Original Paper

WEST GERMANY 1973-1989 AND UNIFIED GERMANY

1990-2022, AN ANALYSIS

Pete Mavrokordatos¹ & Stan Stascinsky²

¹Rector Larnaca College, Cyprus (deceased)

² Tarrant County College, U.S.A

Received: March 27, 2025	Accepted: April 22, 2025	Online Published: May 25, 2025
doi:10.22158/jetr.v6n1p1	URL: htt	p://dx.doi.org/10.22158/jetr.v6n1p1

Abstract

One of the most important events in the World after World War II was the reuniting of Germany, during the late 1980's and early 1990's. The goal of the authors in this paper is to discuss the general economic conditions of West Germany before 1989 and Germany after 1989. In attempting to do that, we will in the introductory section present data and analysis for both East and West Germany for the years from World War II up until the time of reunification. The second section will present an evaluation of the economy of Germany since the reunification. In the third section a statistical model will be developed to show the general impact of the union on the German economy. In the fourth section, the authors will try to derive a conclusion as to whether the reunification was successful or not, and finally in the Appendix we are going to run several regression models in order to measure the impact of several indicators before and after 1989.

Keywords

West Germany, East Germany, Unified Germany

I. Introduction

Germany was divided into East and West by the Allies right after World War II. The East remained under Soviet control for several years, and then under Soviet influence until 1989, whereas the West was under western control and financial support until 1948 and under western influence afterwards until 1989. A lot of developments took place in both Germanies during those 40 years, but probably the most important one took place during 1961, when the East German government built a wall to separate East and West Berlin. In 1989, this wall opened as a result of a mass exodus of East Germans to the West, as well as a lot of demonstrations in a number of East German cities. Finally, by October of 1990,

the two German States were reunited, and in June of 1991, the German seat of government was moved to Berlin. Because of the different political and economic influence in the two countries since the split, their respective economies headed in different directions. In this section of the paper, the authors would like to evaluate the economic performance of West Germany from the end of World War II until 1989, the year of the unification.

West Germany

<u>1948-1960</u> During this period the West German economy was very robust. It experienced very fast growth, low price inflation, declining unemployment and a good external trade balance. One of the most important factors driving this success was a strong improvement in labor productivity which was in turn due primarily to three things:

- a. a rapid reconstruction of the capital stock
- b. a powerful structural adjustment of employment
- c. German wages were lower only than the US and the UK

As a result of these things, wages rose by 15% between 1947-1950, while the consumer price index rose by 14.3%, and labor productivity rose by 17.7%. All these contributed to strong profit margins for business. This success continued between 1950-1960, during which time the GDP doubled, worker productivity rose by 75%, and there was virtual price stability. This growth was accompanied by only one significant recession, which was in 1957-1958. Several factors contributed to this unbelievable success. Demand for German goods was very strong, and that pushed exports up by 17.5%. The strong demand for goods was fueled by a relatively loose monetary policy (made possible by the lack of inflation). On the fiscal side, policy between 1952-1956 created a budget surplus of more than 3% of GNP. In short, during the years 1950-1955 the German economy performed amazingly.

In 1955 we begin to see some inflationary pressures develop. Specifically, inflation for that year was about 2%. While this seems mild by our standards, it must be remembered that Germany was not far removed from a period of hyperinflation in the 1930's and was therefore extremely wary of any inflation. As a result, the monetary authorities started changing their approach. They tightened credit by raising the discount rate from 3% to 5%. This brought on a recession in 1957, and to remedy it they again reversed their monetary policy, lowering the discount rate to 2.75%. The economy responded by emerging from the recession in 1958.

<u>1960-1973</u> This period is known as the transition years. During these years, we see very tight labor market conditions, due to labor shortages, with foreign workers being imported to fill the gaps. Unemployment was below 1%. All of this contributed to price inflation, and by 1960 the monetary authorities had to tighten credit by raising the discount rate to 5% and raising the minimum required reserves by 55%. As a result, the external trade balance was aggravated and exports declined, and by November of the same year the monetary policy was reversed to improve the external trade balance. By

