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Market Structure in Transition: Entry and Competition in Slovakia

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Abstract

The present paper provides first empirical evidence on the relationship between market size and the number of firms for a transition economy. We estimate size thresholds required to support different numbers of firms for seven retail and professional service industries in a large number of distinct geographic markets in Slovakia. The empirical analysis is carried out for three time periods (1995, 2001 and 2010) characterizing different stages of the transition process. Our results suggest that the relationship between market size and the number of firm has changed substantially over time. While entry threshold ratios tend to be larger than one and decline with the number of firms in most professions in 1995, the estimation results obtained for 2010 suggest entry threshold ratios much closer to one. This finding is consistent with observations suggesting a significant decline in entry barriers as well as an intensification of competition over time.

Keywords: entry thresholds, competition, Slovakia, transition, geographic markets
JEL codes: L22, D22, M13, R11

1 Introduction

Competition through entry of new firms has been viewed as an essential element of transition towards a market economy. This relationship between market structure, competition and performance is the main focus of research in Industrial Organization. While much of the early work in this area implicitly or explicitly assumed market structure exogenously given, researcher soon developed elaborate theoretical models investigating the contexts in which firms' strategic behavior influences market structure. These models can provide a solid basis for empirical research on the determinants and consequences of firms' entry decisions.[1]

The empirical literature on changes in market structure and the strategic entry decisions of individual firms has applied different approaches; excellent reviews of the empirical literature are available in Geroski (1995) and Caves (1998) and more recently Berry and Reiss (2007). In a series of papers, Bresnahan and Reiss (1988, 1991) argue that by studying entry and exit of firms (more specifically by investigating the relationship between the number of firms in a market and market size), economists can gain insight into the underlying determinants of firm profitability, the role of fixed and sunk costs, as well as the nature of competition. The intuition is that if competition is increasing in the number of firms, market size has to increase disproportionally to support additional firms. For example, if the smallest market size necessary to support one firm is equal to S ('monopoly entry

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[1] Etro (2012) puts together a wide and dispersed theoretical literature that analyzes the endogenous structure of markets in different contexts.

threshold') then the market size must be greater than 2*S* to support two firms if competition reduces profits. By estimating these market thresholds from the relationship between the number of firms and an exogenous profit shifter (such as population *S*), the researcher can draw inferences about the toughness of competition for a product or industry. The attractiveness of this approach rests in the fact that it can be applied with relatively modest data requirements. The relative degree of competition can be assessed on the basis of information on the number of firms, population size and other market demographics for a cross-section of local markets.

The empirical approach pioneered by Bresnahan and Reiss (1988, 1991) has been applied and extended in a number of ways. The effects of product differentiation are investigated in Davis (2006), Mazzeo (2002) and Schaumans and Verboven (2011). Davis (2006) and Mazzeo (2002) use direct measures of oligopolists' product characteristics and prices to measure the effects of product differentiation on competition and markups in local cinema (Davis) and motel (Mazzeo) markets. Product differentiation substantially lessens competition in these industries. Effects of firm heterogeneity are also investigated in Schaumanns and Verboven (2011). Campbell and Hopenhayn (2005) extend this framework by considering differences in firm size (in addition to differences in the number of firms). Based upon the work of Abbring and Campbell (2010), Collard-Wexler (forthcoming) estimates dynamic ordered probit models which allows the author to differentiate between entry and exist thresholds.

Note that these studies exclusively focus on market structure and competition in developed market economies; similar studies for transition economies are lacking. Investigating entry and exit in transition economies is particularly interesting since 'transition economies make a particularly good laboratory for understanding the dynamics of market evolution' (Estrin, 2002, p. 101).[2] The aim of the present paper is to provide first empirical evidence on the effect of entry on market conduct in a transition economy. Following Bresnahan and Reiss (1991), we summarize this relationship using the concept of 'entry thresholds' for seven retail and professional service industries in a large number of geographic markets in Slovakia. Specific emphasis will be given to changes in the relationship between market size and the number of firms over time. Estimating a model in the spirit of Bresnahan and Reiss for three years (1995, 2001, and 2010) provides evidence on the transformation of market structure and firm conduct during different stages of transition from a centrally planned towards a market economy.

The structure of a planned economy as well as the behavior of firms (or production units) in this environment differs from the structure and conduct of firms in a market economy in many dimensions. In communist regimes, firms were not independent decision-making units and did not have responsibility for sales or pricing. Competitive rivalry was weak or nonexistent and entry of new firms as well as bankruptcy and exit of existing ones was effectively impossible (Estrin, 2002). Compared to market economies, firms were very large and market structure highly concentrated. With the collapse of communism, these countries experienced a fundamental change in their economic and institutional environment. State-owned enterprises were broken up and privatized and a large number of new (mostly small) firms were founded. This process of entry of new firms and the re-structuring of existing ones was instrumental in creating a market structure which is conducive to competition between independent rivals and to bring supply in line with the patterns of consumer demand. Given the very specific structure of a centrally planned economy as well as the significant

[2] Only a small number of empirical studies are devoted to analyzing entry and exit in transition economies so far. Roberts and Thompson (2003) estimate entry and exit rates across 152 3-digit industries in Poland. Similarly, Bojnec and Xavier (2004) investigate the determinants of firm entry and exit for a cross section of 3-digit industries in the Slovenian manufacturing sector. The present paper follows a different approach by focusing on industry dynamics within individual industries. Avdasheva et al. (2007) summarize the broader Industrial Organization literature on competition in transition economies with a specific focus on empirical studies for Russia.

economic and institutional changes during the process of transition, an empirical analysis for specific retail and professional service industries can provide novel insights into the evolution of market structure and firm conduct in a transition economy.
The paper is organized as follows. Section 2 briefly highlights relevant changes in the economic environment in Slovakia during the transition period as well as describes the data used for the empirical analysis. Section 3 presents the econometric specification and discusses empirical results and section 4 summarizes and discusses possible extensions.

2 Economic Environment and Data

2.1 Transition in Slovakia and Market Description

The relationship between competition, market size and entry and exit will be investigated for seven occupations in Slovakia: automobile dealers (including the repair of cars and retail of vehicle parts), electricians, plumbers, restaurants, pharmacies, doctors and dentists. The analysis will be carried out for three time periods (1995, 2001 and 2010) characterizing different stages of the Slovakian transition process.
Slovakia, a small open economy, started its transition as a part of the Czechoslovak federation. As all countries in transition, Czechoslovakia experienced a deep transition recession during the early 1990s, during which output dropped significantly. The Slovak economy was hit much harder than its Czech counterpart (output dropped by more than 20% and unemployment rates exceeded 10%) as its industrialization during the communist period made it more dependent on markets in the Soviet Union and its Central and Eastern European satellites. However, Slovakia was able to recover quickly from the initial output collapse. Following its peaceful 'Velvet Divorce' Slovakia gained independence from Czechoslovakia on 1 January 1993. Economic reforms slowed in 1994-98, but then regained momentum under a reform-oriented coalition government which restructured enterprises and banks and initiated large-scale privatizations of state-owned enterprises. These economic changes paved the way for Slovakia to enter the European Union in May 2004 and to adopt the euro currency at the beginning of 2009. The increasing pressure from foreign competitors may have had an additional impact on structural change and firm performance; the Slovak economy today is among the most dynamic of the Central and Eastern European countries (EC, 2007).
The mid 1990s characterize the early phase of transition. Some first reforms to establish more efficient markets were already introduced at this time; the liberalization of prices and foreign trade started in 1991. 1995 was the third year of an independent Slovak economy and the second year of growth after the so called transition depression. The economic environment was strongly influenced by a search for a specific "Slovak way" of transition (Marcinčin, 2002). Policy makers refused to continue with the harsh reforms initiated when Slovakia was still part of the Czechoslovak federation (1990-1992). The so called "Slovak way" of transition was characterized by a slowdown of reform measures, mistrust towards foreign investors, opaque privatization measures (the so called "sale to pre-selected owners"), exertion of political influence on investment flows and a revival of state paternalism and interventionism. In this period, ownership structure of enterprises was highly fragmented (an outcome of mass privatization) and foreign strategic investors were absent. This period ended with the parliamentary elections held at the end of 1998 when a new government was formed.
The early 2000s was a period during which many corrections of the early transformation process were implemented. Macroeconomic stabilization was achieved and the economy was gradually directed towards EU integration. The new government focused on strengthening competitiveness and initiated the transformation process in sectors that have been protected during the previous

