



FORDHAM | IPED

Fordham University's graduate program in International Political Economy and Development trains graduate students in the advanced interdisciplinary analysis of global economic relations and international development issues. Graduates frequently pursue professional careers in global finance and banking, international economic policy, and in international relief and development.

Current Issues in Development is a student-run newsletter of Fordham's IPED program. It aims to share with prospective students and friends in the academic, non-profit, government, and corporate community, IPED's analysis and experience in economic and humanitarian development.

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IPED alumna fights for children's rights

Meg Gardinier currently serves as the Secretary General of ChildFund Alliance, a consortium of children's development organizations with the aim of improving the lives of vulnerable and excluded children, helping them overcome poverty and violence, and achieving their rights. The alliance, which currently operates in 58 countries, deals with issues pertaining to children such as child survival and development, child protection, and child participation.

As the Secretary General, she leads and coordinates the alliance's efforts in advocating for the rights of children. The alliance, in partnership with other children-focused development organizations globally, was very active in advocating for the inclusion and focus on children's welfare in one of the Sustainable Development Goals (SDG), the post-2015 development agenda of the United Nations. This was formalized in goal 16.2 which aims to "end abuse, exploitation, trafficking and all forms of violence and torture against children."

Following the launch of the SDGs, she has also been working on with United Nations International Children's Emergency Fund in the widespread adoption of the Global Partnership to End Violence Against Children, an international multi-stakeholder partnership that aims to build political will at the national and international level to help and work with countries to accelerate their preventive and corrective actions to end violence against children. She expects that the partnership will be finished and adopted this Spring 2016.

When asked what she thinks is critical in development sector work today, she was reminded of an African proverb that says "If you want to go fast, go alone. If you want to go far, go together." She



pointed out that partnerships and collaboration, especially with other similar development organizations such as Save the Children and World Vision, are critical factors in development work. While these organization usually compete on limited funding from donors, she noted that working with them has given the advocacy for the rights of children a collective voice to ensure its significance is heard, acknowledged, and worked on.

She shared that the IPED program had made significant contributions in her professional and personal life. The interdisciplinary focus of the program on political science, economics, and sociology and its strategic analysis on issues are two of the things which really shaped her way of thinking. She also shared that IPED has a vast network of people including students, alumni, and professors who you can connect with personally and professionally. Most importantly, she found a lifelong home within the Jesuit tradition at IPED and the values intrinsic to Jesuit teaching such as stewardship, collaboration, respect, discipline, and commitment to excellence, have been her guiding principles in life.

Political Determinants of Child Mortality

BY ARMAND AQUINO

Child mortality, a core indicator of child health and well-being, is a highly political issue, as it has been receiving global attention and high-level political commitment from government leaders, as evident when the Millennium Development Goals (MDGs) were adopted in 2000, when they launched the “Committing to Child Survival: A Promise Renewed” in June 2012, and more recently, when the United Nations adopted the post-MDG agenda or the Sustainable Development Goals (SDGs) in September 2015. The SDG targets to reduce child mortality to as low as 25 per 1,000 live births by 2030.

At the global level, significant progress on reducing child mortality has been made. The global under-five mortality rate, a measure for child mortality, dropped 53 percent from its 1990 levels¹. While significant and despite sustained high-level political commitments, these results were not enough to meet the target set forth in the MDGs. In fact, only 62 countries, roughly a third of those who adopted the MDGs, met the goal¹.

Various studies have been conducted to understand the correlation of political determinants to public health outcomes. Specifically, most of these studies looked separately into the effects of regime type, government effectiveness, and levels of corruption. The outcomes of these studies are at best mixed, especially on the



A Burmese child who the author met in his travels. Myanmar has decreased its under-five child mortality rate from 110 in 1990 to 50 in 2015, averaging an annual reduction rate of 3.2 percent. Despite significant progress, Myanmar did not meet its target¹. (Photo Credit: Armand Aquino)

effect of regime type on public health outcomes.

