



Effects of Product Certification on Importer Trade Across Borders: The Case Study of the Philippines

Michelle Esteban
Kyung Hee University

November 30, 2019

Outline

Introduction

Review of Related Literature

Methodology

Results

Conclusion & Recommendations

Introduction

Product Selection: Electrical and Electronics

ISO	certificates in manufacturing	64%
ASEAN	exports share (2012-2017) export value (2019)	43%- 67% 56.7%
PHL	growth rate (2019)	45%

Effects of product certification on importers trading across borders?

Ease of Doing Business: Trading Across Borders

- common parameters with product certification
- time, cost and documentary requirements

(Miller 1998)

1970
regulatory
compliance

1980
self
certification
for identity

1990
globalization
“trade weapon”



voluntary → mandatory



conformance evaluation

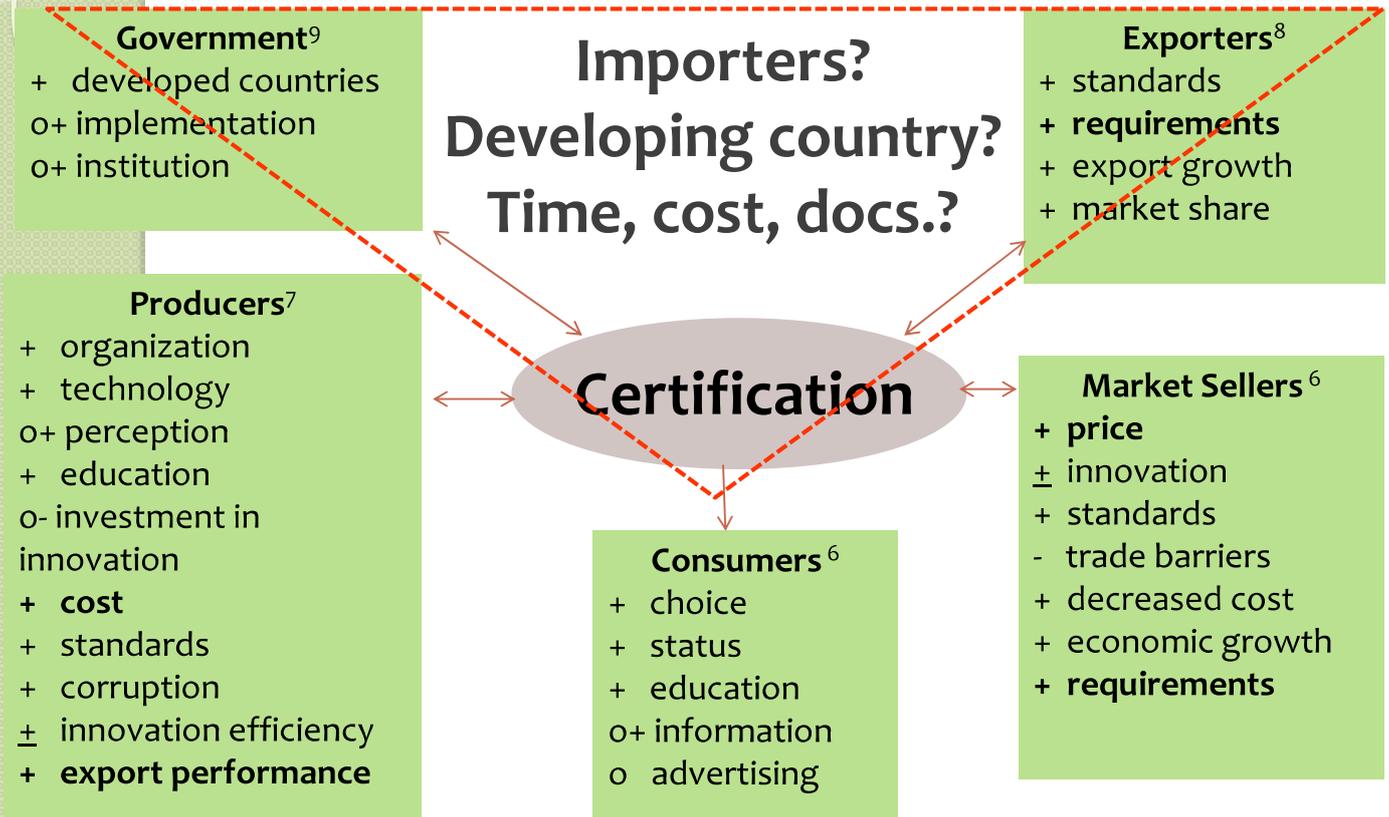


ASEAN harmonization
to minimize TBT, safeguard



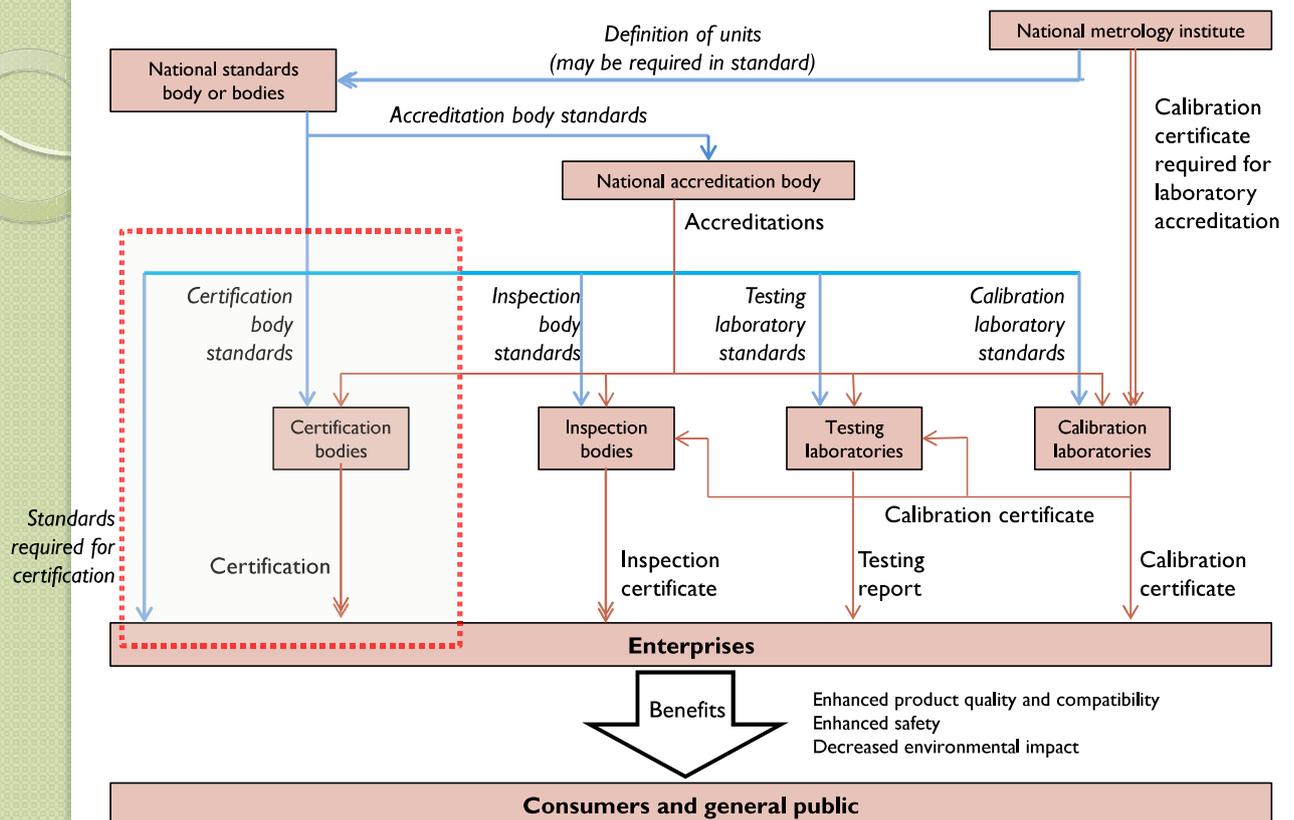
different schemes
process

Conceptual Framework



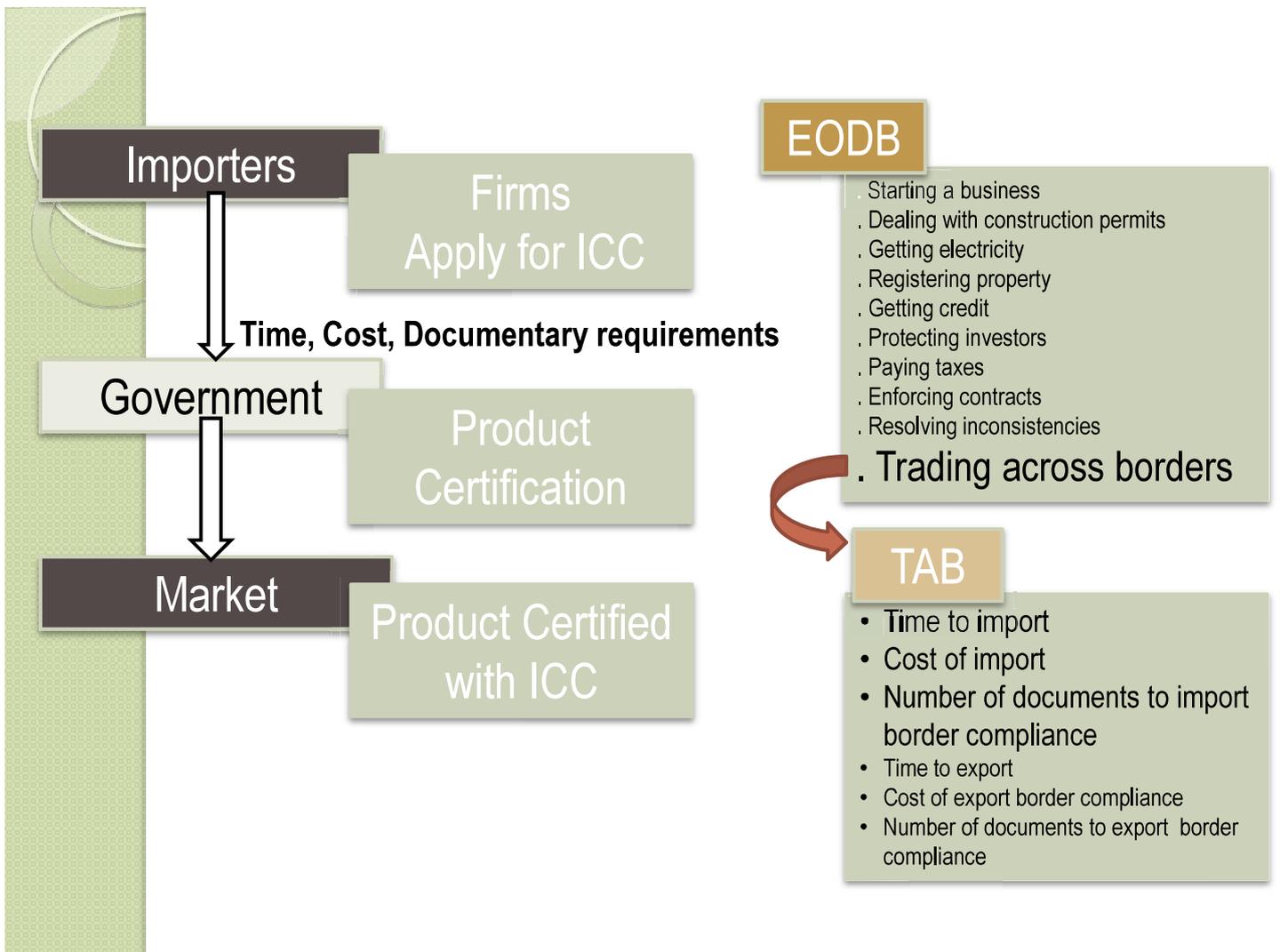
Sources:
⁶(Blind et. al. 2015, Dimara and Skuras 2001, Giovanetti and Cleto 2018, Houde 2018, Latouche and Chevassus-Lozza 2015, Jang et.al. 2014, Lee and Shin 2013, Plummer 2011, and Stevens et.al. 1998);etc.
⁷(Fentisov 2007, Marde 2015), regulatory institution (Berliner and Prakash 2014, Panuov 2016, Rodriguez-Arnaldo and Martinez-Lorente 2014, and Spasojevic-Brkic, et.al. 2015) ;etc.
⁸(Panuov 2016, Pekovic and Rolland 2016, Spasojevic-Brkic et. al. 2015, Sun and Ouyang 2014); etc.
⁹(Paunov 2016, Rodriguez-Arnaldo, and Martinez-Lorente 2014) etc.