regime (Morvay, et. al. 2005). More specifically, the following measures were implemented: the banking sector was restructured which eased financial flows and at the same time weakened political influence on the allocation of credit; institutions and procedures of regulatory interventions were changed (regulatory bodies independent from direct political influence were established); privatization mostly took place via international tenders; and the economy opened more significantly to foreign investors, which lead to increased foreign investment inflows.
In the third stage of the transformation process, the Slovak economy is well integrated into the EU (since becoming a member in 2004) and in many important dimensions compares well to Western European economies. After the 2009 economic recession, the economy in 2010 was growing rapidly again (OECD, 2012). Economic growth in this period was distinctively mono-structural (dependent on strong expansion in a small number of branches in the manufacturing industry, especially in the manufacture of passenger cars). Growth in these sectors was ensured by the reorientation of export, while domestic demand remained weak. The entry in the EU suggests meant that the economy has already reached a certain level of commensurability with the economic environment in the more developed economies of the EU even if income levels are still lacking behind significantly (Bartošvá and Želinský 2013).

2.2 Data and Descriptive Evidence

Cross-sectional data for three years (1995, 2001 and 2010) on the number of firms, population size and other market characteristics are available for 2,829 local markets in Slovakia.
The number of firms for each occupation is obtained from the 'Register of Economic Subjects' in the Slovak Republic which covers the whole population of firms in manufacturing and services. This register is administrated by the Statistical Office of the Slovak Republic and was provided to us by its affiliation INFOSTAT. For each firm, information on location and its main economic activity (classified according to the NACE Rev. 1 classification of industries) is collected. From this we compute the number of firms in the different local markets. Data on population as well as demographic characteristics of the regional markets are obtained from the 'Urban and Municipal Statistics'.
We control for several market characteristics such as wages, unemployment rates and the share of young and old population. Data on wages and unemployment rates are taken from the 'Regional Statistics Database'. Unfortunately, we do not observe these variables at the local market level; these data are available at the district level (79 districts) in Slovakia only. The share of population aged below 15 years and above 60 years for each market in Slovakia is obtained from the 'Urban and Municipal Statistics'.
Table 1 reports descriptive statistics for key variables, more details are reported in an appendix. Geographic markets are defined at the level of ZIP codes. To avoid problems of overlapping markets, we follow previous research (Schaumans and Verboven, 2011) and only retain the non-urban areas. More specifically, we restrict the number of markets according to two criteria: regional markets are included only if the number of inhabitants is lower than 15,000 and population density is below 800 inhabitants per km^2. From the total number of 2,887 towns and villages in Slovakia, 2,829 geographic markets comply with these criteria.

Table 1

Note that the number of firms differs substantially between regions and also between occupations. The maximum number of automobile dealers is 66 while the largest number of pharmacies only is 9. About 50% of all regional markets have at least one firm in the first four of the seven occupations

(automobile dealers, electricians, plumbers and restaurants). However, the clear majority (around 75% or more) of regional markets does not have one pharmacy, one doctor or one dentist (see Table 2). In Table 2, all markets with more than seven firms are pooled into one category.

Table 2

3 Empirical Framework and Results

The empirical framework closely follows Schaumans and Verboven (2011), who suggest a simplified version of the pioneering work of Bresnahan and Reiss (1991). Assuming symmetric firms, per-firm profits are $\pi(N) = v(N)S - f$ where $v(N)$ are variable profits per consumer, S is market size and f are fixed costs. Since variable profits per consumer as well as fixed costs are unobserved it is not possible to analyze the effects of the number of competitors (N) on variable profits $v(N)$ directly. However, from observing a specific number of competitors in a market of size S, we can infer that N firms are profitable whereas $N+1$ firms are not: $v(N+1)S - f < 0 < v(N)S - f$ or equivalently $\ln\frac{v(N+1)}{f} + \ln S < 0 < \ln\frac{v(N)}{f} + \ln S$. Let us assume the ratio of variable profits over fixed costs to be characterized by a vector of observable market characteristics ($\boldsymbol{X}$), firm fixed effects (θ_N) as well as an unobservable error term $\omega \sim N(0,\sigma)$: $\ln\frac{v(N)}{f} = \boldsymbol{X\beta} + \theta_N - \omega$. The entry condition thus becomes $\boldsymbol{X\beta} + \theta_{N+1} + \ln S < \omega < \boldsymbol{X\beta} + \theta_N + \ln S$. Normalizing $\sigma = 1$, the probability of observing N firms is $\Pr(N) = \Phi(\theta_N + \boldsymbol{X\beta} + \ln S) - \Phi(\theta_{N+1} + \boldsymbol{X\beta} + \ln S)$, where Φ represents the cumulative distribution function for the standard normal distribution. The parameters $\boldsymbol{\beta}$ can be estimated from an ordered probit model where θ_N and θ_{N+1} are the 'cut-points' or entry effects.

Tables 3a and 3b report results from ordered probit models estimated for the three years 1995, 2001 and 2010.

Tables 3a and 3b

The estimation results show that population, which is our proxy for market size S, positively affects the number of firms in all seven retail and professional service industries. The parameter estimate of ln(*POP*) is positive and significantly different from zero across all occupations. Wages and unemployment rates as well as the demographic composition of the population in the market exert a significant impact in most equations. Because these variables summarize both demand and cost conditions, we cannot attempt to draw structural inferences about the signs of their coefficients. 'Cut points' (θ_N) are positive and increasing indicating that profits are lower in market with more firms.

From these estimation results, entry thresholds (i.e. the critical market size to support N firms) are computed as $S(N) = \exp\left(\frac{-\theta_N - \bar{\boldsymbol{X}}\boldsymbol{\beta}}{\alpha}\right)$ where $\bar{\boldsymbol{X}}$ represents average values of exogenous variables and α is the parameter estimate of market size ($\ln(POP)$) in the ordered probit model. From the entry thresholds, we compute per-firm entry thresholds $s_N = S(N)/N$ as well as entry threshold ratios s_{N+1}/s_N (or s_7/s_N). These ratios are scale-free measures of entry's effect on market conduct.

If firms are identical and entry does not change competitive conduct, then $s_{N+1}/s_N = 1$. Departures of successive entry threshold ratios from one measure whether competitive conduct changes as the number of firms increases. Entry thresholds and entry threshold ratios (s_7/s_N) are computed for all occupations (the detailed results are reported in Table A1 in the appendix).

Estimating the model for all local markets in Slovakia suggests that the monopolist entry threshold in 2010 for automobile dealers, electricians and restaurants is around 500 inhabitants. The monopoly threshold for plumbers is somewhat higher (around 700 inhabitants). For professions related to health care, monopoly thresholds are much higher. Approximately 1,300 inhabitants are required for the first doctor to enter a market and around 2,000 (3,000) inhabitants are necessary in a local market for the first dentist (pharmacist) to break even. While monopoly thresholds for restaurants, pharmacists, doctors and dentists remained stable between 1995 and 2010, we observe a continuous and substantial decline for the other occupations (automobile retailer, electricians and plumbers). For automobile dealers, for example, the estimated threshold declined from 1,068 in 1995 to 868 in 2001 and 488 in 2010.

