（参考3）

統計委員会・第1WG第1回会合
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「第2のアンバンドリング」と統計

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木村　福成

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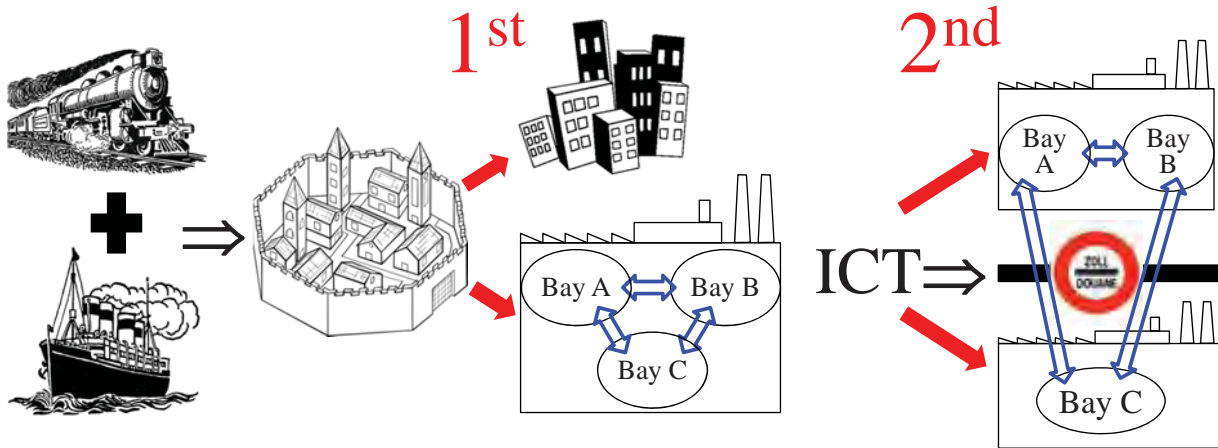# 1．第2のアンバンドリング
（Baldwin (2011)）

- 1980年代以降、産業単位の国際分業（第1のアンバンドリング）から生産工程・タスク単位の国際分業（第2のアンバンドリング）へ

- 東アジア、製造業（特に機械産業）に関しては世界でももっとも第2のアンバンドリングが進んでいる地域。さらに他産業にも拡大。

- 東アジア経済のダイナミズムの源泉、日本・日本企業の競争力の源泉。
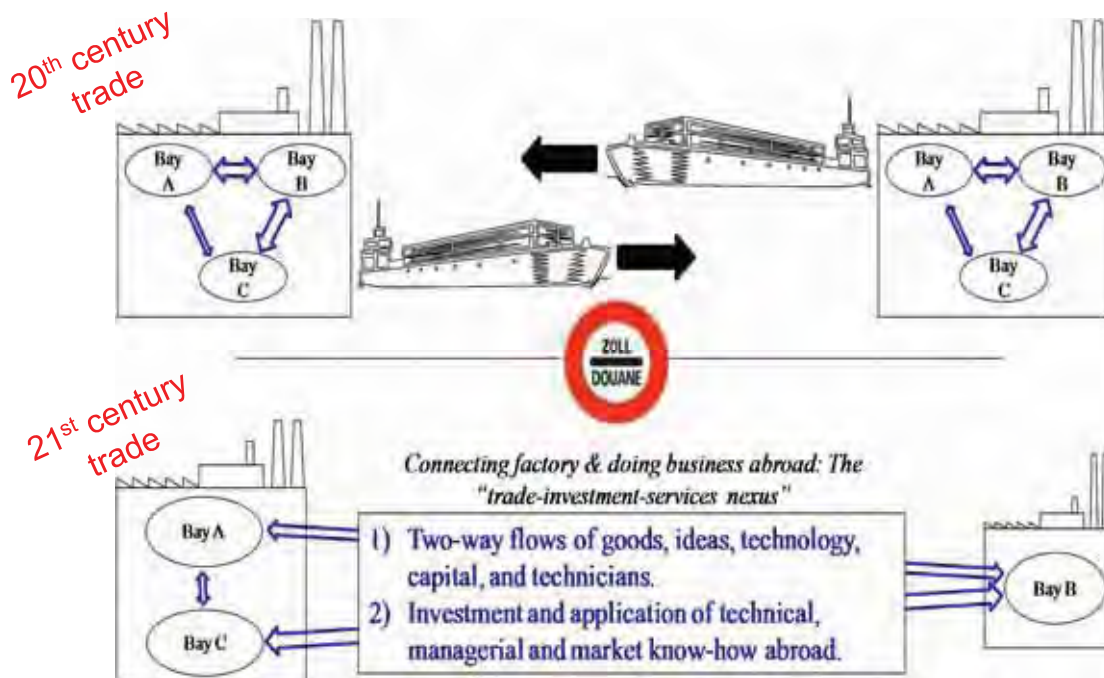
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The 2nd Unbundling

> The 2nd unbundling, i.e., international division of labor in terms of production processes and tasks, has developed since the 1980s.
> The 2nd unbundling in the manufacturing sector is most advanced in East Asia.

12/06/29　　Source: Baldwin.

Transformation of international commerce

Connecting factory & doing business abroad: The "trade-investment-services nexus"

1) Two-way flows of goods, ideas, technology, capital, and technicians.
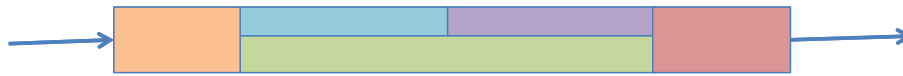2) Investment and application of technical, managerial and market know-how abroad.
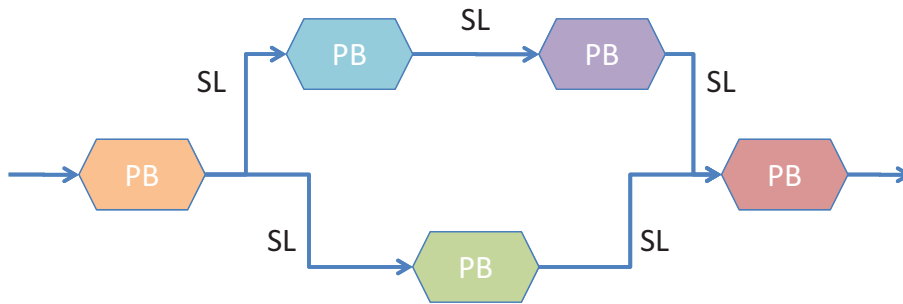
12/06/29　　Source: Baldwin.

