Trade Barriers and Firms' Sales Hierarchy: Evidence from Firms' Access to External Finance

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Abstract

We study the effects of access to external finance for firms to overcome sunk costs arising from domestic and international trade barriers, and examine how access to finance helps firms advance their sales hierarchy both domestically and internationally. We use a World Bank Survey of 12,372 firms operating in China in 2004 to inform the study. Based on firms' sales destinations both domestically and internationally, we categorize firms in four exclusive types as *Provincial Firms*, *Domestic Firms*, *Pure Exporters* and *All Sellers*, and analyze how access to external finance affects firms' decision to choose to be a particular firm type. We find that access to financial loans significantly raises firms' odds to overcome trade barriers to become *Domestic Firms* or *All Sellers*; and the magnitudes of domestic trade barriers are as much a hurdle for firms as international trade barriers. The effects of external finance to overcome trade barriers vary across firm ownership types of being SOEs, foreign owned and privately/collectively owned; and are indicative of the loans' perceived importance. Further, we find that access to external finance significantly increases the odds more for firms to sell in other provincial markets if they felt/experienced local protection than those which didn't.

Keywords: Domestic trade barriers; External financing; Multi-destination market sales

JEL: F14; F63; M21

1. Introduction

This paper studies the importance of external finance, in terms of loans from banks and financial institutions, for firms to overcome domestic and international trade costs to advance their sales both domestically and internationally. The research builds on a literature on the role of external financing to enable firms to overcome international trade barriers to become exporters, but extends it to include domestic trade barriers and firms' domestic sales outside their home provinces where firms operate. In so doing, the paper presents a complete scenario of trade barriers, as domestic trade barriers often present significant costs for firms; and compares the effects of external finance for firms to overcome both domestic and international trade costs. It utilizes a World Bank survey of firms operating in China in the early 2000s to inform the study.

Our research is motivated by the existence of pervasive domestic trade barriers in many countries. Although it is commonly assumed in the trade literature that firms' domestic markets are integrated, it is seldom the case in reality. Domestic trade barriers, like their counterparts of international trade barriers, are shown to hinder intra-national trade flows both in developing economies and in developed countries alike such as the United States (Wolf, 2000; Hillberry and Hummels, 2003, 2008; Coughlin and Novy, 2013; Nitsch and Wolf, 2013).[1] China is no exception, and is even more so as China is still in its early stage of fostering an integrated domestic market with market-oriented economy. Domestic trade barriers across provincial borders are widespread by overt and often covert local protections. The magnitudes of these local protections can by no means be ignored, which are also evidenced by findings in a few studies including Poncet (2005) and Huang et al. (2015).

The mechanism of external finance for firms to advance their domestic sales works similarly as that for firms' international sales, which can be better explained through the added additional costs. In exports, the additional costs often occur while acquiring information about foreign markets, customizing products to fit foreign tastes, setting up international distribution networks and overcoming tariff and non-tariff barriers. These costs are largely sunken in nature and are often have to be paid up front.[2] In addition, exporting to a foreign market also adds extra layers of complexity. There tends to be a longer time-lag between production and the receipt of sales revenue regarding exports; and exporters also face inherently more risk, due to the increasing difficulty to enforce payment across country boundaries (Amiti and Weinsten, 2011). Although tastes for domestic consumers are less heterogeneous than international consumers, but the fixed cost of setting up sales channels in the presence of domestic trade barriers would present as much a hurdle as international trade barriers, and the difficulty of enforcing payment across provincial borders are a hassle at

[1] For instance, even in the United States, Coughlin and Novy (2013) show that trade flows appear to be substantially impeded by state borders. In certain cases, the intra-national border effect in US is found to be surprisingly higher than its international counterparts.

[2] The presence of sunk costs in international trade has been widely reported, such as Roberts and Tybout (1997), Bernard and Jensen (2004), Das et al., (2007), and Roberts et al., (2012).

times.[3] Firms having better access to external finance can allow them to borrow at reduced costs to maintain some cost advantage and to set up the necessary sales channels. It is thus no surprise that studies have documented a very important role of external finance for firms' export decision and/or volumes (Berman and Hericourt, 2010; Minetti and Zhu, 2011; Manova, 2013; Behrens et al., 2013; Feenstra et al., 2014).

Understanding the existence of China's domestic trade barriers and the general environment for external borrowing is conducive for our study. The existence of domestic trade barriers has helped create China's segmented domestic market across provincial borders, and the causes are multi-dimensional, with the leading one being its fiscal policy. Since 1978 the beginning of China's market-oriented economic reforms, fiscal responsibility at local levels was one of the first series to be introduced, while the Chinese central government broke down its centralized fiscal management system, and replaced it with various forms of fiscal contracting system and a tax sharing system (Shen et al., 2012). Such reforms had encouraged local governments to be fiscally responsible, but local governments were also motivated to create conditions to foster local business for their tax base. As a by-product, these measures inadvertently helped raise interregional trade barriers and local protection (Huang et al., 2015). These interregional barriers have effectively fragmented the Chinese domestic market across provincial borders, which are widely documented in many studies.[4] In the presence of domestic trade barriers, only the more productive firms choose to sell outside their home provincial markets (Huang et al., 2015; Bao et al., 2015), which mirrors the findings in the trade literature that more productive firms become exporters.[5]

Development of China's financial markets during the sample period was lagging behind, because financial market in China was among the last few industries which have been liberated to embrace the market discipline. Before and during the period of the early 2000s, China's financial market was still heavily under-developed, and many allocations of financial resources were largely inefficient (Allen et al., 2005; Guariglia and Poncet, 2008; Cull et al., 2009; Huang et al., 2015). The inefficiency of financial markets would especially add strains to firms with desire for rapid sales expansions during the period, post China's entry to the World Trade Organization in December 2011. Getting access to external finance was a priority for many firms, and financial constraints were a common problem. But, relatively speaking, state-owned firms (SOEs) and foreign-owned affiliates enjoyed better access (Lin

[3] Triangle debt was a big problem facing many Chinese firms during the late 1990s and early 2000s. Many firms sourced intermediate materials with a promise to pay the costs once their products are got paid by other firms on similar purchasing terms. Once some firms could not pay the costs with the agreed timeline, the link was cut broken, which had created a phenomenon, "triangle debt", restricting many firms' financial abilities.

[4] Various scholars, in their study of the Chinese economy, have noticed the significant inter-provincial trade barriers, including, but not limited to, Young (2000), Poncet (2003, 2005), Naughton (2003), Bai et al., (2004), Xu and Fan (2012), Wong (2012), and Huang et al., (2015). In particular, Wong (2012) finds that China's domestic trade costs are nearly twice as large as its international trade costs.