In nearly all occupations, thresholds per firm are higher for a second entrant (the only exceptions are doctors). In duopoly markets, firms need more than twice the market size of a monopoly market to be profitable. For the most recent year (2010), this increase in entry thresholds is most pronounced for plumbers where the per firm entry threshold size increases from around 700 in a local monopoly to 850 customers in a duopoly market: the entry-threshold ratio (s_2/s_1) is 1.2. To examine the changes in market structure and competition during the 15 year period in more detail, Figure 1 compares entry threshold ratios (s_7/s_N) for all retail and professional service industries for the years 1995, 2001 and 2010.[3]

Figure 1

Note that the results for doctors and dentists differ substantially from those obtained for the other occupations. Entry threshold ratios in these two markets are close to 1 and are very stable over time. In contrast to the other occupations analysed, entry into the market for doctors and dentists is strongly regulated and the supply of these services was reasonable good during the communist regime. Further, one cannot rule out the possibility that entry in these markets not only leads to more competition for a given number of potential customers which lowers prices and margins. As argued in Bresnahan and Reiss (1991) and shown in more detail in Schaumans and Verboven (2011), entry might also increase product variety and thereby have a positive effect on consumers' willingness to pay. This countervailing effect of entry reduces entry threshold ratios and can explain ratios smaller than one (note that s_7/s_N is below 1 in the case of doctors). With the exceptions of these two occupations, Figure 1 indicates that entry threshold ratios (a) decline with the number of entrants and (b) have declined over time.

As the number of firms in a market increases, we observe a strong decline in entry threshold ratios for plumbers, electricians and pharmacies for the first two time periods (1995 and 2001). The reduction in entry threshold ratios is more modest for automobile dealers and restaurants. Similar to Bresnahan and Reiss (Figure 4 in Bresnahan and Reiss, 1991, p. 996), entry threshold ratios (s_7/s_N) quickly approach one as the number of entrant increases.

[3] Note that the results for plumbers for the year 1995 should be interpreted very carefully. In this specific case, entry threshold ratios are estimated very imprecisely and the results for this year thus are not shown in Figure 1.

Changes over time are particularly pronounced for plumbers, electricians, pharmacies, automobile dealers and are more modest for restaurants. While Figure 1 suggests only minor changes between in the first time interval (between 1995 and 2001) for electricians and automobile dealers, entry threshold ratios in these markets dropped significantly in the second period (from 2001 to 2010). Interestingly, Figure 1 suggests a slight increase in entry threshold ratios between 1995 and 2001 for pharmacies before these ratios approached very small levels in the final year (2010). Note however, that entry threshold ratios for pharmacies in markets with more than four firms are estimated very imprecisely due to the small number of observations.

In order to confirm that our results are not driven by the specific definition of market boundaries, regressions were run using perturbations of these definitions. Results from these estimation experiments, which are available from the authors upon request, show that our results described above are robust with respect to these modifications.

To further explore the robustness of our results, we use different definitions for the residual category in the ordered probit model and also applied a different estimation technique. Note that the ordered probit model entails some loss of information since we pooled regional markets with more than seven firms into one category. As an alternative, we re-estimate our models when using five or more firms as well as ten or more firms as a residual category. The main results remain unchanged. Further, the ordered probit model does not take into account that the number of firms in a market is not only a ranking but also a counting. As an additional robustness test, we thus follow Asplund and Sandin (1999) and compare results of the ordered probit to a Tobit model. The most important finding is that the coefficient of population (*Pop*) is positive whereas population squared (Pop^2) is negative (see Table A2 in the appendix). This implies a concave relationship between the number of firms and market size and corresponds nicely to the results from the ordered probit model.

4 Summary and Extensions

The present paper provides first empirical evidence on the effects of entry on market conduct for a transition economy. We use the framework pioneered by Bresnahan and Reiss (1991) and estimate size thresholds required to support different numbers of firms for seven retail and professional service industries in a large number of distinct geographic markets in Slovakia. In comparing entry threshold ratios for different occupations over time it is important to note that these ratios can be affected by unobserved variables such as the existence of barriers to entry, entrant inefficiencies as well as different degrees of product differentiation. The three time periods analyzed (1995, 2001 and 2010) characterize the different stages of the Slovakian transformation process. In 1995, the Slovak economy was in the early phases of a turbulent transition process with an unclear trajectory of its future route. Half a decade later, in 2001, the economy was in the process of relieving itself of post-socialist deformations and in the process of preparing for European integration. After being a member of the European Union for six years, the relevant institutions as well as the functioning of the Slovak economy in 2010 have already converged significantly towards Western European standards.

Consistent with these observations, our results indicate that the effect of entry on market conduct has changed over time. While entry threshold ratios tend to be larger than one and decline with the number of firms in most professions in 1995, the estimation results obtained for 2010 suggest entry threshold ratios much closer to one. This finding is consistent with observations suggesting a significant decline in entry barriers, for example. In the 1990s, Slovakia was the country with the largest number of days required to start a business among the 18 countries listed in Table 3 in Estrin (2002). However, the country cut the time to register a business in half a few years later and,

according to the 'World Bank Doing Business' survey, was ranked among top reformers in the business environment in 2005.[4] A decline in entry barriers is consistent with our observation of a decline in entry threshold ratios over time. Additional insights into the importance of sunk costs and entry barriers for entry thresholds and firm conduct can be obtained from supplementing the present approach with an analysis of prices and costs (Einav and Levin, 2010).

The pace of transition, however, has not been the same in all parts of Slovakia and structural change and economic development are unevenly balanced between regions. While western regions of Slovakia are in closer proximity to EU markets and have a much better network of quality roads and motorways, the poorer eastern regions border similar poor regions in neighboring countries and suffer from significant transport infrastructure bottlenecks. It is plausible to assume, that these regional difference in infrastructure and human capital will also bear on firms' entry and exit decisions and thus on market conduct. The impact of entry barriers as well as infrastructure quality and human capital has not been considered explicitly in empirical models on entry, exit and competition so far but would be an important area of future research.

Further, the Bresnahan and Reiss (1991) framework assumes that at least some consumers with high reservation prices do not leave local markets; i.e. the number of consumers who are willing to drive long distances to patronize firms in other markets must not be too large. While this might be a plausible assumption for most occupations analyzed in the present paper, explicitly considering the distances (in driving time) between rival firms as well as the quality of transport infrastructure in a spatial model might nevertheless be an interesting extension of the present framework.

And finally, following the approach suggested in Abbring and Campbell (2010) would allow us to extend the static Bresnahan and Reiss framework to a dynamic setting. Explicitly modelling the dynamics of structural change is important to further improve our understanding of the relationship between entry and competition in developed market economies. Dynamics are even more important in transition economies.