1963 exports picked up and growth was up to 6.7%, but by 1965 the Germans experienced their first budget deficit since 1951, 1.4% of GNP. In the next year wages rose faster than productivity, and this continued for the next two years, with the result that profits were squeezed, investment collapsed, interest rates rose, and the GDP shrank by 0.1%. As a result of this recession, the monetary authorities adopted expansionary measures, and by 1968 exports rose to 8.4%, leading the economy out of its only recession of the decade. Between 1969-1973, what has come to be called the German economic miracle reached its high-water mark, a fact that was evident in three major areas:

- a. In 1970, the degree of capital stock utilization reached the highest level since 1956
- b. Inflationary pressures started showing up, with consumer price inflation between 5-7%
- c. Germany realized maximum capacity and growth

Another important thing that took place in the 1960-1973 period was the growth of the government sector. In 1960 government spending was 32.9% of the GNP, but by 1973 this rose to 42.1%. Also, taxes and social security rose to 43.3% of GNP by 1973, a figure that was only 35.9% in 1960.

<u>1973-1989</u> This is the last period before the reunification. This period was not as good overall as the previous two. In 1973, Germany had the lowest GDP growth of the six most industrial countries, and this resulted in labor surpluses. There were two major recessions in this period, 1974-1975 & 1981-1982, with very slow recovery. Both of these recessions were worldwide phenomena, and both were preceded by a hefty raw material price shock. Several factors within Germany contributed to them. In 1973, the inflation rate rose to 7% so the authorities imposed a tight monetary policy, which by 1974 resulted in a discount rate of 7% and a prime rate of 10.2%. As a result, investment contracted by 10% and the economy sank into recession. The authorities responded to this with expansionary measures, and in 1976 exports grew by 10% and investment got back on the right track, pulling the economy from its slump. Despite this, persistent unemployment continued through the 1970's.

The Reunification of East and West

After the end of WW II, West Germany, through the measures adopted, realized one of the strongest recoveries in the world. As a result, the reunification with East Germany was very attractive to the West because it presented a lot of opportunities and challenges to reform the new economy.

Some of the factors that contributed to the West Germany economic "Miracle", were the rapid industrialization and the strong economic growth between1940 and 1960. Also, other factors that contributed were implementation of the social market economy, a fast-growing industrial base, investments in infrastructure and a highly skilled labor force. As result of the social market economy, we see the adoption of free market principles, followed by social welfare policies. Some of the sectors that benefited from these policies were manufacturing, engineering and automotive.

Everything presented and discussed to this point, took place in West Germany prior to 1989. Next, we look to United Germany after 1990. Some of the characteristics of United Germany were Integration,

restructuring, as well as several socioeconomic challenges. Also, as a result of unification, the economic differences between the East and the West surfaced. Some of the challenges that came up from this union were with respect to privatizing state-owned businesses of East Germany because of the old infrastructure, inefficiencies, and lack of competitiveness. The result of the new market economy was losses of jobs as well as emigration to the West, but new opportunities arose because of the influx of capital, techn0logies and managerial expertise. In conclusion, this unification turned United Germany into a global economic power.

II. Current Economic Condition

After the above economic review of Germany prior to the unification, the purpose of this section is to present some current economic data and show the current economic condition. As was discussed, the economy has become completely different since the split. The West had linked its post war reform to a market economy, but the East had transformed to a Soviet type of command economy. The outcome was that at the time of reunification the per capita GDP in East Germany was 40% less than the West, and labor productivity was 30% less. Economic unification took place on July 1, 1990. While political unification followed on October 3, 1990.

West Germany was, and still is, carrying almost the entire burden of the reunification-helping East Germany recover. This is illustrated by the fact that during the first five years of unification it spent more than \$586.5 billion in East Germany for the improvement of infrastructure, such as transportation, housing, and environmental protection. Another factor contributing to the Eastern German development is the increase of investment by foreign firms. All these efforts began paying off, and by 1994, the Eastern economy grew by 9.4%, and the per capita GDP stood at about 50% of that of the other side. This figure was up from 30% at the end of 1990. The only thing that was very slow in responding was unemployment, which stood at 14% of the labor force.

In 1997, economic production was under 57% of that of the west, and the wage costs in connection with real net output were nearly 30% higher. So, their most important goal was to increase productivity in order to reduce the impact of the high labor costs, and the way they tried to achieve this was by maintaining existing jobs and creating new ones, in cooperation with business management.