Figure 1. Schematic Representation of National Quality Infrastructure



Note: Figure 1. Schematic Representation in National Quality Infrastructure as described by author consist of many other stakeholders
 Source: Guasch, et.al 2007

↓ Standards and definitions
 ↓ Conformity assessment process

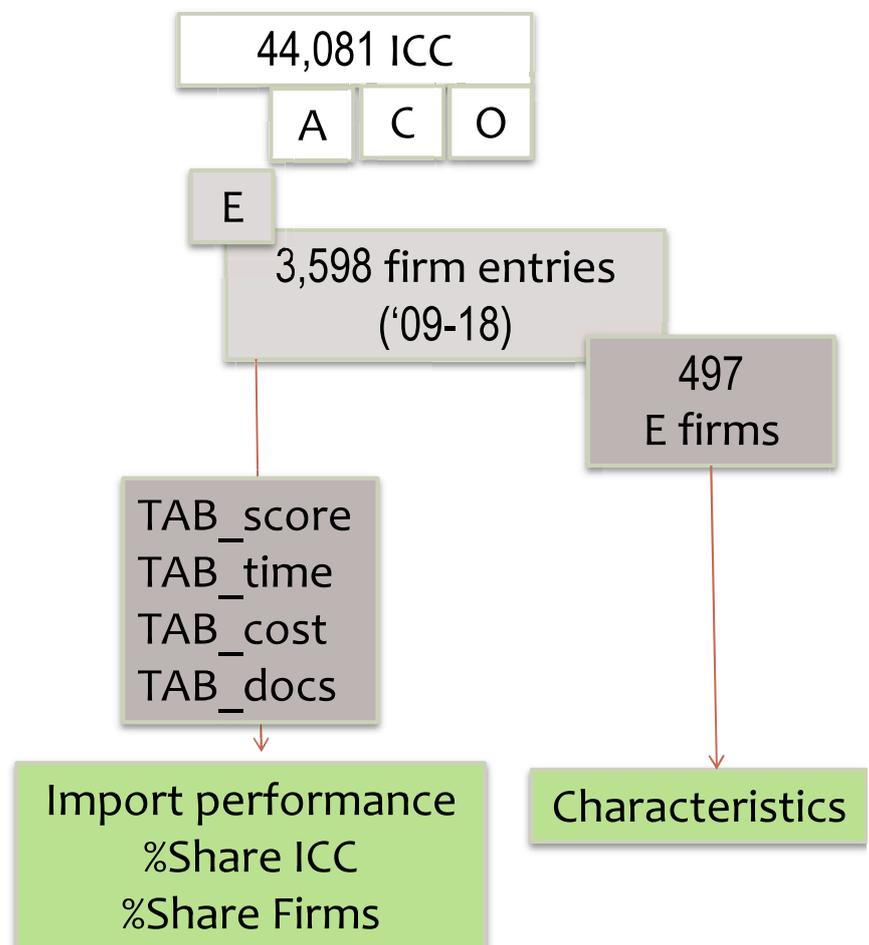


Methodology

Certification type:
mandatory, ICC
(batch certification)

Sources:
World Bank, DTI,
PSA, ASEAN

Analysis:
semi-structured survey,
interview
time series analysis
Pearson's correlation
bivariate regression



Major Findings

Table 3.2 Number of Firms Data Entries per Year (2009 – 2018)

Year	N_i	A	%	C	%	E	%	O	%
2009	259	48	19	94	36	97	37	20	8
2010	155	149	96	93	60	129	83	10	6
2011	326	307	94	219	67	272	83	25	8
2012	326	304	93	184	56	268	82	47	14
2013	330	299	91	177	54	260	79	66	20
2014	313	282	90	164	52	240	77	42	13
2015	503	469	93	330	66	416	83	11	2
2016	485	449	93	246	51	373	77	35	7
2017	511	478	94	257	50	392	77	7	1
2018*	390	360	92	169	43	291	75	35	9

Note: *Only January to June of 2018 has an available data based on publicly available source. One firm count per year, if same firm appears on second year, another count for that firm is tabulated to calculate % distribution of firms on per year basis.

