seekers in Germany (2000-2017)


Source: UNHCR STATISTICS. Please see the Appendix for the exact data in Excel.
Explanation:

The data first I collected from the UNHCR website is the number of refugees (refugee-like situations) and asylum-seekers (pending cases) between the year of 2000 and 2017 from both Germany and the United States of America. And I determined the origin of those refugees from both countries and they all came from Syria. After putting data into the Excel, I started to gather all the data together and made line graphs for both countries to see the trend of the refugee and asylum-seekers number changes through the recent ten years.

Results:

Both graphs have shown us an apparent common trend which indicated that there was a fastly increasing started from the year of 2011 in both countries and both countries showed a continuously increasing trend after the year of 2017 under the refugee category. While according to the lines of asylum-seekers, they both started to rise after 2014 in Germany and after 2011 in the US, but they both did not grow fast comparing to the numbers of refugees. Which we can conclude that they are still a considerable number of refugees who did not get the proper help and found their receiving country after they became refugees.

Conclusion

From this chapter, we can have an clear visual feeling about the refugee problems and numbers of them from different region or countries by showing the geographical maps with numbers. These are the basic statistical information which can show us a big picture of how
serious is the refugees problem in current days. The statistics also showed the refugees’ numbers, geographical distributions, living conditions compared with each other. From these statistics, we can see that the countries where wars and conflicts frequently happened, these regions or countries would have a larger number of refugees there. These regions or countries local governments do not have strong regulations or laws to control the conflicts which leads to a more serious refugee problem.

According to the countries I have mentioned above, the data results of them are obviously shocking, the common trend of the global refugee number showed a continuous increasing pattern with many people losing their homes during the wars, conflicts, government persecutions, and so on. More and more people are forced to leave their homeland and fled to other countries to seek help. Even though the places they decided to go don’t have enough support for them, they indeed risked their lives with it. Therefore, more powerful and stronger laws need to be proclaimed in the future to help ameliorate this condition.
Chapter 4: Basic statistics about the Refugee Children

Intention

Besides getting to know the refugees in general, the refugee children are also an essential part of this refugee crisis. Children's development is especially crucial for our future, and we need to pay much more attention to them, especially refugee children. Their education, their mental and physical health, their families, etc. Refugee children are facing more severe problems than adult refugees. The key to helping them is to find out what is the best solution for their resettlement and finding the best host country where the government could give them the best support.

In order to have a better solution about how to help the refugee children for a better future, basic statistics information need to be considered and analyzed. If we can show a piece of clear statistical information about the refugee children, we can see the trends of the numbers changes through recent years. Moreover, also we can get to know the geographical location of the refugee children. In this chapter, we will use a few geographical maps to show where the most refugee children located, the age and gender differences among these refugee children to find a common characteristic.

Where are the Refugee Children Located and How many of them?

According to the UNHCR, “over half of the world’s refugees are children. Many will spend their entire childhoods away from home, sometimes separated from their families. They may have witnessed or experienced violent acts and, in exile, are at risk of abuse, neglect,
violence, exploitation, trafficking or military recruitment.” The number of how many refugee children is astonishing. From the beginning part of my thesis, we knew that by the end of 2017, there were more than 70 million people who were recognized as refugees. Which means half of them which is 35 million that our children, and also there is one child in two refugees by chosen randomly, by the end of 2017. This number is overwhelming. Such a considerable number also means a lot of them who are not able to get enough help.

The statistics I am using here is to show the general trend of the child refugee crisis especially in the US, Europe, and Asia. There will be different categories in terms of gender, ethnicities, origin of countries, etc. In this way, we can get a more precise visual view about these child refugees common characteristics and predict what the future of child crisis will be. In order to find the trend, the statistics of refugee and migrant children arriving in Europe will be concentrated in this chapter since the data are enough to be gathered.