[5] Empirical studies, as early as Bernard and Jensen (1995), have provided numerous cases that showed a clear linkage between a firm's productivity and its export decision. This evidence is also documented in surveys by Wagner (2007), and Greenaway and Kneller (2007), among others.

and Tan, 1999; Cull and Xu, 2000, 2003; Poncet, et al., 2010).[6] Privately and collectively owned firms often were found to face credit constraints on the one hand, and were discriminated against in getting financial loans on the other (Langlois, 2001).[7]

It is within this background, we study the effects of external finance on firms' decision to advance their sales *domestically* and *internationally* in their role to overcome trade costs of setting up sales channels. We use the *China Investment Climate Survey* (2005) from the World Bank of 12,372 firms to inform our study. We differentiate firms' sales destinations in firms' home provinces, outside a firm's home province in China, and overseas markets. We then categorize firms in mutually exclusive four types as *Provincial Firms* (sales only in firms' home provinces), *Domestic Firms* (sales also outside firms' home provinces across China, but no exports), *Pure Exporters* (only exports but no domestic sales) and *All Sellers* (with both domestic and international sales). We utilize the multinomial logit method (MNL) model to capture firms' choices to be a particular firm type.

Our study makes some notable contributions to the literature. First, access to financial loans in China in the early 2000s was still quite challenging, and the estimated effects would provide a useful empirical evidence to highlight the role of external finance in firms' sales expansion efforts. Second, adding domestic sales complements previous studies regarding external finance and Chinese firms' exports, including Du and Girma (2007), and Feenstra et al., (2014). And finally, using firms' access to financial loan in China to overcome trade costs is also a complimentary perspective to the productivity angel, often analyzed in the literature and especially in China's case by Huang et al., (2015) and Bao et al. (2015).

We find that access to financial loans significantly raises firms' odds to overcome trade barriers to sell their products outside their home provinces in China, and in the international market. The effects of external finance to overcome trade barriers vary across firm ownership types of being SOEs, foreign owned and privately/collectively owned; and are indicative of their perceived importance. Given the covert nature of domestic trade barriers, results from firms' experiences help uncover their existence: access to external finance significantly increases the odds more for firms to sell outside their home provinces if they felt local protection than those which didn't. We show that the effects of external finance are to help firms overcome fixed trade costs, not necessarily with their sales volume per se during the short time period.

[6] Gregory and Tenev (2001) pointed out that local governments encouraged bank lending to state-owned enterprises by extending explicit or implicit guarantees or through other means on one hand, and banks did not consider a bad loan to a state-owned enterprise to be as serious as a bad loan to a private enterprise on the other. This view seems to be supported by Chan et al., (2012), which find that political connection does matter for firms' access to bank loan; and show that politically-connected firms have better access.

[7] Langlois (2001) refers to a survey of private firms conducted in 1999 by the International Finance Corporation (IFC). They locate in four provinces: Beijing, Chengdu (in Sichuan province), Shunde (in Guangdong province), and Wenzhou (in Zhejang province). It finds that about 80% considered lack of access to external finance to be a serious constraint.

The remainder of the paper is organized as follows. Section 2 describes the data, Section 3 proceeds with the estimation method, Section 4 report the main regression results, Section 5 conducts additional analyses and Section 6 concludes.

2. A Close Look at the Data

Data used in this study are taken from the *China Investment Climate Survey* (2005) conducted by the World Bank. The survey randomly chose 12,400 firms located in 120 cities: 100 firms in each city, but 200 firms in the four municipality cities (Beijing, Tianjin, Shanghai, and Chongqing). The survey collects firms' sales shares (not volume) within the city where they operate (*home* city), within their home provinces but excluding their home city, other provinces in China, and overseas. Based on the reported sales shares in various exclusive and exhaustive destinations, we group firms exclusively between types as the following: *Provincial Firms* (for short, *ProvFirm*), with sales only in their home provinces (including their home city and other cities with their home provinces); *Domestic Firms* (for short, *DomFirm*), with positive sales shares outside their home provinces, but no exports; *Pure Exporters* (for short, *PureExpFirm*) with positive sales shares only in international markets but no positive domestic sales shares either in their home provinces or outside; and *All Sellers* (for short, *AllSeller*), with positive sales shares overseas, and positive sales shares in domestic destinations, which could be in their home provinces and/or other provinces in China. In this categorization, both *PureExpFirm* and *AllSeller* firms are traditionally defined exporters—the only difference between them is that *AllSeller* firms also have domestic sales, while *PureExpFirm* firms do not. We retain 12,372 firms which have the needed firm-level information for this study. Table 1 reports the distribution of the number of firms in each category in the sample. Among all the firms, about 15% only sell within their home provinces—*ProvFirm*; 48% sell domestically including outside their home provinces--*DomFirm*; 7.70% as pure exporters—*PureExpFirm*; and 30% sell both at home and abroad—*AllSeller*. Together, 38% firms are exporters, which is higher than the export ratios reported in studies of some other countries (see Bernard and Jensen, 1995, for the US, for instance), which might reflect China's active participation in trade during the early 2000s, right after China's accession to the World Trade Organization.

The comparison of the number of firms in each category reflects the sales hierarchy, but with China's specialties. *ProvFirms* are typically small in nature on the one hand; and a province in China is quite large on the other (due to China's large geographical area). The next natural step is for firms to expand their sales domestically beyond their provincial borders —*DomFirms* (about 47.7%). Following domestic sales are international sales—*AllSeller* firms. The only exception to the sales hierarchy is pure exporters—*PureExpFirm*—(7.70%). Pure exporters are a special category in that they do not face the necessary trade costs associated with building new sales channels overseas, since, in China's case, pure exporters largely engage in processing trade, producing based on foreign customers' orders.

