

Whose Policy Uncertainty Matters in the Trade between Mexico and the US?

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ABSTRACT

The main goal of this paper is to determine whose policy uncertainty affects commodity trade flows between the US and Mexico the most. By using monthly data from each of the 93 industries that trade between the two countries, we find that while, in the short-run, trade by most industries is affected by US and Mexican policy uncertainty measures, in the long run only a limited number of industries are affected. More precisely, 17 US exporting industries to Mexico, with 30 per cent export share, are affected positively by the US uncertainty measure and 21 US exporting industries with 45 per cent export share are affected negatively by the Mexican uncertainty measure. On the other hand, 25 Mexican exporting industries to the US with only 4.9 per cent export share are affected by the US uncertainty measure and 27 Mexican exporting industries with 5.1 per cent export share are affected by the Mexican uncertainty measure. Thus, both uncertainty measures have their largest long-run effects on US exports to Mexico.

JEL Classifications: F14, F40, F50.

Keywords: Economic Policy Uncertainty, the US, Mexico, Trade Flows, 93 Industries.

1. INTRODUCTION

Since its inception in 1994, the North American Free Trade Agreement (NAFTA) has resulted in the elimination or reduction of trade barriers and barriers to investment between the US, Canada, and Mexico. The effects of the agreement regarding issues such as employment, the environment, and economic growth have been the subject of political disputes. In 2017, when Donald Trump became US president, one of his administration's goals was to replace NAFTA with a new agreement. In September 2018 members agreed to replace NAFTA with the United States-Mexico-Canada Agreement (USMCA). All three countries ratified it by March 2020. The USMCA took effect on 1 July, 2020, replacing NAFTA with only minor changes to its content. However, while the three countries continued their discussions and meetings, during the negotiation period tensions were high and trade flows were affected.³ Indeed,

trade flows among the members still could be affected due to uncertainty introduced by the Trump administration not just associated with trade, but also with other matters such as migration through Mexico to the US, building a border wall, etc.

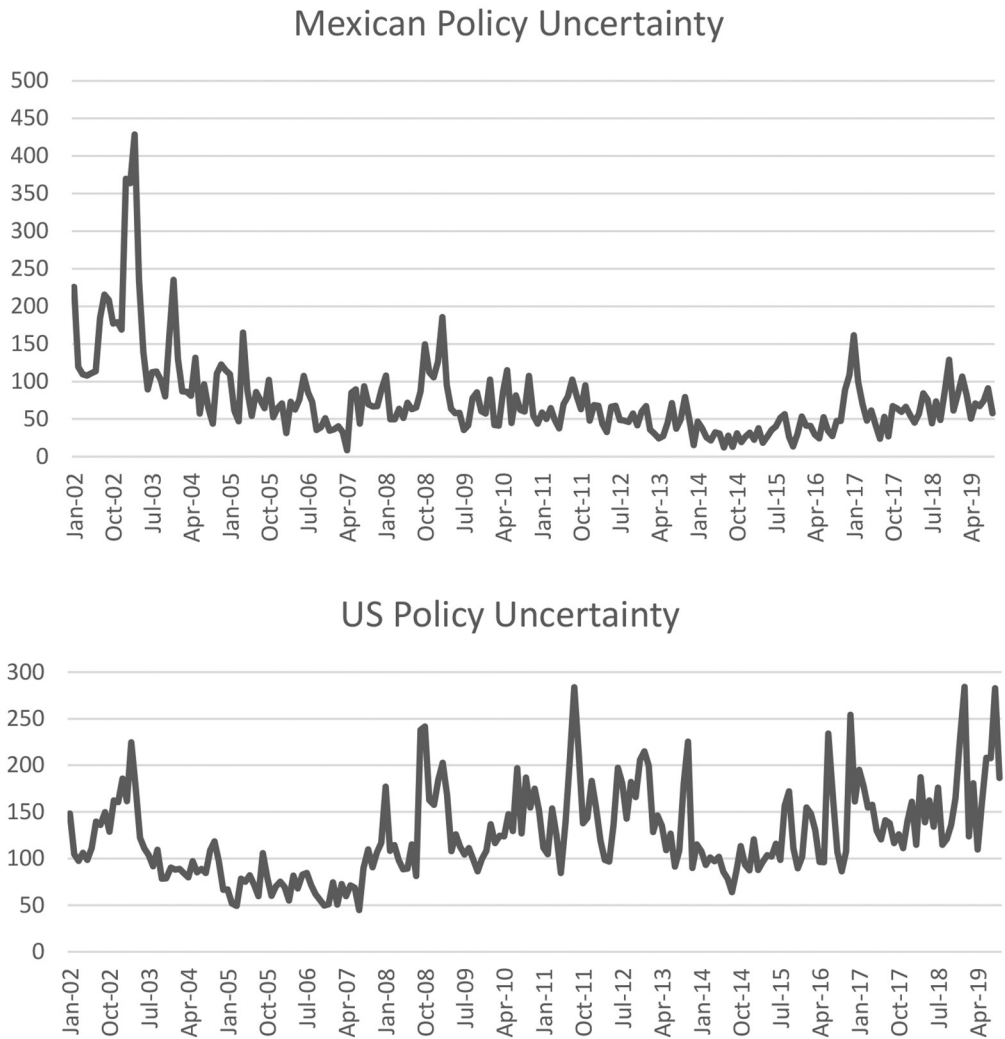
Other factors such as changes in domestic tax laws, rules and regulations, anti-immigrant sentiment, etc., could also have contributed to an uncertain environment within the member countries. Such changes, in turn, contribute to changes in measures of policy uncertainty. For example, when the US announces the limiting of its imports of Mexican avocados, prices will change in both countries and traders will expect uncertain future prices. This will be reflected in policy uncertainty measures in both countries.

Recently, Baker *et al* (2016) introduced a measure of uncertainty that captures the effects of all uncertain factors in one measure, known as “policy uncertainty”. This new measure of policy uncertainty is based on a search of news covering economic policy uncertainty issues from highly circulated newspapers. To capture policy-oriented news, the following terms were searched for: “policy”, “tax”, “spending”, “regulation”, “central bank”, “budget”, “deficit”, “trade”, “terrorism”, etc. Moreover, to capture policy uncertainty news, terms such as “uncertain” or “uncertainty” were included in all searches. A normalised index of volume of news articles, from these papers, is then constructed. To see how the measure has evolved over time, for each country, we plot them in Figure 1. As can be seen, we observe more volatility in the US policy uncertainty measure than that of Mexico, which is expected to have greater effects on trade flows.

Our goal in this paper is to determine whose measure of policy uncertainty affects trade flows between the US and Mexico. Since the introduction of the policy uncertainty measure by Baker *et al* (2016), a group known as the Policy Uncertainty Group has adopted the approach and has constructed the measure for as many countries as possible. Researchers are trying to assess its impact on different macro variables, and trade flows are no exception. The link between policy uncertainty and trade flows is in its infancy. Existing literature on this topic includes Armelius *et al* (2014), Han *et al* (2016), and Tam (2018). Armelius *et al* (2014) assessed the impact of the US economic policy uncertainty measure on aggregate global trade and showed that its impact is negative. The same was discovered by Han *et al* (2016), who utilised a panel model that included data from 31 countries over the period 1999–2012. They showed that, again, US policy uncertainty negatively affects the exports of countries included in the sample.

Finally, Tam (2018) employed a global vector autoregressive (GVAR) trade model, a panel model that included a total of 45 countries. By relying upon impulse response functions, the author found that US policy uncertainty affected global trade flows significantly and strongly, largely due to its indirect trade linkages with the rest of the world. By contrast, China’s economic policy uncertainty shock exhibited statistically significant impacts on exports and

Figure 1: Policy Uncertainty Measures



Source of the Data: Policy Uncertainty Group, <https://www.policyuncertainty.com/>

imports of its own as well as other economies, although not as pronounced as those arising from US economic policy shock.

All three studies mentioned above suffer from aggregation bias in that they either use each country’s trade with the world in a time-series framework, or each country’s trade with the world in a panel model. Thus what may hold for one cross-sectional unit in a panel, may not hold for another unit. In a time-

series model using the aggregate trade flows of one country with the rest of the world, the bias arises from the fact that we are aggregating trade across all trading partners, where trade with one partner could respond to policy uncertainty differently than trade with another partner.

Following their approach, and suspecting that the above studies suffer from aggregation bias, Bahmani-Oskooee and Baek (2021) consider the trade flows between two trading partners, the US and South Korea, and try to determine whose policy uncertainty matters in the trade between the two countries. To reduce aggregation bias further, the authors disaggregate trade flows by industry and include 61 2-digit US exporting industries to South Korea and 49 2-digit South Korean exporting industries to the US. They find that both countries' policy uncertainty measures have short-run effects on the exports, of almost one-third of industries in either direction. In the long run, however, while nine US exporting industries (with a trade share of 9 per cent) are negatively affected by the South Korean uncertainty measure, only five industries (with 6 per cent export share) are affected by the US uncertainty measure. As for the South Korean exporting industries, they find that three industries with 31 per cent export share are affected positively by the South Korean uncertainty measure and six industries with a 7 per cent export share are affected positively by the US uncertainty measure.

Bahmani-Oskooee and Xu (2022) follow a similar approach and assess the response of each of the 87 industries represented in the trade between the US and China, to economic policy uncertainty in both countries. They find that US policy uncertainty has negative effects in 36 exporting industries, with an export share of 43 per cent, and 25 importing industries with an import share of 11 per cent. By contrast, they find China's economic policy uncertainty to have positive long-run effects on US exports of 19 industries, with an export share of 18 per cent, and on US imports of 24 industries with an import share of 13.5 per cent. Such findings by Bahmani-Oskooee and Baek (2021) and Bahmani-Oskooee and Xu (2022) at the commodity level support disaggregation by trading partners and by commodity. Furthermore, these results contradict those of Jia *et al* (2020 p 600), who used a gravity model and aggregate trade data between pairs of 20 countries and concluded that 'the export of a country is negatively associated with the EPU of its corresponding importing country, but not with the EPU of the exporting country itself'. Additionally, they reveal that the outcomes are country and commodity specific.

A major contributing factor to country and industry specific results could be the fact that different traders in different countries could tolerate risk and uncertainty at a different rate. A Mexican trader with the US will have a different level of risk tolerance than a Chinese trader with the US, mostly arising from different changes in US trade policies against Mexico versus China. Similarly, a US trader will have a different level of risk tolerance against Mexico versus China. Mexico is not considered a major economic or political threat, whereas China is. Risk-averse traders will trade less, and risk-tolerant traders will trade more.