フラグメンテーション理論：生産ブロックとサービス・リンク

フラグメンテーション以前

フラグメンテーション後
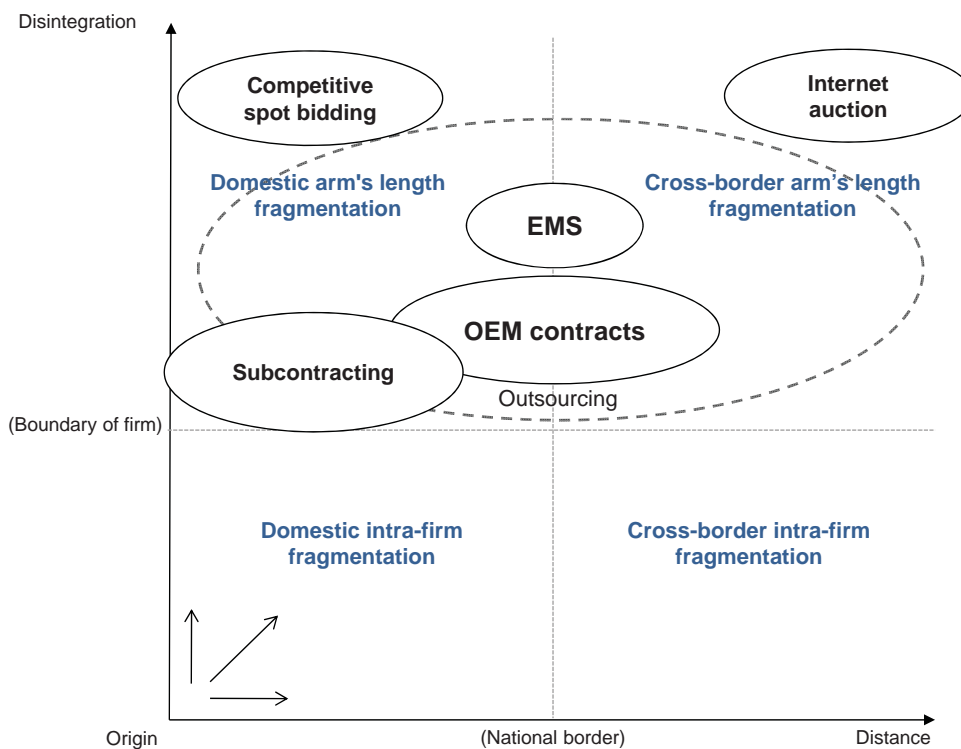

PB: 生産ブロック
SL: サービス・リンク

Two-dimensional fragmentation: An illustration

Source: Kimura and Ando (2005).

生産ネットワークの構造：アメリカ＝メキシコと東アジア

アメリカ

消費市場

メキシコ

- ⬤ 本社または子会社
- ◯ 同じ企業国籍の別企業
- ☐ 他の企業国籍の別企業

日本

消費市場

韓国

アメリカ

消費市場

台湾

ベトナム

フィリピン

インターネット
オークション

マレーシア

産業集積

産業集積
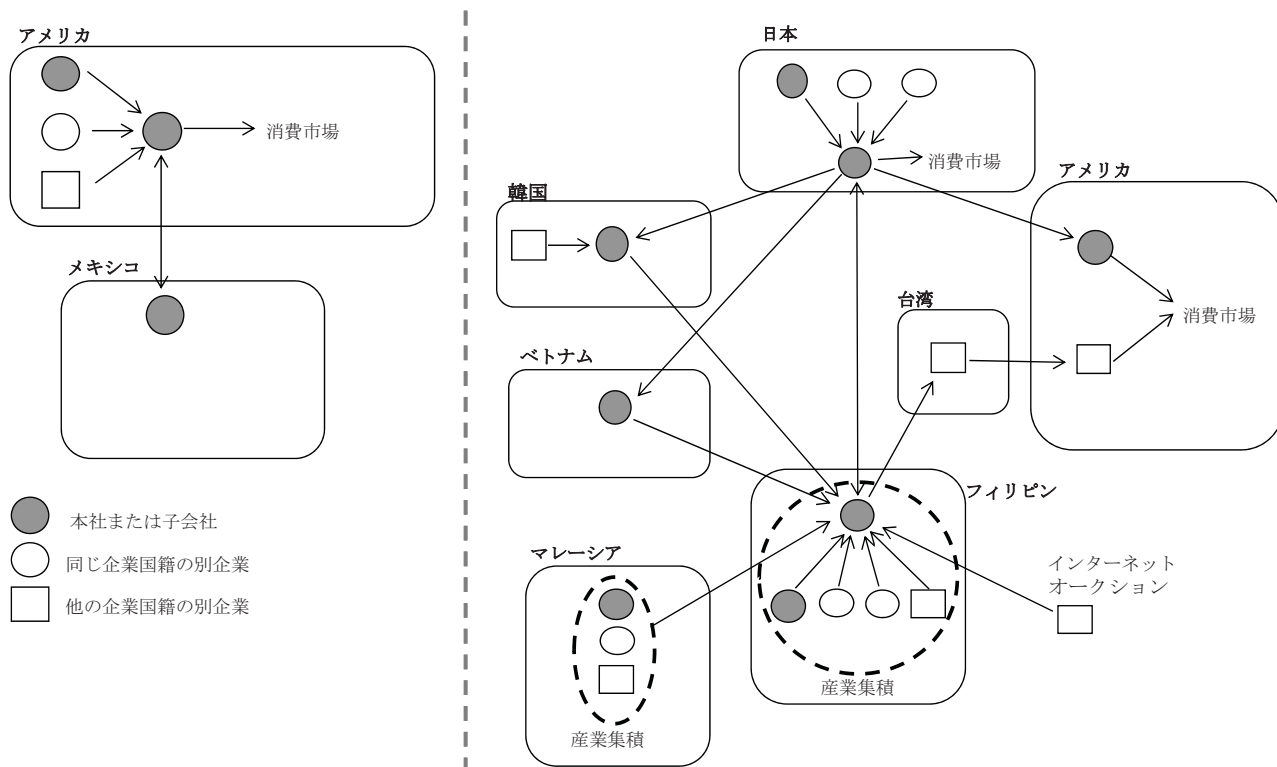
世界各国の製造業品輸出入に占める機械・機械部品の比率 （2007年）
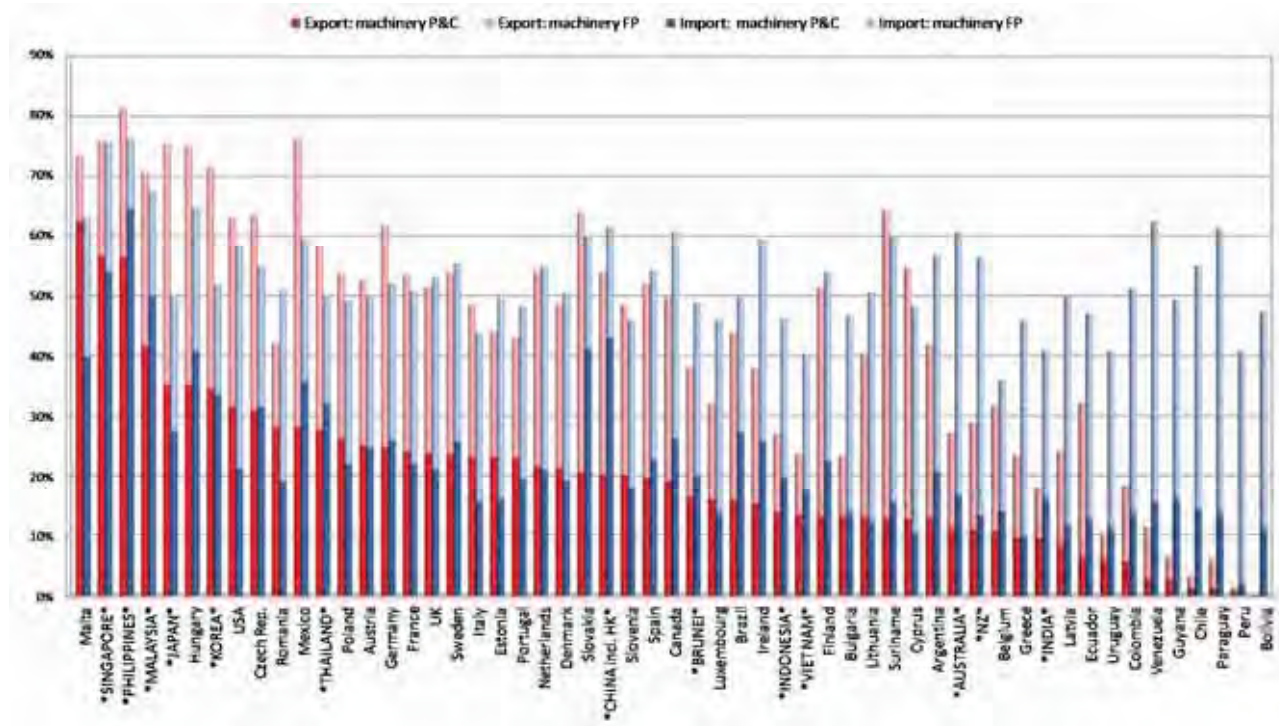
Source: Kimura and Obashi (2010).

