IDENTIFYING PREFERENCE-BASED DISCRIMINATION IN RENTAL MARKET : A FIELD EXPERIMENT IN PARIS

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Identifying preference-based discrimination in rental market:

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Abstract

We measure the discrimination linked to racial origin and access to housing in the private Parisian rental market by an experimental protocol which provides us with a simple procedure for identifying the causes of discrimination (housing provider's preferences or insufficient information). From the beginning of April to the end of May 2016, we sent 4 requests to visit an apartment in reply to each of 504 housing rental advertisements, which totaled 2016 messages sent.

We show that discrimination against individuals of North African origin in relation to their access to Parisian accommodation is very strong, and is only slightly linked to their supposedly fragile financial position. An indication of professional and financial stability increases the access to accommodation only for those of French origin, which implies a strong 'Becker' discrimination where North African candidates are concerned.

Key words: Discrimination, Housing, Field experiment.

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Introduction

The testing method is predominant in international studies on the measurement of discrimination in the access to a given market. In the domaine of access to housing, a very large number of studies in the USA have used this method since the 1970s (Yinger, 1986 ; Page,1995 ; Choi et al., 2005 ; Hanson and Hawley, 2011) and more recently, in several European countries (Ahmed et al. 2008 and 2010 ; Bengtsson et al, 2012 ; Carlsson and Eriksson, 2014, in Sweden ; Bosch et al., in Spain ; Baldini and Federici, 2011 in Italy; Drydakis, 2011 in Greece ; Heylen et al 2015 in Belgium). But this procedure has been little used in France.

Testing is, of course, frequently used in France in other areas, especially in the job market and according to different criteria: sex, (Duguet and Petit, 2005 ; Petit 2007) origin (Berson, 2011) reputation in place of residence (Bunel et al., 2013), religion (Adida et al., 2010 ; Pierné, 2013) the crossed effects of several reasons for discrimination (Duguet et al., 2010 ; l'Horty et al., 2011; Petit et al., 2014). But as far as we know, only three studies using an experimental procedure have measured discrimination in access to housing in France. Bonnet et al. (2016) conducted a campaign in the spring of 2009 in which 'false' candidates replied by phone to 250 rental ads in Ile de France, giving a pre-established list of personal information to the people letting the accommodation. Acolin et al. (2016) sent electronic mail replies to ads published on internet for two months, from April to May 2014, totaling 1800 replies in the whole of France. These two studies concluded that there was a strong discrimination at work in the access to housing, without being able to spatialize it nor to interpretate the causes. Bunel et al. (2017) used a testing campaign in 2015 to study the extent of discrimination in the access to housing of a candidate of Kanak origin in the urban area of Greater Nouméa in New Caledonia. From a sample of 350 advertisements they show that this discrimination is very large, but if a stable financial position comes into play (being a civil servant) it is much reduced.

The subject of our study is to measure discrimination in the rental market in Paris with a testing method using a protocol which enables us to interpret the causes of this discrimination. More precisely, we are seeking to establish whether the possible refusal given to an individual who has identified himself by a North African surname reveals a statistical discrimination, involving the fear of unpaid rent, or a 'pure aversion' towards visible minorities, which is independant of the supposed financial stability of the individual.

We created four fictitious characters seeking to rent accommodation ; two of them implied that they were French by the use of a French surname, the other two indicated similarly that they were North African. Within each pair, one individual signaled a financial stability by stating that he was a civil servant, while the other individual made no mention of his situation. From the beginning of April to the end of May, these four people replied, almost simultaneously, to 504 advertisements for housing in inner Paris, which corresponded to the sending of 2016 messages (504 x 4). This study consists of statistically exploiting the answers to these messages.
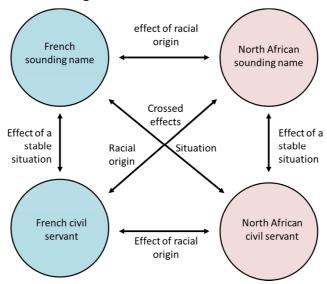
1. **Protocol and data collection**

We evaluate the discrimination linked to the supposed ethnic origin and the access to housing in the private sector located in inner Paris, depending on whether the identity of potential tenants is taken to be French or North African, and whether the implication of professional stability tends to lower the supposed risk of non-payment of rent. The protocol for the data collecting is presented below.

