Economics Bulletin

Volume 40, Issue 2

Do retailers benefit from network affiliation in all locations?

Magali Chaudey
Univ Lyon, UJM Saint-Etienne, GATE UMR 5824

Muriel Fadairo
Université Savoie Mont-Blanc – Irege Lab.

Frédéric Perdreau
Univ Lyon, UJM Saint-Etienne, COACTIS EA 4161

Abstract

When a retailer enters a new market, the location and the decision whether to join a branded network are two major choices that must be faced. This empirical paper concerns the performance outcome of these choices. Based on French data, we measure the outlet performance with respect to turnover growth and economic return. Our analytical framework and our results highlight that network membership does not systematically provide advantages at the outlet level. The advantages of network membership decrease with increasing distance from the locus of economic activity.

We would like to thank the CASD (Secure Data Hub which gave us access to the data) for its great responsiveness.
Citation: Magali Chaudey and Muriel Fadairo and Frédéric Perdreau, (2020) "Do retailers benefit from network affiliation in all locations?", *Economics Bulletin*, Volume 40, Issue 2, pages 1623-1633
Contact: Magali Chaudey - magali.chaudey@univ-st-etienne.fr, Muriel Fadairo - Muriel.Fadairo@univ-savoie.fr, Frédéric Perdreau - frederic.perdreau@univ-st-etienne.fr.
Submitted: October 01, 2019. **Published:** June 07, 2020.

1. Introduction

In the retail industry, a variety of organizational forms compete in the marketplace. Such forms include large retail chains, various types of franchises, and independents. Many of these chains and networks capitalize on a brand and can be gathered under the label "branded networks". Branded networks have grown strongly in recent decades, and now play a major role worldwide (Ferrante 2012; Kfoury and Trevien 2017). Network expansion is another particularly salient feature of franchising (Dant et al., 2011; Aliouche *et al.* 2015), a trend which calls into question the potential advantages of being part of a network over independent distribution. In this paper, we investigate the idea that these advantages are visible in terms of performance output at the outlet or company level.[1] Prospective retailers should be especially interested in the effect of affiliation on the financial measure of company performance. Indeed, the goal of increasing revenue is an important determinant of network affiliation for individual retailers (Bastié *et al.* 2016), and the failure to reach this objective can trigger a decision to leave (Frazer and Winzar 2005). To attract prospective retailers, networks provide information about the performance of their company members. However, as with the disclosure document in franchising, this information relies on development prospects or on stated goals to be attained by the retailer: it does not guarantee a specific level of turnover, nor even a growth of turnover. It is even less a guarantee of an improved return on investment for the retailer compared to independent retailing. Furthermore, this information refers to targets and averages that do not take into account the specific features of the prospective retailers. For these reasons, it is important to study the actual comparative performance of independent outlets versus outlets belonging to a branded network. To see if the affiliation to a network is worthwhile for retailers, it is also essential to include a performance measure that is directly relevant for the company's owner.

Previous studies on the subject present two deficiencies. First, the literature has concluded that network membership can increase outlet performance (Bracker and Pearson 1986; Bronson and Morgan 1998; Litz and Stewart 1998; Pilling *et al.* 1995; Yoo *et al.* 1998). Yet these studies focus on outlet efficiency or turnover growth; they do not include a measure of financial performance relevant exclusively to the outlet's owner (e.g. profit or ROA; a partial exception being the work of Bracker and Pearson in 1986). In addition, since these first studies were conducted, several changes may have modified the situation at retail level; for example, the development of distribution channels. The literature review by Hibbard, Kacker and Sadeh (2019) shows that the effect of distribution expansion (whether in the form of additional channels or greater distribution intensity) on company performance (measured by sales or profit) may be contingent on other variables.

Our study is a first step toward bridging those gaps. It addresses the issue of comparative performance of independent companies versus companies affiliated to a branded network. In addition to a classical measure of performance based on turnover growth, we take into account a measure directly relevant to the company's owners through the return on investment. Turnover growth is of particular concern for the network and its head, because its revenue – royalties – is based on the outlets' turnover. Of course, turnover growth is also a relevant measure of performance for the (outlet) company's owner, but this indicator does not guarantee an adequate income. Conversely, the return on assets, measured at the company level, is a primary concern for the owner of an outlet, but only a secondary concern at the network level.

