

Beyond Entry: Examining McDonald's Expansion in International Markets

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Abstract

This paper examines the factors that affect not only entry but also the subsequent growth of retail chains within international markets. Specifically, we focus on McDonald's expansion around the globe. Arguably, McDonald's has introduced the American concept of fast food and franchising to many foreign markets. Moreover, this firm has by now expanded throughout most of the world. Thus it is of particular interest to examine the international expansion path that this firm has chosen to pursue. The pattern of entry into foreign markets and growth that we observe contradicts the notion that McDonald's expanded abroad only after saturating existing markets. Instead, we find evidence that consistent with traditional profit maximization arguments for a multi-market firm, as we see McDonald's allocating resources to achieve growth across many desirable markets, particularly favoring those with higher GDP per capita. More importantly, we find that some of the factors that affect expansion post-entry are different from those that affect entry. We interpret these results as evidence that McDonald's optimally focuses on those factors that affect profitability post entry whereas it also considers factors that affect the sunk cost of entry ex ante.

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1. INTRODUCTION

An extensive body of literature on firm expansion beyond domestic borders in international business has focused on entry, specifically the issues of timing and mode of entry, where the latter typically takes the form of exporting, licensing, joint venture or FDI.¹ While this literature has provided useful insights regarding where and how firms enter foreign markets, it treats entry as its own end rather than the beginning of a firm's foreign market involvement. This focus on entry probably stems in part from the frequent use of manufacturers as the empirical setting for analyzing expansion; a manufacturer can enter a foreign market at the outset with a plant large enough to service the needs of the market for some time to come. In this context, entry rightly may be seen as the end as well as the beginning of a firm's foreign market investment. But as the U.S. moves increasingly from a largely manufacturing-based economy towards a more service-based economy, understanding how service firms expand abroad becomes increasingly important. And the reality is that service firms typically enter foreign markets with one or a few locations and then expand their geographic coverage of the foreign market over time in their quest for customers. In that case, when and how these firms develop additional locations in foreign markets becomes potentially more important than choosing the timing and mode of entry for the initial location(s).

In this paper we employ the empirical context of fast-food franchising to gain a richer understanding of international expansion by service firms within as well as across foreign markets. We focus on the expansion of the firm—McDonald's—credited with introducing the

¹ See e.g. Hymer 1976; Davidson 1983; Anderson & Gatignon 1986; Teece 1986; Dunning 1988; Gatignon & Anderson 1988; Kogut & Singh 1988; Barkema, Bell & Pennings 1996; Buckley & Casson 1998; Shaver 1998; Mitra & Golder 2002.

concept of franchising itself to many of the markets where it operates. Most importantly, this firm has by now expanded throughout most of the world. Looking back at the pattern of expansion that it pursued is of particular interest as it allows us to uncover what draws firms to particular markets opportunities before others that we know they will still pursue later. We use data on the number of outlets that McDonald's operated each year in each country since its first foray outside the U.S., into Canada, in 1967. We examine how this firm's characteristics at each time period, including its level of international experience, and country characteristics previously identified as important to foreign market entry timing and mode relate to observed growth in outlet counts by McDonald's in each country. For instance, we examine how market potential affect the firm's decision to enter and grow its business in various markets, but also consider the role of factors that should affect mostly the cost of entry to determine if they play a role in expansion post entry. Moreover, we can explore how governance mode (subsidiary, joint venture, master franchising) adopted by the firm to oversee operations within each country influences the rate of subsequent store development within that market.

The paper is organized as follows. In the next section we briefly summarize literature on market entry and identify hypotheses to be tested with our data. Section 3 describes the data and the international expansion of McDonald's over time. Section 4 presents our empirical specification and results. Section 5 concludes.

2. A BRIEF OVERVIEW OF LITERATURE AND CONCEPTUAL FRAMEWORK

Economic theory suggests that firms should pursue positive net present value projects whenever and wherever they arise. For many firms this will entail developing and adopting new technologies or diversifying one's product portfolio. But geography also offers one of the most basic sources of diversification and growth. Toivanen and Waterson (2005) for example show

how McDonald's and Burger King have expanded within the UK, starting in London. Our focus is on international expansion. Economic theory here tells us that assuming risk neutrality, a firm with opportunities abroad should pursue all of them. In fact absent any form of constraint on capital or managerial time, and ignoring issues of learning, theory would imply that firms with opportunities abroad would pursue all of them aggressively and rapidly. If firms face constraints – in terms of capital availability or managerial capabilities – or if there is option value in accumulating information about a market opportunity gradually, economic theory suggests that firms will maximize profits by following first the highest expected profit opportunities around the globe, and allocating resources across markets in a way that exploits all the best opportunities first.² The markets they first enter under this scenario may be markets that are similar, culturally or in close proximity, to the ones they are already operating in because the firm might expect customers in such markets to behave similarly to those they know like their product. However, other factors, especially fundamental drivers of market potential, will affect the expected profitability of a market and thus a firm's decision as to where to expand abroad. As suggested by LaPorta et al, institutional factors also will factor into a firm's assessment of the value of operating in various countries.

Internationalization theory, which is the prominent theory in international business regarding how firms expand overseas, is a behavioral theory that suggests that firms minimize the uncertainty associated with going abroad by doing so only gradually, starting with modes of entry that involve little commitment, such as exporting, and only increasing their involvement in those markets where they have found success (Johansen & Vahlne, 1977 and 1990). This view

² For example, standard economic theory implies that a monopolist selling a fixed quantity of output will maximize profits by allocating units of output across markets to equalize marginal revenue across markets. Similarly, in finance, firms with limited resources invest in the highest NPV projects.

of international expansion is not inconsistent with the options value approach, where firms also commit resources only gradually (see Dixit, ???) and thus have occasion to update their evaluation of different opportunities. Internationalization theory, however, with its focus on risk aversion, also suggests that firms expand abroad only once they have exhausted opportunities within their home market, and that they then expand first in markets that are “familiar” to them, namely markets similar culturally or in close geographic proximity to those they are already in, and that they exhaust opportunities in each market before moving into new ones.³ Economic theory suggests instead that the firm will continuously pursue best opportunities across all markets.

Contrary to a manufacturing firm whose options include exporting, a retail firm such as McDonald’s has no choice but to go abroad, where the customers are, if it is to sell its product outside its home market. Additionally, such a firm must expand its number of units abroad if it is to reach increased numbers of customers there. This reality makes it possible for us to observe not only the time at which McDonald’s enters a given foreign market but also track the extent and timing of its expansion within any given foreign market. This in turn means that we can

³ Eriksson *et al.* (1993) provides an overview of the empirical research that examines whether manufacturing firms increase their involvement in foreign markets gradually over time, moving from low commitment methods of selling abroad, such as exports, to high commitment methods involving ultimately foreign direct investments. The empirical literature overall does not support this gradual involvement hypothesis. A number of empirical studies, however, support the idea that firms invest first in markets that are nearby and whose populations are similar to the home market culturally. Most of these studies are based on small samples and are mostly descriptive in nature (*e.g.*, Johanson and Wiedersheim-Paul, 1975; Loustarinen, 1980). Three studies involve larger-sample analyses: Davidson (1980) examines pairwise entry frequencies of foreign direct investment for a sample of 934 individual new products introduced by fifty-seven U.S. firms in the period 1945-76. He concludes that “firms in the initial stage of foreign expansion can be expected to exhibit a strong preference for near and similar culture.” (p. 18). Similarly, Nordström and Vahlne (1994) find a positive rank correlation between measures of psychic distance from Sweden and mean rank of entry for their sample of Swedish firm investments. Benito and Gripsrud (1992) and Pedersen and Shaver (2000), on the other hand, find no support for the hypothesis that expansion first occurs in countries that are culturally closer to the home country.

assess whether this firm mostly pursues markets that are similar to those it is already in or whether it engages in the highest profit opportunities throughout.

