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The location choices of Multinational firms: the role of Internationalization experience and Group affiliation

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THE LOCATION CHOICES OF MULTINATIONAL FIRMS: THE ROLE OF INTERNATIONALIZATION EXPERIENCE AND GROUP AFFILIATION[1]

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Abstract

This paper investigates whether location choices of multinational firms depend on past export, import or FDI experience on foreign markets, and the experience of other affiliated firms. Using French data, we observe that 95% of new FDIs are preceded by exports in the same country, whereas 73% are preceded by imports. Regardless of locations' observable and unobservable characteristics, we find that exporting in a given country, and to a smaller extent importing from it, significantly phase is more systematic for investing in distant countries and for first-time investors, whereas import experience is significantly correlated with FDI in low-income countries. Location choices not only depend on the investor's own international experience, but also on the international experience of other affiliated firms: firms tend to invest in countries where the group already owns a local affiliate, and are more likely to invest in a distant country if other affiliated firms are already exporting there. These findings suggest the existence of coordinated strategies and/or information sharing between affiliated firms.

Keywords: Multinational firms, location choices, internationalization process, export, import, proximity / concentration trade-off.

Résumé

Cet article s'intéresse aux choix de localisation des firmes multinationales, et détermine dans quelle mesure ces choix dépendent de l'expérience internationale de l'investisseur et de celle de son groupe. A partir de données françaises, nous constatons que 95% des nouveaux investissements à l'étranger sont précédés d'exportations dans le même pays, tandis que 73% sont précédés d'importations. Indépendamment des caractéristiques observables et inobservables des pays, exporter vers un pays donné, et dans une moindre mesure en importer, accroît significativement la probabilité d'investir dans ce pays l'année suivante. La phase d'exportation est plus systématique pour les investissements dans des pays distants et pour les primo-investisseurs, tandis que l'expérience d'importation est significativement corrélée aux IDE dans les pays à bas revenu. Par ailleurs, les choix de localisation ne dépendent pas seulement de l'expérience internationale de l'investisseur, mais aussi de celle de son groupe : les firmes tendent à investir dans les pays où le groupe détient déjà une filiale locale, et sont plus enclines à investir dans des pays distants si d'autres sociétés affiliées y exportent déjà. Ces résultats suggèrent l'existence de stratégies coordonnées et/ou d'un partage d'informations entre sociétés affiliées.

Mots Clés : Firmes multinationales, choix de localisation, processus d'internationalisation, exportation, importation, arbitrage proximité / concentration.

JEL Codes : D22, F13, F20.

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Introduction

This paper investigates whether location choices of multinational firms depend on past export, import or FDI experience on foreign markets, and the experience of other affiliated firms. Our main hypothesis is the following: when there is uncertainty on foreign markets, firms do not engage immediately in Foreign Direct Investment (FDI) in order to serve these markets, since this strategy implies high fixed costs. They begin by exporting small amounts, in order to evaluate their profitability and to test their products, and set up a local affiliate only when they get familiar with their new environment. Therefore, firms should adopt a progressive internationalization pattern, from export to FDI (Conconi *et al.*, 2011). In this paper, we follow on this hypothesis and investigate whether location choices also depend on the international experience of affiliated firms. Indeed, each firm might belong to a business group, in which each company has its own strategy regarding international development. Still, these affiliated firms might share information regarding their foreign markets, use the same distribution networks, pool local resources or even share the same reputation on foreign markets. In that case, firms which are part of a business group should tend to locate their activities in countries where other affiliated firms export, import or own a local affiliate.

This paper connects two different fields of the literature. The first one is interested in the determinants of multinationals' location choices, regardless of constraints imposed by their activity (availability of raw materials, climate, infrastructure etc.). Empirical studies conclude that market potential is the main decision factor (Crozet *et al.*, 2004; Head and Mayer, 2004) and appears more important than low production costs (Head *et al.*, 1999; Head and Mayer, 2004; Mayer *et al.*, 2010). Moreover, firms prefer countries with common language and/or border, where transaction costs are low (Mayer *et al.*, 2010) and where they can lower their taxes (Bénassy-Quéré *et al.*, 2005; Büttner and Ruf, 2007). Finally, some papers highlight the existence of agglomeration effects, meaning the advantage to locate its activities near firms within the same industry, from the same country, or integrated in the same chain value (Crozet *et al.*, 2004, Mayer *et al.*, 2010): R&D centers tend to locate near production sites (Defever, 2006), firms within the same group tend to agglomerate in order to decrease transaction costs (Defever et Mucchielli, 2005), and FDI of the service sector tend to follow FDI of manufacturers because of input-output linkages (Nefussi and Schwellnus, 2010).

The second field of research connected to this paper considers that internationalization is a learning process, and that firms sequentially increase their engagement on foreign markets. This idea initially comes from the "Uppsala" model: Johanson and Wiedersheim-Paul (1975) describe an incremental process with four successive steps, during which firms improve their perception of the risks they face on foreign markets: they begin by exporting on an irregular basis, then they find a distributor, choose to have commercial representation and finally set a local production unit. The same authors introduce the notion of "psychic distance", which corresponds to all factors that prevent information from circulating between the firm and its host country (language, cultural differences). Firms can overcome this psychic distance only by increasing their experience on foreign markets. Johansson and Valhne (1977) describe a dynamic process, where the result of each step has effects on the following step: firms decide of their engagement on foreign markets according to their stock of generic knowledge (which can be used for all markets) and market-specific knowledge, which in turn can be affected by the firm's new international activities.

Several papers describe the dynamics of firms that begin exporting, and explain that the rise of exports is due to improved perception of the risks on foreign markets. Using Colombian data, Eaton

et al. (2008) point that a small proportion of new exporters survive more than a year on foreign markets; exports start small but increase quickly conditionally to the exporter's survival. Aeberhardt *et al.* (2009) develop a model where exporters must go through a local distributor: as they do not know about its reliability, they minimize their risks by exporting small amounts, which will increase if the relationship goes successful. Their model predicts greater persistence of exports towards markets with good legal institutions, and for the most productive exporters, predictions which are confirmed using French data. Following the same logic, Rauch and Watson (2003) build a model where importers do not know if their new foreign subcontractors can handle important contracts, so they first test them by importing small amounts. In the model of Eaton *et al.* (2010), exporters are uncertain about foreign demand: they first devote resources for prospecting and knowing their customer's needs. Albornoz *et al.* (2009) consider that firms discover their profitability on foreign markets only once they actually enter these markets, so they will first test their products on one single market before widening their scope.

To our knowledge, the paper of Conconi *et al.* (2011) is the only one interested in the switch from exports to FDI. Inspiring from the approach of Albornoz *et al.* (2010), their model states that firms are uncertain about their profits on foreign markets because they lack specific information on these locations. However, they can obtain this information first by exporting, and then eventually by setting up a local affiliate. In other words, if exporting and investing abroad imply common fixed costs, like finding distribution networks, defining a marketing strategy, or adapting products to local demand, exporters already have supported one part of the cost of investing abroad, and they will face a lower productivity threshold in order to engage in FDI. Using Belgium data, the authors confirm that firms' choice between exports and FDI does not only depend on the classic parameters of the proximity-concentration trade-off, but also on their past export experience on the market.

This paper contributes to these two strands of the literature by testing three different hypotheses.

Our first hypothesis is that location choices not only depend on export experience, but also on import experience. This is likely to be the case for firms which do not seek to access local demand but production factors (low-skilled workers with lower wages, raw materials): as explained above, importing might be a way of testing the quality of the factors of interest, before engaging in a costly investment. Following the same logic, the motives of FDI might be to secure the company's supplies, for example by acquiring one foreign subcontractor.

Our second hypothesis is that firms can lower the fixed costs of investing abroad by exploiting the international experience of other affiliated firms. If they can, they should tend to locate in countries where affiliated firms export, import or own a local affiliate. As seen above, several papers have shown that firms tend to locate their activities in countries where the group already owns one or several affiliates (Basile *et al.*, 2008 ; Defever et Mucchielli, 2005 ; Mayer *et al.*, 2010). However, to our knowledge, no paper tests the hypothesis that location choices might also depend on the export and/or import experience of affiliated firms.

