Country Study 3: 
Denmark

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Changes in a country’s money supply can have dramatic effects on its economy. Floating exchange rates make monetary policy very effective in stimulating growth. Denmark’s monetary policy has successfully manipulated its economy to achieve certain goals from 1996 to 2006.

Denmark’s money supply growth declined slowly from 10.02% in 1996 to 3.64% in 1999. Then in 2000, the money supply actually shrunk with a growth rate of -4.61%. From 2001 to 2005, they began expanding the money supply again, and the growth rate increased to 14.67% by 2005. In 2006 however, the growth rate declined again to 10.84%.

Inflation in Denmark’s prices ranged from 1.17% to 3.22% from 1996 to 2006. In 1996, it started at 1.98% then rose to 2.99% in 2000. This was followed by a declining trend until 2003 when inflation hit 1.62%, then started to rise again. Inflation rose to 3.22% in 2005, and in 2006 it declined to 2.23%.

The interest rate on Danish government bonds began at 7.58% in 1995 and declined slowly until 1999 when it hit 4.30%. In 2000, the interest rate rose to 5.54%, but it began to decline again in 2001. By 2006, the interest rate was at 3.60%.

Overall, the condition of the economy in Denmark is reflected in its real GDP growth. In 1996, real GDP growth in Denmark was at 2.86%. By 2000, it had risen to 3.54%, but then fell to .70% in 2001 and didn’t rise again until after 2003 when it was at a low of .41%. From 2004 to 2006, there was a rising trend in real GDP growth that ended at 3.51%.

The movement of Denmark’s inflation is easily explained by the changes in money supply growth. Since in the long run prices rise by the same proportion as money supply, inflation will increase when the money supply increases and decrease when the money supply decreases. In the year 2000, when inflation was at 2.99% and then slowly declined, the decline is most likely a direct result of the decrease in the money supply which happened the same year.
Then when inflation peaked at 3.22% in 2005, the money supply growth declined again. This explains why the inflation rate began to decline at the same time.

The interest rate is highly correlated with money supply growth, but inversely. When money supply increases interest rate decline due to decreased demand for funds and vice versa. In conjunction with the decrease in the money supply in 2000, the interest rate rises and then begins to decline again in 2002 when the money supply growth rate begins to rise again. Then in 2005, the money supply growth rate falls and the interest rate rises again. The interest rate is also correlated directly with inflation due to the fisher effect that says nominal interest rates equal the real interest rate plus expected inflation. Therefore when inflation is in an upward trend people will expect inflation to keep increasing and drive up interest rates. This is why interest rates and inflation rates move together in Figure 1.

The real GDP growth in Denmark is also affected by the money supply growth rate. The money supply decrease in 2000 caused a recession of the GDP growth rate from 2001 to 2003. This was probably a necessary setback in order to get their inflation under control. GDP growth slowly increased again in 2004 after the money supply growth rate had begun to rise again. This effect of the money supply is due to the fact that when the money supply decreases the interest rate rises which discourages investment and therefore has a lasting effect on the output of the economy which takes longer to recover from.

The exchange rate seems to be mostly affected by changes in the money supply in the long run, but it also appears to be inversely related to the inflation rate in the short run. As the money supply decreased from 1996 to 2000, the exchange rate also decreased from .168 to .118. Then as the money supply growth rate increased from 2001 to 2005, the exchange rate rose to .182. The small fluctuations along the long run trends in the exchange rate appear to coincide
with changes in the inflation rate. The unusual increase in the exchange rate in 1998 matches a
decrease in the rate of inflation. The decrease in 2005 matches an increase in the inflation rate.
Figures

Figure 1:

Denmark Economic Factors

- Inflation
- Money Growth
- Interest Rates
- Real GDP Growth
- Exchange Rate

Year

Percent


-0.1 -0.05 0 0.05 0.1 0.15 0.2
Citations