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# NEW AND TRADITIONAL TRADE FLOWS AND THE ECONOMIC CRISIS

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STUDY SERIES No. 49



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**NEW AND TRADITIONAL TRADE FLOWS  
AND THE ECONOMIC CRISIS**

by

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## Abstract

In terms of economic development, it makes a difference whether export increases at the extensive (new trade flows) or intensive margin (traditional, well-established trade flows). Similarly, a decline in international trade may affect new flows relatively more than traditional ones. A more severe impact on new trade flows could impose additional obstacles to recovery for those countries relying on export diversification for their economic development. This paper seeks to determine whether the recent decline in international trade has affected relatively more trade at the extensive margin or at the intensive margin. The overall results indicate that the economic crisis of 2008 and 2009 has had more severe implications for those bilateral trade flows that did not exist before 2006. New bilateral flows have a lower probability of surviving the fall in demand and relatively higher negative effects on their volumes of trade. Consequently, the economic crisis may also affect the global economy by producing delays in the international product cycle, with traditional and larger exporters holding ground in a relatively better way than new entrants.

**Keywords:** International trade flows, economic crisis

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Any mistakes or errors remain the authors' own, who may be contacted at the following e-mail address: [alessandro.nicita@unctad.org](mailto:alessandro.nicita@unctad.org).

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# Introduction

In the last 20 years, international trade has increased more than five-fold to reach about \$15 trillion in 2008. For developing countries, export growth has been even faster, as it jumped from about \$800 billion in 1990 to about \$5 trillion in 2008. Most of the increase in trade has been at the intensive margin; that is, an increase in volume of existing trade flows. The growth at the extensive margin, whether due to exports to new markets or due to exports of new products, has been much lower (Amurgo-Pacheco and Pierola, 2007; Besedes and Prusa, 2007 and Brenton and Newfarmer, 2007).

In terms of economic development, it makes a difference whether export increases at the extensive or intensive margin. In general, countries that have been able to expand into the export of new products have performed better in terms of economic development (Hausmann et al., 2006).<sup>1</sup> Similarly, in periods of slowing economic growth or declining demand, it could make a difference whether the fall in trade is at the intensive or extensive margin. The export of new products often anticipates the future export potential of a country. If periods of shrinking demand have a relatively higher negative impact on new export flows, this could imply stronger repercussions for economic growth in developing countries.

This paper investigates whether export performance in time of economic crisis differs between new trade flows and well-established flows. There are several reasons why reduced global demand could have a different impact on bilateral trade flows, depending on length relationships. For example, new exporters may be the ones that were filling the increasing marginal demand, thus operating on smaller margins. Consequently, these new exporters may be the first to be crowded out once markets shrink. Similarly, in times of economic crisis, importers may be more willing to rely on proven suppliers. Suppliers with a limited history may be considered too risky and thus be the first to experience reduced demand. However, new exporters may be those that adopt newer varieties, newer and more efficient production processes and thus navigate better through price declines. Moreover, new products may benefit from some forms of government support and thus be more resilient. Similarly, a large initial investment may force firms to stay in the market even at a loss, hoping for a quick recovery of demand and prices. Finally, an economic crisis may represent a structural break, thus providing the shock necessary to reshape trade flows and offer opportunities to new entrants.

To investigate the relative performance of new export sectors versus traditional ones, we proceed in three steps. Firstly, we use a probabilistic econometric model to determine whether the occurrence of exporting in periods of declining demand differs according to the length of the trade relationship. Secondly, we examine whether new products behave differently in terms of spell duration from traditional products and whether this changes during a period of shrinking demand. In doing so, we utilize the standard methods of the trade duration literature: the Kaplan-Meier estimator and the Cox regression approach. Finally, we use a standard panel estimation to measure any difference in the effect on trade volumes of new flows versus traditional, well-established flows.

The findings suggest that, although shrinking demand has had a negative effect on trade both at the extensive and intensive margins, trade at the extensive margin appears to have been relatively more affected, especially with regard to its magnitude. Moreover, the results hint at other

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<sup>1</sup> The failure of many developing countries to successfully diversify out of their traditional export sectors suggests that export diversification is not an easy task. It often involves fixed costs and high entry barriers that often require large investments that cannot be met without careful planning and government support (Hausmann and Rodrik, 2003).



determinants that may be more important in explaining the effect of the crisis on bilateral trade relationships. Indeed, our results suggest that that the past magnitude of bilateral trade is important, with larger flows relatively less affected than smaller ones.

