

ASCENDANCE TO SCHENGEN: HOW DID THE SCHENGEN AREA EFFECT FINLAND'S ECONOMY

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Abstract: While a member of the European Union since January 1, 1995, Finland made a significant step toward greater openness when it joined the Schengen Area on March 25, 2001. The Schengen Area is the world's largest VISA free zone. Member countries agree to abolish border controls which allows the unrestricted flow of people between member countries and establish common rules for external borders. Schengen member countries also agree to ensure cooperation between police and the judicial systems of the member countries. Using data from Quarter 1 1990 through Quarter 3 2019 from Eurostat, this study examines whether becoming a member of the Schengen Area significantly changed Finland's long-run economic growth rate. The study also examines whether becoming a member of the Schengen Area significantly changed the statistical relationship between Finland's economic growth rate and the change of its unemployment rate. The results find that while joining the Schengen Area did not change Finland's long-run growth rate, it did significantly reduce the negative relationship between the growth rate and the unemployment rate change. Before joining the Schengen area, a 1% increase of the unemployment rate reduced Finland's growth rate by .72%. After joining the Schengen Area, a 1% increase of the unemployment rate reduced Finland's growth rate by 0.14%. Finland's long-run growth rate remained unchanged at 2.9%.

Introduction

On January 1, 1995 the European union was created and ratified. Finland joined that same day along with several other countries. However, Finland did not become a section of the Schengen Area until March 25th, 2001. It is important to distinguish between these two dates. Finland's acceptance into the Schengen Area allowed its citizens and firms free movement and work inside between itself and other members of the Schengen Area. The creation and promotion of the Schengen Area built a greater sense of utility and economic prosperity amongst the European Union nations. The Schengen Area can be loosely compared to a relaxed variation of the free trade agreement between the United States and Canada (pre-NAFTA).

The purpose of this research is to determine what economic development and benefits were obtained from Finland's introduction into the Schengen Area, if any at all. For us to do so we must ask the following questions. "Did joining the Schengen Area significantly change Finland's long-run growth rate?" and "Did joining the Schengen Area significantly change the statistical relationship between the real GDP growth rate and the unemployment rate for Finland.?" The two periods in question being 1990-1998 pre-Schengen Area and 1999-2019 post Schengen Area. Taking the two periods in account, we make comparison based on variables such as Finland's unemployment rate and real GDP. We hypothesize that the country's economy will experience exponential growth after joining the Schengen area.

Methodology

The model used to structure the data is known as Okun Law, named after it's founder Arthur Melvin Okun. The purpose of this model is to estimate and find the correlation between Finland's unemployment rate and GDP rate (meaning correlation). This method is usually used as a tool in estimating long-run quarterly economic growth rate (a) and identifying the short-run statistical relationship between unemployment and Finland's economic growth rate (c). For our research we used the model to compare the unemployment rate and GDP of Finland before and after joining the Schengen Area, using a dummy variable, $D = 1$ for the Schengen period and $D = 0$ otherwise. The regression equation is

$$\frac{\Delta Y}{Y} = a_0 + a_1 * D + c_0 \Delta u + c_1 \Delta u * D + \epsilon$$

As a group, we hypothesize that Finland joining the Schengen Area would increase employment and significantly increase the GDP growth rate for Finland. We expected the long-run quarterly GDP growth rate to be significantly higher during the Schengen period and short-run relationship between the unemployment rate change and the growth rate would be smaller..

$$H_0: a_1 = 0 \\ H_A: a_1 \neq 0$$

$$H_0: c_1 = 0 \\ H_A: c_1 \neq 0$$

Results

The regression results are

$\frac{\Delta Y}{Y} =$	0.7235	-	0.007D	-	0.7175 Δu	+	0.579 $\Delta u * D$	+	ϵ
	(0.3328) **		(0.4195)		(0.2167)***		(0.2918)**		

with the standard error in parentheses, ** statistically significant at .05 and *** statistically significant at 0.01. The model $R^2 = 0.092$, which means that 9.2% of the change in the change in the real GDP growth rate for Finland is explained by the model.

Did joining the Schengen Area significantly change Finland's long-run quarterly growth rate?

$H_0: a_1 = 0; H_A: a_1 \neq 0$. The results failed to reject the null hypothesis. This means that becoming part of the Schengen Area did not statistically affect the long-run quarterly growth rate of Finland.

Did joining the Schengen Area significantly change the statistical relationship between the real GDP growth rate and the unemployment rate for Finland?

$H_0: c_1 = 0; H_A: c_1 \neq 0$. The results reject the null hypothesis. As predicted the incorporation of Finland to the Schengen area did reduced the affect the change in unemployment rate related to the country's growth. Before joining the Schengen area, a 1% unemployment rate change led to a 0.72% decrease of the GDP growth rate. After joining the Schengen area, a 1% unemployment rate change led to a 0.138% decrease of the GDP growth rate. Joining the Schengen area and allowing easier movement of people reduces the impact of an unemployment rate change on the GDP growth rate.

Conclusion

In this project we can conclude that joining the Schengen are did not impact the long run economy growth rate of Finland, as other factors came into play concerning their economy. By joining the Schengen area, the country accessed a great amount of new resources and goods, but it also gave up some of its freedom for the greater good. With so many variables and changes taking place in the country at the same time, making a solid connection between `the merge into the Schengen area and the country's long run growth proved difficult statistically and in theory.

However, there was a correlation between Finland's unemployment rates and long-run economy growth after joining the Schengen area. The economic long run in Finland went from being reduced to 0.72% with a 1% increase in the unemployment to a 0.14%. This could mean that the unemployment rate lost some of its power over the Finland economy after it joined the Schengen area because they could now depend on other factors that could carry and better their economy. Although joining the area did not significantly nor directly increase the long run economy in Finland, it definitely boosted its short run growth and allowed them to stabilize themselves as an economy, as well as providing them with new resources that helped them remain greatly unaffected when negative events like the rising of unemployment rates affected them.