Obviously, the business sector had to contribute to the development of East Germany, and all the trade and industrial associations have pledged to implement measures to stabilize capital expenditure on equipment, but they made this pledge on three conditions:

- a. The trade tax be abolished
- b. Investment and equity assistance remain available to trade and industry
- c. Overall investment-friendly conditions exist

On the other hand, the Federal government did share in contributing to the development. Among other things, they continue providing large-scale assistance (such as tax incentives) to commerce and industry in the years to come, eliminate special depreciation allowances in return for a noticeable increase in investment allowances, aid in the housing construction industry for the modernization of old buildings, and provide a six-year plan and conditions for assistance.

One can say that all the data available indicates that both the German government and the German people are doing everything they can and are working together to make this unification work. And it has, in fact, worked thus far, and this is supported by the latest data available. Germany now is the fifth largest economy in the world, with a GDP of \$4,523 trillion in 2022, and a real per capita GDP of \$54,000 also during 2022 which makes Germany the largest economy in Europe. Other data that show a tremendous improvement in Germany include unemployment of 3.54%, of a labor force of 43,968 million both during 2021 and inflation of 3.06%. Germany had total exports of \$2,079 trillion during 2022, of which 9% went to the US, 8% to China, 6% to the Netherlands and 6% to the UK. The exports included cars and vehicle parts, packaged medicines, medical cultures and vaccines, aircraft, industrial machinery and medical instruments. On the Oher hand imports totaled \$1.999 trillion of which 10% came from China, 10% from Netherlands, 7% from Poland, 6% from France and 6% from Italy, and included cars and vehicle parts, packaged medicines, broadcasting equipment, medical cultures and computers All these for a country of about 84 million. In conclusion, all the indications are that Germany came a long way since the fall of the Berlin Wall, especially with the negative economic and political conditions of East Germany.

III. Statistical Analysis

In the statistical analysis section, the authors will show several indicators collected and then show most of them graphically to show a better economic picture of Germany before and after the unification. All the graphs will be discussed, and we will draw some conclusions. Some of the indicators include, but not limited to GDP, GDP per capita, trade and population.

	GDP US	GDP				
	\$	GR. R	GDP PER	EXPORTS	IMPORTS	NET EXP.
			CAP. TH.			
	CONST.		US \$	(X) CON.	(M) CON.	Xn CON
YEAR	2015	%	2015	US \$ 2015	US \$ 2015	US \$ 2015
1973	1.57	4.78	19972	185	192	-7
1974	1.59	0.89	20141	206	193	13