Our last hypothesis is that firms which engage in outward FDI for the first time ("switchers") opt for a more progressive approach of foreign markets, given their lack of experience. In that case, the intermediate phase of exporting/importing should be longer and more systematic for these firms. They should also have a higher propensity to rely on their group's experience.

Our results are the following. First, we show that 95% of new investments are preceded by exports in the same country, 73% by imports. Modeling the location choices of multinational firms shows that

exporting in a given market, and to a lesser extent importing from it, increases the propensity of investing in that particular country the following year, regardless of observable and unobservable country's characteristics. The exporting phase appears more important for switchers and when the firm is investing in a distant country, whereas investments in developing countries are more correlated with import experience. Location choices also depend on affiliated firms' international experience: all things being equal, investors prefer countries where their group already owns a local affiliate. When investing in a distant country, the group's export experience also seems to drive the investor's decision. Finally, switchers tend to invest in country from which their group is importing. All these results confirm that firms sequentially increase their engagement on foreign markets: before investing abroad, they seek information on these markets, which they can obtain through exports, imports and by exploiting their group's international experience.

This paper is organized as follows: section I describes the methodology, section II presents the data, section III shows some stylized facts about the sample, and section IV presents the econometric analysis.

Section I: Methodology

Our objective is to assess whether exporting in a given country, or importing from it, increases the probability of investing in that particular country the following year. We focus on a sample of French firms which decide to engage in outward FDI, and explain their location choices in year T, according to their export and import patterns in T-1. Regressors in our model are all lagged in order to account for endogeneity and reverse causality. We only keep firms that set up one foreign affiliate a year, in order to avoid correlation between several investment decisions[4].

Which investments? In which countries?

We must define a set of countries where firms can choose to locate their activities. Potential locations are countries where at least one firm of the final sample has invested in between 2000 and 2004 (the list of these 55 countries is presented in appendix I). We construct the database so that each observation corresponds to a location possibility for a given firm in a given year.

Firms which are already multinationals before the investment (in T-1) cannot choose countries where they already own a local affiliate. So they will not have the choice between investing in a new country and increasing their production in another one. The reason for this restriction is that we lack information about the activity of foreign affiliates, so we want to avoid two scenarios:

- First, the appearance of a new legal entity in a country where the firm already owns affiliates could simply come from the split of these affiliates into several legal structures. In that case, there are no new activities per se in the country.
- Second, we do not want to include investments which correspond to the extension of pre-existing sites ("brownfield investments"), since these decisions obviously depend on the nature and the function of existing affiliates, on which we have no information.

[4] This sample censoring especially leads to drop large multinational firms, which frequently reorganize their network of foreign affiliates.

This restriction leads us to neglect the case where firms prefer to increase their production capacities in existing affiliates in order to serve the surrounding markets, rather than investing directly in these countries.

The econometrical framework

First, we model the decision of investing in a given country (p) in year t with a conditional logit. In this method of estimation, firms choose their location in order to maximize their profits, which depend on two groups of variables: the first group gathers all countries' observable characteristics which affect their attractiveness; the second group is random and gathers unobservable phenomena (maximization error, unobserved tastes of investors etc.). Let us consider profit of firm i in country p:

$$\pi_{ip} = \beta X_{ip} + \varepsilon_{ip} \qquad (1)$$

McFadden (1974) shows that if error terms are i.i.d. according to a Weitbull distribution, the probability that firm i chooses country p is:

$$P_{ip} = \frac{e^{\beta X_{ip}}}{\sum_{p=1}^{N} e^{\beta X_{ip}}} \qquad (2)$$

The conditional logit relies on the hypothesis of Independence of Irrelevant Alternatives (IIA): the probability that country p is chosen over country k depends on the characteristics of these two countries, and the ratio of choice probabilities between these two countries will not be affected by the introduction of a third country. This hypothesis is probably not realistic: firms do not consider all countries as perfect substitutes. This is why empirical papers also rely on nested logits (see Maddala, 1983 ; Train, 2003). Nested logits consist in gathering countries which appear as substitutes into the same nest, and assume that the IIA hypothesis is valid within each nest, but not across different nests. Let us consider R = 1,…r…L the nests, and P = 1,…,p,…N_r all countries that belong to nest r. The choice structure now has two levels: choosing the nest and choosing the country inside the nest. We can write the profits of firm i that chooses location p in nest r:

$$\pi_{ipr} = \alpha Y_r + \beta X_{ipr} + \varepsilon_{ipr} \qquad (3)$$

These profits depend on characteristics that vary both across countries and nests (X_{ipr}), and others that only vary across nests (Y_r). Choosing the nest and the country are not two independent decisions: choosing one nest depends not only on its own characteristics, but also on the characteristics of all countries in the nest. Choosing a country is conditional to the choice of the nest. In that case, we can write the probability of choosing country p in nest r (P_{rp}) and the marginal probability of choosing nest r (P_r) as follows:

$$P_{rp} = P_{p/r} \times P_r \qquad (4)$$

Where the probability of choosing the nest is written:

$$p_r = \frac{e^{(\alpha_r(Y_r + (1/\beta_r)VI_r)}}{\sum_{n=1}^{L} e^{(\alpha_n(Y_n + (1/\beta_n)VI_n)}} \qquad (5)$$

With $VI_r = \ln\left(\sum_{r=1}^{N_r} e^{\beta_r X_{rp}}\right)$

VI_r is called the inclusive value. It is the maximum utility that one firm gets by locating in a country in nest r. If the associated coefficient (noted Φ) equals 1, nested logit is equivalent to conditional logit

without choice structure. If it equals 0, countries inside the nest are perfect substitutes, and only choosing the nest matters. Therefore, the choice structure is adequate only when the coefficient of the inclusive value is ranged between 0 and 1 (McFadden, 1984). We can check whether this condition is met or not using the likelihood ratio test. It is a test of $\Phi \neq 1$ against the null hypothesis $\Phi = 1$, *i.e.* a nested logit against conditional logit test. We will consider the choice structure as relevant if the coefficient of the inclusive value ranges between 0 and 1, and is significantly different from 1.

Section II: the data

We merge three databases over the period 1999 – 2004.

First, we use individual data from the French customs, which provide exports and imports for each company, by country and by product. Firms exporting to countries inside the European Union (EU) do not have to declare their transactions unless the annual exported amount reaches a certain threshold (same for imports). This threshold was 38,100 euros (250,000 francs) until 2000, then 99,100 euros (650,000 francs) in 2001, then 100,000 euros between 2002 and 2005. All transactions with a country outside the EU are reported when the amount exceeds 1,000 euros. In order to avoid threshold effects on the results, we restrict the analysis to firms which both export and import more for more than 100,000 euros for each year considered in the sample[5]. Transactions are then consolidated at the firm – country level.

The second database is the « Financial links » survey, also known as LiFi, which is collected by the French office of statistics (INSEE). The use of LiFi is twofold. First, this survey identifies which firms are engaged in outward FDI and where these investments are located. Second, LiFi provides the identity and the location of the parent company of each French firm: therefore, we are able to separate independent firms from firms that belong to a French business group and foreign-owned affiliates. Moreover, since each parent company has its own identification number, we can gather all firms that belong to the same business group. This enables us to know, for each firm part of a French business group, in which countries other French affiliated firms export, import and own local affiliates.

Merging LiFi and individual data from the French customs gives us three variables for each firm - country combination: exports, imports and number of FDIs[6]. However, let us precise that we do not have any information about:

- Intra-group trade. Therefore, we cannot evaluate the share of exports which are destinated to foreign affiliates (or the share of imports that originate from them).
- Trade flows between foreign affiliates within the same business group, or which transit through a third party located abroad. This leads us to underestimate the presence of firms in some countries through export platforms.
- Finally, the activity of foreign affiliates is unknown, especially regarding sales, workforce or industry (even the main activity is not systematically given by LiFi). Therefore, it is impossible

[5] This restriction eliminates about 16% of new FDIs that were initially identified.

