

1 Appendix

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Appendix A: Elasticity Calculation

$$Y1 = 6.79319 - 0.004 X2t - 0.09 X3t + 0.22 X4t - 0.43 X5t + 0.025 X6t + 8.63 X7t - 0.03 X8t - 0.0006 X9t - 0.19 X10t + Ut$$

Y1t ... Unemployment, total (% of total labour force) (modeled ILO estimate)

X2t ... Foreign direct investment, net inflows (BoP, current US\$, in millions)

X3t ... Inflation, GDP deflator (annual %)

X4t ... GDP growth (annual %)

X5t ... Urban population growth (annual %)

X6t ... Time required to start a business (days)

X7t ... Research and development expenditure (% of GDP)

X8t ... Corruption Perceptions index (0 - low, 100 - high)

X9t ... Income from Tourism (in mil USD)

X10t ... Development of inflation rates for consumer goods

U1t ... Random error, $\sim \text{nid}(0, \sigma^2)$

Appendix B: Elasticity Calculation from 2001-2002 and Y1-X5 based on Equation 4

| Years | Y Theoretical | Elasticity for X2 | Elasticity for X3 | Elasticity for X4 | Elasticity for X5 |
|---------|---|-----------------------------------|----------------------------------|---------------------------------|-----------------------------------|
| Formula | $6.78319 - 0.004 * X_2 - 0.09 * X_3 + 0.22 * X_4 - 0.43 * X_5 + 0.025 * X_6 + 8.63 * X_7 - 0.03 * X_8 - 0.0006 * X_9 - 0.19 * X_{10}$ | $-0.004 * X_2 / Y$ Theoretical | $-0.09 * X_3 / Y$ Theoretical | $0.22 * X_4 / Y$ Theoretical | $- 0.43 * X_5 / Y$ Theoretical |
| 2001 | -3.982 | 2.830 | 0.230 | -0.746 | -0.004 |
| 2002 | -2.875 | 3.601 | 0.182 | -0.750 | 0.020 |
| 2003 | -3.267 | 3.040 | 0.323 | -0.626 | 0.061 |
| 2004 | -16.558 | 1.357 | 0.088 | -0.128 | 0.021 |
| 2005 | -4.232 | 2.407 | 0.380 | -0.504 | 0.103 |
| 2006 | -25.445 | 1.196 | 0.076 | -0.093 | 0.020 |
| 2007 | -43.768 | 1.094 | 0.032 | -0.045 | 0.013 |
| 2008 | -66.326 | 1.014 | 0.028 | -0.011 | 0.013 |
| 2009 | -53.052 | 1.076 | 0.008 | -0.005 | 0.017 |
| 2010 | -26.186 | 1.139 | 0.067 | -0.061 | 0.025 |
| 2011 | -51.900 | 1.061 | 0.036 | -0.031 | 0.013 |
| 2012 | -50.212 | 1.087 | 0.009 | -0.021 | 0.013 |
| 2013 | -36.296 | 1.103 | 0.024 | -0.036 | 0.019 |
| 2014 | -25.639 | 1.140 | 0.020 | -0.036 | 0.027 |
| 2015 | -22.900 | 1.149 | 0.007 | -0.012 | 0.030 |
| 2016 | -68.375 | 1.007 | 0.018 | -0.004 | 0.010 |
| 2017 | -16.284 | 1.158 | 0.062 | -0.055 | 0.039 |
| 2018 | 2.347 | -0.142 | -0.353 | 0.384 | -0.270 |
| 2019 | -11.961 | 1.244 | 0.057 | -0.083 | 0.053 |
| 2020 | -26.793 | 1.106 | 0.014 | 0.021 | 0.024 |

Appendix C: Elasticity Calculation from 2001-2002 and X6-X10 based on Equation 4

| Years | Elasticity for X6 | Elasticity for X7 | Elasticity for X8 | Elasticity for X9 | Elasticity for X10 |
|---------|-----------------------------------|----------------------------------|-----------------------------------|-------------------------------------|------------------------------------|
| Formula | $0.025 \cdot X6/Y$ Theoretical | $8.63 \cdot X7/Y$ Theoretical | $-0.03 \cdot X8/Y$ Theoretical | $-0.0006 \cdot X9/Y$ Theoretical | $-0.19 \cdot X10/Y$ Theoretical |
| 2001 | -0.201 | -0.477 | 0.598 | 0.076 | 0.398 |
| 2002 | -0.278 | -0.765 | 0.822 | 0.142 | 0.386 |
| 2003 | -0.245 | -0.667 | 0.698 | 0.117 | 0.374 |
| 2004 | -0.048 | -0.129 | 0.141 | 0.029 | 0.079 |
| 2005 | -0.183 | -0.578 | 0.525 | 0.114 | 0.340 |
| 2006 | -0.027 | -0.082 | 0.087 | 0.023 | 0.065 |
| 2007 | -0.015 | -0.041 | 0.054 | 0.017 | 0.047 |
| 2008 | -0.010 | -0.028 | 0.035 | 0.011 | 0.049 |
| 2009 | -0.012 | -0.037 | 0.041 | 0.013 | 0.026 |
| 2010 | -0.024 | -0.051 | 0.081 | 0.028 | 0.054 |
| 2011 | -0.012 | -0.026 | 0.042 | 0.018 | 0.031 |
| 2012 | -0.012 | -0.028 | 0.043 | 0.026 | 0.019 |
| 2013 | -0.012 | -0.041 | 0.061 | 0.039 | 0.031 |
| 2014 | -0.016 | -0.056 | 0.083 | 0.052 | 0.050 |
| 2015 | -0.012 | -0.064 | 0.094 | 0.048 | 0.055 |
| 2016 | -0.003 | -0.019 | 0.031 | 0.018 | 0.040 |
| 2017 | -0.014 | -0.074 | 0.127 | 0.087 | 0.087 |
| 2018 | 0.053 | 0.484 | -0.882 | -0.677 | -0.487 |
| 2019 | -0.010 | -0.089 | 0.166 | 0.146 | 0.083 |
| 2020 | -0.005 | -0.037 | 0.069 | 0.013 | 0.048 |