

Four Reproducible Contributions in Development Economics

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Making the Next Billion Demand Access

The Local-Content Effect of google.co.za in Setswana

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Making the
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Grandfathers
and
Grandsons

Global Value
Chains in
LICs

Motivation

- Two-Sided Market / Cross-side network effects
- WWW content is hard
- Social media content is easier: Facebook vendor lock-in

Table: Protocol Stack and Network Effects (NE)

Soc. Media Website (simple NE, propr.)	Spam (negative NE)
Websites (cross-side NE)	Email (simple NE)
TCP/IP (simple NE)	

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Quantifying Content

- using visit counts instead of page counts

Endogeneity

- Maybe Google introduced the interface following increased usage among Setswana speakers?
- Botswana speaks Setswana
- google.co.bw was translated in Setswana
- introduction on google.co.za was a spillover, exogenous (2011)
- google.co.za also introduced Xhosa, but not exogenous

Data NIDS

- 2008 & 2011 (pre), 2013 (post)

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Table: Internet Access and Computer Ownership

	Internet	(P > t)	Computer	(P > t)
event * setswana	0.012	0.00	0.024	0.00
event	-0.012	0.00	-0.054	0.01
setswana	-0.014	0.00	-0.015	0.00
income	0.000	0.00	0.000	0.00
woman	-0.001	0.23	-0.023	0.00
education	0.001	0.00	0.006	0.00
Observation	47665		46464	

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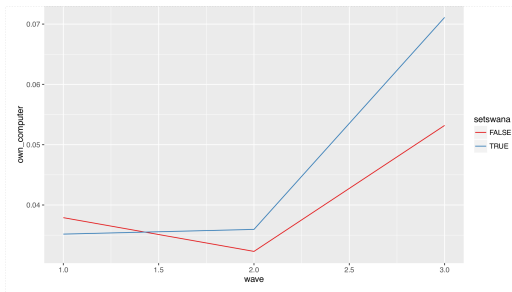
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Figure: Computer Ownership Setswana



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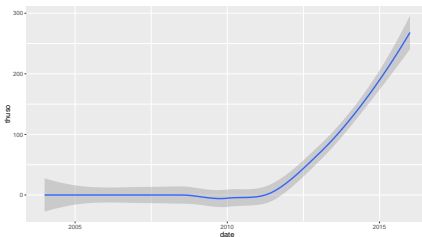
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Figure: Effect on online usage of Setswana



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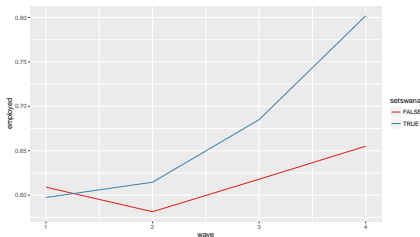
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Figure: Employment for Individuals who Own a Computer in Wave 3



Grandfathers and Grandsons

Effects of a Male-Only Change in Pensions

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Motivation

- Income recipient and growth
- Growth and future income
- Grandmothers and Granddaughters:
 - South African pension, including black population
 - eligibility-age differential: women 65, men 60
 - life expectancy significantly lower: large selection bias

Identification Strategy

- Pension change (2010): men 65 \rightarrow 60, to a par
 - still selection bias based on life expectancy
- NIDS: 2008 (pre) & 2011 (post)

Grandfathers and Grandsons

Effects of a Male-Only Change in Pensions

Table: Food and Non-Food Expenditure

	Food	(P > t)	Non-Food	(P > t)
event * Man 60-65	103.82	(0.03)	-0.05	(0.22)
event * Man 65+	0.09	(1.00)	-0.02	(0.35)
event * Woman 60-65	4.69	(0.90)	0.02	(0.36)
event * Woman 65+	104.24	(0.00)	0.01	(0.51)
Man 60-65	55.61	(0.20)	206.16	(0.57)
Man 65+	112.18	(0.00)	377.43	(0.57)
Woman 60-65	46.88	(0.13)	-356.02	(0.16)
Woman 65+	-0.68	(0.00)	-181.57	(0.38)
event	35.23	(0.00)	131.32	(0.08)
Household Income	0.03	(0.00)	0.09	(0.00)
Girl	-12.49	(0.22)		
Intercept	810.81	(0.00)		
Observations	15938		15938	

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Table: Weight for Age

	General	(P > t)	Boys	(P > t)	Girls
event * Man 60-65	0.33	(0.02)	0.44	(0.03)	0.26
event * Man 65+	-0.03	(0.74)	0.15	(0.31)	-0.30
event * Woman 60-65	0.15	(0.18)	0.18	(0.23)	0.13
event * Woman 65+	0.04	(0.58)	0.29	(0.79)	0.03
Man 60-65	-0.27	(0.03)	-0.35	(0.06)	-0.29
Man 65+	-0.06	(0.47)	-0.35	(0.01)	0.26
Woman 60-65	-0.17	(0.06)	-0.14	(0.27)	-0.18
Woman 65+	0.03	(0.69)	0.09	(0.32)	-0.02
event	0.00	(0.00)	0.01	(0.85)	0.06
Household Income	0.00	(0.00)	0.00	(0.00)	0.00
Girl	0.09	(0.00)			
Intercept	-0.31	(0.00)	-0.33	(0.00)	-0.23