Source: (BPS 2019)

Table 3.1 Number of ICC Data Entries per Year (2009 – 2018)

Year	N_i	A	%	C	%	E	%	O	%
2009	2416	596	25	950	39	805	33	65	3
2010	962	155	16	312	32	472	49	23	2
2011	4254	590	14	1642	39	1614	38	408	10
2012	4193	435	10	1566	37	1878	45	314	7
2013	4321	453	10	1671	39	1686	39	511	12
2014	4385	582	13	1893	43	1588	36	322	7
2015	6761	1515	22	1813	27	3035	45	398	6
2016	6493	1481	23	697	11	3942	61	373	6
2017	6498	569	9	877	13	3753	58	1299	20
2018*	3797	735	19	507	13	2085	55	470	12

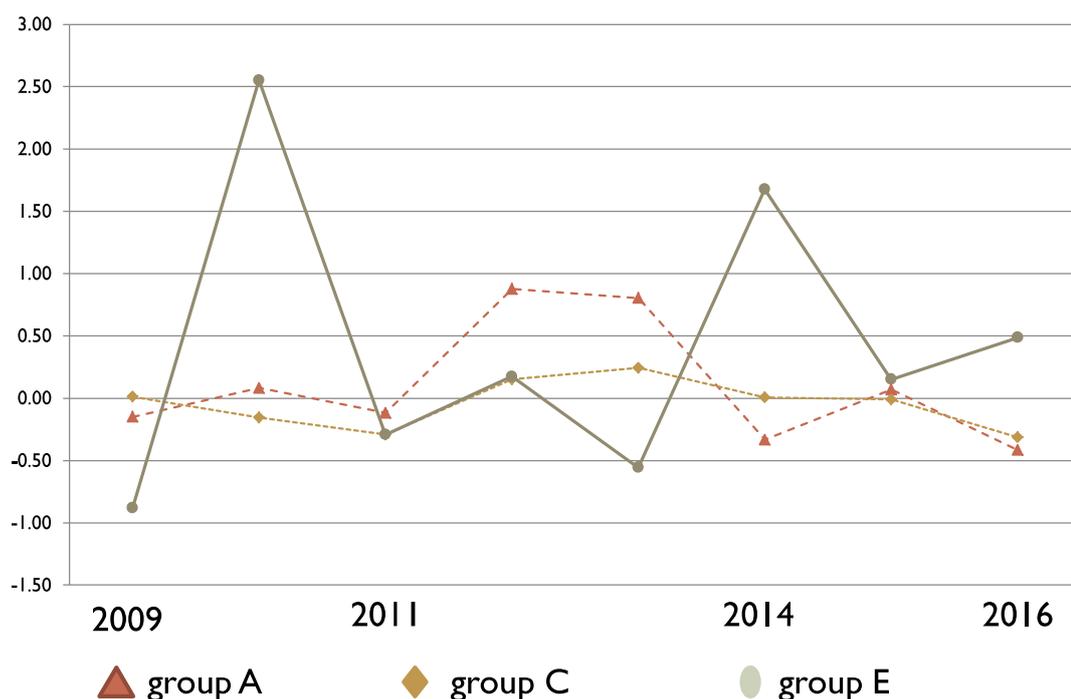
Note: *Only January to June of 2018 has available data based on publicly available source. Number of ICC per year represents % share of ICC imports, N_i . A,C and E mostly follow BPS groupings while group O also includes LPG, monobloc chairs, lighter, fire extinguisher, brake fluid, helmet and visors. The certificate of exemptions were not accounted.