Many potential factors may influence the retailer to join a network. We argue that a major factor is outlet location. In the retail literature, location has long been clearly considered a major determinant of firm performance (Jones and Simmons 1987), and a decisive performance factor for distribution networks (Cliquet 1998). We argue that in a remote area, the advantage of

[1] We use the term 'company' to refer to an outlet or a set of outlets belonging to the same legal entity.

network membership for the outlet company's owner will decrease. Hence, we contend that the advantages of branded network affiliation may diminish with increasing distance from the locus of economic activity.
The rest of this paper is organized as follows. Section 2 develops the analytical framework based on the economic literature on location choices, in addition to the retailing and franchising literature. Section 3 presents the data, variables, and summary statistics. The estimations are contained in Section 4. Section 5 concludes.

2. Analytical Framework

2.1. Advantages and costs of network affiliation

When joining a branded network, a retailer may first seek to leverage name recognition (Feldwick 1996) and increased economies of scale to enhance its performance. Network affiliation can indeed reduce costs due to bulk purchasing (Peterson and Dant 1990). The network logistics chain may also entail lower ordering and transportation costs. In addition, the cost of gaining market share may be higher for an independent. The trade name serves as a signal to potential customers. To be profitable for the retailer, all these network advantages must outweigh the cost associated with affiliation. These costs can be of a pecuniary nature (fee), but also include the costs related to the constraints imposed on the outlet by network affiliation. The huge development of networks in recent decades, as well as existing studies, indicate that the advantages generally outweigh the costs. Results of prior studies (Bracker and Pearson 1986; Pilling *et al.* 1995; Bronson and Morgan 1998; Litz and Stewart 1998) identify different factors as the source of network affiliation outperformance: trade name and signal to customer, economies of scale, and better efficiency in the production process. From this analytical context, we derive the following prediction:

H_1: Retail units affiliated to a branded network outperform independent outlets.

2.2. Location impact on network affiliation advantages and costs

2.2.1. The advantage of locating close to the locus of economic activity

The choice to locate in an urban rather than a surrounding or a rural area is justified by the advantages of agglomeration, i.e. of being located in a place with many other outlets. In the economic analysis, agglomeration gains are justified by Hotelling's (1929) seminal model, and by the literature on agglomeration externalities. From the early work of Marshall (1920), to the "New Economic Geography" (Krugman 1991) and the impressive literature on clusters, the concept of externalities has occupied a major role in justifying the observed trend towards agglomeration.
In the distribution sector, a cluster is defined as the concentration on a given territory of retail outlets and consumers. Larsson and Öner (2014) highlight several criteria to explain this location form: the location of new units based on distributors already located in the area, with similar or complementary activities; the distance of the unit to the "business center"; and the accessibility to the local demand.
From this background literature underlining the advantages of spatial agglomeration, we derive the following hypothesis:

H_2: Whatever their organizational form, retail outlets located in urban areas achieve a higher performance compared to outlets located in rural areas

2.2.2. Interaction between organizational form and location

Location and organizational form may interact. According to transaction cost theory, branded distribution networks must bear a range of different costs related to location (Baena and Cerviño 2015). Transaction cost theory highlights the research costs associated with identifying possible locations and evaluating potential franchisees in a targeted geographic market. These costs may benefit from an economy of scale in urban areas where the potential locations are concentrated on a limited area, but not in larger rural areas. The branded network head may have more incentives to incur research costs and to develop their knowledge of an area when it is dense and concentrated. Hence, an outlet may benefit from better knowledge and advice from headquarters. This may further increase the cost for the network when the outlet is located in a remote area. This cost can be reduced by setting up a franchisor-owned unit, enabling the franchisor to control franchised units in a specific area. Yet this strategy may only be effective in dense areas, where the distance between outlets remains limited. These transaction cost arguments lead us to consider that the network head may be more reluctant to develop the network in a remote area.

From the retailer's point of view, the benefits of network membership may decrease with distance from the place of economic activity. Indeed, one of the advantages of affiliation – the economies of scale mentioned above – is based on volume-oriented transactions. The volume of sales may be lower in remote areas. In addition, in these low-density areas, meeting the needs of a smaller and more heterogeneous customer base requires greater transaction competence and time commitment, which leads to greater quantitative and, possibly, qualitative changes in sales behavior. This need to manage information richness creates a disadvantage for brand retailers and an opportunity for independent retailers (Litz and Stewart 1998). Where the management shifts its focus more towards volume-based transactions, this reduces the time available to execute transactions in complex environments. This state of affairs provides potential opportunities for independents to create niches based on offering more complex, informationally rich products and services that are specifically targeted to their local environment.