[6] Some country codes in the French customs nomenclature were united in order to match with the nomenclature used by LiFi.

to differentiate our results according to the function of the created affiliate (production site, distribution, R&D center, headquarters, logistics).

Finally, the annual census for manufacturing (known as "Enquête Annuelle Entreprise" or EAE) allows us to restrict the sample to manufacturers with more than 20 employees or sales exceeding 5 million euros. The survey provides information about industry, sales, workforce, value-added and capital[7]. The sectoral distribution of the sample is described in appendix II.

The sample is restricted to independent firms and firms which belong to a French business group**.** Foreign-owned firms are excluded for two reasons. The first reason is that we only have information about the French part of foreign business groups. Foreign-owned firms probably trade with other affiliated firms outside of France, but it is impossible for us to locate these other companies. Second, if foreign-owned firms lack decisional autonomy, their investments might be completely disconnected from their own activity: these firms might hold a stake in a foreign company although their parent company decided and financed the whole investment. In that case, it is not relevant to assess whether the location choices of foreign-owned firms depend on their own international experience.

The analysis will also make the distinction between first-time investors ("switchers") and firms which are already multinationals in T-1 (which we will call "already multinational firms" for simplicity).

The sample finally gathers 580 investments in a new country. 64% of investors are already multinationals one year before the investment (see table 3).

Table 3: Number of new FDIs between 2001 and 2004

Year of investment (T)	2000	2001	2002	2003	2004	TOTAL
All investors	**97**	**141**	**134**	**87**	**121**	**580**
First-time investors	26	50	56	19	59	210
Independent firms	4	9	11	3	11	38
Firms part of a group with international activities	22	30	33	17	27	129
Already multinational firms	71	91	78	68	62	370
Independent firms	0	0	3	0	1	4
Firms part of a group with international activities	62	79	64	62	47	314

Sample : French manufacturers with more than 20 employees or sales exceeding 5 million euros.

Sources : Annual census for manufacturers (EAE), LiFi survey, French customs - Author's calculation.

Only 7% of investors are independent firms and only 17% belong to a business group where no company has international activities (neither exports, nor imports or FDI). This leaves 443 investors, 76% of the sample, which belong to a business group with international activities (either export, import or FDI).

SECTION III: Descriptive statistics

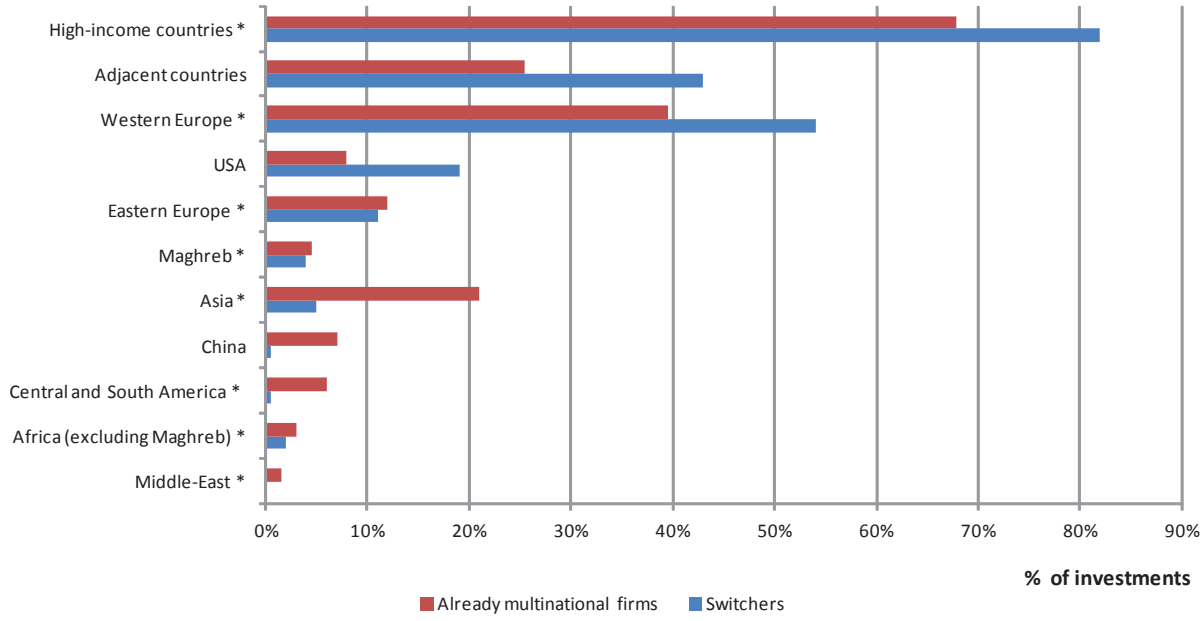
As expected, most investments take place in high-income countries (see table 1 in appendix I), the most invested location being the USA (12% of all investments), in front of Germany (9%), United

[7] Amounts are deflated using series from the French office of statistics (as well as exports and imports).

Kingdom (7%), and Spain (7%). The EU[8] and North America (USA and Canada) respectively attract 41% and 13% of new investments, whereas this share falls to 4% for Central and South America and 2.5% for Africa (without Maghreb[9]). The sample also reflects the recent interest for China, which gets 4.5% of all investments and ranks seventh among most invested locations.

First-time investors are more likely to locate in close and high-income countries (see figure I). They clearly invest more in the EU and the USA, while firms that already owned affiliates abroad are more interested in distant and low-wage countries. For example, China attracts 7% of already multinational firms, against 0.5% of switchers. This difference partly comes from the construction of the sample: we exclude alternatives where firms already own affiliates, and in many cases, they have first invested in close and high-income countries (see figure II). However, these figures could also result from a performance gap: in average, first-time investors appear smaller, less productive and less export-oriented than firms which already own affiliates abroad (see table 4). Therefore, they might have a harder time investing in distant countries and opt for a more progressive approach of foreign markets. This justifies treating the two groups separately in the regressions.

Figure I: Location choices of first-time investors and already multinational firms



** See the list of countries and the composition of regions in appendix I.*
Reading : 82% of switchers invest in a high-income country.
Sample : Manufacturers with more than 20 employees or sales exceeding 5 million euros.
Sources : Annual Census for manufacturers (EAE), LiFi survey - Author's calculation.

[8] During the period considered in this paper, the EU only gathers 15 members.
[9] Tunisia, Algeria and Morocco are put aside since they are former colonies of France. These three countries account for 4% of all investments.

Table 4: Performance of switchers and already multinational firms in T-1

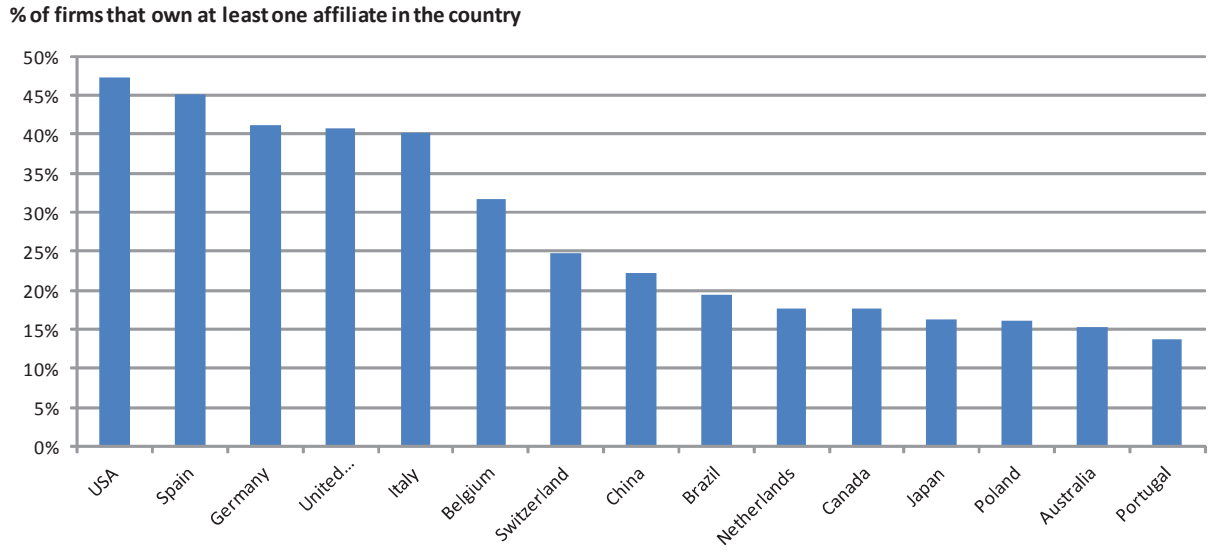
Performance in T-1	Switchers		Already multinational firms		All investors	
	Mean	Median	Mean	Median	Mean	Median
Sales (K euros)	66 083	25 310	272 272	89 374	197 617	62 689
Workforce	332	152	1 117	503	833	329
Labour Productivity	95	53	458	57	327	55
Export intensity	34%	30%	41%	41%	38%	37%

Reading : In average, switchers have 332 employees one year before their investment.