The outline of the paper is as follows. Chapter 1 presents the data and some descriptive statistics on new and traditional trade flows. Chapter 2 discusses the methodology to estimate the impact of the crisis on trade flows. Chapter 3 presents the results and is followed by conclusions drawn from the study.

## 1. New and traditional trade flows

Many factors determine bilateral trade flows. In addition to supply and demand factors, government policies, trade costs, geography, cultural links and past experience in trade relationships also play an important role as determinants of international trade (Nicita and Olarreaga, 2007).

Periods of declining international demand can relate to new and traditional bilateral trade flows in several ways. For example, to the extent to which new export flows stem from exporters with higher costs – for instance because these exports filled the marginal demand in the previous period of economic growth – these flows are likely to be the first to disappear when global demand shrinks. However, new export flows could be the reflection of changes in global production chains with new, more efficient exporters replacing traditional ones. If so, new export flows will be less likely to be affected by shrinking demand. Past trade relationships may also play an important role. In periods of economic downturn, firms may tend to engage in businesses relationships solely with proven partners, as uncertainty and risks are generally higher. In this regard, firms that have just entered a determined market or started exporting a new product can find themselves in a more difficult position in competing with firms that have already established trade relationships.

The objective of this paper is to analyse the performance of new export flows relative to well-established traditional exports in times of shrinking demand. The data we use in the analysis consists in monthly data relating to the United States of America from January 2007 to June 2009 originating from the Interactive Tariff and Trade DataWeb of the United States International Trade Commission. The data is at the harmonized system (HS) six-digit-level classification encompassing some 5,000 different products. Import data is bilateral and covers about 110 trading partners. Since we set the start of the economic crisis in October 2008, our analysis is based on 21 time periods before the crisis and 9 during the crisis. New trade flows are defined as those bilateral flows at the product level that did not exist before 2006 – but did exist in 2006 or 2007. The study does not consider products for which total imports to the United States were under \$10 million for the 2007–2008 period – thus excluding economically meaningless products – or bilateral trade flows under \$10,000.<sup>2</sup>

Table 1 provides descriptive statistics on the incidence of new trade flows in terms of the number of flows and volumes of trade in 2008. On average, we observe that about 6 per cent of bilateral trade flows and 13 per cent of trade volumes can be classified as new flows. Further, the percentage of new trade flows both in number and volumes varies substantially by country. The amount of new trade flows ranges from zero for Sudan, Chad, Azerbaijan, and Tajikistan (implying that exports from these countries to the United States in 2008 were limited to products that had already been exported before 2006) to about 17 per cent for Paraguay and Uganda (implying that 17 per cent of the products exported by these countries to the United States in 2008 were not exported prior to 2006). With regard to trade volumes, the percentage of trade categorized as new also varies considerably across countries. New flows represent an important share of total trade for

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<sup>2</sup> We also test the validity of our results according to different definitions of new products.

a number of developing countries. Trade flows categorized as new represent more than 20 per cent of total trade for nine countries, seven of which are in East Asia. This indicates that countries in that region are the most dynamic new market entrants.

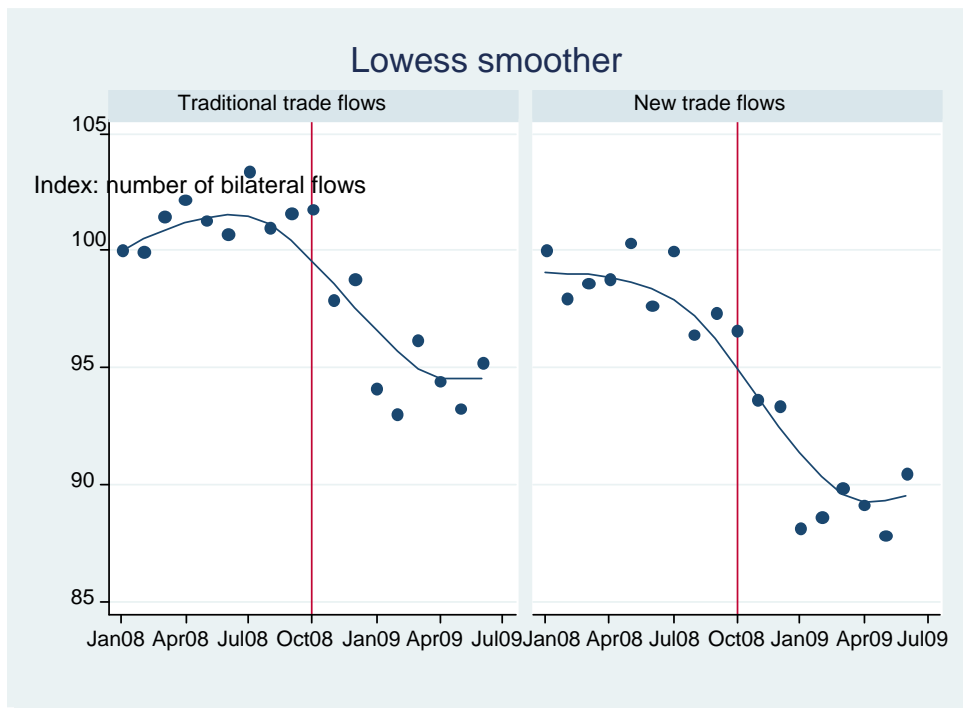
**Table 1. Incidence of new trade flows, by country**

