Productivity Before and After Exports:
The Case of Korean Food Processing Firms

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Selected Paper prepared for presentation at the American Agricultural Economics Association Annual Meeting, Long Beach, California, July 23-26, 2006

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Abstract: In this article, we analyze the export decision of Korean manufacturing firms with emphasis on those in the food processing sector. A dynamic discrete choice model based on sunk (entry or exit) costs is specified for export behavior. Data for 1996-2002 on 1022 Korean firms, of which 95 are in the food processing sector, are assembled. A nonparametric measure of firm productivity is derived for use in the export-behavior (probit) model. Results show the significant effects of sunk costs on the export decision of Korean firms. A firm-size effect on export behavior is identified for food processing firms, unlike in the case of their manufacturing counterparts. We also find a firm-size effect on productivity in all manufacturing firms.

Key words: Export decision, food processing firms, productivity, and sunk costs.

JEL Classification: F10, L29

Introduction

In this era of increased economic integration, exports are often viewed as indicators of efficiency and performance. Positive correlation between exports and economic growth and development has led to a flurry of export promotion activities by developed- and developing-country governments (Giles and Williams, 2000a, 2000b; World Bank, 2003). With an end to export subsidies in sight (Doha Round of WTO negotiations), many of these promotional activities are mostly aimed at mitigating market failures such as informational asymmetries, knowledge spillovers, and credit and exchange rate risks. Yet the factors that underlie a firm's decision to export, continue to export or exit a foreign market have received limited attention until recently (Bernard and Jensen, 1995; See Wagner, 2005, for a summary). Part of the problem is that the export-led growth theory has been mostly macroeconomic in design and applications. The small number of firm-level export studies indicates problems of data availability as well as the limited understanding of the characteristics of exporting firms, which are critical to the design of an effective policy if alleviation of market failures is desired (Bernard and Jensen, 1997, 1999; Roberts and Tybout, 1997; Helpman, Melitz and Yeaple, 2004).

The purpose of the present study is to improve our understanding of firms' decision to export using a panel database from the Republic of Korea. With much of its exports activity in the later part of the twentieth century, Korea has often been cited as one of the best examples of the export-led growth idea. In this study, we will highlight firms in the food processing industry and compare the determinants of their export behavior with those in other manufacturing industries. Although Korea is a major food importer, its food exports have averaged over $1.5 billion annually in recent years. Korean exports include processed grain products, sugar and confectionery, processed fruits and vegetables, and beverages.

To achieve the objective, a model of firm export behavior, based on Roberts and Tybout (1997), is employed. Here, firms' decision to export, continue to export or exit a foreign market depends crucially on profits net of sunk (entry and/or exit) costs. Data on manufacturing firms are obtained from a major Korean credit rating agency and a sample of 1022 firms is chosen to have the maximum time series data (1996-2002). A key firm-specific characteristic, i.e., firm productivity is derived using a nonparametric approach. For all manufacturing and food processing firms, we then estimate a probit model of export behavior, where sunk-costs are represented by lagged dependent variables.

The next two sections present a brief review of the recent literature on export decision models and an outline of the basis of our empirical methodology in that order. Then, data including productivity computation are described followed by the discussion of results. Finally, the summary section concludes and provides policy implications of the study.

Prior Literature

In the context of manufacturing industries, firms' decision to produce for foreign markets and export, popularly termed the export decision, has been extensively addressed beginning with the seminal contribution of Bernard and Jensen (1995). The emerging theoretical and empirical literature on factors that underlie a firm's decision to export, continue to export or exit a foreign market have improved our understanding of exporting firms' characteristics (Aw and Hwang, 1995; Aitken, Hanson and Harrison, 1997; Bernard and Jensen, 1997, 1999, 2004a; Roberts and Tybout, 1997; Bernard et al., 2003; Helpman, Melitz and Yeaple, 2004).