While McDonald's cannot export its product, it can choose among different modes of operation in each market, some of which involve a higher degree of commitment of resources than others. In particular, it can open a subsidiary that franchises directly, or enter into a joint venture with a local partner, or establish a master franchising arrangement whereby the master franchisee owns and operates all the outlets in his or her territory or finds franchisees to do the same. While the level of investment that McDonald's commits to these markets differs across these different governance modes, in all cases McDonald's exerts significant control over the number of outlets and the growth in the number of outlets in each market. Consequently, in what follows, we assume that it internalizes the cost of expansion to a large extent – though potentially to varying degree depending on governance within each market - and that it gets to set the expansion path within as well as across all markets.⁴

While internationalization theory implies that familiarity will be the driving factor in determining where McDonald's will expand abroad, a prediction we address empirically below, it is useful to discuss further the factors that economic theory instead suggests might enter into a firm's decision to expand abroad. The economic literature on firm entry has focused explicitly on the importance of sunk costs in determining the number of firms that can operate and thus

⁴ For example, while McDonald's may not fully internalize the cost of expansion in a master franchise context, such a contract usually stipulates a development schedule that states the number of outlets to be opened at different points in time. In that sense, McDonald's can still control the expansion path in such markets. Moreover, as tight development schedules impose higher costs on the master franchisee, they will not be willing to pay as much for a contract that requires them to expand very rapidly relative to one where they can expand more slowly. As a result, McDonald's potentially internalizes the cost of rapid development in master franchise contexts as much as they do under joint venture or even direct franchising.

compete at a point in time in a market (e.g. Bresnahan and Reiss, 1987). While Bresnahan and Reiss consider homogeneous firms, this literature also has examined how firm heterogeneity affects the likelihood of entry (Berry (1992), Scott Morton (1999)). Specifically, the typical model assumes that heterogeneous firms decide simultaneously whether to enter and incur the sunk costs associated with entry. Firms then compete in a single market, and the resulting combination of production levels and prices determine their net profits in this new market.

Our setting differs from that of these studies in that rather than examining multiple firms deciding whether or not to enter a given market, we consider a single firm deciding whether to enter various markets. We follow this literature, however, in assuming that McDonald's faces sunk entry costs in each market. This cost would include the cost of learning about the rules that govern each new market and about the customers in each market. It would also include the cost of advertising the brand and making itself and its product known in this new market.⁵ We agree that these costs may be lower in markets that are physically closer, and culturally more similar, to the markets that the firm already operates in at any given time. Also, because of the limited managerial resources available at the Chicago head office at a point in time, we assume that these costs are convex in the distance – geographic or cultural or both – weighted number of countries entered into in a given time period. This convex cost function will make it more profitable not to enter all markets at once.⁶

⁵ It has been suggested that in some markets, McDonald's has purposely kept supply low to generate queues and thus increase customer interest and perception of quality. The cost of doing this is the lost profit that the firm would have obtained if it operated more outlets faster in these markets. Such a cost would also be part of the sunk cost of entry into these markets.

⁶ See Pedersen and Shaver (2000) for an argument that the first entry abroad is particularly costly, while those that follow are less so. They derive and find support for the hypothesis that the time to first entry will be larger than the time to second entry. They also find that the time to follow-up entry does not differ from the time to second entry significantly.

Beyond the cost of entering into a new foreign market, we also attach a sunk cost of entry to each new outlet that the firm establishes in a given country.⁷ This assumption represents the strain on local resources when many outlets are opened at once in a given market. For example, it is costly to find enough real estate experts and to analyze large numbers of sites to identify a large number of good locations for new outlets. It is also time consuming and costly to identify and train the requisite number of franchisees, managers, and employees to staff numerous outlets. These limits in turn impose a constraint on the chain's growth in any given market in a given time period. The combination of these costs will lead to slow gradual growth, overall and within each market, a pattern we find in Figures 1 and 2 which show respectively the evolution in the number of U.S. and foreign outlets over the history of the firm, and the evolution of the number of outlets in each of McDonald's five main markets. These figures also already suggest that the firm begins operating in new markets much before all profitable opportunities to operate in its existing set of markets are exhausted, as illustrated by the fact that much growth occurs in markets already entered even after entry into new markets⁸

⁷ One might also reasonably assume that there is a cost of opening outlets that operates at the level of the chain as a whole, across markets, that is a cost function $C = \zeta(\sum_j \text{Outlets}_{ji})$. However, empirically, there is large variation in the number of outlets opened in total by the chain each year, so there does not appear to be an obvious cross-market constraint or cost operating at this level. Moreover, discussions with industry representatives suggest that markets are developed relatively separately - for example, master franchise development schedules are set up independently from those arranged for other markets.

⁸ Linn (2004) for example reports that Starbucks plans to triple its store count from the current 8000 to 25,000 worldwide long long-term. At this time, it is expanding at a rate of about 3.5 new stores per day, which requires that the firm, whose employees already number around 80,000, hire 250 new employees a day. At this rate, it will take Starbucks more than a decade to achieve its current long-term goal.

Figure 1: McDonald's Expansion 1995-1999

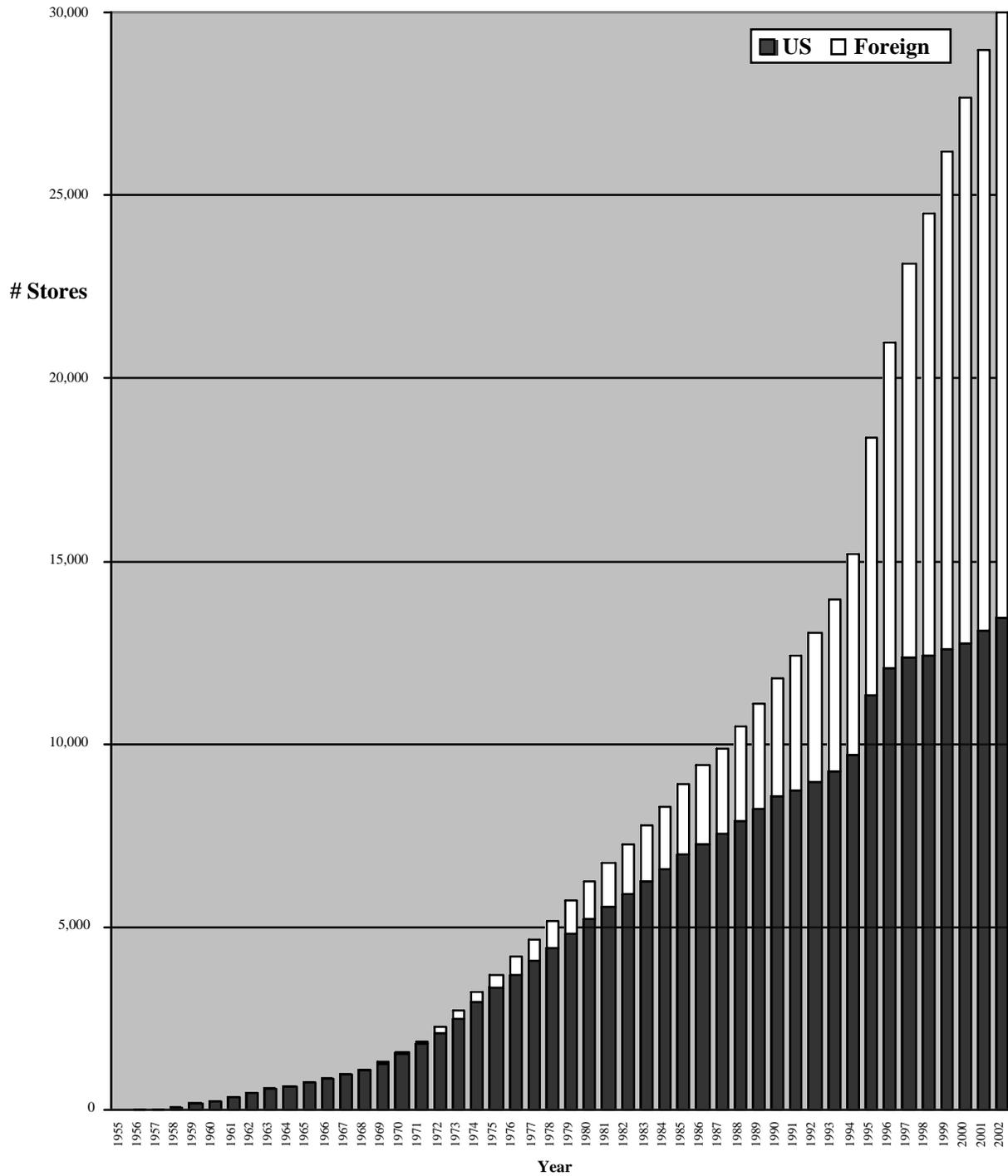
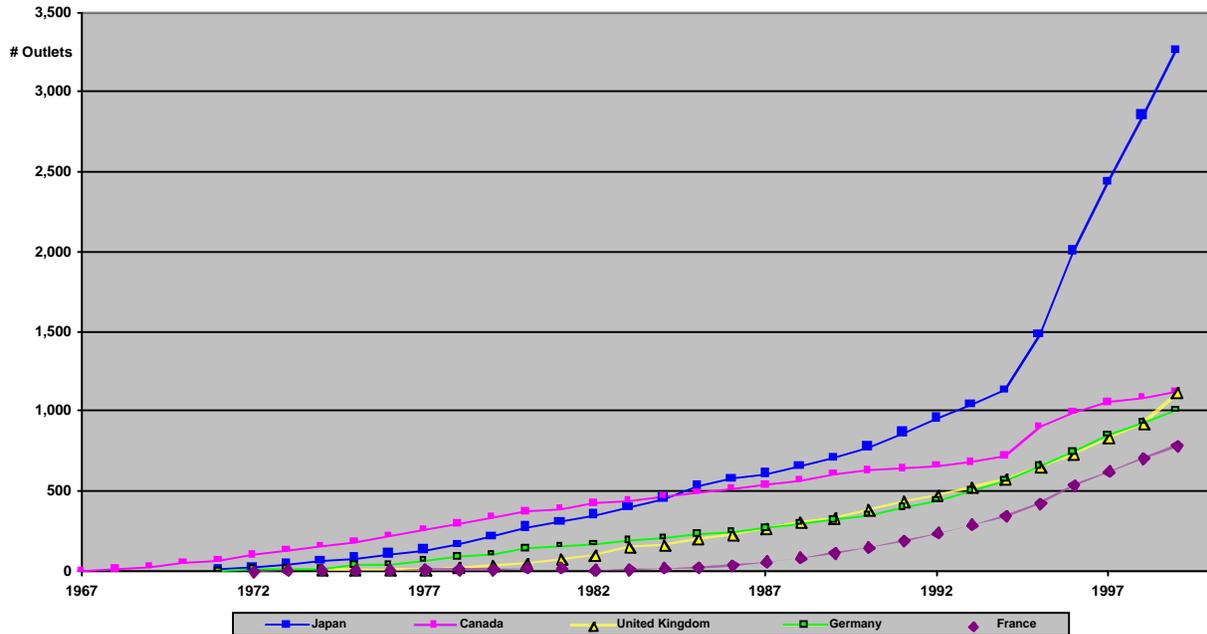