The controlled experiment consisted in creating four fictitious male individuals. Two of them have a French-sounding first and last name, the two others have North African-sounding names. In similar, short messages in reply to ads for rented accommodation, the four individuals ask to visit and request to know what administrative information they should supply. In their message, one French and one North African individual implicitly state that they are civil servants, and thus have financial stability. The two other individuals give no information about their professional standing, opening the way for uncertainty on the part of the housing provider.

The addition of a signal of financial stability enables us to interpret the reasons for the refusals, i.e. to verify if the supposed ability of the tenant to pay his rent is the only consideration, or if a discriminatory behavior, à la Becker, is at work. We raise here the two principle foundations of discrimination found in economic literature. On one hand, discrimination can result from exogenous preferences, or individual aversions for such and such a demographic characteristic of the candidates, following the models of Becker (1957, 1971). On the other hand, it can be a matter of a statistical discrimination which, in a situation of insufficient information, for example on the risk of non-payment of the rent, based on the real or supposed knowledge of the housing provider on the average prevalence or not of this characteristic in the candidate's demographic group, after the models of Arrow (1972) and Phelps (1972).

By comparing the results obtained by each of the four individuals, our protocol enables us to evaluate the ethnic origin effect, conditional to the supposed financial stability, the effect of the supposed financial stability conditional to the ethnic origin, as well as the crossed effects which combine the two aspects (schema 1). In other words, we are able to evaluate the effect of the racial origin on the supposed financial situation given, and the effect of the supposed financial situation on the given racial origin, which permits us to identify the existence of discrimination and to identify its origin.

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Diagram 1 : the effects assessed

The four fictitious individuals answer the same ads on the day that they are published online, a few hours apart. Table 1 shows the messages from the four individuals in reply to the same advertisements.

Table 1 : Identity et messages des quatre individus fictifs

	French origin	North African origin
Civil servant	Hello, I am a public sector employee and I have just been transferred to Paris. I am looking for an apartment in this area and am interested by your advertisement. Could I visit the accommodation ? Could you also tell me what documents I need to provide. Sincerely, Julien LEROY	Hello, I am a civil servant appointed to Paris. I am interested in renting an apartment in your district. Could you tell me how I could visit your apartment and what are the procedures involved? Thanking you in advance, Ahmed Kaidi
No professionnal information provided	Hello, This advert corresponds fairly well to what I am actually looking for in this part of Paris. How can I visit it? What documents do I need in order to rent it? Thankyou, Thomas Moreau	Sir, Madam, The apartment that figures in your advertisement is exactly what I am looking for. Would it be possible to visit it ? I would also like to prepare the necessary documents, so could you give me a list of things I'll need ? Thankyou in advance, Karim KHALIS

The comparison of the follow-up given by the same housing provider to these 4 individuals, considered two by two, reveals a possible discrimination due to the supposed racial origin, depending on whether a signal of financial stability appears in the messages or not. The effects that we have been able to identify, thanks to this experimental protocole, are given in Table 2, which complements the information given in Diagram 1. We can, on one hand, compare if an indication of financial stability has a comparable effect on the follow-up given by the housing provider depending on the racial origin of

the potential tenant. We can, on the other hand, compare the extent of discrimination linked to racial origin, with or without financial stability.
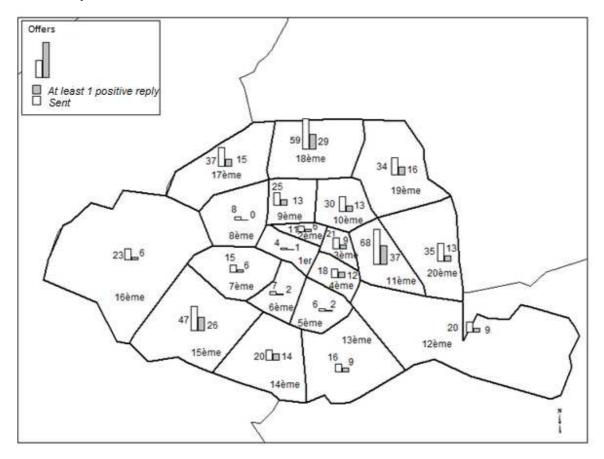
Table 2 : Effects revealed

