The Impact of Statistical Discrimination in Shared Housing Markets: A Correspondence Study on Ethnic Discrimination in Germany

Dräger, Jascha

The Impact of Statistical Discrimination in Shared Housing Markets

A Correspondence Study on Ethnic Discrimination in Germany

Jascha Dräger
GESIS – Leibniz-Institut für Sozialwissenschaften

Existing research found strong and convincing evidence of ethnic discrimination in housing markets in almost all Western countries (Pager & Shepherd, 2008). This also holds for Germany, where particularly applicants with Turkish or Arabic names face severe discrimination. In large German cities applicants with Turkish names get up to 16 percentage points fewer responses than applicants with German names (Auspurg, Hinz, & Schmid, 2017). However, almost all of these studies look at "traditional" housing markets, where a landlord rents a flat to a family or individuals. Another segment of the housing market is mostly ignored, even though it has become increasingly common: Shared housing. About five million Germans are currently living in shared flats (Institut für Demoskopie Allensbach, 2017, p. 12). Discrimination in this market likely differs from other housing markets because of differences in the recruiting process and differences in the rationales and composition of tenants.

Firstly, shared flats likely differ in the prevalence of ethnic discrimination. Usually, tenants who currently live in a flat, instead of the landlord, are in charge of recruiting new tenants (Diehl, Andorfer, Khoudja, & Krause, 2013). Contrary to renting a flat, new tenants directly affect the life of the other tenants, as they interact on a daily basis. Moreover, while the law in Germany prohibits ethnic discrimination, it is difficult to prove that decisions regarding an individual case were based on prejudices held against ethnic minorities. On the other hand, self-selection into shared flats might reduce discrimination. It can be assumed that people who live in shared flats have on average fewer prejudices against minorities than people living in other housing arrangements. For instance, a large share of university students dwell in shared flats and students report on average fewer prejudices against minorities. Which of these effects dominate remains an empirical question. The few existing studies on the shared housing market found ethnic discrimination in the UK (Carlsson & Eriksson, 2015) and the US (Gaddis & Ghoshal, 2015), but no evidence for discrimination in Germany (Diehl et al., 2013).

Secondly, the selection process and, thus, discrimination in shared flats is likely to differ from other housing markets because of the daily interaction between co-tenants. Ethnic discrimination in housing markets is often explained by so-called statistical discrimination (Phelps, 1972). Statistical discrimination means that landlords have incomplete information about applicants and use perceived group means to approximate missing information. The reason for the occurrence of statistical discrimination in the "traditional" housing market is that landlords assume systematic ethnic differences in applicants' ability to pay the rent and whether they take care of the flat or house (Ahmed, Andersson, & Hammarsted, 2010). However, the concept of statistical discrimination likely differs in shared housing markets. As the two main motives for flat sharing are saving money and socialising with flatmates (Steinführer & Haase, 2009), social considerations about applicants play a bigger role in this market. Factors that are normally interpreted as a taste for discrimination may enter statistical discrimination. Thus, a potential explanation for ethnic discrimination in shared housing markets may be that tenants assume systematic differences in how well they get along (hereafter "sociability") between applicants of different ethnicities.

However, selection criteria for applicants will crucially depend on who is recruiting the new tenant. In most cases, this decision falls on the current tenants of the shared flat and the landlord plays only a minor role. In some cases though, landlords are directly recruiting new tenants for available rooms.

Thus, the goal of this article is threefold. Firstly, I assess whether ethnic discrimination against applicants with Turkish names exists in the market for shared flats in Germany. Secondly, I evaluate whether ethnic discrimination can be explained by statistical discrimination. Thirdly, I analyse differences between different types of recruiters. To do this, I create fake applicants with typical German or Turkish names, apply for rooms offered on a popular website for shared housing (wg-gesucht.de), and compare the responses to these applications. I evaluate statistical discrimination by randomly varying the information given in the application. Applicants give either no specific information about themselves, signal that they have enough financial resources, or signal sociability.

Theory

Research on ethnic discrimination distinguishes two types of discrimination.