Sample : French manufacturers with more than 20 employees or sales exceeding 5 million euros.

Sources : Annual census for manufacturers (EAE), LiFi survey, French customs - Author's calculation.

Figure II: List of the 15 first countries where firms already owned foreign affiliates in T-1



Reading : 47% of firms which are already multinationals in T-1 own at least one affiliate in the United States.

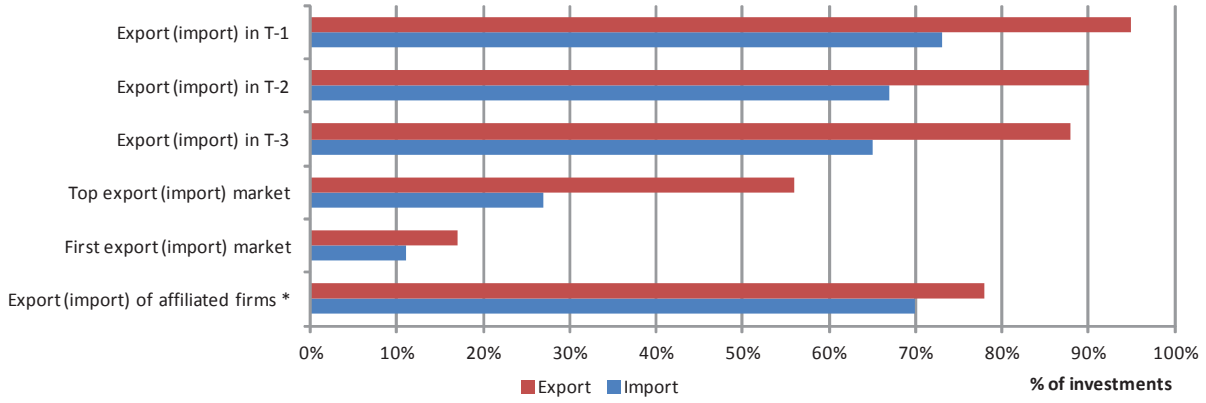
Sample : French manufacturers with more than 20 employees or sales exceeding 5 million euros.

Sources : Annual census for manufacturers (EAE), LiFi survey, French customs - Author's calculation.

Nearly all investments (95%) are preceded by exports in the same country (see figure III); about 73% are preceded by imports. No investor chooses a country where it was not trading before. This finding is consistent with the results of Conconi *et al.* (2011), which report that 98.6% of Belgium firms invest in a foreign country where they have already exported in T-1 or T-2. Exports often take place a long time before the investment: 88% of investors already exported in the country three years before investing (and 65% already imported from it). Moreover, the invested country often concentrates a great share of exports: 56% of investments occur in one the top export markets of the investor[10]; 17% of them in the first export market. However, the invested country less frequently attracts a great share of the investor's imports. All these figures confirm the intuition that FDI is rarely the first mode of entry on foreign markets.

[10] Meaning that exports for this market are greater than if they had distributed equally across all export markets.

Figure III: Anteriority and intensity of exports and imports in the invested country



** Only firms which are part of a group with international activities are considered here.*
Reading : 17% of investments abroad are located in the first export market of the investor.
Sample : French manufacturers with more than 20 employees or sales exceeding 5 million euros.
Sources : Annual census for manufacturers (EAE), LiFi survey, French customs - Author's calculation.

In average, the share of the invested market in total exports reaches 4%, but it is lower than 1% for half investors. These low figures come from the high number of export destinations: in average, investors export towards 26 foreign countries (20 countries for first-time investors). However, we observe that first-time investors do not engage in FDI until their export intensity reaches a certain threshold: in average, export represent 38% of their total sales, and 75% of investors reach an export intensity of 17%. In other words, the decision of switching from export to FDI does not only depend on the export experience in the considered country, but also on the export experience on other markets. For example, we can make the assumption that firms test their products in several countries before choosing which one is the more relevant for a local establishment. Besides, given that FDI is associated with a high fixed cost, some firms might prefer to continue their international development by exporting towards new destinations, instead of engaging in FDI in a known location.

When investors belong to a business group with international activities, other affiliates firms often already export in the invested country (78% of all cases), import from it (70%) or already own a local affiliate (40%). Trade flows of investors and their affiliated firms seem strongly correlated: when one investor is exporting in a given country, other affiliated firms are exporting in the same country in 80% of all cases (same for imports). One can wonder whether this agglomeration effects comes from country characteristics affecting both the investor and its group (market potential for example) or from coordinated strategies and information sharing between affiliated firms.

Finally, we find that one third of firms which are already multinationals locate next to countries where they already own an affiliate. This finding illustrates the results of Egger *et al.* (2011), which show that multinationals follow a sequential process when they build their network of foreign affiliates. Indeed, engaging in FDI in a given country also reduces the uncertainty of surrounding markets, as firms gain knowledge on all the invested area. Therefore, most multinationals do not directly invest in distant countries, but choose to move away from their home country in a progressive and prudent manner.

Until now, we can only observe a strong correlation between export, import and FDI in a given country, but we have not controlled for the factors which can influence these strategies: local demand, distance, cultural proximity or investors' characteristics. This is why we now turn to the econometric model.

Section IV: Econometric analysis

Variables of the model

We now model the location choices of investors. First, regressors include observable characteristics of all countries which are candidates for FDI:

- Market potential, computed as Redding and Venables (2004). This variable accounts for the demand of the targeted country, as well as the demand of other countries weighted by distance. Therefore, this regressor accounts for the location's proximity with attractive markets.
- GDP per capita (constant euros). Given that the role of demand is already accounted for by market potential, GDP will control for production costs, which increase with income (this specification is used by Mayer *et al.*, 2010).
- Weigthed Distance in kilometers, in order to control for trade costs.

We also control for common border, common official language and former colonial ties (thanks to the CEPII database), which should all stimulate trade flows between two countries. In order to account for the influence of unobservable country characteristics, we will test the model with country fixed effects (forcing us to drop all time-invariant regressors, meaning all except market potential and GDP).

The following regressors concern export and import activities of the investors and affiliated firms. Given that investors already export and/or import in many destinations, only accounting for export and import status would not be enough in order to differentiate these alternatives. This is why we control for exported and imported amounts (adding 1 for the logarithm transformation). We also account for exports and imports of affiliated firms, and introduce a dummy indicating if they already own a local affiliate. These last regressors only affect investors which belong to a group with international activities, so only these observations will be kept in the sample when controlling for the group's experience.

Finally, we introduce a dummy for firms which already own a foreign affiliate in an adjacent country. If foreign affiliates help obtaining information about adjacent countries, the associated coefficient should have a positive sign. However, if firms prefer to use their existing affiliates as export-platforms rather investing directly in the targeted country, the coefficient should be negative.