Comparison of the rates of success of the individuals in pairs	Studied effects
LEROY / MOREAU	Effect of financial stability on the chances of succes of a French individual
KAIDI / KHALIS	Effect of financial stability on the chances of succes of a North African individual
MOREAU / KHALIS	Discrimination linked to racial origin when individual in situation of uncertain financial stability
LEROY / KAIDI	Discrimination linked to racial origin when individual has explicit financial stability

The messages were regularly switched round between the pairs of individuals during the data collection (Leroy versus Kaidi and Moreau versus Khalis), so that for any given advertisement we either sent the A set of messages, or the B set. Moreover, the order the 4 messages were sent in reply to the same ad was fixed at random, in this way each of the messages was sent first to all the advertisements a comparable number of times.

We tested advertisements originating from both estate agencies and private landlords. Each agency was tested once ; however, a same agency-chain could have been tested several times insofar as it was question of a different agency.

We dealt with the principal internet sites specialised in classified advertisements (small ads) : to sell, to rent, Logic immo, PAP, Le bon coin, seloger.com. On each of these sites contact is established with the landlord or agent through an application where the potential tenant must give his first and last names, his telephone number, his e-mail address and his information request. Having received the e-mails, the landlord/agent can, if he wishes, contact the potential tenant directly by phone or e-mail. Each of the fictitious individuals is equiped with an electronic-mail and a mobile phone to collect the replies from the landlord/agent, to which, if need be, no follow-up is given.

We examined advertisemants for accommodation with different attributes in terms of size (square metres), type of accommodation (one to four rooms) the price of rent and the geographical situation in all the districts of Paris (map 1).

Map 1 : Location of tested advertisements in the 20 districts of Paris

Source : Testing TEPP-CNRS, ADAM, property renting in Paris
Interpretation: we tested 47 adverts in the 15th district. 26 resulted in a non-negative reply to at least one of our fictitious individuals.

Between the beginning of April and the end of May 2016, we tested 504 housing advertisements, which corresponds to the sending of 2016 messages (504 X 4). We treat the answer to a message as negative when the landlord/agent either does not reply or explicitly indicates that he cannot give a favorable answer (for example because the accommodation is no longer available). In all other cases, we consider that the reply is non-negative.

2. Results

Out of the 504 advertisements tested, nearly one out of two produced a non-negative reply to at least one of our fictitious characters. In Table 3 we present and compare the characteristics of the 504 advertisements tested and of the 238 advertisements which produced a non-negative reply to at least one of our fictitious individuals.

Table 3 : Characteristics of tested advertisements

	Totality of Advertisements tested (N=504)	Advertisements with at least one non-negative reply (N=238)
Characteristics of the housing providers		
Private individuals	48.40%	47.10%
Agencies	51.60%	52.90%
Origin of advertisement		
Bon Coin	66.50%	60.90%
Other	34.50%	39.10%
Date of advertisement		
March-April 2016	50.60%	59.70%
May-July 2016	49.40%	40.30%
Price of accommodation		
Average rent per m2	33.3 €	33.3 €
Low price (<Q1)	25.00%	21.90%
Average price (Q1-Q2)	25.00%	26.00%
High price (Q2-Q3)	25.00%	26.50%
Highest price (>Q3)	25.00%	25.60%
Floors and lifts		
2nd floor and below	39.70%	44.10%
3rd floor and above(1)	60.30%	55.90%
With lift	67.10%	68.50%
Without lift(2)	32.90%	0.00%
$(1) \times (2)$	20.80%	0.00%
Furnished Apartment	46.80%	50.00%
Message set sent		
A	51.40%	50.40%
B	48.60%	49.60%
Location of offers (in districts)		
1st to 7^{h} and 16th	20.80%	18.50%
17th to 20th	32.70%	30.70%
12th to 15th	20.40%	24.40%
8th to 11th	26.10%	26.40%

