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Examining the Correlation between Refugee Populations and Unemployment Rate in Host Nations

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ABSTRACT

In the past decade, the worldwide refugee population has more than doubled; in 2012, there were 10.5 million refugees, and this has increased to 27.1 million refugees by 2021. Studies on the effects of refugees on host nations' unemployment rates are inconclusive and there is a gap in knowledge of the relationship between refugees and the unemployment rate. Addressing this gap in knowledge would help further the understanding of the economic effects of large numbers of refugees and help reduce negative stigmas given to refugees and advise policy decisions. A correlational study was performed examining the correlation between an increase in refugees and a change in the unemployment rate of a host nation between the time frame of 1991-2021. The findings of the study include a weak positive correlation with a *rs* value of 0.198 and a p-value of 0.293, which indicates that the correlation is statistically insignificant. The lack of correlation between the variables indicates that natives should not fear that refugees make the job market more competitive or that they would strain the labor market. Similarly, intolerance, hate speech, and hardened attitudes toward refugees should not be justified on the fear that they damage the labor market.

Literature review

Growth in Worldwide Refugee Populations

Over the past decade, the number of refugees has increased significantly, with the United Nations High Commissioner for Refugees reporting that at the end of 2021, there were 27.1 million refugees (Global Trends Report 2021, 2022). This is a drastic increase from 2012, when the UNHCR found 10.5 million refugees worldwide (UNHCR Global Trends 2012, 2013). With this, the number of refugees worldwide has more than doubled in the past decade, and it does not seem to be declining with recent conflicts like the Russo-Ukraine conflict, which displaced 7.8 million people throughout the conflict, of whom 2.4 million are still displaced in Europe (Operational Data Portal Ukraine Refugee Situation 2023). In the 1951 refugee convention, they defined a refugee as "someone who is unable or unwilling to return to their country of origin owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion, and who is unable or unwilling to seek the protection of their own government" (Convention and Protocol Relating to the Status of Refugees 2011). Refugees cannot be returned to a country where they face persecution. The 1951 Refugee Convention also establishes several obligations for states that are parties to the treaty. These include the obligation to provide refugees with basic necessities such as food, shelter, healthcare, and the right to work and education. States on. States are also required to cooperate with the United Nations High Commissioner for Refugees (UNHCR) to help refugees find solutions to their displacement, such as voluntary repatriation or resettlement in a third country (Convention and Protocol Relating to the Status of Refugees 2011). Given the large numbers of displaced refugees and established regulations to take care of refugees, there are clear humanitarian implications for the global refugee crisis as vulnerable populations need access to appropriate shelter, food, medical care, and social services (Braithwaite et al., 2018). Some causes of forced migration and an increase in refugees are armed conflicts, violations of human rights, popula-

tion surges and lack of meaningful employment, climate change, disruptive technologies, and the global rise of non-state, nefarious actors (Yayboke & Gallego, 2019). In a refugee crisis, a host nation would want to measure how its economy and, more importantly, its labor market are doing. One of the best indicators of how a labor market is performing is the unemployment rate, which is a measure of the percentage of the labor force that is currently unemployed but actively seeking employment. The unemployment rate is important as it is a measure of the health of national labor market conditions by showing the number of people who are willing and able to work but currently have no job (Wolla, 2016). Given the significant increase in refugees worldwide in recent years, it is worth asking how this affects the labor market of host nations, and one way to see if it does is to determine any correlation between the influx of refugees and unemployment rates.