Focusing on characteristics of exporting firms, most studies support the link between higher efficiency or productivity and export participation, but two competing hypotheses are offered for directionality in this relationship. The first is the self-selection hypothesis, which states that only higher productivity firms will become exporters: Bernard and Jensen (1995, 1999) in the case of the United States; Clerides, Lach and Tybout (1998) for Colombia, Mexico and Morocco; Aw, Chung, and Roberts (2000) in Korea and Taiwan; Alvarez and Lopez (2004) in Chile; and Girma, Greenaway and Kneller (2004) in UK. The reasoning here is that there are extra costs associated with the production of exportable products (e.g., quality and supply-chain/distribution costs). These additional costs can only be afforded by high-productivity farms, making them self-select into export markets, and therefore, the decision to export is impacted by firms' efficiency. The alternative hypothesis, learning-by-exporting, suggests that firms improve their productivity by participating in the exportable market (Clerides, Lach and Tybout, 1998; Aw, Chang and Roberts, 2000). Firms learn from the exposure to demanding buyers/exporting firms, who require product and process standards, and supply-chain/distribution cost-sharing to compete in international markets. Productivity gains associated with this learning-by-exporting

process helps firms continue to produce for foreign markets.

The accumulated evidence thus far, indicates high-productivity firms self-select into export markets (Richardson and Rindal, 1995; Wagner, 2005). Other findings include that exporters survive longer and pay higher wages relative to nonexporters in developed and developing economies. Modeling such firm heterogeneity at the industry level shows resource reallocation in favor of fast-growing exporters is an important determinant of the observed correlation between exports and economic growth (Melitz, 2003; Bernard and Jensen, 2004b). However, the evidence as of now on whether exporting improves productivity, i.e., learning-by-exporting, remains mixed.

Empirical Methodology

Roberts and Tybout's (1997) dynamic discrete choice process of export behavior based on sunk (entry and/or exit) costs is the basis of our empirical strategy. In their model, firms' decision to export, continue to export or exit a foreign market depends crucially on profits net of entry/exit costs. At any given time, the difference in profits between exporting and not exporting for a representative firm is a function of factors exogenous and specific to the firm. A firm will export if the difference in profits between exporting and not exporting exceeds the initial sunk entry or export costs. Firms decide to export in every period, so a non-exporting firm at one time can turn into an exporter in the next or following periods. Similarly, an exporting firm at one time can turn into a nonexporter at another time, but it incurs an exit cost. Additionally, if a firm exported in a year, for example $t-j \quad (j \geq 2)$, and if it resumes export in year *t*, it will face reentry costs. In the following, a version of the multiperiod, export-behavior model is outlined akin to Bernard and Jensen (2004a).

A firm exports ($Y_{it} = 1$) if current and expected revenues $\hat{\pi}_{it}$ are greater than current-period costs c_{it} plus any (sunk) costs of entry, N:

(1) $$Y_{it} = \begin{cases} 1 & if \quad \hat{\pi}_{it} > c_{it} + N(1 - Y_{i,t-1}), \\ 0 & otherwise, \end{cases}$$

where

(2) $$\hat{\pi}_{it} = r_{it}^{*} + \delta(E_t[V_{i,t+1}(.) \mid r_{it}^{*} > 0] - E_t[V_{i,t+1}(.) \mid r_{it}^{*} = 0]),$$

and r_{it}^{*} is the desired level of export revenues.

Our empirical model is based on equation (1), but we employ a binary choice non-structural approach to identify and quantify factors influencing the probability of exporting. Formally,

(3) $$Y_{it} = \begin{cases} 1 & if \quad \beta X_{it} + \gamma Z_i - N(1 - Y_{i,t-1}) + \varepsilon_{it} > 0, \\ 0 & otherwise. \end{cases}$$

Firm characteristics are represented in the vector X_{it}, while entry or sunk costs are represented by one-period lagged, discrete export choice. Often, export decision models represented in equation (3) include other explanatory variables representing factors exogenous to the firm. In equation (3), Z_i is a set of time-invariant, firm-specific indicators such as its membership in an industry or its location.

Most studies estimate equation (3) as a probit model, but after considering the consequences of including the lagged dependent variable (Roberts and Tybout, 1997; Bernard and Jensen, 1999, 2004a; Wooldridge, 2002). The disturbance term ε_{it} in equation (3) embodies random events as well as firm characteristics unobserved by researchers. Since many of the unobserved firm characteristics are likely associated with either X_{it} or $Y_{i,t-1}$, the latter in particular due to persistence (serial correlation) in ε_{it}, standard probit procedures yield inconsistent estimates of β (Roberts and Tybout, 1997; Bernard and Jensen, 2004a; Greene, 2002). Equation (3) can be rewritten to account for such unobserved firm characteristics, κ_i, using a linear probability framework as follows:

(4) $$Y_{it} = \beta X_{i,t-1} + \gamma Z_i + \theta Y_{i,t-1} + \kappa_i + \eta_{it}.$$

Note that the constituents of the X_{it} vector are lagged by one period to avoid simultaneity problems. The fixed-effects probit estimation of equation (4) is shown to yield biased or inconsistent parameter estimates (Greene, 2002). One can avoid that by estimating a random-effects model or employing a specification in first differences as follows: [1]

(5) $$\vartriangle Y_{it} = \beta \vartriangle X_{i,t-1} + \theta \vartriangle Y_{i,t-1} + \vartriangle \eta_{it}.$$

The specification in equation (5) eliminates permanent, unobservable firm-specific characteristics and likely correlation between regressors and the disturbance term. Similar to Bernard and Jensen (2004 a), we believe that first differencing will alleviate problems associated with possible serial correlation in η_{it} [$\text{cov}(\eta_{it}, \eta_{i,t-1}) \neq 0$] when shocks are permanent in nature. However, our estimation will suffer a loss in efficiency especially if the serial correlation mostly reflected transitory shocks.

Data and Firm-Specific Characteristics

[1] Bernard and Jensen (2004a) and Roberts and Tybout (1997) employ a random-effects specification of equation (4). Our initial attempts to estimate such a specification failed since the computed panel-specific correlation coefficient, based on κ_i in the random error, is outside the [-1, +1] bound.

A firm-level panel database is obtained from the Korea Information Service (KIS), the major credit-rating agency in Korea. Established in 1985, KIS has compiled the most extensive corporate database on the Korean manufacturing sector. Most firms report sales, employment and benefits, investment and related activity, and financial conditions to KIS for credit-rating purposes. Since we need time series data on manufacturing firms, we focus on the 1996-2002 time period for which data are available for 1,022 firms. Extending the time period to before 1996 significantly reduced our sample size (e.g., 600 firms for 1994-2002). The output of the firm is denoted by its total sales in domestic and foreign markets, both of which are deflated using a manufacturing price index. Inputs into production are capital - tangible and intangible reported by KIS, employment (labor), raw or intermediate materials, and R&D expenditures. Since the last two inputs are reported in values terms, they are also deflated by a price index. In our sample, there are 95 food processing firms.

The dependent variable, Y_{it}, takes value one when positive sales in foreign markets are observed and zero otherwise. Since we have time-series data, we use up to two lags of the dependent variable in specifying equation (4) or (5). The primary variable in the vector X_{it} is the productivity of a firm. Unlike prior studies, here we compute multifactor as opposed to labor productivity using a nonparametric approach. Following Chambers et al. (1996), the data envelopment analysis (DEA) is used to derive firm-specific productivity measures using total sales (domestic and foreign) as output and labor, tangible capital, intangible capital, raw material, and R&D expenditures as inputs. More specifically, the directional distance function of *k*-th firm for the periods *t+1* and *t*, $\vec{D}_{t+1}(.)$ and $\vec{D}_t(.)$ respectively, can be represented by the following linear programming problems (for details, see Chambers et al., 1996):

$$\vec{D}_{t+1}(x_t^k, y_t^k : g_x^k, g_y^k) = \max_{\theta,\lambda} \theta$$

(6)
$$\begin{aligned} s.t. \quad & \textstyle\sum_{k=1}^{K} \lambda^k x_{t+1}^k \le x_t^k - \theta g_x^k, \\ & \textstyle\sum_{k=1}^{K} \lambda^k y_{t+1}^k \ge y_t^k + \theta g_y^k, \\ & \textstyle\sum_{k=1}^{K} \lambda^k = 1, \\ & \lambda^k \ge 0,\ k = 1,\ldots,K \end{aligned},$$

and

$$\vec{D}_t(x_{t+1}^k, y_{t+1}^k : g_x^k, g_y^k) = \max_{\theta,\lambda} \theta$$

(7)
$$\begin{aligned} s.t. \quad & \textstyle\sum_{k=1}^{K} \lambda^k x_t^k \le x_{t+1}^k - \theta g_x^k, \\ & \textstyle\sum_{k=1}^{K} \lambda^k y_t^k \ge y_{t+1}^k + \theta g_y^k, \\ & \textstyle\sum_{k=1}^{K} \lambda^k = 1, \\ & \lambda^k \ge 0,\ k = 1,\ldots,K \end{aligned},$$

where θ measures how far the input-output vector (x, y) is from the frontier technology, expressed in units of the reference input-output bundle, (g_x, g_y). Lower-case *x* and *y* are used to denote inputs and output, respectively, in the measurement of productivity, which is a component of the X_{it} vector. The average of $\vec{D}_{t+1}(.)$ and $\vec{D}_t(.)$ can be used as the productivity index of the firm in period *t*. Larger values of the average of these two indexes indicate inefficiency, while a zero value indicates that the corresponding firm is efficient given the frontier technology.

