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Looking Inside the Magic 8 Ball: An Analysis of Sales Forecasts using Italian Firm-Level Data

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Abstract

This paper explores firm forecasting strategies. Using Italian data, we focus on two aspects of the forecasting process: how firms forecast sales and how accurate their predictions are. We relate both outcomes to current conditions, firm experience, global factors, and other firm characteristics. We find that current conditions tend to explain most of the variability in the sales forecast. While past projection errors tend to account for cross-firm differences in models of expectation formation, they are a key explanatory variable in models of forecast accuracy. Among other controls, firm size, experience, and global conditions–through the effect of price changes that the firm anticipates–shape firm expectations and influence the projection errors. Our findings suggest that models of sales expectations should take firm characteristics and market heterogeneity into account.

Key words: Exporting, Sales Forecasting, Forecast Accuracy.

JEL classification: F14

1 Introduction

Sales forecasts are a crucial tool for business planning, marketing, and general decisionmaking, as more accurate forecasts improve firm performance. Understanding how firms predict sales is also a premise for empirical research, where estimating the parameters associated with various firm's

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problems depends on the firm sales forecast. A firm's decision to export, for example, depends on its profit expectation in foreign markets; similarly, developing new products requires projecting future demand. While many contributions assume that firm's sales expectations depend on some set of observables, the exact functional dependence influences the estimate of structural parameters. In particular, Dickstein and Morales [2015] show that the sensitivity of export flows to transport costs is heavily dependent on how the researcher specifies the firm's foreign profit expectation.[1] The authors propose a strategy to recover bounds for the fixed costs of exporting. This methodology has the advantage of requiring only partial knowledge on the conditioning set of information; the bounds, however, remain conditional on a subset of variables that firms employ to predict export revenues–specifically, the authors assume that each firm knows only the aggregate exports from Chile to each destination market in the previous year, the distance to each market, and the firm's own productivity in the previous year.[2]

Further progress on firm information sets may be achieved by directly analyzing data on expectations. We draw on a novel dataset, the Survey of Industrial and Service Firms (INVIND), which collects data on expectations for domestic and foreign sales, to explore firm forecasting strategies. In particular, we focus on two aspects of the forecasting process: how firms forecast sales and how accurate their predictions are. Our models relate firm expectations and forecast errors to four indicators: current conditions, firm's experience, global factors, and other firm characteristics. We analyze sales predictions by destination market, distinguishing between domestic and foreign markets. We find that current conditions tend to explain most of the variability in the domestic and foreign sales forecast; in particular, current sales explain around 75 percent of the within-firm forecast variability. If we take also the cross-sectional variation into account, the R^2 of a regression that includes only current sales increases to more than 95 percent. While past projection errors tend to account for cross-firm differences in models of expectation formation, they are a key explanatory variable in models of forecast accuracy.

Among other controls, firm size, experience, and global conditions–through the effect of price changes that the firm anticipates–shape firm expectations and influence the projection errors, with

[1] This problem is common to all settings in which agents' decisions depend on their expectations. Manski [1993], Manski [2004], and Cunha and Heckman [2007] highlight the influence of specifying agents' expectation when evaluating returns to schooling.

[2] Dickstein and Morales [2015] propose a test to analyze the content of potential exporters' information sets. The procedure, however, can become cumbersome as each additional variable included in the set would require a new implementation of the test.

magnitudes varying across markets.

Our paper belongs to the literature on sales forecast, recently reviewed by Winklhofer et al. [1996]. Earlier contributions focused on the forecast accuracy and collected cross-sectional survey data on firm-level projection errors. Our paper relies on a novel data source that directly records data on expectations and offers cross-sectional and panel variation. A similar data source exists for Japanese firms, but it has never, to the best of our knowledge, been used to analyze firm forecasting strategies.[3]

Our paper provides an empirical microfoundation to sales expectations models. While the literature has mostly adopted either *perfect foresight* or *limited information* models of expectation formation, with the latter assuming that firms use only specific observables to predict sales, our results point to the empirical importance of current sales, firm characteristics, and prices as factors affecting the forecast.[4] Moreover, our models stress the interplay between market characteristics and expectations.

The rest of the paper is organized as follows. Section 2 describes the data and presents some preliminary evidence. Section 3 develops an empirical model of sales forecast. Section 4 identifies the variables that influence the accuracy of the forecast. Section 5 concludes.

2 Data and Descriptive Analysis

The empirical analysis draws upon the Survey of Industrial and Service Firms (INVIND), a representative panel of Italian firms with at least 20 employees.[5] The data are collected by the Bank of Italy, through its regional branches; this collection method ensures a high response rate – 77 percent, on average – and a rigorous control on reported answers.

The survey collects data on standard balance sheet items (wage bill, employment, sales, investments, etc.) and on one-year-ahead expectations of domestic and foreign sales. In each year, firms

[3]The Basic Survey of Overseas Business Activity collects data on sales and investment expectations for Japanese parents and their foreign affiliates; see, for example, Chen et al. [2016]. Qualitative information on firm current business conditions and expectations are available through the IFO Business Climate Survey for Germany and the Philly Fed's Business Outlook Survey for the United States; see, for example, Bachmann et al. [2013].

[4]Our findings are consistent with other papers in the trade literature. The importance of experience is, for example, stressed by Albornoz et al. [2012], who develop a model of experimentation in which exporters learn from previous experience. Moreover, Dickstein and Morales [2015] cannot reject the hypothesis that exporters know at least distance, their own lagged domestic sales, and lagged aggregate exports when making their export decisions.

[5]Banca d'Italia, Indagine sulle Imprese Industriali e dei Servizi, 1995-2012. Until 2000, the survey was restricted to firms with a minimum of 50 employees. A brief description is included in Tito [2015].

are asked to report their sales expectations for domestic and foreign markets. Export data are available as aggregates across all foreign markets in which a firm operates; the only exception is the 2008 survey, which records a breakdown of firm foreign sales and expected shipments by region (European Union, North America, China, and Rest of the World).[6]

Our analysis focuses on manufacturing firms with at least 50 employees; moreover, as data on expectations are available only since 1995, our sample covers 1995-2015 and includes 24,500 observations (here an observation is a firm-year combination) from the initial 67,417 records.

Figures 1 and 2 offer a preliminary view on the data on expectations, comparing sales projections to current shipments. Expected sales mirror the path of current sales, hinting to a random-walk behavior: Firms, on average, expect their future revenues to be roughly in line with the realized sales. The wedge between current and expected sales is larger on the domestic market (figure 1) where factors influencing demand other than those embedded in current shipments are likely easier to identify. Conversely, the hurdle of acquiring knowledge on market conditions abroad may induce firms to closely shape the path of expected sales on that of current shipments (figure 2). Sales expectations inherit the properties of current sales, with foreign shipments representing around 40 percent of total shipments and displaying larger variability, as shown in table A1.[7]

Tables 1 and 2 highlight cross-sectional differences. We construct the growth rates of domestic and foreign sales and compare current rates to the forecast; the results are shown for 2005. While firm expectations tend to be, on average, in line with future growth, the projections appear more concentrated in foreign markets. Firm assign a negligible probability to export growth less than -10 percent or higher than +20 percent; the interval is wider for the domestic market. As for the time-series evidence, this difference may reflect the larger information costs firms face abroad.