Addressing the Gap

There is a gap in the literature on refugees' effects on the unemployment rate of a host nation, as there is no study that directly mentions the relationship between these two variables. Different studies examining different crises found differing results in the change in a host nation's unemployment rate post-refugee increase. For example, in 1980, there were around 125,000 refugees that fled from Cuba to Miami. Studies found that there was no effect on unemployment (Sarzin, 2021). This situation shows that refugees do not always affect unemployment. In this refugee increase, there wasn't found to be an effect on unemployment, but this differs when compared to other studies. When examining an increase of 550,000 Syrian refugees to Jordan, it was found that the area that housed the majority of the refugees had a lower unemployment rate increase compared to the national unemployment rate growth, as in the 4 governorates, the unemployment rate grew from 12.2% to 12.4%, meanwhile, the national unemployment rate grew from 12.7% to 13.1%, which is greater than the governorates housing the majority of the refugees. An important thing to note from this study is that it found that employment growth slowed in the governorates compared to the national average (Ajluni & Kawar, 2014). This study points out an interesting discovery: an increase in refugees potentially causes employment and unemployment to stay stagnant compared to national economic conditions. Studies of influxes of refugees to European countries during the Balkan wars suggest that refugees substantially displaced natives in the labor market of the countries that the refugees fled to, as 18 of them had adverse effects on their unemployment rate, with 7 countries finding no effect on unemployment (Sarzin, 2021). When there was a refugee influx in France from Algeria, a study found that the arrival of 900,000 people raised French native unemployment by 0.3 percentage points. The study points out that this increase may be due to the fact that refugees represent 1.6% of the labor force. This study suggests that a large increase in refugees, to the point that it marks a noticeable increase in the labor force, may cause an increase in a host nation's unemployment rate. A study examining the refugee crisis when half a million returnees from Mozambique and Angola fled to Portugal found that the unemployment rate was clearly higher compared to the counterfactual outcome. The estimated effect is at its highest level when the unemployment rate is 3.3 percentage points higher than the counterfactual (Mäkelä, 2017). The counterfactual is an estimation of how Portugal's economy would do if there wasn't a large increase in refugees. The difference between actual Portugal and the synthetic counterfactual provides an estimate for the effect of the influx. This paper, with its methodology that attempts to find the direct effect that refugees have on the labor market, found the greatest increase in the unemployment rate. One thing to note is that this study found that Portugal's civil labor force grew by 15%. In part to this refugee increase, and a large decrease in military employment, which may explain the increased unemployment rate (Mäkelä, 2017). In 2014, Germany saw many Syrians flee to their country. A paper examining the refugee crisis could not detect the asylum seekers' effects on the overall unemployment rate, youth unemployment, or unemployment of non-Germans. This failure to detect an effect suggests that native employment was not affected due to the refugee increase. The study found that the unemployment rate actually dropped later (Gehrsitz & Ungerer, 2022). The differences in these studies' findings when examining different refugee crises and the change in the unemployment rate of the host nation lead to a gap in the literature. The gap is whether or not a large number of refugees fleeing to the host nation affects the unemployment rate. To explore the relationship be-

tween these 2 variables, finding out if they are correlated may help determine the possibility of an association between the 2 variables and may explain the strength and direction of their relationship.

Native Perceptions of Refugees

The importance of understanding whether an influx of refugees is correlated with a change in the unemployment rate is the native's public perception of refugees and their effect on the economy. During the Syrian refugee crisis, where many refugees fled to Europe, a Yle survey determined that the single greatest worry among Finland's residents in early 2016 was unemployment, followed by the refugee situation (*Top Finnish concerns: Unemployment, the refugee situation and gov't indecision* Yle, 2016). The respondents complain that there are not enough jobs in the labor market, and related intolerance, hate speech, and hardened attitudes to refugees have also appeared during that same time. This survey indicated that as economic conditions worsen, natives may attempt to blame refugees and treat them worse. Shortly after the Syrian refugee crisis, where millions of Syrian refugees had to flee throughout Europe, a survey of 18,000 voters in 15 European countries was conducted, they showed respondents profiles of asylum seekers and asked them which ones they would prefer their countries to accept; The survey found that people cared about the economic benefits of the refugee compared to the burdens that accepting the refugee would impose. The interviewees would rather admit refugees who worked in highly skilled professions rather than those who do not (Lalwani & Winter-Levy, 2016). This finding is important as it indicates that natives of countries accepting refugees believe it is wrong to admit refugees if they hurt the economy. A study that surveyed 4000 native Germans and provided them with information on refugees' education, found that it relieved their fear of economic burden due to refugees but increased their fear of the competitiveness of the labor market (Lergetporer et al., 2021). These studies all have an important connection with natives' perceptions of refugees, in that they agree that natives choose to accept refugees if they believe it will benefit their economy. For this reason, examining the unemployment rate is especially important as the unemployment rate is often regarded as the most traditional indicator for native citizens' perceptions of economic conditions and therefore their opinions regarding immigration or further competition in job markets (Tomaszewski, 2019). This shows that the natives of the host nation's perception of refugees can be negatively affected if there is a correlation between an influx of refugees and an increase in the unemployment rate of the nation shortly following. Discovering if a correlation is present or not is important for the reason that it would fill the gap in scholarly literature. Clarifying if this correlation exists or not may also prevent negative stigmas associated with refugees or help nations better understand the full implications of allowing refugees into their country if a correlation is found.

