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ARE ECONOMIC SANCTIONS A BARRIER TO TRADE IN ENVIRONMENTAL GOODS? THE INTERNATIONAL EVIDENCE

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ABSTRACT

The purpose of economic sanctions is to isolate a sanctioned country and harm its economy to force its government to adjust course, policies, and actions. To resist sanctions, a sanctioned country needs to adopt a variety of survivalist and unsustainable policies that undermine the economic challenge of sanctions at the expense of lowering priority to the environmental sector and the production of environmental goods (EGs). Due to the shortage of EGs in the sanctioned nations, we hypothesize that economic sanctions are a potential driver of trade in EGs. To assess the empirical merits of our theoretical claims, we used panel data with 5,297 pairs of 88 countries for the years spanning 1996 to 2019, inclusive. While economic sanctions take various forms, EGs refer to environmental goods and services that are manufactured, consumed, and disposed of without causing unintended environmental impacts. We used the Combined List of Environmental Goods (CLEG) to define the EGs. Our empirical results indicate that imposition of economic sanctions hinders trade in EGs. We also found clear evidence that the effect becomes more pronounced for the use of trade and financial sanctions and when the economic sanction is put on low-income countries.

Contribution/Originality: This paper is one of the first attempts to show the side effects of economic sanctions on trade in environmental goods. We also found that the adverse effect becomes particularly strong with the imposition of trade and financial sanctions and in low-income countries.

1. INTRODUCTION

A growing literature has highlighted the detrimental effects of economic sanctions (ESs) on population health, including poorer nutrition (Gibbons & Garfield, 1999) increased child mortality (Gibbons & Garfield, 1999; Peksen, 2011) and maternal mortality rates (Sen, Al-Faisal, & AlSaleh, 2013) and impaired mental health (Aloosh, Salavati, & Aloosh, 2019). There are two main transmission channels of the impacts of ESs on public health. First, ESs hurt the economy of the sanctioned state, thereby lifting costs of living and unemployment rates (Aloosh et al., 2019). Moreover, ESs may lead to the destruction of health facilities (Sen et al., 2013). The declining income and the weakened health services as a result of insufficient sanitation infrastructure and medical equipment prevent people from accessing medication, thus inadvertently harming people's physical well-being. Second, the imposition of ESs leads to environmental degradation as the targeted countries implement a variety of survivalist and unsustainable

policies in response to the economic pressure inflicted by ESs (Fu, Chen, Jang, & Chang, 2020; Madani, 2020) such as lowering the priority of environmental governance schemes in the public policy arena or increasing the natural-resource-intensive sectors. We further advance existing literature concerning the consequences of economic sanctions by introducing a new channel in which they act as a trade barrier to EGs, impeding green consumption and undermining public health.

To carry out the analysis, we collected data on bilateral trade in EGs from the BACI with UNCTAD taxonomy, whereas information on economic sanctions was attained from the Global Sanctions Data Base (GSDB) (Felbermayr, Kirilakha, Syropoulos, Yalcin, & Yotov, 2020). After taking into account the trade gravity determinants, year-, country-year-, and pair-fixed effects, our main finding is that the imposition of economic sanctions hinders the trade in EGs. However, this effect is varied across different forms of sanctions. More specifically, the effects of trade and financial sanctions become stronger compared to those of other forms of sanction. Moreover, the effects of economic sanctions are conditional on the economic development of targeted countries.

We contribute to the trade in EGs and economic sanction literature on three points. First, our paper is one of the first attempts to examine the linkage between economic sanctions and trade in EGs employing the workhorse of the gravity model. Given the side effects of economic sanctions, we provide environmental consequences of economic sanctions in the form of a reduction in the trade in EGs. Second, we acknowledge the heterogeneous impact of economic sanctions on trade in EGs across different forms of economic sanction. Third, our paper departs from the current literature by empirically assessing the moderating role of the targeted nations' economic development in the relationship between economic sanction and the trade in EGs.