We add to this new literature by considering trade flows between Mexico and the US at the industry level. A total of 93 US exporting and importing industries with Mexico are included in our analysis. We use monthly data over the period January 2002-September 2019 to estimate our models for each industry. To that end, we introduce the models in Section 2, followed by the results in Section 3. A summary is provided in Section 4, followed by an Appendix in which the variables are defined and data sources are provided.⁴

2. THE MODELS AND METHODS

In formulating any export and import demand models, we must first account for the level of economic activity or income and relative prices. These models, which include only a measure of real income and relative prices, are estimated to judge the so-called Marshall-Lerner condition in the international trade literature. Some examples are found in Goldstein and Khan (1978, 1985), Bahmani-Oskooee (1986), Marquez (1990), Rose (1990, 1991), Bahmani-Oskooee and Niroomand (1998), and Bahmani-Oskooee and Kara (2005).⁵ Therefore, we borrow the trade models from these studies and add two policy uncertainty measures to arrive at:⁶

$$\text{Ln}X_t^{US} = \alpha_0 + \alpha_1 \text{Ln}Y_t^{MEX} + \alpha_2 \text{Ln}REX_t + \alpha_3 \text{Ln}PU_t^{US} + \alpha_4 \text{Ln}PU_t^{MEX} + \varepsilon_t \quad (1)$$

$$\text{Ln}M_t^{US} = \beta_0 + \beta_1 \text{Ln}Y_t^{US} + \beta_2 \text{Ln}REX_t + \beta_3 \text{Ln}PU_t^{US} + \beta_4 \text{Ln}PU_t^{MEX} + \mu_t \quad (2)$$

where in (1), X^{US} denotes US exports of an industry to Mexico, which is assumed to depend on the level of economic activity or real income in Mexico (Y^{MEX}), the real peso-dollar exchange rate denoted by REX , and measures of policy uncertainty in the US and Mexico, denoted by PU^{US} and PU^{MEX} , respectively. Similarly, in (2), M^{US} denotes US imports of the same industry from Mexico (or Mexican exports) which is assumed to depend on US real income (Y^{US}), the real exchange rate denoted by REX , and again, both uncertainty measures appear.

As far as the signs of the estimated coefficients are concerned, since increased economic activity stimulates trade, we expect estimates of α_1 and β_1 to be positive. As the Appendix reveals, the real exchange rate is defined as $REX = (P_{US} \cdot NEX / P_{MEX})$, where NEX is the nominal exchange rate defined as the number of pesos per dollar, P_{US} is the price level in the US and P_{MEX} is the price level in Mexico. Thus, a decline in REX reflects a real depreciation of the US dollar. Thus, if a dollar depreciation is to boost US exports and reduce US imports, estimates of α_2 in (1) and β_2 in (2) are expected to be negative and positive, respectively. Finally, if either measure of policy uncertainty is to hurt US or Mexican exports, coefficients attached to policy uncertainty measures should carry negative signs.

The coefficient estimates discussed above reflect the long-run effects of all right-hand side variables in each model. If we are also to infer their short-run effects, we must then include the short-run dynamic adjustment process in these models. An approach that yields both short-run and long-run estimates

in one step is that of Pesaran *et al* (2001). Accordingly, models (1) and (2) are converted to error-correction models outlined by (3) and (4):

$$\begin{aligned} \Delta \text{Ln}X_t^{US} = & a_1 + \sum_{j=1}^{n_1} a_{2j} \Delta \text{Ln}X_{t-j}^{US} + \sum_{j=0}^{n_2} a_{3j} \Delta \text{Ln}Y_{t-j}^{MEX} + \sum_{j=0}^{n_3} a_{4j} \Delta \text{Ln}REX_{t-j} \\ & + \sum_{j=0}^{n_4} a_{5j} \Delta \text{Ln}PU_{t-j}^{US} + \sum_{j=0}^{n_5} a_{6j} \Delta \text{Ln}PU_{t-j}^{MEX} + \theta_0 \text{Ln}X_{t-1}^{US} + \theta_1 \text{Ln}Y_{t-1}^{MEX} \\ & + \theta_2 \text{Ln}REX_{t-1} + \theta_3 \text{Ln}PU_{t-1}^{US} + \theta_4 \text{Ln}PU_{t-1}^{MEX} + \psi_t \end{aligned} \quad (3)$$

$$\begin{aligned} \Delta \text{Ln}M_t^{US} = & b_1 + \sum_{j=1}^{n_5} b_{2j} \Delta \text{Ln}M_{t-j}^{US} + \sum_{j=0}^{n_6} b_{3j} \Delta \text{Ln}Y_{t-j}^{US} + \sum_{j=0}^{n_7} b_{4j} \Delta \text{Ln}REX_{t-j} \\ & + \sum_{j=0}^{n_8} b_{5j} \Delta \text{Ln}PU_{t-j}^{US} + \sum_{j=0}^{n_9} b_{6j} \Delta \text{Ln}PU_{t-j}^{MEX} + \rho_0 \text{Ln}M_{t-1}^{US} + \rho_1 \text{Ln}Y_{t-1}^{US} \\ & + \rho_2 \text{Ln}REX_{t-1} + \rho_3 \text{Ln}PU_{t-1}^{US} + \rho_4 \text{Ln}PU_{t-1}^{MEX} + \phi_t \end{aligned} \quad (4)$$

In spirit, specifications (3) and (4) follow Engle and Granger's (1987) approach. The only difference is that rather than including the lagged error term from (1) in (3) and from (2) in (4), their proxies as a linear combination of the lagged level variables are included.⁷ One of the main advantages of this approach is that the short-run and long-run effects are estimated in one step by estimating (3) and (4). Short-run effects are reflected in the estimates of coefficients attached to the first-differenced variables in both models. Long-run effects are judged by the estimates of θ_1 to θ_4 , normalised on $-\theta_0$ in (3) and estimates of ρ_1 to ρ_4 normalised on $-\rho_0$ in (4). To validate the long-run estimates, Pesaran *et al* (2001) propose two cointegration tests: the F and the t-test. The F test is applied to establish joint significance of the lagged level variables in each model. The t-test is used to judge the significance of θ_0 in (3) and ρ_0 in (4).⁸ Since both tests have non-standard distributions, Pesaran *et al* (2001) tabulate new critical values that account for the degree of integration of the variables. Indeed, under this method, the variables could be a combination of I(0) and I(1), which are the properties of most macro variables; this is another advantage of this approach.⁹

3. EMPIRICAL RESULTS

Both models (3) and (4) are estimates for each of the 93 2-digit industries that trade between the US and Mexico using monthly data over the period January 2002–September 2019. All data sources are provided in the Appendix. Since the data are monthly, a maximum of 12 lags is imposed on each first-differenced variable in both models and Akaike's Information Criterion (AIC) is used to select the optimum number of lags. Additionally, a dummy variable is included in all models to account for the Global Financial Crisis of 2008. Significant cases are identified by # in the tables. Furthermore, since different estimates and diagnostic statistics are subject to different critical values, all required critical values are collected in the notes to each table and used to identify significant estimates. We begin with the estimate of the US export model to Mexico and report the results in Tables 1–3.

To conserve space, we only report the short-run coefficient estimates attached to two policy uncertainty measures, to see whose policy uncertainty

Table 1: Short-Run Coefficient Estimates of the US Policy Uncertainty on the US Exports to Mexico

Code	# Lags on $\Delta \ln PU^{us}$											
	0	1	2	3	4	5	6	7	8	9	10	11
01 Live Animals	0.09											
02 Meat And Edible Meat Offal	-0.03	0.05	-0.02	-0.005	-0.003	-0.05	0.05					
03 Fish, Crustaceans & Aquatic Invertebrates	-0.03	0.02	0.12	-0.12	0.06	-0.002	0.19**	-0.31**	0.29**	-0.12	-0.12	
04 Dairy Prods; Birds Eggs; Honey; Ed Animal Pr Nesoi	-0.01											
05 Products Of Animal Origin, Nesoi	0.03											
06 Live Trees, Plants, Bulbs Etc.; Cut Flowers Etc.	-0.03	0.31**										
07 Edible Vegetables & Certain Roots & Tubers	0.02	-0.07	-0.16**									
08 Edible Fruit & Nuts; Citrus Fruit Or Melon Peel	0.05											
09 Coffee, Tea, Mate & Spices	0.02	0.16										
10 Cereals	-0.02											
11 Milling Products; Malt; Starch; Inulin; Wht Gluten	0.06											
12 Oil Seeds Etc.; Misc Grain, Seed, Fruit, Plant Etc	0.01											
13 Lac; Gums, Resins & Other Vegetable Sap & Extract	0.08											
15 Animal Or Vegetable Fats, Oils Etc. & Waxes	0.05	0.10*	-0.03	0.08	-0.08	-0.09*						
16 Edible Preparations Of Meat, Fish, Crustaceans Etc	0.02											
17 Sugars And Sugar Confectionary	0.01	-0.14**										
18 Cocoa And Cocoa Preparations	-0.02	-0.04	0.07	-0.10	0.11*	-0.04	0.13**	0.04	0.08	0.07		
19 Prep Cereal, Flour, Starch Or Milk; Bakers Wares	-0.01	0.01	0.03	-0.12**	0.01	0.08	0.03	0.02	0.06			
20 Prep Vegetables, Fruit, Nuts Or Other Plant Parts	0.04											
21 Miscellaneous Edible Preparations	-0.001											
22 Beverages, Spirits And Vinegar	0.09	-0.01	0.09	-0.003	-0.04	0.05	0.07	-0.01	0.12**			
23 Food Industry Residues & Waste; Prep Animal Feed	0.05	0.03	-0.10**	-0.04	0.09*	-0.09*	-0.04	0.06	0.01	0.07	-0.04	-0.08
24 Tobacco And Manufactured Tobacco Substitutes	-0.12											
25 Salt; Sulfur; Earth & Stone; Lime & Cement Plaster	0.07	-0.08	0.08	-0.03	0.05	-0.07	0.08	0.08	0.03	0.12**		
26 Ores, Slag And Ash	0.09											
27 Mineral Fuel, Oil Etc.; Bitumin Subst; Mineral Wax	-0.01	0.08	0.05	-0.13*								
28 Inorg Chem; Prec & Rare-earth Met & Radioact Compd	-0.06											
29 Organic Chemicals	-0.02											
30 Pharmaceutical Products	-0.005											

Table 2: Short-Run Coefficient Estimates of the US Policy Uncertainty on the US Exports to Mexico