My analysis was aimed to replicate these by combining all these three political factors in one model, utilizing more recent data, and controlling for some economic factors typically related to child mortality. A cross-sectional data from 122 countries was used to understand the macro-political trends affecting under-five child mortality rate.

The regression results validate some of the findings of research on the link of political factors on health outcomes. From

the regression, only government effectiveness, a measure for a state's capacity to deliver public services, was empirically proven to have statistically significant correlation with reduction in child mortality. This implies that now that the SDGs are adopted globally, it is imperative to focus global efforts in programmatically building state capacities, especially in developing countries, to make them more effective in delivering public health services and help them achieve their target in child mortality rate reduction.

Additionally, economic factors considered in the study are consistent with existing literature. This implies that efforts in these areas – such as increasing health spending per capita, expanding access to clean water, and educating women—should be continued, as not only they are good in themselves, but they are also instrumental in reducing child mortality rates.

Sources:

¹UNICEF. *Levels and Trends in Child Mortality*. New York: UNICEF, 2015.

The final model is as follows:

$$LChild = 13.470 - 0.410 LHealth^* + 0.508 GovEffPos^* - 0.126 GovEffPos^{2*} - 0.09 COC - 0.924 LPrimaryF^* - 0.999 LAccess^* - 0.004 Dem$$

$LChild$ is the logarithm of under-five child mortality rate; $LHealth$ is the logarithm of health expenditure per capita; $GovEffPos$ is the government effectiveness score; $GovEffPos^2$ is the square of the government effectiveness score; COC is the score on control of corruption; $LPrimaryF$ is the logarithm of primary completion rate of females; $LAccess$ is the logarithm of percentage of population with access to clean water; and Dem is the Polity IV rating on democratic quality.

Notes:

1. R^2 of the model is 0.83
2. Variables tagged with (*) are significant at 5% level of significance
3. Data from United Nations Children's Emergency Fund (UNICEF), World Health Organization, World Bank, and Center for Systemic Peace.



Armand Aquino is a Global Markets Fellow pursuing his MA in International Political Economy and Development at Fordham University.

Technology's Effect on Stemming the Rise in Global Carbon Emissions

BY GARY TUORTO

Over the last 50 years, global carbon dioxide (CO₂) emissions have increased dramatically, as more nations became increasingly industrialized and populations continue to grow. Industrialization and population growth led to a significant surge in demand for energy, and such demand was primarily met through the utilization of non-renewable sources of energy, specifically fossil fuels.

A number of studies have been conducted trying to establish the relationship between CO₂ emissions and other economic factors including affluence, measured through Gross Domestic Product (GDP) per capita, total country population size, and level of technology. My analysis builds on these previous works and aims to test and quantify the relationship, if any, between CO₂ emissions and technology (measured through GDP per energy input), affluence, population, and freedom, measured through political and civil liberties. However, the main focus of my regression analysis is the role of technology and how it can help deal with the problems of increasing CO₂ emissions. A cross-sectional data of 131 countries in 2011, gathered from the World Bank and Freedom House databases, was used in the analysis.

The results of the regression affirm the statistically significant relationship be-



Wind Farm in Xinjiang, China. Technological innovations in harnessing renewable sources of energy such as wind, solar, and geothermal, among others, have proven to be useful in stemming the rise of CO₂ emissions globally. (Photo Credit: Chris Lim / 林慕尧)

tween CO₂ emissions and aforementioned economic factors. Specifically, my analysis shows that higher levels of technology are associated with reduction in CO₂ emissions and should be used as a major tool in stemming carbon emissions. Furthermore, the more free or democratic and open a country is the lower the levels of its carbon emissions. This implies that governments could set up institutions that encourage, facilitate, and catalyze improvements and innovations in technology, which can then lead to more efficient

means of production, growth, and development.