Table 5: Definition and sources for the variables of the model

Variable		Source	Expected sign
Countries' observable characteristics	Market potential	Mayer (2009)	+
	GDP per capita (constant euros)	Penn World Tables	-
	Weighted distance in kilometers	CEPII	-
	Common border	CEPII	+
	Former colonial tiers	CEPII	+
	Common official language	CEPII	+
International experience of the investor	log (exports)	French customs	+
	log(imports)	French customs	+
	FDI in an adjacent country	LiFi survey	?
International experience of other affiliated firms	ln(group exports)	French customs and LiFi	+
	ln(group import)	French customs and LiFi	+
	FDI of affiliated firms in T-1	LiFi survey	+

Results with conditional logit

We begin with results using conditional logit. Estimating the model only with countries' observable characteristics confirms several classic results of the literature (see the first column of table 6): the probability of investing in a given country increases with market potential, common border and former colonial ties, while it decreases with distance. The effect of wages, reflected by the coefficient of GDP, is negative but not significant. Surprisingly, the coefficient for common language also has a negative sign, but this is mostly explained by the fact that French-speaking countries (Morocco, Algeria, Tunisia, Canada) represent a small fraction of all investments.

Table 6: Base model, estimated with a conditional logit

Dependent variable: FDI in the country in T+1	CONDITIONAL LOGIT				
	No country fixed effects			Country fixed effects	
	(1)	(2)	(3)	(4)	(5)
Market potential	0.509***	0.232***	0.200***	-0.674	-0.709
	(0.0403)	(0.0461)	(0.0532)	(0.414)	(0.455)
GDP per capita	-0.0651	-0.128	-0.178*	2.388	2.416
	(0.0846)	(0.0844)	(0.0911)	(1.670)	(1.898)
Distance	-0.314***	0.161***	0.200***		
	(0.0609)	(0.0622)	(0.0724)		
Common border	1.065***	0.148	0.0478		
	(0.133)	(0.153)	(0.181)		
Common official language	-0.677***	-0.0960	0.254		
	(0.136)	(0.152)	(0.173)		
Former colonial ties	1.431***	0.686***	0.341*		
	(0.140)	(0.155)	(0.183)		
FDI in an adjacent country		0.308*	0.343**	0.161	0.212
		(0.164)	(0.172)	(0.174)	(0.184)
Exports		0.449***	0.400***	0.426***	0.385***
		(0.0268)	(0.0303)	(0.0274)	(0.0308)
Imports		0.146***	0.132***	0.138***	0.132***
		(0.0227)	(0.0265)	(0.0235)	(0.0273)
Group's exports			0.00662		0.00134
			(0.0377)		(0.0378)
Group's imports			0.0318		0.0197
			(0.0264)		(0.0266)
FDI of affiliated firms			0.627***		0.481**
			(0.191)		(0.189)
N	29,644	29,645	22,317	29,645	22,317
R^2	0.1529	0.2947	0.2684	0.3324	0.3058

*Reading : *** means significativity at 1%, ** at 5%, * at 10%. Standard errors (in parenthesis) are clustered around firms.*
Sample : French manufacturers with more than 20 employees or sales exceeding 5 million euros.
Sources : Annual census for manufacturers (EAE), LiFi survey, French customs - Author's calculation.

Including information about exports and imports (see column 2 of table 6) significantly increases the explanatory power of the model (R^2 goes from 0.15 to 0.29). First, we find that regardless of locations' specific variables, exporting in the country increases the probability of investing in that country the following year. These results confirm a two-step process when firms engage on foreign markets, beginning with exports and following with FDI. There could be several underlying mechanisms: exporting gives additional knowledge about the local market and reduces the fixed costs of a local establishment. Moreover, firms probably begin by testing their products before engaging in a costly investment. Finally, the investment might also follow the request of foreign clients which represent a great share of the firm's revenues. The investment decision is also determined by import experience, although the correlation appears less strong (the coefficient is lower). As explained above, this significant relationship might come from the fact that firms do only

seek market access but also production factors: before investing in the country, they want to test the quality of the inputs of interest.

Introducing variables about the investor's export and import experience reduces the coefficient associated to market potential, which remains significant. Interestingly, the coefficient of distance becomes positive: for a given export experience, firms prefer to invest in distant countries. This result might simply come from the negative correlation between these two variables[11]: the negative effect of distance is now reflected by the fact that the firm is not exporting in the market. We could also suggest that exporters have already overcome the obstacles related to distance (different language, culture, regulation): the positive coefficient of distance could mean that conditionally to exports, firms prefer to invest in distant countries because they have already devoted important efforts for approaching these markets.

Already multinational firms tend to prefer countries close to their foreign affiliates. Two explanations are possible: on the one hand, it is easier to invest in countries whose culture is close to already known locations'; on the other hand, investing in a given country might create opportunities in adjacent countries if the created affiliate acts as an export-platform. However, the fact that the R^2 is smaller for the regression which only includes already multinational firms suggests that we miss more explanatory variables, which probably include interactions with existing affiliates.

All things being equal, investors do not seem to privilege countries where other affiliated firms are exporting or importing (column 3 in table 6). The correlation which appeared with the descriptive statistics seems to come from variables affecting both the investor and affiliated firms (market potential, distance). This could also suggest that information acquired by affiliated firms through their experience is not relevant for the investor's project.

Still, firms are more likely to locate where affiliated firms already own a local affiliate**.** This result is consistent with other empirical studies (Basile *et al.*, 2008 ; Defever et Mucchielli, 2005 ; Mayer *et al.*, 2010). We can imagine two different explanations for this agglomeration effect. On the one hand, the group becomes really able to support the firm's project only when it has its own local affiliate: the group is then familiar to administrative procedures, has a more solid knowledge of the market and the business environment or might pool some resources and share its local network (distribution, suppliers, administration). On the other hand, the created affiliate and the pre-existing ones might have complementary activities. This complementarity might follow a functional logic: for example, R&D centers tend to locate near production sites. This complementarity might also come from input-output linkages between affiliated firms: for example, some automobile manufacturers might have asked their subcontractors to locate near their plants abroad, in order to reduce delays and stocks.

Finally, the introduction of country fixed effects does not change the results (columns 4 and 5 of table 5). Coefficients of market potential and GDP become non significant, which might indicate that one country's attractiveness does not depend on the variation of these variables but only on their level. However, coefficients of exports, imports and group's local affiliate remain very significant, although their level decreases.

[11] Indeed, let's precise that the negative sign of distance becomes positive only when the model controls for exports: only accounting for imports and FDIs in adjacent countries does not change the sign of the coefficient.

The role of export experience increases with distance, import experience matters more for low-income countries

We now estimate the model with interaction variables between exports/imports and two observable characteristics: market potential and distance. First, we observe that the role of exports is increasing with distance. There are several explanations for this result. In accordance with the proximity-concentration trade-off (Brainard, 1993), the incentive to substitute local production to exports increases with transport costs. Moreover, firms might opt for a more progressive internationalization process when they approach countries with very different culture and business practices: given the lack of information on these countries, the exporting phase might become longer and more systematic. Finally, given the efforts which are necessary to approach distant markets, firms that engage on such markets might be more likely to have a long-run strategy, involving FDI. Reversely, firms might opt for a more opportunistic approach of close markets, since they can enter and exit these markets without high fixed costs.

