

# Improving primary health care financing in Ghana: Efficiency and fiscal space analysis

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## Introduction (1)

- Primary health care (PHC) crucial for UHC
  - Particularly after the Alma Ata declaration
  - Resource constrained countries (e.g. SSA)
- Benefits abound
  - Improves health care equity
  - Easy access for poor and vulnerable population groups
  - Less pressure on higher level facilities
  - Improves efficiency

## Introduction (2)

- PHC facilities in developing countries however face daunting challenges
  - Poor facilities and supplies
  - Lack of adequate financing
- While there have been calls for increased gov't financing, resources are limited
  - Many other competing public expenditure items
- Need to create additional fiscal space through improved fiscal space
- We pursue this study
  - estimate efficiency
  - examine the potential fiscal space from improved efficiency
  - investigate efficiency disparities in public and private facilities.

## Methods

- Data:
- 2015 Access, Bottlenecks, Cost and Equity (ABCE) project conducted by
  - Institute for Health Metrics and Evaluation (IHME) in collaboration with
  - Ghana Ministry of Health (MOH),
  - Ghana Health Service (GHS),
  - Ghana UNICEF office and UNICEF
- Collected between 2007 and 2011 on 73 health centers

## Methods (2)

- Measuring efficiency
  - Stochastic frontier Analysis (SFA) was used.
  - Preferred to DEA for various reasons...
- Efficiency gain: computed as the proportion of facility revenues that could be saved if efficiency was improved.
- 'Nopo' Decomposition procedure: Public-private efficiency disparity
  - Estimates gap and decomposes into
    - Explained component
    - Unexplained

## Methods (3)

- Variables
- *Output variable:*
  - Outpatient visits (Inpatient services are mostly not available at primary level).
- *Input variable:*
  - number of personnel
  - hospital beds and
  - expenditure on other capital items and administration.
  - Other control variables used include
    - rural/urban location
    - public/private facility type
    - age of facility
    - display of fee list and
    - number of rooms available.

## Results

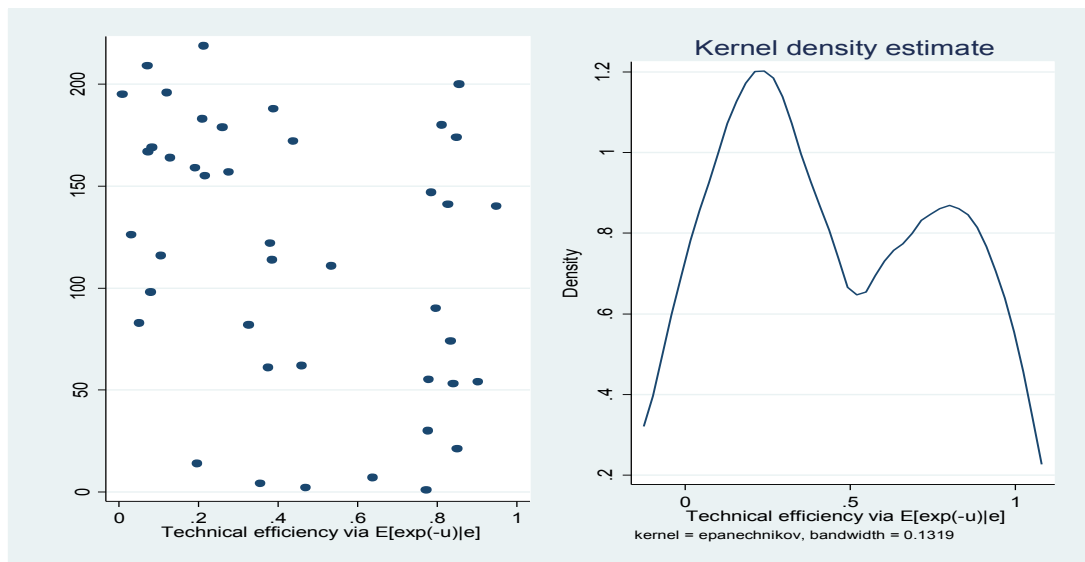
### Estimated production function

Variable	Coefficient
Ln labour	0.24924** (0.10358)
Ln beds	0.53260*** (0.08318)
Rural	-0.04596 (0.09195)
Public	-0.54704** (0.23284)
Ln age	-0.23807** (0.09406)
Fee list	1.05780*** (0.12929)
Ln rooms	0.38479*** (0.12443)
Constant	7.98531*** (0.60185)
$\sigma_u$	0.8952109*** (0.11601)
$\sigma_v$	0.496361*** (0.07899)

## Mean efficiency estimates

Variable	Mean	Standard Error
<b>Facility location</b>		
Rural	0.53	0.02
Urban	0.53	0.03
<b>Facility type</b>		
Private	0.61	0.03
Public	0.52	0.02
<b>Regional Location</b>		
Ashanti	0.56	0.03
Brong Ahafo	0.71	0.01
Central	0.71	0.01
Eastern	0.52	0.05
Greater Accra	0.31	0.10
Northern	0.33	0.07
Upper East	0.64	0.05
Upper West	0.45	0.03
Volta	0.48	0.06
Western	0.56	0.05
<b>Performance Based Financing status</b>		
No	0.53	0.02
Yes	0.69	0.02

## Distribution of efficiency



## Average potential gains from efficiency

Variable	Mean (GHC)	Mean (US\$)	Standard Error
<b>Facility location</b>			
Rural	11,362.00	6,930.14	1419.49
Urban	32,455.62	19,795.98	11,013.62
<b>Facility Type</b>			
Private	34,406.26	20,985.75	12,348.03
Public	17,472.92	10,657.43	4,394.89
<b>Administrative region</b>			
Ashanti	22,305.66	13,605.11	7,991.19
Brong Ahafo	5,212.99	3,179.61	1,800.00
Central	44,175.18	26,944.21	29,673.39
Eastern	9,897.81	6,037.07	2,317.69
Greater Accra	15,382.95	9,382.68	12,286.15
Northern	16,447.83	10,032.19	9,666.65
Upper East	8,249.91	5,031.95	2591.58
Upper West	27,889.06	17,010.65	12,238.74
Volta	6,176.20	3,767.11	1,842.61
Western	9,116.42	5,560.47	4,374.10
<b>Performance Based Financing</b>			
No	19,391.1	11,827.41	4,748.25
Yes	69,804.04	42,576.28	64,532.98

## Public-private disparity in efficiency

	Coefficient
<b>Total Gap (<math>\Delta</math>)</b>	0.233
<b>Decomposition of <math>\Delta</math></b>	
$\Delta_0$	0.494
$\Delta_{pu}$	-0.132
$\Delta_{pr}$	-0.129
$\Delta_x$	0.000
<b>% Public in Common Support</b>	0.321
<b>% Private in Common Support</b>	0.667

## Conclusion

- Some potential space exist for the health sector if efficiency was improved
- How?
  - Effective monitoring and evaluation at the sub-national level
  - PBF could work – facilities under PBF scheme more efficient
    - This could be sustained and scaled-up
- Efficiency gains should only be seen as complementary to government resources to the health sector.