Country	Percentage of new bilateral trade flows (%)	Percentage of trade under new flows (%)	Average volume of new relative to traditional trade flow (%)	Country	Percentage of new bilateral trade flows (%)	Percentage of trade under new flows (%)	Average volume of new relative to traditional trade flow (%)
Albania	0.9	0.1	38	Lao PDR	7.4	1.8	26
Algeria	10.1	1.5	10	Latvia	12.9	10.1	87
Angola	2.5	0.0	68	Lebanon	5.6	3.1	96
Argentina	5.4	5.4	109	Lithuania	7.8	4.6	68
Australia	5.1	2.2	42	Madagascar	3.3	0.2	8
Austria	5.9	5.3	70	Malawi	8.1	5.6	47
Azerbaijan	0.0	0.0	4	Malaysia	9.3	32.2	478
Bangladesh	4.0	0.1	3	Mauritius	4.3	0.7	29
Belarus	10.2	2.8	23	Mexico	4.7	20.4	504
Belgium	4.3	1.6	41	Mongolia	1.0	0.0	74
Bolivia, Plurinational State of	8.4	7.8	72	Morocco	6.0	13.4	221
Bosnia and Herzegovina	4.9	2.3	91	Mozambique	5.6	1.8	23
Brazil	4.6	3.6	89	Nepal	3.5	0.9	29
Bulgaria	5.8	3.9	63	Netherlands	4.9	8.7	204
Burkina Faso	2.9	1.2	518	New Zealand	6.7	4.0	53
Cambodia	6.3	0.8	12	Nicaragua	7.7	1.2	15
Canada	4.4	3.6	85	Nigeria	5.0	1.3	25
Chad	0.0	0.0	4	Norway	6.9	11.4	159
Chile	8.8	14.0	156	Pakistan	2.5	4.2	152
China	5.4	22.4	503	Panama	10.0	9.6	73
China, Hong Kong	5.8	11.0	212	Papua New Guinea	11.4	1.4	13
China, Taiwan Province of	5.7	28.3	676	Paraguay	16.4	18.1	124
Colombia	6.6	16.5	264	Peru	5.8	3.4	51
Costa Rica	8.3	10.6	120	Philippines	7.9	26.0	417
Côte d'Ivoire	7.3	1.5	13	Poland	5.8	6.3	102
Croatia	6.1	2.6	42	Portugal	6.0	8.5	199
Czech Republic	5.4	8.2	140	Republic of Korea	5.2	32.1	845
Denmark	5.5	4.8	98	Republic of Moldova	4.0	7.3	130
Dominican Republic	6.5	5.2	80	Romania	5.8	4.1	80
Ecuador	8.9	18.7	223	Russian Federation	5.1	2.3	48
Egypt	5.7	6.0	82	Saudi Arabia	5.3	2.7	38
El Salvador	4.7	3.7	72	Senegal	3.5	2.3	47
Estonia	10.6	10.1	126	Singapore	7.1	25.0	398
Ethiopia	7.1	1.9	27	Slovak Republic	12.0	5.6	46
Finland	5.0	4.6	96	Slovenia	7.2	10.1	118
France	4.2	1.9	46	South Africa	5.3	0.7	12
Gabon	5.5	3.0	28	Spain	4.0	2.9	87
Germany	4.3	3.7	84	Sri Lanka	4.1	1.3	29
Ghana	11.3	19.9	125	Sudan	0.0	0.0	2
Greece	5.3	2.1	41	Sweden	4.9	7.1	124
Guatemala	4.8	3.6	45	Switzerland	4.1	2.3	48
Haiti	2.3	0.1	4	Syrian Arab Republic	4.6	1.1	27
Honduras	5.7	5.3	88	Tajikistan	0.0	0.0	8
Hungary	8.1	22.3	261	Thailand	6.8	22.0	374
India	4.3	3.6	67	Tunisia	4.6	3.8	73
Indonesia	8.1	12.4	152	Turkey	4.8	2.4	61
Iran (Islamic Rep. of)	3.7	0.1	3	Uganda	18.0	3.5	25
Ireland	6.6	3.0	42	Ukraine	5.6	4.6	67
Israel	5.5	4.7	115	United Kingdom	4.6	3.0	67
Italy	4.6	3.9	73	United Republic of Tanzania	5.5	7.5	103
Jamaica	6.5	0.6	8	Uruguay	9.8	9.6	78
Japan	4.2	13.4	360	Uzbekistan	1.7	0.0	13
Jordan	5.8	1.2	18	Venezuela, Bolivarian Republic of	2.4	1.7	49
Kazakhstan	7.4	0.1	2	Viet Nam	10.5	6.4	61
Kenya	7.4	3.0	35	Zambia	1.8	0.0	9