The remainder of this paper comprises four sections. In the next section, we consider the theoretical background, proving the connection between economic sanctions and trade in EGs. In the third section, we discuss the variables and the methodological approach. The results from the empirical analysis are provided in the fourth section. Finally, conclusion and the policy implications of our findings are given in the fifth section.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Determinants of Trade in Environmental Goods

a. Concept of Trade in Environmental Goods

As living standards have soared swiftly in a broad set of emerging and advanced countries, the environmental challenges have become more serious notwithstanding some advancement in separating economic growth from environmental degradation. The OECD Environmental Outlook to 2050 predicts that the BRICS countries will account for more than a third of global GDP and about half of global greenhouse gas emissions by 2050 (OECD, 2012). Water pollution is also forecast to grow in the next decades in many areas around the world (World Bank, 2012). Experiencing such increasing problems has encouraged governments in developing and emerging nations to take urgent action to mitigate the harmful effects of economic activities on the living surrounding. The appearance of markets for trade in EGs leads to advantages in terms of better efficiency and economic scale, or fewer barriers to approaching eco-friendly technologies. Furthermore, it also boosts environmental performance, regarding less water and air pollution and more effective allocation of natural resources. To maintain such advantages, governments should support trade in EGs in various ways, such as tariff reduction and removing other trade barriers.

b. Measuring Trade in Environmental Goods

For a number of reasons, there is no consensus on what should be included in a list of environmental products and services. Steenblik (2005) attributed this to the lack of specificity of the current taxonomy, such as the harmonized system (HS) at the six-digit level, and the presence of goods with several purposes, such as

environmental and non-environmental usages. The existence of both intermediate and final goods in the list of EGs further exacerbates the problem as their coverage in the HS classification is typically different by sectors. However, few scholars have attempted to construct lists of EGs that could be used during trade negotiations. One example is the list reported in Annex 2 of OECD/Eurostat (Vickery, 1999) that consists of 132 six-digit HS codes, covering from environmental media or themes (i.e., air pollution control) to solid waste treatment.

Another attempt is the list of climate change related goods for a plurilateral environmental goods and services (PEGS) agreement, containing 150 products with a focus on those related to tackling climate change. The proposed lists are regularly linked to the purpose of trade negotiations (Balineau & De Melo, 2013).

Regarding the multilateral stance, the 2011 Honolulu summit of APEC countries achieved an accord to cut applied tariffs imposed on environmental goods to 5% or less by the end of 2015. APEC (2012) proclaimed a list of 54 products at the Vladivostok Summit in 2012. Departing from the APEC initiative, 14 nations in January 2014 in Davos recommended a comprehensive list that was officially declared in Geneva in late 2014. This list demonstrates the lack of a global consensus on the goods that should be treated environmentally and the fact that negotiated lists may disregard some goods normally believed environmental, but not perceived to be in the perspective of trade negotiations. The OECD labels it the "CLEG" (Combined List of Environmental Goods) list with 248 products using the HS 2007 classification at the six-digit number.

2.2. Effects of Economic Sanction on Trade in Environmental Goods

Economic sanctions can affect trade in EGs in a number of ways. Economic sanctions harm environmental performance. Chen, Chen, and Chang (2019) documented a non-linear impact of environmental rules on carbon dioxide emissions in the presence of economic sanctions, as their imposition distorts economic incentives in environmental regulation. Fu et al. (2020) emphasized the role of income effect in which environmental protection's effectiveness shrinks because of a decrease in friendly-environmental consumption when the sanctions imposition negatively affects a household's income. Moreover, the governments of the targeted countries resist the trade sanctions at the expense of environmental regulation. Specifically, to support the firms affected by trade embargos, the governments may provide subsidies in the form of lessening environmental requirements, leading to environmental pollution. In the same line, Chen et al. (2019) revealed that economic sanctions considerably reduce energy efficiency and then destroy environmental quality. Furthermore, economic sanctions cause militarized tensions and conflicts among nations, which may have environmental consequences. Frauhiger (2017) pointed out that environmental degradation arises from the usage of massive weapons and resources because chemical weapons result in water and soil contamination and deforestation causes the environment's acidification.