Statistical discrimination arises because decision makers have incomplete information about the applicants (e.g., their income) and use perceived group means to replace missing information (Phelps, 1972). Statistical discrimination should disappear when applicants provide relevant information. To test statistical discrimination, researchers have included additional information about the applicant (e.g., employment status or occupation). Although adding positive information increases the proportion of responses and invitations, only some authors find a discrimination reducing effect of adding information (e.g., Bosch, Carnero, & Farré, 2010), while others find similar discrimination (e.g., Ahmed et al., 2010). Taste-based discrimination means that decision-makers prefer an applicant from a specific ethnic group even if applicants are known to be equal with regard to all other characteristics (Becker, 1957).

I assume similar motives for discrimination in shared flats, except for one important difference; The tenants of the shared flat usually screen the applications they received and invite all applicants they like to viewings to get to know them better. Flats with a sufficient number of applications will only invite the subset of applicants whom they like most. Based on the two main motivations to live in a shared flat, saving costs and socialising (Steinführer & Haase, 2009), I assume that tenants base this initial decision on two criteria: *financial considerations* and *social considerations* about the applicants.

Much like landlords in the traditional housing markets, tenants will consider how likely it is that applicants will pay the rent regularly. Furthermore, tenants may consider if applicants will be able to contribute to purchasing and maintaining household appliances. Tenants will not invite applicants if there is the risk that applicants might not be able to do so, because in that case, current tenants may have to compensate for missing payments or search for a new tenant again. Since tenants do not know the financial situation of the applicant, they will look for indicators in the application like labour market status or occupation. If applicants do not provide this information in the application, tenants may either eliminate the applicant from the selection process or look for indirect indicators of financial resources.

At this point, statistical discrimination based on financial considerations can come into play. Tenants may not invite a Turkish applicant because they assume that being of Turkish origin is associated with having fewer financial resources. Thus, without having specific knowledge about the applicants, tenants may assume that the average German applicant will be more likely to pay their rent regularly than a typical Turkish applicant. This process is very similar to statistical discrimination in other housing markets.

However, more important for the choice of a flatmate may be how well tenants get along in everyday life. This includes whether the new tenant will contribute to domestic chores, cares for shared goods, has similar expectations regarding closeness and socialising, and has similar values and common interests (Clark, 2017). Again, tenants will prefer a flatmate they presume has these characteristics and will do a preliminary selection based on the information they get from the applications. Yet, it is less certain what tenants will look for. Applicants may be favoured if they have already lived in a shared flat and give some information about their social life and hobbies. Like with financial considerations, tenants will either not invite an applicant who is not providing enough information or they will look for proxies of sociability.

One of these proxies could be the perceived origin of the applicant. As Germans feel strong cultural and social differences to Turkish immigrants (Blohm & Wasmer, 2008), German tenants may anticipate problems in everyday interactions. For instance, tenants may fear that they can celebrate fewer parties in the flat (Diehl et al., 2013, p. 1684). Under these circumstances, statistical discrimination based on social consideration may happen: Tenants assume that the average German applicant is a better co-tenant than the average Turkish applicant because the average German applicant is more likely to have similar attitudes and expectations regarding the daily flat life. Contrary to statistical discrimination based on financial considerations, statistical discrimination based on social considerations is very specific to the shared flat market.

Even if statistical discrimination does not occur, there may still be taste-based discrimination. Some tenants feel more comfortable in interaction with persons of their own ethnicity and prefer to avoid contact with ethnic minorities.

Thus, there are three potential motives for discrimination in shared flats: 1) Statistical discrimination based on financial considerations; 2) Statistical discrimination based on social considerations; or 3) taste-based discrimination or any combination of these. I expect ethnic discrimination in the shared housing market because there exist some preferences for German co-tenants, even among students (Diehl et al., 2013).

Hypothesis 1: Applicants with Turkish names will receive fewer invitations to viewings than applicants with German names.

However, applicants can reduce discrimination by giving more information about themselves. When the decision-makers have enough reliable information about the applicant's financial credibility or his sociability, they do not have to rely on ethnicity as a proxy for it. Statistical discrimination based on expected differences in financial credibility or sociability will vanish.