２．マイクロ／パネルデータ分析

- 「新新」国際貿易理論
  - 企業の異質性。
- 企業組織・企業間関係
  - 中小企業研究など。
- 第2のアンバンドリング
  - 企業活動が分割されて国境をまたいで展開。
  - 企業内分業と企業間分業。
- 企業単位の政策研究が不可欠

例：企業活動の国際化と産業空洞化

- 企業活動基本統計をベースとする分析
  - 東アジアにおける海外子会社設立　－＞　国内雇用（数・本社機能・製造活動）、国内事業所・子会社、海外売上・仕入
  - 労働関係統計との接続ができれば、skill shift等の分析も可能に（cf. カナダ、デンマーク、その他欧州諸国）。
  - 海外子会社側の活動（e.g., R&D）に関する情報が不足。海事、把捉率も低い。
- 国際貿易統計をベースとする分析
  - Extensive margin（HS9桁分類x仕向地国）の分析：世界金融危機－＞輸出ベースの恒常的縮小
  - 企業との名寄せができれば、インパクトを詳細に分析できる（cf. アメリカ、欧州諸国）。
- サービス業
  - 国際化の実態不明（cf.イギリス）。

Figure Typical sequence in international production networking

Decision of international production networking

Establishment of a foreign affiliate

Reach full operation

Foreign

Preparation period for FDI
（typically 2-3 years)

Expanding operation
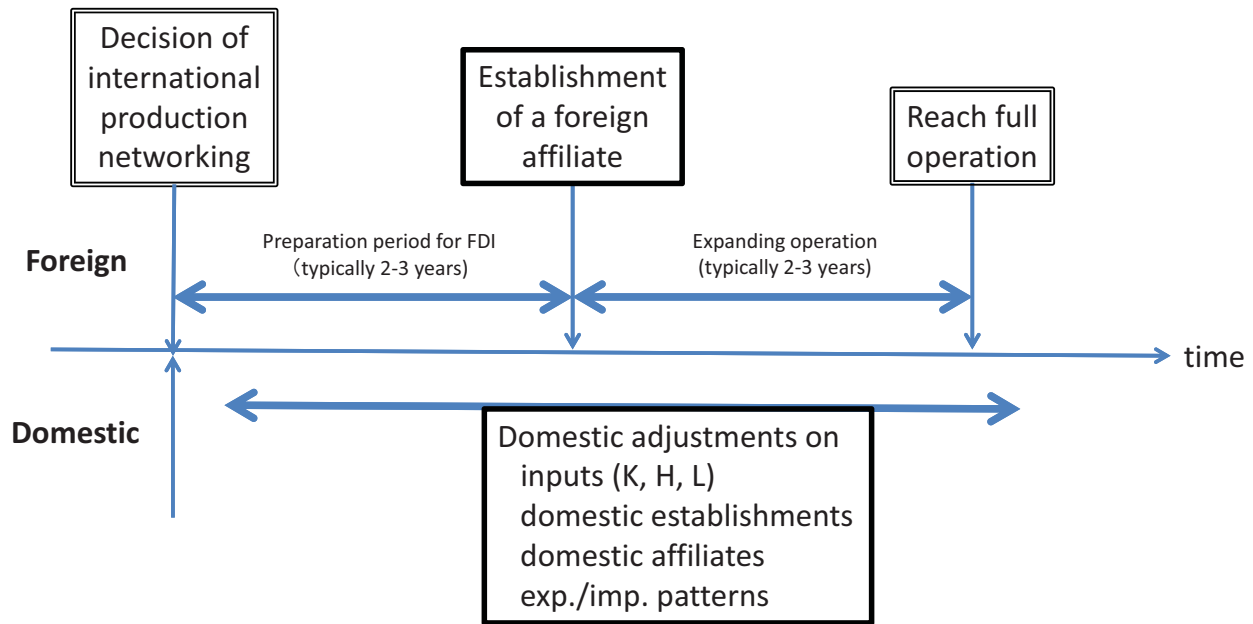(typically 2-3 years)

time

Domestic

Domestic adjustments on inputs (K, H, L)
domestic establishments
domestic affiliates
exp./imp. patterns

12/06/29

Source: Ando and Kimura (2012).

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Table 2 Globalizing patterns of firms in the normal periods and at the Global Financial Crisis

| The type of firms | Normal periods | | | | GFC | |
| | 1998-2002 | | 2002-2006 | | 2007-2009 | |
	# of firms	Share	# of firms	Share	# of firms	Share
(a) Manufacturing firms						
No entry in East Asia	8,619	80%	8,017	77%	8,937	77%
– (Domestic)	8,368	78%	7,807	75%	8,699	74%
Expansion in East Asia (i+ii)	1,003	9%	1,314	13%	675	6%
– (i) Expansion in East Asia	539	5%	773	7%	458	4%
– (ii) Expansion in East Asia (with 1st FDI in the region)	464	4%	541	5%	217	2%
Steady in East Asia	764	7%	822	8%	1,646	14%
Shrinkage in East Asia (i + ii)	326	3%	313	3%	422	4%
– (i) Shrinkage in East Asia	177	2%	156	1%	307	3%
– (ii) Shrinkage in East Asia (withdrawal from the region)	149	1%	157	2%	115	1%
Total	10,712	100%	10,466	100%	11,680	100%
(b) Manufacturing SMEs						
No entry in East Asia	7,007	89%	6,777	85%	7,509	85%
– (Domestic)	6,885	87%	6,657	84%	7,357	83%
Expansion in East Asia (i+ii)	420	5%	544	7%	270	3%
– (i) Expansion in East Asia	125	2%	208	3%	122	1%
– (ii) Expansion in East Asia (with 1st FDI in the region)	295	4%	336	4%	148	2%
Steady in East Asia	373	5%	489	6%	917	10%
Shrinkage in East Asia (i + ii)	109	1%	146	2%	174	2%
– (i) Shrinkage in East Asia	29	0%	50	1%	97	1%
– (ii) Shrinkage in East Asia (withdrawal from the region)	80	1%	96	1%	77	1%
Total	7,909	100%	7,956	100%	8,870	100%

Source: authors' calculation, based on METI database and Ando and Kimura (2011).