Other variables in the X_{it} vector include firm-size indicators like employment and capital. However, a one-period lag of these variables is used to avoid simultaneity problems noted earlier. The vector Z_i contained two sets of dummies, one each for industry and location. The firms are classified into ten industrial groups, which we represent with 9 dummy variables. Likewise, the postal code of each firm's headquarters is identified in the database, which were used to identify 6 regions.

Table 1 presents descriptive statistics on key variables used in the estimation of export behavior in Korea. For the entire manufacturing sector, the proportion of exporters varied between 16 and 21 percent between 1996 and 2002. A similar trend is observed in the case of the food processing industry, but the share of exporters is lower than that for the manufacturing sector. The decline in the proportion of exporters in late 1990s and the eventual recovery is coincidental with the Asian financial crisis. The DEA-based productivity indexes, in general, show a decreasing trend in its level, which implies a deterioration in productivity levels. Surprisingly, productivity levels are greater in food processing relative to all manufacturing firms. However, the former shows a modest increase in variability of productivity during the sample period. Firm size indicated by employment in general shows a downward trend. Again, food processing firms appear to be larger in employment size relative to all manufacturing firms.

Preliminary Results

Table 2 presents probit results on the export decision with model 1 and 2 corresponding to all manufacturing firms, while model 3 is for the subset of food processing firms. Model 1 and 2 differ in the use of a dummy variable to represent the food industry. For the manufacturing firms, we find that sunk cost, represented by lagged dependent variables, is a statistically significant determinant of their export decision. Among the lags, the coefficient on $Y_{i,t-1}$ is larger than that on the two-period lag of Y_{it} in both model 1 and 2. The finding that sunk costs are key to the export decision is consistent with that of Roberts and Tybout (1997), Bernard and Jensen (2004a) and others.

To test the self-selection hypothesis, i.e., high-productivity firms self select into export markets, we used two lags of the DEA-based productivity indexes in the probit model. Recall from the previous section that the larger the value of the index, the greater is the inefficiency of firms. So, the hypothesized sign for the coefficients on the DEA indexes is negative. We obtain negative coefficients, but they are not statistically significant. In their study of U.S. plants, Bernard and Jensen (2004a) did not find a statistically significant effect of (labor) productivity on the export decision. The size of the firm, which we represent by one-period lagged employment, is not significant in either model 1 or 2. Our attempts to introduce other firm-specific characteristics, and industry and regional dummies did not affect results reported in table 2, except in the context of a dummy for the food processing sectors. Consistent with the differences between all manufacturing and food processing firms in table 1, the coefficient on the latter’s dummy is significant with a negative sign. Although it is an intercept dummy, we hypothesize that slope coefficients in the food processing industry are different from those in model 1 or 2.

Model 3 estimates the probit regression for the export decision in the food processing sector. As noted earlier, our sample contained 95 firms in this industry and hence, the lower number of observations relative to that in model 1 or 2. In the estimation of model 3, we encountered a problem of high collinearity between one- and two-period lags of Y_{it}. Therefore, we dropped the latter from model 3 given the relatively larger effect of the former in model 1 and 2. Consistent with the results from the manufacturing sector and other studies, we find that sunk-cost effects significantly influence the decision to export (e.g., Roberts and Tybout, 1997). The coefficient on one-period lagged Y_{it} is larger relative to that in model 1 and 2, but the relative strength can only be inferred using predicted or expected probabilities (Wooldridge, 2002). The two lags of the DEA-based productivity index do not significantly affect export decision in the food processing sector as well. However, the coefficient on one-period lagged employment is significant at the 10 percent level. This result suggests that size of the firm is a determinant of the export decision of food processing firms and can arise if larger firms are either more efficient or there exists significant economies of scale. Data in table 1 show that the average employment per firm in the food processing and manufacturing sectors in all sample years (1996-2002). Although the manufacturing sector has some relatively large firms (see column 4, table 1 on maximum number of employees), the food processing sector tends to have higher employment per firm on average over the sample period. Hence, food processing firms appear to have significant scale economies, which likely is reflected in the export decision.[2]