Source : Testing TEPP-CNRS, ADAM, property renting in Paris
Interpretation : 48,4% of tested advertisements come from private individuals. This proportion is 47,1% of the advertisements producing one reply to at least one of our 4 fictitious individuals.

The distribution of the number of replies by advertisement is given in Table 4. Nearly half of the tested advertisements gave rise to at least one non-negative reply, and in 60% of these cases the landlord/agent had contacted only one fictitious individual. This low proportion is certainly due to the high number of contacts that the landlords/agents receive following the posting of their advert.

Table 4 : Distribution of the number of non-negative replies per advertisement tested.

	Number	%
None	266	52.8%
1 and more	238	47.2%
Number of non-negative replies per advertisement :		
1	144	60.5%
2	22	9.2%
3	23	9.7%
4	49	20.6%

Source : Testing TEPP-CNRS, ADAM, property renting in Paris
Interpretation : Out of the 504 ads tested, 266 did not produce any non-negative replies and 238 gave rise to a non-négative reply to at least one of our 4 fictitious characters. (47.2%). Amongst these, 144 ads gave rise to one reply to only one of our 4 individuals (60,5% of the 238 ads having given rise to at least one non-negative reply), 22 produced a reply to two fictitious individuals.

Faced with a large number of replies, if the landlord/agent is unable to reply favorably to them, notably by offering a visit of the accommodation, it does seem that he does not make his choice at random. In fact, the chances of having a non-negative reply is sensibly different depending on the individuals (Tableau 5). When the landlord/agent decides to send a non-negative reply to only one of our four fictitious individuals, it is to one of the two French origin individuals in more than 97% of cases (Table 5-A). However, a notable preference is noted in favor of the French individual who states he is a civil servant because it is he who receives a non-negative reply from the housing provider in 90.8% of cases.

It is interesting to notice whether the ad comes from a private individual or an estate agency. Globally, the non-negative response rates are similar : there is at least one non-negative reply for 48,5 % (126/260) of ads published by an estate agency and this rate is 45.9 % (112/244) for private individuals. However, they are markedly different depending on the profile of the candidate. When the ad is published by an estate agent, the French individual who indicates that he is a civil servant receives a reply in 84.9 % of cases where the housing provider has sent a non-negative reply to at least one of our fictitious individuals (Table 5-B). When the advert is published by a private individual, this same candidate benefits from a non-negative reply in 97.3 % of cases (Table 5-C). As for the North African candidate who is not a civil servant, he receives a non-negative reply in 38.9 % of the cases where the landlord/agent sent at least one non-negative reply when the advert is published by an agency, against 17 % of cases when it is published by a private individual. From this point of view, private individuals seem to be even more selective in their replies than estate agents.

Table 5 : Breakdown of non-negative replies obtained by each of the 4 imaginary individuals,

according to the number of replies sent by the landlord/agent

5-A. Totality of advertisements

	Rate of non-negative replies		Rate of non-negative replies conditional on the total number of non-negative replies							
			1		2		3		At least 1	
	N	%	N	%	N	%	N	%	N	%
French origin, civil servant	216	42.9%	132	91.7%	18	82%	17	73.9%	216	90.8%
French origin, non civil servant	94	18.7%	8	5.6%	15	68%	22	95.7%	94	39.5%
North African origin, civil servant	78	15.5%	3	2.1%	9	41%	17	73.9%	78	32.8%
North African origin, non-civil servant	65	12.9%	1	0.7%	2	9%	13	56.5%	65	27.3%
Number of tested advertisements	504		144		22		23		238	

