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Economic impact for Central America, Panama and the Dominican Republic (CAPDR) of changes in US trade policy, increased regional integration and new trade agreements

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- The United States is the most important trade and FDI partner for the Central American countries (Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua), Panama and the Dominican Republic (henceforth, CAPDR)
- What are the potential implications for CAPDR of a "new" US trade policy?
- Trump Administration: pledge of new approach to trade policy based on the "America first" slogan, which is related to a new protectionist stance the US government
- So far, less than expected policy changes (e.g. no border-adjustment tax), but high risks following TPP withdrawal and NAFTA renegotiations
- Main objective of this study is to quantify potential impacts of different US trade policy scenarios, and to quantitatively assess the potential of deeper regional integration and new PTAs

Scenario analysis

- Given that no concrete US policies directed towards CAPDR (yet), we use a scenario-based analysis
- First set of scenarios relates to US trade policy:
 - ① We use a worst-case scenario approach to US policy: the US will unilaterally repeal its preferential trade agreements (PTAs) with the region (DR-CAFTA and Panama-United States Trade Promotion Agreement), and also NAFTA (to see trade diversion effects with Mexico)
 - ② CAPDR can retaliate by also repealing the treaties (i.e. bilateral repeal), which is a possible political (if not economically sound) approach
- Region can compensate these expected negative effects with deeper regional integration and new PTAs:
 - ① Deeper regional integration: within CAPDR, with Mexico and with rest of Pacific Alliance (Chile, Colombia and Peru)
 - ② CAPDR negotiates and implements new PTAs: with Mercosur, China, rest of East and Southeast Asia

- The expected sign and general direction of some of these trade policies scenarios can be easily inferred (i.e. unilateral US repeal of DR-CAFTA), but we provide numerical results to assess the relative magnitude of the changes
- Value-added of using the same quantitative trade model is to use the same CGE model and similar associated trade costs reductions to *quantitatively* assess the economic magnitude of each scenario
- By providing numerical results to these trade policies, we can also rank each scenario by its expected economic impact and this can inform trade policy-makers in CAPDR

- Methodological strategy: use a CGE model that is complemented with gravity estimations of the effects of PTAs on FDI inward stocks
- We use an imperfect competition and capital accumulation variation of the standard GTAP model based on Francois et al. (2005).
- We use a dynamic closure of the model where changes in investment are linked to long-term capital accumulation, following Francois et al. (1996).
- Changes in investment directly affect the capital stock used in production to mimic a long run approach where investment flows are translated into physical capital, and this process generates an endogenous capital accumulation mechanism in the model
- To assess the *potential* impact on jobs, we use a labour market closure where for:
 - Low-skill workers: wages are fixed and employment adjusts to labour demand changes
 - High-skill workers: employment is fixed and wages adjust to labour demand changes

- The model is calibrated to the GTAP-9 database, with 2011 as its base year, with a 45 sector and 15 region aggregation
- We substitute the original GTAP tariff data (for 2011) for the CAPDR region, with the most recent WITS tariff data available
- The base year GTAP data from 2011 is projected to 2030 using the Shared Socioeconomic Pathways (SSP2) population and real GDP projections from the OECD (cf. OECD, 2012; Dellink et al., 2017).
- FDI shocks are taken from a separate study (commissioned by World Bank) on the impact of PTAs on FDI stocks/flows for the Pacific Alliance.
 - We use panel data gravity estimations using UNCTAD bilateral FDI inward stocks and latest gravity best-practices (cf. WTO, 2016)
 - We use the PTA "depth" index from DESTA

- Tariffs: US treaty repeals changes current applied tariffs to WTO's MFN tariffs (tariff data taken from World Bank-UNCTAD WITS database)
- Non-tariff measures (NTMs) increase reflecting trade costs associated with border and customs regulations, sanitary and phytosanitary controls, and other behind-the-border trade costs that were reduced with the implementation of the agreements.
- Measuring NTMs is complex, and we take the top-down gravity approach by Egger et al. 2015 (similar to other estimations using PTA "depth"): they provide NTB ad-valorem equivalent (AVE) estimations of deep PTAs (as DR-CAFTA is classified within the DESTA database) on NTB cuts for both goods and services
- For other scenarios, we use different combinations of tariff reductions and tariff elimination, together with assumptions on deep PTAs to assess expected NTM changes.