A Focus on the European Countries

According to the UNICEF, in Germany, France, Greece, and Italy these four EU countries, there are at least seven in every ten children who sought international protection in these four countries. Specifically speaking, in Germany, there were 89,205 children, in France, there were 20,970 children, in Greece, there were 19,790 children, and in Italy, there were 16,309 children. And among those children, gender differences also is an important issue.

The graph below showed the gender and age breakdown of those accompanied and unaccompanied and separated children. In the latter of this chapter, I will introduce a few
European countries’ refugee children reception status and current condition. In this way, we can have a better understanding of how the refugee children’s asylum process works and to see how serious the refugee children living condition is nowadays.

According to the geographic map from the UNICEF, we can see how many refugee children were arriving in the EU countries by the year of 2017. The green color with different levels shows the number of child refugees. The darker the green color gets, the more child refugee stays in this country for protection. From the graph, we can see that there were 777,979

Source: UN Department of Economics and Social Affairs, 2017
children arrived in Germany in 2017 for protection from their home countries. In Italy, 603,806 children stayed there to seek help.

**Statistics by Countries**

**Greece**

Greece also has a large number of refugee children just like Germany, Italy or Turkey among European countries. According to UNICEF, it is said that “approximately 80 percent of the 20,500 refugees and migrants now on the Greek Islands, including more than 5,000 children, are being sheltered in unsanitary, overfilled Reception and Identification Centers.” Moreover, the number keeps increasing year by year. As Greece located by the heart of western Europe, and it is the neighboring country of the Mediterranean Sea, the fastest way for these refugee children to arrive in Greece is by the Sea. These refugee children started their journey by risking their lives on the Sea by a boat. Also, once they landed on Greece's Islands, their safety cannot be guaranteed as well.

UNICEF also reported that “Over 7,000 children – on average more than 850 every month – have made the dangerous journey by the sea, with most ending up in overcrowded and unsafe facilities.” Greece’s reception center is not big enough to take all the refugees who arrived in their country and give them enough supports. This condition made it worse especially for the refugee children since they are still growing up and experiencing this terrible stuff the same time.
They are such a group of a purely invulnerable human being who will experience a high chance of being harmed mentally and physically.

Meanwhile, from the shore of Greece to the Greece mainland, the refugee children will also need a long process to be confirmed to stay in the mainland. Currently, the Greece government also experiences significant turbulence, which made the whole process for these children even harder. Therefore, for the refugee children who went all the way to Greece from their home countries, there is still a lot of unexpected and laborious process for them to finish. Also, these refugee children will go through a hard time as well once landed on the Greece Islands.

Italy

According to UNICEF, it is said that “18,303 UASC (unaccompanied and separated children) (93% boys and 7% girls) were present in shelters for UASC, run by State authorities and nonprofit entities at the end of 2017.” Meanwhile, the age of 93% of these children who lived in shelters in Italy is between 15 and 17 years old. This age period's children are growing up at a really fast speed, which means they continuously need instructions psychologically during the transformation from their homelands to Italy. However, currently, the Italian government did not imagine such a large amount of refugee children would come to their country seeking help. There is no sufficient help for these refugee children, neither.
Another problem rises recently, and it is about the long wait of young unaccompanied migrants in Italy. It is hard for refugee children to wait for such a long time until they are confirmed to get proper help from the local government. The biggest issue before they can be confirmed is to be verified by the local government that they are eligible to get protections in Italy. Older refugee children will be easier to claim their asylum status compared to younger refugee children.

According to Giacomo Zandonini from Open Migration, he said: "it would be easier for an eighteen-year-old claim that they were younger in order to ‘enjoy protections reserved for minors'." Confirming the refugee children's ages is a hard job to do for the local government officers. Therefore, the tasks before these refugee children who want to seek protection in Italy is to confirm their age with proper identification evidence. If there is no sufficient evidence to prove their age, it may be hard for these children to get proper protection in Italy nowadays.