It is thus relevant to defend the idea that the advantage of belonging to a branded network is decreasing with outlet distance to the local urban center:

H_3: The outperformance of branded network units is higher in urban areas compared to rural areas.

Results of prior studies (Bracker and Pearson 1986; Pilling *et al.* 1995; Bronson and Morgan 1998; Litz and Stewart 1998) identify different factors as the source of network affiliation outperformance: trade name and signal to customer, economies of scale, and better efficiency in the production process. All these studies focus on efficiency or productivity measures, and all are based on sales or sales growth. With the notable exception of Bracker and Pearson (1986), none of these studies looks at a measure specifically relevant for the outlet owner. Bracker and Pearson's (1986) study includes a measure that relates to compensation for the owner of the outlet. They rely on self-reported data from the owner. But advantages in terms of turnover growth might not be relevant for the owner of the outlet if it does not increase his return. We propose to use return, based on accounting data, in addition to the more classical measure in terms of growth of turnover, and we focus on owner-level measures.

3. Data And Variables

3.1. Data sources

Our sample comes from two French sources. First, the survey *Enquête Points de vente 2009* (Outlets survey 2009), produced by INSEE. The population of companies[2] surveyed focuses on retail sectors. This survey contains interesting and unique variables regarding organizational features of French retail outlets. In particular, it indicates the type of location of a company and if this company belongs to a branded network. But the survey does not include performance variables directly relevant to the owner. So, we complemented this first dataset with the FARE data produced by the Ministry of Economics and Finance. The FARE dataset gathers tax reports and accounting statements and allows one to calculate performance variables. The initial sample from *Enquête Points de vente* includes 50,488 outlets from 20,028 companies. The matching with the FARE database, the missing values for some data, and the cleaning of the base, reduced the number of observations to 7858 companies.

3.2. The variables

As dependent variables we use two performance variables:
Turnover Growth is a commercial measure of performance. It is the growth of the company turnover between 2010 and 2013 and is calculated as [(*Turnover* 2013 – *Turnover* 2010)/*Turnover* 2010]. We use a four-year period to smooth our measure and to be consistent with the second performance measure.
Economic return is the (arithmetic) average economic return of the company between 2010 and 2013. This variable is calculated as the EBIT after taxes (Earnings Before Interest and Taxes), divided by the sum of stockholder's equity and financial debt. Previous studies focus on efficiency or productivity measures, and are based on sales or sales growth. To the best of our knowledge, with the notable exception of Bracker and Pearson (1986), no study looks at a measure specifically relevant for the outlet owner. Bracker and Pearson's (1986) study includes a measure that relates to compensation for the owner of the outlet. They rely on self-reported data from the owner. We propose to use return, based on accounting data, in addition to the more classical measure in terms of growth of turnover.
We introduce two independent variables and control variables:
Branded network member. This dummy variable is noted 1 if the company belongs to a network and 0 if the company is independent. To ensure that the companies labeled "branded network member" belong to a network, we only selected companies for which outlets declared they belong to a network *and* which gave a brand name for their network. We have only treated as independent companies those for which none of the outlets declared they belonged to a branded network. These last conditions explain to a large extent the reduction of our sample (7,858 companies) compared to the initial INSEE sample (20,833), and allow us to compare companies belonging to a branded network with independent companies.
Location of the company is a variable with 3 modalities, taken from the INSEE database. INSEE distinguishes 3 types of locations, (i) *Rural areas* where less than 40% of the population has to go to an urban center to work, (ii) *Surrounding areas* which do not belong to an urban pole but where at least 40% of the population is attached to one or more urban poles, and (iii) *Urban poles* which are communes or groups of adjacent communes representing at least 5,000 jobs. The *Location* variable presents some features of an ordinal variable regarding the distance to the urban center or urban pole. Rural areas (*location* = 1) are distant (in term of distance but

[2] In the data, a company is defined as a legal entity including one or more than one outlets (which are not legal entities). A company can, but does not have to, belong to a branded network.