5-B. Advertisements originating from estate agents

	Rate of non-negative replies		Rate of non-negative replies conditional on the total number of non-negative replies							
			1		2		3		Au moins 1	
	N	%	N	%	N	%	N	%	N	%
French origin, civil servant	107	41.2%	41	80.4%	16	80.0%	14	73.7%	107	84.9%
French origin, non civil servant	74	28.5%	7	13.7%	13	65.0%	18	94.7%	74	58.7%
North African origin, civil servant	62	23.9%	3	5.9%	9	45.0%	14	73.7%	62	49.2%
North African origin, non-civil servant	49	18.9%	0	0.0%	2	10,0%	11	57.9%	49	38.9%
Number of tested advertisements	260		51		20		19		126	

5-C. Advertisements originating from private individuals (landlords)

	Rate of non-negative replies		Rate of non-negative replies conditional on the total number of non-negative replies							
			1		2		3		Au moins 1	
	N	%	N	%	N	%	N	%	N	%
French origin, civil servant	109	44.7%	91	97.9%	1	100.0%	3	75.0%	109	97.3%
French origin, non civil servant	20	8.2%	1	1.1%	1	100.0%	4	100.0%	2	17.9%
North African origin, civil servant	16	6.6%	0	0.0%	0	0.0%	3	75.0%	16	17,00%
North African origin, non-civil servant	16	6.6%	1	1.1%	0	0.0%	2	50.0%	16	17,00%
Number of tested advertisements	244		93		2		4		112	

Interpretation : Out of the 505 tested ads, the fictitious French person, supposedly a civil servant received a non-negative reply in 216 cases (42.9% of cases). He was the only one to receive this type of reply in 132 cases (91.7% of cases having given rise to at least one non-negative reply). When the housing provider gives a non-negative reply to only 2 fictitious individuals, this individual was one of them in 18 cases (82% of cases having given rise to at least one non-negative reply). Amongst the 238 cases where the landlord/agent had given a non-negative reply to at least one of the four fictitious individuals, the French origin individual supposedly a civil servant was among the fictitious individuals contacted in 216 cases (which represents 90,8% of cases).

Table 6 compares in a systematic way the rate of non-negative replies of the four fictitious individuals given in the first column of Table 5. Globally, there is a 30 percentage point gap between the chances of an individual of French origin, who states he is a civil servant, of receiving a non-negative reply and those of a North African individual who does not mention his profession (30 % = 42,9% - 12,9%). We can break this gap down by singling out on one hand, the effect of a financial stability according to racial origin, and on the other hand, discrimination linked to racial origin according to the indication of financial stability.

First, considered in their totality the individuals who state they are civil servants in their first contact messages with the landlord/agent have significantly more chances of receiving a non-negative reply. For all that, this positive effect of financial stability depends noticeably on the racial origin of he individual: it is very strong if the individual is French, and weak if he is North African. If the individual's first and last name sound North African, his chances are 2.6 percentage points higher when he says he is a civil servant (compared with 24.2 percentage points if his first and last name sound French).

Secondly, globally our results reveal that a discimination linked to racial origin does exist : North African individuals are significantly less likely to receive a non-negative reply than those of French origin. At the first contact no objective element justifies *a priori* such a difference in treatment. We show that this treatment is stronger among individuals claiming to be civil servants (gap of 27.4 percentage points in favor of a French individual) than amongst those who do not mention their profession (gap of 5.7 percentage points in favour of the French individual). This result indicates the presence of discrimnation linked to preferences, *à la* Becker.

Thus, an indication of positive financial stability does not reduce discrimination where a North African individual is concerned. This discrimination does not seem to be related to a lack of information linked to the risk of unpaid rent, but, most importantly, to the discrimiatory preferences of the landlords/agents, or those, real or supposed, of the neighbours (Combes et al. 2016). We show that, for a North African individual, the positive sign of financial stability does not compensate for the negative impact of racial origin. In fact, the liklihood of a North African individual receiving a non-negative reply is significantly weaker than that of a French individual who does not mention his profession (gap of 3 percentage points).

