

Contributing Factors to Economic Growth in Developing Countries: An Empirical Examination of Klein's Shock Doctrine

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Abstract

*The following regression analysis centers on a question posed by journalist and activist Naomi Klein in her 2007 New York Times bestseller *The Shock Doctrine: The Rise of Disaster Capitalism*. Klein concludes that global capitalism is responsible for the discrepancies observed in economic well being between countries. Her hypothesis is that the economic growth (as % of GDP) of a nation will be positively impacted by: 1) smaller GDP (more room to grow), 2) less foreign aid (stronger economic position), 3) more foreign investment, 4) low debt level, 5) high levels of school enrollment, 6) increased levels of exports (versus relying on foreign imports). Utilizing the World Bank and International Monetary Fund databases, twenty five nations were examined for the fiscal year 2007. Klein's variables accounted for explaining only 50% of the relationship in percentage growth of gross domestic product. The only statistically significant variable identified by Klein was foreign investment, with all other variables falling short of the required t-statistic. A relationship is evident, though not with the variables ascribed to by Klein. Considerations such as employment rate, population, natural resources, and political systems are recommended for additional analysis.*

Historians have long pointed to the end of the second world war as the birth of modern day globalization. With Europe in shambles and Japan reeling from the atomic bomb, the world responded with the creation of the International Monetary Fund in 1944 and the World Bank in December of 1945. Determined to provide economic opportunity for all, the organizations sought to provide affordable financing for re-building efforts, establishing improved trading relations, and the reduction of global poverty. Fast forward sixty years and the reviews are decidedly mixed.

Naomi Klein, journalist and activist, has been one of the most vocal critics of globalization – labeling the World Bank and International Monetary Fund as nothing more than tools of the wealthy to impoverish the poor. (Klein, 2007) In her 2007 New York Times Best Seller, *The Shock Doctrine: The Rise of Disaster Capitalism*, Klein concludes that the wealthiest nations knowingly utilize debt, aid, and 'imagined crisis' to exploit the status quo to their advantage. Referring to the process as 'disaster capitalism' Klein accuses the wealthy of 'creating' problems and then forcing solutions in their best interest upon the parties involved. One of the earliest examples outlined is the country of Chile, where the author concludes:

Friedman first learned how to exploit a large scale shock or crisis in the mid-seventies, when he acted as advisor to the Chilean dictator, General Augusto Pinochet. Not only were Chileans in a state of shock following Pinochet's violent coup, but the country was also traumatized by severe hyperinflation. Friedman advised Pinochet to impose rapid-fire transformation of the economy – tax cuts, free trade, privatized services, cuts to social spending, and deregulation. (Klein, 2007, p. 5)

The question posed is an interesting one. What factors truly do impact the economic growth of a nation? Utilizing a linear regression, Klein's variables are easily analyzed and the significance of their impact objectively assessed. The hypothesis posed can be summed up as:

The economic growth (as % of GDP) of a nation will be positively impacted by: 1) smaller GDP (more room to grow), 2) less foreign aid (stronger economic position), 3) more foreign investment, 4) low debt level, 5) high levels of school enrollment, 6) increased levels of exports (versus relying on foreign imports).

It becomes imperative, before collecting data on these six factors, that a cross sectional list of countries be compiled that provides a wide assortment of various economic positions. Those accused of 'disaster capitalism', as well as the purported victims must be examined.

The following list of nations will be examined in the linear regression:

Bahamas	Bangladesh	Bolivia	Cameroon	Canada
Chile	Colombia	Costa Rica	France	Germany
Honduras	Indonesia	Kenya	Malaysia	Mexico
Peru	Rwanda	Singapore	Thailand	Uganda
United Kingdom	United States	Uruguay	Venezuela	Vietnam

The source of all regression data will be the World Bank and International Monetary Fund databases. Detailed statistics have been kept by the organizations for decades, and are available to interested parties purchasing a membership.

The linear regression was originally run utilizing all six independent variables noted in the hypothesis. The results were as follows:

Dependent Variable: growth

Independent Variable	Estimated Coefficient	Standard Error	t-Statistic
one	5.78785	1.82191	3.17680
gdp	-1.66261e-004	1.73280e-004	-0.95949
aid	2.14210e-002	9.80621e-002	0.21844
invest	-9.96725e-003	0.15685	-6.35463e-002
savings	-0.15557	7.80520e-002	-1.99316
debt	5.43685e-002	0.21121	0.25741
educ	1.69124e-005	1.17357e-002	1.44110e-003
export	7.05905e-003	1.20185e-002	0.58735
Number of Observations		25	
R-squared		0.50368	
Corrected R-squared		0.29932	

The significant number to note is the r-squared value of .50368. In spite of Klein’s insistence on the statistical significance of the variables examined, all six together only explained 50% of the observed relationship with economic growth; expressed as a percentage of gross domestic product.

The regression was run a second time, removing the variables of foreign investment and primary education enrollment levels in an effort to improve the r-squared figure. The revised results were as follows:

Dependent Variable: growth

Independent Variable	Estimated Coefficient	Standard Error	t-Statistic
one	5.74687	1.16719	4.92367
gdp	-1.63279e-004	1.57695e-004	-1.03541
aid	2.25764e-002	8.79253e-002	0.25677
savings	-0.15594	7.19757e-002	-2.16651
debt	5.77819e-002	0.19386	0.29807
export	6.59678e-003	9.23303e-003	0.71448
Number of Observations		25	
R-squared		0.50355	
Corrected R-squared		0.37291	

The corrected r-squared improvement to .37291 confirms that the variables removed were not significant factors in successful economic growth.

Utilizing the second regression, the individual variables can now be analyzed individually to determine which ones, if any, are in fact statistically significant. In order to be noteworthy in explaining economic growth, each variable must have at a t-statistic of at least +/- 2.101. Referring back to the results listed previously, only two independent variables meet this criteria: one (summary of all other variables not listed individually in the analysis) and national savings rate.

Several conclusions can be drawn from the results, most notably that the hypothesis proposed by Klein is not mathematically accurate. Debt levels, foreign aid, education, and exports are not statistically significant to economic growth percentages in developing nations. The results further indicate that there are variables which are significant that Klein does not include, as the t-statistic of the 'one' category is double the required +/- 2.101. Speculating on what variables might be included in a new analysis, considerations like employment rate, total population, natural resources available, and political systems in place come to mind. Perhaps these variables would prove more meaningful to addressing the question at hand than a total indictment of capitalism itself.

Reference

Klein, Naomi (2007). *The Shock Doctrine: the Rise of Disaster Capitalism* (1 ed.). New York: Metropolitan Books.