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Table 1: Definition and descriptive statistics of variables (N_{1995}=2788, N_{2001}=2817, N_{2010}=2,829)

Variable	Definition	Mean	Std. Dev.	Min	Max
Pop_{1995}	Total population in 1995	1044.54	1497.32	13	14810
Pop_{2001}	Total population in 2001	1044.58	1446.59	7	14710
Pop_{2010}	Total population in 2010	1079.32	1473.32	12	14913
$Dens_{1995}$	Density of population per km^2 in 1995	42.68	25.26	1	99.9
$Dens_{2001}$	Density of population per km^2 in 2001	72.39	66.37	1	707
$Dens_{2010}$	Density of population per km^2 in 2010	75.87	72.14	1	798

Vehic$_{1995}$	Number of automobile dealers including the repair of cars and retail of vehicle parts in 1995	0.83	2.07	0	34
Vehic$_{2001}$	– in 2001	1.06	2.48	0	47
Vehic$_{2010}$	– in 2010	2.02	3.91	0	66
Elect$_{1995}$	Number of electricians in 1995	0.19	0.70	0	12
Elect$_{2001}$	Number of electricians in 2001	0.40	1.13	0	23
Elect$_{2010}$	Number of electricians in 2010	1.76	3.23	0	53
Plumb$_{1995}$	Number of plumbers in 1995	0.15	0.60	0	11
Plumb$_{2001}$	Number of plumbers in 2001	0.57	1.37	0	25
Plumb$_{2010}$	Number of plumbers in 2010	1.31	2.39	0	34
Restau$_{1995}$	Number of restaurants in 1995	1.69	3.32	0	64
Restau$_{2001}$	Number of restaurants in 2001	1.72	3.86	0	92
Restau$_{2010}$	Number of restaurants in 2010	1.96	4.27	0	60
Pharm$_{1995}$	Number of pharmacies in 1995	0.15	0.46	0	6
Pharm$_{2001}$	Number of pharmacies in 2001	0.11	0.38	0	4
Pharm$_{2010}$	Number of pharmacies in 2010	0.15	0.57	0	9
Doctor$_{1995}$	Number of doctors in 1995	0.42	1.27	0	21
Doctor$_{2001}$	Number of doctors in 2001	0.69	2.32	0	31
Doctor$_{2010}$	Number of doctors in 2010	0.82	2.83	0	45
Dentist$_{1995}$	Number of dentists in 1995	0.23	0.76	0	11
Dentist$_{2001}$	Number of dentists in 2001	0.30	0.90	0	13
Dentist$_{2010}$	Number of dentists in 2010	0.28	0.92	0	11
Wage$_{1995}$	Average nominal wage 1995	215.12	13.34	193	286
Wage$_{2001}$	Average nominal wage 2001	361.61	38.22	294	462
Wage$_{2010}$	Average nominal wage 2010	675.52	87.94	492	902
Unemp$_{1995}$	Average unemployment rate in 1995	15.48	4.70	6.60	26.40
Unemp$_{2001}$	Average unemployment rate in 2001	22.69	7.16	6.98	35.45
Unemp$_{2010}$	Average unemployment rate in 2010	16.07	6.82	5.71	33.64
Young$_{1995}$	Share of population aged 0-14 years in total population in 1995	0.21	0.05	0	0.51
Young$_{2001}$	– in 2001	0.19	0.05	0	0.53
Young$_{2010}$	– in 2010	0.16	0.05	0	0.69
Old$_{1995}$	Share of population aged 60+ years in total population in 1995	0.24	0.08	0.01	0.92

Old$_{2001}$	– in 2001	0.23	0.07	0.02	0.89
Old$_{2010}$	– in 2010	0.23	0.06	0.03	0.67

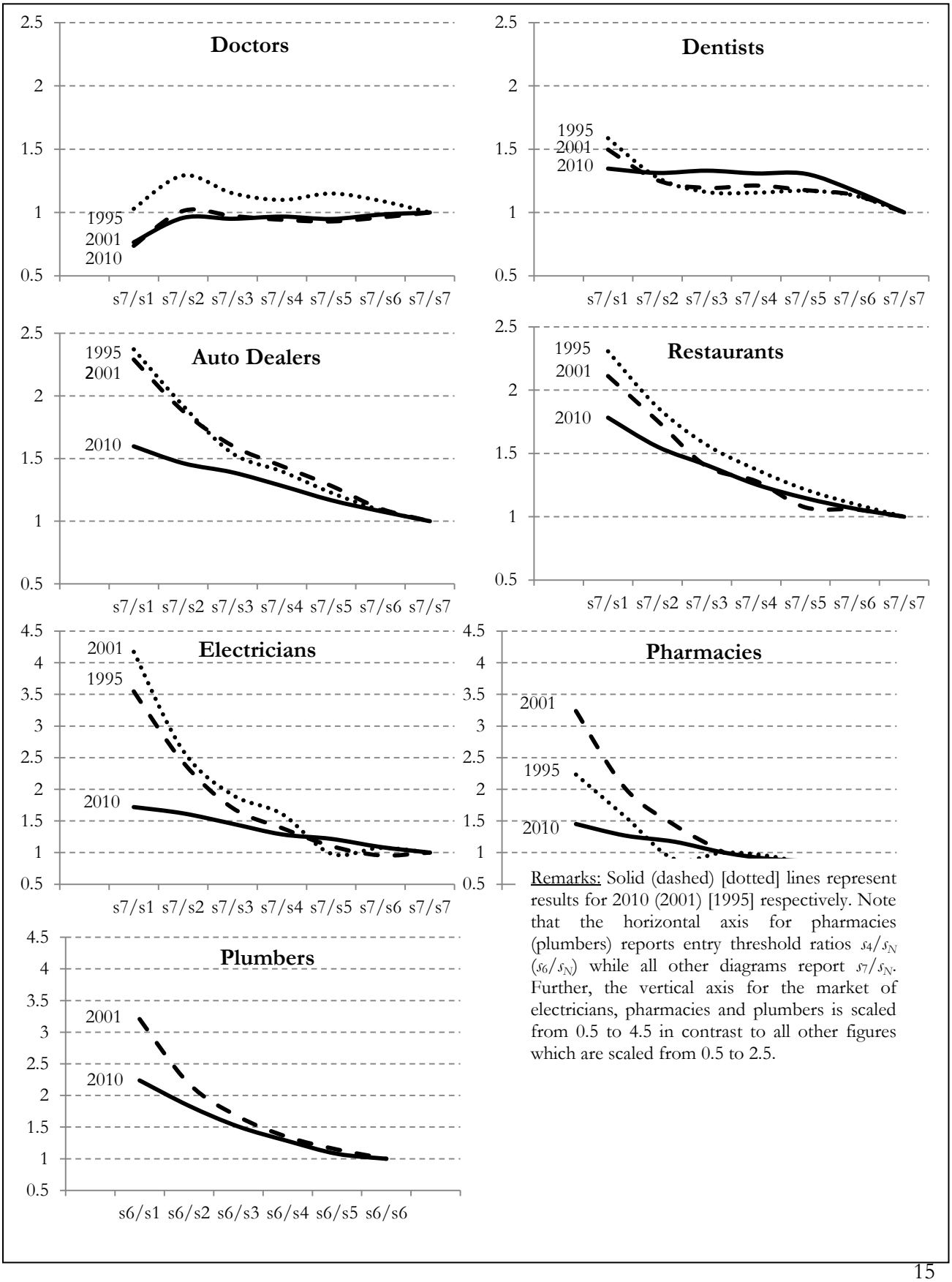
Table 2a: Summary statistics for number of firms in markets for 1995, 2001 and 2010

Number of firms	Automobile dealers			Electricians			Plumbers		
	1995	**2001**	**2010**	**1995**	**2001**	**2010**	**1995**	**2001**	**2010**
	Number of local markets								
0	1810	1677	1230	2465	2214	1312	2527	2036	1494
1	526	564	618	223	365	578	186	444	574
2	216	241	300	57	130	324	40	158	292
3	83	116	193	20	48	198	18	73	160
4	52	70	131	15	27	104	7	37	102
5	31	49	86	1	12	86	6	22	51
6	18	26	62	2	3	56	0	17	45
>7	52	74	209	5	18	171	4	30	111
TOTAL	2788	2817	2829	2788	2817	2829	2788	2817	2829
	Share of local markets with a particular number of firms in %								
0	64.92	59.53	43.48	88.41	78.59	46.38	90.64	72.28	52.81
1	18.87	20.02	21.85	8.00	12.96	20.43	6.67	15.76	20.29
2	7.75	8.56	10.60	2.04	4.61	11.45	1.43	5.61	10.32
3	2.98	4.12	6.82	0.72	1.70	7.00	0.65	2.59	5.66
4	1.87	2.48	4.63	0.54	0.96	3.68	0.25	1.31	3.61
5	1.11	1.74	3.04	0.04	0.43	3.04	0.22	0.78	1.80
6	0.65	0.92	2.19	0.07	0.11	1.98	0.00	0.60	1.59
>7	1.87	2.63	7.39	0.18	0.64	6.04	0.14	1.06	3.92