Table 1. WEST GERMANY AND GERMANY DATA 1973-2022

1975 1.58 -0.87 20041 194 198 -4 1976 1.65 4.95 21124 214 220 -6 1977 1.71 3.35 21880 222 228 -6 1978 1.76 3.01 22558 228 240 -12 1979 1.84 4.15 23484 240 263 -23 1980 1.86 1.41 23766 253 272 -19 1981 1.87 0.53 23855 271 264 7 1982 1.86 -0.39 23783 281 262 19 1983 1.89 1.57 24221 280 269 11 1984 1.95 2.82 2491 305 283 22 1985 1.99 2.33 25630 327 294 33 1986 2.04 2.29 26204 323 304 19 1987 2.07 1.4 26531 327 318 9 1988 2.14 3.71 27407 344 335 9 1989 2.23 3.89 28256 380 364 16 1990 2.34 5.26 29485 423 403 20 1991 2.46 5.11 30776 469 447 22 1992 2.51 1.92 31121 467 460 7 1993 2.49 -0.98 30615 440 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>							
19771.713.3521880222228-619781.763.0122558228240-1219791.844.1523484240263-2319801.861.4123766253272-1919811.870.5323855271264719821.86-0.39237832812621919831.891.57242212802691119841.952.82249913052832219851.992.33256303272943319862.042.2926043233041919872.071.426531327318919882.143.7127407344335919892.233.89282563803641619902.345.26294854234032019912.465.11307764694472219922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.793231360156536 <tr<< td=""><td>1975</td><td>1.58</td><td>-0.87</td><td>20041</td><td>194</td><td>198</td><td>-4</td></tr<<>	1975	1.58	-0.87	20041	194	198	-4
19781.763.0122558228240-1219791.844.1523484240263-2319801.861.4123766253272-1919811.870.5323855271264719821.86-0.39237832812621919831.891.57242212802691119841.952.82249913052832219851.992.33256303272943319862.042.29262043233041919872.071.426531327318919882.143.7127407344335919892.233.89282563803641619902.345.26294854234032019912.465.11307764694472219922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.793233682673920002.842.913449077674630<	1976	1.65	4.95	21124	214	220	-6
19791.844.1523484240263-2319801.861.4123766253272-1919811.870.5323855271264719821.86-0.39237832812621919831.891.57242212802691119841.952.82249913052832219851.992.33256303272943319862.042.29262043233041919872.071.426531327318919882.143.7127407344335919892.233.89282563803641619902.345.26294854234032019912.465.11307764694472219922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.013259682673920002.842.913449077674630 <td< td=""><td>1977</td><td>1.71</td><td>3.35</td><td>21880</td><td>222</td><td>228</td><td>-6</td></td<>	1977	1.71	3.35	21880	222	228	-6
19801.861.4123766253272.1919811.870.5323855271264719821.86-0.39237832812621919831.891.57242212802691119841.952.82249913052832219851.992.33256303272943319862.042.29262043233041919872.071.426531327318919882.143.7127407344335919892.233.89282563803641619902.345.26294854234032019912.465.11307764694472219922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.0132596476182919992.791.8933559682673920002.842.913449077674630	1978	1.76	3.01	22558	228	240	-12
19811.870.5323855271264719821.86-0.39237832812621919831.891.57242212802691119841.952.82249913052832219851.992.33256303272943319862.042.29262043233041919872.071.426531327318919882.143.7127407344335919892.233.89282563803641619902.345.26294854234032019912.465.11307764694472219922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91348385473312120032.86-0.73461987077496	1979	1.84	4.15	23484	240	263	-23
19821.86-0.39237832812621919831.891.57242212802691119841.952.82249913052832219851.992.33256303272943319862.042.29262043233041919872.071.426531327318919882.143.7127407344335919892.233.89282563803641619902.345.26294854234032019912.465.11307764694472219922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.881.68350118207526820022.88-0.193483854733121 <t< td=""><td>1980</td><td>1.86</td><td>1.41</td><td>23766</td><td>253</td><td>272</td><td>-19</td></t<>	1980	1.86	1.41	23766	253	272	-19
19831.891.57242212802691119841.952.82249913052832219851.992.33256303272943319862.042.29262043233041919872.071.426531327318919882.143.7127407344335919892.233.89282563803641619902.345.26294854234032019912.465.11307764694472219922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91348385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.73353101036834202<	1981	1.87	0.53	23855	271	264	7
19841.952.82249913052832219851.992.33256303272943319862.042.29262043233041919872.071.426531327318919882.143.7127407344335919892.233.89282563803641619902.345.26294854234032019912.465.11307764694472219922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.73353101036834202 <tr< td=""><td>1982</td><td>1.86</td><td>-0.39</td><td>23783</td><td>281</td><td>262</td><td>19</td></tr<>	1982	1.86	-0.39	23783	281	262	19
19851.992.33256303272943319862.042.29262043233041919872.071.426531327318919882.143.7127407344335919892.233.89282563803641619902.345.26294854234032019912.465.11307764694472219922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.82366991163983180<	1983	1.89	1.57	24221	280	269	11
19862.042.29262043233041919872.071.426531327318919882.143.7127407344335919892.233.89282563803641619902.345.26294854234032019912.465.11307764694472219922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.881.68350118207526820022.88-0.79346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.983784212661044222 <td>1984</td> <td>1.95</td> <td>2.82</td> <td>24991</td> <td>305</td> <td>283</td> <td>22</td>	1984	1.95	2.82	24991	305	283	22
19872.071.426531327318919882.143.7127407344335919892.233.89282563803641619902.345.26294854234032019912.465.11307764694472219922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.881.68350118207526820022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.983784212661044222 <td>1985</td> <td>1.99</td> <td>2.33</td> <td>25630</td> <td>327</td> <td>294</td> <td>33</td>	1985	1.99	2.33	25630	327	294	33
19882.143.7127407344335919892.233.89282563803641619902.345.26294854234032019912.465.11307764694472219922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.881.68350118207526820022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.140.963827812911068223	1986	2.04	2.29	26204	323	304	19
19892.233.89282563803641619902.345.26294854234032019912.465.11307764694472219922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.881.68350118207526820022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.140.963827812911068223	1987	2.07	1.4	26531	327	318	9
19902.345.26294854234032019912.465.11307764694472219922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.881.68350118207526820022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	1988	2.14	3.71	27407	344	335	9
19912.465.11307764694472219922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.881.68350118207526820022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	1989	2.23	3.89	28256	380	364	16
19922.511.9231121467460719932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.881.68350118207526820022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	1990	2.34	5.26	29485	423	403	20
19932.49-0.98306154404301019942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.881.68350118207526820022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	1991	2.46	5.11	30776	469	447	22
19942.542.39312384754651019952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.881.68350118207526820022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	1992	2.51	1.92	31121	467	460	7
19952.581.5431628506497919962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.881.68350118207526820022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	1993	2.49	-0.98	30615	440	430	10
19962.60.81317905405202019972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.881.68350118207526820022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	1994	2.54	2.39	31238	475	465	10
19972.651.79323136015653619982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.881.68350118207526820022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	1995	2.58	1.54	31628	506	497	9
19982.72.01329596476182919992.791.8933559682673920002.842.91344907767463020012.881.68350118207526820022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	1996	2.6	0.81	31790	540	520	20
19992.791.8933559682673920002.842.91344907767463020012.881.68350118207526820022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	1997	2.65	1.79	32313	601	565	36
20002.842.91344907767463020012.881.68350118207526820022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	1998	2.7	2.01	32959	647	618	29
20012.881.68350118207526820022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	1999	2.79	1.89	33559	682	673	9
20022.88-0.193488385473312120032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	2000	2.84	2.91	34490	776	746	30
20032.86-0.7346198707749620042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	2001	2.88	1.68	35011	820	752	68
20042.891.183503497183513620052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	2002	2.88	-0.19	34883	854	733	121
20052.910.7335310103683420220063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	2003	2.86	-0.7	34619	870	774	96
20063.023.8236699116398318020073.112.98378421266104422220083.140.963827812911068223	2004	2.89	1.18	35034	971	835	136
20073.112.98378421266104422220083.140.963827812911068223	2005	2.91	0.73	35310	1036	834	202
2008 3.14 0.96 38278 1291 1068 223	2006	3.02	3.82	36699	1163	983	180
	2007	3.11	2.98	37842	1266	1044	222
2009 2.96 -5.69 36190 1107 964 143	2008	3.14	0.96	38278	1291	1068	223
	2009	2.96	-5.69	36190	1107	964	143