Our criterion for grouping firms is clearly incremental, and different types of firms can have sales in one or more destinations specified here. For instance, *ProvFirm*, *DomFirm* and *AllSeller* firms can all have sales within their home provinces; *DomFirm* and *AllSeller* firms can both have sales outside their home provinces; and both *PureExpFirm* and *AllSeller* firms have exports. To compare domestic trade flows and international trade flows in firms' sales hierarchy, ideally, we would like to present firms' sales in each destination, which are unfortunately not reported in the survey. Nonetheless, we present sales shares averaged over all firms in their home provinces, outside their home provinces and in international markets, as shown in Table 2. In that metric, firms' home provincial markets account for 44.1% of total sales in the sample, other provincial markets (domestic trade) 39.4%, and exports 16.5%. It is evident that firms' home provincial markets are the largest market in their sales portfolio, and the orderly decreasing sales shares from home provincial markets, to other provincial markets, and then to international markets indicate their sales hierarchy in the presence of domestic and international trade barriers. In addition, domestic trade is over two times as large as exports, a similar observation as in Wong (2012). The much larger flow of domestic trade might not necessarily indicate that firms face smaller domestic trade barriers than international ones, because firms' domestic trade flows could also be facilitated by the close psychic distances among China's provinces including political system, business culture and common language (Huang et al., (2015).[8]

Regarding firms' access to external finance, the survey asks firms whether they had borrowed financial loans from banks and other financial institutions. Among the 12,372 surveyed firms, 7,435 firms borrowed financial loans, accounting for about 60%. Despite the earlier discussed borrowing difficulties for private owned firms, firms' access to financial loans is not significantly different among the different ownership types of SOEs, foreign affiliates and privately/collectively owned. The loan borrowing rate is 61% for private firms, 57% for state-owned firms, and about 58% for foreign-owned firms. The rate is even slightly higher for private firms than for other types, presumably signaling their greater need for loans than for other firm types. We build a *loan* indicator variable which takes the value of 1 for firms which had financial loans during the surveyed period, and 0 otherwise.

3. The Estimation Strategy

To model firms' choice to be one specific firm type among the four exclusive types with different (combinations of) domestic and international sales destinations, we introduce a framework based on firms' profits derived from their total sales. Let *k* denote each firm type.

[8] The political closeness across provinces helps ease any trade barriers arising from different political ideologies, commonly found in the literature (Dajud, 2013; Decker and Lim, 2009; Michaels and Zhi, 2010; Sekkel, 2009); the universal language makes it much easier to conduct business across provincial borders rather than the often found language barriers impeding international trade flows (Egger and Lassmann, 2012; Melitz, 2008; Melitz and Toubal, 2011); the Confucius culture and many social norms are shared across the country, making a trade-facilitating factor in China (Cyrus, 2012). Finally, internal migration has been ongoing for decades in China, which has led to a great business network across the country, conducive to domestic goods flows (Mehanna, 2003; Rauch, 1999; Rauch and Trindade, 2002).

We then have $k \in K = \{1, 2, 3, 4\}$, with $k = 1$ for *ProvFirm* type; $k = 2$ for *DomFirm* type; $k = 3$ for *PureExpFirm* type and $k = 4$ for *AllSeller* type. If a firm chooses type $j \in K$, then profits derived from type *j* are assumed to be higher than from any one of the other available types. That is:

$$\Pi^j(\mathrm{x}_0, \mathrm{z}) > \Pi^k(\mathrm{x}_0, \mathrm{loan}, \mathrm{z}), j \neq k, \text{and } j, k \in \{1, 2, 3, 4\} \quad (1)$$

Where Π indicates profits, which depend on firm characteristics (x_0), access to financial loans (*loan*) and other factors (z). Let ε be an idiosyncratic term and X= ($\mathrm{x}_0, \mathrm{loan}, \mathrm{z}$), then, a firm's profit by being *k* type is:

$$\Pi^k(\mathrm{x}_0, \mathrm{z}) = \beta_k' X + \varepsilon_k \quad (2)$$

For our empirical investigation, we use the multinomial logit method (MNL) to capture firms' multiple choices, with *ProvFirm* ($k = 1$) as the base category. The MNL model is:

$$P(K = k) = \frac{\exp(\beta_k' X)}{1 + \sum_{\mathrm{k}=2}^{4} \exp(\beta_k' X)} \quad (3)$$

The MNL model specifies well the multiple choices firms face. But a shortcoming is that it is not straight forward to interpret the estimated coefficients. To overcome that difficulty, researchers tend to derive the relative-risk ratios (*rrr*) from the estimations. For instance, for firm type *j*, the $rrr_{j/1}$ for vector X, compared with the base category firm type (*k*=1) (*ProvFirm*), is derived as:

$$rrr_{j/1} = \frac{P(K=j|X+1)/P(K=1|X+1)}{P(K=j|X)/P(K=1|X)} \quad (4)$$

Interpretation of *rrr*, for instance, $rrr_{2/1}$, is the following. Compared with *ProvFirm* (the base type, *k*=1), one unit increase in X will lead to the relative odds of firms choosing *DomFirm* type (*k*=2) $rrr_{2/1}$times what it was before. Thus, a greater than unity value of $rrr_{2/1}$ indicates that increase in X leads to a higher probability to choose *DomFirm* type than to choose the base type, *ProvFirm*, and vice versa. But the interpretation of the *rrr* rests on the independence of irrelevant alternatives assumption (IIA). The IIA assumption requires that the choice of any option does not affect the relative probability of choosing other options. In the empirical analysis, we use the Hausman test to test the IIA assumption (Hausman and McFadden, 1984).

For firm-level controls, the first one is firm size, for which we use firms' core business revenue in logs—*ln(Scale)*, as larger firms might have the additional resources to overcome trade costs. Firm productivity—sales revenue per worker in logs, *ln(Sales/L)*—is to capture the productivity effects, as more productive firms are found to be able to absorb some additional trade costs for both domestic and international trade (Huang, et al., 2015). Firms' capital labor ratio in logs—*ln(K/L)* is to capture firms' technology complexity, where K is firms' net fixed capital; and the ratio of R&D expenditure over total sales—*RD/Sales*—is to capture firms' innovation efforts. We also control firms' business experience by including

firm age—*Age*. To capture the differences among firms due to their ownership types, we introduce ownership indicators of *Private* for privately or collectively owned, *SOE* for state-owned, and *Foreign* for foreign affiliates. In the main regressions, we also different foreign affiliates between investors from Hong Kong, Macao and Taiwan (HMT), and *Other Foreign* (from other foreign sources) to control any fixed differences between the two sources, as some studies have shown that *HMT* investors might know the Chinese culture better than other investors and might enjoy certain advantages in their domestic sales expansion. We also include industry and location (city) specific effects by introducing industry and city binary variables to capture the inherent industry and location specific effects. After including these firm-level variables, we are left with 12,372 firms, while 28 firms do not have all relevant information and thus are dropped.

4. The Main Estimation Results

4.1 The Baseline Results

Table 3 reports the baseline results. The Hausman test statistics indicates that the IIA assumption in the MNL model is satisfied in our case.[9] Below, we explain the main results.