Green consumption refers to a form of consumer behavior in which customers purchase green goods and services in pursuit of minimizing harmful impacts on the environment and advocating sustainability, therefore contributing to public health when they consume (Beatson, Gottlieb, & Pleming, 2020; Zhao et al., 2020). Trade in EGs can help consumers enjoy the benefits of high-quality green goods produced abroad (Cantore & Cheng, 2018; De Melo & Solleder, 2020). In addition, trade in EGs benefits the economy through higher effectiveness, increased economic scale, and easier access to eco-friendly technologies. It also helps to attain desirable environmental outcomes, such as a cleaner water system, reduced air pollution levels and higher efficiency of natural resource allocation. Hence, environmental economists have been seeking ways to foster trade in EGs. While Cantore and Cheng (2018) suggested the role of environmental regulation, De Melo and Solleder (2020) proposed reducing tariffs and non-tariff measures. In this domain, economic sanctions can be regarded as a trade resistance of EGs for the following reasons. Firstly, trade bans, the most common tool of economic sanctions, will cause a substantial drop in aggregate trade in general (Hufbauer, Schott, & Elliott, 2009) and trade in EGs in particular. Secondly, other tools of economic sanctions, such as deferral of international assistance and the withdrawal of foreign capital, will also adversely affect the growth rate of sanctioned economies (Neuenkirch & Neumeier, 2015). Once sanctions

harm the national income, the target economies' purchasing patterns might be altered in such a way that green consumption falls as consumers in sanctioned states are less likely to afford sourcing green goods overseas. Moreover, the sanctioned governments will seek to guarantee the normal operations of their economies and minimize how economic sanctions might translate into political grievances by relaxing environmental controls. Consequently, purchasing pollution management goods and cleaner technologies from the sanctioned countries decreases.

Based on the above discussion, we propose the following hypothesis:

H1: Economic sanction hamper trade in EGs.

3. MODEL SPECIFICATION

We use a workhorse of the gravity model to investigate the impact of economic sanctions on trade in EGs in target countries. Although economists previously included a battery of common factors of the gravity model as driving forces of trade in EGs, they are still inadequate (Fu et al., 2020; Madani, 2020). To consider this issue and address the estimation bias, full fixed effects in the panel data are applied. As a result, bilateral resistance (physical distance, common border, common language, and past colony) and multilateral resistance are omitted from the regression of our benchmark model:

$$\text{TEG}_{ijt} = \exp \left[\alpha_{it} + \alpha_{jt} + \alpha_{ij} + \beta_1 \text{Sanction}_{ijt} + \beta_2 \text{GRA}_{ijt} \right] + \varepsilon_{ijt} \qquad (1)$$

where subscripts i and j capture countries and t reflects year. Based on the approach proposed by Silva and Tenreyro (2006) the Poisson Pseudo Maximum Likelihood (PPML) estimator is applied to obtain the benchmark results. The advantages of applying PPML are as follows: (i) it fully addresses the heteroskedasticity observed in trade data, which causes inconsistent OLS estimation; and (ii) because of its multiplicative specification, PPML uses the information covered in the flows of zero trade. *TEG* is the value of export of EGs. Following Cantore and Cheng (2018), we used the Combined List of Environmental Goods (CLEG) to define the EGs as this represents a comprehensive list of 248 environmental products. Data on bilateral trade in CLEG goods were obtained from the United Nations Comtrade dataset using the six-digit degree of the 2007 edition of the Harmonized System (OECD, 2016). The trade values are all measured in the currency USD. To capture the period $1996 - 2019$, the HS codes used in the CLEG are converted from the 2007 version of the HS into the HS 1996 version by the United Nations Trade Statistics[1]. For robustness checks, we used narrow lists of EGs, such as Asia-Pacific Economic Cooperation (hereinafter referred to as APEC) list with 54 products, plurilateral agreement on environmental goods and services (hereinafter referred to as PEGS list) with 150 products, and Friends list (154 products)[2].