Hypothesis 2: Signalling financial credibility will reduce discrimination against applicants with Turkish names.

Hypothesis 3: Signalling sociability will reduce discrimination against applicants with Turkish names.

Depending on the characteristics of the shared flat, the effectivity of these two strategies will vary. Decision-makers weight different signals according to their rationale for renting the flat. When a landlord recruits the new tenant, financial aspects will be more important because landlords will rarely have direct contact with the new tenant and are mostly interested in maximising profit. Thus, landlords will mostly respond to

financial signals. On the other hand, tenants will interact regularly with their new co-tenant and are likely putting more emphasis on expected sociability. Contrary to the analysis of ethnic discrimination and the role of statistical discrimination in it, I cannot manipulate the type of recruiter in the experiment. Thus, the type of recruiter is probably correlated with other differences between flats. Therefore, the analysis of how different types of recruiters react to different signals in the application should be interpreted as explorative.

Methods

Procedure

To test the proposed hypotheses, I conducted a correspondence study where I applied with fake applications for advertisements of shared flats posted on the popular website wg-gesucht.de. I manipulated the ethnicity of applicants as well as information given in the application and evaluated how these factors affected responses.

I manipulated ethnicity by the name of the applicants. The fake applicants are named Dominik Binder, Nico Heller (signalling a German applicant), Murat Arslan, and Mustafa Ceylan (signalling a Turkish applicant; Schmid, 2015, pp. 64–65). For each applicant, I created an account on wg-gesucht.de and an email address. With these accounts I applied for the offered rooms.

I manipulated information by sending applications that contained either no specific information about the applicant or by adding information that should reduce uncertainty about the applicant's financial or social characteristics. The basic message (no specific information) included only a greeting, a statement that the applicant is interested in renting the room, a request for a viewing, and the first name of the applicant. The financial credibility message added a sentence about the occupation of the applicant to the basic applications. Applicants introduced themselves as engineers or architects. The sociability message added to the basic message information about the applicant's leisure activities, a preference for socialising with co-tenants, companionable attributes, and positive experiences in shared flats.

I sent two applications to each flat, one with a Turkish name and one with a German name. The type of information is allowed to differ between applications within flats. To keep participants unaware of the experiment, I sent messages that had slightly different content but signalled similar qualities of the applicant.[1] The two applications to each advertisement were sent with a time difference of 60-120 minutes. I assigned order and version of the messages randomly. The person who offers the flat (hereafter "contact person") received the message via email and responded via email.

Participants

In the experiment, I included all advertisements for vacant rooms in shared flats in Mannheim, Germany that had been uploaded on wg-gesucht.de between March 16th and April 25th, 2018. Advertisements were only included if the standardised applications roughly matched the criteria mentioned in the advertisement. I excluded advertisements if restricted to women, to students, were only rented until a fixed date, did not include a description in German, explicitly demanded applications via phone call, or if the contact person already received an application for another room.

In total, I sent applications to 208 advertisements. For two advertisements, I sent only one application because the advertisement was deactivated before I could send the second application. Mannheim is an interesting city for the experiment because more than 40 % of its inhabitants have a migration background, and nearly 9 % of its inhabitants are of Turkish origin (Stadt Mannheim, 2017). Both values are way above the average of German cities.

Measures

The exact responses to the applications are registered. I coded the responses in four categories: (1) a direct or indirect invitation to a viewing (e.g., by offering or asking for a date for a viewing); (2) a rejection (e.g., "We already found a new tenant"); (3) other responses (e.g., flats asking for more information about the applicant); and (4) no response.

Following Ahmed and colleagues (2010), I collapsed these categories into three binary measures for the analysis. Firstly, I analysed how the manipulated factors affect the probability of getting any response. Secondly, I differentiated between positive responses that permit further contact (invitation, other response) versus those that do not (rejection, no response). Thirdly, I distinguished between invitations and non-invitations. I will primarily focus on invitations because applicants who get other responses particularly ask for further information to reduce uncertainty about the characteristics of applicants.