In general, the results from table 2 suggest that sunk or entry costs of exporting significantly affects Korean firms' decision to export. Variation in the sunk-cost effect between food processing and all manufacturing firms is also observed in our results. Firm size does not appear to affect the export decision of all manufacturing firms, but we find a significant effect in the case of food processing firms. The impact of productivity is surprisingly not significant in all models of export behavior. The studies noted in the literature review section argue that productivity is likely to be endogenous determined with production and export decisions. In the following, we informally explore the reverse causality, i.e., exporting activity improves productivity.

To identify whether or not exports bring about learning, which in turn, improves firm productivity, we specify a panel model as follows: [3]

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[2] Food processing industries can also be labor-intensive. Nevertheless, the data suggest on average firms are larger (employment) relative to all manufacturing industries including textile and apparels, which is often categorized as most labor-intensive.

[3] An ideal model would simultaneously estimate the probit regression with a specification for productivity, where contemporaneous decisions on each impact the other. Note that such a model involves continuous and discrete endogenous variable, procedures for which are detailed in Maddala (1983). For the preliminary results reported here, we do not consider such procedures, but the final version of this article will address such issues.

(8) $$Productivity_{it} = \alpha_0 + \alpha_1 Y_{i,t-1} + \alpha_2 DEA_{i,t-1} + \alpha_3 Labor_{i,t-1} + \mu_{it},$$

where μ_{it} is a random error term. Both fixed and random effects procedures are used to estimate equation (8). Model 1 and 2 in table 3 are estimated versions of equation (8) for all manufacturing and food processing firms, respectively. A Hausman test failed to reject the null that regressors are independent of the error term, a maintained assumption of the random effects model. Therefore, results from fixed-effect specifications are reported for model 1 and 2. The R^2 in model 1 and 2 including fixed (firm-specific) effects are 88 and 91 percent, respectively.

Preliminary results in table 3 suggest that the one-period lag of Y_{it} does not significantly affect firm productivity. That is, we do not find evidence of learning-by-exporting. Our model will be subjected to additional specification and robustness tests, but prior studies do not find a learning-by-exporting effect as well (Bernard and Jensen, 1999). Significant external scale economies, which impact all firms and not just exporters may partly be responsible for this result. Productivity in the previous period has a positive effect on that in the current period. As noted earlier, higher values of the productivity index mean lower efficiency. Hence, this result implies that there is significant inertia in inefficient firms. The coefficient on one-period lag of labor, used to measure size effects, is significantly negative. All else constant, an increase in firm size lowers inefficiency or improves productivity. The size effect is similar in both model 1 and 2, but the size effect in the export-decision model is obtained only in the case of food processing firms (table 2).

Summary and Conclusions

In this article, we analyze the export decision of Korean manufacturing firms with emphasis on those in the food processing sector. Our empirical approach follows prior literature on firms' decision to export, continue to export or exit a foreign market. At any given time, the difference in profits between exporting and not exporting for a representative firm is a function of factors exogenous to the firm (e.g., prices) and of state-specific variables (e.g., productivity). A firm will export if the difference in profits between exporting and not exporting exceeds the initial sunk entry or export costs. Firms decide to export in every period, so a nonexporting (exporting) firm at one time can turn into an exporter (nonexporter) in the next or following periods.

Data on 1022 Korean firms, of which 95 are in the food processing sector, are obtained for 1996-2002 from Korea Information Service, the major credit rating company in the Republic of Korea. Firm productivity, a state-specific variable, is derived from a nonparametric approach, the Data Envelopment Analysis. Size, industry and locational indicators are used along with firm productivity to model export behavior of manufacturing firms.

Results show the significant effects of sunk costs on the export decision of Korean firms. The export behavior of food processing appears to differ from that of all manufacturing firms by the presence of a size effect. That is, larger food processing firms have a relatively higher probability of exporting. This result can arise if larger food firms are either more efficient or there exists significant economies of scale. There is some evidence for the latter in employment data, where food processing firms appear to employ more people per firm relative to the overall manufacturing sector. The lack of a significant impact of productivity on the export decision is surprising, but consistent with other case studies that also find significant sunk-cost effects (e.g., the United States). A preliminary analysis of learning-by-exporting, i.e., whether or not exporting improves firm productivity failed to identify such effects. However, an increase in firm size positively affects its productivity.