Our main explanatory variable is economic sanctions. All bilateral sanctions of nation i to nation j in year t are reflected by the main variable, $Sanction_{ijt}$, that was initiated by Felbermayr et al. (2020). The new database on global sanctions has allowed us to categorize economic sanctions into different forms (i.e. trade sanctions versus financial sanctions). Moreover, we only focused on effective sanctions by dropping the threats. Specifically, we defined $Sanction_{ijt}$ as a dummy variable that received a value of 1 if there is at least one type of sanction between i and j in year t, and 0 otherwise. The specific forms of global sanctions, including trade (*Sanction_trade*), financial (*Sanction_financial*), arms (*Sanction_arms*), military (*Sanction_military*), travel (*Sanction_travel*), and other (*Sanction_other*) were also taken into account in the analysis.

GRA_{ijt} is a set of bilateral variables that are common in the literature on the gravity-trade model. These variables consist of bilateral distance, dummy variables for the common border, official language, and past colonial.

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[1] https://unstats.un.org/unsd/trade/classifications/correspondence-tables.asp.

[2] The Friends group includes Canada, the European Union, Japan, Korea, New Zealand, Norway, Switzerland, Chinese Taipei, and the United States.

Time-varying i and j fixed effects (α_{it} and α_{jt}) and pair-fixed effects (α_{ij}) were incorporated to manage the multilateral and bilateral resistance, respectively.

Our dataset included 37,533 observations covering 88 nations from 1996 to 2019[3]. The lists of countries are provided in Tables A1 and A2 of the Appendix. Control variables are from the CEPII database. Table 1 reports the statistical summary of variables. Figure 1 portrays the distribution of the mean of *TEG* and *Sanction* over years and sanctioned countries. In Figure 1, TEG remained relatively steady until 2004, after which it started to increase exponentially to reach a peak in the year 2008. This was followed by a significant drop in 2012, with TEG levelling off at the 2012 level for the rest of the research period. Meanwhile, economic sanctions decreased in the period 1996-2002 but tended to increase over time after 2002. The negative association between *TEG* and *Sanction* was discernable in the post-2014 period.
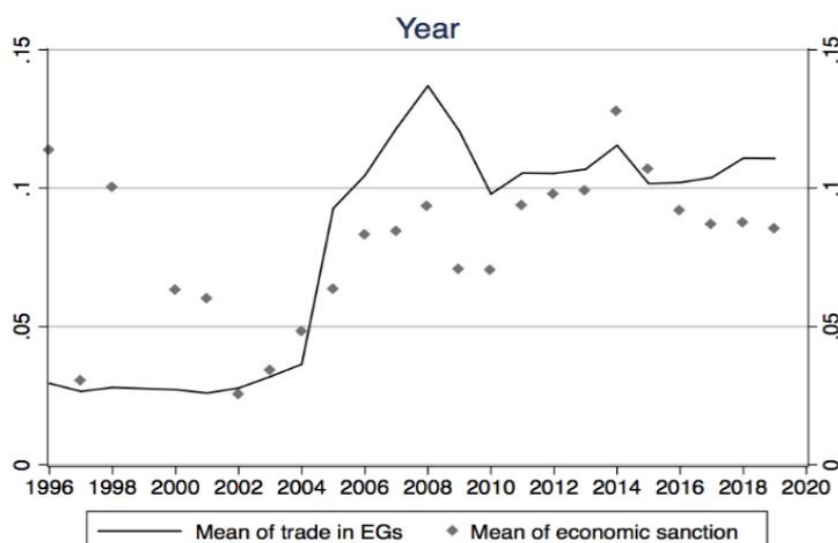

Figure 1. Distribution of average *TEG* and *Sanction* over year and countries
Note: The mean value of *TEG* is on the left-right scale, and the mean value of *Sanction* is on the right-hand scale.