Loan—the *rrr* coefficient is significantly larger than 1. They indicate that with financial access, the odds to be *DomFirm*, or *PureExpFirm*, or *AllSeller*, compared with the odds to be the base type of *ProvFirm*, are significantly larger than those without financial access. Specifically, with financial loans, firms have 1.647 times the odds to choose *DomFirm* as the odds to be *ProvFirm*; 1.262 times the odds to choose *PureExpFirm* as those to be *ProvFirm*; and 2.313 times the odds to choose *AllSeller* as those to be *ProvFirm*. The coefficients suggest the following. First, having access to financial loans increases firm' odds to export, either as pure exporters, or as exporters with domestic sales. This is consistent with some earlier findings in the literature (Svaleryd and Vlachos, 2002; Svaleryd and Vlachos, 2005; Do and Levchenko, 2007; Minetti and Zhu, 2011; Manova, 2013), and echoes those for China's case (Du and Girma, 2007; Feenstra et al., 2014). Second, access to financial loans significantly increases firms' odds to sell outside firms' home provincial markets—for choosing to be *DomFirm* or to be *AllSeller* firms. Third, the magnitudes of the coefficients suggest that domestic trade barriers are significant hurdles for firms in intra-national trade, despite the close psychic distances across provincial borders arising from the same set of rules of law, same official language and same or similar culture (Huang et al., 2015). Further, the magnitudes of the *rrr* coefficients on firms' odds to choose *DomFirm* over *ProvFirm* are larger than that to choose *PureExpFirm* over *ProvFirm*; and are the highest to choose *AlllSeller* over *ProvFirm*. The results here unequivocally suggest that there exist domestic and international trade barriers, and access to external finance helps relax firms' financial constraints to overcome the fixed trade costs arising from these trade barriers. However,

[9] We also used the Small-Hsiao test and reach similar conclusion of failing to reject the independence of the irrelevant alternatives hypothesis.

caution is required to interpret that domestic trade barriers are *higher* than international trade barriers, because pure exporters are a special category of firms in China, a great proportion of which are engaged in global production chains or processing trade. In addition, a fairly large fraction of these pure exporters are foreign owned—in that foreign owners either control firms' sales or sometimes feed the production in China into their global production chains. In those cases, the fixed costs of setting up trading channels are not as high as ordinary exporters in their expansion to the international markets.

Moving to firm-level control variables, our results both confirm those in the literature and also reveal China's specialties that firms possess. The *rrr* coefficient on firm size, *ln(Scale)*, is significantly larger than 1, indicating that larger firms are more likely to expand their sales across China and in the international markets by choosing to be *DomFirm*, *PureExpFirm* or *AllSeller* firms, than to be *ProvFirm*, the base type. This is consistent with the often reported size effect in the trade literature (Bernard and Jensen, 1995). Here, productivity effects (*ln(Sales/L)*)on firms' choice to choose other types are somewhat smaller, which mirrors the findings in Lu (2010) which finds that there is no exceptional productivity performance for China's exporters.[10] Increases in firms' capital-labor ratio significantly raise firms' odds to choose to be *DomFirm* and *AllSeller* over the base firm type, but not for *PureExpFirm*. Many pure exporters in China often engage in low-tech processing and/or assembling activities, which do not require higher capital ratio per worker. Increases in RD/Sales ratio raise firms' odds to choose *DomFirm* type or to choose *AllSeller* type over the base firm type, but also not to be *PureExpFirm*. Firm experiences (*Age*) do not appear to be an important factor with a coefficient not significantly different from 1, which might signal that firms' experiences in business might not be a factor in influencing firms' decision to advance their sales.

For firms' ownership types, compared with the base type of SOEs, *ceteris paribus*, firms with all other ownership types have higher odds of becoming *DomFirm*, *PureExpFirm* and *AllSeller* over the base firm type. This apparent discrepancy regarding SOEs has more to do with firms' inherent differences across these ownerships, which we analyze in detail shortly after. There is a higher tendency for *HMT* and *Other Foreign* affiliates to choose to be *DomFirm*, *PureExpFirm* and *AllSeller* over the base firm type, than for private/collective firms, which might imply the objectives of some foreign affiliates in China to serve the domestic Chinese market, or to use China as an export platform due to its abundant and relatively skilled labor.

4.2 Correcting Endogeneity of Getting Financial Loans

Our main results indicate that financial loans increases firms' ability to overcome both domestic and international trade costs and thus can sell both domestically and internationally. It could be argued that banks might know firms' market sales potential and then decide to loan them. In turn, with financial loans, firms then have some comparative advantage in relaxing their liquidity constraints and develop better sales channels to advance their sales.

[10] The specialty of pure exporters in China is also manifested by their productivity pattern. Lu (2010) finds that there is no productivity premiums associated with exporters in China, with more than half of China's exporters exporting most of their output.

This is theoretically sound, but practically difficult, as it is hard to imagine that banks could have accurate micro-level data to do the necessary potential analysis on firms. We nonetheless choose to correct this potential endogeneity using instrumental variables (IVs).

The IVs have to be related with firms' ability to obtain loans, but unrelated with firms' sales expansion. We choose to use two firm-level variables: workers' share with frequent computer usage (*Computer*), and whether there are fitness facilities in the firm (indicator of *Fitness*). Firms with a higher share of workers with frequent usage of computers might signal that those firms have a higher percentage of skilled labor force, which might signal their resilience in dealing with more difficult situations. Firms' fitness facilities indicate firms' mindset to promote a healthy workplace, avoiding unnecessary sick leaves. Both are related with firms' labor force, which could be part of the signals financial institutions might assess but are not related with firms' choice to be a specific firm type. Beyond firm-level information, we also compute the mean loan ratio (*meanloan*)—the share of firms in a city-industry pair which borrowed financial loans over all firms operating in that city-industry. The mean ratio implies the general easiness/difficulty for getting loans in a city-industry, and is clearly predictive of a firm's chances to get one, but not with that firm's choice of choosing to be a specific firm type. Given our non-linear nature of the empirical investigation, we adopt a two-step procedure as suggested in Hilbe (2011). In the first stage, we use OLS to regress the *loan* indicator on the IVs and all other exogenous variables to get the predicted values of *loan*, denoted as *IVloan*. In the second step, we use *IVloan* in the MNL estimation. In the empirical analysis, we test these IVs' validity with the criteria proposed by Cameron and Trivedi (2009) to test the joint significance of the instruments. "One commonly used diagnostic is, therefore, the F statistic for joint significance of the instruments. … A widely used rule of thumb suggested by Staiger and Stock (1997) views an F statistics of less than 10 as indicating weak instruments" (Cameron and Trivedi , 2009: P190). We conduct this test in all the relevant empirical regressions, and report the associated F-test statistics.