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Source: Ando and Kimura (2012).

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Table 3 Changes in domestic operations in the period 1998-2002 and 2002-2006 by the type of firms, based on the two-year-balanced panel data

| | 1998-2002 | | | 2002-2006 | | | 1998-2002 | | 2002-2006 | | 1998-2002 | | 2002-2006 | |
| | Domestic employment | | | | | | Domestic establishments | | | | Domestic affiliates | | | |
The type of firms	Share of firms increasing	Average growth rates at the firm level	Aggregate change	Share of firms increasing	Average growth rates at the firm level	Aggregate change	Share of firms increasing	Aggregate change	Share of firms increasing	Aggregate change	Share of firms increasing	Aggregate change	Share of firms increasing	Aggregate change
(a) Manufacturing firms														
No entry in East Asia	32%	-3.7%	-128,527	51%	5.2%	60,913	19%	393	20%	299	11%	-664	8%	-235
Expansion in East Asia (i+ii)	33%	-4.2%	-160,084	64%	12.6%	116,235	26%	-620	33%	108	27%	-240	28%	1,443
- (i) Expansion in East Asia	29%	-4.1%	-142,988	62%	10.1%	99,970	25%	-728	34%	73	29%	-685	32%	1,347
- (ii) Expansion in East Asia (with 1st FDI)	38%	0.2%	-17,096	67%	16.1%	16,265	28%	108	33%	35	26%	445	23%	96
Steady in East Asia	25%	-9.3%	-69,561	54%	4.5%	13,861	25%	-283	25%	-117	19%	-389	16%	-193
Shrinkage in East Asia (i + ii)	25%	-10.1%	-113,890	50%	1.4%	-40,715	27%	-145	23%	-159	19%	-1,499	16%	-513
- (i) Shrinkage in East Asia	23%	-10.2%	-104,182	48%	2.2%	-35,154	28%	-282	24%	7	23%	-1,392	16%	-369
- (ii) Shrinkage in East Asia (withdrawal)	29%	-9.7%	-9,708	52%	0.7%	-5,561	26%	137	23%	-152	15%	-107	16%	-144
Total	32%	-4.3%	-472,062	53%	6.0%	150,294	21%	-655	22%	131	13%	-2,792	12%	502
(b) Manufacturing SMEs														
No entry in East Asia	33%	-2.7%	-38,565	52%	6.0%	40,767	17%	103	19%	433	9%	-599	7%	-153
Expansion in East Asia (i+ii)	45%	2.1%	344	67%	16.9%	12,769	25%	97	26%	56	20%	35	19%	32
- (i) Expansion in East Asia	46%	0.5%	-92	63%	12.5%	4,461	22%	-21	27%	1	21%	-10	19%	5
- (ii) Expansion in East Asia (with 1st FDI)	44%	2.7%	436	70%	19.6%	8,308	27%	118	26%	55	20%	45	19%	27
Steady in East Asia	30%	-7.2%	-5,588	58%	5.8%	3,060	21%	-66	23%	-4	14%	-22	15%	-22
Shrinkage in East Asia (i + ii)	32%	-2.2%	-1,512	55%	5.2%	820	27%	-11	18%	-26	21%	9	10%	-53
- (i) Shrinkage in East Asia	28%	-10.9%	-665	56%	13.6%	899	41%	-21	18%	-9	34%	5	14%	-15
- (ii) Shrinkage in East Asia (withdrawal)	34%	-5.7%	-847	54%	0.9%	-79	23%	10	18%	-17	16%	4	7%	-38
Total	34%	-2.6%	-44,586	54%	6.7%	57,416	18%	123	20%	459	10%	-577	8%	-196

Source: authors' calculation, based on METI database and Ando and Kimura (2011).

Source: Ando and Kimura (2012).

Table 4 Changes in domestic operations in the period 2007-2009 by the type of firms, based on the two-year-balanced panel data

| | Dom. Employment | | | Dom. establishments | | Dom. affiliates | |
The type of firms	Share of firms increasing	Average growth rates at the firm level	Aggregate change	Share of firms increasing	Aggregate change	Share of firms increasing	Aggregate change
(a) Manufacturing firms							
No entry in East Asia	41%	-0.5%	-3,500	12%	-79	5%	-257
Expansion in East Asia (i+ii)	52%	2.8%	-9,579	24%	-218	23%	302
- (i) Expansion in East Asia	53%	2.5%	-10,996	24%	-263	22%	87
- (ii) Expansion in East Asia (with 1st FDI)	50%	3.3%	1,417	23%	45	23%	215
Steady in East Asia	43%	-1.4%	-1,773	16%	-169	9%	-410
Shrinkage in East Asia (i + ii)	40%	-3.9%	-5,576	19%	-535	13%	-521
- (i) Shrinkage in East Asia	42%	-2.9%	-2,487	20%	-491	14%	-548
- (ii) Shrinkage in East Asia (withdrawal)	33%	-6.5%	-3,089	16%	-44	8%	27
Total	42%	-0.6%	-20,428	14%	-1,001	7%	-886
(b) Manufacturing SMEs							
No entry in East Asia	39%	-0.7%	-8233	11%	-105	5%	-158
Expansion in East Asia (i+ii)	43%	1.3%	425	18%	18	16%	11
- (i) Expansion in East Asia	40%	-0.9%	-117	15%	-14	13%	-12
- (ii) Expansion in East Asia (with 1st FDI)	45%	3.0%	542	21%	32	18%	23
Steady in East Asia	38%	-2.1%	-3380	11%	-65	6%	-138
Shrinkage in East Asia (i + ii)	34%	-5.2%	-1762	13%	-32	11%	65
- (i) Shrinkage in East Asia	36%	-3.7%	-792	11%	-27	14%	-2
- (ii) Shrinkage in East Asia (withdrawal)	32%	-6.7%	-970	13%	-5	8%	67
Total	39%	-0.9%	-12,950	11%	-184	5%	-220

Source: authors' calculation, based on METI database.

Source: Ando and Kimura (2012).