I infer the role of the contact person from the free self-description in the advertisement and responses of the contact person. Contact persons are categorised as either: (1) tenant, who stays in the flat; (2) tenant, who moves out of the flat; or (3) landlord.

Results

Ethnic Discrimination

Table 1 shows the distribution of the treatment variables and the respective percentages of any responses, positive responses, and invitations at the application level. Of the 414 applications, 57% received some kind of response, 51% received a positive response, and about 36% received an invitation. Yet, there are big differences in the response rates by ethnicity of the applicants. While applicants with German names received some response to 69% of their applications and invitations to 47% of their applications, the respective numbers for applicants with Turkish names are 45% and 26%.

Furthermore, responses vary by the kind of information the applicants gave in the application. Applicants who mentioned a high-paid job (financial information) or mentioned hobbies and companionable attributes (social information) got much more responses and invitations than applicants who gave no specific information. Only 24% of contact persons were landlords, while about 38% of contact persons were tenants who were moving out of the flat and 38% are tenants who were staying in the flat.

Table 1 Descriptive statistics and conditional responses

	Number of Applications	Any Response (in %)	Positive Response (in %)	Invitation (in %)
Ethnicity				
German	206	69.4	66.0	47.1
Turkish	208	45.2	36.5	25.5
Information				
None	138	46.4	41.3	24.6
Financial	138	60.1	52.2	39.1
Social	138	65.2	60.1	44.9
Contact Person				
Tenant (stays)	156	57.7	50.0	34.0
Tenant (moves)	158	53.8	51.2	41.8
Landlord	100	62.0	53.0	31.0
Total	414	57.2	51.2	36.2

Ethnic discrimination is also confirmed in a random-intercept logistic regression which accounts for the clustering of applications in flats and the order and the version of the applications: Applicants with Turkish names get 20 percentage points fewer invitations when compared to the applicants with German names (see Table 2, model 1). This difference is highly significant. Adding social information increases the invitation rate by 21 percentage points while adding financial information increases the invitation rate by 13 percentage points.

The Role of Statistical Discrimination

After having shown that shared flats discriminate against applicants with Turkish names, I evaluated whether additional information reduces discrimination by adding the interaction between ethnicity and type of information to the regression (see model 2). Adding social information increases the proportion of invitations to applicants with German names by 16 percentage points, while adding financial information increases responses and invitations by 4 percentage points. Applicants with Turkish names gain even more from additional information as indicated by the positive estimates for the interaction term between ethnicity and information. The difference in invitation rate by ethnicity is smaller when applicants give additional information. Adding social information reduces discrimination by 11 percentage points (which equals a reduction by one-third compared to the "no information" message) while mentioning a high-paid job reduces discrimination by 20 percentage points (a reduction by two-thirds). Thus, the discrimination reducing effect seems to be bigger for financial than for social information.

However, only the interaction between ethnicity and financial information is statistically significant. Yet, I interpret this finding as (tentative) support for hypotheses two and three because of the substantial effects sizes. Both, adding information about the financial resources and the sociability of the applicant, reduce discrimination against applicants with Turkish names. The sum of the effects of social and financial information implies no discrimination. Thus, statistical discrimination would account for total discrimination.

Statistical Discrimination by Type of Contact Person

Until now, I have only looked at the average discrimination reducing effect of additional information. However, different types of contact persons may differently react to additional information because they have different rationales. The findings for discrimination regarding invitations are summarised in Figure 1. It shows the difference in the proportion of invitations between applicants with Turkish and German names by type of contact person. A value of zero would mean that there is no discrimination. Negative values imply discrimination against applicants with Turkish names, whereas positive values imply discrimination against applicants with German names.

There are substantial differences by type of contact person. Tenants who stay in the shared flat show high levels of discrimination against applicants with Turkish names for all types of information. Adding social information (dark-blue bars) reduces discrimination by about 18 percentage points while adding financial information (light-blue bars) does not affect discrimination for this subgroup. For tenants who move out of the flat, adding financial information reduces discrimination most (20 percentage points). Adding social information slightly reduces discrimination.