Methods

To find if there is a correlation between an increase in refugee populations and a change in the country's unemployment rate, Spearman's rank correlation coefficient was used to find an *rs*-value. Spearman's rank correlation coefficient measures the strength and direction of a relationship between 2 variables. This fits the study as the correlational test directly answers whether a correlation is present as once the equation finds an *rs*-Value it can be determined if a correlation between those 2 variables is present or not. The reason that Spearman's correlation was chosen was that it works with the data set as it has ratio data and 2 variables whose data are paired. Spearman's rank correlation was chosen over other similar correlational tests like Pearson's because my data was not normally distributed, as shown in Figure 1.

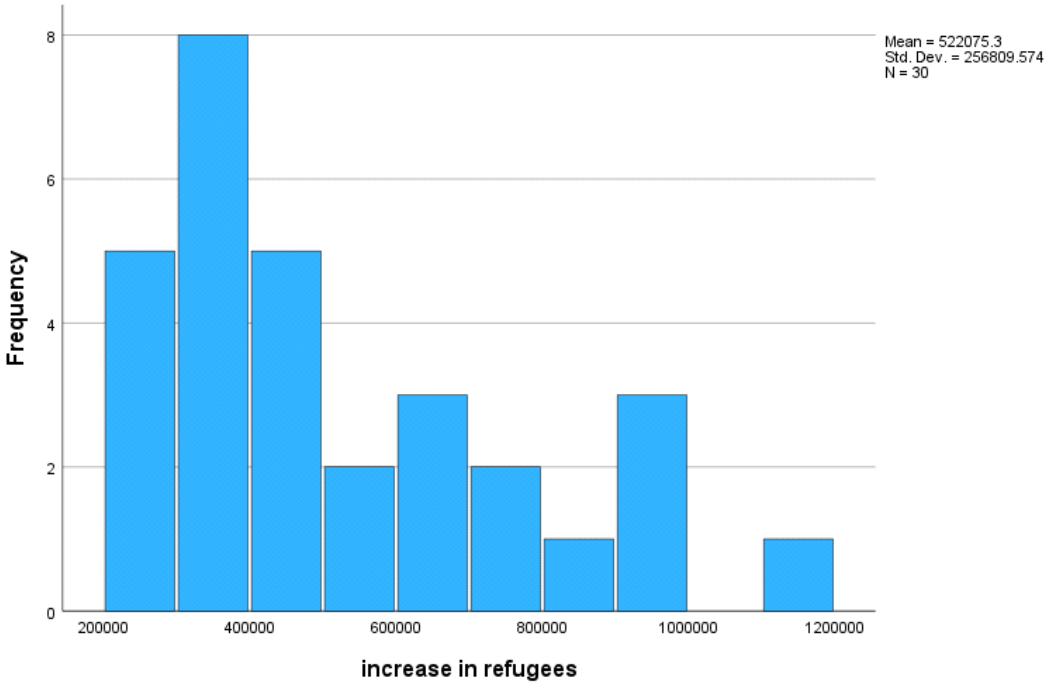

Figure 1. Histogram of 30 biggest increases in refugee populations from 1991-2021