Table 7: Role of export and import experience according to distance and market potential

Dependent variable: FDI in the country in T+1	CONDITIONAL LOGIT			
	No country fixed effects		Country fixed effects	
	All firms	Firms in an internationalized group	All firms	Firms in an internationalized group
Market potential	0.539***	0.537***	-0.436	-0.445
	(0.0709)	(0.0800)	(0.427)	(0.464)
GDP per capita	-0.240***	-0.293***	2.291	2.229
	(0.0853)	(0.0914)	(1.726)	(1.969)
Distance	-0.195*	-0.174		
	(0.105)	(0.122)		
Common border	0.446***	0.378**		
	(0.156)	(0.187)		
Common official language	-0.221	0.110		
	(0.152)	(0.174)		
Former colonial ties	0.838***	0.573***		
	(0.156)	(0.189)		
FDI in an adjacent country	0.331**	0.368**	0.130	0.184
	(0.158)	(0.164)	(0.171)	(0.182)
Exports	0.400	0.478	0.468	0.504
	(0.294)	(0.366)	(0.301)	(0.370)
Imports	1.481***	1.534***	1.728***	1.794***
	(0.290)	(0.356)	(0.316)	(0.378)
Exports x distance	0.0554***	0.0296	0.0559***	0.0326
	(0.0186)	(0.0227)	(0.0181)	(0.0217)
Imports x distance	0.0128	0.0208	0.00133	0.0129
	(0.0182)	(0.0209)	(0.0181)	(0.0208)
Exports x market potential	-0.0197	-0.0160	-0.0240*	-0.0189
	(0.0127)	(0.0162)	(0.0130)	(0.0165)
Imports x distance	-0.0691***	-0.0758***	-0.0772***	-0.0855***
	(0.0124)	(0.0150)	(0.0140)	(0.0163)
Group's exports		-0.228		-0.654
		(0.308)		(2.574)
Group's imports		0.307		-0.251
		(0.332)		(0.300)
FDI of affiliated firms		0.457		0.323
		(2.550)		(0.320)
Group's exports x distance		0.0500**		0.0515***
		(0.0206)		(0.0192)
Group's import x distance		-0.0193		-0.0218
		(0.0208)		(0.0201)
FDI of affiliated firms x distance		-0.189		-0.195
		(0.138)		(0.135)
Group's exports x market potential		-0.00728		-0.00696
		(0.0145)		(0.0141)
Group's import x market potential		-0.00577		-0.00628
		(0.0151)		(0.0143)
FDI of affiliated firms x market potential		0.0806		0.129
		(0.109)		(0.113)
N	28,226	21,305	28,226	21,305
R^2	0.3129	0.2933	0.3491	0.3268

*Reading : *** means significativity at 1%, ** at 5%, * at 10%. Standard errors (in parenthesis) are clustered around firms.*
Sample : French manufacturers with more than 20 employees or sales exceeding 5 million euros.
Sources : Annual census for manufacturers (EAE), LiFi survey, French customs - Author's calculation.

The role of exports does not depend on the country's market potential*:* the sequential internationalization process which we describe is not less relevant for low-income countries.

Reversely, FDI in low-income countries, which is more likely to aim at acquiring cheaper inputs, is significantly determined by import experience*.* We can imagine several scenarios behind this result. First, the investor might want to test the quality of raw materials and components integrated in their products before setting a new factory in the country. Second, above a certain import threshold, firms are likely to internalize their production because the repercussions of a poor performance of its subcontractor (increased delays, deterioration of the quality of the product) would be too damaging for its activity. Finally, firms might have a hard time to replace their former subcontractor in countries with low market thickness, and therefore have a greater incentive to internalize their local production.

Coefficients related to group's FDI all become non-significant. The fact that this variable concerns a more limited number of firms might explain that the coefficient becomes non-significant when introducing heterogeneity.

Finally, the export experience of the group can trigger the decision of investing in distant countries. This suggests that affiliated firms are more likely to share their export experiences for difficult markets.

Does the experience as an international investor matter?

We now differentiate our results according to the status of first-time investor. As explained above, we see two reasons for doing so. First, the construction of the sample, which only keeps investments in a country where the firm has no existing affiliate, introduces a bias in the analysis: already multinational firms face a shorter list of potential locations, where distant and low-income countries are over-represented. Regardless of this bias, switchers have, by definition, no experience as an international investor, and appear smaller and less productive than already multinational firms. Therefore, they might take fewer risks in their international development, which might involve a longer and more systematic exporting phase before the investment, and a greater propensity to invest in countries which are already known from their business group. This is why we now estimate the model with interaction terms between exported/imported amounts (of the investor and affiliated firms) and switcher's status. Results are reported in table 8.

The econometric analysis confirms that switchers tend to invest in less distant countries than already multinational firms. Regardless of this trend, the coefficient of the interaction term between exports and switcher's status is positive and significant. This confirms that switchers opt for a more progressive internationalization process, which might come from their relative lack of experience as international investors. Their exporting phase is longer even when they invest in close countries. However, this regression might suffer from the fact that exports and imports of already multinational firms are probably under-estimated, since they might use their existing foreign affiliates as export-platforms.

The interaction term between import and switcher's status has no significant coefficient. However, when country fixed effects are introduced in the regression, the role of the group's import experience becomes significant: some groups might have forced their French affiliates to invest

abroad in order to secure their own supplies and/or relocate their production. Reversely, the export experience of affiliated firms does not seem to influence switchers' decision.

Table 8: Location choices of switchers and already multinational firms

Dependent variable: FDI in the country in T+1	CONDITIONAL LOGIT				
	No country fixed effects			Country fixed effects	
	All firms		Firms in an internationalized group	All firms	Firms in an internationalized group
Market potential	0.496***	0.254***	0.233***	-0.627	-0.679
	(0.0438)	(0.0500)	(0.0571)	(0.418)	(0.459)
GDP per capita	-0.0445	-0.121	-0.164*	2.653	2.642
	(0.0843)	(0.0842)	(0.0910)	(1.655)	(1.887)
Distance	0.177**	0.177**	0.245***		
	(0.0733)	(0.0733)	(0.0809)		
Common border	0.126	0.126	0.0275		
	(0.157)	(0.157)	(0.181)		
Common official language	-0.118	-0.118	0.193		
	(0.153)	(0.153)	(0.175)		
Former colonial ties	0.696***	0.696***	0.393**		
	(0.154)	(0.154)	(0.185)		
Switcher * market potential	-0.0638	-0.0638	-0.153	-0.0776	-0.167
	(0.0771)	(0.0771)	(0.0984)	(0.0823)	(0.103)
Switcher * distance	-0.0622	-0.0622	-0.233		
	(0.115)	(0.115)	(0.150)		
FDI in an adjacent country		0.404**	0.443***	0.243	0.283
		(0.162)	(0.171)	(0.167)	(0.178)
Exports		0.363***	0.352***	0.338***	0.331***
		(0.0309)	(0.0342)	(0.0309)	(0.0342)
Imports		0.137***	0.142***	0.122***	0.135***
		(0.0268)	(0.0300)	(0.0274)	(0.0307)
Switcher x exports		0.265***	0.180***	0.269***	0.201***
		(0.0560)	(0.0692)	(0.0523)	(0.0667)
Switcher x imports		0.0120	-0.0608	0.0304	-0.0424
		(0.0434)	(0.0569)	(0.0427)	(0.0564)
Group's exports			-0.00202		-0.0159
			(0.0453)		(0.0452)
Group's imports			0.0111		-0.00788
			(0.0300)		(0.0302)
FDI of affiliated firms			0.503**		0.333
			(0.209)		(0.207)
Switcher x group's exports			0.0255		0.0445
			(0.0724)		(0.0713)
Switcher x group's imports			0.107		0.126**
			(0.0667)		(0.0639)
Switcher x FDI of affiliated firms			0.542		0.609
			(0.444)		(0.436)
N	29,644	29,644	22,317	29,644	22,317
R^2	0.1548	0.304	0.2794	0.3415	0.3148

*Reading : *** means significativity at 1%, ** at 5%, * at 10%. Standard errors (in parenthesis) are clustered around firms.*

Sample : French manufacturers with more than 20 employees or sales exceeding 5 million euros.

Sources : Annual census for manufacturers (EAE), LiFi survey, French customs - Author's calculation.

Results with nested logit

Definition of the choice structure

As mentioned above, the conditionnal logit relies on the IIA hypothesis, which implies that all countries appear as substitutes to the investor. We have to reject this hypothesis if some countries appear more attractive than others, regardless of variables already included in the model. Given the heterogeneity of potential locations, it is obviously difficult to find a perfect typology. In order to keep some simplicity in the analysis, we will gather countries according to two criteria:

- A geographic criteria. Adjacent countries can share some characteristics related to culture, business environment, or proximity with a big market. We will first separate members of the EU (15 members at the time) then split the world map into continents and regions (see the detail in appendix I).
- An income criteria. Before choosing a precise destination, the first trade-off might be to choose a high-income country (if the motive of the investment is conquering new markets) or a low income country (if the motive is reducing production costs). Here, high-income countries are defined as countries with GDP per capita superior to the median in 2003 (the list is also available in appendix I).