The relative size of the trade volumes of new trade flows versus traditional ones is shown in table 1. Interestingly, for several countries in East Asia and some in Latin America, new trade flows tend to have a larger volume – up to 8 times larger in the Republic of Korea, for example – than traditional trade flows. This implies that growth in exports has been largely due to growth in new products for these countries. Their success in achieving economic development indicates that export growth at the extensive margin is related to economic growth.

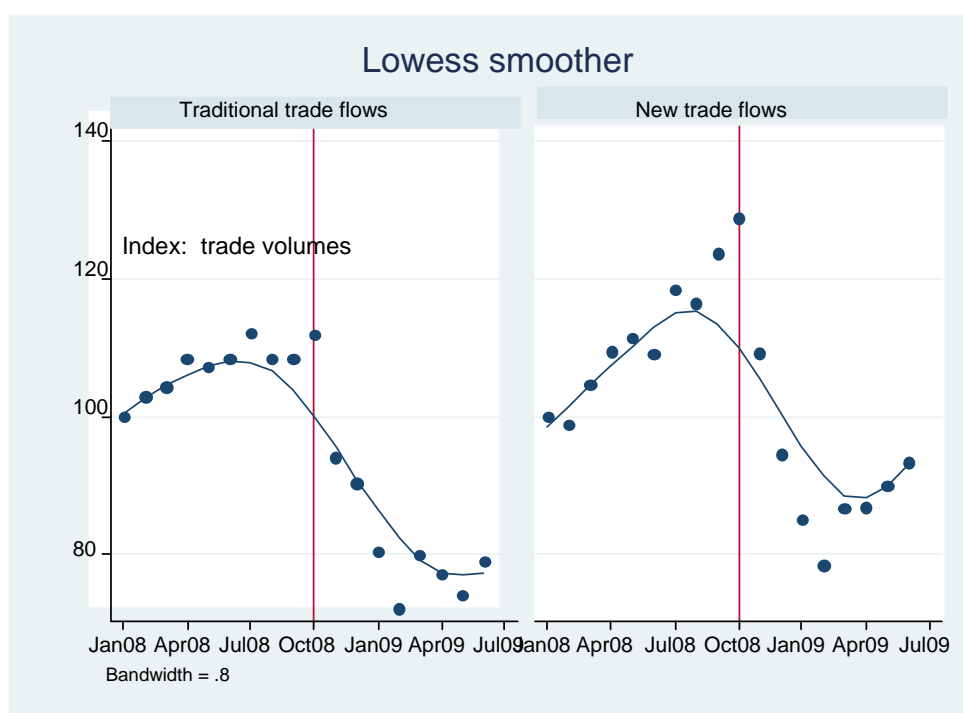
The effect of the economic crisis on United States imports is illustrated in figures 1 and 2. Figure 1 shows the trends in the number of new and traditional United States bilateral import flows between January 2008 and June 2009. Figure 2 provides the same information, but in terms of trade volumes. For comparison purposes, the numbers are indexed with the first period as base. The vertical line represents the crisis break, in October 2008. Disregarding any consideration of possible seasonality, we observe an overall reduction in new and traditional trade flows during the crisis break, both with regard to their number and their volume. Although trade volumes of new and traditional flows decline with a similar magnitude, new flows appear to decrease more substantially in number than traditional flows.