also in terms of activities) from an urban pole. Surrounding areas (*location* = 2) are in a medium situation: they depend on one or more urban poles regarding economic activities and employment, although they are spatially slightly distant from these poles. Urban poles (*location* = 3) are the local center of economic activities; they are not limited to the city center and are more similar to an urban community or metropolitan area, since they can include several adjacent communes. Beyond this dimension – expressed in terms of distance – this variable catches some of the specific characters of customers and workers that could be linked to different (segmented) markets. This definition of location zones proposed by INSEE is in line with that proposed by Eurostat, which distinguishes between "cities" and "functional urban areas". *Surface* is the average sales area of the company outlets (measured in square meters).
Turnover 2009 represents the turnover of the companies at the end of 2009 (in thousands of euros).
Age is the age of the outlet (in 2017).
Number outlets refers to the number of outlets in each company.

3.3. Summary statistics

Table 1 presents summary statistics and highlights that independent companies and companies belonging to a branded network have different features. In particular, independent companies are smaller in terms of outlet surface and turnover and, unsurprisingly, have on average far fewer outlets (1.48) than companies belonging to a network (24.19 outlets).

Table 1: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Total sample					
Economic return	7858	.133	.720	-4.902	4.988
Turnover growth	7858	-.026	.613	-1	16.820
Location	7858	2.510	.803	1	3
Network member	7858	.099	.298	0	1
Surface	7858	182.577	579.06	3	12000
Age	7858	22.966	13.166	8	117
Turnover 2009	7858	10061.68	255314.2	0	1.65e+07
Number outlets	7858	3.724	25.256	1	843
Members of a branded network					
Economic return	777	.075	.503	-4.777	3.885
Turnover growth	777	-.017	.399	-1	3.345
Location	777	2.581	.774	1	3
Surface	777	644.498	1420.277	20	11460.58
Age	777	25.388	14.506	9	117
Turnover 2009	777	94194.52	807509.9	0	1.65e+07
Number outlets	777	24.189	77.368	1	843
Independent retailers					
Economic return	7081	.139	.739	-4.902	4.988
Turnover growth	7081	-.027	.632	-1	16.820
Location	7081	2.503	.806	1	3
Surface	7081	131.890	353.610	3	12000
Age	7081	22.700	12.984	8	117
Turnover 2009	7081	829.756	2656.277	0	86429.03
Number outlets	7081	1.478	.894	1	10

4. Methodology and Estimations

4.1. Econometric model

The choice of our econometric model takes into account a potential selection effect and the associated endogeneity bias. Indeed, companies belonging to a branded network have specific features other than the branded network affiliation, particularly size, which may impact the performance outcome. To take this potential selection bias into account, we use a two-stage treatment effect model where the performance measures are the dependent variable and branded network affiliation is the treatment variable. The treatment variable is instrumented by the sector dummies, the number of outlets in the company, the turnover of the company and its age.

We estimate the following econometric model:

$$y_i = \alpha + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{1i} X_{2i} + C_i + \varepsilon_i \qquad (1)$$
$$i = 1, \ldots, 7858$$

With:
Y = performance at company level i (*Turnover growth; Economic return*).
X_1 = outlet location (urban pole = 3; surrounding area = 2; rural area = 1).
X_2 = organizational form (independent outlet *vs* member of a branded network: 0/1). X_2 is instrumented by the sector dummies, the number of outlets in the company, the turnover of the company and its age.
C = vector of control variables (average surface of outlets for the company, turnover and age of the company, sector dummies).
ε: error term.

We expect the estimated coefficients β_1 and β_2 to be positive (H1 and H2), and the estimated coefficient of the product of X_1 and X_2 also to be positive (H3: higher branded network affiliation effect for more central location).

4.2. Estimation Results

We first present the results for the turnover growth model, then for the economic return model. In each case, we present the results without interaction between location and branded network affiliation (model I), and then with the interaction effects (model II).
Model I (table 2) shows that there is a positive link between the network affiliation and the turnover growth of the company (H1 corroborated). The age of the company is negatively linked to its growth. The other variables are not statistically significant. In particular, the results do not show any difference between the turnover growth of the companies according to their location (H2 not corroborated). The small number of significant coefficients is consistent with the stochastic nature of firm's growth and with results of prior studies on this issue (Coad 2007).