Initial trade conditions

Table: Total trade for each CAPDR country and its main trading partners in 2011, US\$ million

	CRI	DOM	SLV	GTM	HND	NIC	PAN	CAPDR
Total Trade	41,011	30,424	16,646	29,456	18,548	11,113	52,938	200,137
Trade with:								
USA	19,127	13,477	6,686	12,010	9,135	3,972	12,993	77,400
CAPDR	3,712	858	3,940	4,835	2,801	1,940	2,406	20,493
Mexico	1,406	1,030	781	2,307	810	508	1,030	7,873
Rest of PA	1,046	744	282	919	363	79	1,440	4,873
Mercosur	586	818	259	524	200	196	1,004	3,587
EU28	5,727	4,679	1,768	2,910	2,171	990	7,726	25,971
China	1,681	1,737	634	1,428	671	522	9,013	15,684
E-SE Asia	4,192	1,605	825	1,757	829	648	9,724	19,580
Other regions	3,533	5,475	1,471	2,766	1,568	2,258	7,604	24,676
Shares:								
USA	46.6%	44.3%	40.2%	40.8%	49.3%	35.7%	24.5%	38.7%
CAPDR	9.1%	2.8%	23.7%	16.4%	15.1%	17.5%	4.5%	10.2%
Mexico	3.4%	3.4%	4.7%	7.8%	4.4%	4.6%	1.9%	3.9%
Rest of PA	2.6%	2.4%	1.7%	3.1%	2.0%	0.7%	2.7%	2.4%
Mercosur	1.4%	2.7%	1.6%	1.8%	1.1%	1.8%	1.9%	1.8%
EU28	14.0%	15.4%	10.6%	9.9%	11.7%	8.9%	14.6%	13.0%
China	4.1%	5.7%	3.8%	4.8%	3.6%	4.7%	17.0%	7.8%
E-SE Asia	10.2%	5.3%	5.0%	6.0%	4.5%	5.8%	18.4%	9.8%
Other regions	8.6%	18.0%	8.8%	9.4%	8.5%	20.3%	14.4%	12.3%

Source: GTAP-9 database.

Initial FDI conditions

Table: CAPDR, inward FDI stocks by country of origin, 2010-2012 weighted averages in US\$ million

	Average inward FDI stocks for 2010-2012									
	USA	Mexico	CAPDR	rest PA	Mercosur	EU	China	rest Asia	rest World	Total
CRI	10,303	684	679	367	71	2,879	42	37	1,251	16,313
DOM	1,518	2,074	6	0	0	1,334	0	0	9	4,941
GTM	1,509	1,165	344	292	24	882	12	96	853	5,177
HND	1,408	1,245	731	198	0	1,736	0	64	360	5,742
NIC	298	362	75	0	0	41	0	178	0	954
PAN	4,180	796	680	2,584	403	6,966	21	2,105	5,314	23,048
SLV	2,672	791	2,678	53	12	850	0	172	443	7,671
CAPDR	21,889	7,116	5,193	3,495	510	14,687	75	2,652	8,229	63,846
	Share of total inward FDI stocks									
	USA	Mexico	CAPDR	rest PA	Mercosur	EU	China	rest Asia	rest World	Total
CRI	63.2%	4.2%	4.2%	2.3%	0.4%	17.6%	0.3%	0.2%	7.7%	100.0%
DOM	30.7%	42.0%	0.1%	0.0%	0.0%	27.0%	0.0%	0.0%	0.2%	100.0%
GTM	29.1%	22.5%	6.6%	5.6%	0.5%	17.0%	0.2%	1.9%	16.5%	100.0%
HND	24.5%	21.7%	12.7%	3.5%	0.0%	30.2%	0.0%	1.1%	6.3%	100.0%
NIC	31.3%	37.9%	7.9%	0.0%	0.0%	4.3%	0.0%	18.7%	0.0%	100.0%
PAN	18.1%	3.5%	3.0%	11.2%	1.7%	30.2%	0.1%	9.1%	23.1%	100.0%
SLV	34.8%	10.3%	34.9%	0.7%	0.2%	11.1%	0.0%	2.2%	5.8%	100.0%
CAPDR	34.3%	11.1%	8.1%	5.5%	0.8%	23.0%	0.1%	4.2%	12.9%	100.0%

Source: Own estimations using bilateral FDI database from UNCTAD(2014).