**Figure 1. Number of new and traditional bilateral trade flows, by month**



Notes: Index base period: Jan2008 = 100  
Bandwidth = .8

**Figure 2. Volumes of new and traditional bilateral trade flows, by month**



Note: Index base period: Jan2008 = 100

We now turn to the length of bilateral trade relationships. The question we would like to answer is whether there is any difference in the trade relationship between new and traditional trade flows, and whether shrinking demand in the United States has a different effect on each of the trade flows. Figure 3 illustrates the smoothed hazard estimates for new and traditional trade flows from January 2007 to June 2009<sup>3</sup> and table 2 provides some summary statistics on the spells as well as the country-product-periods that have non-zero trade.<sup>4</sup> According to these preliminary results, there is no difference in trade duration with regard to flow type (new or traditional) or period (before or during the crisis). The only noticeable difference is that the new trade flows are more likely to end in their first few months than the traditional flows. However, the average spell lengths in months that were measured in the nine months before and during the crisis are very similar at around three months. The difference is greater before and during the crisis with regard to the total number of spells and of trade relationships. This suggests that the crisis may have had an effect on the number of bilateral trade flows, terminating some, but not changing the duration of

<sup>3</sup> We first examine duration by using the Kaplan-Meier estimator, where  $\hat{S}(t)$ , the overall probability of

survival past time  $t$  of product  $i$ , is calculated as: 
$$\hat{S}(t) = \prod_{i|t_j \leq t} \left( \frac{n_i - d_i}{n_i} \right)$$

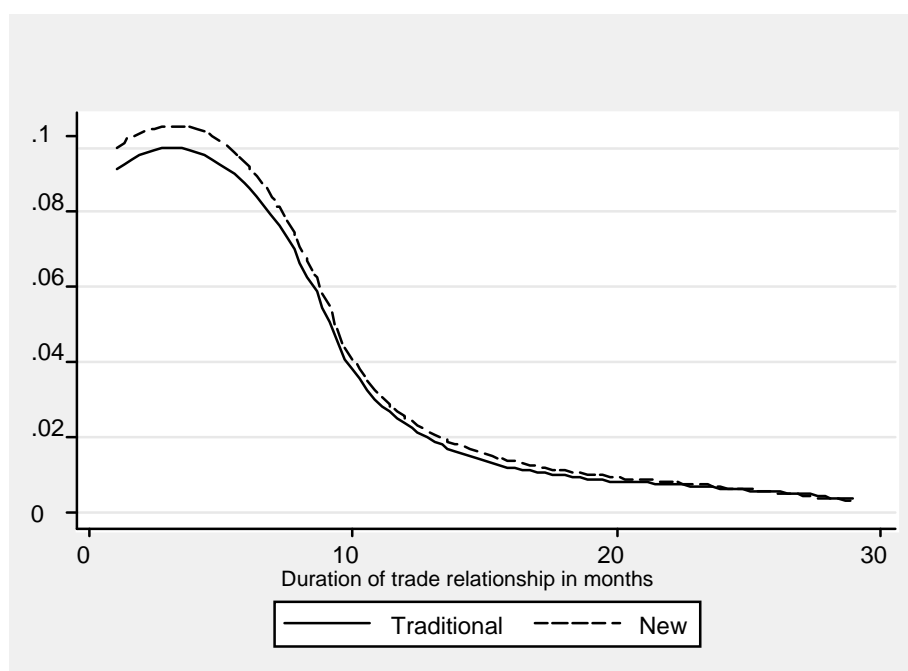
where  $n$  is the number of bilateral flows at risk at time  $t$ , and  $d$  is the number of failed bilateral flows at time  $t$ . The plot of the Kaplan-Meier estimate provides the proportion of the bilateral trade flows that would survive during each given length of time.

<sup>4</sup> To ascertain whether spell lengths of traditional and new trade flows differed before and during the crisis, we split our sample in two, each spanning a duration of nine months. The pre-crisis period includes all the spells that started before October 2008; the spells still in force in October 2008 are considered censored. The crisis period includes all the spells that began in October 2008 or later; the spells that were still in force at the end of the sample period (June 2009) are considered censored.

the surviving flows. However, also in this case, there are no significant differences between new and traditional flows.