Finally, figure 3 and 4 look at the forecast in revision space. Firms tend to consistently over-predict their sales; the forecast error, the difference between realized and expected sales in any given year, implies that firms do not fully know their future revenues when making a decision on their operations. Excluding 2001, when the introduction of the euro currency promoted conditions favorable to entry in European markets, the revisions are, on average, larger for the domestic market forecast. This result is not surprising for two reasons. First, trade policy and foreign regulations likely contributed to tapering down sales fluctuations in foreign markets, improving the accuracy of

[6]Data on current shipments (but not on expectations) by region are also available in the 2006 survey.

[7]While the share of foreign sales out of total shipments is on the upper bound of the values reported by the trade literature, our dataset does not include firms with fewer than 50 employees.

firm export forecasts. Second, selling to different markets could work as a diversification strategy: projection errors would compensate if fluctuations in demand were negatively correlated across markets.

3 Forecasting Sales: Domestic vs. Foreign Markets

How do firms forecast sales? Figures 1-2 flag current sales as an important predictor to firm forecasts. The discrepancy between expected and current values, however, suggests that other factors may influence the projection. We propose a baseline model that relates expected sales to current shipments and past forecast errors,

$$\ln E_t \left[\text{Sales}_{i,t+1}\right] = \beta_0 + \beta_1 \cdot \ln \text{Sales}_{it} + \beta_2 \cdot \text{Forecast Error}_{it} + D_{st} + \varepsilon_{it} \tag{1}$$

where $\ln E_t \left[\text{Sales}_{t+1}\right]_{it}$ denotes the $t+1$ value of sales expected by firm i at time t, $\ln \text{Sales}_{it}$ represent current shipments, and $\text{Forecast Error}_{it}$ captures the projection error, defined as the difference between current sales and past projections (in log-s).[8] Our baseline model focuses on β_1 and β_2. β_1 identifies all factors that influence the projection through changes in sales; as $\ln \text{Sales}_{it}$ is a sufficient statistics for firm productivity, β_1 captures also the effect of productivity shocks on the forecast. The forecast error introduces a mean-reverting component to the process of expectation formation; we expect $\beta_2 > 0$ as firms would boost their projections if realized sales were above expectations and viceversa.

We estimate model (1) separately by market; although our approach does not allow us to directly compare the magnitude of the marginal effects and their implications on the projection, our interest mainly lies in highlighting the qualitative differences between the domestic and foreign market forecasts. In our sample, we set (log) foreign shipments to zero for firms operating only on the domestic market, while we exclude firms that report zero sales in the home market. More precisely, we define expected foreign sales as $\ln\left(1 + E_t\left[\text{Exports}_{t+1}\right]_{it}\right)$ and foreign sales as $\ln\left(1 + \text{Exports}_{it}\right)$ to exploit the variation in sales due to entry in a foreign market. Instead, we define expected

[8] In our model, we specify the forecast error as a simple difference, as both the size and the sign of the forecast error matter for the expectation formation in our empirical findings. In unreported results, the absolute deviation of the realized sales from the expectations does not significantly affect the projection.

domestic sales as $\ln E_t \left[\text{Dom. Sales}_{t+1}\right]_{it}$ and domestic sales as $\ln \text{Dom. Sales}_{it}$.[9]

In addition to current sales and projection errors, our decomposition explores the role of four potential predictors: experience, current conditions in other markets, past sales, and firm characteristics. Following the literature on forecasting, we include the share of sales in the market and firm age to capture learning about market conditions.[10] Our model tests whether firms extract signals on future sales from conditions in other markets or from past sales by adding, for example, price changes experienced by the firm across all markets, foreign shipments, and past sales to our list of variables in the home market regression. We include total employment to control for factors varying at the firm level and affecting the forecast – for example, cross-firm differences in the forecast budget.[11] In some specifications, we add firm fixed effects to absorb all time-invariant firm characteristics that influence the projection.

Finally, we absorb sector-specific revenue shifters by using sector-time dummies.

Results

This section analyzes the estimates of model (1) by market. Tables 3 and 4 report the OLS regression results; table 3 presents the estimates for the domestic market, while table 4 focuses on foreign markets.

The results reveal key similarities across markets. Current sales are the most important predictor of domestic and foreign sales expectations; in each case, they account for more than 95 percent of the overall forecast variability. The coefficient on $\ln \text{Sales}_{it}$ suggests that larger sales in the current period induce the firm to improve the near-term outlook at home and abroad. Looking at magnitudes, a one-standard-deviation increase in sales, which correspond to an increase in domestic sales by 5,000 euro and in foreign sales by 55,000 euro, is associated with a one-standard-deviation upward revision to the domestic and foreign market forecast.[12]

In both models, the effect of sales extends beyond that of current shipments: our estimates imply that firms tend to soften their expectations if current results exceed past projections. Similarly, we find a negative correlation between sales at $t-1$ and expectations for $t+1$.

[9] By construction, all firms in our sample operate on the domestic market but not necessarily on the foreign market.

[10] See, for example, Cavusgil [1984] and Diamantopoulos and Winklhofer [1999].

[11] Recent studies conclude that the accuracy of forecast is influenced by firm size. See, for example, Dalrymple [1987].

[12] See Table A1 for the summary statistics of the main variables of interest.

The impact of other components varies by market. The domestic market forecast is significantly influenced by experience and firm characteristics. Among proxies of experience, the negative and significant effect of *Age* indicates that older firms tend to be more conservative in their projections; less robust implications, instead, are associated with the coefficient of *Dom. Share*, which becomes positive in the last two columns, after introducing indicators of past outcomes. Firm characteristics are positively correlated with expectations, implying that bigger firms are more optimistic about the projection.

Moving to foreign market estimates (table 4), we find that firms take signal from errors to the domestic forecast: as with errors on foreign projections, revisions to the domestic forecasts are negatively associated with expectations of foreign sales. The significant effect of domestic sales, through its deviation from expectations, is consistent with the findings in Dickstein and Morales [2015], which fail to reject the inclusion of past domestic sales in the information set of potential exporters when deciding whether to start selling their products abroad.

Tables 5 and 6 isolate the contribution of the within-firm variation. The introduction of firm fixed effects reduces the similarities between the domestic and foreign market specifications. Current sales remain the main predictor of the firm forecast; however, it explains a smaller share of the variation in projections if compared with the results in tables 3 and 4–namely, around 75 percent in FE regressions vs. more than 95 percent in the OLS regressions. Reassessing magnitudes, increasing current sales by one standard deviation (sd) raises the domestic market projection by 75 percent of a sd and the foreign market projection by 80 percent of a sd. Thus, removing idiosyncratic cross-firm differences weakens the effect of current sales on the forecast.