Data Sampling

In the absence of a clear definition of what constitutes a significant increase in refugee populations, the approach taken was to select a sample from the 30 largest refugee increases year-on-year between 1991 and 2021. The reason that this was done was to capture the largest refugee population growth in a single year while reaching the minimum requirement of a proper sample size to perform Spearman's correlation coefficient. The list of nations and years that were recorded in finding the data that followed the criteria for this study is listed in Table 1.

A trend that was found when observing the top 30 refugee increases year over year is that the same countries are present on multiple occasions; for example, Turkey is present 6 times, with an increase from the years 2011–2017. There are 5 instances where a nation had a top 30 refugee increase for 2 years straight. Out of the top 30 refugee increases, there are only 16 different nations, which shows how the same nations tend to have a significant increase in refugees, which may be because most refugees flee to a neighboring country (Christophersen, 2020). which could be a possible explanation for this trend that can be seen when examining a host nation and what nations are receiving the refugees from. For example, Turkey's refugees come mainly from Syria, a neighboring nation.

Data Collection

The independent variable for this study is the increase in the refugee population in host nations. This data was found through World Bank Open Data, which has indicators compiled from officially recognized international sources. It presents the most current and accurate global development data available and includes national, regional, and global estimates, including refugee populations in countries (World Data Bank, 2023). To find the refugee population for all the countries in my study, the refugee population by country or territory of asylum was searched. Once in that database, the refugee data was imported into Microsoft Excel, which allowed access to the refugee population for most countries from now until around the 1960s. Then the Microsoft Excel formula =value was used with the columns from the year 1991 of each country to be able to determine the year-over-year change in refugee population

for each country in the world from 1991 to 2021. Then all the values were found and inputted into a number sorter to accurately allow me to select the 30 greatest refugee population increases in a host nation from 1991 to 2021. If my country were to have multiple refugee crises, it could be listed twice or as many times as necessary in my data set.

To find my dependent variable, the change in the unemployment rate of a host nation, the same World Bank database was used (World Data Bank, 2023). To find the unemployment rate from the database Unemployment, the total (% of the total labor force) (modeled ILO estimate) was searched. This provided an estimate of the unemployment rate for every country in the world from 1991 to 2021. The ILO estimate was used rather than the national estimate in the World Data Bank database due to its greater availability for all countries, as the national estimate often didn't have any data for many countries. Once the unemployment rate data based on the corresponding year prior to the refugee crisis was collected and the year of the refugee increase was collected, Then the unemployment rate pre-increase of refugees and post-increase of refugees was found and then used to calculate the change in the unemployment rate. The unemployment rate, being a dependent variable, would follow the independent variable of the refugee population.

Table 1. Table of all data collected in the study including host nation name, refugee population pre-influx, refugee population post-influx, change in refugee population, unemployment rate pre-influx, unemployment rate post-influx, change in unemployment rate.