Figure 2: McDonald's Expansion - Five Largest Foreign Markets



While McDonald's faces costs of expansion into new and within markets, it is able to assess the long-term prospects of different markets and it is on this basis that, according to economic theory, it would decide when to enter a new market. Specifically, assuming that service firms follow manufacturing trade patterns, the international trade literature suggests that McDonald's will initially open outlets in higher-income countries and move into lower-income countries later on (Vernon 1966 and Grossman & Helpman 1991). Also, just like we see in manufacturing, the firm's evaluation of each market will determine its mode of entry into these markets.

Suppose then that the demand for McDonald's product in any given market j at time t is given by

$$Q_{jt} = f(Z_{jt}, p_{jt}) + u_{jt} \quad (1)$$

where the Z_{jt} are a series of market characteristics such as population and income, the u_{jt} is random noise that makes it impossible to precisely predict demand, and p_{jt} is the price charged for the product in market j at time t .⁹ Given price, and holding the size of each McDonald's constant, this demand implicitly defines the optimal number of outlets that McDonald's would find optimal to have in this market at time t . We use N_{jt}^* to represent this optimal number of restaurants. Note that we allow this optimal number of restaurants to vary over time as the market evolves over time as well.

The expected profit from operations in a specific new market at time t if all N_{jt}^* outlets were opened at once would be

$$\Pi_{jt} = N_{jt}^* (\pi_j - F(N_{jt}^*))$$

where π_j is the present value of each outlet's profit over the life of the restaurant and $F(N_{jt}^*)$ is the sunk cost of establishing all these restaurants at once. Of course, if all outlets are not opened at once, the total cost F would be lower. However, profits generated in the market also will be lower as some outlets would then only generate profits further in the future. Comparing the marginal benefit of one more restaurant to the marginal cost of establishing one more, McDonald's will determine the optimal number of outlets to be opened in this market each period. The net present value of the profits generated by this expanding set of outlets over time minus the marginal cost of entering this specific market at time t would represent the net value of entering this market at time t . Economic theory suggests that at each period t , the firm would rank markets not yet entered based on its expectation of net present value overall for each market, and enter all those for which the net present value of expected profits are above the

⁹ Note that the demand for franchises in each market is derived from the demand for the firm's product. In that sense, even if the firm mostly sells franchises, it cares about the demand for its products.

incremental cost of entry. Of course, at any given time, the expected profits from projected outlets in a particular market need not be positive. In those cases, the firm will delay entry until market conditions improve sufficiently so that the profit potential outweighs entry costs. Thus entry into very low demand markets may be delayed significantly.

Assuming similar sunk costs of opening outlets within the different markets, everything else constant, McDonald's net expected profits from entry will be higher the larger the expected number of stores to be opened in a market and the lower the sunk cost of entry into a given market. Thus economic theory predicts that, in any given period, McDonald's will first enter those remaining markets with the highest expected demand, namely markets where income (assuming, of course, that fast-food is a normal good) and population for example are high, and markets that are more similarly culturally if this means that local customers are most likely to appreciate the firm's product.

Going beyond entry, however, what does economic theory imply when it come to how McDonald's should allocate resources to grow within markets? One way to think about the process of expansion within a market is as a series of entry decisions within specific submarkets (see e.g. Toivanen and Waterson, 2004). The convex cost function for new units then constrains the number of outlets to open in each market in any given period. Here again outlets or submarkets can be ranked in decreasing order of expected sales, and all those for which expected profits are above the incremental sunk cost associated with opening a new outlet will be worth opening at time t . This implies that McDonald's would open those outlets in the most profitable submarkets first. It also implies that McDonald's will open more outlets faster in high demand countries.

In many of the countries where McDonald's now operates, it brought along not just one but two new concepts: its product – the hamburger, or fast-food itself – and franchising. As a

pioneer, it faced significant uncertainty, not knowing how the population would react to its product offering. Hence demand could not be predicted with as much precision (the variance of u in (1) is larger) when the firm had no experience in the market (see e.g. Caplin and Leahy's (1998) model of search with information externalities). This implies that there is option value in not developing a large number of outlets all at once but instead taking some time to learn about customers, tailoring products, and advertising to increase demand in each market. The cost of waiting will be larger, however, in high expected demand markets. In other words, both an assumption of convex sunk cost and the option value approach to this problem imply that the number of outlets will grow more rapidly the larger the expected demand in the market.

