

Measuring the Impact of the CARIFORUM-EU EPA on OECS Exports to the EU

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Introduction

- ▶ Economic Partnership Agreement signed between the European Union and the CARIFORUM countries in 2008.
- ▶ Has the EPA increased trade between CARIFORUM and the European Union?
- ▶ Studies used partial equilibrium models and mixed methods; focused primarily on imports from the EU.
- ▶ Is the CARIFORUM-EU EPA disadvantageous to CARIFORUM countries?
- ▶ (Nicholls et al (2001), Greenaway and Milner (2004), Preville (2006), Gomez (2007), Hosein (2008), Alleyne and Lorde (2014)).
- ▶ In 2011, Mahabir used a gravity model approach to measure the impact of CARICOM's exports to the EU.
- ▶ Use the gravity model of trade and employ panel estimation techniques to measure the impact of the CARIFORUM-EU EPA, specifically on OECS exports to the EU.

Methodology

- ▶ Tinbergen (1962) was the first to develop the Gravity Model of Trade. He formulated the idea based on the Newton's Law of Universal Gravitation where bilateral trade flows between two countries were positively related to their economic sizes and negatively related to the distance between them. His aim was to determine the normal and standard pattern of international trade that would prevail in the absence of trade impediments.
- ▶ Other researchers augmented the Gravity Equation to suit market structures and conditions:
 - ▶ Linneman (1966) - Partial Equilibrium Model
 - ▶ Anderson (1979) – CES a la Armington Theory (1969) of Product differentiation
 - ▶ Krugman (1980), Bergstrand (1985, 1989), Helpman and Krugman(1985) - Monopolistic Competition
 - ▶ Anderson and van Wincoop (2003) – building on Anderson 1979
 - ▶ Tayab et al (2012) – First past equation

Methodology cont'd

- ▶ The Gravity Model of Trade has been proven to be versatile and as noted by van Bergeijk and Brakman (2010) the basic model on average explains 70% – 80% of the variations in bilateral flows.
- ▶ The model can also control for time invariant variables such as language, colonial ties, as well as, institutional variables such as trade agreements which are applicable to the trade of goods and services between the EU and OECS.
- ▶ The model can also be derived under different assumptions in terms of market structures and conditions and has dominated the literature on trade policy evaluation.
- ▶ The application of the Gravity Model has become popular because of its appeal of empirical strategy over the years and became known as the “workhorse of empirical studies”(Eichengreen and Irwin (1997)).

