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The internal migration decisions of youth in Ghana

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Motivations

Internal migration : a relevant question ?

- In 2005, around 763 million people in the world (11% of the world population) lived in their birth country but outside of their birth region

- In Africa, 113.5 million internal migrants : 12.5% of the African population

Research questions

- What are the characteristics of educated youth who migrate between regions in Ghana ?

- What part economic opportunities do play in the internal migration decision in Ghana ?

- Is income and/or unemployment driving the internal migration in Ghana ?

Literature

Consequences of internal migration in Ghana :

- For the migrant : Lichtfield and Waddington (2003) ;
  Boakye-Yiadom (2006)

- For the household : Adams et al. (2008) ; Adaawn and Owusu
  (2013) ; Ackah and Medvedev (2012)

Internal migration and labour market :

- Main theoretical papers : Lewis (1954) ; Harris and Todaro
  (1970)

- Recent empiric papers : Hu et al. (2011) ; Lu and Shunfeng
  (2006)

Literature

Internal migration and labour market in Ghana : Tsegai (2007)

- Data collected in 2001, 501 households from Volta region

- Probit model with Heckman equation (against selection bias)

- Result : income differences between migrants and non-migrants are a factor of internal migration

$\Rightarrow$ Lack of economic paper on this topic in Ghana

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Contributions

- Fill a gap in literature

- Overview of youth internal migration in Ghana

- Adapt a choice model to internal migration

- Unique database collected by authors

Main database

The Ghana Opportunities for Transitioning Senior High School
Students (GOT) survey :

- Following students of senior high school (SHS) between 2010
  and 2012

- Interview 3 275 youths

- Migration : when current region is different than birth region
  and SHS region
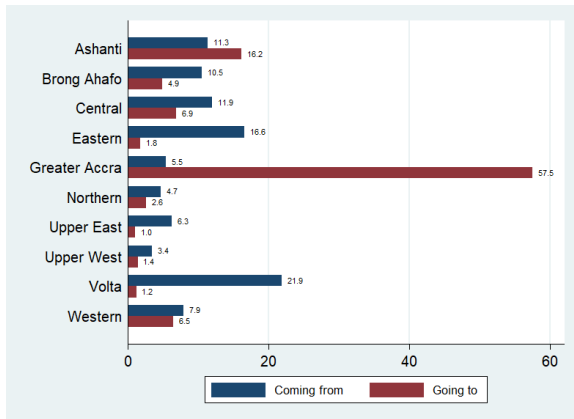
Sample characteristics

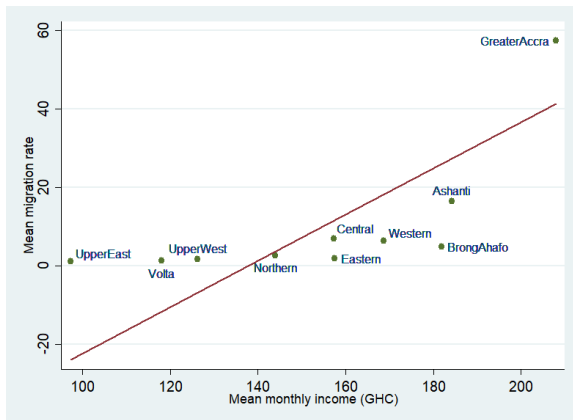|	
Male	61.67 %
Age	21.93 year-old
Migration after SHS	21.72%
Rural born	59.57%
Network (migrants per school)	21.67%
Years since graduation	1.44
Region	
Ashanti	19.50 %
Brong Ahafo	10.23 %
Central	7.70 %
Eastern	6.30 %
Greater Accra	26.24 %
Northern	7.08 %
Upper East	2.01 %
Upper West	2.54 %
Volta	10.67 %
Western	7.74 %

Additional database

The Ghana Living Standards Survey (GLSS5) from Statistics Ghana and World Bank :

- Survey conducted in 2005

- Sample of 21 330 individuals

- Information about average income by region

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Migration and income

McFadden model

McFadden choice model (1974) adapted to migration issue :

- What are the drivers of migration to one region over another

- Regional characteristics : average income ratio, average unemployment ratio

- Individual characteristics : age, sex, cognitive capacity, ...

McFadden model

Assumptions :

- A rational individual assesses the characteristics of each region with his/her own criteria

- Then he/she chooses the region that maximizes his/her utility

Estimation

Mixed logit model of the choice of region of residence :

$$U_{ij}^* = \beta_{0j} + \beta_{ratio}Ratio_{ij} + \beta_{1j}Resid_i + \beta_{2j}Ability_i + \beta_{3j}Age_i$$
$$+ \beta_{4j}AgeSquare_i + \beta_{5j}Rural_i + \beta_{6j}Male_i + \beta_{6j}TimeDiploma_i$$
$$+ \beta_{7j}Network_i + \beta_{8j}DistanceAccra_i + a_i + e_{ij}$$
$$(1)$$