Table 3b: Summary statistics for number of firms in markets for 1995, 2001 and 2010

Number of firms	Restaurants			Pharmacies			Doctors			Dentists		
	1995	2001	2010	1995	2001	2010	1995	2001	2010	1995	2001	2010
	Number of local markets											
0	1104	1230	1234	2467	2563	2541	2275	2196	2118	2389	2317	2396
1	783	701	665	256	213	204	237	234	320	296	362	288
2	377	375	314	56	31	48	154	185	173	53	69	66
3	188	156	190	3	8	22	51	81	70	18	23	128
4	110	123	117	3	2	7	17	38	44	10	16	15
5	65	46	76	2	0	2	17	17	20	8	10	14
6	43	40	51	1	0	4	13	10	15	7	9	10
>7	118	146	182	0	0	1	24	56	69	7	11	12
TOTAL	2788	2817	2829	2788	2817	2829	2788	2817	2829	2788	2817	2829
	Share of local markets with a particular number of firms in %											
0	39.60	43.66	43.62	88.49	90.98	89.82	81.60	77.96	74.87	85.69	82.25	84.68
1	28.08	24.88	23.51	9.18	7.56	7.21	8.50	8.31	11.31	10.62	12.85	10.18
2	13.52	13.31	11.10	2.01	1.10	1.70	5.52	6.57	6.12	1.90	2.45	2.33
3	6.74	5.54	6.72	0.11	0.28	0.78	1.83	2.88	2.47	0.65	0.82	0.99
4	3.95	4.37	4.14	0.11	0.07	0.25	0.61	1.35	1.56	0.36	0.57	0.53
5	2.33	1.63	2.69	0.07	0	0.07	0.61	0.60	0.71	0.29	0.35	0.49
6	1.54	1.42	1.80	0.04	0	0.14	0.47	0.35	0.53	0.25	0.32	0.35
>7	4.23	5.18	6.43	0	0	0.04	0.86	1.99	2.44	0.25	0.39	0.42

Figure 1: Entry threshold ratios for occupations in Slovakia for 1995, 2001, and 2010.



Remarks: Solid (dashed) [dotted] lines represent results for 2010 (2001) [1995] respectively. Note that the horizontal axis for pharmacies (plumbers) reports entry threshold ratios s_4/s_N (s_6/s_N) while all other diagrams report s_7/s_N. Further, the vertical axis for the market of electricians, pharmacies and plumbers is scaled from 0.5 to 4.5 in contrast to all other figures which are scaled from 0.5 to 2.5.

Table 3a: Parameter estimates obtained from ordered probit model for Slovakia in 1995, 2001 and 2010 (for automobile dealers, electricians, plumbers, and restaurants)

	Automobile dealers			Electricians			Plumbers			Restaurants		
VARIABLES	**2010**	**2001**	**1995**	**2010**	**2001**	**1995**	**2010**	**2001**	**1995**	**2010**	**2001**	**1995**
Ln(Pop)	1.099***	0.947***	0.927***	1.029***	0.771***	0.687***	0.871***	0.743***	0.419***	1.045***	1.080***	1.145***
	(0.0310)	(0.0337)	(0.0351)	(0.0303)	(0.0381)	(0.0449)	(0.0293)	(0.0349)	(0.0441)	(0.0302)	(0.0324)	(0.0332)
Wage	5.03e-05	0.000110	-0.00719***	-0.000815***	-0.00548***	0.00341	-0.000816**	-0.00403***	0.00587*	-0.000693**	-0.00135*	-0.00423**
	(0.000316)	(0.000758)	(0.00240)	(0.000316)	(0.000906)	(0.00333)	(0.000324)	(0.000829)	(0.00342)	(0.000312)	(0.000696)	(0.00210)
Unemp	-0.0358***	-0.0169***	-0.0155**	-0.0354***	-0.0580***	-0.0263***	-0.0471***	-0.0529***	-0.0487***	-0.0290***	-0.0246***	-0.0129**
	(0.00445)	(0.00400)	(0.00689)	(0.00446)	(0.00510)	(0.00993)	(0.00468)	(0.00461)	(0.0110)	(0.00434)	(0.00372)	(0.00595)
Young	-6.084***	-7.402***	-7.725***	-4.049***	-4.790***	-4.380***	-3.970***	-3.175***	-0.230	-4.054***	-6.571***	-5.890***
	(0.655)	(0.799)	(0.925)	(0.643)	(0.979)	(1.348)	(0.671)	(0.858)	(1.297)	(0.629)	(0.696)	(0.768)
Old	-2.050***	-3.216***	-4.871***	-0.731	-3.129***	-3.117***	-2.663***	-2.975***	-2.800**	0.193	-2.363***	-2.080***
	(0.657)	(0.704)	(0.748)	(0.646)	(0.903)	(1.127)	(0.685)	(0.807)	(1.121)	(0.609)	(0.598)	(0.594)
θ_1	4.813***	3.920***	1.885**	4.536***	1.117*	4.590***	3.135***	1.632***	4.054***	4.920***	3.819***	4.085***
	(0.421)	(0.531)	(0.735)	(0.419)	(0.635)	(1.062)	(0.428)	(0.584)	(1.087)	(0.413)	(0.480)	(0.638)
θ_2	5.672***	4.764***	2.723***	5.307***	1.944***	5.389***	3.913***	2.432***	4.779***	5.789***	4.766***	5.122***
	(0.423)	(0.533)	(0.735)	(0.421)	(0.636)	(1.065)	(0.429)	(0.585)	(1.089)	(0.416)	(0.482)	(0.640)
θ_3	6.174***	5.299***	3.302***	5.836***	2.528***	5.881***	4.443***	2.935***	5.160***	6.316***	5.452***	5.786***
	(0.425)	(0.534)	(0.736)	(0.423)	(0.637)	(1.068)	(0.431)	(0.586)	(1.091)	(0.418)	(0.484)	(0.641)
θ_4	6.579***	5.672***	3.660***	6.260***	2.909***	6.196***	4.840***	3.309***	5.495***	6.734***	5.856***	6.267***
	(0.427)	(0.535)	(0.737)	(0.425)	(0.639)	(1.070)	(0.432)	(0.587)	(1.094)	(0.420)	(0.485)	(0.643)
θ_5	6.927***	5.994***	3.987***	6.547***	3.258***	6.689***	5.184***	3.593***	5.728***	7.062***	6.288***	6.663***
	(0.429)	(0.537)	(0.739)	(0.426)	(0.641)	(1.077)	(0.434)	(0.588)	(1.098)	(0.423)	(0.487)	(0.644)
θ_6	7.213***	6.311***	4.268***	6.848***	3.508***	6.753***	5.409***	3.830***	6.094***	7.331***	6.501***	6.985***
	(0.431)	(0.539)	(0.741)	(0.428)	(0.643)	(1.079)	(0.435)	(0.590)	(1.107)	(0.424)	(0.488)	(0.646)
θ_7	7.467***	6.548***	4.489***	7.093***	3.593***	6.908***	5.659***	4.084***		7.556***	6.728***	7.271***
	(0.433)	(0.540)	(0.742)	(0.430)	(0.644)	(1.083)	(0.437)	(0.591)		(0.426)	(0.490)	(0.647)
Observations	2,829	2,817	2,788	2,831	2,829	2,817	2,788	2,829	2,817	2,788	2,829	2,817
Log-likelihood	-3600	-2852	-2523	-3,592	-3592	-1707	-1075	-3310	-2184	-968.8	-3633	-3419
Pseudo R2	0.224	0.205	0.198	0.202	0.202	0.216	0.186	0.189	0.189	0.133	0.200	0.219

Remarks: All markets with more than seven firms are pooled in one category. Standard errors are in parenthesis. ***, **, and * indicates that parameter estimates are significantly different from zero at the 1%, 5%, and 10% level, respectively.