Table 8 Production networking in East Asia and domestic operations for 1998-2002 and 2002-2006: manufacturing firms

Independent variables	(1) d. employment [logit]	(2) d. employment [OLS]	(3) d. establishment [logit]	(4) d. affiliates [logit]	(5) exports to E.Asia [OLS]	(6) imports from E.Asia [OLS]
a) Period: 1998-2002						
Constant	0.880 ***	0.199 ***	-2.932 ***	-3.925 ***	0.004	0.022 ***
	(0.215)	(0.029)	(0.238)	(0.272)	(0.004)	(0.009)
Expansion in East Asia (incl. 1st FDI)	0.344 ***	-0.043 ***	0.062	0.768 ***	0.021 ***	0.032 ***
	(0.087)	(0.012)	(0.096)	(0.101)	(0.002)	(0.004)
Steady in East Asia	-0.088	-0.015	0.125	0.527 ***	0.006 ***	0.028 ***
	(0.097)	(0.013)	(0.101)	(0.112)	(0.002)	(0.004)
Shrinkage in East Asia	0.034	0.005	0.047	0.120	-0.001	0.028 **
	(0.151)	(0.020)	(0.151)	(0.175)	(0.003)	(0.006)
Firm size	-0.359 ***	0.049 ***	0.247 ***	0.327 ***	0.000	-0.002 *
	(0.029)	(0.004)	(0.030)	(0.034)	(0.001)	(0.001)
Capital-labor ratio	0.117 ***	0.009 ***	0.092 ***	0.134 ***	0.000	-0.001
	(0.026)	(0.003)	(0.030)	(0.038)	(0.001)	(0.001)
Foreign sales ratio	0.080	-0.040	-0.238	-0.263	0.045 ***	0.039 ***
	(0.232)	(0.031)	(0.259)	(0.299)	(0.005)	(0.009)
In-house R&D ratio	2.339 **	0.272 *	2.626 **	2.104	0.049 *	-0.004
	(1.481)	(0.165)	(1.262)	(1.516)	(0.026)	(0.050)
Advertisement ratio	-0.221	0.227	2.294	4.887 ***	-0.047	-0.010
	(1.485)	(0.207)	(1.512)	(1.647)	(0.032)	(0.062)
Foreign capital ratio	0.000	0.000 **	0.000	-0.001 *	0.000 ***	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Log likelihood	-5398.5		-4438.3	-3275.1	0.051	0.025
Adj R2		0.0337				
Number of observations	8834	8834	8834	8834	8526	8154
b) Period: 2002-2006						
Constant	0.553 ***	0.117 ***	-2.612 ***	-4.795 ***	-0.002	0.034 ***
	(0.175)	(0.026)	(0.203)	(0.254)	(0.003)	(0.008)
Expansion in East Asia (incl. 1st FDI)	0.374 ***	0.066 ***	0.449 ***	0.932 ***	0.017 ***	0.037 ***
	(0.081)	(0.012)	(0.087)	(0.102)	(0.002)	(0.004)
Steady in East Asia	0.049	-0.004	0.153	0.526 ***	0.011 ***	0.011 ***
	(0.089)	(0.013)	(0.102)	(0.123)	(0.002)	(0.004)
Shrinkage in East Asia	0.096	-0.008	0.058	0.184	0.004	0.015 **
	(0.135)	(0.020)	(0.155)	(0.191)	(0.003)	(0.006)
Firm size	-0.208 ***	-0.029 ***	0.222 ***	0.393 ***	0.001	-0.007 ***
	(0.029)	(0.004)	(0.032)	(0.039)	(0.001)	(0.001)
Capital-labor ratio	0.074 ***	0.019 ***	0.025	0.283 ***	0.000	0.001
	(0.028)	(0.004)	(0.033)	(0.047)	(0.001)	(0.001)
Foreign sales ratio	0.137	-0.031	-0.693 **	-0.259	-0.054	-0.004
	(0.242)	(0.035)	(0.286)	(0.330)	(0.006)	(0.011)
In-house R&D ratio	2.845 **	0.635 ***	1.112	2.081	0.110	-0.014
	(1.262)	(0.183)	(1.394)	(1.658)	(0.032)	(0.060)
Advertisement ratio	-0.534	0.000	4.147 ***	4.163 **	-0.057	-0.016
	(1.479)	(0.221)	(1.553)	(1.733)	(0.040)	(0.070)
Foreign capital ratio	0.004	0.000	-0.004	-0.004	0.000	0.001 ***
	(0.002)	(0.000)	(0.003)	(0.004)	(0.000)	(0.000)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Log likelihood	-4857		-3874	-2549		
Adj R2		0.030			0.023	0.024
Number of observations	7281	7281	7281	7263	7003	6731

Data source: Authors' calculation, based on METI database.
Notes: see Table 6.

Source: Ando and Kimura (2012).

Table 6 Production networking in East Asia and domestic operations for 2007-2009: manufacturing firms

Independent variables	(1) d. employment [logit]	(2) d. employment [OLS]	(3) d. establishment [logit]	(4) d. affiliates [logit]	(5) exports to E.Asia [OLS]	(6) imports from E.Asia [OLS]
Constant	-1.301 ***	-0.096	-3.761 ***	-4.654 ***	0.000	-0.033
	(0.175)	(0.051)	(0.233)	(0.297)	(0.015)	(0.021)
Expansion in East Asia (incl. 1st FDI)	0.320 ***	0.041 ***	0.229 **	0.990 ***	0.014 ***	0.019 ***
	(0.090)	(0.010)	(0.110)	(0.120)	(0.003)	(0.005)
Firm size	0.127 ***	-0.001	0.374 ***	0.360 ***	0.002 ***	-0.004 ***
	(0.024)	(0.003)	(0.031)	(0.039)	(0.001)	(0.001)
Capital-labor ratio	0.119 ***	0.012 ***	0.008	0.260 ***	0.001	-0.002 *
	(0.022)	(0.002)	(0.030)	(0.046)	(0.001)	(0.001)
Foreign sales ratio	0.188	-0.069	0.124	-0.380	-0.038 ***	0.015 **
	(0.173)	(0.019)	(0.231)	(0.315)	(0.006)	(0.010)
In-house R&D ratio	1.135	-0.033	0.373	0.530	0.081 ***	0.109
	(0.900)	(0.097)	(1.142)	(1.539)	(0.030)	(0.051)
Advertisement ratio	0.092	-0.157	3.363 **	4.627 **	-0.047	0.041
	(1.439)	(0.159)	(1.652)	(2.034)	(0.048)	(0.083)
Foreign capital ratio	-0.002	0.000	0.000	0.003	0.000	0.000
	(0.002)	(0.000)	(0.003)	(0.003)	(0.000)	(0.000)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Log likelihood	-6280.6		-3823	-2437		
Adj R2		0.0211			0.0132	0.0052
Number of observations	9509	9509	9509	9509	9509	9436
Constant	-1.361 ***	-0.033 *	-3.782 ***	-4.698 ***	0.004	-0.024
	(0.178)	(0.051)	(0.237)	(0.302)	(0.015)	(0.021)
Expansion in East Asia (incl. 1st FDI)	0.264 ***	0.036 ***	0.231 **	1.172 ***	0.018 ***	0.025 ***
	(0.094)	(0.010)	(0.117)	(0.131)	(0.003)	(0.005)
Steady in East Asia	-0.013	-0.006	0.078	0.352 ***	0.008 ***	0.012 ***
	(0.063)	(0.007)	(0.086)	(0.112)	(0.002)	(0.004)
Shrinkage in East Asia	-0.263 **	-0.033 ***	-0.174	0.396 **	0.007 *	0.025 ***
	(0.116)	(0.013)	(0.154)	(0.181)	(0.004)	(0.007)
Firm size	0.140 ***	0.000	0.377 ***	0.317 ***	0.001 *	-0.006 ***
	(0.025)	(0.003)	(0.032)	(0.041)	(0.001)	(0.001)
Capital-labor ratio	0.122 ***	0.012 ***	0.010	0.250 ***	0.000	-0.003 **
	(0.022)	(0.002)	(0.031)	(0.046)	(0.001)	(0.001)
Foreign sales ratio	0.242	-0.001	0.128	-0.571 *	-0.043 ***	0.005
	(0.178)	(0.020)	(0.237)	(0.323)	(0.006)	(0.010)
In-house R&D ratio	1.193	-0.024	0.360	0.337	0.076 ***	0.090 *
	(0.904)	(0.097)	(1.138)	(1.542)	(0.030)	(0.051)
Advertisement ratio	1.061	-0.149	3.411 **	4.491 **	-0.049	0.035
	(1.440)	(0.159)	(1.651)	(2.050)	(0.048)	(0.083)
Foreign capital ratio	-(0.002)	0.000	0.000	0.004	0.000	0.000
	(0.002)	(0.000)	(0.003)	(0.003)	(0.000)	(0.000)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Log likelihood	-6278		-3821.6	-2431.2		
Adj R2		0.0216			0.0145	0.0071
Number of observations	9509	9509	9509	9509	9509	9436