Other similarities are limited to the role played by past sales, firm size, and experience. In tables 5 and 6, differently from the OLS results, past sales are positively and significantly correlated with the projections. Employment shows a similar positive correlation, with bigger firms predicting significantly larger gains in future sales at home and abroad. While proxies of experience share similar signs in tables 5 and 6, they significantly influence only the domestic sales forecast through the effect of Dom. Share, which preserves a positive coefficient.

Controlling for cross-firm differences alters the effect of forecast errors from the OLS results. While projection errors tend to lose significance in the domestic market specification when adding all controls, they are positively correlated with foreign market expectations in the last two columns

of table 6; this result, however, is not robust across specifications.

Global conditions offer other points of contrast across markets. First, while domestic conditions significantly contribute to modulating expectations of foreign shipments, outcomes in the export market do not significantly affect the domestic outlook; this difference may be related to the higher cost of acquiring information on foreign consumers. Second, higher prices are viewed as a signal of larger revenues at home, but of lower revenues abroad; this result supports empirical findings of higher elasticity of demand for foreign goods.

3.1 Forecasting Export Sales by Market

The heterogeneity across foreign markets complicates the forecast of export sales and the interpretation of our results.[13] Exploiting the 2008 survey, which separately records current and expected shipments to the European Union, North America, and China, we estimate models of sales forecast for each region. To control for the endogenous selection into a particular market, we restrict our sample to the set of firms that export to all three regions: This constraint substantially reduces the number of firms in our sample to 885.

Results are shown in tables 7-9. In all three markets, current sales remain the best predictor of future shipments. For North America, however, even after controlling for country-specific sector-year revenue shifters, other factors also exercise a significant influence on the forecast. Global conditions achieve diverging effects on the near-term sales outlook. On the one hand, overall projection errors raise future sales expectations. On the other hand, changes in prices are negatively related to the sales forecast: Higher prices abroad translate into lower revenues, due to the higher elasticity of demand relative to the domestic market. Cross-firm differences in employment also affect the projection, with bigger firms lowering their North American sales forecast.

Our identification is based on cross-firm variation within sector-year cells. The exclusive availability of 2008 data threatens the general validity of the model because of special factors related to the Great Recession. Including controls for the severity of the crisis does not change our results (final column in tables 7-9); however, we cannot exclude the influence of other factors.

[13] See Anderson [1960] for a discussion of the problems specific to the export sales forecast.

4 Revisions to Forecast

We examine the sales forecast error using a model that relates the difference between expected and realized values to past errors and past sales,

$$\text{Fore. Error}_{it} = \gamma_0 + \gamma_1 \cdot \text{Fore. Error}_{i,t-1} + \gamma_2 \cdot \ln \text{Sales}_{i,t-1} + \alpha_i + D_{st} + \eta_{it} \tag{2}$$

where $\text{Fore. Error}_{it} = \ln \text{Sales}_{it} - \ln E_{t-1}[\text{Sales}_{it}]$ denotes the discrepancy between current sales and firm i forecast for time t. γ_1 is our coefficient of interest; we expect $\gamma_1 < 0$ as firms adjust their forecast in response to past errors. We introduced past sales to absorb productivity shocks and the effect of market conditions.

Among other controls, we consider the role of four factors: experience, global conditions, firm characteristics, and other forecast errors. As in the previous section, we proxy experience using the share of sales in the market and firm age; here, we also introduce the number of years a firm has been exporting to directly identify firm experience in foreign markets. A second set of indicators captures the role of global market conditions and includes past sales in other markets, past projection errors, and price changes. The influence of firm characteristics is outlined by employment. A last group of regressors includes the errors in the forecast of other key variables–namely, employment and prices–which we expect to propagate through the sales projection.

Finally, firm fixed effect and sector-time dummies extract time-invariant firm characteristics and sector-time-specific shocks.

Results

Tables 10 and 11 present the estimates of model (2) for the domestic and foreign markets, respectively. Similarities between the two models are limited to the role of forecast errors and past sales. As expected, past errors are negatively correlated with revisions to current projections, suggesting that firms tend to improve their forecasts by learning from previous errors. Comparing these estimates with the results in tables A2 and A3, where the forecast error is defined as the absolute deviation between realized sales and the projection, we document that both the size and the sign of the error matter in the domestic market, while the absolute deviation of the outcome from the projection outweighs the effect of positive vs. negative deviations in foreign markets. Using the coefficient from

column (6) in tables 10 and 11, we find that a 1-percent increase in past projection errors implies a 0.22-percent lower revision to the current forecast in the domestic and foreign markets.

Similarly to past errors, past sales are negatively correlated with projection errors; looking at the effect of past shipments, one-standard-deviation higher sales are associated with 21 percent of a sd lower forecast miss in the domestic market and with 90 percent of a sd lower error in foreign markets. The negative correlation between sales and the forecast error might capture a productivity advantage of large firms over small firms; a similar advantage across potential exporters is documented by Dickstein and Morales [2015].

Table 10 shows that most other correlates do not significantly affect the projection errors in the domestic market; only errors to the forecast of other key variables significantly contribute to explaining the discrepancy between sales and the projection: errors in predicting employment and future price changes tend to propagate, magnifying the difference between current and expected sales.

The results for foreign markets are more articulated (table 11). In particular, our proxies of experience continue to carry diverging signals. While age and the number of years a firm has operated abroad are negatively related to the size of the projection error, firms tend to make bigger errors in forecasting foreign shipments the larger the export share of sales.

The global contour is among the factors inversely related to the forecast accuracy: Larger sales in the home market and larger price changes are positively correlated with revisions to the forecast, suggesting that firms do not fully incorporate changes to the near-term outlook into sales expectations. Finally, as for the domestic market, errors to employment feed into the foreign sales forecast, magnifying the magnitude of the errors.

5 Conclusions

This paper explores firm forecasting strategies. Exploiting a novel dataset on Italian manufacturing, we analyze how firms formulate their forecast and the accuracy of their predictions. Looking both across firms and over time, we find that current sales tend to explain a large share of the variability of the forecast. The foreign market forecast also benefits from the knowledge of domestic market conditions, consistent with the findings of Dickstein and Morales [2015], which fail to reject that

potential exporters know their own domestic sales in the previous year. In our analysis, we control for aggregate exports to each markets and the distance to each destination, other variables that Dickstein and Morales [2015] cannot reject from the information set of potential exporters, by adding sector-time dummies and firm fixed effects to our models. Moreover, our results point to the effect of experience and market-specific characteristics in shaping the projection. In terms of accuracy, we document that larger firms have an advantage over smaller firms in correctly predicting sales. Among other factors, while past errors are the only predictor that improves the home-market projection, experience and global condition also play a role in the foreign market specification. Taking into account those additional factors is key to obtaining more precise estimates of structural parameters.