Source: (BPS 2019)

Correlations and Regression Matrix Analysis
Table E.1 Correlations and Regression Results of Product Groups

Variables Dependent:	Parameter	TAB_score		Tab_time		Tab_cost		Tab_docs	
		X (09-18)	(10-15)	(09-18)	(10-15)	(09-18)	(10-15)	X (09-18)	(10-15)
EQDB_score (2010-2015)	P	X	0.514	X	-0.308	X	0.438	X	-0.515
	S	X	0.297	X	0.552	X	0.386	X	0.296
TAB_score	P	N/A		0.576	-0.961	0.323	-0.864	X	-0.927**
	S			0.082	0.002	0.362	0.026	X	0.008
	R ²	N/A		0.331	0.924	0.104	0.747	X	0.859
	Std.E.			2.499	0.465	2.892	0.003	X	0.008
E: % N _t	P	-0.756*	-0.821*	-0.760*	0.803	-0.636	0.822*	X	0.687
	S	0.011	0.045	0.011	0.054	0.066	0.045	X	0.139
	R ²	0.074	0.727	0.067	0.645	0.140	0.675	X	0.459
	Std.E.	14.077	4.178	14.131	3.370	13.564	3.225	X	4.159
% N _t	P	0.272	-0.631	-0.259	0.513	0.375	0.885*	X	0.350
	S	0.447	0.179	0.470	0.298	0.286	0.19	X	0.496
	R ²	0.074	0.399	0.067	0.263	0.140	0.783	X	0.123
	Std.E.	14.077	2.222	14.131	0.459	13.564	1.335	X	2.683
A: % N _t	P	-0.401	-0.485	0.149	0.612	0.363	0.720	X	0.200
	S	0.251	0.329	0.680	0.196	0.303	0.107	X	0.704
% N _t	P	0.134	-0.871	-0.417	0.727	-0.528	0.889*	X	0.726
	S	0.712	0.024	0.230	0.102	0.117	0.018	X	0.102
C: % N _t	P	0.875**	0.646	0.796	-0.860*	0.582	-0.729	X	-0.356
	S	0.002	0.166	0.006	0.028	0.077	0.101	X	0.489
% N _t	P	0.527	-0.348	0.238	-0.324	0.183	0.733	X	0.065
	S	0.117	0.452	0.509	0.531	0.613	0.097	X	0.903

Figure 4.2.1 (N₂) New firms rate (growth rate) applying for ICC (2009 – 2018)



Firm Characteristics Group E

Number	Shifts	With gap	Both	Fixed
of years	(S)	(G)	(B)	(F)
7 to 10	8	6	2	Importing 41 Not importing 4
	0	0	0	
5 to 6	8	1	2	4
	1	3	0	11
3 to 4	11	4	2	41
	2	0	1	10
1 to 2	5	2	3	Importing 96 Not importing 210
	7	10	1	
Count	43	26	11	417

Interview Results

Cost

Depends on import value
Depends on type
Cheaper electrical imports
Low labor cost

Documents

Docs. requirements varies
Certification type varies

Time

Time varies on type
Faster on-line application

Other observations

10+ yrs. importer
Import frequency depends on season
Lacks information
Promotes competitiveness

Conclusion

	Possible Implications
<p>(++) Cost of importation $\%N_i$ (6 & 10yrs period) $\%N_f$ (10 yrs period)</p> <p>(-) Time of importation $\%N_i$ (10 yrs period)</p> <p>Import and exit behavior firms 1-2 yrs and fixed product import 7-10 yrs</p> <p>Flexible technical regulation</p>	<ul style="list-style-type: none"> • Incentives in frequent importation (competitiveness) • High demand, technological advancement (innovation) • Company certification strategies (efficiency) • Short period import substitution effect • Import surge (TBT) • Regulation have varied effects to products and importers (choice)

Conclusion con'd...

<p>(o) Documents</p> <p>Other observations were found statistically insignificant.</p>	<ul style="list-style-type: none"> • policy review on mandatory and optional document requirements
<p>(-)TAB_score (6 & 10yrs period)</p>	<ul style="list-style-type: none"> • reduced cost and time may ease up and increase import of product but does not necessarily increase importers

(++) strong positive; (-) moderately negative; (o) not significant

Recommendation

Further research on the following:

- The effects of increase in number of **certification bodies** versus **import or export performance** and compared with other countries.
- The impact of **promotion** versus firm performance.
- ICC on **importers of other industry**
- Comparative analysis on **other certification types**
- Certification and **development of standards** in other countries
- The effects of **technological advancement**
- The level of **technical training** in the system of certification and impact on the quality of service of CABs

THANK YOU!