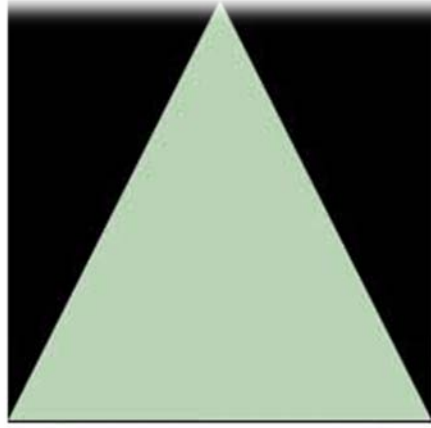


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AERC



CAREICCP 2018

Central Asian Regional Economic Integration & CPEC:
Challenges, Prospects and the Way Forward
(CAREICCP)

AERC International Conference 2018

Future health prospects depend upon





Introduction

- Global integration influences health → trade liberalization policies and financial expenditures available for health
- Affects household income → individual preferences to spend on health
- Healthy population is a main input → accentuates personal, social & physical resources
- Reckoned as one of the main ingredient → improving, expanding and sustaining development

Impacts

- Globalization → interdependencies among economies of the world
- Global integration → incomes and henceforth improving health and other facets of welfare
- Countries seek help → health care facilities
- Macro health → globally integrated economies
- The need of time → global complementary policies

Impacts

- Countries open up borders → individual's health can be affected
- Global integration brings → educational reforms, increase in incomes
- Enhanced immigration opportunities → larger flow of information via Internet and tourism that affects literacy rates
- Health can also be improved → transfers of vaccines, medical treatments, and pharmaceuticals
- Better sanitation and water facilities, access and diffusion of medical technologies

Global Statistics of Health

- Underdeveloped economies are experiencing improved life expectancy and reduced infant and child mortality
- One out of ten children could not reach his fifth birthday in less developed economies
- In 2015, child mortality was 43 deaths per 1,000 live births depicting a decline of 44% since 2000
- While life expectancy has improved from 67 years in 2000 to 71 years in 2015

Global Statistics of Health

- Children in Sub-Saharan Africa are more than 15 times likely to die before the age of 5 than children in high income countries
- Still in many countries in East Africa, 1 in 15 children dies before reaching age 5
- 5.4 million children died in 2017 under the age of 5 and 2.5 million children died within the first month of life
- This translates into 15,000 under-five deaths per day
- Life expectancy improved and child mortality declined but curve is not declining as fast in all countries

What affects Child Mortality?

- Child deaths are due to conditions that could be prevented or treated
- Leading causes of death in children under-5 years



What affects Life Expectancy?

- Life expectancy may be the outcome of multiple factors, such as:



Objective of the Study

- The major objective of present analysis is to check and enlighten the effect of globalization and its dimensions on:
 - Life Expectancy
 - Child Mortality

Research Questions

This study tries to address following questions:

- Does globalization improve health performance in terms of life expectancy and child mortality?
- Does the impact of globalization on health performance vary depending upon different dimensions of globalization and health proxy used?

Prior Evidence

- A huge body of the literature relates health status with income (Raphael, 2006; Acemoglu & Johnson, 2007; Kawachi *et al.*, 2008; Pickett & Wilkinson, 2015), health expenditures (Novignon *et al.*, 2012), inequality (Elgar *et al.*, 2017; McDaniel, 2018), medical care (Wolfe, 1986; Hertz *et al.*, 1994) and health care facilities (Lake & Baum, 2001).
- Similarly, voluminous research on development side linked globalization with growth (Dreher, 2006; Grossman & Helpman, 2015), within-country inequality (Bergh & Nilsson, 2010), the environment (Panayotou, 2000; Najam *et al.*, 2016) and many others.
- However, a few studies gave importance to health-globalization nexus in the framework of life expectancy (Bergh & Nilsson, 2010b; Ali & Audi, 2016) and infant mortality (Jorgenson & Burns, 2004). In particular, the role of globalization in determining cross country variations of child health and mortality is ignored.