The first-step results are reported in Table 4. The three IVs significantly explain firms' possibility of getting financial loans; and the F-test rejects the hypothesis that the IVs are weak. We then use the predicted value of *loan*, *IVloan*, in the second stage regression, with results in Table 5.

The coefficients of *rrr* on firms' choices to be *DomFirm*, *PureExpFirm* and *AllSeller* from *IVloan* (Table 5) are in close proximity from *loan* (Table 3). So are the cases for firm-level controls. For instance, the *odds* to be *AllSeller* is 2.166 times the base type with financial loans than without from IV correction; and it is 2.128 times from *loan*. We then conclude that firms' access to external financial loans might be subject to endogenity, but the bias is not as serious as feared. In the remaining analysis, we choose to use the IV corrected *IVloan* variable, obtained from the first stage regressions for the rest of the analyses.[11]

[11] Results from *loan* indicator in the subsequent analyses are also obtained for comparison. It is largely in line with those from *IVloan*. These results are available upon request.

4.3 Heterogeneity across Firm Ownership Types

The baseline results across firm ownership dummies present significant differences in their roles affecting firms' choices to sell domestically or overseas by settling with a specific firm type. Ownership dummies can capture fixed effects associated with SOEs, *Foreign* affiliates and private/collective firms, but it is inadequate to address whether the effects of access to financial loans vary across these different types of firms in their odds to choose a specific firm type. Examining this issue could explore whether the inherent firm differences across ownership types would manifest into different ways regarding their choice for a specific firm type, with and without financial access, and also feed into the ongoing curiosity regarding the inherent differences among firms operating in China. Since coefficients on *HMT* and *Other Foreign* lead to similar conclusions, we would pull them together as *Foreign*.

There are two ways to proceed econometrically: one is to include additional interaction terms in the whole sample between ownership dummies and the *IVloan* variable, and the other is to split the sample into three subsamples according to firms' ownership types. Either way has its advantages and shortcomings. Coefficients obtained from the whole sample regressions are easier for comparison across firm *ownership* types, but the base firms in the whole sample still consists of firms with all *ownership* types. That would cloud the interpretation *within* each firm ownership type, with and without financial access. Sample splitting along firm *ownerships* would allow straight comparison *within* each firm ownership type between firms with and without access to financial loans, but across firm *ownership* comparison needs more econometric testing *among* regressions. Here, we are interested in the effects of financial loans on firms' choices to sell domestically and/or internationally, not only *across* firm ownership types, but also *within* each ownership type. To that end, we choose the second method and split the whole sample into three subsamples consisting SOEs, private/collective firms and foreign affiliates, respectively. We thus run three parallel regressions each for *SOE*s, foreign affiliates and private/collective firms respectively. To focus on the main variable of interest, we choose to report only the coefficients on the *IVloan* indicator, reported in Table 6.

For SOEs, access to financial loans does not increase their odds to choose to be *DomFirms*, or to be *PureExpFirms*, or to be *AllSellers*, over the base firm type despite the existence of both domestic and international trade costs. The results might be partially explained by SOEs' special relationships with local or central governments being investors.[12] With (local) governments as the largest shareholders, SOEs are often burdened with undue social responsibilities and other constraints, though at the same time, they might also enjoy some special advantages in other aspects, such as getting certain approvals faster. The unnecessary burdens might tie their hands such as laying off surplus workers, but these special connections might help some in overcoming provincial barriers. Our results indicate

[12] State-owned enterprises, though often clustered together, actually belong to different layers of "state", as central government agencies, as provincial government agencies and as city-level government agencies.

that having access to financial loans is not a deterministic factor in SOEs' decision to choose to sell outside their home provinces or internationally over serving their home provincial markets. This finding echoes the findings in Huang et al. (2015) where they find that productivity effects to overcome provincial barriers are not significant for SOEs.

For foreign affiliates, the results indicate that having financial loans is not a significant factor in their odds to choose to be pure exporters (*PureExpFirm*), but is so in choosing to sell either domestically in China outside their home provinces (*DomFirm*), or both domestically in China and overseas (*AllSeller*). The no effects on the odds to be pure exporters over the base firm type for foreign affiliates is not surprising, given the processing trade nature of pure exporters in China, especially for foreign affiliates. However, being foreign owned does not seem to guarantee them an easy pass across provincial trade barriers, as the favorable policies toward FDI by local governments are meant for investment, not so much for sales. Access to financial loans thus significantly increases foreign affiliates' odds to be *DomFirm* or *AllSeller* over the base type, so that the loans can help them overcome provincial trade barriers and sell in China's domestic markets. The very close coefficients of *rrr* for *DomFirm* and for *AllSeller* over the base type imply that access to financial loans are very conducive for foreign affiliates to overcome domestic trade barriers in China, but not necessarily international trade barriers, as the latter is generally small for foreign affiliates by using the existing sales channels of their overseas parents.

Private/collective firms operating in China are the closest to the typical firm type analyzed in the trade literature. They do not have special relationships with any layers of the Chinese governments as SOEs on the one hand, nor any existing foreign sales channels as foreign affiliates on the other. The newly obtained results suggest that having access to financial loans significantly increases their odds for privately/collectively owned firms to choose *DomFirm*, or *PureExpFirm*, or *AllSeller* firms over the base firm type. The magnitudes confirm previous findings that domestic trade barriers are a hurdle for firms' domestic sales endeavor, despite the close psychic distances across China's provinces.

Comparing the coefficients *across* the three parallel regressions, the test statistics reject the hypothesis that coefficients are equal. From the magnitudes of the coefficients, we conclude that access to financial loans significantly increases the odds the most for private/collective firms to choose *DomFirm* over the base firm type, followed by foreign affiliates, but no effects for SOEs. The same holds for firms' odds to be *AllSeller* over the base type. But for the odds to choose to be *PureExpFirm* are only significantly higher for private/collective firms to be over the base firm type. The results not only highlight the significant effects of access to financial loans to enable firms to overcome both domestic and international trade costs, but also shed light on the inherent differences among the three ownership types of firms. Both domestic and international trade costs present the greater challenges for private/collective firms, than for either SOEs or foreign affiliates, and thus

access to external finance offer larger comparative advantage for them to over trade costs in setting up sales channels both at home and abroad.