Table 1. Statistical summary.

Variables	Obs.	Mean	Sd	Min	Max
TEG_CLEG	37533	0.09	0.37	0	2.9
TEG_APEC	37533	0.03	0.16	0	1.24
TEG_PEGS	37533	0.08	0.58	0	19.9
TEG_Friends	37533	0.1	0.7	0	24.6
Sanction	37533	0.08	0.28	0	1
Sanction_trade	37533	0.07	0.25	0	1
Sanction_financial	37533	0.04	0.19	0	1
Sanction_arms	37533	0.02	0.13	0	1
Sanction_military	37533	0.04	0.2	0	1
Sanction_travel	37533	0.02	0.14	0	1
Sanction_other	37533	0.01	0.1	0	1

4. ECONOMETRIC RESULTS

4.1. Baseline Results

We report our baseline results in column (1) of Table 2. The coefficient of *Sanction* is negative and statistically significant at a 5% level. This lends robust support for our prediction that economic sanctions hinder trade in EGs.

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[3] The data that support the findings of this study are available from the corresponding author upon reasonable request.

Columns (2)-(4) of Table 2 indicate that our result is robust for alternative lists of EGs. This finding supports our hypothesis H1.

Table 2. Estimation results.

Variables	(1) CLEG	(2) APEC	(3) PEGS	(4) Friends
Sanction	-0.37**	-0.45***	-0.48**	-0.46**
	(0.152)	(0.168)	(0.239)	(0.229)
Observations	37,533	37,533	37,533	37,533
R-squared	0.753	0.773	0.826	0.833
Pair FE	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes

Note: Standard errors in parentheses.
*** p<0.01, ** p<0.05.
CLEG (248 products); APEC list (54 products); PEGS list (150 products); and Friends list (154 products).

To examine the role of control variables, we re-regressed Equation 1 with country-fixed effects only. Table 3 shows that most of the control variables have the expected signs. The role of common gravity variables, namely common colonizer (*comcol*), common religion (*comrelig*), common regional trade agreement (*rta*), and physical distance (*D*) are underscored in our paper. While there are positive relationships between *comcol*, *comrelig*, *rta*, and *TEG*, the physical distance between sanctioning and targeted nations hinders trade in EGs. The findings imply that the risk of trade failure shrinks with closeness and common values, thus prompting nations to trade more in EGs. The greater efficiency in examining and gathering soft information comes from the physical closeness between sanctioning and targeted states. Our results are consistent with the current literature (Disdier, Tai, Fontagné, & Mayer, 2010; Takara, 2018). Ultimately, trade liberalization (i.e. tariff cuts) represented by *rta* cultivates trade in EGs.

Table 3. Estimation results with control variables.

Variables	(1) CLEG	(2) APEC	(3) PEGS	(4) Friends
Sanction	-0.28**	-0.11	-0.55***	-0.53***
	(0.129)	(0.143)	(0.191)	(0.183)
D	-0.40***	-0.32***	-0.62***	-0.61***
	(0.053)	(0.044)	(0.058)	(0.056)
comlang_off	0.15	0.21	0.27**	0.31**
	(0.159)	(0.163)	(0.137)	(0.145)
comcol	0.39*	0.11	0.22	0.13
	(0.234)	(0.233)	(0.318)	(0.275)
comrelig	0.40*	-0.00	0.61***	0.54***
	(0.221)	(0.223)	(0.229)	(0.202)
rta	0.43***	0.35***	0.20*	0.17
	(0.089)	(0.081)	(0.111)	(0.109)
Observations	37,204	37,204	37,204	37,204
R-squared	0.802	0.809	0.921	0.925
Pair FE	NO	NO	NO	NO
Country FE	YES	YES	YES	YES

Note: Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1.