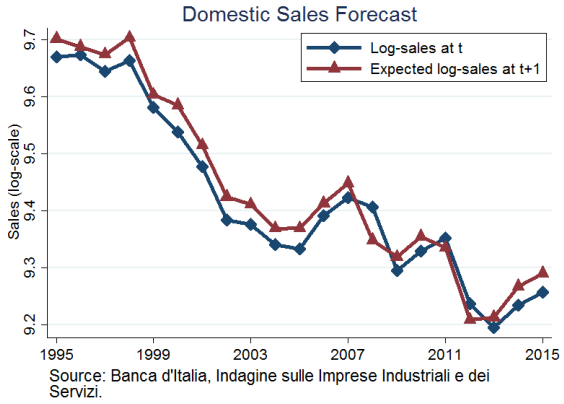

Figure 1: Comparison between Current Sales and Forecast, Domestic Market, 1995–2015

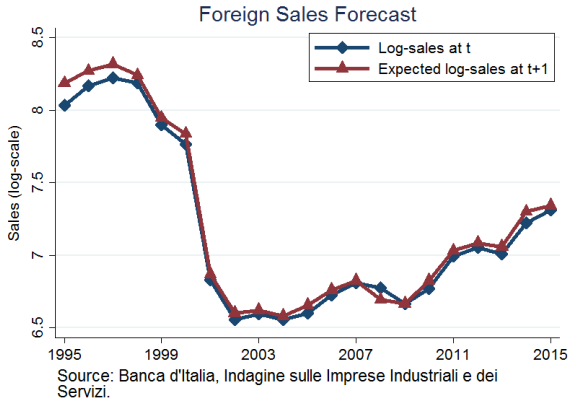

Figure 2: Comparison between Current Sales and Forecast, Foreign Markets, 1995–2015

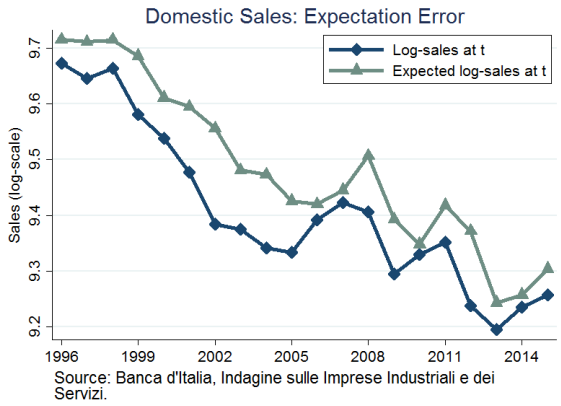

Figure 3: Comparison between Current Sales and Past Forecast, Domestic Market, 1996–2015

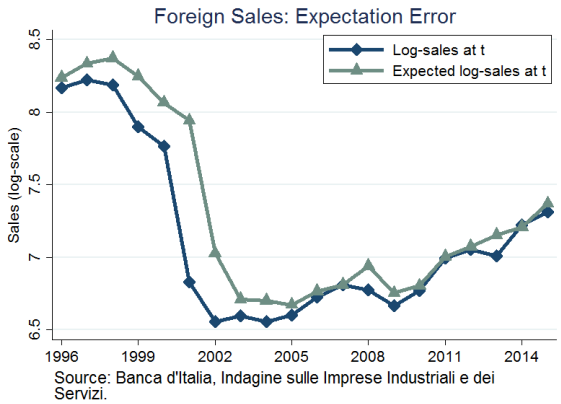

Figure 4: Comparison between Current Sales and Past Forecast, Foreign Markets, 1996–2015

Table 1: Growth Rates Distribution in 2005: Domestic Market

	Current	Expectation for 2006
p10	-24%	-35%
p25	-11%	-13%
p50	-1%	0%
p75	+8%	14%
p90	+22%	35%
Avg	-1%	0%
Sd	22%	31%

Note: Comparison between realized and expected growth rates of domestic sales.

Table 2: Growth Rates Distribution in 2005: Foreign Markets

	Current	Expectation for 2006
p10	-11%	-10%
p25	-2%	-2%
p50	1%	4%
p75	7%	12%
p90	18%	28%
Avg	2%	6%
Sd	28%	22%

Note: Comparison between realized and expected growth rates of foreign sales.

Table 3: Sales Forecast: Domestic Market

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$\ln E_t$ [Dom. Sales$_{t+1}$]						
$\ln$ Dom. Sales$_t$	0.989***	0.996***	0.993***	0.994***	0.992***	1.024***	1.016***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.037)	(0.038)
Dom. Forecast Error$_t$		-0.167***	-0.197***	-0.197***	-0.198***	-0.227***	-0.224***
		(0.025)	(0.027)	(0.027)	(0.027)	(0.038)	(0.038)
Dom. Share$_t$				-0.026***	-0.006	0.002	0.039***
				(0.007)	(0.010)	(0.010)	(0.011)
Age				-0.007***	-0.007***	-0.008***	-0.008***
				(0.002)	(0.002)	(0.003)	(0.003)
$\ln$ Exports$_t$					0.002**	0.002	0.002
					(0.001)	(0.004)	(0.004)
Exp. Forecast Error$_t$					-0.005***	-0.005	-0.004
					(0.002)	(0.005)	(0.005)
$\ln$ Price Change$_t$					0.060	0.057	0.066*
					(0.038)	(0.038)	(0.038)
$\ln$ Dom. Sales$_{t-1}$						-0.069**	-0.072**
						(0.030)	(0.030)
$\ln$ Exports$_{t-1}$						-0.0002	0.001
						(0.004)	(0.004)
$\ln$ Empl$_t$							0.022***
							(0.004)
Sector-Year	n	n	y	y	y	y	y
Obs.	24,500	24,500	24,500	24,500	24,500	24,500	24,500
R^2	0.976	0.977	0.978	0.978	0.978	0.978	0.978

$\ln E_t$ [Dom. Sales$_{t+1}$]: expected domestic sales at $t+1$ (in log-s).
$\ln$ Dom. Sales$_t$: domestic sales at t (in log-s).
Dom. Forecast Error$_t$: forecast error in domestic sales at t, measured as the difference between expected and actual domestic sales at t (in log-s).
Dom. Share$_t$: share of domestic out of total sales.
Age: years since birth, in log-s.
$\ln$ Exports$_t$: foreign sales at t (in log-s).
Exp. Forecast Error$_t$: forecast error in exports at t, measured as the difference between expected and actual foreign sales at t (in log-s).
$\ln$ Price Change$_t$: change in price at t compared to the level of prices reported by the firm for $t-1$ (in log).
$\ln$ Dom. Sales$_{t-1}$: domestic sales at $t-1$ (in log-s).
$\ln$ Exports$_{t-1}$: foreign sales at $t-1$ (in log-s).
$\ln$ Empl$_t$: total employment at t (in log-s).
Legend: *** significant at 1%, ** at 5%, * at 10%.
Notes: Firm-level regressions, 1996-2015. Specifications (4)-(6) also include sales and exports at $t-2$; those coefficients are omitted as they are not statistically significant. Standard errors are clustered at the firm level.