Model

- The model used in the study is:

$$\mathbf{Health}_{it} = \alpha_0 + \alpha_1 \mathbf{X}_{it} + \alpha_2 \mathbf{Globalization}_{it} + \mathbf{u}_{it} \dots \dots \dots (i)$$

- Where, \mathbf{X}_{it} is a vector of determinants of health status that includes:

GDP = Economic Growth

Agd = Age Dependency

Edu = Education

Phy = Number of Physicians

Urb = Urbanization

Imm = Immunization

- Where as Health comprises of two indicators 'life expectancy' and 'child mortality'

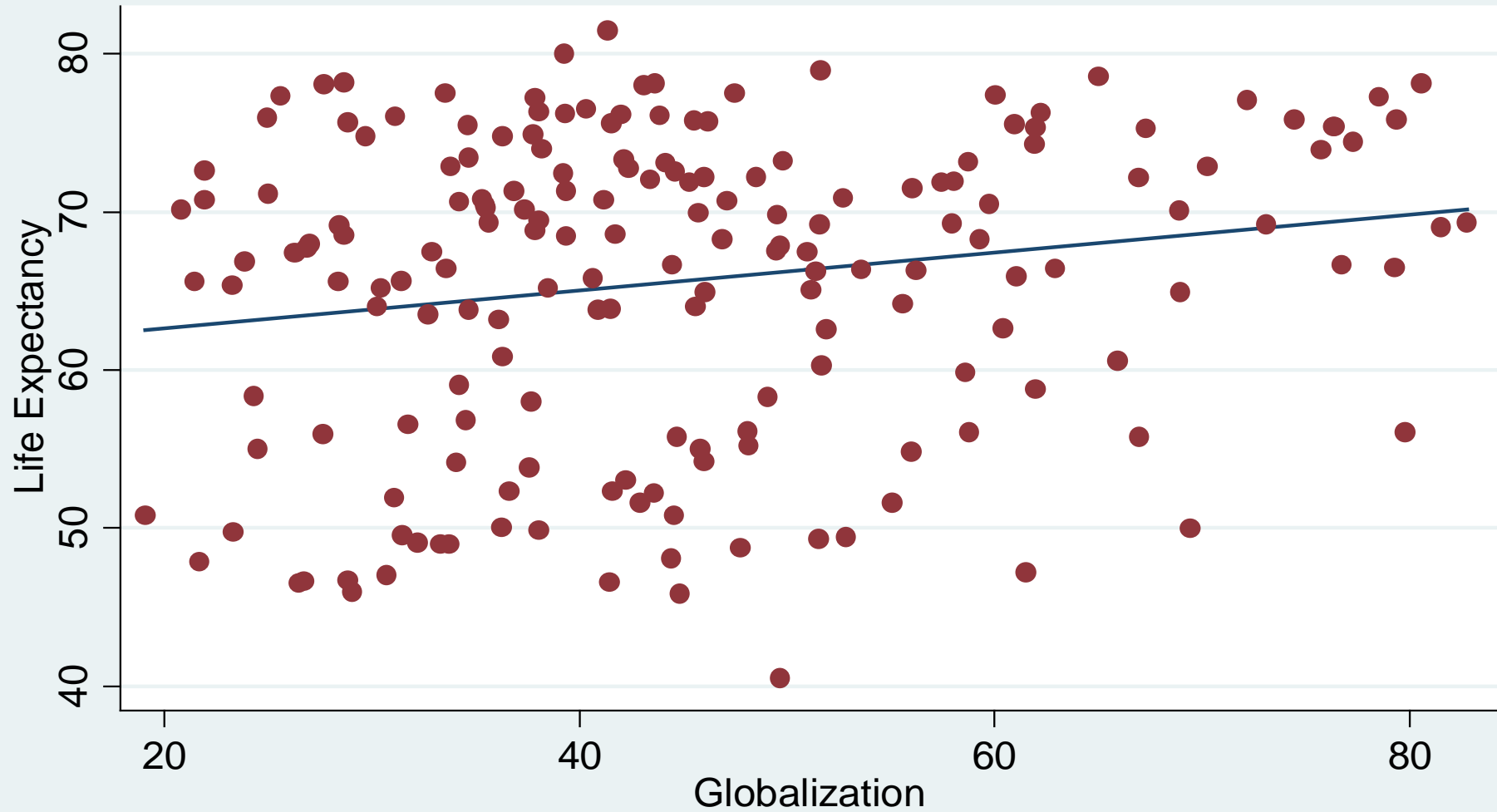
Disaggregating Globalization

- Three dimensions of globalization as independent variables:
 - (1) **Economic Globalization:** long distance flows of goods, capital and services as well as information and perceptions that accompany market exchanges,
 - (2) **Political Globalization:** the diffusion of government policies internationally, and
 - (3) **Social Globalization:** the spread of ideas, information, images, and people