According to the geographic mad from the UNICEF, we can see how many refugee children are arriving in the EU countries by the year of 2017. The green color with different levels shows the number of child refugees. The darker the green color gets, the more child refugee stays in this country for protection. From the graph, we can see that there were 777,979 children arrived in Germany in 2017 for protection from their home countries. In Italy, 603,806 children stayed there to seek help.
Turkey

As a neighboring country of the country of Syria, Turkey has the most refugee children from Syria in recent years. According to UNHCR, "as of October 2017, there are approximately 3.2 million Syrian refugees in Turkey." By the end of 2017, there is already 3.5 million Syrian refugees who flee from their own home countries to seek help in Turkey. Meanwhile, there is also a large amount of non-Syrian refugee in Turkey as well. UNHCR also reported that "of the non-Syrian population of protection seekers in Turkey: about 44% are from Afghanistan, 42% are from Iraq, and 10% are from Iran. The remainder is from other countries around the world."

Since Turkey is trying to prepare these refugees better supports during the transition from their homes to Turkey such as health care, living expenses than any other Western European countries could afford. Which made more and more refugees are coming to Turkey for better protection. According to the Economist, it is said that "Turkey is not fully signed up to the 1951 Refugee Convention." Which means that the European Union partly pays the protections and various accommodations provided by Turkey, and the refugees in Turkey do not get as many benefits as the refugees in the EU to get such as child benefit.

In Turkey, 1,404,194 children were asking for protection. Also, Turkey is the country with the most significant number of child refugees. According to the UNICEF, “in 2017, the proportion of children arriving unaccompanied or separated (UASC) has increased by 31%.” Even though the refugee children do not get the education benefits from Turkey while the EU
countries will support them with the benefits of education, a lot of refugee children or refugee families still choose to come to Turkey seeking helps because the asylum process in Turkey is much easier to achieve compared to other processes in other EU countries.

However, meanwhile, there also exist some significant problems in this phenomenon, not only in Turkey but also in other EU countries. Since the benefits in different host countries varied from each other, the refugee families and the refugee children would choose differently from time to time. Which means some of them will frequently move due to different benefits and conveniences. This causes a pretty severe problem with refugee children's education. If these refugee children move frequently, their education will not be continuous and significant. This is not good for their future.

According to Gaziantep from the Economist, he told a story about a Syrian family who frequently moved after they decided to come to Europe for better protection. They have been to Germany, Turkey, and some other countries. Also, their son was little when they started the first asylum process in Germany. In the following few years, their son learned differently from each different country, and then he started to speak a mixture of German, Turkish and Arabic.

Therefore, frequently moving from different countries to other countries for better protection is not wrong. However, when it is concerned with the refugees' children's education and growth, moving might not be a perfect choice for every family who is seeking help from those EU countries.
From this graph, we can see that the gender differences in the refugee children are pretty clear, especially in Spain and Italy. In Italy, gender differences are more serious, there were 93% of the refugee children who arrived in Italy were boys, and only 3% of them were girls. Overall, the proportion of boys refugee children were higher than the girls' proportion in 2017 in these four EU countries. The reason behind this phenomenon can be considered with the origin countries of those refugee children.

Since the gender inequality issues are pretty severe especially in developing countries, underdeveloped countries. And most of the refugee children home countries are underdeveloped countries.

18 Source: Hellenic Police, EKKA, Italian Ministry of Interior and Ministry of Labour and Social Policy, Bulgarian State Agency for Refugees, Bulgarian Helsinki Committee, Spanish Ministry of Interior
countries such as some Asian countries, African countries, or some South American countries. In these countries, most of the local families prefer to have boys instead of girls. Therefore, once they become refugees, those families will leave together with their children to seek help from other countries and the boys' group will be much larger than the girls' group during the transformation.

We can find some common characteristics from the graph above, which is that the European countries received many refugee children in the past years, especially the EU countries since those countries always have the better protection and supports. However, this phenomenon also raises some concerns.