We could have considered a "currency" criteria, since France belongs to the Euro zone since the first year of the sample (1999). However, the Euro zone and the EU with 15 members nearly gather the same countries (only three members of the EU kept their own currency), so testing separately the two choice structures would be redundant. Moreover, it would be difficult to assess to which extent the currency criteria matters regardless of the geographic and/or income criteria. We would also have been interested in testing a choice structure where one firm first chooses between a location where it is already exporting (or from where it is already importing) and a completely unknown location. However, we cannot test such a structure with a nested logit since the structure has to be the same for each firm of the sample.

In the last step, we will combine the geographic and the income criteria in order to define a "mixed" choice structure. For example, we will separate several emerging economies which clearly stand out from neighboring countries in terms of income: China, India South Africa and Turkey[12]. In the same way, we distinguish Japan and the Asian "dragons" (South Korea, Hong-Kong, Singapore) in the Asian continent. Since the objective is to construct a typology which makes sense for investors, we will base the typology on the econometric analysis, which will reveal which zones are actually attractive or not.

For given market potential and distance, investors are more likely to invest outside of the EU and in a high-income country

We now introduce a series of dummies in the base model in order to assess the attractiveness of each zone defined above. The model already accounts for observables countries' characteristics, as well as the export and import experience of the firm: therefore, coefficients of dummies capture the influence of unobservable factors (quality of infrastructure and institutions, growth perspectives, business climate etc.). In order to lighten the table, coefficients related to observable variables are not reported (few changes compared to former versions).

First, it appears that for a given market potential and distance, investors are significantly less attracted by the EU. This might come from relatively low growth perspectives, or the incentive to locate production sites outside of the Euro zone. This result explains the negative sign associated with high-income countries: in fact, the regression that distinguishes continents and their sub-regions shows that North America, high-income Asian countries (South Korea, Hong-Kong, Japan, Singapore) and Oceania are associated with a positive and significant sign. Among low-income countries, China, South America and Eastern Europe appear significantly more attractive than the EU.

[12] We made the choice not to separate Brazil because its GDP per capita is still clearly lower than the GDP of others South-American countries (except Columbia) in 2003.

Reversely, Africa (Maghreb and South Africa included), Middle-East countries and emerging countries in Asia (excluding China) do not attract significantly investors.

Table 9: Attractiveness of investment zones

Dependent variable: FDI in the country in T+1	INVESTMENT ZONES				
	EU	High-income countries	Continents and regions (1)	Continents and regions (2)	Mixed choice structure
EU	**-0.935*** **				
	(0.168)				
High-income countries		**-0.788*** **			
		(0.262)			
Eastern Europe (1)			0.892***	0.705***	
			(0.173)	(0.187)	
Africa (2)			0.0629		
			(0.304)		
Maghreb				0.164	
				(0.519)	
South Africa				0.619	
				(0.668)	
Other African countries				-0.260	
				(0.457)	
North America			0.685*	1.106**	
			(0.352)	(0.489)	
Central and South America (3)			1.445***	2.510***	
			(0.396)	(0.726)	
Asia			0.389		
			(0.315)		
Asian Dragons + Japan				1.388**	
				(0.668)	
China (4)				1.481***	
				(0.571)	
India (5)				-0.0194	
				(0.661)	
Turkey (6)				-0.140	
				(0.482)	
Other Asian countries (7)				0.304	
				(0.602)	
Middle-East (8)			-0.754	-0.450	
			(0.528)	(0.551)	
Oceania			1.033**	1.893**	
			(0.494)	(0.778)	
High-income countries outside the EU					**0.723*** **
					(0.171)
"Attractive" low-income countries = (1) + (3) + (4)					**1.174*** **
					(0.273)
"Non-attractive" low-income countries = (2) + (5) + (6) + (7) + (8)					**0.0278**
					(0.408)
N	29,644	29,644	29,644	29,644	29,644
R^2	0.3017	0.2969	0.31	0.3141	0.3074

NB : The model is estimated with a conditional logit. In each column, the model includes the following regressors : market potential, GDP per capita, distance, a common border, former colonial ties, common official language, exports, imports, FDI in an adjacent country.

*Reading : *** means significativity at 1%, ** at 5%, * at 10%. Standard errors (in parenthesis) are clustered around firms.*

Sample : French manufacturers with more than 20 employees or sales exceeding 5 million euros.

Sources : Annual census for manufacturers (EAE), LiFi survey, French customs - Author's calculation.

Basing on these results, we can build a "mixed" choice structure. High-income countries are separated into two groups: countries inside or outside the EU. Low-income countries are also separated into two groups: countries which significantly attract investors (Eastern Europe, South

America, China), and those that do not raise any particular attention (Africa, Middle-East, asian emerging countries). The detailed content of each category is reported in appendix I.

Estimates of the nested logit

We now estimate the base model (the one estimated in table 6) using a nested logit. There are now two levels in the location choice: first, firms choose one nest, and then a country inside this nest. Given that switcher's status affects the location choice (as seen in table 8), and especially the propensity to invest in distant countries, we will use this variable as a regressor for the choice of the nest. In columns (1), (3) and (5), all three choice structures are tested using the full sample. In columns (2), (4) and (6), the sample only keeps firms that belong to a group with international activities.

Table 10: Results with a nested logit

Dependent variable: FDI in the country in T+1	CONDITIONAL LOGIT		NESTED LOGIT					
	No choice structure		Outside/inside the EU		High/low-income country		"Mixed" choice structure	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Country choice								
Market potential	-0.674	-0.709	-0.293	-0.311	-0.419	-0.450	-0.480	-0.452
	(0.414)	(0.455)	(0.205)	(0.235)	(0.294)	(0.406)	(0.300)	(0.348)
GDP per capita	2.388	2.416	1.076	1.102	1.816	2.036	2.107*	2.294*
	(1.670)	(1.898)	(0.813)	(0.927)	(1.166)	(1.585)	(1.161)	(1.326)
FDI in an adjacent country	0.161	0.212	0.103	0.147*	0.109	0.214	0.110	0.161
	(0.174)	(0.184)	(0.0736)	(0.0851)	(0.110)	(0.152)	(0.117)	(0.134)
Exports	0.426***	0.385***	0.203***	0.186***	0.292***	0.321***	0.313***	0.294***
	(0.0274)	(0.0308)	(0.0400)	(0.0436)	(0.0517)	(0.0621)	(0.0339)	(0.0379)
Imports	0.138***	0.132***	0.0719***	0.0753***	0.116***	0.135***	0.120***	0.114***
	(0.0235)	(0.0273)	(0.0160)	(0.0194)	(0.0232)	(0.0312)	(0.0178)	(0.0219)
Group's exports		0.00134		0.00834		0.00208		0.00536
		(0.0378)		(0.0161)		(0.0283)		(0.0246)
Group's imports		0.0197		0.00798		0.0139		0.00988
		(0.0266)		(0.0130)		(0.0228)		(0.0201)
FDI of affiliated firms		0.481**		0.193*		0.404**		0.359***
		(0.189)		(0.100)		(0.165)		(0.138)
Country fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Nest choice								
Switcher choosing:								
- a country outside the EU			-0.444**	-0.574**				
			(0.185)	(0.226)				
- a low-income country					-0.487**	-0.407		
					(0.224)	(0.271)		
- a high-income country outside the EU							-0.274	-0.445*
							(0.219)	(0.269)
- an "attractive" low-income country							-0.727***	-0.779**
							(0.282)	(0.347)
- a "non-attractive" low-income country							-0.387	-0.400
							(0.354)	(0.409)
Inclusive values								
Inside the EU			0.522***	0.584***				
Outside the EU			0.423***	0.430***				
High-income countries					0.805***	0.983***		
Low-income countries					0.531***	0.673***		
EU member							0.787***	0.856***
High-income country outside the EU							0.811***	0.807***
"Attractive" low-income country							0.670***	0.796***
"Non-attractive" low-income country							0.327***	0.307***
Likelyhood test ratio								
Chi2 statistic			30,62	19,89	20,11	9,48	36,96	33,63
P-value			0,0%	0,0%	0,0%	0,9%	0,0%	0,0%
Number of observations	29,644	22,317	29,644	22,317	29,644	22,317	29,644	22,317

*Reading : *** means significativity at 1%, ** at 5%, * at 10%. Standard errors (in parenthesis) are clustered around firms.*

Sample : French manufacturers with more than 20 employees or sales exceeding 5 million euros.