2010	3.08	4.18	37760	1266	1089	177	
2011	3.21	3.93	39977	1372	1168	204	
2012	3.22	0.42	40069	1412	1170	242	
2013	3.24	0.44	40135	1426	1201	225	
2014	3.31	2.21	40851	1494	1248	246	
2015	3.56	1.49	41103	1574	1320	254	
2016	3.43	2.23	41682	1614	1380	234	
2017	3.52	2.68	42639	1693	1452	241	
2018	3.56	0.98	42928	1731	1510	221	
2019	3.59	1.08	43292	1770	1560	210	
2020	3.46	-3.83	41602	1610	1430	180	
2021	3.57	3.16	42900	1762	1558	204	
2022	3.63	1.81	43361	1820	1662	158	

SOURCE: The World data Bank, databank.worldbank.org

GDP in trillions of US \$ constant 2015

GDP per capita in Thousands of US \$ constant 2015

Exports, Imports and Net exports in US billions \$ constant 2015

Figures illustrating the data are presented on the next two pages.

Using the data from Table 1 (above), we derived several graphs, showing the direction of the German economy both before and after the unification. Figure 1 shows the GDP in trillions of constant 2015 US \$. It can be seen that the GDP had a constant rise, although at a much faster rate after 1990 at which time the unification took place. The same direction is also shown in Figure 2, GDP per capita in thousands of constant 2015 US \$, but once more at a faster rate after 1990.



Figure 1. GDP in US\$



Figure 2. GDP per Cap in 1000's US\$

On the other hand, Figure 3 shows the trade of Germany, exports, imports and net exports, again in constant US billions \$ 2015, but slightly a different picture. As can be seen up until 1989 imports and exports were almost even, whereas after 1990, even though both exports and imports have increased, exports have increased by much more, and the end result was that net exports were positive. With some reservations we can conclude that the unification of East and West Germany helped Germany's trade.



