

Gravity in Higher Education: The determinants of international branch campus

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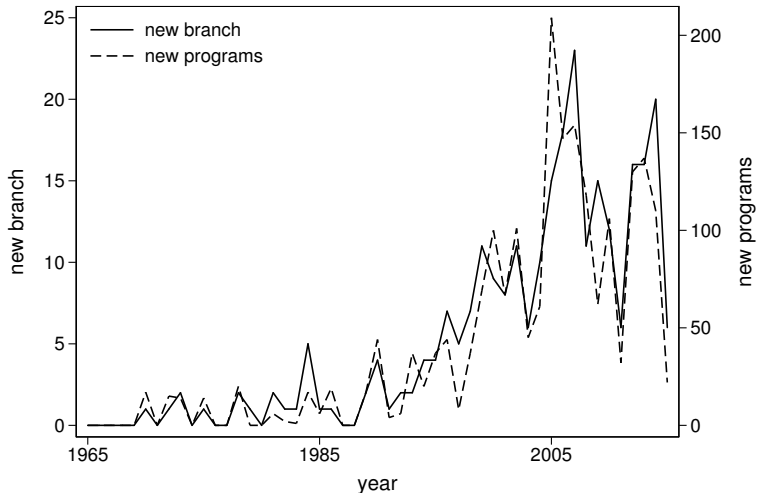
International Branch Campus

- IBC is “an entity that is owned, at least in part, by a foreign education provider; operated in the name of the foreign education provider; and provides an entire academic program, substantially on site, leading to a degree awarded by the foreign education provider". Observatory of Borderless Higher Education (2017)
- The growth in the number of IBC has been one of the most striking developments in the internationalization of Higher Education (HE) since the turn of the century (Healey, 2015).

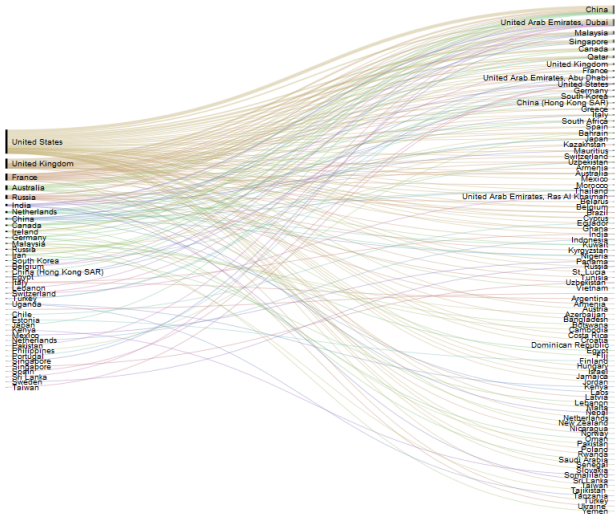
International Branch Campus

- IBCs have motivated extant literature focused on models of IBC, academic and managerial issues, educational hubs and sustainability among others
- In this paper we analyze the Economic, Cultural and Educational determinants for IBC
- The study offers some interesting insights that might be useful for :
 - policymakers in their effort to promote FDI and human capital
 - university management might profit from some of the paper's insights in their international endeavours.

Branch Campus and Foreign educational programs



International Branch Campus flows



Contributions of the paper

- Scarce evidence on the determinants of International Branch Campus
- We rely on the gravity equation to study:
 - **Economic determinants**
 - Influence of home and host GDP, geographical distance or sharing currency
 - **Cultural and institutional determinants**
 - Differences in language, cultural identity, religion, or the uses of English as a *lingua franca*
 - **Educational determinants**
 - The level of enrollment, focus on GPI, the Government expenditure per student or the scientific production

Scholars have said

- Since 1995 when WTO included education as a tradable product in GATS, for many countries HE has been an important export sector (Healey, 2008)
- Globalization has turned HE into a global business engaging in marketing strategies to sell their knowledge-based products, attract foreign students, and establish international branches (Hou, 2014)
- The academic related to IBC has spanned in ten broad areas:

Scholars have said

Research Areas	Main References
Globalization an Internationalization	Lane, Kinser, & Knox, 2013; Bartell, 2003a; Healey & Michael, 2015; Mazzarol, Soutar, & Seng, 2003; McBurnie & Ziguras, 2009; Naidoo, 2006; Van Damme, 2001; Wilkins, 2012
Managerial issues	Eldridge y Cranston, 2009; Kevin Kinser & Jason E. Lane, 2014; Lane, 2011; Lane & Kinser, 2011; Shams & Huisman, 2012; Tierney & Lanford, 2015; Wilkins, 2010, 2016
Academic Staff Issues	Altbach, 2010; Shams & Huisman 2012, 2014; McBurnie & Ziguras, 2009; Wallace & Dunn, 2008, 2013; Ziguras, 2008; Smith, 2009.
Educational Hubs	Knight, 2014a, 2011, 2013a, 2013b, 2014c, 2014d, 2014e; Knight & Morshidi, 2011; Lawton & Katsomitros, 2012; Lee, 2014; Wilkins, 2010; Wilkins & Huisman, 2015; Chan & Ng, 2008
International Business	Bhanji, 2008; Guimon, J., 2016; Lane & Kinser, 2011; McBurnie & Ziguras, 2001; Shams & Huisman, 2012; Surdu & Mellahi, 2016; Wilkins, 2017
Institutional issues	Altbach & Knight, 2007b; Bartell, 2003; Becker, 2009; de Wit, 1995; Harding & Lammey, 2011; McBurnie & Ziguras, 2006; Mok, 2015; Naidoo, 2015; Van Damme, 2001; Verbik, 2015
Students issues	Mazzarol et al., 2003; Wilkins & Balakrishnan, 2012, 2013; Wilkins & Huisman, 2010, 2015; Wilkins, Stephens Balakrishnan, & Huisman, 2012
Sustainability	Altbach, P., 2010; Crombie-Borgos, 2013; N. M. Healey, 2008b; Knight, 2014
Language issues	Altbach, 2007; Philip G. Altbach, 2007; Wilkins & Urbanovic, 2014; Wit, 2002
Models of IBC	Girdzijauskaitė & Radzeviciene, 2014; Lane y Kinser, 2013; Verbik, 2015

Economic, cultural and educational

- **Economic determinants**

- Countries with a larger population and a higher GDP send more students abroad, whereas distance discourages migration (Levatino, 2015)

- **Cultural and institutional determinants**

- Managing an IBC requires to adapt operations to meet cultural, legal, and environmental conditions of the host (Healey, 2016; Shams, 2012; and Harding, 2011)

- **Educational determinants**

- Scarce research from a global perspective, generally based on one specific country or region (Wei, 2013)
- Gender gap in the intent to study abroad (Salisbury, 2009)
- HEIs more oriented towards research activity are more likely to conceive the strongest benefits from internationalization for research (Seeber et al., 2016)

Estimation

We use the the Pseudo-Poisson Maximum likelihood (PPML) estimator proposed by Silva and Tenreyro (2006):

$$IBC_{ijt} = \exp \left(\begin{array}{c} \text{Economic}_{ijt} \\ \text{Cultural}_{ijt} \\ \text{Educational}_{ijt} \\ +\lambda_i + \lambda_j + \lambda_t \end{array} \right) + e_{ijt}, \quad (1)$$

Data

- C-BERT: Branch campus years etc countries

Variable	Description	Source
IBC	Number of international branch campus	C-BERT
Education programs	Number of educational programs (bachelors, masters and other degrees) offered in IBC	
IBC Probit	Takes the value 1 when countries have a IBC 0 otherwise	
Economic determinants		
GDP	Gross domestic product	World Bank
GINI index	Statistical dispersion of income distribution	
Distance	Distance in kilometers between country capitals	CEPII
Currency	Takes the value 1 when countries share a common currency, and 0 otherwise	
Cultural and institutional determinants		
Border	Takes the value 1 when countries share a common border, and 0 otherwise	CEPII
Language	Takes the value 1 if both countries share the same official language	
Colony	Takes the value 1 if the two countries have ever had a colonial link, and 0 otherwise	
Religion	Takes the value 1 if the two countries have the same religion, and 0 otherwise	
Educational determinants		
Enrollment	School enrollment, tertiary (% gross)	World Bank
Enrollment GPI	School enrollment, tertiary (gross), gender parity index (GPI)	
Expenditure	Government expenditure per student, tertiary (% of GDP per capita)	
Articles	Scientific and technical journal articles	