Sources : Annual census for manufacturers (EAE), LiFi survey, French customs - Author's calculation.

First, we observe that all choice structures are relevant, since the coefficient for the inclusive value is significant and in the 0-1 range. As expected, switchers are less likely to invest outside of the EU, in a

low-income country (in particular those that were revealed “attractive” by the econometric analysis in table 9). Regardless of the nest structure, the sign and significance and coefficients remain unchanged: investors determine their location choices according to their export and import experiences as well as the presence of group’s affiliates. However, we notice that coefficients for exports and imports are lower in the nested logit regression than in the conditional logit one: once the region has been chose, the choice of the country depends less on the export/import experience of the investor.

CONCLUSION

First, this paper shows that manufacturers rarely invest in a country where they have not exported before. Most investments are preceded by an exporting phase, during which firms increase their knowledge of the local market. This finding holds regardless of countries’ observable and unobservable characteristics. The exporting phase seems longer and more frequent in distant countries and for first-time investors.

Investors can shorten this exporting/importing phase by exploiting the international experience of their business group, in particular when affiliated firms already own a local affiliate. This finding might suggest that group restructuring plays an important role in the location choices of multinational firms. Affiliated firms might also benefit from the experience, the good practices and the network of their group. From this point of view, promoting the sharing of information between small independent businesses and big internationalized groups might contribute to boost the internationalization process of firms, as it was recently suggested by French policy makers.

Finally, we show that location choices also depend on import experience. The importing phase appears especially important for investing in low-income countries. Moreover, switchers seem to favor countries which provide important supplies for their business group.

It would be interesting to differentiate these results according to the nature and the function of the created affiliate. Data on foreign affiliates’ activity would also allow us to describe the interactions between foreign affiliated firms in a more consistent manner. According to Defever and Muchielli (2005), the presence of the group in one country determines the location of production sites, R&D centers and logistics, but not the location of headquarters and commercial affiliates. Describing these interactions is a necessary step for understanding the organization of global value chains, and for evaluating the contribution of group restructuring to FDI flows.

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Appendix I: Geographic distribution of investments

The analysis considers countries where at least one French manufacturer has invested between 1999 and 2003, and for which the variable "market potential" is available (Mayer, 2009). The complete list of the selected countries is reported in table 2.

Table 2: Invested countries

Countries	Number of investments	in %	Countries	Number of investments	in %
USA	69	11,9%	Slovakia	4	0,7%
Germany	50	8,6%	South Africa	4	0,7%
United Kingdom	41	7,1%	Cameroon	3	0,5%
Spain	40	6,9%	Lebanon	3	0,5%
Italy	38	6,6%	Russia	3	0,5%
Belgium	34	5,9%	Sweden	3	0,5%
China	26	4,5%	Austria	2	0,3%
Poland	26	4,5%	Bulgaria	2	0,3%
Switzerland	23	4,0%	Colombia	2	0,3%
Canada	20	3,5%	Denmark	2	0,3%
Czech Republic	19	3,3%	Finland	2	0,3%
Hong Kong	16	2,8%	Greece	2	0,3%
Japan	15	2,6%	Hungary	2	0,3%
Netherlands	12	2,1%	Mauritius	2	0,3%
Morocco	11	1,9%	Mozambique	2	0,3%
Romania	11	1,9%	Phlippines	2	0,3%
Portugal	9	1,6%	Venezuela	2	0,3%
Tunisia	9	1,6%	Ivory Coast	1	0,2%
Brazil	8	1,4%	Egypt	1	0,2%
Australia	7	1,2%	Gabon	1	0,2%
Mexico	7	1,2%	Ireland	1	0,2%
Algeria	6	1,0%	Israël	1	0,2%
Singapore	6	1,0%	New Zeland	1	0,2%
Turkey	6	1,0%	Nigeria	1	0,2%
India	5	0,9%	Norway	1	0,2%
South Korea	5	0,9%	Uruguay	1	0,2%
Thailand	5	0,9%	Vietnam	1	0,2%
Argentina	4	0,7%	**TOTAL**	**580**	**100**

Continents:

- **Europe**: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, United Kingdom.
- **North America**: United States of America, Canada.
- **Central and South America**: Argentina, Brazil, Colombia, Mexico, Uruguay, Venezuela.
- **Middle East:** Israël, Lebanon.
- **Asia**: China, Hong-Kong, India, Japan, Phillipines, Singapore, South Korea, Thailand, Turkey, Vietnam.
- **Africa**: Algeria, Cameroon, Egypt, Gabon, Maurice, Morocco, Mozambique, Nigeria, Ivory Coast, South Africa, Tunisia.
- **Ocenia**: Australia, New Zeland.

High-income countries (GDP per capital higher than the median in 2003)**:** Australia, Belgium, Canada, Czech Republic, Denmark, Germany, Greece, Hong-Kong, Hungary, Ireland, Israel, Italy, Japan, Maurice, Netherlands, Norway, New Zealand, Portugal, Singapore, South Korea, Spain, Sweden, Switzerland, United Kingdom, United States of America.

« Asian Dragons »: Hong-Kong, Singapore, South Korea (Taiwan is not invested by a French firm of our sample during our period).

"Mixed" choice structure, which takes into account geographic proximity and GDP per capita:

- **EU members**: Austria, Belgium, Denmark, Finland, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Sweden, United Kingdom (Luxembourg is not invested in the sample).
- **High-income countries outside the EU**: Australia, Canada, Czech Republic, Israel, Japan, Mauritius, New Zealand, Norway, South Korea, Switzerland, United States of America.
- **"Attractive" low-income countries**: Argentina, Brazil, Bulgaria, China, Colombia, Mexico, Poland, Romania, Slovakia, Uruguay, Venezuela.
- **Low-income countries that do not raise any particular attention**: Algeria, Cameroon, Egypt, Gabon, Ivory Coast, Lebanon, Morocco, Mozambique, Nigeria, Philippines, South Africa, Thailand, Tunisia, Turkey, Vietnam.

APPENDIX II: Distribution of the sample in terms of industry

French manufacturers taken as a whole (restricting to firms with more than 20 employees) do not have the same sectoral distribution than firms in the final sample. Indeed, “leather and clothing”, “pharmacy, perfumes and maintenance”, “shipbuilding, aeronautics and rail construction”, “electronic and electronical equipments” and “chemicals, rubber and plastics” are clearly over-represented in the sample of investors, which reflects the higher propensity of these industries to go multinational. Reversely, the share of “mechanical equipments”, “publishing, printing and reproduction” and “meta and transformation of metal” is decreasing.

Table 3: Sectoral distribution of French manufacturers and firms in the final sample

Industry ("Summary Economic Classification") in 2003	Annual Census for manufacturers ("EAE")	Sample of investors
Consumer goods industry		
Clothing and leather	6%	9%
Publishing, printing and reproduction	8%	3%
Pharmacy, perfumes, maintenance	3%	8%
Household equipment	6%	8%
Manufacture of motor vehicles	3%	3%
Industry producing capital goods		
Shipbuilding, aeronautics and rail construction	1%	4%
Mechanical equipment	18%	10%
Electrical and electronic equipment	5%	9%
Industry producing intermediate goods		
Mineral products	6%	5%
Textiles	5%	6%
Wood and paper	6%	5%
Chemicals, rubber and plastics	11%	15%
Metal and transformation of metal	18%	11%
Electrical and electronic components	4%	5%
ALL INDUSTRIES	**100%**	**100%**

Reading: In 2003, the "clothing and leather" industry" represents 6% of manufacturers with more than 20 employees, and 9% of the sample of investors.