The results provided in this chapter are descriptive and do not take into account products or country characteristics. For example, differences across products could mask existing differences within each product, with declines in demand affecting some products more than others. Ultimately, we are interested in the within-product differences, meaning that traditional and new flows behave in a similar fashion once checked for demand shocks at the product level. We will verify these in the econometric estimations.

**Figure 3. Kaplan-Meier: Smoothed hazard estimates by flow type**



**Table 2. Duration of trade flows**

	Observed spell length in months		Total number of spells	Total number of trade relationships	Total number of flow codes	Trade periods that have nonzero trade (percentage)
	Mean	Median				
<b>All flows (Jan 2007- June 2009)</b>						
All flows	4.52	1	446,019	149,039	4,739	37
New trade flows	4.21	1	26,771	9,023	2,554	38
Traditional trade flows	4.55	1	419,248	140,016	4,738	37
<b>Pre-Crisis (Jan 2008-Sept 2008)</b>						
All flows	2.93	1	208,856	114,614	4,732	38
New trade flows	2.97	1	11,181	6,036	1,416	38
Traditional trade flows	2.92	1	198,535	108,578	4,727	38
<b>Post-Crisis (Oct 2008- June 2009)</b>						
All flows	2.89	1	200,118	110,827	4,732	35
New trade flows	3.00	1	10,195	5,537	1,228	34
Traditional trade flows	2.88	1	190,582	105,290	4,721	36

## 2. Econometric methods

To investigate whether the impact of the shrinking global demand has had a diverse impact on the intensive margin of trade relative to the extensive margin of trade, we examine three related issues.

Firstly, we try to determine whether the existence of a bilateral trade flow during the crisis can be associated with the type of flow – new or traditional. A sudden reduction in demand could wipe out new exporters because they may be marginal or because they may not be perceived to be as trustworthy as traditional suppliers. Second, we investigate the extent to which new exporters can maintain trade relationships after the first few months of the crisis. Sometimes bilateral trade flows can be sustained for a few months because of pending orders and fail only after that. To ascertain whether the resilience of new trade flows differs from that of traditional trade flows, we analyse their frequency and duration before and during the crisis. Finally, we study the effects of shrinking demand on the trade volumes of new bilateral trade flows, compared with those of traditional flows. In other words, we investigate whether a fall in imports affects more or less the new trade flows. In all these issues, there is no a priori on whether new sectors could be affected diversely by shrinking global demand. This is ultimately an empirical question that can be answered only by analysing the data.

Our analysis begins by running a standard probabilistic model where success is denoted by the existence of export flows during a period of falling demand. We estimate this model according to two specifications. The first specification checks for country- and product-fixed effects (at the HS six-digit level). The second specification adds previous trade volumes as control. In summary, the estimation captures any difference between new and traditional trade flows, within each 6 digit product, after having controlled for country specific factors. In more formal terms, we estimate a conditional fixed-effect logit model of the form:

$$\Pr(\text{trade}_{i,k} \neq 0) = \Phi(a_k + a_i + \beta_1 \text{New}_{i,k} + \beta_2 X_{i,k}) \quad (1)$$

where  $\Phi$  is the logistic cumulative distribution function,  $i$  denotes products,  $k$  denotes country and the alphas denote fixed effects.  $\text{New}$  is a dummy denoting new bilateral trade flows and  $X$  denotes overall volumes of trade in 2007.

Secondly, we turn to the question of whether the duration of United States imports is shorter during the crisis and whether the effect of the crisis differs across product types.<sup>5</sup> In doing so, we then estimate the semi-parametric Cox proportional hazards model to determine whether the duration of new bilateral trade flows is different from that of traditional trade flows.<sup>6</sup> We estimate the model, checking for country, product and time effects by stratifying into HS four-digit product

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<sup>5</sup> In this context the hazard function is defined as  $H(t) = \int_0^t h(t)dt$  where  $h(t)$  is the instantaneous risk of

trade-relationship end at time  $t$ , conditional on survival to that time:  $h(t) = \frac{f(t)}{S(t)}$ . It can be also shown that

$H(t)$  and  $S(t)$  are related by  $H(t) = -\text{Log}[S(t)]$ .