Results: US unilateral revocation of DR-CAFTA and US-Panama PTA

Table: Main economic outcomes, DR-CAFTA and Panama-US repealed only by the US, percentage changes with respect to baseline in 2030

	CRI	DOM	SLV	GTM	HND	NIC	PAN	CAPDR /3	MEX	USA
% changes by 2030 /1:										
Real GDP	-7.05	-4.66	-4.92	-4.24	-6.55	-5.88	-10.40	-6.08	0.04	-0.04
Total trade	-10.08	-12.38	-13.80	-12.18	-22.97	-12.95	-11.80	-13.42	0.04	-0.36
Total exports	-9.91	-14.29	-16.45	-13.43	-24.24	-13.63	-10.48	-14.59	0.04	-0.45
Total imports	-10.32	-11.18	-12.28	-11.24	-21.81	-12.30	-12.28	-12.75	0.04	-0.30
Trade with USA	-25.06	-27.53	-33.92	-29.57	-46.21	-44.16	-30.83	-31.25	0.24	-
Trade with CAPDR	-5.25	-3.98	-4.73	-1.55	-8.42	-3.95	0.56	-3.80	-7.58	-31.25
Trade with Mexico	-7.81	-5.16	-8.64	-7.99	2.32	-3.44	-12.27	-7.58	-	0.24
Trade with rest of LAC	-5.47	-4.26	-6.74	-15.29	-21.13	-15.91	-2.94	-1.66	-0.18	0.17
Trade with EU28	4.71	0.90	3.03	0.21	5.55	3.02	-6.78	-0.20	0.02	0.08
Trade with other regions	4.99	-1.84	-6.60	-4.52	-6.23	7.26	-9.38	-4.70	0.08	0.21
Potential job changes by 2030 /2:	-153,239	-178,795	-303,688	-395,204	-357,042	-237,594	-179,997	-1,805,559	23,829	-24,488
Expected changes in yearly investments: in US\$ millions	-1,856	-841	-213	-485	-353	-194	-2,966	-6,909	184	
as % of annual FDI inflows /4	-60.7%	-40.5%	-50.3%	-39.4%	-28.8%	-23.0%	-59.8%	-50.0%	0.5%	

Source: Own estimations using CGE model and GTAP database.

Figure: Changes in GDP levels related to different trade policy shocks

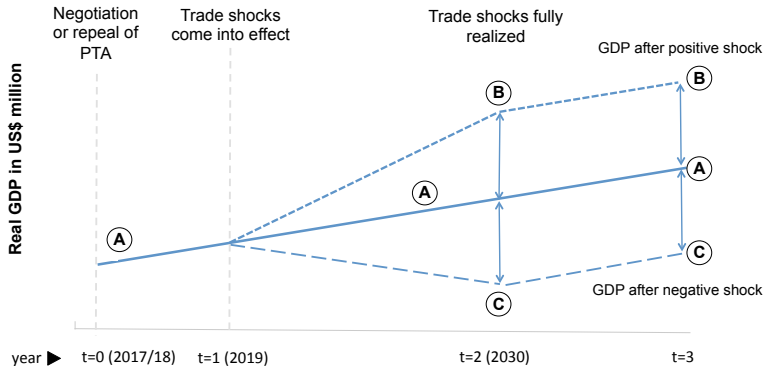


Figure: Summary US trade policy scenarios

Tabla 1. Principales resultados de distintos escenarios proteccionistas con los EE UU para la región CAPDR, cambios porcentuales

Variable	Escenarios con EEUU			
	sólo TLCAN (1)	sólo CAPDR ^{3/} (2)	todos APs unilateral (3)	todos APs bilateral (4)
PIB real (con respecto a 2030)	0.59	-6.08	-5.83	-9.72
Crecimiento (promedio anual)	0.05	-0.57	-0.55	-0.94
Comercio total	0.61	-13.42	-13.37	-18.13
Exportaciones	0.78	-14.59	-14.44	-19.71
Importaciones	0.51	-12.75	-12.75	-17.23
Comercio con EEUU	0.52	-31.25	-31.55	-61.67
Cambio potencial empleo (miles)	107.8	-1,805.6	-1,788.6	-1,756.7
Cambio esperado inversión				
en millones de US\$	208.0	-6,908.7	-6,622.9	-10,205.3
respecto al flujo anual de IED	6.8%	-50.0%	-47.9%	-73.9%

Results: Deeper within-CAPDR integration

Table: Main economic outcomes, deeper CAPDR integration, percentage changes with respect to baseline in 2030