3. THE DATA

The panel data set we use is constructed from McDonald's Corporation annual reports which together contain information on the number of stores that the company operates in each country in each year since the company's foundation in 1955. In addition, we gathered information on the characteristics of as many markets/countries as we could, irrespective of whether McDonald's operated outlets in these by the end of our period, in 1999.¹⁰ Our data are yearly since 1967 as this is when McDonald's opened its first outlet outside of the United States - in Canada. Our goal was to capture those market characteristics that influence expected demand for McDonald's in each market as well as the level of sunk costs to the extent possible. Thus we obtained data on GDP per capita, population, the proportion of the population living in

¹⁰ Tables A1 and A2 in Appendix A show the list of markets that McDonald's operates in that are included in our data, and the set that we had to exclude for lack of data. We made every effort to find all the needed data for all markets. Table A2 shows that the countries or jurisdictions with McDonald's that are excluded from our data are typically small, often island markets.

urban centers, the surface area of the country, the distance of each capital from Chicago, where McDonald's headquarters is located, and so on. Table 1 shows the details of all these variables, their exact definitions and the sources we used. Table 2 gives descriptive statistics for all these variables across all the foreign markets over the period from 1967 to 1999 first for the overall sample, irrespective of whether McDonald's had in fact any outlets within a given market at the time, and then focusing on those markets that McDonald's was in fact present in by 1999.

As one of our goal is to examine whether McDonald's expands geographically only after saturating markets, it is useful to consider this issue using our full data set instead of only those few markets that McDonald's went in early on, as per Figure 2. Table 3 shows the number of new markets in which McDonald's has opened outlets during each year after its first foreign market entry in 1967, into Canada.¹¹ The table also shows the number of outlets the firm had in the markets it was already in by that time, and the number of outlets it added in year t to those markets. The last three columns in the table show the equivalent information but for the markets that McDonald's enters at time t . Consistent with the conclusions we drew from Figure 2, the table shows that the bulk of the growth occurs in the markets that McDonald's has previously entered, despite the fact that it is entering many additional markets at any given time. Thus, the data again rejects the idea that a firm such as McDonald's first saturates the markets it is already in before moving on to exploit opportunities in other markets.

¹¹ It also went to Puerto Rico that year. For the list of countries that McDonald's operates in by 1999 and the year of entry in each case, see Appendix A.

Table 1: Variable Definitions and Sources

Variable Name	Description	Units	Measure	Source(s)
<i>Outlets</i>	# outlets in country	Outlets	Total year-end number of outlets in country.	Annual Reports
<i>Outlet Growth</i>	Outlet growth from preceding year	None	$\text{Log}(\text{outlets}_t) - \text{Log}(\text{outlets}_{t-1})$	Annual Reports
<i>yr_in_mkt</i>	Year in market (entry year=1)	Years	First year equals 1, 2nd year equals 2, ...	Annual Reports
<i>Calendar_yr</i>	The calendar year for the period t	Calendar Year	Spans from 1967 through 1999	
<i>Population</i>	Total country population	Millions of people		USCB
<i>Urban_rate</i>	Proportion of total population residing in urban settings	None	# People in urban settings divided by total population of the country	WDI,PWT, WB
<i>Gdpcap</i>	Real GDP per capita	\$US 1995		WDI,PWT, WB
<i>Distance</i>	Distance from firm headquarters	Kilometers	Great circle distance between Chicago and country capital	
<i>risk_gdpcap</i>	Variability of detrended GDP/capita as a proportion of average GDP	None	Mean squared error from regression of real local currency GDP per capita on calendar year from t-6 to t-1 divided by mean GDP per capita over same period	WDI,PWT, WB
<i>risk_USxchg</i>	Variability of local currency and US \$ exchange rate	None	Standard deviation of exchange rate between t-6 to t-1 divided by average exchange rate over same period. The result is then divided by 1,000 to appropriately scale the variable.	WDI,PWT, IMF
<i>Polcon</i>	Index of political consistency	(0, 1) with 1= most consistent	Henisz (2000) "polconiii" measure. Refer directly to article for details underlying calculation of index.	Henisz' Web site†
<i>Competitors</i>	# of Major US Burger Chains in Country	{0,2}	Counts whether Burger King and Wendy's present in country. If both there, then =2, one, then =1.	AR, SEC, Press
<i>East Block</i>	Dummy variable for Country in East Block	(0,1)	Previously part of Soviet Controlled countries.	WDI
<i>Trade/gdp</i>	Openness of country to foreign trade	None	Total (exports + imports) divided by GDP for a country	WDI,PWT, WB
<i>foreign_mkts_in</i>	Number of foreign markets at year end	Countries		Annual Reports
<i>exper_lang</i>	Total Outlets in Markets w/Same Language	Outlets	Total store count within other countries that speak the same language	Annual Reports, WB

†: www-management.wharton.upenn.edu/henisz/

Table 2: Descriptive Statistics (1967-1999) Excluding US

<i>Variable</i>	Analysis of Entry Decision					Analysis of Post-Entry Expansion				
	Obs.	Mean	Std. Dev.	Min	Max	Obs.	Mean	Std. Dev.	Min	Max
<i>outlets</i>	4,481	21.3	121.0	0	3,258	1,071	89.1	235.1	1	3,258
<i>outlet_growth</i>						1,071	0.29	0.35	-1.61	2.89
<i>yr_in_mkt</i>	4,481	2.6	5.9	0	33	1,071	10.30	7.75	1	33
<i>Calendar_yr</i>	4,481	1984	9.56	1967	1999	1,071	1990	7.78	1967	1999
<i>Population</i>	4,481	31.34	110.95	0.15	1,252.8	1,071	42.71	131.69	0.26	1,253
<i>Urban_rate</i>	4,479	0.47	0.25	0.02	1.00	1,071	0.69	0.18	0.18	1.00
<i>Gdpcap</i>	4,345	5,178	8,322	0	45,952	1,071	12,674	11,076	350	45,952
<i>Distance</i>	4,415	5,889	2,136	437	9,918	1,071	4,850	2,318	437	9,849
<i>risk_gdpcap</i>	4,222	0.03	0.04	0.0010	0.88	1,071	0.025	0.043	0.001	0.875
<i>risk_USxchg</i>	4,284	0.049	0.081	0	0.547	1,064	0.0014	0.0095	0	0.2019
<i>Polcon</i>	4,385	0.18	0.21	0	0.71	1,071	0.36	0.19	0	0.71
<i>Trade/gdp</i>	4,326	0.69	0.45	0.02	4.39	1,071	0.79	0.58	0.13	4.39
<i>Competitors</i>	4,481	0.24	0.55	0	2	1,071	0.89	0.76	0	2
<i>east_block</i>	4,481	0.03	0.18	0	1	1,071	0.071	0.257	0	1
<i>Foreign_mkts_in</i>	4,481	34.86	24.50	2	87	1,071	51.06	24.65	3	88
<i>exper_lang</i>	4,481	1,814	3,797	0	16,557	1,071	1,883	4,084	1	16,557
<i>Arabic Lang</i>	4,481	0.10	0.30	0	1	1,071	0.042	0.201	0	1
<i>French Lang</i>	4,481	0.23	0.42	0	1	1,071	0.109	0.312	0	1
<i>German Lang</i>	4,481	0.02	0.15	0	1	1,071	0.071	0.257	0	1
<i>Portuguese Lang</i>	4,481	0.02	0.15	0	1	1,071	0.020	0.139	0	1
<i>Russian Lang</i>	4,481	0.03	0.16	0	1	1,071	0.034	0.180	0	1
<i>Spanish Lang</i>	4,481	0.15	0.35	0	1	1,071	0.254	0.435	0	1
<i>Other Lang</i>	4,481	0.29	0.45	0	1	1,071	0.371	0.483	0	1

Table 3: McDonald's International Expansion: Markets Already In and New Markets

Year	# Markets Entered by t-1	Total # Outlets in Markets Entered by t-1	# Outlets Added in t in Markets Entered by t-1	# Markets Entered in t	# Markets Entered in t Where No Competitor	# Outlets Added in t in Markets Entered in t
1967	0	0	0	2	1	3
1968	2	3	8	0	0	0
1969	2	11	24	0	0	0
1970	2	35	26	1	1	1
1971	3	62	14	5	5	10
1972	8	86	54	1	1	3
1973	9	143	64	2	2	4
1974	11	211	67	3	3	6
1975	14	284	70	2	2	4
1976	16	358	113	2	2	6
1977	18	477	103	2	2	2
1978	20	582	130	1	1	1
1979	21	713	165	2	2	4
1980	23	882	159	0	0	0
1981	23	1,041	130	3	1	5
1982	26	1,176	154	1	0	2
1983	27	1,332	205	1	1	1
1984	28	1,538	152	2	2	6
1985	30	1,696	213	4	2	5
1986	34	1,914	203	2	2	3
1987	36	2,120	205	0	0	0
1988	36	2,325	258	3	2	4
1989	39	2,587	284	0	0	0
1990	39	2,871	333	3	3	3
1991	42	3,207	419	4	2	5
1992	46	3,631	469	3	2	7
1993	49	4,107	569	4	1	4
1994	53	4,680	736	7	5	11
1995	60	5,427	1,523	6	4	17
1996	66	6,967	1,866	10	7	38
1997	76	8,871	1,822	6	5	17
1998	82	10,710	1,255	4	4	7
1999	86	11,972	1,547	2	2	2

Table 4 shows the number of restaurants added, and the growth rate in number of restaurants in percentage terms, as a function of how many years it has been operating there.