4.2. Further Analysis

As the effects of economic sanctions may be heterogeneous across different forms, Table 4 displays the regression results on trade and financial sanctions. It can be seen that these types of sanctions act like disablers of trade in EGs[4].

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[4] Coefficients of other forms of sanction are insignificant.

Table 4. Breakout of economic sanction: trade and financial sanction.

Variables	(1) CLEG	(2) CLEG
Sanction_trade	−0.50*** (0.169)	
Sanction_financial		−0.61*** (0.165)
Observations	37,533	37,533
R-squared	0.754	0.754
Pair FE	YES	YES
Country-year FE	YES	YES

Note: Standard errors in parentheses.
*** p<0.01.

Lastly, we examined whether the nexus between economic sanction and trade in EGs depends on the economic development of the sanctioned states. We classify sanctioned countries into three groups: low-income nations (LIN), middle-income nations (MIN) and high-income nations (HIN). The estimation result reported in Table 5 indicates that the negative impact of economic sanctions on trade in EGs is only observed in LIC, and the magnitude of the impact of sanctions is much higher than that in the full sample. These results emphasize that economic sanction harm the targeted countries causing a fall in consumption of imported EGs. Meanwhile, people in countries with a high degree of economic development experience no income effects of the economic sanctions.

Table 5. Estimation results: subsample by income groups of targeted countries.

Variables	(1) Low-income countries	(2) Middle-income countries	(3) High-income countries
Sanction	−1.42*** (0.321)	−0.28 (0.180)	0.26 (0.217)
Observations	999	16,288	20,028
R-squared	0.961	0.832	0.757
Pair FE	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes

Note: Low-income countries (LIC), middle-income countries (MIC), and high-income countries (HIC).
Standard errors in parentheses.
*** p<0.01.

5. CONCLUSION AND POLICY IMPLICATIONS

The literature on economic sanctions stresses its humanitarian effects. We expand this research line by examining the effect of economic sanctions on trade in EGs. We hypothesized that the imposition of economic sanction hinders trade in EGs. To investigate our hypothesis, we employed 5,297 pairs during the period 1996–2019. By using the extended gravity model jointly with the rich database of the GSDB and the various lists of EGs, we show a negative association between economic sanction and EG flows. Furthermore, the heterogeneous impacts of sanctions on trade in EGs vary across the genres of sanctions. While military, arms and travel sanctions play no role, financial and trade restrictions hamper trade in EGs. These effects also depend on the degree of economic development of sanctioned state. Our findings suggest a number of important implications for foreign policy. The imposition of economic sanctions hampers trade in EGs, especially in the case of trade and financial sanctions. As the sanctioned states tend to reduce the priority of the environmental sector and reorient the sources away from the production of green goods, the lack of determination in sourcing EGs overseas reduces green consumption in the target countries. As a consequence, economic sanctions have an exacerbating effect on the public health of the sanctioned countries. In addition, this effect becomes particularly strong when trade and financial sanctions are applied. Lastly, the effect of economic sanctions on trade in EGs is contingent on the level of the target state's economic development. LIC suffer the most from the imposition of economic sanctions.

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APPENDIX

Table A1. List of sanctioning countries.

