

Antecedents to the AfCFTA: Insights from export survival

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Presentation Outline

- ➊ Introduction
- ➋ Motivation
- ➌ Methodology
- ➍ Results
- ➎ Conclusion

Research issue

- AfCFTA is a priority among African governments with regards to intra-Africa trade
- 54 out of 55 countries have signed and 29 have ratified the agreement as at end of January 2020
- One key agenda is assessing potential benefits of the agreement
- Done through predicting the future (CGE) or present

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Study focus

- Study projects AfCFTA by drawing insights from current levels of export survival across various Economic Integration Agreements

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- Study projects AfCFTA by drawing insights from current levels of export survival across various Economic Integration Agreements
- Mainly presence of Economic Integration Agreements (EIA), East African Community (EAC) and Common Market for Eastern and Southern Africa (COMESA)

What is export survival?

- Length of time (months or years) a firm's export of a product to a specific destination remains uninterrupted
- First year survival rate: 67% in USA (Besedeš and Prusa, 2006)
- First month (74.8%) and 12th month (57.8%): in Canada (Sabuhoro et al., 2006)
- Other countries: Nitsch (2009) -Germany, Brenton et al. (2010) and Carrère and Strauss-Kahn (2017)-developing countries, Türkcan and Saygılı (2018)-Turkey

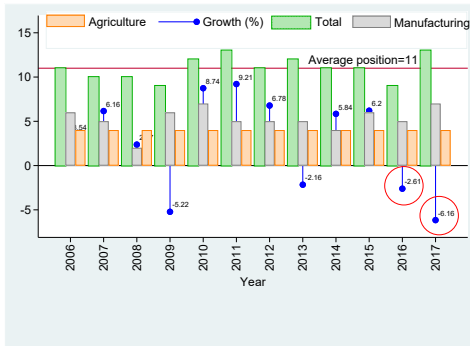
Why bother about export survival?

- (1) Raises levels of long-term export growth
- (2) Deepens existing trade relationships
- (3) Key towards informing trade policy – Particularly those targeting existing exporters, existing products and existing markets
- (4) Survival varies by EIA

Reasons for using Kenya as a case study: Data

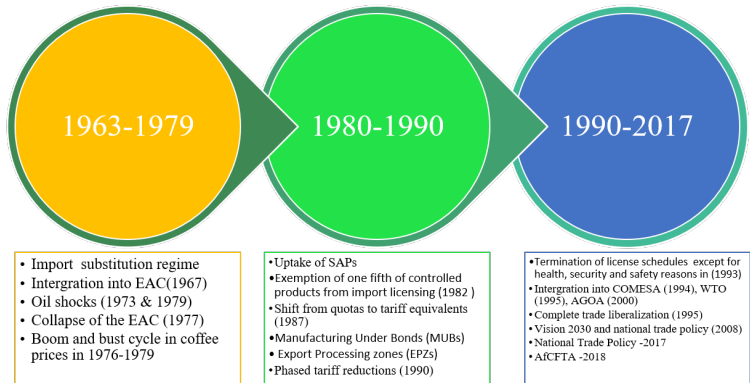
- (1) Use of **monthly** level customs transaction data
 - Sabuhoro, Larue, and Gervais (2006)-Canada, Tovar and Martinez (2011)-Colombia and Stirbat, Record and Nghardsaysone (2015)
 - Partial year effects (over/under statement of exports), one-off export events, left censoring and data quality in Kenya
- (2) Problems with Macro data
 - Related studies on Kenya: **Kinuthia (2014), Chacha et al. (2017), and Majune et al. (2020)**
 - Necessity of mirror data or importer data

Reasons for using Kenya as a case study: Export composition and growth



- Kenya is 11th exporter in Africa
- Top 7 and top 4 exporter of manufactured and agricultural products in the region
- Growth of total exports between 2006 and 2017 has often been below 10%