The figures in the last few rows in the table are based on just a few markets that the firm entered

very early on, and thus are not reliable. Ignoring those, this table shows a tendency for McDonald's to open more and more outlets on average in markets it has been in for longer periods of time. Most likely this reflects the fact that it entered the most profitable markets fairly early on and is still aggressively developing those markets even after 20 or 25 years there. More importantly, it shows a wide range of outlets added or growth rates across countries that McDonald's has been in for similar amounts of time. This fact of course is consistent with the notion that McDonald's is opening more outlets in certain markets than others. In Tables 1 and 2, we saw a tendency for McDonald's to enter high GDP per capita market relatively early. In our analyses below, we will see that it also opens more outlets in markets with higher per capita GDP, as predicted by a simple sunk entry cost model.

Finally, note that our description has focused on entry and growth in underdeveloped markets. As a result, we relate new outlets and growth in outlets not to market growth, but rather to the characteristics of the markets in levels. In other words, we have an entry or diffusion process where the number of outlets at any point in time remains far from the equilibrium level. What we observe are the effects of market characteristics rather than the effect of market growth on the growth of outlets. This is standard in entry analyses, and in turn shapes our empirical model below.

Table 4: McDonald's Growth Statistics By Year in Market

Year in Market	Number of Outlets Added				Percent Outlet Growth				Total # obs.
	Mean	Std. dev.	Min.	Max.	Mean	Std. dev	Min.	Max.	
1	2.10	2.08	1	17	200%	0%	200%	200%	83
2	2.80	3.49	0	18	64%	47%	0%	164%	81
3	3.48	4.90	0	23	45%	33%	0%	120%	77
4	3.82	4.78	-2	22	34%	42%	-200%	125%	73
5	4.33	5.60	-4	25	27%	26%	-67%	86%	64
6	6.40	8.66	-4	35	28%	24%	-40%	90%	58
7	7.84	11.98	-1	55	22%	20%	-13%	82%	51
8	6.77	13.71	-36	67	17%	20%	-42%	74%	48
9	8.84	11.80	-6	51	17%	29%	-150%	54%	45
10	10.78	15.04	0	57	19%	15%	0%	52%	41
11	7.92	10.69	-11	41	13%	22%	-81%	70%	38
12	12.71	21.60	-20	114	19%	23%	-16%	127%	38
13	12.47	14.91	-1	52	9%	38%	-200%	40%	36
14	12.61	16.54	0	70	13%	11%	0%	35%	36
15	14.59	17.71	-1	77	16%	17%	-40%	67%	34
16	12.30	12.44	0	41	18%	15%	0%	67%	30
17	15.21	19.95	0	94	16%	12%	0%	48%	28
18	17.41	21.73	0	94	14%	10%	0%	32%	27
19	19.50	29.03	0	143	15%	13%	0%	59%	26
20	10.22	29.24	-93	72	10%	12%	-21%	31%	23
21	20.78	25.59	-4	89	14%	11%	-6%	40%	23
22	21.43	25.34	0	91	24%	42%	0%	200%	21
23	24.20	28.31	0	88	19%	25%	0%	120%	20
24	27.83	35.49	0	96	22%	45%	0%	200%	18
25	50.19	88.05	0	349	16%	14%	0%	57%	16
26	73.50	140.38	-8	522	2%	47%	-160%	33%	14
27	67.18	125.90	2	433	20%	27%	3%	100%	11
28	73.89	131.61	1	415	10%	6%	4%	21%	9
29	90.13	141.82	2	406	13%	8%	3%	24%	8
30	36.67	47.26	0	90	11%	12%	0%	24%	3
31	36.00	31.11	14	58	10%	6%	6%	14%	2
32	20.00	21.21	5	35	4%	1%	3%	4%	2
33	23.50	23.33	7	40	5%	2%	4%	6%	2

4. EMPIRICAL MODEL AND RESULTS

Economic theory suggests that a firm like McDonald's forecasts its optimal number of outlets in each market based on market characteristics, and in any given period compares the profitability of entering any given market to the incremental cost of entering that market.¹² In other words, we have a notion of optimal number of outlets in each market given its characteristics, N_{jt}^* , such that:

$$N_{jt}^* = f(Z_{jt}) + \varepsilon_{jt} \quad (1)$$

where the Z_{jt} s for example include market population and per capita income, as well as measures of country risk. We expect the latter to have a negative effect on the optimal number of outlets but market population and per capita income should have a positive effect on the same. Note that we allow the optimal number of outlets to vary over time as the market itself evolves.

The phenomenon we are focusing on, that is a firm's expansion across markets, however, is a dynamic one. In fact, since the firm is expanding from no presence at all in the market, under the assumptions of convex sunk costs and option value discussed above, our yearly observations on number of outlets will not represent long-term equilibrium configurations of outlets across markets for many years beyond entry. The intense growth of McDonald's in markets it has been in already for 20 or 25 years, depicted in Table 3, suggests instead that the diffusion process is fairly slow. Thus the firm is typically playing catch up, growing not in response to growth in the market, but in response to the overall desirability of the market throughout its history in foreign markets.

¹² Indeed, in their study of international expansion, Gonzalez-Diaz and Lopez (2002) use franchisors' stated desired market size per outlet to determine the point of market saturation.

Like most studies of international expansion processes, we begin with an analysis of entry decisions. Specifically, we use duration analysis to model entry by McDonald's into a foreign market. In this analysis, a country j is considered to be at risk of entry if that country is an independent jurisdiction and in year t McDonald's has not as yet entered. Assuming a proportional hazard and an exponential survival function, we have

$$h(t|x_{jt}) = h_0(t)\exp(x_{jt}\beta)$$

while under a Weibull distribution, we have

$$h(t|x_{jt}) = p * \exp(x_{jt}\beta)t^{p-1}.$$

Results from estimating the hazard of entry as a function of our explanatory variables which include market characteristics related to demand (the Z_{jt} above) but also firm and market characteristics that may affect the cost of entry, using both the exponential and Weibull proportional hazard models, are summarized in Table 6. They show that indeed high market potential, captured by both GDP per capita and population, is an important factor attracting McDonald's to particular foreign markets. Moreover, we find that trade/GDP also has a positive effect on the likelihood of entry, which would occur if high trade levels implied similar cultures or economic development, but also if such high trade levels lowered the cost of entry into a market for institutional reasons. Interestingly, high tax rates relates positively with the likelihood of entry. Most likely this relationship is explained by the fact that high tax rates are more likely in more developed economies, which in turn are more likely to attract entry. None of our risk measures (based on variance in GDP, or exchange rate fluctuation, or Henisz' political consistency measure) have statistically significant effects on the likelihood of entry. The signs on the exchange rate risk and political consistency, however, are as expected. Similarly, the presence of competitors does not significantly affect the likelihood of entry. Of

course, for the vast majority of markets, this variable is zero: McDonald's is usually the first entrant by far. The effect, though insignificant, is positive in all cases, suggesting that the markets in which Burger King or Wendy's have already entered are likely to be desirable markets generally. Finally, physical distance has a clear and statistically negative effect on entry probabilities.

