



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

Measuring Hope: A Quantitative Approach with Validation in Rural Myanmar

Jeffrey R. Bloem

AAEA Annual Meetings – Boston, MA

August 2, 2016



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

MICHIGAN STATE
UNIVERSITY

Background

- ▶ Development economists have long focused on the *external* constraints to development and poverty alleviation

Background

- ▶ Development economists have long focused on the *external* constraints to development and poverty alleviation
- ▶ In recent years, ‘aspirations’ has become an intriguing and exciting topic among development economists

Background

- ▶ Development economists have long focused on the *external* constraints to development and poverty alleviation
- ▶ In recent years, ‘aspirations’ has become an intriguing and exciting topic among development economists
- ▶ This follows the trend of considering potential *internal* constraints to development and poverty alleviation

Motivation

Banerjee et al. (2015):

- ▶ *“Perhaps this program worked by making beneficiaries feel that they mattered, that the rest of society cared about them, that with this initial help they now had some control over their future well-being, and therefore, the future could become better.”*

Motivation

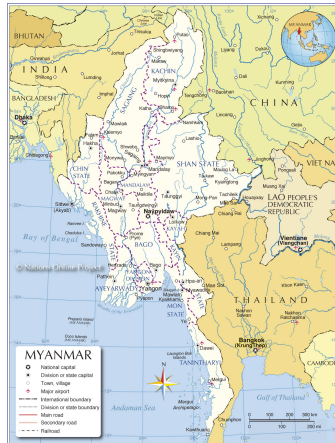
Banerjee et al. (2015):

- ▶ *“Perhaps this program worked by making beneficiaries feel that they mattered, that the rest of society cared about them, that with this initial help they now had some control over their future well-being, and therefore, the future could become better.”*
- ▶ *“A much more detailed psychological measurement would be necessary to fully understand this result and its underlying mechanism.”*

Some Definitions

- ▶ Hope is defined as a function of:
 - ▶ Aspirations
 - ▶ Agency
 - ▶ Pathways

The Study Site: Mon State, Myanmar



The Psychology of Poverty

- ▶ Poverty may have specific psychological consequences that may stall, or even prevent, a future escape from poverty (Haushofer and Fehr 2014; Mullainathan and Shafir 2013; Mani et al. 2013).

The Psychology of Poverty

- ▶ Poverty may have specific psychological consequences that may stall, or even prevent, a future escape from poverty (Haushofer and Fehr 2014; Mullainathan and Shafir 2013; Mani et al. 2013).
- ▶ May cause the poor to refrain from adopting seemingly obvious welfare-enhancing investments (Goldstein and Udry 2008; Duflo, Kremer, and Robinson 2008; Miguel and Kremer 2004).

Emerging Literature on Hope and Aspirations

- ▶ The poor lack the capacity to aspire, not because they are unable to dream or hope, but because lacking material resources means the poor are less able to explore and iterate with their aspirations (Appadurai 2004).

Emerging Literature on Hope and Aspirations

- ▶ The poor lack the capacity to aspire, not because they are unable to dream or hope, but because lacking material resources means the poor are less able to explore and iterate with their aspirations (Appadurai 2004).
- ▶ The ‘aspirations window’, the ‘aspirations gap’, and ‘aspirations failure’ (Ray 2006).

Emerging Literature on Hope and Aspirations

- ▶ The poor lack the capacity to aspire, not because they are unable to dream or hope, but because lacking material resources means the poor are less able to explore and iterate with their aspirations (Appadurai 2004).
- ▶ The ‘aspirations window’, the ‘aspirations gap’, and ‘aspirations failure’ (Ray 2006).
- ▶ ‘Aspirations failure’ can take two forms: aspirations fatalism or aspirations frustration (Ray 2006; Ross 2016)

Emerging Literature on Hope and Aspirations

- ▶ The poor lack the capacity to aspire, not because they are unable to dream or hope, but because lacking material resources means the poor are less able to explore and iterate with their aspirations (Appadurai 2004).
- ▶ The ‘aspirations window’, the ‘aspirations gap’, and ‘aspirations failure’ (Ray 2006).
- ▶ ‘Aspirations failure’ can take two forms: aspirations fatalism or aspirations frustration (Ray 2006; Ross 2016)
- ▶ Lybbert and Wydick (2016) model how hope - defined as a function of aspirations, agency, and pathways - influences economic behavior.