Table 4: Sales Forecast: Foreign Markets

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$\ln E_t\left[\text{Exports}_{t+1}\right]$						
$\ln \text{Exports}_t$	0.992***	0.995***	0.994***	0.994***	0.993***	1.032***	1.032***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.003)	(0.023)	(0.023)
Exp. Forecast Error_t		-0.060***	-0.060***	-0.060***	-0.061***	-0.096***	-0.095***
		(0.008)	(0.008)	(0.008)	(0.008)	(0.022)	(0.022)
Exp. Share_t				0.010	0.019	0.035	0.013
				(0.021)	(0.028)	(0.027)	(0.029)
Age				0.004	0.003	0.005	0.005
				(0.007)	(0.007)	(0.007)	(0.007)
$\ln \text{Dom. Sales}_t$					0.003	0.050*	0.045
					(0.004)	(0.028)	(0.028)
Dom. Forecast Error_t					-0.026*	-0.061**	-0.059**
					(0.014)	(0.029)	(0.029)
$\ln \text{Price Change}_t$					-0.027	-0.054	-0.049
					(0.119)	(0.116)	(0.116)
$\ln \text{Exports}_{t-1}$						-0.043*	-0.043*
						(0.023)	(0.023)
$\ln \text{Dom. Sales}_{t-1}$						-0.029	-0.031
						(0.025)	(0.025)
$\ln \text{Empl}_t$							0.013
							(0.008)
Sector-Year	n	n	y	y	y	y	y
Obs.	24,500	24,500	24,500	24,500	24,500	24,500	24,500
R^2	0.975	0.975	0.975	0.975	0.975	0.975	0.975

$\ln E_t\left[\text{Exports}_{t+1}\right]$: expected foreign sales at $t+1$ (in log-s).
$\ln \text{Exports}_t$: foreign sales at t (in log-s).
Exp. Forecast Error_t: forecast error in exports at t, measured as the difference between expected and actual foreign sales at t (in log-s).
Exp. Share_t: share of foreign out of total sales.
Age: years since birth, in log-s.
$\ln \text{Dom. Sales}_t$: domestic sales at t (in log-s).
Dom. Forecast Error_t: forecast error in domestic sales at t, measured as the difference between expected and actual domestic sales at t (in log-s).
$\ln \text{Price Change}_t$: change in price at t compared to the level of prices reported by the firm for $t-1$ (in log).
$\ln \text{Dom. Sales}_{t-1}$: domestic sales at $t-1$ (in log-s).
$\ln \text{Exports}_{t-1}$: foreign salesat $t-1$ (in log-s).
$\ln \text{Empl}_t$: total employment at t (in log-s).
Legend: *** significant at 1%, ** at 5%, * at 10%.
Notes: Firm-level regressions, 1996-2015. Specifications (4)-(6) also include sales and exports at $t-2$; those coefficients are omitted as they are not statistically significant. Standard errors are clustered at the firm level.

Table 5: Sales Forecast: Domestic Market

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$\ln E_t$ [Dom. Sales$_{t+1}$]						
$\ln$ Dom. Sales$_t$	0.856***	0.881***	0.859***	0.853***	0.847***	0.764***	0.754***
	(0.019)	(0.014)	(0.018)	(0.019)	(0.019)	(0.032)	(0.033)
Dom. Forecast Error$_t$		-0.069***	-0.081***	-0.077***	-0.075***	-0.003	0.0001
		(0.021)	(0.023)	(0.022)	(0.022)	(0.031)	(0.031)
Dom. Share$_t$				0.062*	0.110***	0.062	0.099**
				(0.037)	(0.041)	(0.040)	(0.043)
Age				-0.014	-0.014	-0.015	-0.016
				(0.010)	(0.010)	(0.010)	(0.010)
$\ln$ Exports$_t$					0.009***	0.004	0.003
					(0.002)	(0.004)	(0.003)
Exp. Forecast Error$_t$					-0.007***	-0.005	-0.004
					(0.002)	(0.003)	(0.003)
$\ln$ Price Change$_t$					0.045	0.071**	0.072**
					(0.028)	(0.034)	(0.033)
$\ln$ Dom. Sales$_{t-1}$						0.075***	0.068***
						(0.023)	(0.023)
$\ln$ Exports$_{t-1}$						0.001	0.001
						(0.003)	(0.003)
$\ln$ Empl$_t$							0.075***
							(0.019)
Firm FE	y	y	y	y	y	y	y
Sector-Year	n	n	y	y	y	y	y
Obs.	24,500	24,500	24,500	24,500	24,500	24,500	24,500
R^2	0.735	0.738	0.747	0.748	0.748	0.750	0.751

$\ln E_t$ [Dom. Sales$_{t+1}$]: expected domestic sales at $t+1$ (in log-s).
$\ln$ Dom. Sales$_t$: domestic sales at t (in log-s).
Dom. Forecast Error$_t$: forecast error in domestic sales at t, measured as the difference between expected and actual domestic sales at t (in log-s).
Dom. Share$_t$: share of domestic out of total sales.
Age: years since birth, in log-s.
$\ln$ Exports$_t$: foreign sales at t (in log-s).
Exp. Forecast Error$_t$: forecast error in exports at t, measured as the difference between expected and actual foreign sales at t (in log-s).
$\ln$ Price Change$_t$: change in price at t compared to the level of prices reported by the firm for $t-1$ (in log).
$\ln$ Dom. Sales$_{t-1}$: domestic sales at $t-1$ (in log-s).
$\ln$ Exports$_{t-1}$: foreign salesat $t-1$ (in log-s).
$\ln$ Empl$_t$: total employment at t (in log-s).
Legend: *** significant at 1%, ** at 5%, * at 10%.
Notes: FE Firm-level regressions, 1996-2015. Specifications (4)-(6) also include sales and exports at $t-2$. Standard errors are clustered at the firm level.