Table 6: Duration Analysis – Time to Entry in Each Market

	(1)	(2)	(3)	(4)	(5)	(6)
	Exponential	Exponential	Exponential	Weibull	Weibull	Weibull
<i>Log (population)</i>	0.51** [0.09]	0.52** [0.09]	0.51** [0.09]	0.49** [0.09]	0.49** [0.09]	0.49** [0.09]
<i>Log (gdpcap)</i>	0.79** [0.15]	0.80** [0.16]	0.85** [0.17]	0.78** [0.16]	0.79** [0.16]	0.85** [0.18]
<i>Urban_rate</i>	1.45 [1.11]	1.41 [1.14]	0.92 [1.20]	1.25 [1.16]	1.23 [1.19]	0.78 [1.23]
<i>Trade/GDP</i>	0.75** [0.24]	0.77** [0.26]	0.80** [0.25]	0.77** [0.24]	0.79** [0.26]	0.82** [0.25]
<i>Corporate Tax Rates</i>			2.13+ [1.25]			2 [1.25]
<i>Risk_gdpcap</i>	0.98 [0.90]	0.97 [0.89]	0.22 [0.96]	1.01 [0.87]	1.00 [0.86]	0.27 [0.94]
<i>Risk_US exchange</i>	-40.06 [41.92]	-39.97 [41.91]	-48.18 [48.11]	-41.16 [43.51]	-41.09 [43.51]	-49.04 [49.45]
<i>Political consistency</i>	0.84 [0.79]	0.84 [0.78]	0.77 [0.81]	1.02 [0.78]	1.01 [0.78]	0.93 [0.81]
<i>Competitors</i>	0.19 [0.28]	0.18 [0.29]	0.34 [0.28]	0.19 [0.29]	0.19 [0.29]	0.33 [0.28]
<i>Log (distance)</i>	-0.55+ [0.31]	-0.56+ [0.31]	-0.52+ [0.30]	-0.51+ [0.31]	-0.51+ [0.31]	-0.49+ [0.30]
<i>Log (foreign markets in)</i>	1.17** [0.33]	0.95 [0.76]	1.30** [0.34]	0.53 [0.58]	0.36 [0.97]	0.67 [0.58]
<i>Log (experience language)</i>	0.20* [0.08]	0.20* [0.09]	0.17+ [0.09]	0.21* [0.09]	0.20* [0.09]	0.17+ [0.09]
<i>East Block</i>	0.6 [0.75]	0.59 [0.75]	0.26 [0.82]	1.84* [0.82]	1.81* [0.80]	1.52 [0.93]
<i>Calendar Year</i>		0.02 [0.06]			0.02 [0.06]	
<i>Language Fixed Effects</i>	Yes**	Yes**	Yes**	Yes**	Yes**	Yes**
<i>Constant</i>	-13.32** [3.27]	-50.00 [113.90]	-14.87** [3.35]	-13.69** [3.30]	-44.65 [121.03]	-15.07** [3.38]
<i>Observations</i>	2,984	2,984	2,439	2,984	2,984	2,439
<i># Countries</i>	145	145	124	145	145	124

<i>Log Likelihood</i>	-53.04	-53.00	-46.49	-52.14	-52.11	-45.64
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Robust standard errors in brackets; + significant at 10%; * significant at 5%; ** significant at 1%.

As for firm characteristics, we find that McDonald's is more likely to enter new markets at time t if it has already done this often (large number of foreign markets already in) and if it has more experience in countries within the same language group. We also find that the likelihood of entry at any time t is greater for previous eastern block countries. While significant only under the Weibull assumption, this effect also is not surprising given that entry into these countries prior to their independence from the Soviet Union was effectively not possible. In light of this, we treat these countries as at risk of entry only once they achieve independence. Finally, we note that the large negative values for the constant term imply that the baseline hazard is basically zero.

Focusing on entry rather than the whole process of international expansion of this chain, however, ignores much relevant information. Assuming that expansion or diffusion within a market can be modeled using the familiar S-shape pattern, we follow Pindyck and Rubinfeld's (1998) suggestion and specify that the number of outlets in market j at time t can be described by

$$Y_{jt} = e^{k_1 - (k_2/t)}$$

or, after taking the log of both sides,

$$\log Y_{jt} = k_1 - k_2/t \quad (2)$$

where k_1 captures the fact that there is a "target" or optimal number of outlets in the market, and k_2 captures the friction that prevents the firm from being at this optimal at any given time t . Note in particular that as t becomes larger, k_2/t becomes smaller, and hence we approach market saturation.

As expressed, however, equation (2) does not include any regressors. Our goal is to transform it in such a way as to capture the effect of different variables on the target number of outlets and the degree of friction. We therefore rewrite it as follows:

$$\log Y_{jt} = k_1(Z_{jt}) - k_2(W_{jt})/t.$$

We assume specifically that market potential variables affect the target but not the speed of expansion, and that factors such as distance and firm experience affect the degree of friction but not the desired level of outlets.¹³

We summarize in Table 7 the results obtained from examining the firm's expansion, using this specification. In all cases the regressions include country fixed effects among the Z_s . Thus the coefficients on the other Z_s capture the effect of changes in each variable over time within each country on the target level of stores. The first two columns show results for our full sample. Because McDonald's has not achieved maturity in many of the markets in our data, we present in the next two columns results obtained when we restrict the set of countries to only those that McDonald's considers its major foreign markets (Australia, Brazil, Canada, France, Germany, Japan, and the UK). Finally, we reproduce our full sample regressions in the last two columns of Table 7 but here use outlets/population as our dependent variable.

The results in Table 7 indicate that the target level of stores is highly positively related to indicators of market potential and is negatively related to the corporate tax rate. Interestingly, the number of competitors increases the target, suggesting that either McDonald's reacts

¹³ The more traditional approach to estimate a diffusion curve of this type was pioneered by Griliches (1957) who used a logistic specification. Other authors have relied instead on the Gompertz. See e.g. Berndt et al. (2003). In either of these specifications, however, the interaction of variables that enter the target and those that enter the friction component of the estimation lead to large number of coefficients to be estimated in our setting, and prevent us in particular from including country fixed effects in the target equation. For that reason, we adopted the functional form above which does not suffer from this limitation.

aggressively to the presence of its main U.S. competitors in these markets, or that their presence is taken as a sign of high market potential. The fact that we control for country fixed effects in the regressions, however, implies that the latter effect would need to be a dynamic one to be consistent with our results, that is that the increased presence of competitors is taken as a sign of increased market potential by McDonald's.

As for the variables that we relate to the speed of expansion, we find that distance from McDonald's headquarters, in Chicago IL, reduces the significantly the speed at which new outlets are added to close the gap between target and actual, as does increased ownership control. McDonald's total international experience, on the other hand, along with a country's openness to trade, tends to speed up the development of new units within each market. The results with respect to the firm's "culturally relevant" experience, however, go counter to our expectations. We are exploring these further at this stage, along with alternative specifications and groups of variables.