	A	B	C	D	E	F	G	H
1	Country	inital refugee po	increased refuge	increase in refug	inital unemploym	unemployment r	change in unemployment rate	
2	Dem rep of cong	572,070	1,724,365	1,152,295	2.9	2.9	0	
3	Pakistan(06-07)	1,044,464	2,035,025	990,561	0.6	0.4	-0.2	
4	Turkey(13-14)	609,931	1,587,365	977,434	8.7	9.9	1.2	
5	Turkey(14-15)	1,587,365	2,541,348	953,983	9.9	10.2	0.3	
6	Syria(06-07)	1,144,565	1,955,234	810,669	8.2	8.4	0.2	
7	Pakistan(99-00	1,202,015	2,001,460	799,445	0.6	0.6	0	
8	Lebanon(12-13)	575,456	1,303,867	728,411	7.8	8.3	0.5	
9	Syria(05-06)	458,135	1,144,565	686,430	8.9	8.2	-0.7	
10	Bangladesh(16-	276,203	932,209	656,006	4.3	4.4	0.1	
11	Turkey (16-17)	2,869,419	3,480,350	610,931	10.8	10.8	0	
12	Jordan 05-06	1,828,839	2,358,587	529,748	14.8	14	-0.8	
13	Serbia(91-92	517	516,430	515,913	13.3	12.9	-0.4	
14	Sudan(16-17)	421,459	906,590	485,131	17.5	17.5	0	
15	United states (0	379,330	843,434	464,104	5.1	4.6	-0.5	
16	Uganda(15-16)	477,187	940,825	463,638	1.9	1.9	0	
17	Germany(91-92)	821,500	1,236,000	414,500	5.3	6.3	1	
18	Uganda(16-17)	940,825	1,350,495	409,670	1.9	1.9	0	
19	Jordan(12-13)	2,337,341	2,712,877	375,536	12.2	12.6	0.4	
20	Afghanistan (13-	16,861	385,503	368,642	11.2	11.1	-0.1	
21	Germany(15-16)	316,098	669,468	353,370	4.6	4.1	-0.5	
22	Turkey (12-13)	267,063	609,931	342,868	8.1	8.8	0.7	
23	Turkey (15-16)	2,541,348	2,869,419	328,071	10.2	10.8	0.6	
24	Tanzania(93-94	564,520	883,250	318,730	3.5	3.4	-0.1	
25	Lebanon(13-14)	1,303,867	1,606,698	302,831	8.3	8.8	0.5	
26	Germany(16-17)	669,468	970,357	300,889	4.1	3.8	-0.3	
27	Kenya(91-92)	120,163	402,194	282,031	3.1	3.1	0	
28	Tanzania(92-93	293,148	564,520	271,372	3.6	3.5	-0.1	
29	Dem rep of cong	119,752	383,095	263,343	4.5	4.5	0	
30	Ecuador(06-07)	11,767	264,868	253,101	3.5	3.1	-0.4	
31	Turkey (11-12)	14,457	267,063	252,606	8.8	8.1	-0.7	

*Orange is the increase in the refugee population.

*Yellow is the change in the unemployment rate.

Data Analysis

The *rs* value is calculated by Spearman's rank correlation coefficient, which is found using the following formula: The calculations were performed using IBM's SPSS Statistics software.

$$rs = 1 - [(6\Sigma d^2) / (n(n^2-1))]$$

where,
rs = Spearman's rank correlation coefficient
D = difference between the two ranks of each observation
N = number of observations

The *rs*-value for Spearman's rank correlation coefficient will be between -1 and 1, with -1 being a perfectly complete negative correlation and 1 being a perfectly positive correlation. The exact determination of the strength of the correlation will be based on how close the *rs*-value is to 1 or -1. So, an *rs-value of* 0 <*rs* <.1 would be a negligible correlation, an *rs-value of* 0.1<*rs*<.39 would be a weak correlation, and an *rs*-value of .4<*rs*<.69 would be a moderate correlation .70<*rs*<.89 would be a strong correlation, and .90<*rs*<1 would be a very strong correlation. Whether the correlation is positive or negative is determined by whether the *rs*-value is positive or negative. To test these correlations for significance, Spearman's correlation coefficient will be used to find the p-value. If the p-value is found to be less than 0.05, then the null hypothesis can be rejected.

Null Hypothesis: there is no statistically significant correlation between a rapid increase in the refugee population and a change in the unemployment rate.

Alternative Hypothesis: There is a statistically significant correlation between a rapid increase in the refugee population and a change in the unemployment rate.