Table 3b: Parameter estimates obtained from ordered probit model for Slovakia in 1995, 2001 and 2010 (pharmacists, doctors, and dentists)

	Pharmacists			Doctors			Dentists		
VARIABLES	**2010**	**2001**	**1995**	**2010**	**2001**	**1995**	**2010**	**2001**	**1995**
Log(Pop)	1.345***	1.331***	1.529***	1.666***	1.857***	1.598***	1.637***	1.815***	1.579***
	(0.0597)	(0.0699)	(0.0697)	(0.0501)	(0.0594)	(0.0575)	(0.0600)	(0.0663)	(0.0652)
Wage	-0.000390	0.000744	-0.00876**	0.000493	-0.000168	-0.00145	0.000384	3.11e-05	-0.000425
	(0.000568)	(0.00140)	(0.00408)	(0.000426)	(0.00104)	(0.00327)	(0.000514)	(0.00115)	(0.00368)
Unemp	0.0139*	0.00169	0.0130	0.0247***	0.0238***	0.0210**	0.0293***	0.0166***	0.0235**
	(0.00805)	(0.00743)	(0.0117)	(0.00595)	(0.00548)	(0.00936)	(0.00724)	(0.00601)	(0.0105)
Young	-6.109***	-6.859***	-2.136	-4.954***	-6.576***	-1.845	-5.320***	-6.173***	-4.515***
	(1.622)	(1.702)	(1.666)	(0.913)	(1.148)	(1.324)	(1.299)	(1.282)	(1.546)
Old	1.060	-3.901**	-1.639	0.985	-3.213***	-0.594	-0.461	-3.638***	-2.998**
	(1.537)	(1.680)	(1.520)	(0.991)	(1.155)	(1.195)	(1.364)	(1.326)	(1.395)
θ_1	9.976***	8.992***	9.459***	12.12***	12.00***	11.38***	12.22***	11.95***	10.71***
	(0.908)	(1.100)	(1.352)	(0.637)	(0.801)	(1.099)	(0.815)	(0.904)	(1.243)
θ_2	11.09***	10.55***	11.06***	12.90***	12.70***	12.12***	13.40***	13.53***	12.15***
	(0.919)	(1.117)	(1.366)	(0.643)	(0.807)	(1.103)	(0.827)	(0.920)	(1.253)
θ_3	11.74***	11.54***	12.54***	13.59***	13.53***	12.95***	14.04***	14.36***	12.94***
	(0.928)	(1.131)	(1.385)	(0.650)	(0.813)	(1.108)	(0.836)	(0.930)	(1.262)
θ_4	12.40***	12.40***	12.81***	14.04***	14.12***	13.49***	14.53***	14.85***	13.40***
	(0.941)	(1.163)	(1.391)	(0.656)	(0.818)	(1.113)	(0.846)	(0.937)	(1.269)
θ_5	12.87***		13.25***	14.44***	14.56***	13.77***	14.89***	15.31***	13.73***
	(0.955)		(1.405)	(0.662)	(0.823)	(1.117)	(0.854)	(0.945)	(1.274)
θ_6	13.08***		13.86***	14.69***	14.84***	14.15***	15.36***	15.70***	14.07***
	(0.964)		(1.445)	(0.666)	(0.828)	(1.122)	(0.865)	(0.952)	(1.279)
θ_7	13.90***			14.91***	15.05***	14.53***	15.84***	16.22***	14.51***
	(1.035)			(0.670)	(0.831)	(1.128)	(0.876)	(0.961)	(1.287)
Observations	2,829	2,817	2,788	2,829	2,817	2,788	2,829	2,817	2,788
Log-likelihood	-761.9	-578.6	-658.2	-1742	-1475	-1303	-1032	-993.6	-891.7
Pseudo R2	0.366	0.418	0.449	0.348	0.397	0.366	0.396	0.452	0.414

Remarks: All markets with more than seven firms are pooled in one category. Standard errors are in parenthesis. ***, **, and * indicates that parameter estimates are significantly different from zero at the 1%, 5%, and 10% level, respectively.

Appendix

Table A1a: Per-firm entry thresholds and entry threshold ratios for Slovakia in 2010, 2001, and 1995 for automobile dealers, electricians, plumbers, and restaurants

	Automobile dealers			Electricians			Plumbers			Restaurant		
	2010	**2001**	**1995**	**2010**	**2001**	**1995**	**2010**	**2001**	**1995**	**2010**	**2001**	**1995**
						Thresholds						
S1	488	868	1068	540	2525	5617	693	1800	26586	483	476	425
S2	1066	2117	2636	1147	7381	17963	1690	5282	150069	1109	1144	1051
S3	1684	3722	4930	1915	15756	36770	3085	10390	372109	1836	2160	1877
S4	2433	5522	7251	2886	25806	58159	4845	17179	828081	2746	3141	2856
S5	3340	7751	10319	3818	40585	119196	7197	25175	1443795	3756	4685	4037
S6	4333	10841	13974	5122	56176	130852	9313	34635	3459698	4861	5707	5348
S7	5460	13918	17733	6504	62699	164077	12410	48746		6031	7042	6864
						Thresholds per firm						
s1	488	868	1068	540	2525	5617	693	1800	26586	483	476	425
	(36)	(48)	(119)	(18)	(712)	(4285)	(70)	(530)	(53182)	(19)	(32)	(71)
s2	533	1059	1318	574	3691	8981	845	2641	75034	555	572	526
	(20)	(30)	(73)	(10)	(515)	(3427)	(43)	(387)	(75093)	(12)	(20)	(44)
s3	561	1241	1643	638	5252	12257	1028	3463	124036	612	720	626
	(14)	(25)	(62)	(9)	(487)	(3128)	(35)	(338)	(82850)	(9)	(18)	(35)
s4	608	1380	1813	721	6451	14540	1211	4295	207020	687	785	714
	(12)	(22)	(52)	(8)	(452)	(2799)	(32)	(315)	(104016)	(9)	(15)	(31)
s5	668	1550	2064	764	8117	23839	1439	5035	288759	751	937	807
	(11)	(22)	(50)	(8)	(464)	(3742)	(31)	(297)	(116561)	(8)	(16)	(28)
s6	722	1807	2329	854	9363	21809	1552	5773	576616	810	951	891
	(10)	(24)	(49)	(8)	(458)	(2865)	(29)	(287)	(196246)	(8)	(14)	(26)
s7	780	1988	2533	929	8957	23440	1773	6964		862	1006	981
	(10)	(24)	(48)	(8)	(380)	(2674)	(29)	(301)		(8)	(13)	(25)
						Thresholds per firm ratios s7/s1						
s7/s1	1,598	2,290	2,373	1,719	3,548	4,173	2,556	3,870	21,689	1,783	2,111	2,310
	(0,118)	(0,129)	(0,268)	(0,059)	(1,012)	(3,218)	(0,263)	(1,152)	(44,008)	(0,072)	(0,146)	(0,389)
s7/s2	1,463	1,878	1,922	1,620	2,427	2,610	2,098	2,637	7,685	1,553	1,758	1,866
	(0,058)	(0,058)	(0,112)	(0,032)	(0,354)	(1,039)	(0,111)	(0,403)	(8,123)	(0,036)	(0,066)	(0,164)
s7/s3	1,390	1,602	1,542	1,456	1,705	1,912	1,724	2,011	4,649	1,408	1,397	1,567
	(0,04)	(0,037)	(0,065)	(0,023)	(0,174)	(0,535)	(0,065)	(0,215)	(3,485)	(0,025)	(0,039)	(0,097)
s7/s4	1,282	1,440	1,398	1,288	1,388	1,612	1,463	1,621	2,785	1,255	1,281	1,374
	(0,03)	(0,029)	(0,048)	(0,018)	(0,114)	(0,361)	(0,045)	(0,138)	(1,69)	(0,02)	(0,03)	(0,069)
s7/s5	1,167	1,283	1,227	1,217	1,103	0,983	1,232	1,383	1,997	1,147	1,074	1,215
	(0,024)	(0,024)	(0,038)	(0,016)	(0,079)	(0,191)	(0,033)	(0,101)	(1,054)	(0,016)	(0,023)	(0,053)
s7/s6	1,080	1,100	1,088	1,088	0,957	1,075	1,142	1,206		1,063	1,058	1,100
	(0,02)	(0,02)	(0,031)	(0,014)	(0,062)	(0,187)	(0,028)	(0,079)		(0,014)	(0,021)	(0,043)
						Test ratio=1						
s7/s1 = 1	***	***	***	***	**		***	**		***	***	***
Chi-sq.	25,65	99,91	26,31	150,50	6,34	0,97	35,06	6,20	0,22	118,50	58,24	11,34
s7/s2 = 1	***	***	***	***	***		***	***		***	***	***
Chi-sq.	64,07	231,19	67,25	372,19	16,24	2,40	97,04	16,50	0,68	240,19	132,27	27,95
s7/s3 = 1	***	***	***	***	***	*	***	***		***	***	***
Chi-sq.	95,78	258,19	69,75	388,54	16,44	2,91	123,53	22,18	1,10	260,72	102,18	34,01
s7/s4 = 1	***	***	***	***	***	*	***	***		***	***	***
Chi-sq.	87,15	228,31	67,38	249,26	11,66	2,88	105,90	20,25	1,12	168,22	86,34	29,54
s7/s5 = 1	***	***	***	***			***	***		***	**	***
Chi-sq.	47,81	139,31	36,31	185,54	1,74	0,01	48,44	14,32	0,89	79,81	10,33	16,63
s7/s6 = 1	***	***	**	***			***	**		***	**	**
Chi-sq.	15,22	25,89	8,02	41,94	0,49	0,16	25,53	6,74		19,49	7,71	5,42