Table 7: Expansion

Dependent Variable:	Log(outlets)	Log(outlets)	Log(outlets)	Log(outlets)	Log	Log
	Full Sample	Full Sample	Major Markets	Major Markets	(Outlets/pop) Full Sample	(Outlets/pop) Full Sample
Target Parameters						
<i>Log (population)</i>	2.19** [0.30]	2.12** [0.30]	0.79 [0.80]	0.75 [0.80]	1.27** [0.33]	1.20** [0.33]
<i>Log (gdpcap)</i>	2.84** [0.13]	2.86** [0.13]	2.96** [0.34]	2.99** [0.33]	2.94** [0.14]	2.96** [0.14]
<i>Urban_rate</i>	3.04** [1.08]	3.08** [1.09]	21.49** [3.20]	21.32** [3.18]	2.87* [1.19]	2.94* [1.20]
<i>Trade/GDP</i>	-0.11 [0.09]	-0.1 [0.09]	-0.42 [0.46]	-0.46 [0.45]	-0.06 [0.11]	-0.06 [0.11]
<i>Corporate Taxe Rates</i>	-0.61* [0.24]	-0.64** [0.24]	-1.80** [0.64]	-1.77** [0.63]	-0.87** [0.27]	-0.88** [0.28]
<i>Risk_gdpcap</i>	-1.28** [0.41]	-1.32** [0.41]	0.04 [2.63]	-0.07 [2.62]	-1.58** [0.48]	-1.62** [0.49]
<i>Risk_US exchange</i>	0.01 [1.45]	0 [1.45]	-0.37 [1.72]	-0.4 [1.72]	-0.07 [1.55]	-0.07 [1.55]
<i>Political consistency</i>	0 [0.14]	0 [0.14]	0.24 [0.38]	0.23 [0.38]	0 [0.15]	0 [0.15]
<i>Competitors</i>	0.16** [0.03]	0.16** [0.03]	0.29** [0.05]	0.29** [0.05]	0.20** [0.03]	0.20** [0.03]
<i>Country Fixed Effects</i>	Yes**	Yes**	Yes**	Yes**	Yes**	Yes**
Friction Parameters						
<i>Log (distance)</i>	-0.40** [0.09]	-0.20** [0.03]	-0.48* [0.24]	-0.38** [0.09]	-0.45** [0.10]	-0.29** [0.03]
<i>Trade/GDP</i>	0.88** [0.06]	0.86** [0.06]	-1.43 [1.24]	-1.1 [1.00]	1.01** [0.08]	1.00** [0.08]
<i>Log (foreign markets in)</i>	0.10+ [0.06]	0.11+ [0.06]	1.20** [0.34]	1.12** [0.29]	0.14* [0.06]	0.15* [0.06]
<i>Log (experience language)</i>	-0.04* [0.02]	-0.03+ [0.02]	-0.09+ [0.05]	-0.09+ [0.05]	-0.03+ [0.02]	-0.03 [0.02]
<i>East Block</i>	-0.25 [0.16]	-0.22 [0.16]			-0.42* [0.19]	-0.38* [0.19]
<i>Ownership Control</i>	-0.21** [0.05]	-0.22** [0.05]	-0.27 [0.20]	-0.32+ [0.16]	-0.21** [0.06]	-0.22** [0.06]
<i>Calendar Year</i>	0.00* [0.00]		0 [0.00]		0.00+ [0.00]	
<i>Observations</i>	1,063	1,063	195	195	1063	1063
<i># Countries</i>	83	83	7	7	83	83
<i>Log Likelihood</i>	-147.53	-145.51	36.96	37.13	-276.67	-275.68
<i>Autocorrelation (rho)</i>	0.66	0.66	0.61	0.61	0.62	0.63

Robust standard errors in brackets; + significant at 10%; * significant at 5%; ** significant at 1%.

5. CONCLUSION

In this paper, we have examined the international expansion process followed by one of the most visible American firms to expand abroad, and also a firm that has pioneered American fast-food and franchising in several countries. We found that this firm's pattern of entry into foreign markets and growth easily rejects the notion that McDonald's expanded abroad because it had saturated its home market. Instead, consistent with traditional profit maximization arguments for a firm with market power that faces numerous market opportunities and limited resources, we find evidence that it allocated resources to achieve growth across many highly desirable markets. Specifically, it enters those markets with the most promising demographics first. Finally, we have found that while growth conditional on entry, and entry itself, share some common features, e.g. they are both positively related to a country's market potential, there are also a number of factors that affect entry and expansion differently. We conclude that it is worthwhile considering more generally how service chains expand abroad and going beyond just entry to gain further insights in the process and hurdles involved in foreign expansion.

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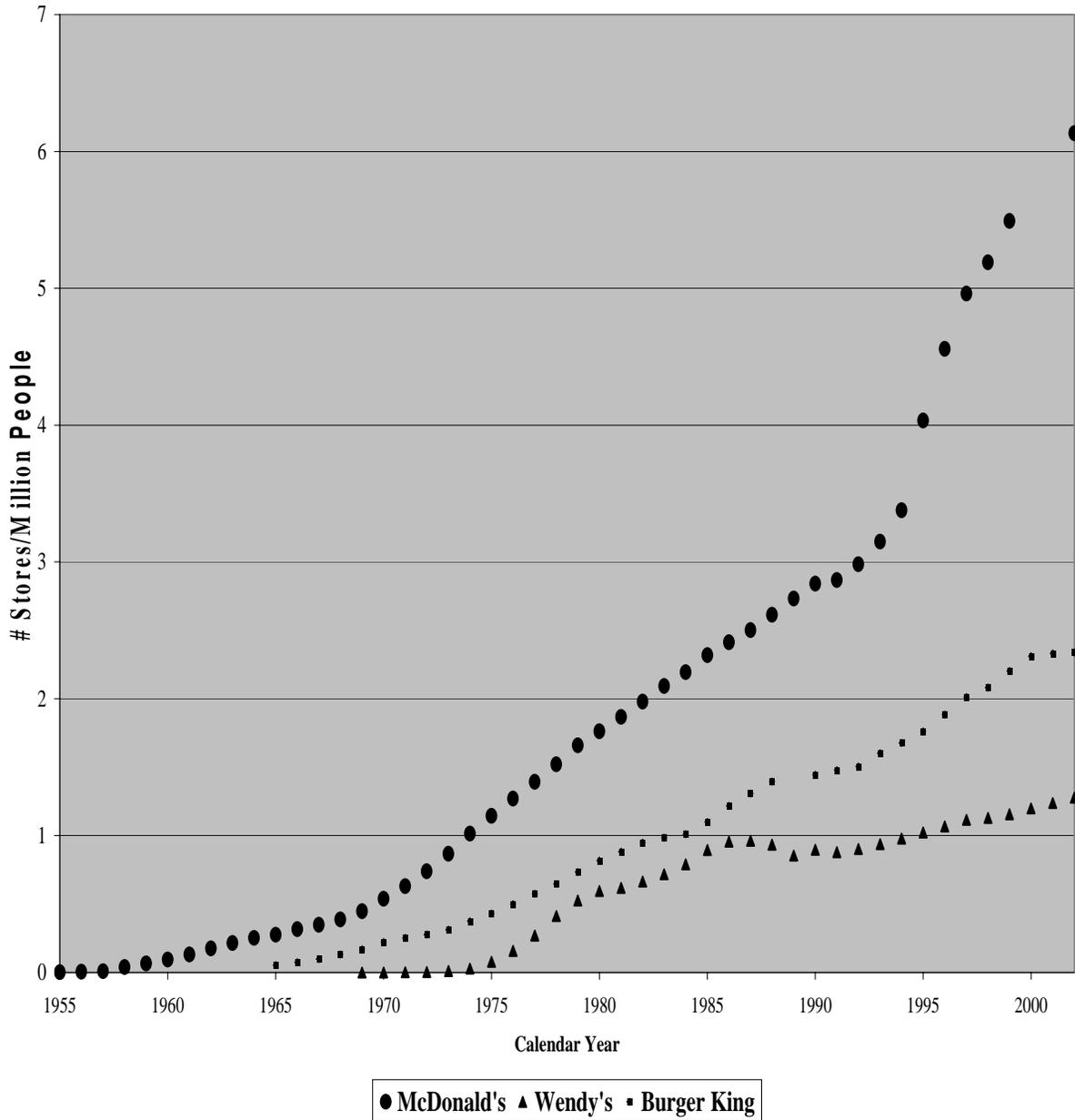
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Stores Per Million People System-wide Within Sampled Jurisdictions
(Comparison Across Chains)