Table 6 : Differences in the rate of non-negative replies for the same ads, according to the indication of financial stability and according to racial origin.

6-A. Totality of advertisements

	Gap in rate of non-negative replies (in % pts)	Standard deviation	Student T	Critical probability
Civil servants versus **non-civil servants**				
Total	**+13.4*****	0.012	10.7	0.000
Among French individuals	**+24.2*****	0.023	-10.7	0.000
Among North African individuals	**+2.6****	0.011	-2.3	0.021
French *versus* North African				
Total	**+16,6*****	0.012	13.5	0
Among individuals signaling they are civil servants	**+27.4*****	0.022	12.5	0.000
Among individuals not signalinging they are civil servants	**+5.7*****	0.012	5.0	0.000
Crossed effects				
French individuals not signaling they are civil servants *versus* North African individuals signaling they are civil servants	**3.2*****	0.012	2.7	0.007
French individuals signaling they are civil servants *versus* North African individuals not signaling they are civil servants	**29.9*****	0.022	13.7	0.000

6-B. Ads originating from estate agents

	Gap in rate of non-negative replies (in % pts)	Ecart-type	T de Student	Critical probability
Civil servants *versus* non-civil servants				
Among French individuals	**12.7*****	0.030	4,2	0.000
Among North African individuals	**5.0*****	0.020	2,5	0.011
French origin *versus* North African origin				
Among individuals signaling they are civil servants	**17.3*****	0.030	5,8	0.00
Among individuals not signaling they are civil servants	**9.6*****	0.020	4,8	0.0
Crossed effects				
French individual not signaling he is a civil servant *versus* North African individual signaling he is a civil servant	**4.6*****	0.022	2,1	0.033
French individual signaling he is a civil servant *versus* North African individual not signaling he is a civil servant	**22.3*****	0.029	7,7	0.000

	Gap in rate of non-negative replies (in % pts)	Standard deviation	T de Student	Critical probability
Civi servants *versus* non civil servants				
Among French individuals	**36.5*****	0.032	11,4	0.000
Among North African individuals	**0.0**	0.008	0.0	0.999
French origin *versus* North African origin				
Among individuals signaling they are civil servants	**38.1*****	0.031	12,2	0.000
Among individuals not signaling they are civil servants	**1.6***	0.010	01/06/17	0.100
Crossed effects				
French individual not signaling he is civil servant *versus* North African individual signaling he is a civil servant	**1.6*****	0.008	2	0,046
French individual signaling he is a civil servant *versus* North African individual not signaling he is a civil servant	**38.2*****	0.032	11,8	0.000

In the tables 6-B et 6-C, we present the results depending on the origin of the advertisement, whether it is published by a private individual or by an agency. The indication of financial stability is taken into account by the estate agents for both categories of candidates, more strongly for the French candidates whose chances increase by 12.7 points than for the North African candidates whose chances increase by 5 points. But it is not the case for landlords for whom the indication of stability increases the chances of access to housing only for the French candidate (by 36.5 points). When the advert is published by a private individual, a North African candidate's chances of access to housing do not increase when he indicates that he is a civil servant.

Table 7 is an econometric estimation. It shows that certain characteristics of the ads have a particular effect on the chances of each of the 4 individuals of receiving a non-negative reply from the landlord/agent, all else being equal. First finding, for the four types of fictitious individuals, it can be seen that the use of the Internet site, the Bon Coin strongly reduces the chances of success, compared to other sites. The difference is above 30 percentage points for most of the candidate types. A possible explanation could be found in the greater competition of rented accommodation seekers on this very popular site.