Table 6: Sales Forecast: Foreign Markets

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$\ln E_t\left[\text{Exports}_{t+1}\right]$						
$\ln \text{Exports}_t$	0.926***	0.931***	0.928***	0.922***	0.918***	0.830***	0.829***
	(0.009)	(0.009)	(0.010)	(0.011)	(0.011)	(0.026)	(0.025)
Exp. Forecast Error_t		-0.009	-0.008	-0.006	-0.005	0.080***	0.081***
		(0.009)	(0.009)	(0.009)	(0.009)	(0.024)	(0.023)
Exp. Share_t				0.175**	0.305***	0.132	0.098
				(0.084)	(0.104)	(0.106)	(0.103)
Age				-0.029	-0.032	-0.034	-0.034
				(0.020)	(0.020)	(0.021)	(0.021)
$\ln \text{Dom. Sales}_t$					0.069***	0.073**	0.063*
					(0.022)	(0.037)	(0.037)
Dom. Forecast Error_t					-0.063***	-0.071**	-0.069**
					(0.020)	(0.033)	(0.033)
$\ln \text{Price Change}_t$					-0.259***	-0.225**	-0.224**
					(0.099)	(0.096)	(0.096)
$\ln \text{Exports}_{t-1}$						0.104***	0.105***
						(0.025)	(0.025)
$\ln \text{Dom. Sales}_{t-1}$						-0.033	-0.039
						(0.028)	(0.028)
$\ln \text{Empl}_t$							0.068*
							(0.040)
Firm FE	y	y	y	y	y	y	y
Sector-Year	n	n	y	y	y	y	y
Obs.	24,500	24,500	24,500	24,500	24,500	24,500	24,500
R^2	0.790	0.790	0.793	0.793	0.793	0.795	0.796

$\ln E_t\left[\text{Exports}_{t+1}\right]$: expected foreign sales at $t+1$ (in log-s).
$\ln \text{Exports}_t$: foreign sales at t (in log-s).
Exp. Forecast Error_t: forecast error in exports at t, measured as the difference between expected and actual foreign sales at t (in log-s).
Exp. Share_t: share of foreign out of total sales.
Age: years since birth, in log-s.
$\ln \text{Dom. Sales}_t$: domestic sales at t (in log-s).
Dom. Forecast Error_t: forecast error in domestic sales at t, measured as the difference between expected and actual domestic sales at t (in log-s).
$\ln \text{Price Change}_t$: change in price at t compared to the level of prices reported by the firm for $t-1$ (in log).
$\ln \text{Dom. Sales}_{t-1}$: domestic sales at $t-1$ (in log-s).
$\ln \text{Exports}_{t-1}$: foreign salesat $t-1$ (in log-s).
$\ln \text{Empl}_t$: total employment at t (in log-s).
Legend: *** significant at 1%, ** at 5%, * at 10%.
Notes: FE Firm-level regressions, 1996-2015. Specifications (4)-(6) also include sales and exports at $t-2$; those coefficients are omitted as they are not statistically significant. Standard errors are clustered at the firm level.

Table 7: Foreign Sales Forecast: European Union

Variables	(1)	(2)	(3)	(4)	(5)	(6)
			$\ln E_t\left[\text{Exports}_{t+1}^{EU}\right]$			
$\ln \text{Exports}_t^{EU}$	0.991***	0.991***	0.991***	0.992***	0.992***	0.992***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)
EU Exp. Share			0.001	-0.002	-0.003	-0.004
			(0.002)	(0.004)	(0.005)	(0.005)
$\ln \text{Exports}_t$				-0.002	-0.008	-0.009
				(0.003)	(0.009)	(0.009)
Exp. Forecast Error$_t$				-0.004	-0.002	-0.003
				(0.004)	(0.003)	(0.003)
$\ln \text{Exports}_{t-1}$					0.006	0.006
					(0.008)	(0.008)
$\ln \text{Empl}_t$						0.002
						(0.007)
$\ln$ Price Change$_t$						0.004
						(0.042)
Sector-Year	n	y	y	y	y	y
Obs.	885	885	885	885	885	885
R^2	0.978	0.978	0.978	0.978	0.978	0.978

$\ln E_t\left[\text{Exports}_{t+1}^{EU}\right]$: expected foreign sales in EU at $t+1$ (in log-s).
$\ln \text{Exports}_t^{EU}$: foreign sales in EU at t (in log-s).
EU Exp. Share$_t$: share of EU exports out of foreign sales.
$\ln \text{Exports}_t$: foreign sales at t (in log-s).
Exp. Forecast Error$_t$: forecast error in exports at t, measured as the difference between expected and actual foreign sales at t (in log-s).
$\ln \text{Exports}_{t-1}$: foreign salesat $t-1$ (in log-s).
$\ln \text{Empl}_t$: total employment at t (in log-s).
$\ln$ Price Change$_t$: change in price at t compared to the level of prices reported by the firm for $t-1$ (in log).
Legend: *** significant at 1%, ** at 5%, * at 10%.
Notes: Firm-level regressions, 2008. Standard errors are clustered at the firm level.

Table 8: Foreign Sales Forecast: North America

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	$\ln E_t\left[\text{Exports}_{t+1}^{NA}\right]$					
$\ln \text{Exports}_t^{NA}$	0.972***	0.973***	0.972***	0.975***	0.975***	0.975***
	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)
NA Exp. Share			0.067	0.035	0.005	0.047
			(0.046)	(0.061)	(0.065)	(0.068)
$\ln \text{Exports}_t$				-0.006	-0.043	-0.031
				(0.006)	(0.024)	(0.024)
Exp. Forecast Error_t				0.030**	0.042**	0.042**
				(0.014)	(0.019)	(0.018)
$\ln \text{Exports}_{t-1}$					0.037	0.036
					(0.023)	(0.023)
$\ln \text{Empl}_t$						-0.031***
						(0.012)
$\ln \text{Price Change}_t$						-0.181**
						(0.072)
Sector-Year	n	y	y	y	y	y
Obs.	885	885	885	885	885	885
R^2	0.946	0.947	0.947	0.947	0.947	0.948

$\ln E_t\left[\text{Exports}_{t+1}^{NA}\right]$: expected foreign sales in North America at $t+1$ (in log-s).
$\ln \text{Exports}_t^{NA}$: foreign sales in North America at t (in log-s).
NA Exp. Share_t: share of North American exports out of foreign sales.
$\ln \text{Exports}_t$: foreign sales at t (in log-s).
Exp. Forecast Error_t: forecast error in exports at t, measured as the difference between expected and actual foreign sales at t (in log-s).
$\ln \text{Exports}_{t-1}$: foreign salesat $t-1$ (in log-s).
$\ln \text{Empl}_t$: total employment at t (in log-s).
$\ln \text{Price Change}_t$: change in price at t compared to the level of prices reported by the firm for $t-1$ (in log).
Legend: *** significant at 1%, ** at 5%, * at 10%.
Notes: Firm-level regressions, 2008. Standard errors are clustered at the firm level.