Code	0	1	2	3	4	5	6	7	8	9	10	11
01 Live Animals	-0.07	-0.05	0.02	-0.16*								
02 Meat And Edible Meat Offal	-0.02	-0.04*										
03 Fish, Crustaceans & Aquatic Invertebrates	0.02	-0.07	0.10**									
04 Dairy Prods; Birds Eggs; Honey; Ed Animal Pr Nesoi	-0.05											
05 Products Of Animal Origin, Nesoi	0.03											
06 Live Trees, Plants, Bulbs Etc.; Cut Flowers Etc.	0.11	-0.20**										
07 Edible Vegetables & Certain Roots & Tubers	-0.001	-0.13	-0.04	0.09**								
08 Edible Fruit & Nuts; Citrus Fruit Or Melon Peel	-0.02											
09 Coffee, Tea, Mate & Spices	0.005											
10 Cereals	0.04											
11 Milling Products; Malt; Starch; Inulin; Wht Gluten	-0.02											
12 Oil Seeds Etc.; Misc Grain, Seed, Fruit, Plant Etc	0.07*											
13 Lac; Gums, Resins & Other Vegetable Sap & Extract	0.12	-0.002	-0.12	-0.06	0.11	0.08	-0.20**	-0.11	0.05	0.07	0.18	-0.22**
15 Animal Or Vegetable Fats, Oils Etc. & Waxes	0.002	-0.02	-0.01	-0.08**	0.005	0.02	-0.07**	-0.003	-0.002	0.12**	-0.05	
16 Edible Preparations Of Meat, Fish, Crustaceans Etc	-0.03											
17 Sugars And Sugar Confectionary	0.02	-0.06**	0.05**									
18 Cocoa And Cocoa Preparations	0.03	-0.05	0.04	0.01	-0.04	-0.01	-0.08**					
19 Prep Cereal, Flour, Starch Or Milk; Bakers Wares	0.02	-0.07**	0.03	-0.03	0.004	0.06**	-0.10**					
20 Prep Vegetables, Fruit, Nuts Or Other Plant Parts	-0.01	-0.04*	0.04**									
21 Miscellaneous Edible Preparations	-0.02											
22 Beverages, Spirits And Vinegar	0.03	-0.07*	0.01	-0.05	0.01	-0.01	-0.05	0.02	-0.01	0.07**	-0.07**	-0.04*
23 Food Industry Residues & Waste; Prep Animal Feed	-0.04	-0.03	0.03	-0.02	-0.02	0.04	-0.02	-0.03	0.03	0.01	0.05*	-0.02
24 Tobacco And Manufactured Tobacco Substitutes	-0.16											
25 Salt; Sulfur; Earth & Stone; Lime & Cement Plaster	0.02											
26 Ores, Slag And Ash	0.13*	-0.17**										
27 Mineral Fuel, Oil Etc.; Bitumin Subst; Mineral Wax	0.001											
28 Inorg Chem; Prec & Rare-earth Met & Radioact Compd	0.07**	-0.04	0.06*									
29 Organic Chemicals	0.004											
30 Pharmaceutical Products	0.02	-0.09**										

Table 3: Long-Run Coefficient Estimates of the US Export Model

	Industries	Trade Share (%)	Long-Run Coefficient Estimates					Diagnostics				
			Constant	$Ln Y_i^{MEX}$	$Ln REX_i$	$Ln PU_i^{US}$	$Ln PU_i^{MEX}$	F^*	$\hat{\alpha}_0$ (t-test) ^d	LM^e	$QS(QS^e)$	Adj. R ²
01	Live Animals	0.04%	4.26	-0.28	-0.49	0.23	-0.28	4.83**	-0.38*	0.02	US(S)	0.58
02	Meat And Edible Meat Offal	1.21%	5.96*	1.67*	0.12	0.25*	-0.20*	3.56*	-0.31**	1.83	S(S)	0.89
03	Fish, Crustaceans & Aquatic Invertebrates#	0.01%	6.03	0.33	1.06	-0.14	0.23	1.15	-0.25	0.12	S(S)	0.71
04	Dairy Prods; Birds Eggs; Honey; Ed Animal Pr Nesoi#	0.62%	-12.27*	5.72*	-0.21	-0.02	-0.15	4.29**	-0.33**	1.16	S(S)	0.89
05	Products Of Animal Origin, Nesoi#	0.09%	-58.21*	16.53*	-3.53*	0.62	0.24	5.12**	-0.12**	1.18	US(US)	0.84
06	Live Trees, Plants, Bulbs Etc.; Cut Flowers Etc.	0.03%	-22.48	6.04	0.37	1.12	-0.38	0.98	-0.25	0.10	S(S)	0.77
07	Edible Vegetables & Certain Roots & Tubers#	0.14%	7.72	1.27	0.85	-1.10	0.27	2.41	-0.19*	0.57	S(S)	0.78
08	Edible Fruit & Nuts; Citrus Fruit Or Melon Peel#	0.38%	-11.34**	5.31	-0.29	0.13	-0.05**	6.20**	-0.40**	1.73	S(S)	0.89
09	Coffee, Tea, Mate & Spices	0.02%	-25.53	6.26*	0.68	0.91	0.02	1.87	-0.19	0.002	S(US)	0.75
10	Cereals#	1.58%	3.66	2.51**	-0.38	-0.04	0.08	12.27**	-0.52**	0.16	S(US)	0.70
11	Milling Products; Malt; Starch; Inulin; Wht Gluten#	0.18%	-0.24	2.53**	0.60**	0.08	-0.03	8.49**	-0.68**	0.30	S(US)	0.68
12	Oil Seeds Etc.; Misc Grain, Seed, Fruit, Plant Etc#	0.91%	4.40**	1.92**	-0.67**	0.01	0.09*	22.71*	-0.77**	3.25*	S(S)	0.42
13	Lac; Gums, Resins & Other Vegetable Sap & Extract#	0.02%	11.05	0.001	-0.76	0.12	0.12	2.01	-0.68*	0.66	S(US)	0.25
15	Animal Or Vegetable Fats, Oils Etc. & Waxes	0.20%	29.56**	-3.08*	-0.52	0.07	-0.31	2.64	-0.31**	0.09	S(US)	0.64
16	Edible Preparations Of Meat, Fish, Crustaceans Etc	0.13%	-3.80	3.24	0.39	0.19	-0.26	1.07	-0.10	3.64	S(S)	0.90
17	Sugars And Sugar Confectionary#	0.27%	4.40	2.99	-0.12	-1.36	0.14	3.07	-0.09**	0.26	US(S)	0.95
18	Cocoa And Cocoa Preparations#	0.10%	4.82**	1.61**	-0.44**	0.34**	-0.22**	7.89**	-0.89**	0.14	S(S)	0.79
19	Prep Cereal, Flour, Starch Or Milk; Bakers Wares	0.14%	16.88	-1.87	0.36	1.45	-0.76	1.69	-0.11	0.29	S(S)	0.79
20	Prep Vegetables, Fruit, Nuts Or Other Plant Parts	0.17%	-3.25	3.16**	0.27	0.13	-0.08	5.85**	-0.38**	0.97	S(US)	0.79
21	Miscellaneous Edible Preparations	0.46%	0.42	2.52*	0.58*	-0.004	-0.04	5.53*	-0.47**	0.05	S(US)	0.71
22	Beverages, Spirits And Vinegar#	0.13%	4.65	2.04	-1.64**	1.10**	-0.62**	3.53*	-0.32**	2.60	S(S)	0.84
23	Food Industry Residues & Waste; Prep Animal Feed	0.58%	0.90	2.41**	0.72**	-0.03	-0.12	7.12**	-0.68**	0.58	S(S)	0.90
24	Tobacco And Manufactured Tobacco Substitutes	0.04%	21.21	-3.81	2.13	-1.12	1.50	1.38	-0.10	0.41	S(S)	0.66
25	Salt; Sulfur; Earth & Stone; Lime & Cement Plaster	0.13%	-14.57*	5.24*	-0.19	0.52*	0.03	10.39**	-0.66**	0.41	S(S)	0.75
26	Ores, Slag And Ash#	0.69%	-50.97*	15.07*	-2.91*	0.28	-0.13	6.35*	-0.33*	0.06	S(US)	0.91
27	Mineral Fuel, Oil Etc.; Bitumin Subst; Mineral Wax#	13.41%	-5.05	4.23	0.89	-0.29	0.01	1.97	-0.13	1.33	US(US)	0.96
28	Inorg Chem; Prec & Rare-earth Met & Radioact Compd#	0.67%	-18.56*	6.84*	0.14	-0.13	0.19*	6.52**	-0.48**	0.003	S(S)	0.85
29	Organic Chemicals	2.11%	9.36*	1.37	-0.08	-0.10	0.02	2.40	-0.18*	0.44	S(US)	0.78
30	Pharmaceutical Products#	0.51%	22.72**	-2.03	0.35	-0.01	-0.20	4.87**	-0.35**	0.47	S(US)	0.78
31	Fertilizers	0.11%	6.46	2.06**	-1.34**	-0.09	0.88	10.14**	-0.89**	1.30	US(S)	0.18