Data

- ▶ The Mon State Rural Household Livelihoods Survey
 - ▶ May 2015
 - ▶ 1,680 households in 140 enumeration areas

Data

- ▶ The Mon State Rural Household Livelihoods Survey
 - ▶ May 2015
 - ▶ 1,680 households in 140 enumeration areas
- ▶ The Hope Survey
 - ▶ March 2016
 - ▶ 503 households in 48 enumeration areas

Survey Instruments

- ▶ Hope Scale (Snyder 1994, 2002)
 - ▶ Likert scale
 - ▶ Bounded between 0 and 10
 - ▶ Aggregated scores generate a continuous measurement

Survey Instruments

- ▶ Hope Scale (Snyder 1994, 2002)
 - ▶ Likert scale
 - ▶ Bounded between 0 and 10
 - ▶ Aggregated scores generate a continuous measurement
- ▶ Aspirations (Bernard and Taffesse 2014)
 - ▶ Both continuous and discrete variables

Survey Instruments

- ▶ Hope Scale (Snyder 1994, 2002)
 - ▶ Likert scale
 - ▶ Bounded between 0 and 10
 - ▶ Aggregated scores generate a continuous measurement
- ▶ Aspirations (Bernard and Taffesse 2014)
 - ▶ Both continuous and discrete variables
- ▶ Self-Efficacy (Bandura 1977; Bernard, Dercon, and Taffesse 2011)
 - ▶ Dichotomous variables
 - ▶ Destiny/Luck/Powerful Others vs. Own effort

Survey Instruments

- ▶ Hope Scale (Snyder 1994, 2002)
 - ▶ Likert scale
 - ▶ Bounded between 0 and 10
 - ▶ Aggregated scores generate a continuous measurement
- ▶ Aspirations (Bernard and Taffesse 2014)
 - ▶ Both continuous and discrete variables
- ▶ Self-Efficacy (Bandura 1977; Bernard, Dercon, and Taffesse 2011)
 - ▶ Dichotomous variables
 - ▶ Destiny/Luck/Powerful Others vs. Own effort
- ▶ Locus of Control (Rotter 1966)
 - ▶ Likert scale
 - ▶ Bounded between 0 and 10
 - ▶ Generates two calculations of LoC

Validation of the Measurement Approach

- ▶ Research Question: Does this measurement approach effectively measure hope?

Determinants of Hope

- ▶ How do scores from the hope scale correlate with expected determinants?

Determinants of Hope

Table 10: Determinants of Hope (Agency and Pathways)

	(1)	(2)	(3)
	Agency	Pathways	Full Hope
	Sub-scale	Sub-scale	Scale
Education:			
Primary	0.2805	0.2119	0.2465
(up to 4 th)	(0.2384)	(0.2819)	(0.2306)
Primary	0.3544	0.5348**	0.4497**
(4 th and 5 th)	(0.2557)	(0.2609)	(0.2165)
Intermediate	0.6353**	0.5064*	0.5713**
(6 th – 9 th)	(0.2487)	(0.2662)	(0.2281)
Secondary	0.0246	0.3453	0.1857
(10 th – up)	(0.2423)	(0.3400)	(0.2210)
Gender: male	0.2328	0.4348*	0.3317*
	(0.1821)	(0.2439)	(0.1843)
Age	-0.0030	-0.0054	-0.0041
	(0.0074)	(0.0079)	(0.0067)
Obs.	465	464	464

Notes: Reported are coefficients from OLS estimates. Standard errors in parenthesis. ***P<0.01, **P<0.05, *P<0.1. Robust standard errors are clustered at the enumeration area level.

Factor Analysis

- ▶ How do scores from the hope scale correlate with similar, yet distinct, concepts?

Factor Analysis

- ▶ How do scores from the hope scale correlate with similar, yet distinct, concepts?
- ▶ Self-efficacy and Locus of Control

Factor Analysis

Table 11: Factor Analysis (Polychoric Correlation Matrix)

	Agency (HS)	Pathways (HS)	Destiny (SE)	Luck (SE)	Others (SE)	LoC Index
Agency (HS)	1					
Pathways (HS)	0.4788	1				
Destiny (SE)	0.0411	-0.0904	1			
Luck (SE)	-0.0478	-0.0781	0.5870	1		
Other (SE)	-0.0706	-0.1159	0.1272	0.2190	1	
LoC Index	0.2306	0.1652	-0.0996	-0.2349	-0.0481	1

Notes:

Hope and Welfare Perceptions

- ▶ How do scores from the hope scale correlate with perceptions of welfare?