Remarks: ***, **, and * indicates that estimates are significantly different from one at the 1%, 5%, and 10% level, respectively. Note that we computed s_6/s_N for plumbers in 1995.

Table A1b: Per-firm entry thresholds and entry threshold ratios for Slovakia in 2010, 2001, and 1995 for pharmacies, doctors, and dentists

	Pharmacies			Doctors			Dentists		
	2010	**2001**	**1995**	**2010**	**2001**	**1995**	**2010**	**2001**	**1995**
				Thresholds					
S1	2968	3552	2533	1307	1447	1706	2012	1770	2132
S2	6794	11416	7227	2087	2106	2717	4129	4225	5302
S3	11035	24066	18952	3155	3289	4570	6110	6658	8740
S4	17234	45991	22628	4132	4526	6386	8282	8742	11703
S5	24095		30269	5267	5736	7633	10376	11266	14442
S6	30071		45030	6099	6661	9642	13889	13988	17926
S7	43621			6996	7464	12289	18967	18556	23684
				Thresholds per firm					
s1	2968	3552	2533	1307	1447	1706	2012	1770	2132
	(1369)	(1945)	(2762)	(690)	(1217)	(1642)	(1355)	(1612)	(2277)
s2	3397	5708	3614	1044	1053	1359	2065	2113	2651
	(788)	(1577)	(1974)	(275)	(443)	(654)	(696)	(964)	(1418)
s3	3678	8022	6317	1052	1096	1523	2037	2219	2913
	(572)	(1520)	(2320)	(185)	(308)	(490)	(459)	(678)	(1041)
s4	4309	11498	5657	1033	1132	1597	2071	2186	2926
	(511)	(1736)	(1563)	(136)	(239)	(385)	(351)	(502)	(786)
s5	4819		6054	1053	1147	1527	2075	2253	2888
	(468)		(1352)	(111)	(194)	(295)	(282)	(415)	(621)
s6	5012		7505	1016	1110	1607	2315	2331	2988
	(415)		(1433)	(90)	(157)	(259)	(263)	(359)	(536)
s7	6232			999	1066	1756	2710	2651	3383
	(469)			(76)	(129)	(243)	(266)	(352)	(522)
				Thresholds per firm ratios s7/s1					
s7/s1	2,100	3,237	2,962	0,765	0,737	1,029	1,347	1,497	1,587
	(0,981)	(1,838)	(3,278)	(0,408)	(0,626)	(1,001)	(0,917)	(1,378)	(1,713)
s7/s2	1,834	2,014	2,077	0,958	1,012	1,292	1,312	1,255	1,276
	(0,447)	(0,634)	(1,202)	(0,263)	(0,443)	(0,648)	(0,461)	(0,596)	(0,711)
s7/s3	1,694	1,433	1,188	0,950	0,973	1,152	1,330	1,194	1,161
	(0,293)	(0,347)	(0,492)	(0,182)	(0,297)	(0,403)	(0,327)	(0,398)	(0,452)
s7/s4	1,446		1,327	0,968	0,942	1,100	1,309	1,213	1,156
	(0,203)		(0,446)	(0,147)	(0,229)	(0,306)	(0,256)	(0,322)	(0,358)
s7/s5	1,293		1,240	0,949	0,930	1,150	1,306	1,176	1,171
	(0,159)		(0,364)	(0,123)	(0,193)	(0,273)	(0,219)	(0,267)	(0,31)
s7/s6	1,243			0,983	0,961	1,092	1,171	1,137	1,133
	(0,139)			(0,114)	(0,178)	(0,232)	(0,176)	(0,231)	(0,268)
				Test ratio=1					
s7/s1 = 1									
Chi-sq.	1,26	1,48	0,36	0,33	0,18	0,00	0,14	0,13	0,12
s7/s2 = 1	*								
Chi-sq.	3,48	2,56	0,80	0,03	0,00	0,20	0,46	0,18	0,15
s7/s3 = 1	**								
Chi-sq.	5,62	1,56	0,15	0,07	0,01	0,14	1,02	0,24	0,13
s7/s4 = 1	**								
Chi-sq.	4,83		0,54	0,05	0,06	0,11	1,45	0,44	0,19
s7/s5 = 1	*								
Chi-sq.	3,40		0,43	0,17	0,13	0,30	1,96	0,44	0,31
s7/s6 = 1	*								
Chi-sq.	3,06			0,02	0,05	0,16	0,94	0,35	0,24

Remarks: ***, **, and * indicates that estimates are significantly different from one at the 1%, 5%, and 10% level, respectively. Note that we compute s_6/s_N for pharmacies in 1995 and s_4/s_N for pharmacies in 2001.