32 Tanning & Dye Ext Etc; Dye, Paint, Putty Etc; Inks#	0.60%	39.46	10.93	-0.001	0.74	-0.23	1.85	0.01	0.06	S(S)	0.92
33 Essential Oils Etc; Perfumery, Cosmetic Etc Preps#	0.36%	-3.23	3.28*	0.33	-0.01	0.05	2.38	-0.33*	0.45	S(S)	0.86
34 Soap Etc; Waxes, Polish Etc; Candles; Dental Preps	0.26%	-5.33	3.36*	0.37	0.44*	-0.11	3.11	-0.38**	0.004	US(S)	0.88
35 Aluminoidal Subst; Modified Starch; Glue; Enzymes	0.20%	0.39	2.46*	0.42*	0.12	-0.18*	6.13*	-0.37*	1.39	S(S)	0.85
36 Explosives; Pyrotechnics; Matches; Pyro Alloys Etc	0.04%	34.49*	-4.42*	0.03	-0.11	-0.38*	3.28	-0.25**	0.08	S(S)	0.60
37 Photographic Or Cinematographic Goods	0.05%	-9.38	7.58	-4.56	-1.92	1.63	1.52	-0.06	0.87	S(S)	0.93
38 Miscellaneous Chemical Products#	1.45%	-22.96	8.01*	-0.44	-0.40	0.70	2.88	-0.09**	1.06	US(US)	0.95
39 Plastics And Articles Thereof	6.42%	-18.13	7.01**	0.21	0.04	0.23	2.28	0.12*	4.59*	S(S)	0.95
40 Rubber And Articles Thereof#	1.35%	-58.36	14.80	-0.59	0.79	-0.12	2.43	0.04*	0.17	S(S)	0.95
41 Raw Hides And Skins (no Furskins) And Leather#	0.12%	11.48	0.32	0.29	-0.02	-0.13	2.19	-0.17*	0.33	S(S)	0.80
42 Leather Art; Saddlery Etc; Handbags Etc; Gut Art	0.10%	-11.59*	5.11**	0.02	-0.02	-0.002	4.50**	-0.22**	0.23	S(S)	0.80
44 Wood And Articles Of Wood; Wood Charcoal	0.31%	-19.11	7.23	-0.82	-0.16	0.44	3.22	0.12**	0.92	S(S)	0.83
45 Cork And Articles Of Cork	0.002%	-9.61	3.72*	0.48	-0.28	0.12	7.52**	-0.53**	0.92	S(S)	0.26
46 Mfr Of Straw, Esparto Etc.; Basketware & Wickerwrik	0.001%	10.01	0.18	-1.19	-0.93*	0.87**	4.02**	-0.37**	0.33	US(US)	0.30
47 Wood Pulp Etc; Recovd (waste & Scrap) ppr & pprbd#	0.28%	13.08*	0.49	-0.18	-0.56*	0.19*	7.06**	-0.48**	0.13	US(S)	0.68
48 Paper & Paperboard & Articles (inc Papr Pulp Artl)#	1.56%	8.33*	1.22**	0.29**	0.02	-0.03	2.93	-0.43**	1.03	US(S)	0.84
49 Printed Books, Newspapers Etc; Manuscripts Etc	0.16%	11.80*	0.25	0.17	-0.14	-0.004	8.05**	-0.55**	0.01	S(S)	0.31
51 Wool & Animal Hair, Including Yarn & Woven Fabric	0.01%	21.28	-2.30	-0.28	0.01	-0.04	2.21	-0.22*	1.27	S(US)	0.47
52 Cotton, Including Yarn And Woven Fabric Thereof	0.24%	22.72**	-1.49	-0.86**	-0.17	0.18*	5.65**	-0.31**	0.48	S(S)	0.69
54 Manmade Filaments, Including Yarns & Woven Fabrics#	0.21%	-10.31	4.84	0.02	0.06	0.59	3.28	0.04*	5.53**	S(S)	0.85
55 Manmade Staple Fibers, Incl Yarns & Woven Fabrics#	0.15%	1.84	2.69**	-0.70**	0.01	0.07*	16.87**	-0.62**	0.02	S(S)	0.51
56 Wadding, Felt Etc; Sp Yarn; Twine, Ropes Etc.	0.28%	18.71	-1.86	1.07	0.37	-0.43	0.53	-0.07	0.06	S(S)	0.88
57 Carpets And Other Textile Floor Coverings	0.04%	-3.09	1.71	6.99	-2.52	0.51	1.99	0.02	1.40	S(S)	0.74
58 Spec Wov Fabrics; Tufted Fab; Lace; Tapestries Etc	0.08%	19.31	-1.95	1.43	-0.42	0.08	1.49	-0.10	0.01	US(US)	0.88
59 Impregnated Etc Text Fabrics; Tex Art For Industry#	0.41%	3.12	1.08	0.69	1.43**	-0.68**	2.77	-0.15**	0.07	S(S)	0.89
60 Knitted Or Crocheted Fabrics#	0.12%	16.49*	-0.02	-0.59	-0.36*	-0.03	2.69	-0.17**	1.01	US(S)	0.87
61 Apparel Articles And Accessories, Knit Or Crochet	0.24%	46.67	-6.88	-0.89	-0.08	-0.21	2.33	-0.02*	1.66	S(S)	0.83
62 Apparel Articles And Accessories, Not Knit Etc.	0.12%	24.29	-2.22	-1.36	0.61	-0.25	1.27	-0.06	1.27	S(US)	0.84
63 Textile Art Nesoi; Needlecraft Sets; Worn Text Art#	0.17%	-12.44*	5.26**	0.09	-0.01	-0.04	4.97**	-0.25**	0.18	US(US)	0.93
64 Footwear, Gaiters Etc. And Parts Thereof	0.04%	4.69	1.85	-1.41	0.38	-0.06	2.81	-0.25**	0.005	S(S)	0.51
65 Headgear And Parts Thereof#	0.02%	5.28	2.89	-0.02	-0.14	0.35	2.02	-0.17	6.41**	S(S)	0.84
66 Umbrellas, Walking-sticks, Riding-crops Etc, Parts#	0.002%	-0.92	1.58	1.16**	-0.43	0.03	9.33**	-0.79**	0.12	S(S)	0.49
67 Prep Feathers, Down Etc; Artif Flowers; H Hair Art	0.004%	-0.51	2.09**	-0.09	0.05	-0.09	18.44**	-0.07**	0.51	S(US)	0.17
68 Art Of Stone, Plaster, Cement, Asbestos, Mica Etc.	0.18%	-22.46	7.31	0.31	-0.62	0.65	0.36	0.04	0.88	S(S)	0.91

69 Ceramic Products#	0.12%	-1.98	3.19**	-0.07	-0.13	-0.02	4.34**	-0.27**	0.32	S(US)	0.77
70 Glass And Glassware	0.31%	7.76	0.57	1.02	0.27	-0.29	1.83	-0.12	0.99	S(S)	0.81
71 Nat Etc Pearls, Prec Etc Stones, Pr Met Etc; Coin#	0.23%	17.7**	-0.46	-0.70*	-0.07	-0.06	6.99**	-0.41**	0.36	US(S)	0.42
72 Iron And Steel#	1.59%	-7.09**	4.76**	-0.23	-0.01	0.01	10.49**	-0.50**	0.77	S(S)	0.92
73 Articles Of Iron Or Steel	2.12%	-5.92*	4.15**	0.15	0.37**	-0.13**	2.62	-0.26**	0.06	S(S)	0.95
74 Copper And Articles Thereof#	0.99%	-10.93**	5.60**	-0.30	-0.04	-0.01	9.96**	-0.45**	1.79	S(US)	0.87
75 Nickel And Articles Thereof	0.13%	-35.85**	10.39**	-0.67	-0.44	0.75**	3.57*	-0.23*	1.14	S(S)	0.74
76 Aluminum And Articles Thereof#	1.39%	-2.11	3.71**	0.22	-0.19*	-0.08	7.31**	-0.36**	0.41	S(S)	0.94
78 Lead And Articles Thereof#	0.01%	22.99**	-0.73	-1.91**	-1.01**	0.08	11.41**	-0.54**	0.11	S(S)	0.57
79 Zinc And Articles Thereof	0.07%	-23.40*	6.99**	0.52	0.28	-0.20	1.18	-0.13	0.19	US(S)	0.92
80 Tin And Articles Thereof	0.03%	-12.27	5.76*	-1.49	-0.27	0.26	1.51	-0.15	0.03	US(S)	0.75
81 Base Metals Nesoi; Cermets; Articles Thereof#	0.12%	-13.47	6.06**	-0.79	-0.25	-0.06	2.59	-0.18*	0.92	S(US)	0.93
82 Tools, Cutlery Etc. Of Base Metal & Parts Thereof#	0.34%	-4.48	3.34**	0.52**	0.18*	-0.06	4.64**	-0.39**	1.14	US(US)	0.89
83 Miscellaneous Articles Of Base Metal	0.60%	-1.61	2.77**	0.95**	0.23	-0.22	2.01	-0.18**	0.61	S(S)	0.87
84 Nuclear Reactors, Boilers, Machinery Etc.; Parts	17.36%	5.10	1.93	0.40	0.63**	-0.27*	2.19	-0.14*	1.58	S(S)	0.95
85 Electric Machinery Etc.; Sound Equip; Tv Equip; Pts	16.27%	13.56**	0.19	1.01**	0.17	-0.19**	3.45	-0.26**	0.19	S(S)	0.89
86 Railway Or Tramway Stock Etc; Traffic Signal Equip#	0.36%	-29.38**	8.53**	0.33	1.18**	-0.81**	4.91**	-0.40**	0.001	S(US)	0.85
87 Vehicles, Except Railway Or Tramway, And Parts Etc#	8.34%	-1.23	3.38**	0.15	0.49**	-0.16**	5.85**	-0.51**	0.01	US(S)	0.85
88 Aircraft, Spacecraft, And Parts Thereof#	1.62%	-16.11**	5.92**	1.39**	-0.18	-0.04	11.92**	-0.73**	0.18	S(S)	0.62
89 Ships, Boats And Floating Structures	0.14%	5.71	0.35	2.08**	-0.17	-0.12	42.38**	-1.09**	0.23	S(US)	0.11
90 Optic, Photo Etc, Medic Or Surgical Instruments Etc	2.98%	26.16	-4.49	4.67	-0.39	-0.08	0.76	0.03	2.17	S(S)	0.90
91 Clocks And Watches And Parts Thereof	0.04%	-12.40**	4.63**	-0.20	0.13	0.40**	20.45**	-0.75**	1.32	S(US)	0.29
92 Musical Instruments; Parts And Accessories Thereof	0.01%	16.46*	-1.19	-0.86	0.14	0.10	1.97	-0.27	0.59	S(S)	0.34
93 Arms And Ammunition; Parts And Accessories Thereof#	0.01%	-1.71	2.27	0.70	-0.07	-0.35*	10.08**	-0.66**	0.09	US(S)	0.54
94 Furniture, Bedding Etc; Lamps Nesoi Etc; Prefab Bd#	0.77%	-103.38	8.63	38.77	-2.50	0.17	5.35**	0.01**	0.07	S(S)	0.95
95 Toys, Games & Sport Equipment; Parts & Accessories#	0.30%	82.39**	-15.86**	1.01	-0.07	0.04	12.05**	0.18**	1.21	S(S)	0.88
96 Miscellaneous Manufactured Articles	0.17%	-15.06	4.77**	0.88	0.85*	-0.18	2.47	-0.16*	0.20	S(S)	0.79
97 Works Of Art, Collectors' Pieces And Antiques	0.05%	-38.11**	8.96**	1.90**	0.03	0.32	42.32**	-1.12**	0.06	S(S)	0.26
98 Special Classification Provisions, Nesoi#	2.90%	4.63	2.21**	0.16	-0.04	-0.01	3.59*	-0.13**	0.14	S(S)	0.95

Notes: a. * and ** indicate significance at 10% levels and 5% level, respectively. The critical values of standard t-distribution, i.e., 1.64 and 1.96 are used to arrive at * and ** for long-run estimates. b.- # indicate that the Financial Crisis dummy was significant in these models. c.- At the 5% (10%) significance level when there are four exogenous variables (k=4), the upper bound critical value of the F test is 4.01(3.52). These come from Pesaran *et al* (2001, Table C1-Case III, page 300). d.- The upper bound critical value of the t-test for significance of $\hat{\alpha}_0$ at the 5% (10%) significance level is -3.99(-3.66) when k=4 and these come from Pesaran *et al* (2001, Table C11-Case III, page 303). e.- LM is Lagrange Multiplier test of residual serial correlation. It is distributed as χ^2 with one degree of freedom (first order). Its critical value at 5% (10%) significance level is 3.84(2.77).

has relatively more short-run effects on US exports to Mexico.¹⁰ Coefficient estimates for US policy uncertainty are reported in Table 1, with those attached to Mexican policy uncertainty reported in Table 2. From these two tables we gather that while US policy uncertainty carries at least one significant lagged coefficient in 45 industries, Mexican policy uncertainty carries at least one lagged significant coefficient in 57 industries. Therefore, it appears that Mexican uncertainty has significant short-run effects in more industries. In how many industries do the short-run effects translate into the long run? The answer is provided in Table 3, in which we report the long-run coefficient estimates as well as all diagnostic statistics.

From Table 3 we gather that US policy uncertainty carries a significant and meaningful coefficient in 17 industries.¹¹ These industries are coded as 02, 18, 22, 25, 34, 46, 47, 59, 60, 73, 76, 78, 82, 84, 86, 87, and 96. Except for four small industries, in the remaining industries the estimate is positive, implying that increased policy uncertainty in the US actually has positive effects on US exports of 12 industries, including four large US exporting industries. These four industries are 02 (Meat and Edible Meat Offal with 1.21 per cent export share), 73 (Articles of Iron or Steel with 2.12 per cent export share), 84 (Nuclear Reactors, Boilers, Machinery Etc. Parts with 17.36 per cent export share), and 87 (Vehicles, Except Railway or Tramway, And Parts Etc. with 8.34 per cent export share). After adding other small industries to the list, it appears that increased US policy uncertainty could stimulate almost 30 per cent of US exports to Mexico in the long run. Thus, it appears that in response to increased policy uncertainty in the US, Mexican importers rush to import more before uncertainty exacerbates.