If the p-value of a two-tailed correlation test was lower than the predetermined significance level, the null hypothesis could be rejected, and the alternative hypothesis would be accepted. Conversely, if the p-value was higher than the significance level, the null hypothesis would not be rejected, indicating that the correlation was not statistically significant. The statistical analysis was conducted using IBM's SPSS Statistics software, which has been validated as a reliable tool for testing the significance of correlation coefficients (Obilor & Amadi, 2018).

Limitations

Some limitations of this study are that the data set for refugee data is counted at the end of the year and not at the height of the refugee population. This means that the refugee numbers may need to be more accurately matched to the peaks of the refugee population for the host nation. A limitation that is present regarding the data collection is that the model International Labour Organization estimate was used to find the unemployment rates of the host nation. These modeled estimates, by their nature of being estimates, may not be 100% accurate. The reason that national estimates were not used was that it was not available for several key countries of interest in this study.

Results

Table 1 shows the value of Spearman's correlation coefficient for the relationship between an increase in refugees and a change in unemployment and the associated two-tailed p-value. A weak positive statistically insignificant correlation was found between an increase in refugees and a change in the unemployment rate of a host nation, *rs(28)* =.198 p =.293 (table 2). With p =.293 being the associated two-tailed p-value, the null hypothesis is not rejected as the p-value was greater than 0.05, which means that there is not a statistically significant correlation between an

increase in the refugee population in a host nation and a change in unemployment for a nation in the following year. This can be seen in Figure 2, as there is a scatter plot that represents the data and shows that the unemployment rate change is around 0, with no clear trend that can be observed.

Table 2. Correlation results for an increase in refugees and change in unemployment.

Correlations

			change in unemployment rate	increase in refugees
Spearman's rho	change in unemployment rate	Correlation Coefficient	1.000	.198
		Sig. (2-tailed)	.	.293
		N	30	30
	increase in refugees	Correlation Coefficient	.198	1.000
		Sig. (2-tailed)	.293	.
		N	30	30

* Correlation is significant at the 0.05 level (2-tailed)