Since we all know that those European countries' sizes are small, while more and more refugee children coming to their country seeking for help means that there will also be a big pressure on their local government to arrange these children in a better condition. Their resources will also be rearranged and reconsidered since this massive amount of refugee children coming into their country. Their government spending will rise clearly. Refugee children crisis will bring up much more problems in regards to the vast amount of them.

Besides government spending and federal funding increasing, refugee children arriving in the EU countries also create a problem for children's integration when they eventually start school in Germany according to the DW reporters. The children integration problem means that when the refugee children arriving in their host countries, due to the cultural differences, language differences, different lifestyles, the refugee children with the same cultural background
will stay together and it will be tough for them to assimilate into the local society in the future. Which means if this is happening, the local government will find it hard to help those refugee children in proper ways, and it will also be hard the government to keep those children on the right tracks.

However, in reality, what are these refugee children who are living in their host countries experiencing right now? It is said that "refugee children do not have far lower standards of safety, medical treatment and education than their German-born counterparts, but are also treated very differently depending on their prospects for being allowed to stay in Germany."

**Age Differences in Refugee Children and Problems**

![Age Distribution Chart]

1% 16% 83%
0-4 years

1% 6% 93%
5-14 years

3% 20% 77%
15-17 years

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19 Source: Hellenic Police, EKKA, Italian Ministry of Interior and Ministry of Labour and Social Policy, Bulgarian State Agency for Refugees, Bulgarian Helsinki Committee, Spanish Ministry of Interior
Despite the gender differences, the age difference between these refugee children is significant, as well. According to the chart above from the Bulgarian State Agency for Refugees, we can see that the 0-14 years and 5-14 years children took a tiny portion among all of them. While when we focus on the 15-17 age group, we can see that this group takes the most significant proportion of all the refugee children. Especially in Italy, the 15-17 age group represents 93% of the whole refugee children group. This proportion is pretty big.

We know that 15-17 years old children are already teenagers, which means they should deserve the rights to have a normal environment to live, grow up, and standards studying environments in order to get the proper education. There is a famous saying by Filippo Grandi, who is a current UN High Commissioner for Refugees said that “Education is a way to help children heal, but it is also key to rebuilding their countries.”

Education plays such an essential and irreplaceable role in refugee children life. In the end, the knowledge they gained would eventually help them to become a well-educated human-being, not as a broken refugee child at the end. Therefore, finding ways to keep these children getting enough and proper education is the primary task not only for the host governments but also it is everyone’s responsibilities in this society.
Chapter 5: Data Analysis

Objectives

Finding the real indicators that affect the refugees’ numbers changes in different countries. So in this way, we can find out what causes such a dramatic increasing number of refugees in some countries such as Afghanistan, Ethiopia, and Iraq (Since the undeveloped countries are the most countries with most refugees nowadays).

Since the countries with a significant number of refugees are a lot nowadays, I picked out three countries that stood out in recent years which are Afghanistan, Ethiopia, and Iraq. In order to find out the main variables(reasons) which affected the increasing numbers of refugees in these three countries. And to verify whether these indicators are significant to the results.

Model:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \]

In this analysis, I will use the regression analysis to find out how different variables (circumstances) will affect the number of refugees in each of the countries I have mentioned above. X1, X2, and X3 are three different indicators which will tell us whether Y will be affected by them.
Tool:

In order to process all of these statistics, I will use the RStudio in order to perform the different regression analysis of these data and get results to determine my previous guesses.