Table 2: Econometrical Estimations for the Turnover Growth

N= 7858 observations	Model I : no interaction			Model II : interaction		
Turnover growth 2010-2013 (dependent variable)	Coef.	Std. Err.	z	Coef.	Std. Err.	z
Location (base = 1= rural area)						
Surrounding area	-.0390	.0272	-1.43	-.0466*	.0282	-1.65
Urban pole	-.0143	.0176	-0.81	-.0179	.0185	-0.97
Branded network Member (=1)	.1130**	.0472	2.39	.0771	.0700	1.10
Location* network member=1						
Surrounding area (Location=2 and branded network member=1)				.1016	.1050	0.96
Urban pole (Location=3 and branded network member=1)				.0407	.0608	0.67
Surface	2.62e-06	.00001	0.20	2.44e-06	.00001	0.18
Age	-.003***	.0005	-5.35	-.003***	.0005	-5.34
Turnover 2009	-1.32e-08	2.82e-08	-0.47	-1.37e-08	2.83e-08	-0.48
constant	.0996	.0632	1.58	.1027	.063	1.62
Sector dummies	yes			yes		
Hazard	-.0591199*	.0267528	-2.21	-.0601359**	.0269567	-2.23
Rho[3]	-0.09680			-0.09847		
Sigma	.61073996			.61072694		

Note: *Significant at the 10% level, ** at the 5% level, *** at the 1% level.

Model II (Table 2) presents the results taking into account an interaction between location and branded network affiliation. Hypothesis H3 predicts that the effect of network affiliation will be higher for the surrounding area than for a rural area and higher for an urban area compared to a rural area. Yet the estimations presented in Table 2 do not support this hypothesis, as we obtain no significant results. Hence, the advantage of network affiliation is not higher (nor smaller) in suburban and central areas compared to rural areas (H3 not corroborated).

While the incremental effect of network affiliation is not statistically different from one area to another, it is still interesting to estimate the significance of the effect of brand affiliation on growth in each location. In that respect, additional Wald tests show that in the surrounding area, affiliation brings an additional growth estimated at 17.86% over the period (i.e. it adds an additional growth of 10.16% to the effect of 7.71% of affiliation in rural areas). This 17.86% effect is slightly significant, but only at the 10% significance level ($z=1.73$, $P>|z| = 0.084$). The 11.78% growth (7.71%+4.07%) in additional turnover generated by branded network affiliation in urban areas is clearly significant ($z=2.45$, $P>|z| =0.014$). In brief, consistent with H1, owners of outlets can expect larger growth from network affiliation in urban and surrounding areas, but not in rural areas. Nevertheless, and contrary to our hypothesis H3, this positive effect of network affiliation is not significantly different from one area to the other.

The branded network affiliation advantage in terms of turnover growth does not necessarily result in an advantage in terms of return for the company owners, as network affiliation entails costs for the outlet. Table 3 presents the results for the model with the economic return as the dependent variable. Model I in table 3 shows that branded network affiliation is associated with lower economic return, but the estimated coefficient is only significant at the 10% threshold. Even though weakly significant, this result contradicts hypothesis H1. There is no significant effect of location type on economic return (H2 not corroborated). Again, the age of the company is negatively associated with economic return, and the other variables are not significant.

[3] The negative rho (estimated correlation between the treatment-assignment errors and result errors) is -0.09, indicating that unobservable increases in turnover growth tend to occur with unobservable decreases in the number of branded network members.

Table 3: Econometric Estimations for the Economic Return

Economic Return 2010-2013 (dependent variable)	Model I : no interaction Coef.	Std. Err.	z	Model II : interaction Coef.	Std. Err.	z
Location (base = 1= rural area)						
Surrounding area	.02280	.0320	0.71	.0090	.0332	0.27
Urban pole	-.0330	.0.207	-1.59	-.0404*	.0217	-1.86
Branded network member (=1)	-.0902*	.0554	-1.63	-.1621**	.0823	-1.97
Location*network member=1						
Surrounding area (Location=2 and branded network member=1)				.1832	.1241	1.48
Urban pole (Location=3 and branded network member=1)				.0819	.0716	1.14
Surface	-.0000	-.0000	-1.10	-.0000	.0000	-1.12
Age	-.0017***	.0006	-2.80	-.0017***	.0006	-2.78
Turnover 2009	-2.63e-08	3.32e-08	-0.79	-2.37e-08	3.32e-08	-0.82
cons	.1236	.07242	1.67	.1297	.0728	1.16
Sector dummies	yes			yes		
Hazard lambda	.0336	.0314	1.07	.0322	0.031	1.02
Rho	0.046			0.044		
Sigma	.7173			.7172		

Note: *Significant at the 10% level, ** at the 5% level, *** at the 1% level.