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Table: Height for Age

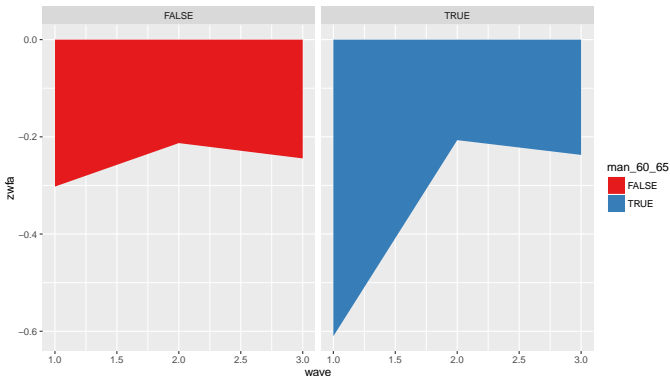
	General	(P > t)	Boys	(P > t)	Girls	(P > t)
event * Man 60-65	-0.52	(0.09)	-0.94	(0.04)	-0.24	(0.04)
event * Man 65+	-0.23	(0.31)	-0.03	(0.92)	-0.36	(0.04)
event * Woman 60-65	0.27	(0.24)	0.55	(0.08)	0.02	(0.92)
event * Woman 65+	-0.00	(0.98)	-0.16	(0.49)	0.14	(0.08)
Man 60-65	0.11	(0.66)	0.35	0.37	-0.06	(0.92)
Man 65+	0.19	(0.29)	-0.07	(0.79)	0.42	(0.04)
Woman 60-65	-0.32	(0.08)	-0.26	(0.32)	-0.40	(0.04)
Woman 65+	0.04	(0.74)	0.12	(0.50)	-0.03	(0.92)
event	-0.01	(0.867)	0.01	(0.92)	-0.03	(0.92)
Household Income	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Girl	0.22	(0.00)				
Intercept	-1.30	(0.00)	-1.30	(0.00)	-1.08	(0.00)

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WfA households with and without a newly eligible member

Figure: Weight for Age



Global Value Chains in Low Income Countries

R package: decomp

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Implement trade decomposition procedures in R

- Leontief (1936)
- Wang Wei Zhu (2013)

Motivation:

- simplify for end users
- consistent and transparent approach

Additional work:

- gvc package: implement indicators
- Interactive demo: <http://shiny.qua.st/decomp>
- RStudio Add-in: Graphical User Interface (soon)

Confirming Existing Understanding 1995-2011

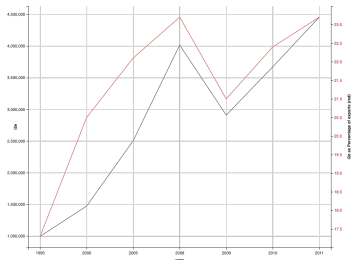


Figure: GVC integration

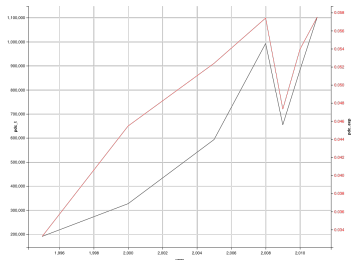


Figure: double counted trade

- GVC intensity in backward linkage : importing 2 export
 - i2e grew ~350%
 - i2e share of total exports 17% -> 23%
- Wang Wei Zhu (2013)
 - pdc (proxies GVC length) share of total exports rose 73%

Global Value Chains in Low Income Countries

TiVa Analysis

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Developing Country trends: New evidence

Table: GVC integration by income

Country group	<i>i2e</i>		<i>e2r</i>	
	Average	Δ 95-11	Average	Δ 95-11
Low/Lower middle	23.46%	48.22%	20.35%	38.58%
High	22.64%	41.84%	21.85%	29.50%

Table: WWZ decomposition results by income

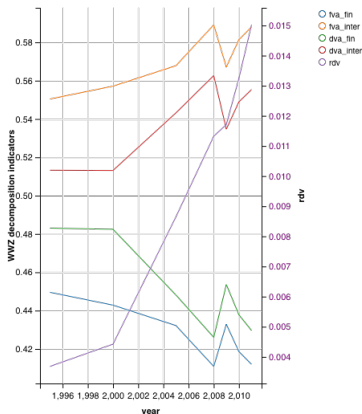
group	<i>fva_fin</i>	<i>fva_inter</i>	<i>dva_fin</i>	<i>dva_inter</i>	<i>rdv</i>
L(M)IC	42.07%	57.93%	44.09%	54.73%	1.18%
High	39.38%	60.62%	40.73%	56.85%	2.42%

Global Value Chains in Low Income Countries

TiVa Analysis

Developing Country Trends: New evidence

Figure: WWZ decomposition indicators



South East Asia:

- Primarily backward linkages

Latin America

- Low backward and forward linkages

Africa

- Tunisia
 - Mainly backward linkages
 - Moving up in value chain
- South Africa
 - Low levels of integration
 - Benefits from commodities boom

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Theoretical Model

- JC Rochet and J. Tirole. **Two-Sided markets: a progress report.**
RAND Journal. 37(3):645–667, 2006.

Household vs. individual effect

- Angrist (1991)

Usage of wave 4 in regressions

- basic info available: employment status,

General motivation

- Social media content is easier: Facebook vendor lock-in
- open web is harder to create than social media
- vendor lock in

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theoretical model:

- D. Thomas. **Intra-Household Resource Allocation.**
Journal on Human Resources. XXV(4):635–664, 1990.

Interpretation of the treatment coefficient

- bargaining power

outliers driving the result

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strictly comparable indicators

- gvc package

notation

- Hamamard products