As for the long-run effects of Mexican policy uncertainty, the $LnPU^{MEX}$ variable in Table 3 carries a significant coefficient that is also supported by one of the tests for cointegration, in 21 industries coded as 02, 08, 12, 18, 22, 28, 35, 36, 46, 47, 52, 55, 59, 73, 75, 84, 85, 86, 87, 91, and 93. Unlike the effects of US policy uncertainty, Mexican policy uncertainty seems to have negative effects on US exports to Mexico in most of the 21 industries, especially in five large industries, i.e. 02 (Meat and Edible Meat Offal with 1.21 per cent export share), 73 (Articles of Iron or Steel with 2.12 per cent export share), 84 (Nuclear Reactors, Boilers, Machinery Etc. Parts with 17.36 per cent export share), 85 (Electric Machinery Etc.; Sound Equip; TV Equip; Pts with 16.27 per cent export share), and 87 (Vehicles, Except Railway Or Tramway, And Parts Etc. with 8.34 per cent export share). Since the total export share of these five industries is 45.3 per cent, we conclude that increased policy uncertainty in Mexico has adverse long-run effects on nearly 45 per cent of US exports to that country.

Next, we consider the estimates of the US import demand model outlined by equation (4), which is the same as Mexican exports to the US. Again, the results are reported in Tables 4–6. From Table 4, which reports the short-run effects of US policy uncertainty, we gather that US policy uncertainty carries at least

Table 4: Short-Run Coefficient Estimates of the US Policy Uncertainty on the US Imports from Mexico

Code	# Lags on $\Delta \ln PU^{US}$											
	0	1	2	3	4	5	6	7	8	9	10	11
01 Live Animals	0.01											
02 Meat And Edible Meat Offal	-0.27**	0.44**	0.05	0.35**								
03 Fish, Crustaceans & Aquatic Invertebrates	0.14**											
04 Dairy Prods; Birds Eggs; Honey; Ed Animal Pr Nesoi	0.26**											
05 Products Of Animal Origin, Nesoi	-0.03	0.06	0.15**	-0.08	0.12**							
06 Live Trees, Plants, Bulbs Etc.; Cut Flowers Etc.	0.02	0.002	0.01	-0.07*								
07 Edible Vegetables & Certain Roots & Tubers	0.02	0.03	0.06*	-0.05	-0.01	0.01	-0.02	0.004	0.03	0.08**	-0.07**	
08 Edible Fruit & Nuts; Citrus Fruit Or Melon Peel	0.04											
09 Coffee, Tea, Mate & Spices	-0.09											
10 Cereals	-0.22											
11 Milling Products; Malt; Starch; Inulin; Wht Gluten	0.04											
12 Oil Seeds Etc.; Misc Grain, Seed, Fruit, Plant Etc	0.11**											
13 Lac; Gums, Resins & Other Vegetable Sap & Extract	0.07	-0.11**										
14 Vegetable Plaiting Materials & Products Nesoi	0.11*	0.08										
15 Animal Or Vegetable Fats, Oils Etc. & Waxes	0.07	0.04	-0.003	0.05	0.19**	-0.14*	0.12*					
16 Edible Preparations Of Meat, Fish, Crustaceans Etc	-0.07											
17 Sugars And Sugar Confectionary	-0.03											
18 Cocoa And Cocoa Preparations	0.04	0.08*										
19 Prep Cereal, Flour, Starch Or Milk; Bakers Wares	-0.03	0.08**										
20 Prep Vegetables, Fruit, Nuts Or Other Plant Parts	-0.02											
21 Miscellaneous Edible Preparations	-0.03											
22 Beverages, Spirits And Vinegar	0.03	0.02	-0.01	-0.06*	0.10*	-0.03	0.03	-0.02	0.06	-0.09**	0.08**	
23 Food Industry Residues & Waste; Prep Animal Feed	0.09											
24 Tobacco And Manufactured Tobacco Substitutes	-0.15	0.64**	-0.07	-0.49**	0.15	0.34						
25 Salt; Sulfur; Earth & Stone; Lime & Cement Plaster	-0.07*											
26 Ores, Slag And Ash	-0.21											
27 Mineral Fuel, Oil Etc.; Bitumin Subst; Mineral Wax	-0.04											
28 Inorg Chem; Prec & Rare-earth Met & Radioact Compd	-0.02											
29 Organic Chemicals	-0.08											

Table 5: Short-Run Coefficient Estimates of the US Policy Uncertainty on the US Imports from Mexico

Code	0	1	2	3	4	5	6	7	8	9	10	11
01 Live Animals	-0.06											
02 Meat And Edible Meat Offal	-0.14*	-0.16*	-0.09	-0.19**	0.02	-0.15**						
03 Fish, Crustaceans & Aquatic Invertebrates	-0.03	-0.12**	0.08**	-0.12**	0.08**							
04 Dairy Prods; Birds Eggs; Honey; Ed Animal Pr Nesoi	-0.15**											
05 Products Of Animal Origin, Nesoi	-0.001	-0.07**	-0.05	-0.02	-0.03	-0.02	0.03	-0.06**	0.02	-0.002	-0.07**	
06 Live Trees, Plants, Bulbs Etc.; Cut Flowers Etc.	-0.03	-0.02	0.01	-0.03	0.06**							
07 Edible Vegetables & Certain Roots & Tubers	-0.003	-0.06**										
08 Edible Fruit & Nuts; Citrus Fruit Or Melon Peel	-0.08**	-0.03	-0.08**									
09 Coffee, Tea, Mate & Spices	-0.03	0.04	0.05									
10 Cereals	0.28**	-0.14	0.08	-0.25**	0.03	0.14	0.12	-0.15	-0.21**			
11 Milling Products; Malt; Starch; Inulin; Wht Gluten	-0.06*											
12 Oil Seeds Etc.; Misc Grain, Seed, Fruit, Plant Etc	-0.04	-0.07**										
13 Lac; Gums, Resins & Other Vegetable Sap & Extract	-0.06*											
14 Vegetable Plating Materials & Products Nesoi	-0.09**	-0.05	-0.07**	-0.06*								
15 Animal Or Vegetable Fats, Oils Etc. & Waxes	-0.06											
16 Edible Preparations Of Meat, Fish, Crustaceans Etc	0.02											
17 Sugars And Sugar Confectionary	0.07	-0.06										
18 Cocoa And Cocoa Preparations	-0.02	-0.06*										
19 Prep Cereal, Flour, Starch Or Milk; Bakers Wares	-0.01	-0.05**										
20 Prep Vegetables, Fruit, Nuts Or Other Plant Parts	-0.04**											
21 Miscellaneous Edible Preparations	-0.01	0.01	-0.03*	0.03	0.01	0.04**	-0.06**	-0.02	0.01	0.02	-0.04**	0.07**
22 Beverages, Spirits And Vinegar#	0.01	-0.04**										
23 Food Industry Residues & Waste; Prep Animal Feed	0.02											
24 Tobacco And Manufactured Tobacco Substitutes	-0.12											
25 Salt; Sulfur; Earth & Stone; Lime & Cement Plaster	0.02	0.03										
26 Ores, Slag And Ash	0.26**											
27 Mineral Fuel, Oil Etc.; Bitumin Subst; Mineral Wax	0.06**											
28 Inorg Chem; Prec & Rare-earth Met & Radioact Compd	0.02	-0.05**										
29 Organic Chemicals	-0.01	0.01	-0.03	0.04	-0.03	0.06*	-0.01	0.08**	-0.10**	0.09**	-0.06*	0.05*

68 Art Of Stone, Plaster, Cement, Asbestos, Mica Etc.	-0.003	-0.02	0.03*
69 Ceramic Products	0.02	-0.02	-0.02*
70 Glass And Glassware	-0.01		
71 Nat Etc Pearls, Prec Etc Stones, Pr Met Etc; Coin.	-0.01		
72 Iron And Steel	-0.02	0.07**	-0.04 0.001 0.09**
73 Articles Of Iron Or Steel	-0.01	0.004	-0.003 -0.03**
74 Copper And Articles Thereof	-0.05*		
75 Nickel And Articles Thereof	0.02	-0.11**	
76 Aluminum And Articles Thereof	0.002	-0.03	0.03** -0.01 0.04**
78 Lead And Articles Thereof	-0.004	0.01	0.12* 0.15** -0.01 -0.03 0.08 -0.17**
79 Zinc And Articles Thereof	0.01	-0.08*	-0.01 0.08*
80 Tin And Articles Thereof	0.09		
81 Base Metals Nesoi; Cermet; Articles Thereof	-0.002		
82 Tools, Cutlery Etc. Of Base Metal & Parts Thereof	0.002	-0.03**	0.01 0.01 -0.006 0.004 -0.02* -0.03**
83 Miscellaneous Articles Of Base Metal	0.001		
84 Nuclear Reactors, Boilers, Machinery Etc.; Parts	0.003		
85 Electric Machinery Etc; Sound Equip; Tv Equip; Pts	0.001	-0.02	
86 Railway Or Tramway Stock Etc; Traffic Signal Equip	0.03		
87 Vehicles, Except Railway Or Tramway, And Parts Etc	0.02	0.004	-0.02 0.001 0.03* 0.01 -0.03** -0.04** 0.02*
88 Aircraft, Spacecraft, And Parts Thereof	0.03	-0.07**	
89 Ships, Boats And Floating Structures	0.06		
90 Optic, Photo Etc, Medic Or Surgical Instruments Etc	0.001	-0.02	
91 Clocks And Watches And Parts Thereof	0.04*	-0.02	0.07**
92 Musical Instruments; Parts And Accessories Thereof	-0.04	-0.01	0.04 0.01 0.04*
93 Arms And Ammunition; Parts And Accessories Thereof	-0.03	-0.08**	
94 Furniture; Bedding Etc; Lamps Nesoi Etc; Prefab Bld	0.003	-0.02	-0.003 -0.005 0.01 -0.01 -0.03* 0.04**
95 Toys, Games & Sport Equipment; Parts & Accessories	-0.06**		
96 Miscellaneous Manufactured Articles	-0.02	-0.03	0.03
97 Works Of Art, Collectors' Pieces And Antiques	0.32**		
98 Special Classification Provisions, Nesoi	-0.04**	0.02*	
99 Special Import Provisions, Nesoi	0.01		

Notes: *and ** indicate significance at 10% and 5% levels, respectively. The critical values of standard t-distribution, i.e., 1.64 and 1.96 are used to arrive at * and **. The t-ratios themselves are not reported due to space constraints but they are available upon request.