Data source: Authors' calculation, based on METI database.
Notes: figures in parenthesis are standard deviation. *** indicates that the results are statistically significant at the 1 percent level, ** at the 5 percent level, and * at the 10 percent level. Regressions are as follows:
(1) dependent variable: 1 if a firm increases in the number of domestic employments and 0 otherwise
(2) dependent variable: growth rate of the number of domestic employment
(3) dependent variable: 1 if a firm increases reduce the number of domestic establishments and 0 otherwise
(4) dependent variable: 1 if a firm increases the number of domestic affiliates and 0 otherwise
(5) dependent variable: a change in the ratio of exports to East Asia in total sales
(6) dependent variable: a change in the ratio of imports from East Asia in total purchases

Source: Ando and Kimura (2012).

Table 10 Production networking in East Asia and domestic operations for 2007-2009: manufacturing firms

(excerpted, coefficients for dummies of globalizing patterns only)

Independent variables	Dependent variable			
	(1) HQ serivces: absolute size [logit]	(2) HQ serivces: relative size [OLS]	(3) Mfg activities absolute size [logit]	(4) Mfg activities relative size [OLS]
1998-2002				
Expansion in East Asia	0.230 ***	-0.004	0.230 ***	-0.008
Steady in East Asia	0.093	0.006	-0.118	-0.014 **
Shrinkage in East Asia	-0.093	-0.006	0.054	-0.006
2002-2006				
Expansion in East Asia	0.334 ***	0.000	0.220 ***	-0.014 **
Steady in East Asia	0.001	-0.004	-0.014	-0.003
Shrinkage in East Asia	-0.110	-0.003	-0.065	0.004
2007-2009				
Expansion in East Asia	0.174 *	0.006 *	0.002	-0.014 *
Steady in East Asia	-0.004	-0.004 **	0.017	-0.002
Shrinkage in East Asia	0.027	0.008 **	-0.313 ***	-0.014

Data source: Authors' calculation, based on METI database.

Notes: figures in parenthesis are standard deviation. *** indicates that the results are statistically significant at the 1 percent level, ** at the 5 percent level, and * at the 10 percent level. Regressions are as follows:

(1) dependent variable: 1 if a firm increases in the number of domestic employment engaged in the sector of HQ serivces and 0 otherwise

(2) dependent variable: a change in the ratio of employment engaged in the sector of HQ services in total employment.

(3) dependent variable: 1 if a firm increases in the number of domestic employment engaged in manufacturing activities and 0 otherwise.
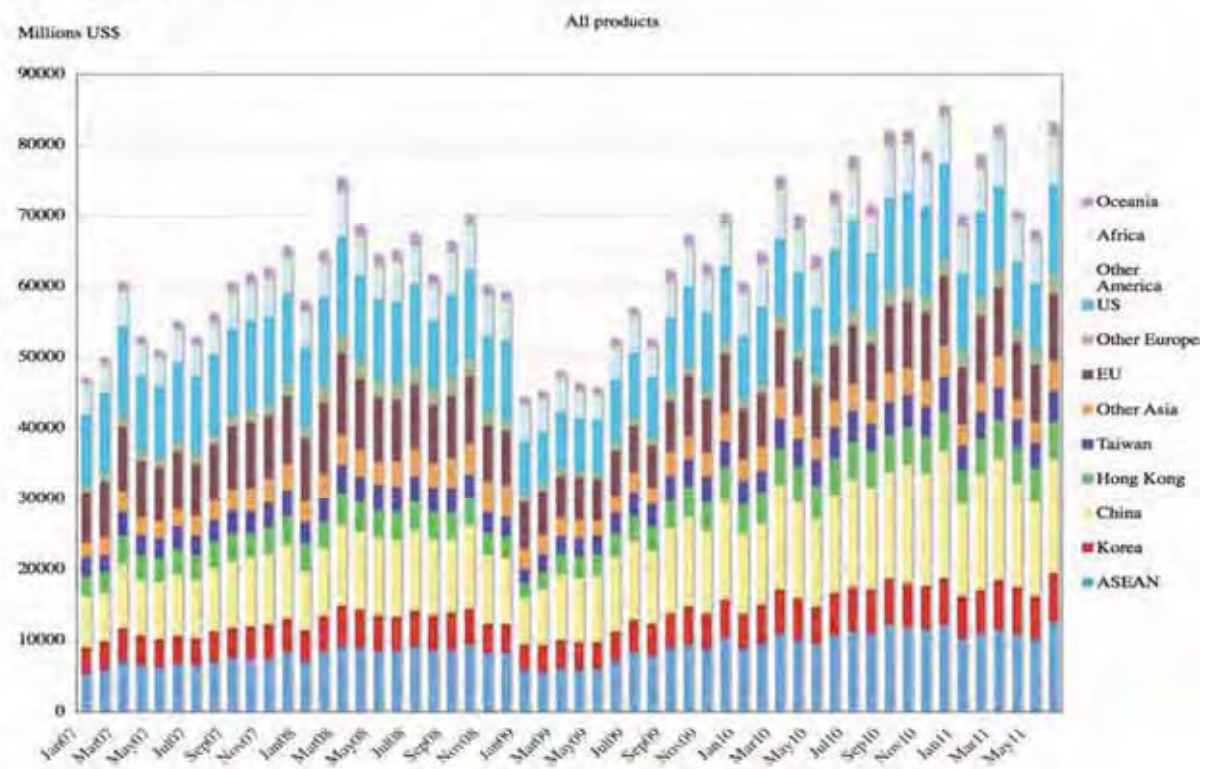
12/06/29

Source: Ando and Kimura (2012).