Data Resources:

All the number I gathered are from the WorldBank Website under four different categories from the period 2002-2017 since these years' data are precise in the four countries and the changes of the number during this period is significant, and they are all recent data so that I picked up this period.

a. Refugee population by country or territory of asylum: this variable stands for the Y in our model later. It represents the total refugee population in each country by different years in the four countries.

b. Adjusted net national income per capita (currently in US$): this is the first X variable I am collecting in the model. Since the countries we are analyzing are all underdeveloped countries, there are no clear and specific data about the or income per person; therefore I collected their adjusted net national income per capita to have a more direct view of how everyone's income stands in this country. So, this is the X1 variable.
c. **GDP (currently in USS)**: the gross GDP is also an important measurement to measure the country's financial position and the status of its whole society. So the GDP is the X2 variable to find out whether it has affected the number of refugees in these four countries.

d. **Labor Force (total)**: since the labor force states how many people in each of these countries are working which means that they are living at a standard level instead of being poor or homeless. So people who are counted as a labor force is harder to be considered as a refugee. Therefore, the number of how many people who work indeed is an essential indicator in determining what affect the refugee numbers.

**Data in Charts**

After gathering the data from the WorldBank, I put all of them into Excel to get a better visual view and sense of how we can organize them later. First of all, I found the different data under the four different categories and put them together, and then I picked each of the four categories and put them under each of the three countries from 2002 to 2017 and get three total charts in three different countries.

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After gathering the data in the Excel, we can start to use the RStudio and perform some regression analysis to find out the results. According to there are three countries we are trying to analyze, therefore there will be three different models for us to get a better understanding of each of these models (Y represents the refugee number, X1 represents the Income Per Capita, X2 represents the GDP, and X3 represents the Labor Force number in all of the three cases)
A. Afghanistan Model

Model 1: \( Y_1 = (-4.097e + 05) + (-3.747e + 03)X_1 + (1.905e + 05)X_2 + (4.467e - 01)X_3 \)

In model 1, \((-4.097e + 05)\) is the intercept of the whole equation, \((-3.747e + 03)\) is the coefficient of variable \(X_1\), \((1.905e + 05)\) is the coefficient of variable \(X_2\), and \((4.467e - 01)\) represents the coefficient of \(X_3\).

Since the coefficient of \(X_1\) is negative, and the coefficients for \(X_2\) and \(X_3\) are both positive. We can conclude that there is a negative relationship between the refugee number and the Income per Capita, and positive relationships between the refugee number and GDP(billions) and Labor Force numbers. Meanwhile, we can say that as the income per capita in Afghanistan increases, the refugee number in this country will decrease; as the GDP and the labor force number increases, the number of refugees will increase as well. In this conclusion, there exist some confusions. For the coefficient \(X_2\), since the number of this coefficient \((1.905e + 05)\) is much smaller compared to the other two coefficients, we can almost neglect this part since its value is minimal.

B. Ethiopia Model

Model 2: \( Y_2 = (2.910e + 06) + (2.070e + 03)X_1 + (5.031e + 03)X_2 + (-1.226e - 01)X_3 \)
In this model, the coefficient of X1 and X2 are both positive. Which means as the Income per capita and GDP(billions) in Ethiopia rises, their refugee number will also increase. While as the labor force number increases, the refugee number will decrease. Since the coefficient of X3 is extremely small comparing to the other two coefficients, so we can ignore it. Which means, in Ethiopia, the income per capita and the GDP are the two indicators that would affect the number of refugees.

C. Iraq Model

Model3: \( Y_3 = (-2.811e + 05) + (1.795e + 05)X_1 + (-2.909e + 02)X_2 + (2.596e - 02)X_3 \)

In this model, the coefficient of X1 and X3 are negative, which means that as Income per capita and labor force number increases, the refugee number in Iraq will increase as well. Meanwhile, as the GDP increases, the refugee number in Iraq will decrease. Since all of these three coefficients are similar, we need to take all of them into our consideration when it comes to the refugee crisis.