Table 6: Long-Run Coefficient Estimates of the US Import Model (Mexican Exports)

	Trade Share (%)		Long-Run Coefficient Estimates						Diagnostics			
	Share (%)	Constant	$\ln Y_t^{US}$	$\ln REX_t$	$\ln PU_t^{US}$	$\ln PU_t^{MEX}$	F^c	$\hat{\sigma}_0(t\text{-test})^d$	LM^e	$QS(QS^2)$	Adj. R ²	
01 Live Animals	0.25%	30.19**	-5.23	3.15**	0.05	-0.23	4.08**	-0.27**	0.47	S(S)	0.72	
02 Meat And Edible Meat Offal	0.38%	-7.48	1.65	4.69**	1.10**	-1.38**	10.31**	-0.52**	0.02	US(US)	0.92	
03 Fish, Crustaceans & Aquatic Invertebrates#	0.16%	3.95	1.45**	0.75**	0.19*	-0.17**	4.13**	-0.70**	2.14	S(US)	0.88	
04 Dairy Prods; Birds Eggs; Honey; Ed Animal Pr Nesoi	0.04%	-1.99	2.17**	0.77**	0.34**	-0.19**	10.99**	-0.75**	2.17	S(S)	0.68	
05 Products Of Animal Origin, Nesoi	0.02%	3.66	1.08*	0.83**	0.44**	-0.56**	5.14**	-0.48**	0.001	S(S)	0.88	
06 Live Trees, Plants, Bulbs Etc.; Cut Flowers Etc.	0.02%	0.32	1.78**	0.93**	-0.07	-0.04	7.71**	-0.45**	4.72**	S(S)	0.88	
07 Edible Vegetables & Certain Roots & Tubers#	1.91%	133.71	-32.05	10.13	6.32	-4.79	3.09	-0.01**	0.64	US(S)	0.98	
08 Edible Fruit & Nuts; Citrus Fruit Or Melon Peel#	2.28%	-2.78	2.17**	3.02**	0.06	-0.29**	12.75**	-0.68**	0.02	US(S)	0.93	
09 Coffee, Tea, Mate & Spices#	0.08%	14.39	-0.02	-0.09	-1.15	0.72	1.12	0.08**	0.47	S(US)	0.80	
10 Cereals	0.01%	-12.87	6.20**	-1.55**	-0.41	-0.19	12.43**	-0.55**	0.03	S(US)	0.50	
11 Milling Products; Malt; Starch; Inulin; Wht Gluten	0.03%	-11.25**	3.43**	2.28**	0.14	-0.22	3.87*	-0.28**	0.01	S(US)	0.88	
12 Oil Seeds Etc.; Misc Grain, Seed, Fruit, Plant Etc	0.03%	1.03	1.92**	0.24	0.29**	-0.30**	8.75**	-0.37**	0.52	S(S)	0.79	
13 Lac; Gums, Resins & Other Vegetable Sap & Extract	0.02%	5.30**	0.83**	0.85**	-0.07	-0.09*	16.19**	-0.63**	0.35	S(S)	0.47	
14 Vegetable Plating Materials & Products Nesoi#	0.01%	11.04	-0.75	0.93	1.20	-1.17	6.74**	-0.23**	0.19	S(S)	0.86	
15 Animal Or Vegetable Fats, Oils Etc. & Waxes	0.06%	-14.02**	4.49**	0.74**	0.57**	-0.10	6.96**	-0.57**	2.42	S(US)	0.80	
16 Edible Preparations Of Meat, Fish, Crustaceans Etc	0.03%	-8.68**	4.29**	0.21	-0.19	0.06	4.32**	-0.36**	0.07	S(US)	0.66	
17 Sugars And Sugar Confectionary#	0.37%	5.78	1.64	-0.04	-0.12	0.02	3.29	-0.22**	1.37	S(US)	0.83	
18 Cocoa And Cocoa Preparations#	0.16%	7.48*	0.45	0.48	0.47**	-0.30**	6.26**	-0.25**	0.39	US(US)	0.96	
19 Prep Cereal, Flour, Starch Or Milk; Bakers Wares	0.40%	4.78	0.74	1.84**	0.25*	-0.38**	3.82*	-0.14**	1.52	S(S)	0.98	
20 Prep Vegetables, Fruit, Nuts Or Other Plant Parts	0.41%	14.45*	-1.48	2.97**	-0.13	-0.30*	4.87**	-0.15**	1.46	S(S)	0.94	
21 Miscellaneous Edible Preparations	0.16%	11.97**	-0.02	0.56*	-0.11	-0.03	2.88	-0.25**	0.001	S(S)	0.77	
22 Beverages, Spirits And Vinegar	1.76%	-3.99	2.69	2.66**	0.17	-0.31	1.29	-0.09	1.13	US(S)	0.94	
23 Food Industry Residues & Waste; Prep Animal Feed#	0.01%	-9.38	4.18**	-0.80	0.24	0.05	7.54**	-0.38**	0.60	S(S)	0.61	
24 Tobacco And Manufactured Tobacco Substitutes	0.04%	36.85	8.14	1.03	1.71	-0.51	2.90	-0.24**	1.69	US(US)	0.73	
25 Salt; Sulfur; Earth & Stone; Lime & Cement Plaster#	0.12%	-1.24	3.25**	-0.55**	-0.18*	0.13*	6.02**	-0.39**	0.001	S(S)	0.62	
26 Ores, Slag And Ash	0.07%	-12.86	5.53	-1.07	-1.04	1.31**	3.20	-0.19**	0.49	S(US)	0.57	
27 Mineral Fuel, Oil Etc.; Bitumin Subst; Mineral Wax	3.68%	25.92	-0.30	-3.52**	-0.65	0.99	1.73	-0.06	0.01	S(US)	0.93	
28 Inorg Chem; Prec & Rare-earth Met & Radioact Compd#	0.18%	1.65	2.65**	-0.30*	-0.05	-0.06	8.87**	-0.50**	1.28	S(US)	0.79	
29 Organic Chemicals#	0.25%	-6.63	3.35**	1.32**	-0.43	0.51	1.55	-0.18	1.18	S(S)	0.67	
30 Pharmaceutical Products	0.16%	-0.31	1.63	1.65**	-0.03	0.23	3.59*	-0.31**	0.002	S(US)	0.58	

31 Fertilizers#	0.03%	-11.39**	4.84**	-0.84**	0.19	-0.05	28.76**	-0.88**	0.24	S(S)	0.45
32 Tanning & Dye Ext Etc; Dye, Paint, Putty Etc; Inks	0.07%	21.52	3.10	1.61	0.38	-0.21	2.34	-0.13*	0.09	S(S)	0.68
33 Essential Oils Etc; Perfumery, Cosmetic Etc Preps	0.27%	-1.69	-0.93	14.41	-6.09	0.57	2.97	0.01**	0.10	US(US)	0.97
34 Soap Etc; Waxes, Polish Etc; Candles; Dental Preps	0.14%	-6.73	4.18**	-0.12	-0.01	0.03	3.45	-0.19**	0.30	S(S)	0.74
35 Albuminoid Subst; Modified Starch; Glue; Enzymes	0.02%	5.08*	0.71	0.85**	0.34*	-0.43**	11.90**	-0.70**	0.14	S(S)	0.73
36 Explosives; Pyrotechnics; Matches; Pyro Alloys Etc#	0.03%	-1.76	4.51	1.11	-3.53	1.03	1.68	-0.05	0.24	S(S)	0.86
37 Photographic Or Cinematographic Goods	0.004%	44.07**	-4.66**	-3.23**	-1.00**	0.41**	6.88**	-0.29**	0.29	S(US)	0.94
38 Miscellaneous Chemical Products#	0.16%	5.49	1.29	0.99**	-0.34	-0.004	2.34	-0.26*	0.47	US(US)	0.80
39 Plastics And Articles Thereof	1.54%	11.98	-0.01	1.48**	0.06	-0.27*	2.65	-0.09**	0.84	S(US)	0.97
40 Rubber And Articles Thereof#	0.77%	1481.00	-298.79	47.57	-56.32	13.57	2.49	-0.0018	0.53	S(S)	0.97
41 Raw Hides And Skins (no Furskins) And Leather#	0.02%	530.14	-98.72	-15.06	-6.88	0.13	4.33**	-0.01**	1.82	S(S)	0.82
42 Leather Art; Saddlery Etc; Handbags Etc; Gut Art	0.06%	-11.07	4.58	0.33	0.03	0.04	1.23	-0.05	1.94	S(S)	0.89
44 Wood And Articles Of Wood; Wood Charcoal	0.12%	1.16	1.25	2.15	0.02	-0.02	1.72	-0.07	0.40	S(S)	0.94
46 Mfr Of Straw, Esparto Etc.; Basketware & Wickerwrik	0.01%	-16.15**	5.50**	-0.63	0.35	-0.15	5.28**	-0.27**	0.07	S(S)	0.81
47 Wood Pulp Etc; Recovd (waste & Scrap) ppr & pprbd	0.001%	12.01	0.47	-2.01**	0.06	-0.23	3.48	-0.21**	0.24	S(US)	0.72
48 Paper & Paperboard & Articles (inc Papr Pulp Artl)#	0.32%	11.52**	-0.13	1.09**	0.21	-0.21*	3.83*	-0.21**	0.41	S(S)	0.71
49 Printed Books, Newspapers Etc; Manuscripts Etc	0.07%	13.26**	0.24	0.06	-0.26*	-0.21**	5.37**	-0.34**	1.49	S(S)	0.68
51 Wool & Animal Hair, Including Yarn & Woven Fabric#	0.01%	3.38	1.17*	0.15	0.20*	0.05	5.87**	-0.57**	0.16	S(S)	0.54
52 Cotton, Including Yarn And Woven Fabric Thereof	0.01%	43.61**	-7.66**	1.81*	-0.38	0.07	3.13	-0.12**	0.13	S(S)	0.92
54 Manmade Filaments, Including Yarns & Woven Fabrics#	0.04%	19.75**	-1.06*	-1.15**	0.004	0.12*	3.92*	-0.32**	0.001	S(US)	0.91
55 Manmade Staple Fibers, Incl Yarns & Woven Fabrics	0.01%	17.72**	-1.42	0.86	-0.45	-0.02	3.83*	-0.17**	0.88	S(S)	0.86
56 Wadding, Felt Etc; Sp Yarn; Twine, Ropes Etc.	0.04%	13.77**	-0.29	0.18	-0.37**	0.12**	11.23**	-0.37**	1.46	S(S)	0.65
57 Carpets And Other Textile Floor Coverings#	0.02%	-34.10**	7.14**	2.72**	0.75**	0.03	4.23**	-0.24**	0.27	S(S)	0.91
58 Spec Wov Fabrics; Tufted Fab; Lace; Tapestries Etc#	0.01%	15.28**	-0.57	-0.50**	-0.08	-0.01	8.57**	-0.51**	0.47	S(S)	0.80
59 Impregnated Etc Text Fabrics; Tex Art For Industry	0.09%	-2.58	3.04	0.96	-0.19	-0.13	2.59	-0.05**	0.03	US(S)	0.94
60 Knitted Or Crocheted Fabrics#	0.01%	0.19	2.82**	-0.13	-1.10**	0.71**	4.87**	-0.27**	0.20	S(US)	0.93
61 Apparel Articles And Accessories, Knit Or Crochet	0.31%	57.53	-10.28	2.95	-0.72	-0.18	3.63*	-0.03**	0.69	US(US)	0.96
62 Apparel Articles And Accessories, Not Knit Etc.	0.60%	199.33	-66.39	24.95	3.70	2.30	5.95**	-0.002**	2.37	US(S)	0.96
63 Textile Art Nesoi; Needlecraft Sets; Worn Text Art	0.29%	10.27**	-0.21	1.57**	0.21	-0.18	1.94	-0.14	1.61	US(S)	0.86
64 Footwear, Gaiters Etc. And Parts Thereof	0.12%	11.52	0.04	-0.84	0.71	-0.15	2.77	-0.11**	1.73	US(S)	0.87
65 Headgear And Parts Thereof#	0.08%	45.87	-2.84	-6.48	-0.39	-0.51	4.03**	0.04**	1.39	S(S)	0.93
67 Prep Feathers, Down Etc; Artif Flowers; H Hair Art#	0.002%	-5.80	2.56*	1.47**	-0.79**	0.28	4.36**	-0.44**	0.09	S(US)	0.54
68 Art Of Stone, Plaster, Cement, Asbestos, Mica Etc.	0.21%	1.59	1.83	1.48*	-0.33	0.10	1.07	-0.12	0.02	S(S)	0.92
69 Ceramic Products	0.29%	5.78	1.55**	0.63**	-0.16	-0.12	2.52	-0.16	1.51	S(S)	0.91