5 Robust Analyses

5.1 The Degree of Financial Constraint

As the data show, not all firms got access to external financial loans, as getting access to external finance is often a challenge in China. That might propel firms to constantly work on getting financial loans, regardless whether they need a loan or not at the time. It could be cases that some firms might have obtained loans, not completely based on the practical necessity, but through their network ability. This obviously would lead to some inefficient allocations of financial resources, as corroborated in findings in a few studies (Allen et al., 2005; Guariglia and Poncet, 2008; Cull et al., 2009; Huang et al., 2015). Although the data do not indicate significant differences in the ratios of getting loans across the three ownership types, they might not adequately reflect firms' real needs for financial loans, especially in lieu of Langlois (2001)'s findings that about 80% of private firms considered lack of access to external finance to be a serious constraint.

The World Bank survey follows up with a question asking those firms who have obtained financial loans the importance of the loan. Among the 7,435 firms with financial loans, 1,981 firms (accounting for 27%) thought the financial loan was *not* important, 3,441 firms (accounting for 46%) believed it was *somewhat* important, and only 2,013 firms (accounting for 27%) believed it was *very* important.

In lieu of our argument that financial loan helps firms relax their liquidity constraints and overcome trade costs to advance their domestic and international sales, then the effects of financial loans would be larger for those firms if they deem the loans are important than for those they think otherwise. Further, along with the previous evidence of difficulty faced by private firms, we would suspect that the estimated effects of financial loans for firms to advance their sales would be different, not only across the perceived loan importance, but also across firm ownership types.

In the following empirical quest, we combine "very important" and "somewhat important" as one group of being "important". We then build an indicator "important" for these loans, and include an additional interaction term of *loan* with *important*, *loan*important*. The coefficient on *loan*important* would capture the additional effects for firms who deem the financial loans important. We first look at the differences for the total sample, and then further highlight the differences across firm ownership types by running parallel regressions respectively for SOEs, foreign affiliates, and private/collective firms. The associated results are reported in Table 7, again with *IVloan* as the explanatory variable.

In the whole sample, we also control for fixed effects arising from firm ownership type, industry type and location, in addition to all relevant firm-level covariates. While the *IVloan* alone captures the base results, the *IVloan*Important* captures the additional effects. The

coefficients on *IVloan* alone seem to suggest that if the loans are deemed unimportant, their effects to relax firms' financial constraint are close to nil. However, the coefficients on *IVloan*Important* indicate that the deemed important financial loans significantly increases firms' ability to overcome both domestic and international trade costs and their odds to sell domestically (*DomFirm*) and internationally (*PureExpFirm* or *AllSeller*).

Across firm ownership types, our results are even more telling. For SOEs, access to financial loans significantly increases their odds to become *DomFirm* and *AllSeller* firms, but only if the loans are deemed important. This result emerges only after we have differentiated the importance of loans. Combined with earlier findings that access to financial loans is not an important factor for SOEs to overcome domestic and international trade costs, it is now clear that that result is driven by the unimportant financial loans that SOEs obtain. The results suggest that the existence of domestic and international trade costs are apparent barriers for SOEs as well for those which are in need for more liquidity.

For foreign affiliates, the coefficients of *rrr* on *IVloan* and *IVloan*Important* unequivocally imply that access to financial loans significantly enables foreign affiliates to overcome domestic trade barriers so that they can advance their sales domestically by increasing their odds to be *DomFirm* or *AllSeller* type. In addition, if they deemed that financial loans are important, the effects from the loans are much larger across the board for their odds to choose to be *DomFirm*, or *AllSeller* than those firms which think otherwise. These results once again suggest that domestic trade barriers present great hurdles for foreign affiliates in their endeavor to advance their sales within China.

For private/collective firms, the results are very revealing regarding the obstacles these firms face in expanding their sales. First, even if the loans are not deemed as important, they are still significant in increasing firms' odds to choose to be *DomFirm*, *PureExpFirm* or *AllSeller*, and the effects are significantly much larger if the loans are indeed deemed important. This indicates that the tremendous trade barriers private/collective firms face, both domestically and internationally.

5.2 Local Market Protection

We have argued throughout the paper the pervasiveness of the existence of provincial trade barriers in China. However, China's local market protection, unlike international trade barriers, is hard to quantify, as they often take covert forms so not to be detected easily. Although not overt, its existence can, by part, be also mirrored by the continuous efforts by the Chinese central government. As recently as in the 2015 government report, the Chinese central government has once again emphasized the importance of fostering an integrated domestic market. Due to its covert nature, the World Bank survey followed up with a question asking firms whether they had *experienced* or *felt* local protectionism after they reported they had domestic sales outside their home provinces. If, as we have argued, entry barriers across provincial borders are prevalent, then financial loans would help firms

overcome these barriers regardless whether they *felt* them or not, and it would be larger for those firms who indeed *felt* trade barriers. For the 5,910 firms with sales outside their home provinces, 2,479 firms said yes, and 3,431 firms answered no.

Following the spirit of the earlier analyses, we split *DomFirm* firms into *DomFirm+* and *DomFirm-* to highlight their perceived experiences of local protection, with "+" for having experienced/felt local protection, and "-" otherwise. We carry out the analyses first for the whole sample to get the big picture, and then for each ownership type. Across ownership types, we again have three subsamples as SOEs, foreign affiliates and private/collective firms, because different firm ownerships often exhibit various patterns in their domestic sales expansion. These second-stage results are reported in Table 8.

First, even pooling all firms together, access to financial loans significantly increases firms' odds to choose to be *DomFirm*, or *PureExpFirm* or *AllSeller*, over the odds to be the base type, even if firms did not feel local market protection. And the associated odds are significantly larger for firms to choose to be *DomFirm* when they felt local market protection (*DomFirm+*) than for those which didn't (*DomFirm-*). The results, besides confirming our main findings, lend additional support on the rationale that financial loans help firms overcome provincial entry barriers. What is also revealing is that, regardless of whether firms felt/experienced local market protections, their existence is well and alive.

Across firm ownership types, statistical tests lead to rejection of the hypotheses that the coefficients are equal across these parallel regressions. Below, we discuss the results for each ownership type.

For SOEs, financial loans indeed significantly increase SOEs' odds to be *DomFirms* only for those which felt local market protections. This implies not only the existence of provincial trade barriers in China, but also the limitations of the special relationship between SOEs and local governments in their role in helping firms over domestic trade costs.