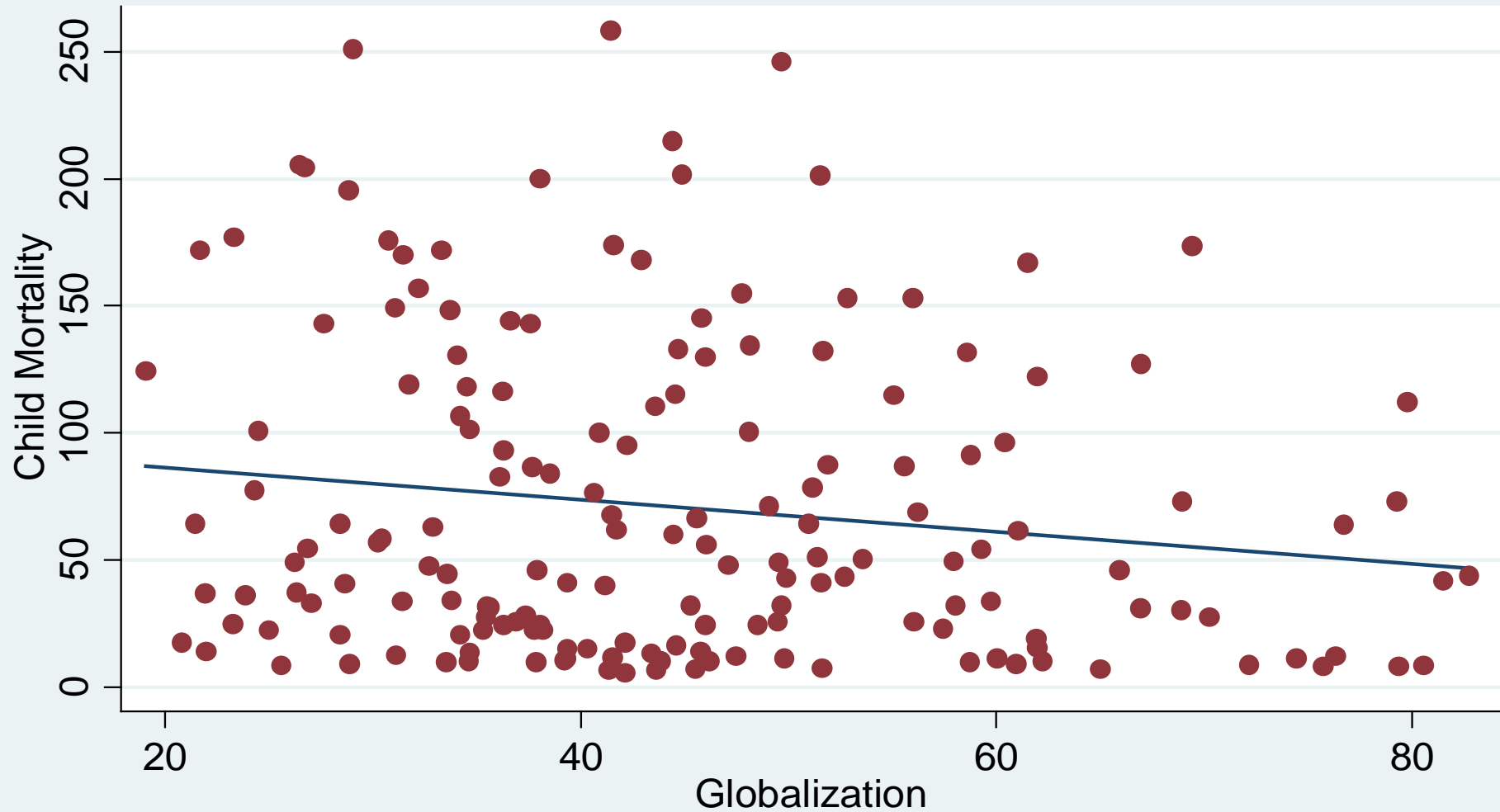
VARIABLE	DEFINITION OF VARIABLES	SOURCE
Dependent Variable		
Life expectancy	Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.	WDI 2016
Child mortality	Under-five mortality rate is the probability per 1,000 that a newborn baby will die before reaching age five, if subject to age-specific mortality rates of the specified year.	WDI 2016
Independent Variable (Control Variables)		
GDP per capita	GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products.	WDI 2016
Physicians	Physicians include generalist and specialist medical practitioners.	WDI 2016
Immunization, measles	Child immunization measures the percentage of children ages 12-23 months who received vaccinations before 12 months or at any time before the survey.	WDI 2016
Secondary school enroll	Total enrollment in secondary education, regardless of age, expressed as a percentage of the population of official secondary education age.	WDI 2016
Secondary school enrollment, female	Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Preprimary education refers to programs at the initial stage of organized instruction, designed primarily to introduce very young children to a school-type environment and to provide a bridge between home and school.	WDI 2016
Improved water	Access to an improved water source refers to the percentage of the population using an improved drinking water source. The improved drinking water source includes piped water on premises (piped household water connection located inside the user's dwelling, plot or yard), and other improved drinking water sources.	WDI 2016
Urbanization	Urban population refers to people living in urban areas as defined by national statistical offices. It is calculated using World Bank population estimates and urban ratios from the United Nations World Urbanization Prospects.	WDI 2016
Age dependency ratio	Age dependency ratio is the ratio of dependents--people younger than 15 or older than 64--to the working-age population--those ages 15-64. Data are shown as the proportion of dependents per 100 working-age population.	WDI 2016
Independent Focused Variable (Globalization & Dimensions)		
Globalization	Aggregate globalization index	KOF Index
Economic glob.	Economic globalization	KOF Index
Social glob.	Social globalization	KOF Index
Political glob.	Political globalization	KOF Index