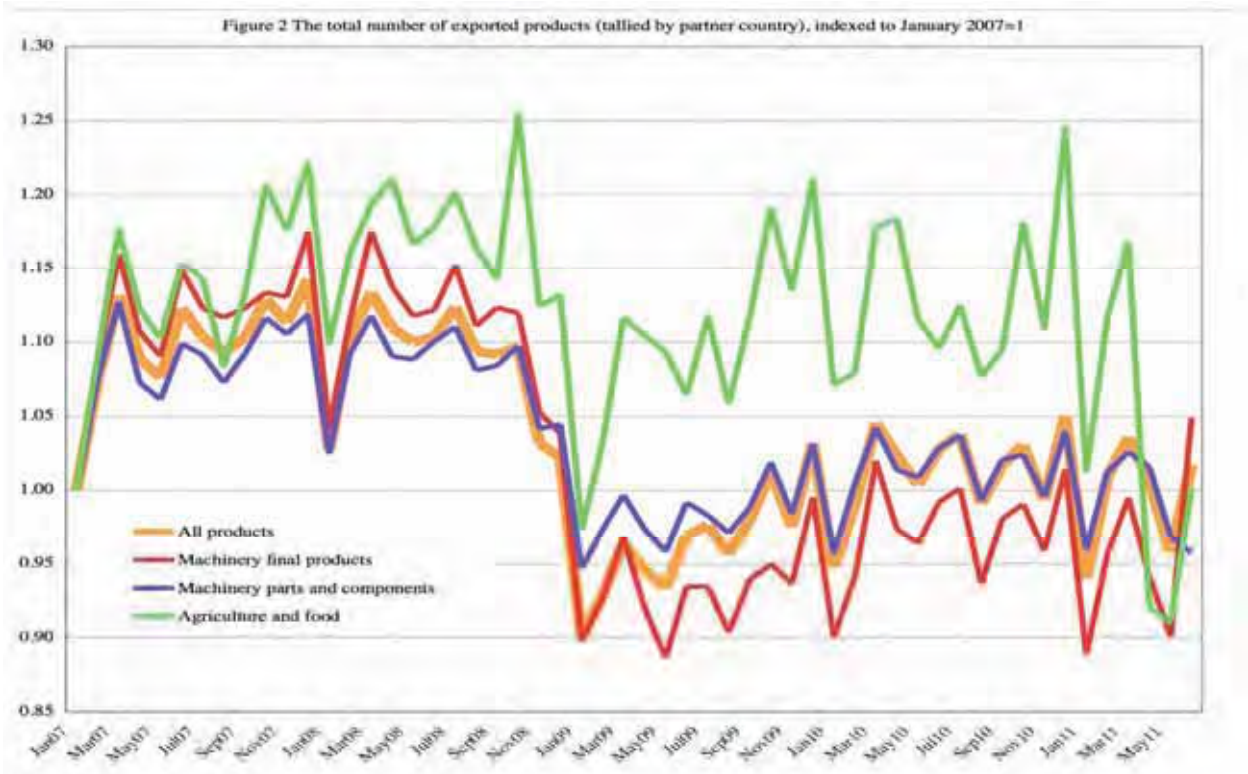日本の月次輸出額（輸出物価指数で実質化、USドルベース）

Figure 1 Japanese exports by region

12/06/29

出所：Ando and Kimura (2011b).

日本の月次輸出のextensive margin（輸出品目数x輸出先国数）

Figure 2 The total number of exported products (tallied by partner country), indexed to January 2007=1

Data: authors' calculation.

12/06/29

出所：Ando and Kimura (2011b).

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3. Decomposition Analysis: GFC (cont'd)