Table 9: Foreign Sales Forecast: China

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	$\ln E_t\left[\text{Exports}_{t+1}^{China}\right]$					
$\ln \text{Exports}_t^{China}$	0.986***	0.984***	0.981***	0.974***	0.974***	0.974***
	(0.012)	(0.013)	(0.014)	(0.014)	(0.014)	(0.014)
China Exp. Share			2.146	3.492	3.507	3.334
			(2.212)	(2.421)	(2.433)	(2.462)
$\ln \text{Exports}_t$				0.012**	0.006	0.001
				(0.005)	(0.008)	(0.008)
Exp. Forecast Error_t				-0.001	0.001	0.0005
				(0.002)	(0.003)	(0.003)
$\ln \text{Exports}_{t-1}$					0.006	0.005
					(0.006)	(0.006)
$\ln \text{Empl}_t$						0.018
						(0.011)
$\ln \text{Price Change}_t$						-0.004
						(0.069)
Sector-Year	n	y	y	y	y	y
Obs.	885	885	885	885	885	885
R^2	0.922	0.923	0.923	0.924	0.924	0.924

$\ln E_t\left[\text{Exports}_{t+1}^{China}\right]$: expected foreign sales in China at $t+1$ (in log-s).
$\ln \text{Exports}_t^{China}$: foreign sales in China at t (in log-s).
China Exp. Share_t: share of Chinese exports out of foreign sales.
$\ln \text{Exports}_t$: foreign sales at t (in log-s).
Exp. Forecast Error_t: forecast error in exports at t, measured as the difference between expected and actual foreign sales at t (in log-s).
$\ln \text{Exports}_{t-1}$: foreign salesat $t-1$ (in log-s).
$\ln \text{Empl}_t$: total employment at t (in log-s).
$\ln \text{Price Change}_t$: change in price at t compared to the level of prices reported by the firm for $t-1$ (in log).
Legend: *** significant at 1%, ** at 5%, * at 10%.
Notes: Firm-level regressions, 2008. Standard errors are clustered at the firm level.

Table 10: Sales Forecast Error: Domestic Market

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	$\ln$ Dom Sales$_t$ $-$ $\ln E_{t-1}$ [Dom Sales$_t$]					
Fore. Error$_{t-1}$	-0.234***	-0.216***	-0.216***	-0.217***	-0.217***	-0.217***
	(0.029)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)
$\ln$ Dom Sales$_{t-1}$		-0.048**	-0.058**	-0.055**	-0.054*	-0.053*
		(0.020)	(0.023)	(0.024)	(0.028)	(0.028)
Dom Share$_{t-1}$			0.077	0.059	0.058	0.049
			(0.069)	(0.083)	(0.088)	(0.088)
Age			-0.014	-0.014	-0.014	-0.012
			(0.016)	(0.016)	(0.016)	(0.016)
F Mkt Experience			-0.040	-0.040	-0.040	-0.038
			(0.026)	(0.026)	(0.026)	(0.025)
Fore Export Error$_{t-1}$				-0.002	-0.002	-0.002
				(0.003)	(0.003)	(0.003)
$\ln$ Exports$_{t-1}$				-0.002	-0.002	-0.002
				(0.005)	(0.005)	(0.005)
$\ln$ Price Change$_{t-1}$				-0.072	-0.072	-0.047
				(0.079)	(0.079)	(0.084)
$\ln$ Empl$_{t-1}$					-0.003	0.003
					(0.027)	(0.027)
Fore Empl Error$_t$						0.213***
						(0.046)
Fore Price Error$_t$						0.286***
						(0.066)
Firm FE	y	y	y	y	y	y
Sector-Year	n	y	y	y	y	y
Obs.	17,613	17,613	17,613	17,613	17,613	17,613
R^2	0.183	0.185	0.185	0.186	0.186	0.191

$\ln$ Dom Sales$_t$ $-$ $\ln E_{t-1}$ [Dom Sales$_t$]: forecast error in domestic sales at t (in log-s).
Fore. Error$_{t-1}$: forecast error at $t-1$ in domestic sales.
$\ln$ Dom. Sales$_{t-1}$: domestic sales at $t-1$.
Dom. Share$_{t-1}$: share of domestic out of total sales.
Age: years since birth, in log-s.
F Mkt Experience: years active in the foreign markets.
Fore. Export Error$_{t-1}$: forecast error at $t-1$ in foreign sales.
$\ln$ Exports$_{t-1}$: foreign sales at $t-1$ (in log-s).
$\ln$ Price Change$_{t-1}$: change in prices at $t-1$ (in log).
$\ln$ Empl$_{t-1}$: total employment at $t-1$ (in log-s).
Fore Empl Error$_t$: forecast error in employment at t.
Fore Price Error$_t$: forecast error in prices at t.
Legend: *** significant at 1%, ** at 5%, * at 10%.
Notes: Firm FE regressions, 1996-2015. Standard errors are clustered at the firm level.

Table 11: Sales Forecast Error: Foreign Markets

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	$\ln \text{Exports}_t - \ln E_{t-1}[\text{Exports}_t]$					
Fore Export Error$_{t-1}$	-0.276***	-0.225***	-0.223***	-0.219***	-0.218***	-0.218***
	(0.018)	(0.021)	(0.021)	(0.021)	(0.022)	(0.022)
$\ln \text{Exports}_{t-1}$		-0.250***	-0.295***	-0.338***	-0.339***	-0.340***
		(0.037)	(0.040)	(0.045)	(0.045)	(0.045)
Exp. Share$_{t-1}$			0.815***	1.544***	1.514***	1.530***
			(0.162)	(0.255)	(0.251)	(0.250)
Age			-0.050**	-0.051**	-0.052**	-0.048**
			(0.025)	(0.024)	(0.024)	(0.024)
F Mkt Experience			-0.018	-0.015	-0.015	-0.015
			(0.060)	(0.061)	(0.061)	(0.061)
Fore Error$_{t-1}$				0.015	0.018	0.019
				(0.024)	(0.023)	(0.023)
$\ln \text{Dom Sales}_{t-1}$				0.225***	0.212***	0.213***
				(0.047)	(0.046)	(0.046)
$\ln \text{Price Change}_{t-1}$				0.285	0.291	0.319*
				(0.177)	(0.177)	(0.177)
$\ln \text{Empl}_{t-1}$					0.049	0.058
					(0.060)	(0.060)
Fore Empl Error$_t$						0.387***
						(0.113)
Fore Price Error$_t$						0.270
						(0.215)
Firm FE	y	y	y	y	y	y
Sector-Year	n	y	y	y	y	y
Obs.	17,613	17,613	17,613	17,613	17,613	17,613
R^2	0.139	0.181	0.186	0.191	0.191	0.193

$\ln \text{Exports}_t - \ln E_{t-1}[\text{Exports}_t]$: forecast error in exports at t (in log-s).
Fore. Export Error$_{t-1}$: forecast error at $t-1$ in foreign sales.
Exp. Share$_{t-1}$: share of exports out of total sales.
Age: years since birth, in log-s.
F Mkt Experience: years active in the foreign markets.
$\ln \text{Exports}_{t-1}$: foreign sales at $t-1$ (in log-s).
Fore. Error$_{t-1}$: forecast error at $t-1$ in domestic sales.
$\ln$ Dom. Sales$_{t-1}$: domestic sales at $t-1$.
$\ln \text{Price Change}_{t-1}$: change in prices at $t-1$ (in log).
$\ln \text{Empl}_{t-1}$: total employment at $t-1$ (in log-s).
Fore Empl Error$_t$: forecast error in employment at t.
Fore Price Error$_t$: forecast error in prices at t.
Legend: *** significant at 1%, ** at 5%, * at 10%.
Notes: Firm FE regressions, 1996-2015. Standard errors are clustered at the firm level.