	CRI	DOM	SLV	GTM	HND	NIC	PAN	CAPDR /3	MEX	USA
% changes by 2030 /1:										
Real GDP	1.08	0.13	1.81	1.12	2.02	1.80	2.39	1.22	-0.01	-0.01
Total trade	3.50	1.80	9.91	7.31	8.31	3.36	7.31	6.36	-0.03	-0.05
Total exports	3.41	2.43	13.64	8.73	8.96	3.81	11.52	8.27	-0.03	-0.05
Total imports	3.62	1.40	7.77	6.25	7.71	2.94	5.77	5.26	-0.03	-0.04
Trade with USA	-5.85	-1.35	-3.72	-3.50	-0.49	-2.44	-0.95	-2.81	0.02	-
Trade with CAPDR	55.71	85.06	40.28	46.59	45.76	31.00	110.28	56.11	-2.05	-2.81
Trade with Mexico	-1.78	-0.98	-5.15	-4.13	-1.68	-8.14	2.41	-2.05	-	0.02
Trade with rest of LAC	-1.60	-1.62	-0.23	-13.89	-13.71	-17.76	-10.35	-2.19	0.03	0.01
Trade with EU28	-2.25	-0.99	-1.73	-1.78	-1.40	-2.69	1.19	-0.81	0.00	0.00
Trade with other regions	-5.81	-2.12	-4.17	-2.95	-3.11	-4.16	2.36	-0.80	-0.02	0.00
Potential job changes by 2030 /2:	30,619	-1,418	70,621	126,747	57,522	34,992	64,130	383,214	-8,697	-10,558
Expected changes in yearly investments:										
in US\$ millions	46	14	52	29	60	12	217	431	-46	
as % of annual FDI inflows /4	1.5%	0.7%	12.4%	2.4%	4.9%	1.4%	4.4%	3.1%	-0.1%	

Notes: Includes complete within-CAPDR tariff elimination and 6% NTB reductions, plus deeper NTB reductions between Panama and the Dominican Republic.

Figure: Summary deeper regional integration scenarios

Tabla 2. CAPDR, principales resultados de una mayor integración intrarregional de CAPDR y con México, cambios porcentuales

Variable	Escenarios mayor integración			
	dentro de CAPDR (5)	con México (6)	con Alianza Pac. (7)	Conjunto EEUU (4+5+6+7)
PIB real (con respecto a 2030)	1.22	3.21	1.64	-0.44
Crecimiento (promedio anual)	0.11	0.29	0.15	-0.04
Comercio total	6.36	4.60	4.69	0.01
Exportaciones	8.27	5.01	4.91	-0.15
Importaciones	5.26	4.37	4.56	0.10
Comercio con EEUU	-2.81	-1.47	-1.80	-62.67
Comercio entre CAPDR	56.11	-0.25	-2.22	62.74
Comercio con México	-2.05	121.65	-8.11	145.23
Comercio con resto de Latin Am.	-2.2	-3.6	54.65	57.00
Cambio potencial empleo (miles)	383.2	513.3	299.2	-246.9
Cambio esperado inversión en millones de US\$	431.4	3,597.5	1,790.5	829.6
respecto al flujo anual de IED	3.1%	26.0%	13.0%	6.0%

Figure: Summary new PTAs scenarios

Tabla 3. CAPDR: Principales resultados de nuevos Acuerdos Comerciales con Suramérica y Asia.

	Escenarios con nuevos APCs			
	AP con Mercosur (8)	AP con China (9)	AP con E-SE Asia (10)	Conjunto EEUU (4+8+9+10)
PIB real (%) ^{1/}	0.73	1.22	1.27	-4.34
Crecimiento (promedio anual)	0.07	0.11	0.11	-0.40
Comercio total (%)	3.97	7.87	5.08	1.66
Exportaciones (%)	5.10	12.60	5.87	5.63
Importaciones (%)	3.33	5.16	4.63	-0.62
Cambio potencial empleo (miles) ^{2/}	115.8	-187.5	83.6	-1,582.9
Cambio esperado inversión (en millones de US\$)	297.2	26.6	1,401.8	-4,986.9
Respecto al flujo anual de IED (%)	2.2%	0.2%	10.1%	-36.1%

Fuente: Cálculos propios con base en el modelo EGC.

Summary and policy implications

- The main aim of these simulations is to quantitatively analyze the expected negative effects of a change in US trade policy and alternative (counterbalancing) trade policies for CAPDR
- As anticipated, the unilateral repeal of the US trade agreements has severe negative economic effects on each of the CAPDR countries
- The region can pursue palliative trade policy measures to counteract these negative effects:
 - ① Deeper regional integration: Separately, will generate positive economic outcomes, and when done jointly can almost erase all the negative effects of the bilateral revocation of the PTAs between the US and CAPDR
 - ② New PTAs: We find that these new PTAs also generate positive economic effects, but they cannot fully compensate
- Deeper regional integration is a good trade policy option
- However, it also implies a political and economic commitment that could maybe only be spurred in the dramatic case of a US policy turn

Thank you for your attention!

Further questions: romagosa17@gmail.com