Second finding, this estimation indicates that people looking to rent are penalised when they reply to an ad coming from an estate agency if they do not mention financial stability. When a person wanting to rent does not say he is a civil servant, his chances of success are significantly reduced, by nearly

ten percentage points, when the advert comes from an agengy rather than a private individual. Thus, professional stability seems to be valued more by agencies than by private individuals. This finding is interesting because it does not appear in the interpretation of the raw statistics. In Table 5, the rate of non-negative replies of the candidates who were not civil servants were always higher for ads coming from estate agencies than for those originating from private individuals.Table 7 shows, on the contrary, that the chances of success are weaker when the ad originates from an estate agency, all other things being equal, and in particular with the given internet site, that is to say by cancelling out the Bon Coin effect mentioned in the previous paragraph. That suggests that it is because private individuals use this internet site more often that their replies are less often non-negative. Once this type of effect is neutralised the agengies seem to practice a stronger statistical discrimination than do private individuals, by operating a larger selection of housing candidates from the very first contact and even before looking at an objective candidate file.

There are other characteristics of the accommodation which also have an effect : the price of the rent has a significant effect on the chances of receiving a non-negative reply, but only for the North African individual who does not give any indication of financial stability. Other things being equal, an expensive rent reduces his chance of being able to visit, by 1.6 percentage points. What's more, if the landlord/agent proposes a furnished apartment, the chances of a French individual who explains he is a civil servant, rise by 10 points.

The location of the apartment also has an effect on the discrimination according to racial origin. Whereas the French individual who makes it clear that he is a civil servant has an equal chance of visiting an apartment in whatever district the offer is found, this is not the case for the other candidates seeking to rent. To show this, we took, as reference the four central districts of the Rive Droite (districts situated on the right bank of the river Seine) from the VIIIth to the XIth districts, Located between the Arc de Triomphe and Place de la Nation which show mixed development, but are, globally, below the median of Parisian rents. Compared to this reference, it is more difficult for the French candidates who are not civil servants and for the North African candidates to have access to the disticts where the rents are the highest, from the I[st] to the VIIth and in the XVIth district. It is equally more difficult for them to acceed to districts where the rent is more moderate, such as the those from the XVIIth to the XXth.

Finally, we have seen that if the sending of the set of messages A or B is without a significant effect on the chances of the 4 fictitious individuals, the order in which the messages are sent has an influence on the two individuals claiming to be civil servants. For the North African, it is preferable to have sent the message first, while for the French individual, the third position is more favourable. For the two individuals who make no mention of their profession, the effect of the sending order has little, if any significance. This result is certainly due to the fact that a landlord/agent considers a message conditionally on those he has received before. The chances of success of the North African individual claiming to be a civil servant are higher if the husing provider, at the time he answers, does not know that he is just about to receive a message from a French individual claiming,as well a financial stability.

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Symetrically, when the message of a French individual claiming to be a civil servant is sent after those of the other individuals, the landlord/agent is more better disposed, preferring him to his competitors.

Table7 : Decisive factors in the probability of receiving a non-negative reply according to the type of imaginary individual

	French individual, civil servant		French individual, non civil servant		North African individual, civil servant		North African individual, non civil servant
	Coef	Marg effect	Coef	Marg effect	Coef	Marg effect	Coef
Characteristics of the housing provider							
Private individuals	Ref.		Ref.		Ref.		Ref.
Agencies	-0.237	-0.085	**-0.497****	**-0.096**	-0.339	-0.058	**-0.503****
Origin of advertisement							
Bon coin	**-0,412****	**-0,148**	**-1,729*****	**-0,335**	**-1,794*****	**-0,308**	**-1,687*****
Other	Ref.		Ref.		Ref.		Ref.
Date of advert							
March-April 2016	**0.601*****	**0.216**	**-0.314****	**-0.061**	-0.142	-0.024	0.059
May-july 2016	**Ref.**		**Ref.**		Ref.		Ref.
Price of accommodation m2 (in log)	-0.146	-0.052	-0.584	-0.113	-0.282	-0.048	**-0.816****
Furnished apartment	**0.279****	**0.100**	0.061	0.012	0.183	0.031	0.127
Set sent							
A	0.048	0.017	-0.127	-0.025	-0.198	-0.034	-0.159
B	Ref.		Ref.		Ref.		Ref
Order of sending							
1st	Ref.		Ref.		Ref.		Ref.
2nd	0.228	0.084	0.005	0.001	-0.462*	-0.081	-0.236
3rd	**0.358****	**0.132**	-0.351	-0.064	**-0.395***	**-0.071**	-0.062
4th	-0.246	-0.086	0.057	0.012	-0.141	-0.028	0.033
Location of offers							
1st to 7th and 16th	-0.265	-0.095	**-0.484****	**-0.104**	**-0.676*****	**-0.131**	**-0.439****
17th to 20th	-0.268*	-0.096	**-0.641*****	**-0.132**	**-0.647*****	**-0.126**	**-0.623*****
12th to 15th	0.210	0.077	**-0.653*****	**-0.134**	**-0.901*****	**-0.163**	**-0.821*****
8th to 11th	Ref.		Ref.		Ref.		Ref.
Constant	0.151		0.940**		0.539		0.683