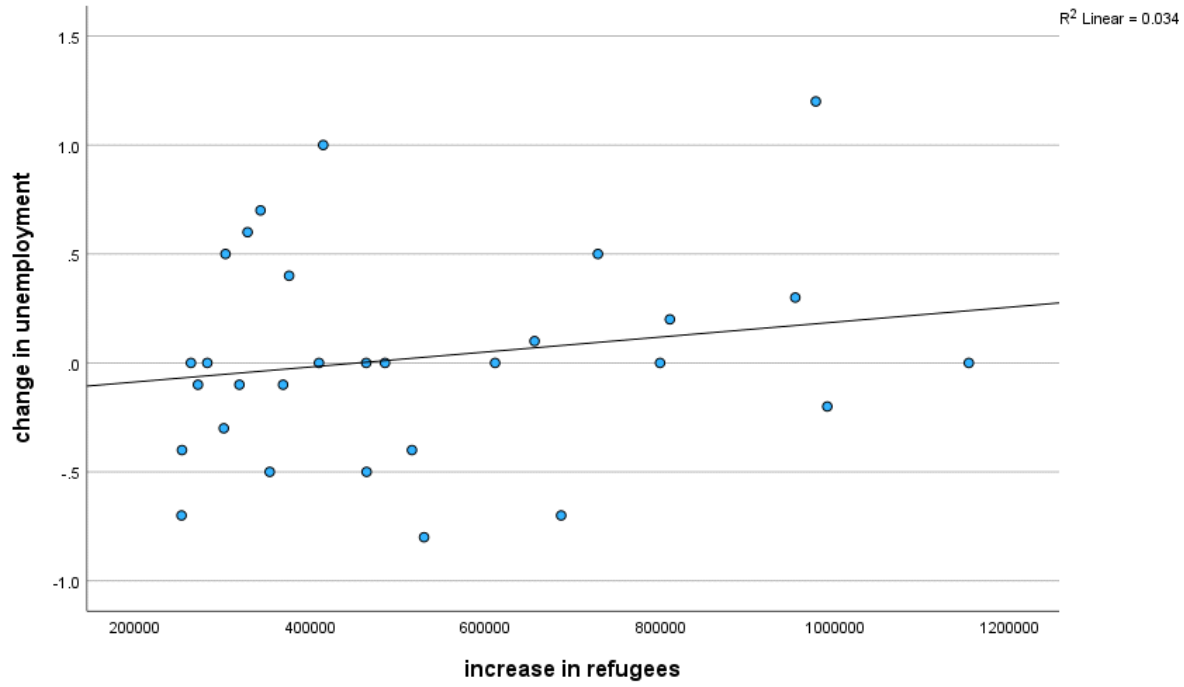

Figure 2. Scatter plot and Trend line of increase in refugees and change in unemployment

* R^2 of the data is 0.034 which means that 3.4% of the change in the unemployment rate can be explained by the increase in refugees.

Discussion

In comparison to the papers discussed in the literature review of this paper, these results compare closely with the studies examining the Cuban refugee crisis in Miami. The findings are similar to those of this case study, as this study found that there was a weak, positive, statistically insignificant correlation. This would be in line with those studies, as they found no change in unemployment. My findings would slightly disagree with the findings of the papers that examined the Syrian refugee crisis in Jordan, the Algerian refugee crisis in France, and the Syrian refugee crisis in Germany. As the Syrian and Algerian refugee crises increased, the unemployment rate increased. Meanwhile, in the Syrian refugee crisis in Germany, there was found to be a decrease in the unemployment rate shortly after, which would disagree with my findings. One thing to note in this evaluation with other scholarly work is that they examined a singular refugee situation that had many other factors that could have affected the unemployment rate. So, it is unfair to make a direct comparison between my findings and the findings of those studies.

The one outlier that was a stark contrast compared to my findings was the study examining the refugee crisis in Portugal, which found a 3.3% increase in the unemployment rate compared to their counterfactual. The discrepancy between that study's findings and mine may be since they used a counterfactual, which is an estimated model of how the unemployment rate would be without a refugee crisis, so they isolated the effect that the increase in refugees has on the unemployment rate. Another possibility that can explain this discrepancy is that this particular refugee crisis could have been caused by some other event that caused the unemployment rate to increase drastically. At this time, there is no clear indication as to what that issue would be.

Limitations

A limitation present in this study is its inability to isolate unemployment rate change from refugee growth. As this study only observed the change in the unemployment rate, it is a variable with a multitude of factors that affect it. It is possible that there is a relationship between an increase in refugees and the unemployment rate, but it may have been overshadowed by other factors in the economy that affect the unemployment rate.

Conclusion

The data using Spearman's correlation coefficient shows that there is a weak correlation between a sudden increase in the refugee population and an increase in a host nation's unemployment rate, $rs(28) = .198$. However, the result of this is not statistically significant, as p =.293 (table 1). This is statistically insignificant as it is greater than the 0.05 p-value threshold to prove statistical significance.

The absence of statistical significance in the findings suggests that there is no correlation between the rise in refugee numbers and alterations in unemployment rates within the top 30 refugee increases over the past three decades. This statistical insignificance may be generalizable to other refugee crises where a large number of refugees entered a country. The p value is p =.293 (Table 1), suggesting that there is a 29.3% chance that the weak correlation between the increase in refugees and a change in unemployment occurred by chance. Therefore, it cannot be said that any significant correlation exists.

The results of this study fill the gap in the literature in regard to the lack of knowledge about the relationship between an increase in refugees and a change in the unemployment rate in a host nation. As this study found that no correlation is present, it fills in this gap and determines that other factors affect the nation's unemployment rate rather than an increase in the refugee population. By finding that there is no correlation, it fills this gap, as it supports the idea that an increase in refugees does not have an effect on the unemployment rate.