Table A2a: Estimates from Tobit model for 2010

VARIABLES	(1) Auto dealers	(2) Electricians	(3) Plumbers	(4) Restaurants	(5) Pharmacies	(6) Doctors	(7) Dentists
Pop	0.00260***	0.00254***	0.00208***	0.00274***	0.00146***	0.00311***	0.00158***
	(0.000103)	(0.000108)	(9.51e-05)	(0.000119)	(9.65e-05)	(0.000132)	(7.83e-05)
Pop²	-2.04e-08**	-7.64e-08***	-8.99e-08***	-1.06e-08	-7.26e-08***	-7.10e-08***	-6.41e-08***
	(1.04e-08)	(1.09e-08)	(9.54e-09)	(1.20e-08)	(7.87e-09)	(1.21e-08)	(6.70e-09)
Wage	0.00123	-0.000897	-0.000849	-0.000765	0.000173	0.00230*	0.00109
	(0.000947)	(0.000991)	(0.000890)	(0.00109)	(0.000892)	(0.00124)	(0.000728)
Unemp	-0.130***	-0.118***	-0.141***	-0.119***	0.00727	0.0364**	0.0224**
	(0.0134)	(0.0140)	(0.0129)	(0.0153)	(0.0125)	(0.0170)	(0.0101)
Young	-17.03***	-13.00***	-11.04***	-13.30***	-8.990***	-15.24***	-6.744***
	(1.920)	(1.986)	(1.806)	(2.160)	(2.285)	(2.558)	(1.657)
Old	-10.69***	-10.32***	-12.51***	-5.796***	-1.687	-4.984**	-2.796*
	(1.784)	(1.861)	(1.753)	(1.924)	(1.933)	(2.449)	(1.613)
Constant	4.365***	4.726***	5.278***	3.373***	-2.481**	-4.375***	-2.873***
	(1.047)	(1.093)	(0.989)	(1.192)	(1.072)	(1.375)	(0.854)
Sigma	3.122***	3.262***	2.833***	3.623***	1.700***	3.117***	1.557***
	(0.0573)	(0.0621)	(0.0583)	(0.0664)	(0.0827)	(0.0865)	(0.0594)
Observations	2,829	2,829	2,829	2,829	2,829	2,829	2,829
Log Likelihood	-4737	-4642	-4020	-4975	-920.3	-2339	-1240
R²	0.204	0.157	0.154	0.177	0.306	0.287	0.349

Remarks: ***, **, and * indicates that estimates are significantly different from one at the 1%, 5%, and 10% level, respectively.

Table A2b: Estimates from Tobit model for 2001

VARIABLES	(1) Auto dealers	(2) Electricians	(3) Plumbers	(4) Restaurants	(5) Pharmacies	(6) Doctors	(7) Dentists
Pop	0.00177***	0.00124***	0.00146***	0.00197***	0.00118***	0.00278***	0.00136***
	(0.000102)	(9.76e-05)	(9.75e-05)	(0.000109)	(8.07e-05)	(0.000121)	(6.59e-05)
Pop2	-1.85e-08*	-4.71e-08***	-7.02e-08***	4.15e-08***	-6.84e-08***	-7.79e-08***	-5.15e-08***
	(9.83e-09)	(9.00e-09)	(9.20e-09)	(1.08e-08)	(6.47e-09)	(1.07e-08)	(5.68e-09)
Wage	0.00428**	-0.00924***	-0.00764***	0.000215	0.00109	0.00163	0.00187
	(0.00206)	(0.00208)	(0.00203)	(0.00213)	(0.00168)	(0.00248)	(0.00134)
Unemp	-0.0466***	-0.137***	-0.133***	-0.0817***	-0.00613	0.0363***	0.00948
	(0.0108)	(0.0121)	(0.0115)	(0.0114)	(0.00894)	(0.0130)	(0.00700)
Young	-20.74***	-11.01***	-9.338***	-20.00***	-8.449***	-15.02***	-6.935***
	(2.129)	(2.189)	(2.054)	(2.098)	(2.005)	(2.648)	(1.435)
Old	-14.15***	-11.17***	-11.90***	-13.51***	-6.305***	-12.16***	-5.813***
	(1.744)	(1.906)	(1.828)	(1.676)	(1.852)	(2.469)	(1.359)
Constant	4.054***	7.595***	7.125***	6.820***	-0.589	-1.116	-1.081
	(1.217)	(1.253)	(1.222)	(1.253)	(1.044)	(1.492)	(0.814)
Sigma	2.804***	2.386***	2.528***	3.181***	1.332***	2.620***	1.330***
	(0.0628)	(0.0773)	(0.0710)	(0.0586)	(0.0704)	(0.0787)	(0.0472)
Observations	2,817	2,817	2,817	2,817	2,817	2,817	2,817
Log Likelihood	-3528	-2006	-2545	-4751	-755.1	-1943	-1306
R2	0.184	0.182	0.156	0.187	0.335	0.327	0.370

Remarks: ***, **, and * indicates that estimates are significantly different from one at the 1%, 5%, and 10% level, respectively.

Table A2c: Estimates from Tobit model for 1995

VARIABLES	(1) Auto dealers	(2) Electricians	(3) Plumbers	(4) Restaurants	(5) Pharmacies	(6) Doctors	(7) Dentists
Pop	0.00179***	0.00115***	0.000994***	0.00203***	0.00123***	0.00205***	0.00136***
	(0.000100)	(0.000116)	(0.000132)	(8.41e-05)	(7.01e-05)	(9.95e-05)	(7.59e-05)
Pop²	-4.80e-08***	-4.98e-08***	-5.97e-08***	-2.98e-10	-6.79e-08***	-8.75e-08***	-5.86e-08***
	(9.03e-09)	(9.56e-09)	(1.15e-08)	(7.85e-09)	(5.41e-09)	(8.17e-09)	(6.08e-09)
Wage	-0.00924	0.0130	0.0185**	-0.00399	-0.00736*	0.00507	0.00483
	(0.00630)	(0.00800)	(0.00930)	(0.00504)	(0.00446)	(0.00621)	(0.00484)
Unemp	-0.0553***	-0.0711***	-0.134***	-0.0425***	0.00311	0.0210	0.0165
	(0.0182)	(0.0240)	(0.0303)	(0.0143)	(0.0127)	(0.0178)	(0.0138)
Young	-19.34***	-10.70***	-1.412	-13.30***	-3.238*	-4.449*	-5.866***
	(2.384)	(3.155)	(3.438)	(1.802)	(1.749)	(2.383)	(1.935)
Old	-15.63***	-10.30***	-10.23***	-9.298***	-3.766**	-5.605***	-5.815***
	(1.842)	(2.519)	(2.929)	(1.327)	(1.486)	(1.988)	(1.627)
Constant	7.663***	-1.487	-4.174	5.213***	0.114	-3.368*	-1.925
	(1.830)	(2.360)	(2.750)	(1.443)	(1.319)	(1.833)	(1.440)
Sigma	2.728***	2.492***	2.756***	2.502***	1.246***	2.104***	1.495***
	(0.0666)	(0.116)	(0.145)	(0.0450)	(0.0576)	(0.0731)	(0.0600)
Observations	2,788	2,788	2,788	2,788	2,788	2,788	2,788
Log Likelihood	-3105	-1244	-1098	-4599	-878.9	-1589	-1153
R^2	0.173	0.155	0.114	0.205	0.357	0.300	0.331

Remarks: ***, **, and * indicates that estimates are significantly different from one at the 1%, 5%, and 10% level, respectively.

The Tobit model includes population (*Pop*) and population squared (Pop^2) as explanatory variables in order to account for non-linearity in the relation with number of firms. Estimated parameters for population are significant both for levels and squared values (the only exception is the market for restaurants in 1995 and 2001). The signs are positive for population and negative for population squared which indicates that a disproportional increase in the number of population is necessary for new entrants to break even. Wages are not statistically significant in most models. Parameters for unemployment are significantly different from zero for most professions and time periods. Similarly, the shares of young and older people exert an impact on the endogenous variable which is significantly different from zero in most specifications. We refrain from drawing structural inferences about the signs of the parameter estimates for these variables since they typically summarize both demand and cost conditions.