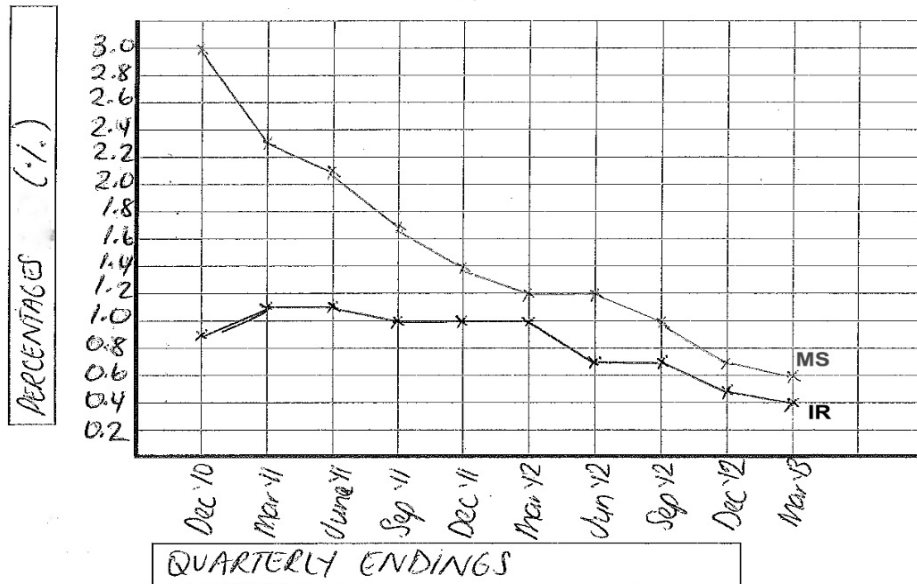


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Student processed and presented inflation and unemployment statistical data.

**Graph 1: INFLATION RATE & PERCENTAGE CHANGE IN MONEY SUPPLY**



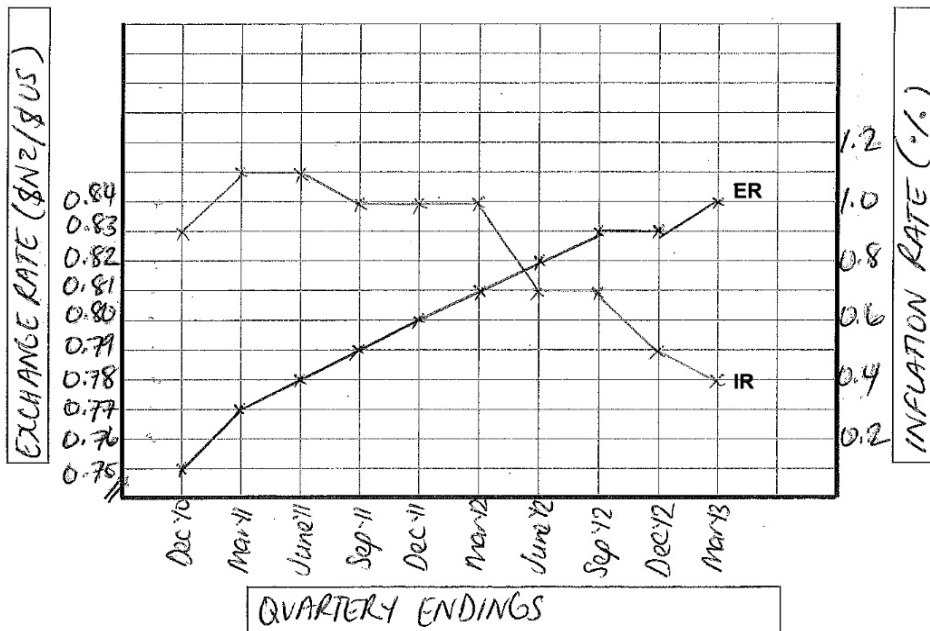
**Graph 1 Interpret the trends:**  
 The inflation rate trends upwards from 0.9% in Dec 2010 to 1.1% in March 2011 where it remains constant until June 2011. After June 2011, the inflation rate generally trends downwards ending at 0.4% in March 2013. Initially we see the percentage change in money supply trend downwards from 3.0% in December 2010 to 1.2% in March 2012. Between March 2012 and June 2012 the percentage change in money supply is constant, after that it continues to trend downwards to 0.6% in March 2013.

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**Identify and explain the relationship:** As the inflation rate decreases so does the percentage change in money supply, which suggests that there is a positive relationship between the two data sets.

This relationship can be explained by the quantity theory of money equation  $MV=PQ$ . M is the level of money supply and P is the level of prices, the equation states that if M increases then so will P, which causes inflation, if V and Q stay constant.

**Graph 2: EXCHANGE RATE (\$NZ/\$US) & INFLATION RATE**



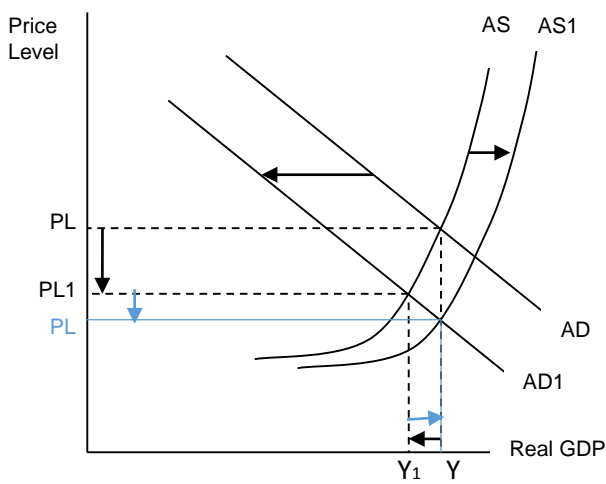
**Graph 2 Interpret the trends:**  
 The exchange rate trends upwards from 0.75 (\$NZ/\$US) in December 2010 up until March 2013 at 0.84 (\$NZ/\$US). The inflation rate trends upwards from 0.9% in Dec 2010 to 1.1% in March 2011 where it remains constant until June 2011. After June 2011, we see the inflation rate trend downwards ending at 0.4% in March 2013.