In model II, the estimated coefficient for "branded network member" is negative and significant (-16.21%): network affiliation is associated with a lower economic return in rural areas. However, results show that network affiliation has no significant additional impact in a surrounding area or in the central area compared to a rural area. For this reason H3 is not corroborated: the advantage of branded network affiliation does not lead to higher economic returns in central (urban) areas compared to remote (rural) areas. Furthermore, additional Wald tests show that the effect of network affiliation is not significant in surrounding and urban areas. There are few significant results; however, the results of models 1 and 2 in table 3 show that at the company level, network affiliation is associated with a slightly lower economic return, which comes from a strong (significant) negative association between branded network affiliation and return for companies located only in rural areas.

In brief, the results show that network membership allows an increase in turnover growth at the company level, but only in some (urban and suburban) areas. Results from the regression explaining economic return show that this extra growth does not necessarily bring additional revenues that exceed the costs of network affiliation for the network owners. In rural areas, where network affiliation does not lead to any growth, results show that economic return for the owner of an outlet affiliated to a branded network is lower than the return of independent outlets.

5. Concluding Comments

In this article, we support the idea that affiliation to a branded network provides certain performance advantages over independent outlets. We also highlight that measuring these advantages in terms of turnover growth is not sufficient if we are to estimate these advantages at the company and not at the network level. In addition, we discuss the costs and benefits of locating an outlet in a central location rather than in a remote geographical area. By interacting

these two dimensions, we argue that the advantages of being affiliated to a branded network may decrease with distance from the local center of economic activity. Consistent with the analytical framework developed in a first step, our estimations highlight the impact of outlet affiliation and location on company performance. More precisely, regarding the growth indicator, our results highlight the advantage of branded network affiliation, but only in areas close to the center of economic activity (urban and surrounding areas). We find no advantage of network affiliation in rural areas. Hence, network affiliation can boost growth in some areas. Although of modest intensity, this result is important considering that the global conclusion of numerous studies is that growth is largely a random process (Coad 2007). This might be good news for company owners seeking growth. However, concerning economic return, we do not obtain clear evidence for an advantage of branded network affiliation at the company level. On the contrary, we observe a rather negative association between affiliation and performance. This result is a consequence of a significant negative effect of affiliation on economic return in rural areas. Our conclusion is that when network affiliation does not bring significant additional revenues, the costs of network affiliation negatively affect profitability for the outlet owner. Overall, our results raise the issue of affiliation at the company level for networks located in remote areas. While some analytical arguments show that network heads can offer benefits to affiliated outlets in remote areas, our empirical results raise questions about whether an outlet owner should join a branded network in these areas. Indeed, our estimations suggest that this organizational choice does not lead to additional growth, and may even reduce the economic return. Thus, if the aim is to target a remote location, it is doubtful that a rational potential franchisee ought to join a network. This result contradicts Srinivasan's (2006) argument according to which networks should employ market-based channels (e.g. franchised outlets) in remote areas when high-potential markets are already covered. This conclusion is in line with Combs and Perryman (2012), who notice that co-location occurs when franchisors fill market gaps left by franchisees.

These initial results open up interesting research perspectives both in terms of including the notion of proximity beyond spatial distance, and generalizing to other forms of localized business networks. This work shows the relevance of associating, in the same analysis, the question of organizational form and that of location. It applied in particular to the analysis of the location of SMEs in competitiveness clusters. In this context, the question is about the impact of location and organizational form on the performance of the clusters, measured in terms of innovation or employment (Geldes *et al.* 2015; Ben Abdesslem and Chiappini 2019). The issues and results of this article are therefore of interest beyond the context of franchising. This research is not without limitations. Indeed, further research could supplement the methodology and the estimation process. Two possibilities are conceivable: first, build a panel database to observe the stability of our results over time;[4] second, compare our results with those of other countries in order to question the possible generalization of our conclusions. However, these initial results offer a promising step towards a field of study that combines brand affiliation and location.

[4] INSEE's "points de vente" survey is not annual and the latest survey data has just been released. It will allow us to enrich our empirical analyses.

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