Graphical Analysis

Relationship between Globalization & Life Expectancy



Relationship between Globalization & Child Mortality



Results and Discussion

Table 1: Life Expectancy & Globalization

VARIABLES	(1)	(2)	(3)	(4)	(5)
	Life Expectancy				
	Cross Sectional-OLS	Cross Sectional-2SLS	Pooled-OLS	Panel-2SLS	Fixed Effects
Economic Growth _{t-1}	0.0018	0.0070**	7.07e-05***	4.13e-05***	7.13e-05***
	(0.00126)	(0.00300)	(7.41e-06)	(9.78e-06)	(1.03e-05)
Age Dependency	-0.253***	-0.172**	-0.186***	-0.173***	-0.0473***
	(0.0394)	(0.0675)	(0.00769)	(0.00938)	(0.00801)
Education	0.0815***	0.0864**	0.0832***	0.0747***	0.0650***
	(0.0210)	(0.0357)	(0.00608)	(0.00671)	(0.00461)
Physicians	0.156	0.151	0.435***	0.454***	0.371***
	(0.506)	(0.745)	(0.0872)	(0.0998)	(0.0999)
Urbanization	0.103***	0.109***	0.0659***	0.0627***	0.0626***
	(0.0241)	(0.0381)	(0.00588)	(0.00745)	(0.0137)
Immunization	0.129***	0.172***	0.0477***	0.0407***	0.0438***
	(0.0352)	(0.0571)	(0.00554)	(0.00634)	(0.00336)
Globalization _{t-1}	0.0509*	0.368**	0.0613***	0.114***	0.112***
	(0.0270)	(0.167)	(0.00859)	(0.0157)	(0.00731)
Economic Globalization _{t-1}	0.0313	0.432**	0.0313***	0.142***	0.0794***
	(0.0281)	(0.192)	(0.00726)	(0.0210)	(0.00624)
Social Globalization _{t-1}	0.0333	0.344**	0.0884***	0.105***	0.0749***
	(0.0215)	(0.152)	(0.00745)	(0.0143)	(0.00674)
Political Globalization _{t-1}	0.0175	0.144	0.0884***	0.102***	0.0543***
	(0.0159)	(0.0930)	(0.00745)	(0.0149)	(0.00480)
R-squared	0.801	0.662	0.788	0.797	0.628
Sargan Test	-	p = 0.1384	-	0.4120	-