Figure 3. Net Trade

Table 2. V	VEST	GERMANY	AND	GERMANY	DATA	1973-	-2022
------------	------	---------	-----	---------	------	-------	-------

YEAR	INFLATION	POPULAT.	LABOR	UNEMPL.
			FORCE	
	%	MILIONS	MIL.	%
1973	7.03	79		
1974	6.98	78.9		
1975	5.91	78.7		
1976	4.24	78.3		
1977	3.73	78.5		
1978	2.71	78.1		
1979	4.04	78.1		
1980	5.44	78.2		
1981	6.34	78.4		
1982	5.24	78.3		
1983	3.29	78.1		
1984	2.41	78		
1985	2.07	77.7		
1986	-0.13	77.7		
1987	0.25	77.8		
1988	1.27	78		

1989	2.98	78.8		
1990	2.69	79.4	38.6	
1991	4.05	80	39.8	5.3
1992	5.06	81	40.5	6.3
1993	4.47	81.2	39.5	7.6
1994	2.69	81.4	39.6	8.7
1995	1.71	81.7	39.5	8.2
1996	1.45	81.9	39.6	8.8
1997	1.93	82	40.1	9.9
1998	0.91	82	39.8	9.8
1999	0.58	82.1	40	8.9
2000	1.44	82.2	39.9	7.9
2001	1.98	82.3	40	7.8
2002	1.42	82.4	40.1	8.5
2003	1.03	82.5	40.2	9.8
2004	1.66	82.5	40	10.7
2005	1.54	82.2	41.2	11.2
2006	1.57	82.3	41.7	10.3
2007	2.29	82.3	41.8	8.6
2008	2.62	82.1	41.9	7.5
2009	0.31	82.1	42	7.7
2010	1.1	81.8	41.9	6.9
2011	2.07	80.3	41.7	5.8
2012	2.01	80.4	42	5.4
2013	1.5	80.6	42.2	5.2
2014	0.91	80.9	42.5	4.9
2015	0.51	81.7	42.6	4.6
2016	0.49	82.2	43	4.1
2017	1.51	82.7	43.8	3.8
2018	1.73	82.9	43.9	3.4
2019	1.44	83.1	44.4	3.1
2020	0.14	83.2	44.1	3.9
2021	3.06	83.3	43.9	3.6
2022	6.87	83.8	44.3	2.9

SOURCE: The World data Bank, databank.worldbank.org

Figures illustrating this data are presented on the next page.

Figure 4 shows unemployment and inflation. Unfortunately, the unemployment figures prior to 1989 were not available, but even so we are able to draw some conclusions. Inflation before 1990 was very unstable, reaching a high of around 8%. After 1989 it leveled off and even reached a low of 0.14% at 2020. After that it started rising and reached a high of 6.87% during 2022. On the other hand, unemployment sky rocked after the unification and reached 11.2% during 2005. After that it started dropping but unfortunately inflation started rising and reaching 6.87% during 2022. This graph basically proves what we have been teaching for years that inflation and unemployment go opposite directions.



Figure 4. Inflation and Employment

The last graph, Figure 5, shows population and labor force. It seems that unification did not impact either one of the two. They both have been fairly stable over the years.





IV. Conclusion

The purpose of this final section of the paper is to summarize the findings of the authors and to make some concluding remarks and recommendations. Both Germanies as independent States have gone through a lot of ups and downs over the years, with those of East Germany being much more severe than the West for obvious reasons. Since 1989-1990, the time of the reunification, the economic futures of Germany are much brighter than before. This conclusion is supported by all the tables discussed previously which illustrate the direction of the German economy. One set of data that is very encouraging for the Germans, is the trade data. As can be seen in this table, Germany has a surplus., which means that Germany has a lot to offer for trade, and they should concentrate on increasing their exports to other countries as well. This will benefit their trade balance, as well as employment and productivity. All these things, taken together, show that Germany is very promising and is very attractive for investments. In conclusion, this paper is not complete by any means, but it is the intention of the authors to draw attention to this topic and hopefully encourage further research in this area.

References

- "Creating new jobs in Eastern Germany: Government, business and trade unions launch joint initiative". (June 1997). Available: http://www.germany-info.org/facts/econ1606.htm.
- "German unification: five years on". (Sep. 1995). Available: http://www.germany-info.org/facts/unifica.htm
- Giersch H., & Paque Karl-Heinz, S. H. (1992). <u>The fading miracle: Four decades of market economy in</u> <u>Germany</u>. Cambridge University Press.

http://www.ecu-activities.be

http://www.globalfindata.com

http://www.mtc.com.my/fpub/statistic/econ95.htm

Kopstein, J. (1997). <u>The politics of economic decline in East Germany, 1945-1989.</u> University of North Carolina Press.