Reasons for using Kenya as a case study: Export policy



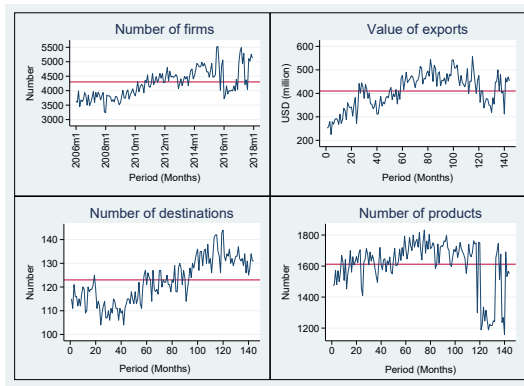
Theoretical model

- Study follows Besedeš, Moreno-Cruz and Nitsch (2016) model
- Two parties – buyer and seller. Seller establishes a reliable buyer in destination market
- Seller has to be productive before establishing a reliable partner (Melitz, 2003)
- Productivity together with the per unit trade cost and set-up costs determine entry rate
- Trade liberalization enhances export survival by reducing the per unit trade cost thereby raising entry rates

Data

- Monthly firm-product-destination export data from the updated Exporter Dynamics Database by the World Bank (Fernandes et al., 2016)
- Trade value converted from Kenya shillings to US\$
- Export is from Kenya to 180 partner countries
- Ranges from January 2006 to December 2017
- Converted from HS-8 digit to HS 6-digit following Cebeci et al. (2012) classification
- Reduced products from 5,138 to 4,067

Results: Preliminary

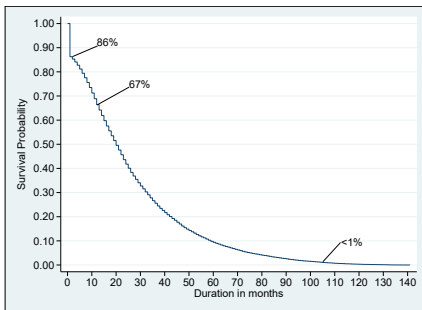


- Number of exporters from Kenya ranged from 3,278 to 5,595 with an average of 4,298. The number hit 4,000 from January 2010

Results: Overall export survival

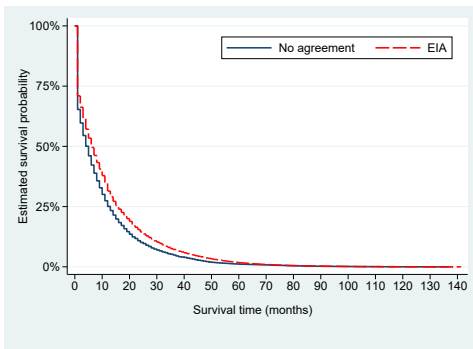
- Survival formular is as follows:

$$\hat{S}(j) = Pr(T > j) = \prod_{m=1}^j (1 - d_m/r_m) = \prod_{m=1}^j (1 - h_m)$$



- Mean and median exit periods are 25.1 and 18 months respectively

Results: Export survival by presence of EIA



- Presence of EIA improves survival
- Trading under an EIA guarantees a 71% survival in the first month of trading as opposed to having no agreement (65%)

Descriptive Statistics

Table 1: **Survival dynamics**

	Length of spell	
	Mean	Median
Overall exports	25.1 months	18 months
No agreement	9.6 months	5 months
EIA	11.9 months	6 months
NR-PTA	12.4 months	6 months
PTA	12.3 months	6 months
FTA	9.9 months	4 months
CM	12.3 months	8 months

- Survival is higher under CM followed by a Non-reciprocal PTA, PTA and a FTA

Empirical model

$$h(x_{im}) = Pr(T_i < t_{m+1}) = \Phi(x'_{im}\beta + \gamma m + v_i) \quad (1)$$

$$\log L = \sum_{i=1}^n \sum_{m=1}^j [y_{im} \log(h_{im}) + (1 - y_{im}) \log(1 - h_{im})] \quad (2)$$