Results of Interest

- Our results depict that globalization increases longevity on average
- Economic globalization improves health and increases average years of life
- Similarly, international trade lead to greater public pressure for social welfare policies
- Social globalization involves cross-border movement of cultures and openness of media
- Increases population's perception of the supposed benefits of foreign lifestyles and intakes

Results of Interest

- The role of the media strongly facilitates the transmission of information
- The latest developments in health-related medicines and services
- Knowledge about vaccines, antibiotics, and other related research and leads to significantly higher level of life expectancy
- Political dimension of globalization, countries involve themselves in international political relationships

Results of Interest

- Political organizations provide national benefit which enhance human welfare such as improvement in health interventions
- Economic growth leads to improved health, individual will have longer life if he/she has more income to spend on quality food, health care, housing and other facilities
- Educated people have more chances to get good jobs, high income level besides capability to practice healthy diet and healthy life style to avoid unhealthy behavior
- Living in urban areas could improve health by providing immediate access to health and other services

Table 2: Child Mortality & Globalization

VARIABLES	(1)	(2)	(3)	(4)	(5)
	Child Mortality				
	Cross Sectional-OLS	Cross Sectional-2SLS	Pooled-OLS	Panel-2SLS	Fixed Effects
Economic Growth_{t-1}	7.855	3.899	-0.674**	-0.496	-25.06***
	(7.455)	(18.13)	(0.305)	(0.423)	(1.457)
Education-Female	-0.802***	-0.890***	-0.379***	-0.128***	0.125***
	(0.117)	(0.157)	(0.0215)	(0.0335)	(0.0236)
Immunization	-2.001***	-1.931***	-1.459***	-1.517***	-0.599***
	(0.252)	(0.309)	(0.0396)	(0.0444)	(0.0294)
Improved Water	0.0494	-0.0489	-0.0871***	-0.00944	-0.327***
	(0.208)	(0.642)	(0.0332)	(0.0388)	(0.0647)
Globalization_{t-1}	-0.212	-0.198	-0.705***	-1.267***	-0.342***
	(0.227)	(1.821)	(0.0499)	(0.0863)	(0.0541)
Economic Globalization_{t-1}	-0.220	-0.0464	-0.568***	-1.229***	-0.0153
	(0.235)	(1.193)	(0.0420)	(0.0840)	(0.0433)
Social Globalization_{t-1}	-0.0670	-0.291	-0.810***	-0.804***	-0.0511
	(0.195)	(1.998)	(0.0367)	(0.0371)	(0.0510)
Political Globalization_{t-1}	-0.0810	-3.797	-0.183***	-0.804***	-0.349***
	(0.131)	(3.249)	(0.0378)	(0.0371)	(0.0301)
R-squared	0.641	0.693	0.696	0.745	0.588
Sargan Test	-	p = 0.6543	-	0.1661	-

Results of Interest

- Globalization along with its three dimensions lowers child mortality significantly
- Increased international cooperation and political integration improves child health by adopting health care and maternal facilities
- Strategies to combat communicable diseases could be positive for child health in developing countries

Results of Interest

- Economic growth reflects rich countries' ability to reduce mortality
- Increased government welfare policies, and higher levels of educational attainment
- Physicians supply improves health as waiting time is reduced
- Child mortality can be reduced if parents specially mother is educated

Results of Interest

- Immunized children have less chances of experiencing numerous diseases
- Children immunized against measles, have less chances of their death
- The areas where access to safe drinking water is easy there is reduction in child death rates
- People live longer with better health status than those who do not have clean drinking water
- Pure and clean water protects children from many infective and harmful ailments

Conclusion

- Poor health is becoming a critical issue in terms of global health
- Dire need to understand the ways in which global and national health policies and programs may condense this burden
- This study affirms that increased global interaction has favorable effect on key markers of health
- In almost all estimation methods we find that economic and social globalization has stronger effect on health than political globalization which shows mixed results

Conclusion

- With increased globalization, population health improves while it lowers child mortality risks
- Results are robust to the inclusion of other determinants of health
- There is a need to provide health care facilities to LDC's specially those of immunization to all children under 5 years of age
- Special awareness through social media campaigns should be conducted by global health specialist to change in the behavior of mothers all over the world towards child care, food and hygiene

Thank
you