For foreign affiliates and for private/collective firms, access to financial loans generates much larger effects on their odds to overcome domestic trade barriers and sell outside their home markets, if they felt local market protection than those which did not. The much larger coefficients of *rrr* on *IVloan* for foreign affiliates and for private/collective firms both for *DomFirm-* and *DomFirm+* are indicative of the extent of domestic trade barriers which they have to overcome.

Taken altogether, these experimentations suggest the pervasiveness of domestic trade barriers, regardless of firms' own experiences with provincial barriers, and offer new supports for our treatment of splitting firms along the dimensions of ownerships.

5.3 External Finance and Firms' Sales Shares

Throughout the paper, we have argued and shown that access to financial loans can help firms overcome (fixed) trade costs to advance their sales domestically and internationally. Along that line of argument, then access to financial loans does not necessarily lead to sales

increase in these destinations especially in the short time period, i.e., not necessarily in helping firms decrease their variable costs. And also sales increase would be caused by many factors such as better quality product, and more skilled sales personnel (Huang et al., 2015).

The survey collected firms' sale shares in the city where they operate (*cityshare*), in other cities within their home provinces (*outcityshare*), in other provinces (*outprovshare*) and in the international market (*expshare*). This four-tier sales hierarchy offers an ideal case to examine the role of financial loans in overcoming fixed trade costs. With firms' sales shares in each destination, we adopt a fractional multinomial logit model (fractional MNL), specified in Papke and Wooldridge (1996), to advance our study. We use firms' sales shares in their home city, *cityshare*, as the base. We also utilize the two-stage regression method to correct the endogeneity in the first stage. The second stage results are reported in Table 9.

The newly obtained results show that access to financial loan does not significantly increase firms' sales shares in other cities within the same province (*outcityshare*), nor in other provinces in China (*outprovshare*), nor in the international markets (*expshare*). These results, combined with earlier findings, suggest that access to financial loans help firms over the fixed trade costs, but not necessarily firms' variable costs.

6 **Concluding Remarks**

Setting up sales channels internationally needs a good amount of capital upfront before firms could begin exporting. But, international trade barriers are only part of the barriers firms face: domestic trade barriers are substantial, with China being a case in point.

The paper examines the effects of access to external finance for firms to overcome the fixed costs arising from both domestic and international trade barriers to advance their sales, by utilizing a detailed survey by the World Bank of 12,272 firms operating in China. We differentiate firms' sales destinations within their provinces, outside their home provinces, and overseas. We thus categorize firms in four exclusive groups: *Provincial Firms*—with sales only in their home provinces; *Domestic Firms*—with sales outside their home provinces, but no exports; *Pure Exporters*—only exports (no domestic sales) and *All Sellers*—with domestic and international sales. Differentiating domestic sales destinations across provincial borders aim to capture domestic trade barriers. We estimate the effects of access to external finance on firms' odds to choose to be a particular firm type.

We find that access to financial loans significantly raises firms' odds to overcome trade barriers to sell their products outside their home provinces in China, and in the international market. The magnitudes of domestic trade barriers are as much a hurdle for firms. The effects of external finance to overcome trade barriers vary across firm ownership types of being SOEs, private/collective firms and foreign affiliates; and are indicative of the perceived importance of the financial loans. Results from firms' experiences help uncover their existence: access to external finance significantly increases the odds more for firms to sell in other provincial markets if they felt/experienced local protection than those which didn't.

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Table 1: Firms and Their Sale Hierarchy

		Definition	No. of firms	Share in total number of firms (%)
Firms with no exports	*ProvFirm* (*Provincial Firms*)	Sales only in firms' home provinces	1811	14.64
	DomFirm (*Domestic Firms*)	Sales outside firms' home provinces	5899	47.68
Firms with exports	*PureExpFirm* (*Pure Exporters*)	Exports only	950	7.68
	AllSeller (*All Sellers*)	Exports plus domestic sales	3712	30.00
Total			12，372	100

Source: Authors' own calculations.

Table 2: Distribution of Firms' Sales Shares

	Home Provinces	Outside Home provinces	International Markets
Types of firms	*ProvFirm* *DomFirm* *AllSeller*	*DomFirm* *AllSeller*	*PureExpFirm* *AllSeller*
Sales shares in all firms' total sales (%)	44.1	39.4	16.5

Source: Authors' own calculations.

Table 3: The Main Results

Variables	***DomFirm***	***PureExpFirm***	***AllSeller***
Loan	1.506***	1.329***	2.128***
	(0.098)	(0.145)	(0.165)
ln(Scale)	1.476***	2.019***	2.566***
	(0.041)	(0.087)	(0.082)
ln(Sales/L)	0.806***	0.507***	0.493***
	(0.033)	(0.034)	(0.024)
ln(K/L)	1.071***	0.827***	1.139***
	(0.026)	(0.033)	(0.034)
Age	0.998*	0.999	0.997**
	(0.001)	(0.001)	(0.001)
RD/Sales	1.111***	1.023	1.148***
	(0.021)	(0.032)	(0.022)
Private	1.546***	2.163***	2.143***
	(0.167)	(0.576)	(0.277)
HMT	1.427**	10.210***	3.768***
	(0.248)	(3.086)	(0.725)
Other Foreign	2.339***	35.101***	10.644***
	(0.453)	(10.962)	(2.199)
Industry fixed effects	yes	yes	yes
City fixed effects	yes	yes	yes
IIA test		Prob>chi2 = 1.000	
Observations		12372	
Adj. R^2		0.267	

Note: ***, ** and * denote 1%, 5% and 10% significance level respectively.

Values in parentheses are standard errors.

Table 4. First step of IV Regression

Variables	coefficient
Computer	0.001**
	(0.000)
Fitness	0.026***
	(0.009)
MeanLoan	0.893***
	(0.023)
ln(Scale)	0.076***
	(0.003)
ln(Sales/L)	-0.061***
	(0.005)
ln(K/L)	0.044***
	(0.003)
Age	0.000
	(0.000)
RD/Sales	0.003**
	(0.001)
Private	0.088***
	(0.014)
HMT	0.046**
	(0.020)
Other Foreign	0.005
	(0.019)
Industry fixed effects	yes
City fixed effects	yes
Observations	12372
Adj. R^2	0.269
F-test	29.60

Note: ***, ** and * denote 1%, 5% and 10% significance level respectively. Values in parentheses are standard errors. *Computer* is the ratio of staff regularly using computers. *Fitness* is a dummy variable indicating whether there are any fitness facilities in the firm. *Meanloan* is the city-industry mean of the firm-level value of loan.