Perceptions of Household Welfare

Table 12: Perceived Household Welfare and Hope (Agency and Pathways)

	(1) Agency Sub-scale	(2) Pathways Sub-scale	(3) Full Hope Scale
(A) Present Situation:			
“Good”	0.2979	0.0248	0.1584
[N=135]	(0.1963)	(0.2284)	(0.1775)
“Not Good”	-0.4190**	-0.4500*	-0.4375**
[N=194]	(0.1810)	(0.2424)	(0.1798)
Obs.	480	479	479
(B) Compared to Neighbors:			
“Better”	1.1160***	0.7251*	0.9186***
[N=25]	(0.2529)	(0.3826)	(0.2783)
“Worse”	-0.5646***	-0.3159	-0.4422**
[N=142]	(0.1824)	(0.2390)	(0.1786)
Obs.	480	479	479
(C) In the past year:			
“Improved”	-0.1519	0.3073	0.0752
[N=97]	(0.1964)	(0.2972)	(0.2021)
“Worsened”	-0.3264*	-0.0043	-0.1678
[N=128]	(0.1897)	(0.2527)	(0.1961)
Obs.	477	476	476

Notes: Reported are coefficients from OLS estimates. Standard errors in parenthesis.
 ***P<0.01, **P<0.05, *P<0.1. Robust standard errors are clustered at the enumeration area level.

Perceptions of Basic Needs Provisions

Table 13: Perception of Basic Needs and Hope (Agency and Pathways)

	(1) Agency Sub-scale	(2) Pathways Sub-scale	(3) Full Hope Scale
(A) Food Consumption:			
"More than Adequate" [N=32]	0.4086 (0.3403)	0.1561 (0.3435)	0.2809 (0.2973)
"Less than Adequate" [N= 55]	-0.4723* (0.2614)	-0.3770 (0.4026)	-0.4261 (0.3022)
Obs.	478	477	477
(B) Housing:			
"More than Adequate" [N=43]	0.6084** (0.2961)	0.3057 (0.3310)	0.4554 (0.2877)
"Less than Adequate" N=102	-0.2758 (0.1732)	-0.1733 (0.2593)	-0.2262 (0.1881)
Obs.	480	479	479
(C) Clothing:			
"More than Adequate" [N=49]	0.2059 (0.2480)	0.4281 (0.3329)	0.3155 (0.2580)
"Less than Adequate" [N=55]	-0.6461** (0.2934)	-0.3472 (0.3990)	-0.4982 (0.3076)
Obs.	480	479	479
(D) Health Care:			
"More than Adequate" [N=36]	0.4985* (0.2926)	0.1897 (0.3446)	0.3425 (0.2576)
"Less than Adequate" [N=70]	-0.6917*** (0.2394)	-0.7377** (0.3641)	-0.7163*** (0.2629)
Obs.	478	477	477
(E) Education:			
"More than Adequate" [N=28]	-0.1484 (0.3533)	0.2251 (0.4377)	0.0358 (0.3330)
"Less than Adequate" [N=184]	-0.5226*** (0.1849)	-0.4029 (0.2546)	-0.4653** (0.1962)
Obs.	477	476	476

Notes: Reported are coefficients from OLS estimates. Standard errors in parenthesis.
 ***P<0.01, **P<0.05, *P<0.1. Robust standard errors are clustered at the enumeration area level.

Future Research Priorities

- ▶ Improving interpersonal comparability
 - ▶ Respondents may understand the ‘same’ concept in vastly different ways

Future Research Priorities

- ▶ Improving interpersonal comparability
 - ▶ Respondents may understand the ‘same’ concept in vastly different ways
- ▶ Identifying poverty traps
 - ▶ Does ‘Hope Break a Poverty Trap?’
 - ▶ A psychological measurement of hope may be a worthwhile alternative to asset-based measurements

Future Research Priorities

- ▶ Improving interpersonal comparability
 - ▶ Respondents may understand the ‘same’ concept in vastly different ways
- ▶ Identifying poverty traps
 - ▶ Does ‘Hope Break a Poverty Trap?’
 - ▶ A psychological measurement of hope may be a worthwhile alternative to asset-based measurements
- ▶ Establishing causality
 - ▶ Psychologists have produced many studies highlighting correlations between hope and various important outcomes
 - ▶ The possibility of reverse causality is quite strong in much of this literature
 - ▶ Policymakers are more interested in understanding causal relationships