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**Identify and explain the relationship:** As the exchange rate increases the inflation rate decreases which suggests that there is an inverse relationship between the two data sets.

This relationship can be explained by the AD/AS model where  $AD = C+I+G+(X-M)$  when the value of the \$NZ appreciates this decreases export receipts (X) because the amount of foreign money that exporters earn in now converts to less \$NZ. This causes a decrease in (X-M) and shifts the AD curve to AD1, and Y to Y1 and PL to PL1. Because of the decrease in the price level, this means there is less money flow in the economy and therefore there is less demand-pull inflation occurring.

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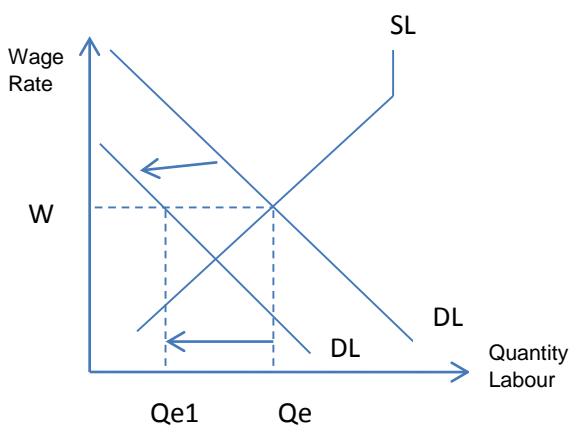
When the value of the \$NZ is high due to a high exchange rate this leads to an increase in competitiveness between firms for raw materials because with a stronger dollar NZ importers are able to buy more materials which decreases the firms COP. Therefore, causing an increase in AS shifting the curve right to AS1 increasing real GDP from Y1 back towards Y, and less inflationary pressure.

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**Graph 3 Interpret the trends:** Initially the unemployment trends upwards from 5.2% in December 2010 to 5.7% in Sept 2011. After Sept 2011, unemployment rates trend upwards to 6.2% in March 2012 and then continue to trend upwards reaching 7.8% in March 2013. The percentage change in the

number of workers employed trends downwards from 1.4% in December 2010 to 0.3% in March 2013.

**Identify and explain the relationship:** As the percentage change in the number of workers decreases the unemployment rate increases which suggests that there is an inverse relationship between the two data sets. This relationship is explained by both the AD/AS model and the Labour market model.



The demand for workers is derived from the real GDP produced in an economy, so when there is a decrease in AD to AD1 as seen in the model, because Y shifts to Y1 and output of goods and services has reduced. Then DL also shifts left to DL1, meaning demand for workers falls to Qe1 (assuming the wage cannot fall due to a minimum wage rate) Qe to Qe1 lose their jobs and now there is involuntary unemployment.

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**Graph 4 Interpret the trends:** Initially the unemployment trends upwards from 5.2% in December 2010 to 5.7% in Sept 2011. After Sept 2011, unemployment rates trend upwards to 6.2% in March 2012 and then continue to

trend upwards reaching 7.8% in March 2013. Initially the participation rate trends upwards slightly from 72.56% in December 2010 to 72.78% in March 2011. After March 2011, the participation rate trends downwards, ending at 66.97% in March 2013.

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**Identify and explain the relationship:** This relationship shows that as the unemployment rate increases the participation rate decreases, which suggests that there is an inverse relationship between the two data sets. When unemployment is high, this causes a decrease in the willingness of people to go out and look for a job. It encourages people to further their studies and become tertiary-educated so that when they have completed their studies finding employment should not be as hard because they now have the qualifications to fit the available job vacancies.

### Inter-relationships

The inter-relationship between the inflation rate and unemployment rate is inverse because as the inflation rate decreases, the unemployment rate increases. As unemployment increases consumption spending (C) decreases, because people have no money to spend because they are unemployed.

$AD = C + I + G + (X - M)$ , and C accounts for two-thirds of the entire equation, therefore if C decreases then so too will AD, seen as a shift left to AD1, causing a decrease in demand-pull inflation (PL-PL1).

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The less employed workers a firm has the less their costs of production will be, because they will have less workers on their payroll, as they have had to lay off workers. This is seen on the model as a movement down the AS curve.

The exchange rate, when the value of the \$NZ appreciates this decreases export receipts (X) because the amount of foreign money that exporters earn in now converts to less \$NZ. This causes a decrease in (X-M) and shifts the AD curve to AD1, and Y to Y1 and PL to PL1. This affects the participation rate and the percentage change in the number of people employed because there is less demand for labour. The percentage change in the number of workers began at 1.4% in Dec 2010, continually decreasing to 0.3% in Mar 2013, so even though the number of workers employed increased each quarter, there is a declining rate of employment, and an increasing rate of unemployment between Dec 2010 and Mar 2013.

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