Source : Testing TEPP-CNRS, ADAM, property renting in Paris
Interpretation : Several decisive factors of an ad significantly influence the chances of an fictitious French Individual claiming to be a civil servant of receiving a non-negative reply : Use of le Bon Coin or being interested in a lodging situated on the third floor of a building, or above, reduces his chances. On the other hand, looking for a lodging at the beginning of spring or being interested in a furnished rent increases his chances. The order in which his message is sent, relative to those of the three other fictitious individuals also has an influence on his chances, other things being equal. It is when his message is sent in third position that this individual has the most chance of receiving a non-negative reply.
NB : The absence of signification of the sending of the message set (A or B) shows that the particular content of the message which had been swapped between the fictitious individuals according to the ad is without any significant effect on their chances of success. This result suggests that our messages are thus comparable in both content and form.
The Student statistics et standard deviations have been calculated by the bootstrap method carried out on 10 000 replicates
*** significant at the 1% threshold, ** significant at the 5% threshold, *significant at the 10% threshold.

Conclusion

We propose an evaluation of the discrimination linked to racial origin and access to housing in the private Parisian rental market. We examine in what measure this potential discrimination is linked to a statistical discrimination based on the risk of unpaid rent feared by the housing providers. With this end in view, between the beginning of March and the end of June 2016 we carried out a controlled experiment using a testing method. We created information-request messages from four fictitious individuals being distinguished only by the French or North African sounding of their fist and last names, and the indication, or not, of their civil servant status on the job market. This characteristic, which we gave to one of the French and one of the North African individuals in each pair, is *a priori* a sign of financial stability, and as such, should reduce if not do away with statistial discrimination. We replied to 504 adverts coming from estate agencies or private landlords, systematically sending the messages from the four individuals in random order. Nearly half of the landlords/agents thus tested sent a non-negative reply to at least one of of the fictitious individuals.

On the basis of this information, the following results have appeared. First, in most cases, the landlords/agents do not reply to all the demands they receive, even after the first contact. This is certainly because of the large number of requests they receive. Secondly, we show that, in this context, their selection is not random but corresponds to a discriminatory behavior: an individual has significantly less chance of receiving a non-negative reply if he has a North African sounding first and last name, and this is the case whether the advert originates from a private individual or an estate agency. Thirdly, if from a theoretical point of view, this discrimination can be linked to the supposed risk of unpaid rent because immigrant-born French generally have lower salaries and are more exposed to the risks of unemployment and poverty, our results suggest that these characteristics are not the main explanation of the recorded discrimination. As we have seen, when in a first contact message, an individual explicitly states the he is a civil servant, which reduces *a priori* the risk of financial instability, his chances of receiving a non-negative reply increase much more if he is of French origin. On the other hand, if he is of North African origin, his chances remain inferior to those of a French individual who gives no information on his professional standing. Thus, the positive effect of financial stability does not compensate the negative effect of supposed racial origin. When an advert is published by a private individual, the indication of financial stability does not increase the chances of the North African candidate atall. This result suggests a discrimination linked to preferences, *à la* Becker, as has already been recognised on the job market (Fremigacci *et al.*, 2015).

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