Concluding Thoughts

- ▶ The approach, developed by psychologists, to measure hope works relatively well amongst the rural poor in a developing country
 - ▶ With necessary effort contextualizing the survey instruments
 - ▶ Improvements could be made, particularly interpersonal comparability

Concluding Thoughts

- ▶ The approach, developed by psychologists, to measure hope works relatively well amongst the rural poor in a developing country
 - ▶ With necessary effort contextualizing the survey instruments
 - ▶ Improvements could be made, particularly interpersonal comparability
- ▶ Hope is not the only important aspect of the psychological lives of the poor
 - ▶ An quantitative measurement of hope may provide valuable insight for development policies

Thank you

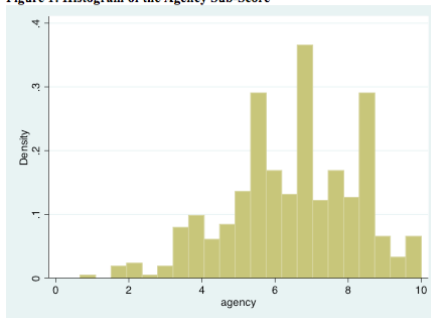
Funding provided by USAID Burma



www.feedthefuture.gov

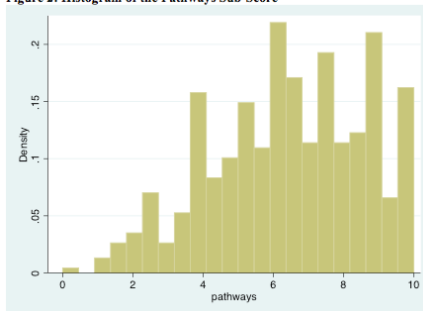
A1: Hope Scale Score Distributions

Figure 1: Histogram of the Agency Sub-Score



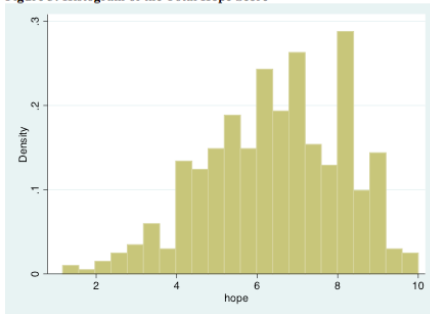
A1: Hope Scale Score Distributions

Figure 2: Histogram of the Pathways Sub-Score



A1: Hope Scale Score Distributions

Figure 3: Histogram of the Total Hope Score



A3: Construct Validity - Aspirations

Table 8: Determinants of Aspirations

	(1) Own Education Aspiration	(2) Son Education Aspiration	(3) Daughter Education Aspiration	(4) Agricultural Land Aspiration	(5) Remittances Aspiration	(6) Donations Aspiration	(7) Income Aspiration	(8) Aspirations Index
Education:								
Primary	0.1245	0.4242***	0.4583**	0.0325	-0.1272	0.0207	0.0505	0.1111*
(up to 4 th)	(0.1284)	(0.1473)	(0.1934)	(0.1136)	(0.1315)	(0.0580)	(0.1264)	(0.0650)
Primary	0.1910	0.5603***	0.6018***	0.0135	-0.0597	0.2457*	0.1356	0.2039***
(4 th and 5 th)	(0.1448)	(0.1607)	(0.1715)	(0.1249)	(0.1239)	(0.1410)	(0.1512)	(0.0637)
Intermediate	0.3489**	0.6543***	0.7004***	-0.0608	-0.1993	-0.0049	0.1036	0.1654**
(6 th – 9 th)	(0.1546)	(0.1950)	(0.1791)	(0.1803)	(0.1459)	(0.0636)	(0.1530)	(0.0719)
Secondary	0.3811**	0.6988***	0.8098***	0.1082	-0.3318*	0.0586	0.1346	0.1932**
(10 th – up)	(0.1734)	(0.2016)	(0.1619)	(0.2124)	(0.1163)	(0.1030)	(0.1455)	(0.0738)
Gender: Male	-0.0330	0.1542	0.1208	0.2370**	0.0347	-0.0575	0.2116*	0.0894*
	(0.1078)	(0.1103)	(0.1362)	(0.1126)	(0.0741)	(0.0662)	(0.1172)	(0.0473)
Age	-0.0082	-0.0052	-0.0043	-0.0020	0.0069**	-0.0030	-0.0022	-0.0019
	(0.0027)	(0.0049)	(0.0039)	(0.0029)	(0.0028)	(0.0045)	(0.0021)	(0.0014)
Obs.	465	342	351	465	462	465	464	462

Notes: Reported are coefficients from OLS estimates. Standard errors in parenthesis. ***P<0.01, **P<0.05, *P<0.1. Robust standard errors are clustered at the enumeration area level.