In the final version of the study, we hope to further highlight differences in the sunk-cost effects on export behavior across industries and firm-size categories. Identifying barriers to firms' export production and their relative magnitude across industries and firms would provide insights into policy options to lower such barriers, encourage export production and the associated benefits in terms of higher wages and economic growth.

Table 1. Descriptive Statistics on Korean Manufacturing Firms

Variable		Mean	S.D	Maximum	Minimum
All Manufacturing Firms (1022)					
Productivity	1996	0.5882	0.1889	0.9999	-0.1261
	1997	0.6271	0.1871	0.9999	-0.1249
	1998	0.6208	0.2094	0.9998	-0.3120
	1999	0.6240	0.2378	0.9999	-0.3144
	2000	0.6696	0.2174	0.9999	-0.3731
	2001	0.6863	0.1901	0.9999	-0.3274
	2002	0.6845	0.1883	0.9999	-0.1702
Export Dummy	1996	0.2045	0.4033	1	0
	1997	0.2035	0.4026	1	0
	1998	0.1879	0.3906	1	0
	1999	0.1703	0.3759	1	0
	2000	0.1595	0.3661	1	0
	2001	0.1957	0.3967	1	0
	2002	0.1967	0.3975	1	0
Labor	1996	511	2747	59019	2
	1997	494	2607	52758	2
	1998	425	2153	42131	3
	1999	433	2318	50801	2
	2000	447	2428	49023	3
	2001	428	2392	48831	2
	2002	421	2427	49855	2
Food Processing Firms (95)					
Productivity	1996	0.4663	0.2497	0.9999	-0.0805
	1997	0.4772	0.2414	0.9999	-0.0985
	1998	0.4358	0.2723	0.9998	-0.3120
	1999	0.4378	0.2981	0.9998	-0.3144
	2000	0.5189	0.2835	0.9998	-0.1824
	2001	0.5779	0.2585	0.9998	-0.0760
	2002	0.5849	0.2625	0.9998	-0.0273
Export Dummy	1996	0.1368	0.3437	1	0
	1997	0.1263	0.3322	1	0
	1998	0.0842	0.2777	1	0
	1999	0.0842	0.2777	1	0
	2000	0.0842	0.2777	1	0
	2001	0.1263	0.3322	1	0
	2002	0.1158	0.320	1	0
Labor	1996	893	1513	7394	2
	1997	878	1494	7394	4
	1998	801	1354	6138	13
	1999	824	1336	5952	15
	2000	767	1249	5522	17
	2001	763	1256	5350	16
	2002	731	1215	5490	18

Table 2. Probit Results on The Decision to Export, Productivity and Sunk Costs

	Model 1 All Manufacturing	Model 2 All Manufacturing	Model 3 Food Processing
Exported Last Year	2.225**	2.216**	2.680**
	(22.31)	(22.23)	(5.68)
Last Exported Two Years Ago	0.332**	0.330**	
	(3.10)	(3.08)	
$\text{Productivity}_{t-1}$	-0.077	-0.089	0.722
	(-0.25)	(-0.29)	(0.76)
$\text{Productivity}_{t-2}$	-0.036	-0.083	-0.078
	(-0.12)	(-0.27)	(-0.08)
Labor	-0.001	-0.001	0.001*
	(-0.17)	(-0.16)	(1.65)
Intercept	-1.609**	-1.547**	-2.343*
	(-17.08)	(-15.85)	(-8.42)
Food Industry Dummy		-0.271**	
		(-2.45)	
Log Likelihood	-1258	-1255	-71
N	5110	5110	475

Figure in parenthesis is z-statistics,
** and * denote significance at the 5% and 10% level, respectively.

Table 3. Productivity After Exports

	Model 1 All Manufacturing	Model 2 Food Processing
Exported Last Year	-0.007	-0.033
	(-1.29)	(-1.22)
$Productivity_{t-1}$	0.493*	0.568*
	(35.69)	(12.74)
Labor	-0.001*	-0.001*
	(-2.77)	(-2.63)
R^2	0.88	0.91
Fixed Effects	Yes	Yes
Chi-squared statistic (Hausman)	958.45	78.47
N	5110	475

Figure in parenthesis is t-statistics,
* denotes significance at the 5% level.

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