No	Sanctioning country	Percent	No	Sanctioning country	Percent	No	Sanctioning country	Percent
1	ALB	0.47	31	GHA	1.12	61	PAK	1.63
2	AND	0.71	32	GRC	0.58	62	PER	2.35
3	ARG	2.5	33	GTM	0.89	63	PHL	1.85
4	ARM	0.63	34	HKG	1.79	64	POL	1.51
5	AUS	2.08	35	HRV	0.25	65	PRT	0.58
6	AZE	0.7	36	HTI	0.42	66	ROU	1.69
7	BFA	0.4	37	HUN	0.88	67	RWA	0.79
8	BGD	1.11	38	IDN	1.6	68	SAU	0.42
9	BGR	0.87	39	IRN	1.31	69	SGP	0.63
10	BIH	0.47	40	IRQ	1.28	70	SLV	0.32
11	BLR	0.82	41	JOR	1.64	71	SVK	0.25
12	BOL	0.48	42	JPN	2.54	72	SVN	1.51
13	BRA	2.02	43	KAZ	1.11	73	SWE	1.95
14	CAN	1.02	44	KGZ	1.2	74	THA	1.79
15	CHL	2.4	45	KOR	2.23	75	TJK	0.34
16	CHN	2.23	46	LBN	1.17	76	TTO	0.99
17	COL	1.47	47	LBY	0.35	77	TUN	1.15
18	CYP	1.77	48	LVA	0.23	78	TUR	2.53
19	CZE	0.27	49	MAC	0.43	79	TZA	0.37
20	DEU	2.09	50	MAR	0.57	80	UGA	0.35
21	DOM	0.17	51	MDA	0.95	81	UKR	1.96
22	DZA	0.9	52	MEX	2.48	82	URY	1.4
23	ECU	1.19	53	MKD	0.58	83	UZB	0.5
24	EGY	1.54	54	MLI	0.46	84	VEN	0.6
25	ESP	1.95	55	MMR	0.54	85	VNM	1.53
26	EST	0.91	56	MYS	1.79	86	YEM	0.48
27	ETH	1.02	57	NGA	1.63	87	ZMB	0.46
28	FIN	0.88	58	NIC	0.51	88	ZWE	1.4
29	GBR	0.57	59	NLD	1.21			
30	GEO	1.34	60	NZL	1.93			

Table A2. List of targeted countries.

No	Targeted country	Percent	No	Targeted country	Percent	No	Targeted country	Percent
1	ALB	0.59	31	GHA	1.15	61	PAK	1.6
2	AND	0.73	32	GRC	0.58	62	PER	2.26
3	ARG	2.38	33	GTM	0.86	63	PHL	1.78
4	ARM	0.72	34	HKG	1.78	64	POL	1.5
5	AUS	2.07	35	HRV	0.25	65	PRT	0.58
6	AZE	0.74	36	HTI	0.4	66	ROU	1.68
7	BFA	0.5	37	HUN	0.85	67	RWA	1.04
8	BGD	1	38	IDN	1.59	68	SAU	0.43
9	BGR	0.85	39	IRN	1.21	69	SGP	0.63
10	BIH	0.48	40	IRQ	1.56	70	SLV	0.33
11	BLR	0.78	41	JOR	1.57	71	SVK	0.25
12	BOL	0.47	42	JPN	2.53	72	SVN	1.47
13	BRA	1.99	43	KAZ	1.18	73	SWE	1.94
14	CAN	1.02	44	KGZ	1.35	74	THA	1.79
15	CHL	2.3	45	KOR	2.21	75	TJK	0.32
16	CHN	2.23	46	LBN	1.17	76	TTO	1.04
17	COL	1.44	47	LBY	0.46	77	TUN	1.15
18	CYP	1.64	48	LVA	0.22	78	TUR	2.52
19	CZE	0.3	49	MAC	0.44	79	TZA	0.36
20	DEU	2.09	50	MAR	0.56	80	UGA	0.35
21	DOM	0.17	51	MDA	1	81	UKR	1.94
22	DZA	1.02	52	MEX	2.47	82	URY	1.23
23	ECU	1.09	53	MKD	0.68	83	UZB	0.48
24	EGY	1.48	54	MLI	0.51	84	VEN	0.64
25	ESP	1.95	55	MMR	0.54	85	VNM	1.47
26	EST	0.88	56	MYS	1.77	86	YEM	0.58
27	ETH	1	57	NGA	1.72	87	ZMB	0.52
28	FIN	0.87	58	NIC	0.5	88	ZWE	1.28
29	GBR	0.57	59	NLD	1.21			
30	GEO	1.31	60	NZL	1.87			