A3: Construct Validity - Aspirations Gap

Table 9: Determinants of the “Aspirations Gap”

	(1) Own Education Asp. Gap	(2) Agricultural Land Asp. Gap	(3) Remittances Aspiration Gap	(4) Donations Aspiration Gap	(5) Income Aspiration Gap	(6) Aspiration Gap Index
Education:						
Primary (up to 4 th)	-0.1039 (0.1059)	-0.0574 (0.1288)	-0.1517 (0.1321)	0.0366 (0.0567)	0.0685 (0.1308)	-0.0491 (0.0468)
Primary (4 th and 5 th)	-0.3254** (0.1246)	0.0299 (0.1270)	-0.0719 (0.1248)	0.2669* (0.1410)	0.0449 (0.1378)	-0.0110 (0.0602)
Intermediate (6 th – 9 th)	-0.5119*** (0.1511)	-0.0972 (0.1527)	-0.2440* (0.1341)	-0.0310 (0.0642)	0.0515 (0.1402)	-0.1669** (0.0677)
Secondary (10 th – up)	-0.9604*** (0.1722)	0.1104 (0.2199)	-0.3622*** (0.0943)	0.0554 (0.0974)	0.0645 (0.1610)	-0.2196** (0.0831)
Gender: Male	0.0097 (0.09963)	0.1446 (0.1172)	0.0782 (0.0821)	-0.0545 (0.0654)	0.1888 (0.1153)	0.0822 (0.0552)
Age	-0.0074*** (0.0026)	-0.035 (0.0030)	0.0050** (0.0024)	-0.0032 (0.0045)	-0.0019 (0.0023)	-0.0023 (0.0015)
Obs.	465	465	462	465	464	462

Notes: Reported are coefficients from OLS estimates. Standard errors in parenthesis. ***P<0.01, **P<0.05, *P<0.1. Robust standard errors are clustered at the enumeration area level.

A4: More Summary Statistics

Table 2: Aspirations – Summary Statistics (discrete variables)

	Mode	Count	Obs.	Share
Occupation				
Own Current Occupation	Agriculture	120	503	23.86%
Own Aspired Occupation	Business Owner	225	503	44.73%
Housing				
Current Wall Material	Wood	224	503	44.53%
Aspired Wall Material	Brick	306	503	60.83%
Current Roof Material	Iron	308	503	61.23%
Aspired Roof Material	Iron	473	503	94.04%
Current Floor Material	Wood	384	503	76.34%
Aspired Floor Material	Wood	311	503	61.83%
Current Number of Floors	1	405	503	80.52%
Aspired Number of Floors	2	258	503	51.29%

Notes: The questionnaire included questions regarding aspirations for the occupation of the respondent's children. The model response, however, was "I don't know".

A4: More Summary Statistics

Table 4: Hope Scale Classifications

	Full Sample
Low Hope (Agency ≤ 5 , Pathways ≤ 5)	13.12%
Lack of Waypower (Agency > 5 , Pathways ≤ 5)	16.50%
Lack of Willpower (Agency ≤ 5 , Pathways > 5)	9.34%
High Hope (Agency > 5 , Pathways > 5)	61.03%

Notes:

A4: More Summary Statistics

Table 5: Integrated Hope Classifications

		<u>Agency</u>			
		<u>Low</u>	<u>High</u>		
<u>Aspirations</u>	<u>High</u>	"Low-will High Aspiration" 5.76%	"Aspirational Hope" 33.00%	<u>High</u>	<u>Pathways</u>
		"Wishful Hope" 5.76%	"Low-ways High Aspiration" 6.36%	<u>Low</u>	
		"Low-will Low Aspiration" 4.17%	"Low Aspirational Hope" 28.03%	<u>High</u>	
	<u>Low</u>	"Hopeless" 7.35%	"Low-ways Low Aspiration" 10.13%	<u>Low</u>	