<sup>6</sup> A particular advantage of the Cox model is that the baseline hazard is left unspecified and is not estimated. However, it assumes a parametric form for the effects of the covariates on the hazard rate, and the hazard proportionality assumption that the proportion of two kinds of hazard is constant and independent of the survival time (Wooldridge, 2002; Cameron and Trivedi, 2005).

groups, exporting country and United States imports' start time. In formal terms, the stratified Cox model expressing the risk of a bilateral trade flow (of a product  $i$  originating from country  $k$ ) dying at time  $t$  can be expressed as:

$$h_{i,k}(t) = h_{0j}(t) \exp(\beta_1 New_{i,k} + \beta_2 Crisis_t + \beta_3 New * Crisis_{i,k,t} + \beta_4 X_{i,k}) \quad (2)$$

where  $h_{i,k}(t)$  denotes the hazard function,  $h_{0j}(t)$  is the baseline hazard for the  $j$ -th stratum and  $X$  is the volume of trade in 2007. The beta coefficients give the proportional change that can be expected in the hazard, related to the change in each explanatory variable. Here the baseline hazards are allowed to be arbitrary and unrelated to the different strata owing to the stratification. The advantage of the stratified model is that it does not force the baseline hazards to be proportional across strata. In other words, stratifying permits us to check for country- and product-fixed effects. Moreover, standard errors are clustered at the HS six-digit-flow level, which allows for possible ties within flows.

Finally, we use panel estimation to investigate whether there is a relationship between trade volumes and new bilateral trade flows in periods of shrinking international demand. The estimation absorbs country, time and product-specific differences into fixed effects. The effects of the crisis on new bilateral flows are captured by dummies. The interaction term between these two dummies captures differences for new bilateral trade flows during the crisis. The estimation equation takes the form:

$$\text{Log}(trade_{i,k,t}) = a_k + a_i + a_t + \beta_1 New_{i,k} + \beta_2 Crisis_t + \beta_3 New * Crisis_{i,k,t} + \varepsilon_{i,k,j} \quad (3)$$

where  $i$  denotes products;  $k$ , country and  $t$ , time.<sup>7</sup>

### 3. Econometric results

This chapter presents and discusses the results of the three econometric estimations detailed above. We first discuss the results of the logit model, then the Cox regression and finally the panel regression.

The results of the logit model are presented in table 3. Two specifications are provided. The first specification captures the effect of the crisis on new flows by checking only for country- and product-fixed effects. The second specification adds the value of trade of the bilateral trade flows before the crisis (2007 values) as a control variable. The results of the first specification indicate that new and traditional trade flows have a similar probability in surviving the crisis. However, in the second specification, the coefficients both on the volume of trade and on the new trade flows becomes significant: larger bilateral trade flows are more likely to withstand the crisis, while bilateral trade flows that did not exist before 2006 are more likely to end as a result of the crisis. This implies two effects. Firstly, within each HS six-digit product, small trade flows are less likely to survive the crisis. Secondly, between two trade flows of similar magnitude, new trade flows are less likely to survive the decline in demand.

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<sup>7</sup> To take into account zero trade, we add 1 to all trade flows and then take the log. Alternative estimation methods such as maximum likelihood estimations prove unfeasible, given the large number of observations and fixed effects.

**Table 3. Conditional logit regression**

	<i>Specification 1</i>	<i>Specification 2</i>
New Flow	0.05 (1.32)	-0.66*** ( -10.64)
Export 2007 (in log)		0.39*** (166.64)
Number of observations	152,200	152,200
LR chi2	30,469	88,402
Fixed effects by:		
Product (HS6)	Yes	Yes
Country	Yes	Yes
Time	Yes	Yes

*Notes:* Robust z statistics in parentheses

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

We now turn to the question of whether spell length was different in the period before and during the crisis, after having checked for time, product and country characteristics. Table 4 presents the results from three different specifications of the Cox models. The coefficients are in exponential form and those of dummy variables give the ratio of the hazard rates for a change from zero to one. Coefficients above (below) one indicate a positive (negative) effect. The interaction coefficient captures any additional effect on new products during the crisis. All specifications point to an effect of the crisis and to an additional effect on new products, but no effect on the interaction term. In particular, we find that the spell length of new flows is on average lower than that of traditional flows, but this difference does not change as a consequence of the crisis.