70 Glass And Glassware#	0.39%	9.16**	0.76**	0.51**	-0.02	-0.03	4.22**	-0.44**	0.49	US(S)	0.76
71 Nat Etc Pearls, Prec Etc Stones, Pr Met Etc; Coin	1.46%	50.05	-8.39	1.20	0.48	-0.24	2.02	-0.04	0.002	S(S)	0.96
72 Iron And Steel	0.58%	5.42	2.27**	-0.06	-0.61**	0.29**	5.76**	-0.34**	0.73	S(S)	0.71
73 Articles Of Iron Or Steel#	1.44%	-1.49	3.18**	0.52**	-0.05	0.04	8.03**	-0.45**	2.27	S(US)	0.92
74 Copper And Articles Thereof	0.29%	10.57	1.42	-0.49	-0.25	-0.29	2.45	-0.16*	2.45	S(S)	0.80
75 Nickel And Articles Thereof#	0.03%	-25.96**	5.17*	2.93**	1.55**	-0.59	2.84	-0.15**	0.03	S(S)	0.86
76 Aluminum And Articles Thereof#	0.29%	6.79	1.24	1.39**	-0.87**	0.25	4.26**	-0.15**	0.78	US(S)	0.88
78 Lead And Articles Thereof#	0.05%	-10.61	5.03*	0.33	0.08	-0.98**	3.66*	-0.21**	0.79	S(S)	0.92
79 Zinc And Articles Thereof#	0.10%	-2.94	2.94**	0.81	-0.06	-0.02	3.58*	-0.29**	0.0001	S(S)	0.66
80 Tin And Articles Thereof#	0.005%	12.21	3.68	-0.62	-5.34	1.05	1.64	-0.08	0.02	S(S)	0.86
81 Base Metals Nesoi; Cermets; Articles Thereof	0.02%	-22.87**	5.97**	1.31**	0.08	-0.004	3.67*	-0.42**	0.28	S(US)	0.79
82 Tools, Cutlery Etc. Of Base Metal & Parts Thereof#	0.14%	21.28*	-1.96	1.19**	-0.33	-0.33*	4.51**	-0.13**	0.21	S(S)	0.95
83 Miscellaneous Articles Of Base Metal	0.63%	2.98	1.79**	1.26**	-0.11	0.01	1.29	-0.17	0.19	S(US)	0.92
84 Nuclear Reactors, Boilers, Machinery Etc.; Parts#	18.5%	1209.05	-257.49	76.55	-44.57	1.37	5.17**	-0.02**	2.43	S(S)	0.97
85 Electric Machinery Etc; Sound Equip; Tv Equip; Pts	17.8%	12.86**	0.93**	0.34**	-0.09	-0.04	5.23**	-0.47**	0.01	US(S)	0.81
86 Railway Or Tramway Stock Etc; Traffic Signal Equip	0.09%	-16.36**	6.79**	-1.86**	0.18	0.10	4.52**	-0.28**	0.02	S(US)	0.75
87 Vehicles, Except Railway Or Tramway, And Parts Etc#	28.3%	-14.19	4.63	1.58	1.83	-0.48	0.35	-0.02	1.07	S(US)	0.96
88 Aircraft, Spacecraft, And Parts Thereof#	0.41%	-25.36*	8.41**	0.11	-0.12	-0.59	4.86**	-0.08**	0.39	S(US)	0.98
89 Ships, Boats And Floating Structures	0.15%	17.85**	4.07**	5.60**	-1.05**	0.14	12.24**	-0.39**	0.02	S(S)	0.86
90 Optic, Photo Etc, Medic Or Surgical Instruments Etc	4.49%	7.53**	0.99	1.43**	0.04	-0.07	1.21	-0.14	0.13	US(S)	0.95
91 Clocks And Watches And Parts Thereof	0.02%	21.58**	-1.46*	-0.51	-0.78**	0.34**	5.21**	-0.24**	0.45	S(S)	0.92
92 Musical Instruments; Parts And Accessories Thereof	0.03%	-14.24	4.81	0.33	-0.03	0.42	0.86	-0.10	0.01	S(S)	0.76
93 Arms And Ammunition; Parts And Accessories Thereof	0.02%	-0.04	1.96	0.16	0.63**	-0.56**	3.71*	-0.20**	0.54	S(S)	0.88
94 Furniture; Bedding Etc; Lamps Nesoi Etc; Prefab Bd	2.99%	-202.41	44.10	5.02	-3.75	4.29	1.66	0.001	1.21	US(S)	0.97
95 Toys, Games & Sport Equipment; Parts & Accessories	0.26%	-0.53	2.39**	0.78*	0.34**	-0.23**	6.23**	-0.27**	0.16	S(US)	0.82
96 Miscellaneous Manufactured Articles	0.18%	4.24	0.87	1.31*	0.51	-0.25	1.11	-0.09	0.07	S(S)	0.91
97 Works Of Art, Collectors' Pieces And Antiques	0.05%	-12.41**	2.95**	3.57**	0.19	-0.27**	17.45**	-1.16**	0.79	S(S)	0.29
98 Special Classification Provisions, Nesoi	1.79%	11.11**	0.67	0.41**	0.04	-0.03	2.34	-0.28*	0.72	S(S)	0.55
99 Special Import Provisions, Nesoi#	0.73%	-3.37	3.73**	0.54**	-0.22**	0.05	5.50**	-0.26**	1.45	S(US)	0.80

Notes: a.- * and ** indicate significance at 10% levels and 5% level, respectively. The critical values of standard t-distribution, i.e., 1.64 and 1.96 are used to arrive at * and ** for long-run estimates. b.- # indicate that the Financial Crisis dummy was significant in these models. c.- At the 5% (10%) significance level when there are four exogenous variables (k=4), the upper bound critical value of the F test is 4.01(3.52). These come from Pesaran *et al* (2001, Table CI-Case III, Page 300). d.- The upper bound critical value of the t-test for significance of $\hat{\alpha}_0$ at the 5% (10%) significance level is -3.99(-3.66) when k=4 and these come from Pesaran *et al* (2001, Table CII-Case III, page 303). e.-LM is Lagrange Multiplier test of residual serial correlation. It is distributed as χ^2 with one degree of freedom (first order). Its critical value at 5% (10%) significance level is 3.84(2.77).

one significant lagged coefficient in 50 industries. Table 5, which reports the results for Mexican policy uncertainty, reveals nearly the same outcome, showing that Mexican policy uncertainty has significant short-run effects on 54 Mexican exporting industries to the US. To determine in how many industries do short-run effects translate into significant and meaningful long-run effects, we shift to Table 6 where we gather that US policy uncertainty carries a significant and meaningful coefficient in 25 industries which are all small. While in almost half of the industries the estimate is positive, it is negative in the other half. Since all industries are small, we can conclude that US policy uncertainty does not have much of a long-run effect on Mexican exports to the US.¹² As for Mexican policy uncertainty, it carries a significant and meaningful coefficient in 27 industries. While in 18 industries with a total export share of 6.37 per cent the effects are negative, only in the remaining seven with a total export share of 0.88 per cent are the effects positive. In summary, less than 6 per cent of Mexican exports to the US are affected adversely by policy uncertainty in Mexico.¹³

4. SUMMARY AND CONCLUSION

Nearly all studies in the extant literature have assessed the impact of exchange rate uncertainty on trade flows between countries. Clearly, during the study period, exchange rate uncertainty only captures the uncertainty or volatility of the exchange rate and not other factors that contribute to an uncertain trading environment. Now that there is a comprehensive measure of uncertainty known as policy uncertainty, we revisit the response of trade flows between the US and Mexico to this news-based comprehensive uncertainty measure. We include in our study 93 industries that trade between the two countries and try to find out whose policy uncertainty has relatively more effects on commodity trade between the US and Mexico.

Our findings could be summarised by saying that while US policy uncertainty has significant short-run effects on 45 US exporting industries to Mexico, Mexican policy uncertainty has significant short-run effects on 57 US exporting industries. However, short-run effects translate into significant long-run effects in 17 industries that are affected by US policy uncertainty and in 21 industries that are affected by Mexican policy uncertainty. The interesting discovery is that in most of the 17 industries, the long-run effects of US policy uncertainty is positive, whereas in most of the 21 industries the effects of Mexican policy uncertainty is negative. Based on the export share of each industry, while increased uncertainty in the US affects 30 per cent of US exports to Mexico positively, increased uncertainty in Mexico affects 45 per cent of US exports negatively. Clearly, increased uncertainty in Mexico has more damaging effects on US exports to that country.

As for the effects of both policy uncertainty measures on US imports from Mexico or Mexican exports to the US, we found that while US policy uncertainty has significant short-run effects on 50 Mexican exporting industries to the US,

Mexican policy uncertainty has short-run effects on 54 Mexican exporting industries. Again, short-run effects translated into significant long-run effects in 25 and 27 industries, respectively. None of the large industries were included in either list. Indeed, while the total export share of the 25 industries that were affected by US policy uncertainty was negligible, the total export share of the 27 industries that were affected negatively by Mexican policy uncertainty was 6 per cent. In sum, it appears that increased policy uncertainty in the US has positive long-run effects on 30 per cent of its exports to Mexico, but has no long-run effects on its imports from Mexico. On the other hand, increased policy uncertainty in Mexico has adverse effects on 45 per cent of US exports to Mexico and adverse effects on 6 per cent of its own exports to the US. Thus, less uncertain policies in Mexico will benefit exports of both countries to each other. A major policy implication of our findings is that any assistance by the US to Mexico, to reduce uncertainty in Mexico, will help the US to export more and reap the benefits of the USMCA agreement.