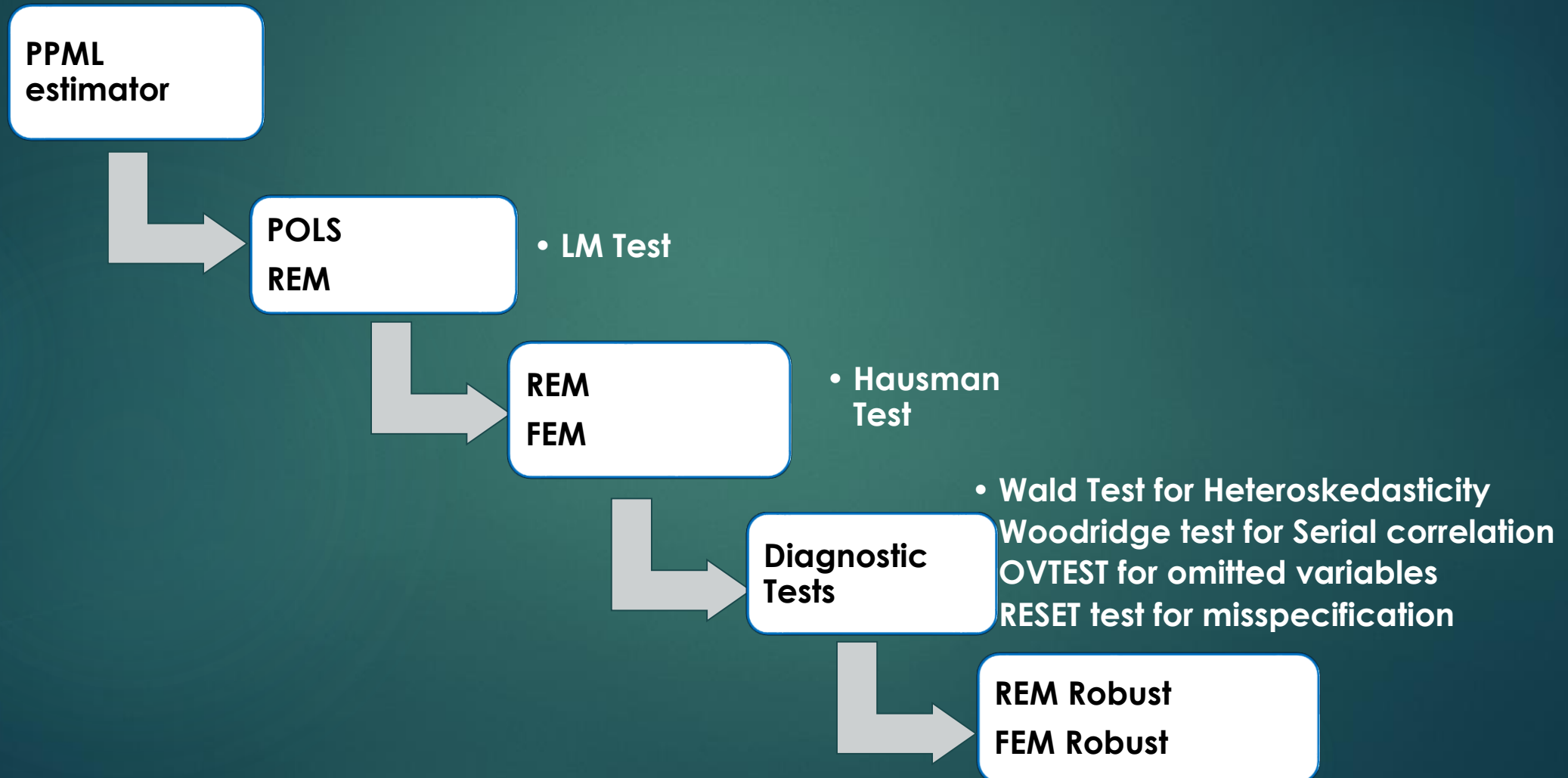
Model

$$\ln(X_{ij}) = \beta_0 + \beta_1 \ln(\text{GDP}_i) + \beta_2 \ln(\text{GDP}_j) + \beta_3 \ln(\text{ioe}) + \beta_4 \ln(D_{ij}) + \beta_5 \text{EPA} + \beta_6 \text{Lome} + \beta_7 \text{col} + \varepsilon_{ij}$$

Variables	Meaning	Expected Signs	Description	Source
X_{ij}	Exports from OECS to EU		Dependent variable	WITS
GDP_i	GDP of exporting country (OECS)	+	The higher the GDP of an exporting country the higher the level of production, hence an increase in exports availability.	WDI
GDP_j	GDP of importing country (EU)	+	The higher the GDP of an importing country the more it will import from its trading partner	WDI
IOE	Intra OECS Exports	+	As the export capacity of OECS expands exports to the EU increases.	WDI
D_{ij}	Distance between OECS and EU	-	The further away countries are the less trade	CEPII
Lomé	Lomé Conventions (1975-1999)	+	Being part of a regional trade agreement encourages exports between trade partners.	Dummy
EPA	CF-EU EPA (2008 – present)	+	Being part of the CARIFORUM-EU EPA boost trade in the countries.	Dummy
Colonial Ties	OECS and UK colonial ties	+	Having colonial ties encourage trade between the two trading partners	Dummy

Estimation Techniques

The panel dataset was strongly balanced and includes data from six OECS countries and twenty eight EU countries for the period 1990 to 2015.



Results

- ▶ All variables are statistically significant in the model.
- ▶ GDP_i, GDP_j, IOE, COL, LOME impacted OECS exports to the EU, positively.
- ▶ Distance and EPA impacted OECS exports to the EU, negatively.
- ▶ R² of 73% which indicates that the augmented gravity model, which is noted for its robustness, describes the variations in OECS exports to the EU, well.

Dependent Variable: Bilateral Exports				
Covariates	POLS	REM	FEM	PPML
lngdpi	-0.17	-0.09	-0.03	0.74**
	0.01	0.38	0.83	0.00
lngdpj	-0.07	-0.00	0.03	0.69***
	0.00	0.67	0.04	0.00
lndij	0.42	1.09	(omitted)	-4.78***
	0.05	0.02		0.00
lnioe	-0.11	-0.14	-0.16	0.93***
	0.00	0.00	0.00	0.00
col	1.19	1.06	(omitted)	3.14***
	0.00	0.00		0.00
lome	0.06	0.19	0.26	1.35***
	0.36	0.01	0.00	0.00
epa	0.14	0.06	0.02	-1.92***
	0.02	0.32	0.81	0.00
_cons	-2.18	-9.39	-0.33	24.61***
	0.28	0.02	0.70	0.00
R ²				0.73

Policy implications

- ▶ GDP plays a significant role in increasing exports to the EU; comparative advantage.
- ▶ Intra-OECS exports plays a significant role in boosting exports to the EU; build strategic alliances; compete on price or quality? Eco-friendly? Fair trade?
- ▶ Colonial ties has a positive impact on OECS exports to the EU; engage with other non traditional, emerging economies.

Further Research

- ▶ Explore sustainable policies that will reduce transportation costs and other trade impediments to facilitate exports from OECS to the EU.
- ▶ Study the impact of other trade relations such as US, China, CARICOM and how they have affected OECS exports to the EU.
- ▶ Investigate the impact of the CARIFORUM-EU EPA on the trade of services between OECS and EU.
- ▶ Execute a prognostication on assessing the potential impact on intra-ACP trade agreements, specifically post-2020.

Thank you

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- ▶ Any Questions or Comments??
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