So far, we have finished the fundamental regression analysis for these three models and found out each model of themselves. Since all of their coefficients are pretty small, we also need to pay attention to something else. Such as the \( R^2 \) value. \( R^2 \) represents the total variation of each model so that we can see how much of our data can be significant in the model we made. Model 1’s \( R^2 \) is 0.26% which means there are only 0.26% of the complete data are explained in our
Model 1. Model 2’s $R^2$ is 4.72% which means there are 4.72% of the total data are explained in our Model 2. Moreover, lastly, the Model 3’s $R^2$ is 45.2% which means that 45.2% of the complete data are being explained by Model 3. Therefore, we can see that Model 3 has the most significant data comparing to the other two models since our model is explaining 45.2% of the total variation.
Chapter 6: Conclusion

From the beginning of the thesis, much brief statistical information has been shown through the whole parts. The first chapter of introduction has shown the intention of this thesis which is to show the contemporary refugee problem in a statistical view with more specific background information. In order to get a better understanding of the refugee news and information, some of the basic refugee problem concepts have been explained in the second chapter of the thesis, which included the definition of refugees, asylum seekers, displacement, assimilation, the refugee camp, the reception centers and receiving country. Also, it explained the differences between refugee and migrants. Later in the second chapter, it stated where the refugees came from and where are they going nowadays. From these definitions, it will be easier to understand the refugee concepts in the following parts in this thesis.

Meanwhile, the thesis showed how the refugee number changes through the recent ten years in different countries (mainly in Germany and the US). The number of how many people turned into refugees from these years is pretty astonishing because the number keeps growing larger and larger each year. Especially in some European countries and the US as well. Most of the receiving countries have reached their highest peak of numbers of refugee persons in recent years. The primary reason of the rapidly increasing number of refugees is because of the wars happened among these countries, conflicts took place among the local governments because of the disagreements between different parties, or the government persecutions. We can see that the political reasons have pushed the increasing of refugee numbers no matter which country we are
talking about in the thesis. They all applied to the main reason why there is such a rapidly increasing number of refugees among these countries.

Also, according to the last two line charts at the end of chapter 2, we can see that there exist common trends about the number of refugees in recent ten years. Both charts have shown that the increasing trend of refugees numbers in Germany and the US. Moreover, this rapid growth of refugees recently has caused so many problems not only for those refugees themselves but also for the local governments who accepted their asylum requests. Such as a dramatic increasing in the government spending, the governments need to cut their government funding to pay for their refugees' supplies. The residents' resources also need to be cut in order to support refugees with similar services, such as education, health supports. However, in recent years, more and more different social systems have been built which only focusing on and helping the refugees who flee to the country from their homelands.

Besides the refugees in general, this thesis also has focused on the refugee children’s condition. After showing the brief statistical information of the refugee children’s numbers changes, their age differences, the gender gap, we can see that the refugee children’s number is proliferating as well in recent years. Refugee children are facing so many severe issues during the transition to becoming a refugee. Their mental health, physical health, social environment are all important to them.

However, clearly, from the thesis, we can see these basic supports for the children are not being well-prepared by the receiving countries. Also among the refugee children, the year
differences are pretty vast. The proportion of the 15-18 years old refugee children is pretty huge compared to other years periods. Therefore, the government should concentrate more on how to help those refugee children with a much stronger, regulated environments with proper education for everyone. Even though the policies in each country varied from each other, but we could see clearly from those graphs in the thesis, refugee children are mostly experiencing non-qualified supports in their host countries. More regulated laws and regulations should be published to help these children for a better future.

At the last part of this thesis, I started a statistical analysis trying to find out what are the essential indicators that affect the refugees' person numbers changes through recent years. I picked up a few indicators which included the GDP of a country, the income per capita and the labor force number from 3 different countries. By conducting a regression analysis, we can figure out whether these three indicators would make significant changes to the changes in refugee numbers in different countries. After the analysis, we could say that all of these indicators depends on different countries’ backgrounds. Such as in Afghanistan, the income per capita and the labor force in their country play an essential role in determining the refugee numbers changes each year. Since these three indicators showed a different level of significances in each country, therefore, we can conclude that income per capita, GDP and the labor force number are all indicators that can affect the refugee numbers in different countries depending on their own cultural, economic and historical backgrounds.
In the end, the intention of this thesis aims to give a brief introduction to the problem of the growing numbers of refugees globally in recent years with a statistical and quantitative point of view. In this way, people will have a more straightforward feeling of how the problems appeared and how are the conditions of these refugees nowadays? Also, what has affected them to become refugees and how they decided to seek help in the host countries. From this thesis, we already knew how severe the refugees' conditions are in our contemporary society, and a various amount of refugees are suffering from their trips to find the host countries and their bad living environments with not enough supplies. Children went through hard times adapting to the new environments, with lack of enough proper education.