**Table 4. Cox regression**

	<i>Specification 1</i>	<i>Specification 2</i>	<i>Specification 3</i>
Crisis	1.299*** (23.36)	1.634*** (42.51)	1.633*** (43.23)
New flow	1.041 (1.53)	1.310*** (9.29)	1.308*** (9.23)
Crisis*, new	0.962 (-1.23)	0.994 (-0.19)	
Export 2007 (in log)		0.682*** (-95.04)	0.682*** (-95.03)
Number of observations	501,761	463,938	463,938
Wald chi2	553.9	9,142.5	9,131.1
Stratified by			
Exporting Countries	Yes	Yes	Yes
Product HS-4	Yes	Yes	Yes
Year	Yes	Yes	Yes

*Notes:* Robust z statistics in parentheses

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Standard error adjusted for 4,137 clusters in HS-6



The results from the first specification indicate that the crisis had an effect on all trade flows, reducing their average spell length by about 30 per cent with no substantial difference between new and traditional flows. By checking the volumes of trade, we find that new trade flows are on average 30 per cent lower in spell length, and that the effect of the crisis on both new and traditional flows is about 63 per cent.

Table 5 presents the results for the panel estimation. The first specification captures the overall effect of the crisis on United States imports, when checking for product, time and country-fixed effects. The second specification adds the new bilateral flow dummy and the third specification adds the crisis-new flow interaction term. The results from the various specifications are comparable, indicating that the impact of the crisis on the volume of bilateral trade flows has been large and even more so on new trade flows. In particular, the results indicate that the value of new trade flows is on average about 70 per cent higher than that of traditional flows, while the effect of the crisis on traditional United States imports is quantified in a slightly more than 20 per cent reduction in values, with an additional 40 per cent reduction for new trade flows categorized.

The results can be summarized as follows: First, new trade flows appear as likely as traditional trade flows to survive the crisis because they are on average larger in value. Once the magnitude of trade flows is checked, new trade flows are less likely to survive the shrink in demand. Second, regarding the duration of trade flows, we find that on average the crisis has had an effect on duration, which, however, has not been different for new and traditional flows. Finally, regarding the effect of the crisis on the magnitude of trade flows, we find that shrinking demand has caused a substantial drop in trade in both traditional and new flows. However, the impact on new trade flows has been stronger.

An important caveat is that our analysis is based solely on United States data. The extent to which these results hold for other trade flows, including those related to other high-income markets, is an open question. Moreover, our analysis does not aim to provide an understanding of the long-term implications of the crisis. In particular, it would be interesting to determine to what extent the relatively larger negative effect on new products will be counterbalanced by a relatively larger positive effect in the recovery stage. Finally, our results suggest that other determinants may be more important in determining the success or failure of trade flows in times of shrinking demand. These are relevant issues that are worth exploring. We leave this to future research, once more comprehensive data is made available.

**Table 5. Panel regression**

	<i>Specification 1</i>	<i>Specification 2</i>	<i>Specification 3</i>
Crisis	-0.24*** (-21.67)	-0.24*** (-21.67)	-0.22*** (-19.69)
New Flow		0.65*** (5.06)	0.77*** (6.03)
Crisis*, new			-0.39*** (-12.22)
Number of observations	4,756,470	4,756,470	4,756,470
F-statistic	193	187	188
Fixed effect by:			
Product (HS-6)	Yes	Yes	Yes
Country	Yes	Yes	Yes
Time	Yes	Yes	Yes

*Notes:* Robust t statistics in parentheses  
 \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%  
 Standard error adjusted for 4,396 clusters in HS-6

## Conclusions

In terms of economic development, it makes a difference whether exports increase at the extensive or intensive margin. Similarly, a fall in international trade can affect new flows relatively more than traditional ones. A more severe impact on new trade flows could imply additional obstacles to recovery for those countries relying on export diversification for their economic development.

In this paper, we analysed whether the fall in international trade stemming from the economic crisis has affected relatively more trade at the extensive margin or intensive margin. The overall results indicate that the economic crisis has had more severe implications for bilateral trade flows that did not exist before 2006. New bilateral flows have a lower probability of surviving the fall in demand and a relatively higher negative effect on their volumes of trade.

This implies that the economic crisis may be producing delays in the international product cycle, with traditional and larger exporters holding ground in a relatively better way than new entrants. As export growth at the extensive margin is correlated with economic growth, this may have repercussions for the development perspective of smaller, newly emerging economies.

The results also suggest that there are other determinants that may be more important in explaining the effect of the crisis on different trade flows. In particular, we find some indication that the volume of the trade flow relates to the magnitude of the effect of the crisis. That is, larger trade flows appear to be proportionally less affected. Further research on this topic would be necessary, but if this is confirmed, the reduction in international demand would be most damaging for smaller and low-income countries with a limited market share in international trade.

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