Appendix

Table A1: Jurisdictions that McDonald's has entered by 1999 that are in our data

Country	Country ID	# Stores	Population (Millions)	# Stores/ Million People	Area in Sq. Km (000s)	Entry Year
1 United States	USA	13,491	287.68	46.90	9,158.96	1955
2 Japan	JPN	3,891	127.07	30.62	364.50	1971
3 Canada	CAN	1,304	31.90	40.87	9,220.97	1967
4 United Kingdom	GBR	1,229	59.91	20.51	240.88	1974
5 Germany	DEU	1,211	82.35	14.71	356.68	1971
6 France	FRA	973	59.93	16.24	550.10	1972
7 Australia	AUS	726	19.55	37.14	7,682.30	1971
8 Brazil	BRA	584	179.91	3.25	8,456.51	1979
9 China	CHN	546	1,279.16	0.43	9,327.42	1990
10 South Korea	KOR	357	47.96	7.44	98.73	1988
11 Taiwan	TWN	350	22.45	15.59	36.00	1984
12 Spain	ESP	333	40.15	8.29	499.44	1981
13 Italy	ITA	329	57.93	5.68	294.11	1985
14 Mexico	MEX	261	103.40	2.52	1,908.69	1985
15 Sweden	SWE	245	8.88	27.60	411.62	1973
16 Philippines	PHL	236	83.00	2.84	298.17	1981
17 Netherlands	NLD	220	16.07	13.69	33.88	1971
18 Hong Kong	HKG	216	7.30	29.58	0.99	1975
19 Argentina	ARG	203	38.33	5.30	2,736.69	1986
20 Poland	POL	200	38.63	5.18	304.42	1992
21 Austria	AUT	157	8.17	19.22	82.73	1977
22 Malaysia	MYS	149	22.66	6.57	328.55	1982
23 New Zealand	NZL	148	3.91	37.87	267.99	1976
24 Switzerland	CHE	138	7.30	18.90	39.55	1976
25 Singapore	SGP	130	4.45	29.20	0.61	1979
26 Venezuela	VEN	129	24.29	5.31	882.05	1985
27 Puerto Rico	PRI	112	3.86	28.99	8.87	1967
28 Portugal	PRT	110	10.08	10.91	91.50	1991
29 Indonesia	IDN	105	231.33	0.45	1,811.57	1991
30 Thailand	THA	100	63.65	1.57	510.89	1985
31 Israel	ISR	99	6.03	16.42	20.62	1993
32 Russia	RUS	94	144.98	0.65	16,888.50	1990
33 Finland	FIN	90	5.18	17.36	304.59	1984
34 South Africa	ZAF	89	42.72	2.08	1,221.04	1996
35 Denmark	DNK	84	5.37	15.65	42.43	1981
36 Hungary	HUN	83	10.08	8.24	92.34	1988
37 Turkey	TUR	81	67.31	1.20	769.63	1986
38 Saudi Arabia	SAU	79	23.51	3.36	2,149.69	1993
39 Chile	CHL	70	15.50	4.52	748.80	1990
40 Czech Republic	CZE	68	10.26	6.63	77.28	1992

Table A1: Jurisdictions that McDonald's has entered by 1999 that are in our Data (cont'd)

Country	Country ID	# Stores	Population (Millions)	# Stores/ Million People	Area in Sq. Km (000s)	Entry Year	
41	Ireland	IRL	67	3.88	17.25	68.89	1977
42	Norway	NOR	62	4.53	13.70	306.83	1983
43	Belgium	BEL	56	10.28	5.45	32.82	1978
44	Greece	GRC	54	10.65	5.07	128.90	1991
45	Ukraine	UKR	51	48.40	1.05	579.35	1997
46	Romania	ROM	48	22.32	2.15	230.34	1995
47	India	IND	46	1,034.17	0.04	2,973.19	1996
48	Egypt	EGY	40	73.31	0.55	995.45	1994
49	Guatemala	GTM	38	13.54	2.81	108.43	1974
50	Kuwait	KWT	37	2.11	17.52	17.82	1994
51	Panama	PAN	32	2.92	10.96	74.43	1971
52	Colombia	COL	28	41.01	0.68	1,038.70	1995
53	United Arab Emirates	ARE	28	2.45	11.45	83.60	1994
54	Costa Rica	CRI	24	3.84	6.26	51.06	1970
55	Uruguay	URY	22	3.39	6.50	175.02	1991
56	Bulgaria	BGR	21	7.62	2.76	110.55	1994
57	Pakistan	PAK	20	147.66	0.14	770.88	1998
58	Morocco	MAR	17	31.17	0.55	446.30	1992
59	Peru	PER	17	27.95	0.61	1,280.00	1996
60	Slovenia	SVN	17	1.93	8.79	20.12	1993
61	Croatia	HRV	16	4.39	3.64	55.92	1996
62	Ecuador	ECU	10	13.45	0.74	276.84	1997
63	Jamaica	JAM	10	2.68	3.73	10.83	1995
64	Dominican Republic	DOM	9	8.60	1.05	48.38	1996
65	Lebanon	LBN	9	3.68	2.45	10.23	1998
66	Malta	MLT	8	0.40	20.13	0.32	1995
67	Estonia	EST	7	1.42	4.94	42.27	1995
68	Honduras	HND	7	6.51	1.07	111.89	1974
69	Jordan	JOR	6	5.31	1.13	88.93	1996
70	Lithuania	LTU	6	3.60	1.67	64.80	1996
71	Latvia	LVA	6	2.37	2.54	62.05	1994
72	Paraguay	PRY	6	5.88	1.02	397.30	1996
73	Belarus	BLR	6	10.34	0.58	207.48	1996
74	El Salvador	SLV	5	6.35	0.79	20.72	1973
75	Oman	OMN	5	2.71	1.84	212.46	1994
76	Nicaragua	NIC	4	5.02	0.80	121.40	1975
77	Macedonia	MKD	3	2.06	1.46	25.43	1997
80	Georgia	GEO	2	4.96	0.40	69.70	1999
81	Sri Lanka	LKA	2	19.58	0.10	64.63	1998
82	Bolivia	BOL	0	8.45	0.00	1,084.38	1998
83	Trinidad & Tobago	TTO	0	1.11	0.00	5.13	1994

Table A2: Jurisdictions that McDonald's Entered by 1999 that are excluded from analyses

Country	Country ID	# Stores	Population (Millions)	# Stores/ Million People	Area in Sq. Km (000s)	Entry Year
1 Cyprus	CYP	14	0.77	18.25	9.24	1997
2 Yugoslavia	YUG	13	10.66	1.22	255.40	1988
3 Macau	MAC	10	0.46	21.65	0.02	1987
4 Bahrain	BHR	9	0.66	13.71	0.69	1994
5 Guam	GUM	8	0.16	49.75	0.55	1971
6 Martinique	MTQ	7	0.42	16.58	1.10	1991
7 Qatar	QAT	7	0.79	8.82	11.00	1995
8 Guadeloupe	GLP	6	0.44	13.77	1.78	1992
9 Luxembourg	LUX	6	0.45	13.38	2.59	1985
10 Reunion	REU	6	0.74	8.06	2.52	1997
11 U.S. Virgin Islands	VIR	6	0.12	48.58	0.34	1970
12 Netherland Antilles	ANT	5	0.21	23.34	0.80	1974
13 Bahamas	BHS	4	0.30	13.55	10.01	1975
14 Andorra	AND	3	0.07	43.86	0.47	1984
15 Fiji	FJI	3	0.86	3.50	18.27	1996
16 Iceland	ISL	3	0.28	10.74	100.25	1993
17 Aruba	ABW	2	0.07	28.39	0.19	1985
18 French Polynesia	PYF	2	0.26	7.76	3.66	1996
19 New Caledonia	NCL	2	0.21	9.62	18.28	1994
20 N. Mariana Islands	MNP	2	0.08	25.87	0.48	1993
21 Brunei Darussalam	BRN	1	0.35	2.85	5.27	1992
22 Cuba	CUB	1	11.22	0.09	109.82	1986
23 Gibraltar	GIB	1	0.03	36.08	0.01	1999
24 Liechtenstein	LIE	1	0.03	30.45	0.16	1996
25 Monaco	MCO	1	0.03	31.26	0.00	1992
26 Samoa	WSM	1	0.18	5.60	2.83	1996
27 San Marino	SMR	1	0.03	36.06	0.06	1999
28 Suriname	SUR	1	0.43	2.31	156.00	1997
29 Barbados	BRB	0	0.28	0.00	0.43	1989
30 Bermuda	BMU	0	0.06	0.00	0.05	1985