Table 5: The Main Results with IV Correction of Endogeneity

	DomFirm	***PureExpFirm***	***AllSeller***
IVloan	1.762***	1.297	2.166***
	(0.364)	(0.461)	(0.523)
ln(Scale)	1.452***	2.061***	2.547***
	(0.048)	(0.106)	(0.096)
ln(Sales/L)	0.816***	0.508***	0.497***
	(0.035)	(0.035)	(0.025)
ln(K/L)	1.063**	0.829***	1.139***
	(0.028)	(0.035)	(0.036)
Age	0.999*	0.999	0.997**
	(0.001)	(0.001)	(0.001)
RD/Sales	1.116***	1.028	1.153***
	(0.021)	(0.032)	(0.023)
Private	1.530***	2.168***	2.141***
	(0.168)	(0.583)	(0.280)
HMT	1.414**	10.122***	3.724***
	(0.246)	(3.061)	(0.713)
Other Foreign	2.350***	35.158***	10.595***
	(0.454)	(10.962)	(2.180)
Industry fixed effects	yes	yes	yes
City fixed effects	yes	yes	yes
IIA test		Prob>chi2 = 1.000	
Observations		12372	
Adj. R^2		0.264	

Note: ***, ** and * denote 1%, 5% and 10% significance level respectively.

Values in parentheses are standard errors.

Table 6. Loan Effects across Firms' Ownership Types

Results for the Subsample of SOEs			
	DomFirm	***ExpPureFirm***	***AllSeller***
IVloan	1.166*	0.297	1.580
	(0.631)	(0.494)	(0.990)
Observations		1118	
Adj. R^2		0.247	
Results for the Subsample of Foreign Affiliates			
	DomFirm	***ExpPureFirm***	***AllSeller***
IVloan	3.205**	0.399	3.086**
	(1.773)	(0.230)	(1.689)
Observations		2381	
Adj. R^2		0.177	
Results for the Subsample of Private/Collective Firms			
	DomFirm	***ExpPureFirm***	***AllSeller***
IVloan	4.751***	4.425***	9.176***
	(0.851)	(1.599)	(2.009)
Observations		8873	
Adj. R^2		0.181	

Note: ***, ** and * denote 1%, 5% and 10% significance level respectively. Values in parentheses are standard errors.

Table 7: Loan Effects Vary With Firms' Perception of Its Importance

	DomFirm	***ExpPureFirm***	***AllSeller***
IVloan	0.949***	0.828**	0.528**
	(0.227)	(0.337)	(0.150)
*IVloan *Important*	1.903***	1.570**	3.629***
	(0.227)	(0.301)	(0.504)
Observations		12372	
Adj. R^2		0.267	

Results for the Subsample of *SOEs*

	DomFirm	***ExpPureFirm***	***AllSeller***
IVloan	0.858*	1.976	0.636
	(0.501)	(3.228)	(0.459)
*IVloan *Important*	1.189***	1.169	2.267**
	(0.437)	(1.073)	(0.984)
Observations		1118	
Adj. R^2		0.159	

Results for the Subsample of *Foreign* Affiliates

	DomFirm	***ExpPureFirm***	***AllSeller***
IVloan	3.208*	0.700	1.790*
	(1.985)	(0.441)	(1.084)
*IVloan *Important*	1.064**	0.699**	1.253***
	(0.413)	(0.284)	(0.479)
Observations		2381	
Adj. R^2		0.133	

Results for the Subsample of *Private/Collective* Firms

	DomFirm	***ExpPureFirm***	***AllSeller***
IVloan	2.630***	6.546***	2.496***
	(0.513)	(2.757)	(0.637)
*IVloan *Important*	1.809**	1.951***	3.807***
	(0.223)	(0.471)	(0.577)
Observations		8873	
Adj. R^2		0.135	

Note: ***, ** and * denote 1%, 5% and 10% significance level respectively. Values in the parentheses are standard errors. *IVloan*Important* is the interaction term of predicted values of the *loan* indicator and a dummy variable *Important* indicating whether accessing finance affects the company's operation and growth.

Table 8. Loan Effects and Firms' Experience of Local Market Protection

Sample	***DomFirm-***	***DomFirm+***	***PureExpFirm***	***AllSeller***
IVloan	3.333***	5.041***	1.343***	6.849***
	(0.568)	(0.928)	(0.339)	(1.281)
Observations		12372		
Adj. R^2		0.185		
Results for the Subsample of *SOEs*				
	DomFirm-	***DomFirm+***	***PureExpFirm***	***AllSeller***
IVloan	0.782*	1.229*	2.206	1.601*
	(0.423)	(0.669)	(2.978)	(0.921)
Observations		1118		
Adj. R^2		0.132		
Results for the Subsample of *Foreign* Affiliates				
	DomFirm-	***DomFirm+***	***PureExpFirm***	***AllSeller***
IVloan	3.133**	3.962***	0.485	2.359*
	(1.619)	(2.111)	(0.236)	(1.102)
Observations		2381		
Adj. R^2		0.121		
Results for the Subsample of *Private/Collective* Firms				
	DomFirm-	***DomFirm+***	***PureExpFirm***	***AllSeller***
IVloan	3.850***	5.465***	11.907**	10.837***
	(0.656)	(1.034)	(3.952)	(2.151)
Observations		8873		
Adj. R^2		0.107		

Note: ***, ** and * denote 1%, 5% and 10% significance level respectively. Values in parentheses are standard errors.

Table 9. Multi-destination Sale Shares

Variables	***outcityshare***	***outprovshare***	***expshare***
IVloan	0.118	0.098	0.020
	(0.093)	(0.092)	(0.168)
ln(Scale)	-0.081***	0.116***	0.281***
	(0.013)	(0.013)	(0.022)
ln(Sales/L)	0.095***	0.025	-0.361***
	(0.019)	(0.019)	(0.033)
ln(K/L)	0.037***	0.067***	-0.142***
	(0.013)	(0.013)	(0.022)
Age	0.000	-0.000	-0.001
	(0.000)	(0.000)	(0.001)
RD/Sales	-0.016***	0.047***	-0.017**
	(0.005)	(0.006)	(0.008)
Private	-0.097*	0.017	0.390***
	(0.053)	(0.049)	(0.105)
HMT	-0.571***	-0.262***	1.508***
	(0.080)	(0.073)	(0.124)
Other Foreign	-0.815***	-0.285***	1.969***
	(0.075)	(0.065)	(0.118)
Industry fixed effects	yes	yes	yes
City fixed effects	yes	yes	yes
Observations		12372	

Note: ***, ** and * denote 1%, 5% and 10% significance level respectively. Values in parentheses are standard errors.