Table 2 Random-intercept logistic regression of invitations on treatment characteristics (AMEs, standard errors in parentheses)

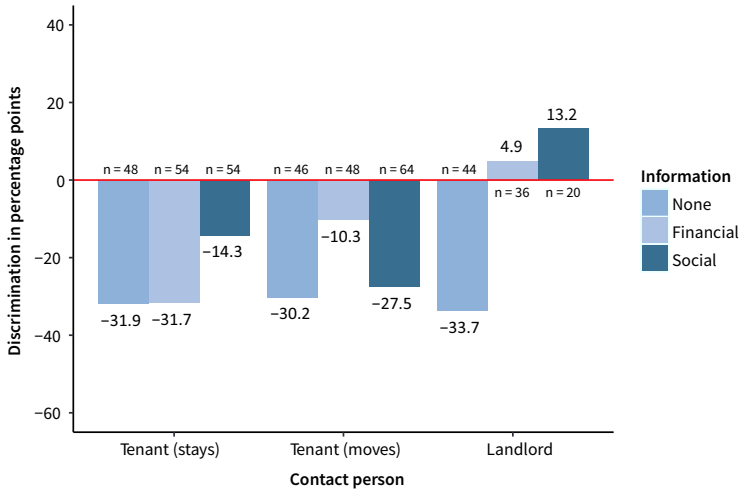
	Model 1	Model 2
Turkish name	-0.203*** (0.031)	-0.311*** (0.071)
Social information	0.206*** (0.048)	0.163** (0.069)
Financial information	0.129*** (0.047)	0.042 (0.068)
Turkish name * social Information	-	0.108 (0.099)
Turkish name * financial Information	-	0.196* (0.108)
Applications	414	414
Flats	208	208

*Further control variables: version and order of applications. Reference categories: German name, no specific information. Significance levels: *** = p<0.01, ** = p<0.05, * = p<0.1*

Therefore, whether the contact person and the applicant will actually live together is an important determinant of (statistical) discrimination. Tenants who stay in the flat are the only group that will live together with the new tenant and, therefore, are more interested in the social characteristics of the applicant. On the other side, tenants who move out will not have much contact with the applicant. Thereby, they may predominantly be interested in avoiding financial problems.

When landlords offer the room, discrimination against applicants with Turkish names vanishes completely if they give any kind of specific information. Landlords even favour applicants with Turkish names under these conditions. However, these results are based on few observations and may have occurred by chance.

Figure 1 Discrimination against applicants with Turkish names by information and type of contact person



Note: Values are estimated with separate random-intercept logistic regression by type of contact person. The numbers next to the red line ('n =') show the number of applications with the respective combination of the type of contact person and information.

Discussion

In this paper, I extend the existing literature by assessing ethnic discrimination in a market for shared housing and by evaluating the role of statistical discrimination. I theorise that ethnic discrimination is partially caused by statistical discrimination regarding financial and social characteristics of applicants. I evaluate this hypothesis by conducting a correspondence study in which I manipulated ethnicity and information given in the application.

The results show unambiguously that many shared flats discriminate against applicants with Turkish names. Applicants with Turkish names get 20 percentage points fewer invitations to viewings than applicants with German names. Therefore, ethnic discrimination in the shared housing market in Mannheim is even more frequent than ethnic discrimination in the "traditional" rental housing market in other German cities, where applicants with Turkish names get between 9 and 16 percentage points fewer responses (Auspurg et al., 2017). A reason for this may be that a bad co-tenant will not only result in monetary costs but also reduce the quality of life in general because of the daily interaction. However, a competing explanation for the high prevalence of discrimination could also be the context of Mannheim, for instance, the high proportion of inhabitants with a migration background.

Additionally, I show that adding information about an applicant's occupation as well as social characteristics reduces discrimination. However, a comparison of these two aspects of statistical discrimination is problematic. Even though I tried to send distinctive signals for financial and social considerations, contact persons may use the occupation to infer information about sociability and vice versa. For instance, mentioning employment also affects social considerations about the applicant, like availability for leisure activities. Future research should include a combination of a financial and a social signal as another treatment to test this possibility.