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APPENDIX

Monthly data over the period 2002M1–2019M9 are used in the empirical analysis. The data come from the following sources:

- A. US trade online (<https://usatrade.census.gov>)
- B. International Financial statistics (IFS)
- C. Policy Uncertainty Group, <https://www.policyuncertainty.com/>

Variables:

X^{US} = Export volume of an industry by the US to Mexico. Export value data in dollars for each commodity come from source A. In the absence of price level at the commodity level, we follow Bahmani-Oskooee and Hegerty (2009) and use aggregate export price index for the US to deflate the nominal exports of each commodity. The aggregate export price index comes from source B.

M^{US} = Import volume of an industry by the US from Mexico (Mexican exports to the US). Data come from source A. Again, aggregate import price index for the US from source B is used to deflate the nominal imports of each commodity.

Y^{MEX} = Mexico's aggregate output as measured by the index of industrial production. [Source: B]. This is the only measure of output that comes with monthly frequency.

Y^{US} = US aggregate output as measured by its index of industrial production. [Source: B].

REX = The real bilateral exchange rate of the US dollar against Mexican Peso. It is defined as $REX = (P_{US} \cdot NEX / P_{MEX})$ where NEX is the nominal exchange rate

defined as number of pesos per dollar (from source B). Thus, a decline in REX reflects a real depreciation of the US dollar. Both price levels are measured by CPI, and come from source B.

PJ^{US} = The US Policy uncertainty measure. Source C.

PJ^{MEX} = Mexico's policy uncertainty measure. Source C.

ENDNOTES

1. The Center for Research on International Economics and Department of Economics, The University of Wisconsin-Milwaukee, Milwaukee, WI 53201. bahmani@uwm.edu. Valuable comments of two anonymous reviewers are greatly appreciated. Any remaining error, however, is our own.

2. Pennsylvania State University, Mont Alto, Department of Economics, Mont Alto, PA 17237. hhh10@psu.edu.

3. For more on USMCA see https://en.wikipedia.org/wiki/North_American_Free_Trade_Agreement

4. Baker *et al* (2016), who introduced the policy uncertainty measure, showed its negative effects on economic activity; while Wang *et al* (2014) showed its adverse effects on investment. Pastor and Veronesi (2013), Brogaard and Detzel (2015), and Ko and Lee (2015), investigated its effects on stock market returns; Kang and Ratti (2013), Bahmani-Oskooee *et al* (2018), and Istiak and Alam (2019) have shown how oil prices respond to the policy uncertainty measure. Furthermore, Bahmani-Oskooee *et al* (2016) assessed the impact of policy uncertainty on the demand for money in the US, while Bahmani-Oskooee and Ghodsi (2017) considered the response of house prices in each state of the US Al-Thaqeb and Algharabali (2019) is a useful review article.

5. For a review article see Bahmani-Oskooee *et al* (2013).

6. The models and methods closely follow Bahmani-Oskooee and Baek (2021) and Bahmani-Oskooee and Jia (2022).

7. By deduction, they are equal. We can see this if we solve (1) and (2) for their error terms and lag the solutions by one period.

8. Note that estimates of θ_0 and ρ_0 in this context are the same as the estimate of the coefficient attached to lagged error-correction term in the Engle and Granger (1987) approach. Hence, these estimates must be negative, and they measure the speed of adjustment. For proofs, see Banerjee *et al* (1998) and Bahmani-Oskooee and Ghodsi (2018).

9. For some other applications of this approach, see Halicioglu (2007), Durmaz (2015), Al-Shayeb and Hatemi-J. (2016), Aftab *et al* (2017) and Arize *et al* (2017).

10. Short-run estimates for all other variables are available from the corresponding author upon request.

11. By 'meaningful' we mean that cointegration is supported either by the F or the t-test, reported in Table 3.

12. While the aggregate share of all industries that are affected positively is 1.57 per cent, that of the industries that are affected negatively is 2.02 per cent, a negligible difference.

13. Note that in addition to reporting the F and t-tests for cointegration in Tables 3 and 6, several additional diagnostics are also reported. To check for serial correlation in every mode, we have reported the Lagrange Multiplier as LM. As can be seen it is insignificant in almost all models, supporting autocorrelation-free residuals. For stability of all estimated coefficients, we have applied the CUSUM and CUSUMSQ tests and reported the results as QS and QS². Stable estimates are indicated by “S” and unstable ones by “US”. Clearly, most estimates are stable. Finally, to judge the goodness of the fit, we have reported size of the adjusted R². As can be seen, almost every model enjoys a good fit.

REFERENCES

- Aftab M, Shah S K and Katper N (2017) ‘Exchange-rate Volatility and Malaysian-Thai Bilateral Industry Trade Flows’, *Journal of Economic Studies*, 44, 99-114.
- Al-Shayeb A and Hatemi-J A (2016) ‘Trade Openness and Economic Development in the UAE: An Asymmetric Approach’, *Journal of Economic Studies*, 43, 587-597.
- Arize A C, Malindretos J and Igwe E U (2017) ‘Do Exchange Rate Changes Improve the Trade Balance: An Asymmetric Nonlinear Cointegration Approach’, *International Review of Economics and Finance*, 49, 313-326.
- Al-Thaqeb S A and Algharabali B G (2019) ‘Economic Policy Uncertainty: A Literature Review’, *Journal of Economic Asymmetries*, 20, e00133, 1-11.
- Armeliu H, Belfrage C J and Stenbacka H (2014) ‘The Mystery of the Missing World Trade Growth after the Global Financial Crisis’, *Sveriges Riksbank Economic Review*, 3, 7-22.
- Bahmani-Oskooee M (1986) ‘Determinants of International Trade Flows: The Case of Developing Countries’, *Journal of Development Economics*, 20, 107-123.
- Bahmani-Oskooee M and Baek J (2021) ‘Whose Policy Uncertainty Matters in the Trade between Korea and the US?’, *Journal of Risk and Financial Management*, 14, 1-23.
- Bahmani-Oskooee M and Ghodsi H (2017) ‘Policy Uncertainty and House Prices in the United States of America’, *Journal of Real Estate Portfolio Management*, 23, 73-85.
- Bahmani-Oskooee M and Ghodsi H (2018) ‘Asymmetric Causality between the US Housing Market and its Stock Market: Evidence from State Level Data’, *Journal of Economic Asymmetries*, 18, Article e00095, 1-8.
- Bahmani-Oskooee M and Hegerty S (2009) ‘The Effects of Exchange-Rate Volatility on Commodity Trade between the US and Mexico’, *Southern Economic Journal*, 75, 1019-1044.
- Bahmani-Oskooee M and Kara O (2005) ‘Income and Price Elasticities of Trade: Some New Estimates’, *The International Trade Journal*, 19, 165-178.
- Bahmani-Oskooee M and Niroomand F (1998) ‘Long-run Price Elasticities and the Marshall-Lerner Condition Revisited’, *Economics Letters*, 61, 101-109.

- Bahmani-Oskooee M and Xu J (2022) 'Whose Policy Uncertainty Matters in the Trade Between China and the US?', *Economic Change and Restructuring*, 55, 1497-1542.
- Bahmani-Oskooee M, Harvey H and Hegerty S (2013) 'Empirical Tests of the Marshall-Lerner Condition: A Literature Review', *Journal of Economic Studies*, 40, 411-443.
- Bahmani-Oskooee M, Harvey H and Niroomand F (2018) 'On the Impact of Policy Uncertainty on Oil Prices: An Asymmetry Analysis', *International Journal of Financial Studies*, 6, article 12, pp. 1-11.
- Bahmani-Oskooee M, Kutan A and Kones A (2016) 'Policy Uncertainty and the Demand for Money in the United States', *Applied Economics Quarterly*, 62, 37-49.
- Baker S R, Bloom N and Davis S J (2016) 'Measuring Economic Policy Uncertainty', *Quarterly Journal of Economics*, 131, 1593-1636.
- Banerjee A, Dolado J and Mestre R (1998) 'Error-Correction Mechanism Tests in a Single Equation Framework', *Journal of Time Series Analysis* 19, 267-285.
- Brogaard J and Detzel A (2015) 'The Asset-Pricing Implications of Government Economic Policy Uncertainty', *Management Science*, 61, 3-18.
- Durmaz N (2015) 'Industry Level J-curve in Turkey', *Journal of Economic Studies*, 42, 689-706.
- Engle R F and Granger C W J (1987) 'Cointegration and Error Correction: Representation, Estimation, and Testing', *Econometrica*, 55, 251-276.
- Goldstein M and Khan M S (1978) 'The Supply and Demand for Exports: A Simultaneous Approach', *Review of Economics and Statistics*, 60, 275-286.
- Goldstein M and Khan M S (1985) 'Income and Price Effects in Foreign Trade' in Jones R W and Kenen P B (eds) *Handbook of International Economics*, Amsterdam: Elsevier, 1041-1105.
- Halicioglu F (2007) 'The J-Curve Dynamics of Turkish Bilateral Trade: A Cointegration Approach', *Journal of Economic Studies*, 34, 103-119.
- Han L, Qi M and Yin L (2016) 'Macroeconomic Policy Uncertainty Shocks on the Chinese Economy: A GVAR Analysis', *Applied Economics*, 48, 4907-4921.
- Istiak K and Alam M R (2019) 'Oil Prices, Policy Uncertainty and Asymmetries in Inflation Expectations', *Journal of Economic Studies*, 46, 324-334.
- Jia F, Huang X, Xu X and Sun H (2020) 'The Effects of Economic Policy Uncertainty on Export: A Gravity Model Approach', *Prague Economic Papers*, 29, 600-622.
- Kang W and Ratti R (2013) 'Oil Shocks, Policy Uncertainty and Stock Market Return', *Journal of International Financial Markets, Institutions, and Money*, 26, 305-318.
- Ko J-H and Lee C-M (2015) 'International Economic Policy Uncertainty and Stock Prices: Wavelet Approach', *Economics Letters*, 134, 118-122.
- Marquez J (1990) 'Bilateral Trade Elasticities', *The Review of Economics and Statistics*, 72, 70-77.
- Pastor L and Veronesi P (2013) 'Policy Uncertainty and Risk Premia', *Journal of Financial Economics*, 110, 520-545.

Pesaran M H, Shin Y and Smith R J (2001) 'Bounds Testing Approach to the Analysis of Level Relationships', *Journal of Applied Econometrics*, 16, 289-326.

Rose A K (1990) 'Exchange Rates and the Trade Balance: Some Evidence From Developing Countries', *Economics Letters*, 34, 271-275.

Rose A K (1991) 'The role of Exchange Rates in a Popular Model of International Trade: Does the 'Marshall-Lerner' Condition Hold?', *Journal of International Economics*, 30, 301-316.

Tam P S (2018) 'Global trade flows and economic policy uncertainty', *Applied Economics*, 50, 3718-3734.

Wang Y, Chen C R and Huang Y S (2014) 'Economic Policy Uncertainty and Corporate Investment: Evidence from China', *Pacific-Basin Finance Journal*, 26, 227-243.