- Recovery: symmetric to "fall"
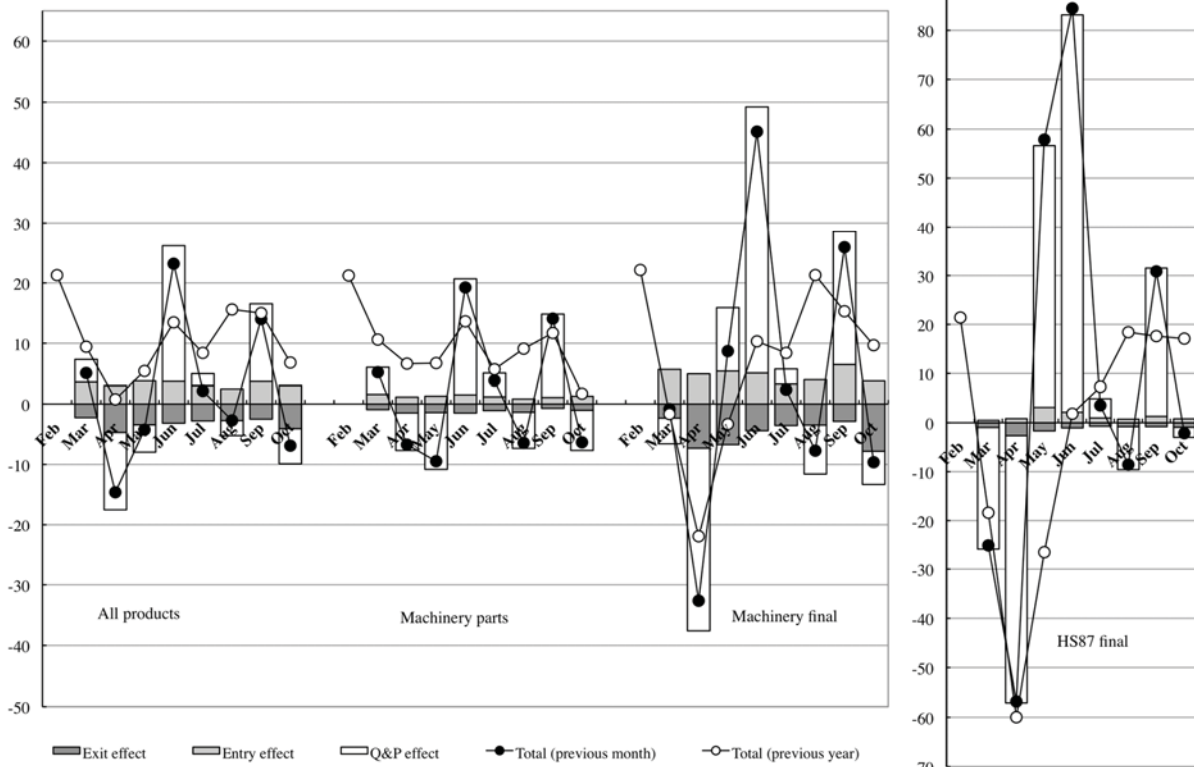
<Fall>

<Recovery>
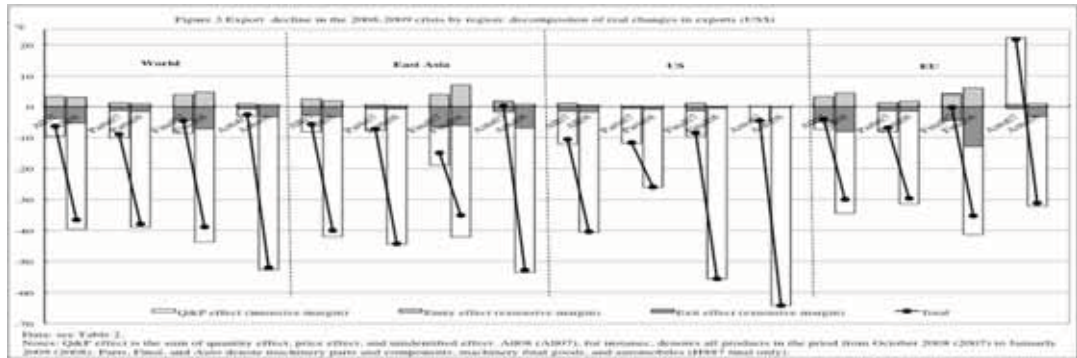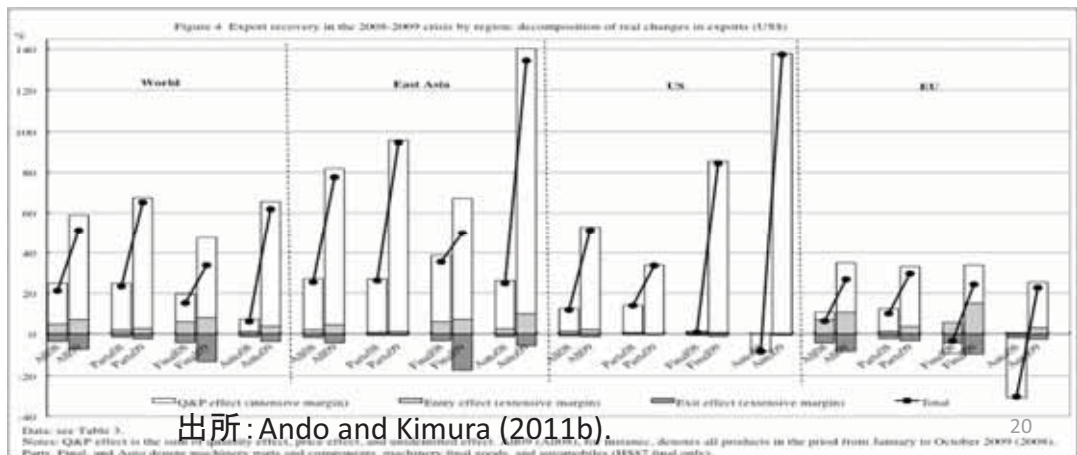
12/06/29

出所：Ando and Kimura (2011b).

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Figure 6 Decomposition of export changes in the 2011 earthquake disaster (US$)

%

All products   Machinery parts   Machinery final

% HS87 final

Legend: ■ Exit effect | ■ Entry effect | □ Q&P effect | ●— Total (previous month) | ○— Total (previous year)

Data: see Table 6.
Note: Q&P effect is the sum of quantity effect, price effect, and unidentified effect.

出所 : Ando and Kimura (2011b).

Table 4 Logit estimation: Japan's machinery exports at GFC
(Excerpt)

	Machinery EX		Machinery EX (except HS87)	
	Fall	Recovery	Fall	Recovery
Distance (log)	-0.05	0.10 *	-0.02	0.09
Parts	-0.51 ***	0.28 ***	-0.59 ***	0.33 ***
Korea	-1.37 ***	1.38 ***	-1.52 ***	1.51 ***
China	-1.74 ***	1.20 ***	-1.95 ***	1.43 ***
Taiwan	-1.31 ***	1.05 ***	-1.44 ***	1.13 ***
Hong Kong	-1.35 ***	0.91 ***	-1.39 ***	0.97 ***
Viet Nam	-0.96 ***	1.38 ***	-1.10 ***	1.42 ***
Thailand	-1.53 ***	1.11 ***	-1.67 ***	1.21 ***
Singapore	-1.39 ***	0.68 ***	-1.55 ***	0.77 ***
Malaysia	-0.91 ***	0.92 ***	-1.02 ***	1.00 ***
Brunei	0.88 ***	-0.75 **	1.18 ***	-1.57 ***
Philippines	-0.99 ***	1.03 ***	-1.07 ***	0.99 ***
Indonesia	-0.91 ***	0.86 ***	-1.06 ***	0.92 ***
Cambodia	0.76 ***	0.30	0.57 ***	0.00
Laos	0.53 *	-1.05 **	2.29 ***	-1.35 *
Myanmar	0.35 **	0.12	0.54 ***	-0.03
US	-1.99 ***	0.37 **	-2.22 ***	0.54 ***
EU	-0.53 ***	0.07 *	-0.63 ***	0.12 ***
Constant	0.93 ***	-2.09 ***	0.82 **	-2.15 ***
Log likelihood	-29744	-11949	-25209	-10302
Sample	45979	20507	39546	17930

Table 7 Logit estimation : Japan's machinery exports at EJE
(Excerpt)

	Machinery EX		Machinery EX (except HS87)	
	Fall	Recovery	Fall	Recovery
Distance (log)	-0.14 ***	0.11 **	-0.08 **	0.13 **
Parts	-0.47 ***	0.06 *	-0.53 ***	0.13 ***
Korea	-1.88 ***	0.96 ***	-1.91 ***	1.05 ***
China	-2.11 ***	0.89 ***	-2.18 ***	0.98 ***
Taiwan	-1.69 ***	0.95 ***	-1.76 ***	1.18 ***
Hong Kong	-1.58 ***	0.74 ***	-1.63 ***	0.89 ***
Viet Nam	-1.30 ***	0.87 ***	-1.37 ***	1.04 ***
Thailand	-1.76 ***	0.79 ***	-1.90 ***	0.81 ***
Singapore	-1.39 ***	0.77 ***	-1.48 ***	0.84 ***
Malaysia	-1.18 ***	0.77 ***	-1.21 ***	0.83 ***
Brunei	1.02 ***	-0.38	2.07 ***	-0.49
Philippines	-1.18 ***	0.33 **	-1.18 ***	0.47 **
Indonesia	-1.15 ***	0.83 ***	-1.24 ***	0.99 ***
Cambodia	0.43 ***	0.12	0.53 ***	0.23
Laos	0.67 *	-1.79 **	1.28 ***	-2.11 **
Myanmar	0.06	-0.03	0.25	-0.05
US	-1.78 ***	0.52 ***	-1.94 ***	0.58 ***
EU	-0.50 ***	0.14 **	-0.57 ***	0.19 ***
Constant	1.53 ***	-2.06 ***	1.14 ***	-2.35 ***
	(4.48)	(-3.89)	(3.01)	(-4.04)
Log likelihood	-26132	-9749	-22388	-8507
Sample	41827	16221	36156	14317

出所 : Ando and Kimura (2011b).

3．国際収支統計と企業国籍

- SNAおよび国際収支統計、居住者概念による純化、所得の帰属に焦点。
- 国際産業連関表、生産の立地に焦点（生産ネットワークについて多くの実証研究あり）。
- 一方、生産は企業によって担われ、その活動は一国の居住者を超えて展開される。
- 企業を1つの経済主体と考え、企業特殊資産（技術、経営ノウハウ、市場アクセスなど）の存在を重視するのであれば、別途、企業国籍ベースの統計体系も構築すべき（Baldwin and Kimura (1998)）。特に東アジアにおいて重要。
- そのためには、FATSに対応する統計を全産業について収集する必要あり（海事の充実？）。

4．結語

- 経済のグローバル化、とりわけ「第2のアンバンドリング」は、企業活動の把握が鍵。
  - 事業所・企業ベースのマイクロ／パネルデータ
    - 労働関連統計とのリンク
    - 国際貿易統計の企業単位への還元
  - 企業国籍に基づく統計の構築
    - 居住者、立地、企業国籍
- 政策研究、極めて重要。
  - 日本に何を残せるか。空洞化？

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