Income ratio

	(1)	(2)	(3)	(4)
Alternative-specific variables				
Birth and destination region	-18.732***			
	(2.037)			
SHS and destination region		-23.065***		
		(2.255)		
Indi educated youths, birth-destination			-4.962***	
			(1.344)	
Indi educated youths, SHS-destination				-7.770***
				(1.364)
Individual-specific variables				
CENTRAL (baseline region)				
ASHANTI				
Residence	0.075	0.194	0.196	0.249
	(0.267)	(0.270)	(0.260)	(0.258)
Cognitive abilities	0.001	0.001	0.001	-0.000
	(0.005)	(0.006)	(0.005)	(0.006)
Age	-0.340	-0.399	-0.236	-0.175
	(0.361)	(0.381)	(0.368)	(0.336)
Age squared	0.008	0.009	0.005	0.004
	(0.008)	(0.008)	(0.008)	(0.007)
Born rural region	-0.691***	-0.876***	-0.857***	-0.760***
	(0.247)	(0.248)	(0.245)	(0.252)
Male	0.383	0.450	3.171***	4.764***
	(0.298)	(0.286)	(0.819)	(0.857)
Number of years since diploma	-0.037	0.014	-0.008	0.015
	(0.084)	(0.081)	(0.083)	(0.083)
Percentage migrants per SHS	-7.767***	-6.277***	-8.635***	-8.138***
	(1.746)	(1.726)	(1.717)	(1.616)
Distance SHS-Accra (log)	1.945***	2.059***	1.877***	1.852***
	(0.286)	(0.301)	(0.294)	(0.301)
Constant	-6.874	-7.663	-5.993	-7.547
	(4.653)	(4.977)	(4.863)	(4.606)

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Individual characteristics

Individual characteristics	Effect	Probability of migrating to
Compared to migrating to Central		
Born in a rural region	−	Ashanti ; Greater Accra
	+	Volta
Being a man	+	Almost every region
Older youths	+	Eastern ; Upper West ; Western

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SHS characteristics

SHS characteristics	Effect	Probability of migrating to
	Compared to migrating to Central	
Network of migrants	−	Ashanti ; Greater Accra
Distance SHS-Accra	+	Ashanti ; Brong Ahafo ; Northern
	−	Eastern

Income and unemployment ratios - shs/destination

				Alternative-specific variables					
Ratio of shs-region to				-21.176***					
dest-region incomes				(2.221)					
Ratio of shs-region to				-0.975***					
dest-region unemployment				(0.235)					
				Individual-specific variables					
Baseline region :		Brong		Greater		Upper	Upper		
Central	Ashanti	Ahafo	Eastern	Accra	Northern	East	West	Volta	Western
Boarding	0.223	-0.252	0.169	0.114	-0.064	0.132	0.627	-0.446	-0.317
	(0.267)	(0.340)	(0.339)	(0.305)	(0.404)	(0.566)	(0.691)	(0.289)	(0.327)
Cognitive abilities	0.002	-0.003	0.002	0.002	-0.001	0.008	0.003	-0.007	0.002
	(0.006)	(0.006)	(0.006)	(0.006)	(0.008)	(0.009)	(0.013)	(0.005)	(0.006)
Age	-0.394	0.642	1.804**	-0.411	1.097	0.274	0.658	-0.235	0.670
	(0.368)	(0.473)	(0.703)	(0.431)	(0.926)	(0.827)	(0.838)	(0.367)	(0.496)
Age squared	0.009	-0.012	-0.038**	0.009	-0.022	-0.006	-0.010	0.006	-0.016
	(0.008)	(0.010)	(0.016)	(0.010)	(0.020)	(0.018)	(0.019)	(0.008)	(0.011)
Born rural region	-0.869***	-0.345	0.495*	-0.736***	-0.496	0.183	-0.707*	0.527**	-0.044
	(0.244)	(0.290)	(0.260)	(0.223)	(0.408)	(0.463)	(0.399)	(0.236)	(0.244)
Male	0.443	0.008	0.214	0.269	0.275	0.389	0.431	0.041	0.900***
	(0.281)	(0.357)	(0.290)	(0.271)	(0.504)	(0.511)	(0.604)	(0.266)	(0.310)
Years since diploma	-0.022	-0.094	0.071	0.104	-0.214	0.083	0.046	-0.046	0.074
	(0.080)	(0.096)	(0.083)	(0.077)	(0.137)	(0.164)	(0.143)	(0.077)	(0.093)
Percentage migrants	-6.889***	-4.818**	2.208	2.723*	-5.984***	-5.648**	-4.784**	-3.042**	-4.672**
per SHS	(1.666)	(2.027)	(1.638)	(1.539)	(2.744)	(2.312)	(3.942)	(1.407)	(2.095)
Distance SHS-Accra	2.004***	4.822***	-0.636***	-0.162	7.962***	1.767*	2.516***	0.737**	1.539***
(log)	(0.261)	(0.545)	(0.231)	(0.189)	(1.367)	(1.031)	(0.906)	(0.291)	(0.289)
Constant	-6.789	-33.961***	-19.261**	0.182	-51.862***	3.089	-19.372**	7.344	-15.595***
	(4.715)	(6.085)	(8.241)	(5.248)	(12.062)	(7.564)	(9.086)	(4.816)	(5.750)
Observations				18 780					
Individuals				1 878					

ASC logit model; Coefficients (standard deviations in parentheses); baseline region is CENTRAL.
*** p<0.01, ** p<0.05, * p<0.1

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Income and unemployment ratios

- An increase in the income ratio has a higher effect on migration than an increase of the unemployment ratio

- An increase of average unemployment in the region of residence decreases the probability of migration

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Main results

- Women and rural born youth have less access to internal migration in Ghana

- Young educated Ghanaians migrate inside of their country hoping for a better income than where they were living

- Income differences are more taken into consideration by youth than unemployment differences between regions in Ghana

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Policy advice

- Need to develop rural regions and increase women's opportunities

- Regions have to offer attractive incomes to keep young educated Ghanaians