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A Additional Tables

Table A1: Summary Statistics

Variable	Mean	Std. Dev.
Domestic Sales[a]	9.42	1.61
Foreign Sales[a]	7.18	4.00
Expectations of Domestic Sales[a]	9.44	1.61
Expectations of Foreign Sales[a]	7.23	4.02
Domestic Forecast Error	-0.02	0.41
Foreign Forecast Error	-0.01	1.49

[a] Values are in (log) thousand euros.
Domestic Forecast Error: difference between log-sales and log-expectations in domestic sales.
Foreign Forecast Error: difference between log-sales and log-expectations in foreign sales.

Table A2: Sales Forecast Error: Domestic Market

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	$\lvert \ln \text{Dom Sales}_t - \ln E_{t-1}[\text{Dom Sales}_t] \rvert$					
Abs Fore. Error$_{t-1}$	-0.102**	-0.079	-0.079	-0.083	-0.082	-0.083
	(0.046)	(0.051)	(0.051)	(0.052)	(0.052)	(0.052)
ln Dom Sales$_{t-1}$		-0.063***	-0.057***	-0.060***	-0.061**	-0.060**
		(0.018)	(0.020)	(0.023)	(0.027)	(0.027)
Dom Share$_{t-1}$			-0.047	-0.024	-0.022	-0.026
			(0.057)	(0.077)	(0.082)	(0.082)
Age			0.006	0.005	0.005	0.006
			(0.012)	(0.012)	(0.012)	(0.012)
F Mkt Experience			-0.018	-0.018	-0.018	-0.019
			(0.019)	(0.019)	(0.019)	(0.019)
Abs Fore Export Error$_{t-1}$				-0.009**	-0.009**	-0.009**
				(0.004)	(0.004)	(0.004)
ln Exports$_{t-1}$				0.006	0.006	0.005
				(0.005)	(0.005)	(0.005)
ln Price Change$_{t-1}$				0.066	0.067	0.066
				(0.064)	(0.064)	(0.065)
ln Empl$_{t-1}$					0.003	0.004
					(0.025)	(0.025)
Abs Fore Empl Error$_t$						0.189***
						(0.033)
Abs Fore Price Error$_t$						0.059
						(0.073)
Firm FE	y	y	y	y	y	y
Sector-Year	n	y	y	y	y	y
Obs.	17,613	17,613	17,613	17,613	17,613	17,613
R^2	0.143	0.150	0.150	0.151	0.151	0.155

$\lvert \ln \text{Dom Sales}_t - \ln E_{t-1}[\text{Dom Sales}_t] \rvert$: absolute deviation between domestic sales and expectation at t (in log-s).
Abs Fore. Error$_{t-1}$: absolute deviation between domestic sales and expectation at $t-1$.
ln Dom. Sales$_{t-1}$: domestic sales at $t-1$.
Dom. Share$_{t-1}$: share of domestic out of total sales.
Age: years since birth, in log-s.
F Mkt Experience: years active in the foreign markets.
Abs Fore. Export Error$_{t-1}$: absolute deviation between foreign sales and expectation at $t-1$.
ln Exports$_{t-1}$: foreign sales at $t-1$ (in log-s).
ln Price Change$_{t-1}$: change in prices at $t-1$ (in log).
ln Empl$_{t-1}$: total employment at $t-1$ (in log-s).
Abs Fore Empl Error$_t$: absolute deviation between employment and expectations at t.
Abs Fore Price Error$_t$: absolute deviation between prices changes and expectation at t.
Legend: *** significant at 1%, ** at 5%, * at 10%.
Notes: Firm FE regressions, 1996-2015. Standard errors are clustered at the firm level.

Table A3: Sales Forecast Error: Foreign Markets

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	$\lvert \ln \text{Exports}_t - \ln E_{t-1}[\text{Exports}_t] \rvert$					
Abs Fore Export Error$_{t-1}$	-0.219***	-0.161***	-0.159***	-0.157***	-0.157***	-0.157***
	(0.017)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)
ln Exports$_{t-1}$		-0.285***	-0.327***	-0.372***	-0.373***	-0.373***
		(0.028)	(0.031)	(0.035)	(0.035)	(0.035)
Exp. Share$_{t-1}$			0.760***	1.522***	1.491***	1.494***
			(0.134)	(0.210)	(0.207)	(0.207)
Age			-0.036	-0.037*	-0.037*	-0.036*
			(0.022)	(0.022)	(0.022)	(0.022)
F Mkt Experience			-0.122**	-0.119**	-0.119**	-0.118*
			(0.061)	(0.060)	(0.060)	(0.061)
Abs Fore Error$_{t-1}$				-0.036*	-0.033	-0.033
				(0.021)	(0.021)	(0.021)
ln Dom Sales$_{t-1}$				0.253***	0.239***	0.239***
				(0.039)	(0.038)	(0.039)
ln Price Change$_{t-1}$				0.370***	0.376***	0.377***
				(0.141)	(0.141)	(0.143)
ln Empl$_{t-1}$					0.050	0.051
					(0.050)	(0.050)
Abs Fore Empl Error$_t$						0.288**
						(0.131)
Abs Fore Price Error$_t$						0.356*
						(0.212)
Firm FE	y	y	y	y	y	y
Sector-Year	n	y	y	y	y	y
Obs.	17,613	17,613	17,613	17,613	17,613	17,613
R^2	0.117	0.189	0.195	0.203	0.203	0.204

$\lvert \ln \text{Exports}_t - \ln E_{t-1}[\text{Exports}_t] \rvert$: absolute deviation between exports and expectations at t (in log-s).
Abs Fore. Export Error$_{t-1}$: absolute deviation between foreign sales and expectations at $t-1$.
Exp. Share$_{t-1}$: share of exports out of total sales.
Age: years since birth, in log-s.
F Mkt Experience: years active in the foreign markets.
ln Exports$_{t-1}$: foreign sales at $t-1$ (in log-s).
Abs Fore. Error$_{t-1}$: absolute deviation between domestic sales and expectations at $t-1$.
ln Dom. Sales$_{t-1}$: domestic sales at $t-1$.
ln Price Change$_{t-1}$: change in prices at $t-1$ (in log).
ln Empl$_{t-1}$: total employment at $t-1$ (in log-s).
Abs Fore Empl Error$_t$: absolute deviation between employment and expectations at t.
Abs Fore Price Error$_t$: absolute deviation between prices and expectations at t.
Legend: *** significant at 1%, ** at 5%, * at 10%.
Notes: Firm FE regressions, 1996-2015. Standard errors are clustered at the firm level.