Mavrokordatos P. & Jumi P., "Thirteen Years of a United Germany: An Evaluation", The Association for Global Business Proceedings, November 2003.

The World Factbook - Germany, https://www.cia.gov, Retrieved March 20, 2024.

www.amue.1f.net

www.germany-info.org/facts/right.htm

Appendix

In this last section, the authors ran several regression models in order to measure the impact of unification. We ran regressions for West Germany prior to 1989 and then the same regressions for a unified Germany after 1990. We considered different aspects of the economy both prior to and after unification. In all models, the null hypothesis is that the independent variable does not affect the dependent variable.

MODEL 1:

In this model we used imports as the dependent variable and population as the independent. For West Germany prior to unification, the r-squared was 0.282 and the p-value was 0.28. This means that roughly 28% of West Germany's imports is determined by its population. Since the p-value is less than 0.05, the null hypothesis is rejected. After unification, the r-squared is 0.254 and the p-value is 0.003. This means that roughly 25% of unified Germany's imports is determined by its population. The null hypothesis is again rejected since the p-value is less than 0.05. The evidence against the null is much stronger than the West Germany model due to the very small p-value. Figures illustrating these are presented below:



FIGURE 1a) Imports vs. Population-West Germany

FIGURE 1b) Imports vs. Population-Unified Germany



MODEL 2:

In this model we used net exports as the dependent variable and GDP per capita as the independent. For West Germany prior to unification, the r-squared was 0.242 and the p-value was 0.045. This means that roughly 24% of West Germany's net exports was determined by its GDP per capita. Since the p-value is less than 0.05, the null hypothesis is rejected. After unification, the r-squared is 0.787 and the p-value is 6.21x10⁻¹². This means that roughly 79% of unified Germany's net exports is determined by its GDP per capita. The null hypothesis is again rejected since the p-value is less than 0.05. The evidence against the null is much stronger than the West Germany model due to the very small p-value. Figures illustrating these are presented below:

FIGURE 2a) Net exports vs. GDP per capita-West Germany



FIGURE 2b) Net exports vs. GAP per capita-Unified Germany



MODEL 3:

In this model we used GDP as the dependent variable and population as the independent. For West Germany prior to unification, the r-squared was 0.307 and the p-value was 0.021. This means that roughly 31% of West Germany's GDP was determined by its population. Since the p-value is less than 0.05, the null hypothesis is rejected. After unification, the r-squared is 0.277 and the p-value is 0.0002. This means that roughly 28% of unified Germany's GDP is determined by its population. The null hypothesis is again rejected since the p-value is less than 0.05. The evidence against the null is much stronger than the West Germany model due to the very small p-value. Figures illustrating these are presented below.





FIGURE 3b) GDP vs. Population-Unified Germany



An interesting result of this model is that the regression lines have opposite slopes before and after unification. The authors are not sure of the exact cause of this. In looking at the data, the population of West Germany was declining slightly in the years before unification. While the population of unified Germany declined around 2010, it increased slightly during the period we examined. Further research is needed to determine the exact cause.

MODEL 4:

In this model we used imports as the dependent variable and unemployment as the independent. We were only able to run a model for the unified Germany as the data was unavailable for West Germany for the period we examined. The r-squared for this model is 0.550 and the p-value is 1.18x10⁻⁶. This means that roughly 55% of unified Germany's imports is determined by its unemployment rate. The null hypothesis is rejected with very strong evidence since the p-value is much smaller than 0.05. A figure illustrating this is presented below.



FIGURE 4) Imports vs. Unemployment-Unified Germany

CONCLUSION

The regressions yielded some interesting results. In every situation the authors examined, the null hypothesis was rejected. This was the case for models both prior to and after the unification of Germany. The p-values of the hypothesis tests, however, changed dramatically after unification; they were all much smaller than 0.05. This means that the evidence against the null hypothesis is very strong in those situations. While we only had data for our fourth model after unification, this trend continued. It appears that the results indicate the unification may be a success, but further study is needed to give a definitive answer and to determine the exact impact on the variables in the models. Any assistance or recommendations for this would be greatly appreciated by the authors.