- Key variables of interest: EIA exists, Duration of EIA, and Spell starts after EIA
- Spell starts after EIA more applicable to the AfCFTA case
- Use pooled EIA, EAC and COMESA in analysis

Econometric concerns

- Endogeneity – Duration effects, Multiple-spell effects and monthly effects
- Left-censoring problem (Ignore January 2006 observations)
- Hausman test – Fixed or random effects

Probit regression results

Table 2: Probit regression results for export survival in Kenya

	EIA			EAC		COMESA	
	(1)	(2)	(3)	(1)	(2)	(1)	(2)
Initial export value	-0.070*** (-62.79)	-0.070*** (-62.98)	-0.070*** (-62.79)	-0.073*** (-65.64)	-0.072*** (-65.50)	-0.070*** (-62.90)	-0.071*** (-63.52)
Lag duration	-0.020*** (-39.73)	-0.020*** (-39.83)	-0.020*** (-39.73)	-0.018*** (-35.22)	-0.019*** (-37.57)	-0.020*** (-39.76)	-0.020*** (-39.82)
Number of firms	-0.001* (-1.84)	-0.001* (-1.83)	-0.001* (-1.84)	0.002*** -4.58	0.002*** -3.51	-0.001 (-1.82)	0.000 (-1.09)
Number of export products	-0.004*** (-36.04)	-0.004*** (-35.98)	-0.004*** (-36.04)	-0.004*** (-31.32)	-0.004*** (-33.71)	-0.004*** (-35.65)	-0.004*** (-35.37)
Number of export markets	-0.030*** (-43.73)	-0.030*** (-43.66)	-0.030*** (-43.73)	-0.029*** (-42.61)	-0.029*** (-41.92)	-0.030*** (-43.23)	-0.030*** (-43.23)
Total exports	-0.040*** (-27.17)	-0.040*** (-27.45)	-0.039*** (-27.17)	-0.040*** (-27.63)	-0.042*** (-29.25)	-0.040*** (-27.55)	-0.040*** (-27.90)
EIA exists	-0.050*** (-3.63)	-0.238** (-2.19)	-0.071 (-0.67)	-0.254*** (-11.98)	-0.437*** (-20.21)	0.141*** (-6.9)	0.003 (-0.11)
Duration of EIA	- (-8.62)	0.023*** (-8.62)	- (-8.62)	- (-36.71)	0.048*** (-36.71)	- (-36.71)	0.024*** (-13.83)
Spell starts after EIA	- (-0.27)	0.029 (-0.27)	0.021 (-0.2)	- (-0.2)	- (-0.2)	- (-0.2)	- (-0.2)
Constant	2.918*** (-42.33)	2.875*** (-41.65)	2.918*** (-42.32)	3.170*** (-34.22)	3.106*** (-33.75)	2.352*** (-24.14)	2.359*** (-24.24)
Duration dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spell dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Monthly dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	629,669	629,669	629,669	629,669	629,669	629,669	629,669
Log-likelihood	-290127.9	-290090.6	-290127.9	-291923.4	-291249	-290110.8	-290015
Rho	0.16 (-51.05)	0.159 (-50.95)	0.16 (-51.05)	0.163 (-51.38)	0.158 (-50.88)	0.159 (-50.91)	0.158 (-50.75)

Note: Z statistics in (.). Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. -ve sign on coefficient means survival ↑

Key results

- Trade agreements enhance survival of export from Kenya
- Effect was only positive when the market is within EAC
- COMESA reduced survival of exports from Kenya

Insights

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Insights

- ① Conflicting policies and interests under EAC and COMESA means that exporters from Kenya are bound to benefit more by exporting to their neighbors and where they are dominant
- ② It's not automatic that a large African market (such AfCFTA) increases export survival in Kenya
- ③ AfCFTA might provide market diversification but may fail to guarantee export survival

Arigato Gozaimas