	(1)	(2)	(3)
	IBC number	Education programs	IBC Probit
log Distance	-0.813*** (0.04)	-0.895*** (0.05)	-0.447*** (0.02)
log GDP home	0.095 (0.08)	-0.108 (0.10)	-0.074 (0.05)
log GDP host	0.877*** (0.06)	0.900*** (0.07)	0.311*** (0.04)
Contiguity	0.783*** (0.09)	0.791*** (0.10)	0.429*** (0.06)
Common language	0.232*** (0.08)	-0.186 (0.12)	0.075* (0.04)
Common currency	-1.787*** (0.14)	-2.116*** (0.17)	-1.224*** (0.08)
Common religion	0.455*** (0.18)	1.465*** (0.24)	0.174** (0.08)
Colonial relationship	1.526*** (0.08)	1.520*** (0.10)	1.065*** (0.05)
R^2	0.588	0.544	-
Country FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	118,239	114,530	130,342

Notes: Robust standard errors in parentheses, clustered by country pair.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

	(1)	(2)	(3)
GINI home	-0.037 (0.05)	0.074 (0.05)	-0.017 (0.07)
GINI host	-0.090** (0.04)	-0.015 (0.04)	-0.025 (0.06)
Enrollment home	-0.068** (0.03)	-0.067** (0.03)	-0.009 (0.03)
Enrollment host	0.035*** (0.01)	0.051*** (0.02)	0.017 (0.02)
Enrollment GPI home	1.256 (2.30)	-1.030 (3.32)	-1.816 (3.22)
Enrollment GPI host	3.321* (1.72)	8.434*** (1.47)	1.691 (1.49)
Expenditure home	0.023 (0.03)	0.042* (0.02)	-0.000 (0.03)
Expenditure host	0.059*** (0.02)	0.063*** (0.02)	0.041* (0.02)
Articles home	1.308** (0.52)	2.555*** (0.57)	4.836*** (1.73)
Articles host	-0.047 (0.33)	0.036 (0.44)	0.137 (0.50)
R^2	0.713	0.851	-
Country and Year FE	Yes	Yes	Yes
Observations	547	547	1481

Robust standard errors in parentheses (clustered by country pair)

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Take-away

● Economic determinants

- Host's GDP matters in the number of IBC, but home's GDP is not significant to any standard level
- A common currency inhibits IBC
- Countries with more gender balanced university students increase both their IBC and foreign programs

● Cultural and institutional determinants

- The institutional context is relevant, common language, common religion and common border have a positive and significant effect

● Educational determinants

- When income and school enrollment increase at home (host) decreases (increases) IBC and foreign programs.
- Significant evidence has been found; increasing educational expenditure at home has a positive effect on increasing foreign educational programs.
- Countries that increase their scientific production increase on average their outbound IBC and programs.

Educational policy implications

- Our study has interesting policy implications both for policy-makers and university management.
- Countries or higher education management interested in promoting the international expansion of their universities might peruse policies aimed at increasing scientific production.
 - All other push factors, except educational expenditure, would have undesired effects on the economy or on the university (e.g., decreasing enrollment or income).
- In addition to the standard economic policies of income increase and reduction of income inequality, host countries have a wider range of educational policy measures to promote IBCs.
 - Policies tailored to increase government expenditure per tertiary student and enrollment, particularly gender balanced enrollment, might prove useful to promote IBCs and spur foreign educational programs.

The end

Thanks!