All these phenomena have told us not to ignore the refugee problems nowadays in this society. The refugees' problem is such a crucial and inevitable issue that everyone and every country in this world need to pay attention to.

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Appendix

**Code for the R Studio**

**Afghanistan Model**

```r
> View(Workbook1)
> data = Workbook1
> Y = data$Refugee.Number
> X1 = data$Income.Per.capita
> X2 = data$GDP.billion.
> X3 = data$Labor.Force
> model1 = lm(Y~X1+X2+X3,data = Workbook1)
> summary(model1)
```

Call:
```
lm(formula = Y ~ X1 + X2 + X3, data = Workbook1)
```

Residuals:

```
  Min 1Q Median 3Q Max
-629054 -185626 -111539 -6862  1958117
```

Coefficients:

```
                     Estimate  Std. Error   t value  Pr(>|t|)
(Intercept)     -4.097e+05    1.858e+06  -0.2210     0.829
X1               -3.747e+03     5.004e+03  -0.7490     0.468
X2               1.905e+05     2.780e+05   0.6850     0.506
X3               4.467e-01     3.833e-01   1.1650     0.267
```

Residual standard error: 640000 on 12 degrees of freedom
Multiple R-squared:  0.2021,  Adjusted R-squared:  0.002685
F-statistic: 1.013 on 3 and 12 DF,  p-value: 0.4207
Ethiopia Model

```r
> data = Workbook2
> y = data$Refugee.Number
> x1 = data$Income.Per.Capita
> x2 = data$GDP.billion.
> x3 = data$Labor.Force
> model3 = lm(y~x1+x2+x3,data = Workbook2)
> summary(model3)
```

Call:
```r
lm(formula = y ~ x1 + x2 + x3, data = Workbook2)
```

Residuals:
```
          Min       1Q     Median       3Q       Max
-115333 -57098    5233  42356  94993
```

Coefficients:
```
                      Estimate  Std. Error t value Pr(>|t|)
(Intercept)        2.910e+06  8.909e+05   3.266  0.00675 **
x1               2.070e+03  7.467e+02   2.772  0.01691 *
x2             5.031e+03  6.785e+03   0.741  0.47266
x3      -1.226e-01  3.694e-02  -3.319  0.00612 **
```

Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 72790 on 12 degrees of freedom
Multiple R-squared: 0.9487, Adjusted R-squared: 0.9359
F-statistic: 74.01 on 3 and 12 DF, p-value: 5.212e-08
Iraq Model

> data = Workbook4
> y = data$Refugee.Number
> x1 = data$Income.Per.Capita..ten.thousand.
> x2 = data$GDP
> x3 = data$Labor.Force
> model1 = lm(y~x1+x2+x3, data=Workbook4)
> summary(model1)

Call:
lm(formula = y ~ x1 + x2 + x3, data = Workbook4)

Residuals:
   Min     1Q Median     3Q    Max
-92573 -59692   2734  67060 112724

Coefficients:
                     Estimate Std. Error t value Pr(>|t|)
(Intercept)   -2.811e+05  1.896e+05  -1.483   0.164
 x1            1.795e+05  2.570e+05   0.699   0.498
 x2           -2.909e+02  6.330e+02  -0.459   0.654
 x3             2.596e-02  5.475e-02   0.474   0.644

Residual standard error: 77610 on 12 degrees of freedom
Multiple R-squared:  0.5616,  Adjusted R-squared:  0.452
F-statistic: 5.124 on 3 and 12 DF,  p-value: 0.01644
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