Additionally, it is interesting to note the quadratic relationship between affluence and CO₂ emissions: as countries develop and become more affluent, their CO₂ emissions continue to increase up to a certain point where a country becomes sufficiently developed, and then CO₂ emissions begin to decline as affluence continues to increase. This suggests that the high levels of affluence allow more developed countries to apply that excess wealth in devising more solutions through technology and innovation, which has a negative correlation with CO₂ emissions. Moreover, wealthier nations can then share these technological solutions to the developing economies around the world. Only through cooperation and innovation will we be able to collectively stem the large amounts of CO₂ emissions that threatens our shared planet and our shared future.

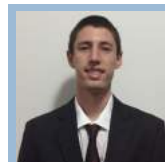
The final model is as follows:

$$LCO_2Em = -28.360 + 1.027 LPop + 4.449 LGDPCap - 0.693 LGDPEn - 0.2000 LGDPCap^2 - 0.300 Free$$

LCO_2Em is the natural logarithm of CO₂ emissions; $LPop$ is the natural logarithm of total country population; $LGDPCap$ is the natural logarithm of GDP per capita; $LGDPEn$ is the natural logarithm of GDP per energy output; $LGDPCap^2$ is the natural logarithm of GDP per capita squared; $Free$ is a dummy variable indicating if a country is free or not free, as per Freedom House's classification.

Notes:

1. R² of the model is 0.92
2. All variables are significant at 5% level of significance
3. Data from World Bank and Freedom House



Gary Tuorto is pursuing his MA in International Political Economy and Development, specializing in International Banking and Finance at Fordham University.

Faculty Feature: Dr. Troy Tassier

Dr. Troy Tassier is an Associate Professor of Economics at Fordham University, teaching courses on Epidemics and Development Policy, Economics and Social Networks, Game Theory, and Microeconomic Theory, among others, at the graduate level.

He received his B.S. Economics degree from Michigan Technological University, and M.A. and Ph.D. in Economics degrees from University of Iowa. His research interests include economics and social networks, economic epidemiology, labor economics, and complex adaptive systems.

He has authored and co-authored a number of scholarly publications in various academic journals including *Journal of Mathematical Economics*, *Journal of Economic Dynamics and Control*, *Journal of Economic History*, and *Infection Control and Hospital Epidemiology*, among others. In 2013, he published a book titled *The Economics of Epidemiology*.

Trained as a labor economist specializing in the spread of job information across social networks, Dr. Tassier leverages his expertise on social networks to understand how infectious diseases spread across populations. In his research, he uses computer simulations and social contact data to try to uncover individuals and categories of people that play signifi-



cant roles in the spread of infectious diseases.

In a recent study, Dr. Tassier, along with two colleagues at the University of Iowa namely Phil Polgreen, a medical doctor, and Alberto Segre, a computer scientist, found that because of their location in the hospital contact network, clerks and social workers play a much more important role in spreading infectious diseases in hospitals than other healthcare workers such as physicians and nurses. The findings of the research were surprising, considering that the US Centers for Disease Control and Prevention had recommended during the 2004 influenza vaccine shortage that only healthcare workers that provide direct patient care should be immunized.

He noted that these methods of social network analysis and computational epidemiology are increasingly being used to understand the spread of infectious diseases across the world.

Dr. Tassier introduces these methods to IPED students in his course, *Epidemics and Development Policy*, which is offered every fall semester. He hopes that his students are able to use an increased understanding of infectious disease contagion to better assist populations, especially those in developing countries, and to aid in the development of improved policies to fight infectious diseases across the globe.

Arrupe Fellowship

Designed to attract highly qualified full-time students who have a strong interest in pursuing a career with an international development and relief organization, the Arrupe Fellowship consists of a tuition scholarship, a generous living stipend, and an additional living stipend for an overseas summer field placement either in Latin America, Africa, or Asia. Eligibility criteria are: relevant work experience in a developing country; professional proficiency in a language widely used in international development, preferably French; intent to apply for International Development Fellowship with Catholic Relief Services; and willingness to complete the Project Management course sequence. The application deadline is early January for the following fall semester.

For further information, go to iped.fordham.edu and follow the link to "Financial Aid."



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