The findings support the idea that refugees do not have a negative economic impact on employment, as the unemployment rate was not found to be correlated with a refugee increase. With these findings, it should reassure

natives of a host nation that a large number of refugees should not make the job market more competitive or strain the labor market with too many people for too few jobs. My findings suggest that the fear that the YLE respondents had about the lack of jobs in the labor market was not affected by the refugee increase that Finland experienced, so intolerance, hate speech, and hardened attitudes toward refugees should not be warranted for the fear that they damage the labor market.

My findings also support the idea that as the refugee population grows worldwide, it should not cause a growth in worldwide unemployment rates. As previously mentioned, as of 2012, there were 10.5 million refugees worldwide, according to a report by the United Nations High Commissioner for Refugees (*UNHCR Global Trends 2012,* 2013). However, by the end of 2021, the number of refugees had risen dramatically to 27.1 (Global *Trends Report 2021,* 2022). The findings suggest that even if this trend were to continue to grow worldwide, refugee populations would increase the unemployment rate due to this.

Limitations

Another limitation is that most nations have a differing definition of what their unemployment rate is; for example, in America, a person is not defined as unemployed unless they follow the following criteria: they were not employed during the survey reference week. They were available for work during the survey reference week, except for a temporary illness. They made at least one specific, active effort to find a job during the 4-week period ending with the survey reference week, or they were temporarily laid off and expected to be recalled to their job (Concepts *and definitions (CPS)* 2023). While different nations, like Germany, have different definitions of unemployment, the German Social Code, Book III (SGB III), defines unemployment as all those who are temporarily not employed or work in a job for fewer than 15 hours per week, seek employment subject to social insurance contributions for at least 15 hours per week, and in the process are available for placement efforts undertaken by the employment agencies or institutions administering basic security benefits for job-seekers and have registered there as unemployed (*Unemployment* 2020). The variations in what is legally defined as unemployment in these 2 countries show how the unemployment rate is calculated differently throughout the world.

It is important to note that correlation does not equal causation, meaning that it is possible that even though the variables do not correlate with each other, an increase in refugees can occur while there is an increase in the unemployment rate. In certain instances, an increase in refugees may disrupt the host nation's economy, possibly affecting the unemployment rate. It is possible for refugees to strain recipient countries' capacity to respond to the humanitarian challenge, process asylum requests, and prepare for the integration of those accepted into the labor market and larger society (Aiyar et al., 2016). This is shown in the literature where there are instances where a host nation's unemployment rate increased during a refugee crisis even though the findings of this study concluded that the variables are unrelated.

A limitation is that different nations take different policy actions when a large number of refugees arrive in their nation. This study supports the idea that, in general, an increase in refugees does not affect the unemployment rate; in reality, the nation may make policy changes due to the increase in refugees that affect employment and harm the natives and refugees' ability to work. So, while this study finds that they are not related, a government may implement actions that could relate to the 2. For example, a host nation can impose an inclusive refugee policy that makes it easy for a refugee to find employment to facilitate economic integration, or they can limit their access to formal labor markets, which is often limited by a multitude of obstacles, including encampment policies, movement restrictions, or bureaucratic hurdles to obtain work permits (Sarzin, 2021). In the event that a host nation attempted to deny the refugees access to work, it would make sense that they would have no effect on the unemployment rate.

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the natives and refugees' ability to work. So, while this study finds that they are not related, a government may implement policies that could relate to the two.

Future Direction

As previously mentioned, there is a possibility that the host nation's policies are an indicator of unemployment change in a refugee crisis rather than the refugee increase itself. A study on what policies are found to be used when the unemployment rate increases and what policies were used when the unemployment rate decreased could be useful in determining if possibly the policy action of a host nation has an effect on the unemployment rate. The study would determine whether it is more effective to have inclusive policies that encourage the economic integration of refugees or if limiting refugees' access to the labor market would be a better form of policy. If there are results that indicate that the policy has an effect or association with the unemployment rate, it would be useful knowledge for host nations to know and would set a new standard on what policies should be implemented to reduce the negative economic effects of a refugee crisis.

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