In a third step, I assessed whether landlords and tenants differently react to additional information. Tenants who stay in the flat only reduce discrimination when getting information regarding sociability. Tenants who move out of the flat only react to the financial signal. Landlords do not discriminate when applicants give any kind of specific information. However, these results are tentative as the number of observations in these subgroups is very small.

To conclude, I will shortly discuss two ideas that may reduce discrimination in shared housing markets. Gaddis and Ghoshal (2015, p. 296) propose that websites could hide names in applications until the contact person gives a response. Alternatively, websites could hide the applicant's name in the heading of the message. This way, contact persons have to read the application and will not delete messages after just reading the heading. Names would be less salient.

Even though more research is needed, the finding that ethnic discrimination in shared housing markets is partially caused by statistical discrimination based on social considerations can help to reduce discrimination. Customers make similar considerations in other sharing markets. Knowledge about the selection criteria will help hosts and applicants to avoid discrimination by countering prejudices through more information. This is especially helpful for second or third generation migrants, who are culturally assimilated to the ethnic majority but are still discriminated against because of prejudices. In a second step, this may reduce prejudices and discrimination through more interethnic contact.

References

Ahmed, A. M., Andersson, L., & Hammarsted, M. (2010). Can Discrimination in the

Housing Market Be Reduced by Increasing the Information about the Applicants? *Land Economics, 86*(1), 79–90. https://doi.org/10.3368/le.86.1.79

Auspurg, K., Hinz, T., & Schmid, L. (2017). Contexts and Conditions of Ethnic Discrimination: Evidence from a Field Experiment in a German Housing Market. *Journal of Housing Economics, 35*, 26–36. https://doi.org/10.1016/j.jhe.2017.01.003

Becker, G. S. (1957). *The Economics of Discrimination*. Chicago: University of Chicago Press.

Blohm, M., & Wasmer, M. (2008). Einstellungen und Kontakte zu Ausländern. In G. Dallinger, R. Koenig, I. Willand, H.-H. Noll, & R. Habich (Eds.), *Datenreport 2008: Ein Sozialbericht für die Bundesrepublik Deutschland* (pp. 208–214). Bonn: Statistisches Bundesamt.

Bosch, M., Carnero, M. A., & Farré, L. (2010). Information and Discrimination in the Rental Housing Market: Evidence from a Field Experiment. *Regional Science and Urban Economics, 40*(1), 11–19. https://doi.org/10.1016/j.regsciurbeco.2009.11.001

Carlsson, M., & Eriksson, S. (2015). Ethnic Discrimination in the London Market for Shared Housing. *Journal of Ethnic and Migration Studies, 41*(8), 1276–1301. https://doi.org/10.1080/1369183X.2014.965670

Clark, V. (2017). Striking the Balance: the Social Dynamics of Shared Household Living among Young Adults in New Zealand (Doctoral dissertation). Wellington. Retrieved February 8, 2020, from Massey University website: https://mro.massey.ac.nz/bitstream/handle/10179/12983/02_whole.pdf?sequence=2&isAllowed=y

Diehl, C., Andorfer, V. A., Khoudja, Y., & Krause, K. (2013). Not In My Kitchen? Ethnic Discrimination and Discrimination Intentions in Shared Housing among University Students in Germany. *Journal of Ethnic and Migration Studies, 39*(10), 1679–1697. https://doi.org/10.1080/1369183X.2013.833705

Gaddis, S. M., & Ghoshal, R. (2015). Arab American Housing Discrimination, Ethnic Competition, and the Contact Hypothesis. *The ANNALS of the American Academy of Political and Social Science, 660*(1), 282–299. https://doi.org/10.1177/0002716215580095

Institut für Demoskopie Allensbach (2017). AWA 2017: Auszug Sozialdemographie, Typologien. Retrieved February 8, 2020, from https://www.ifd-allensbach.de/fileadmin/AWA/AWA2017/Codebuchausschnitte/AWA2017_Codebuch_Sozidemografie_Typologien.pdf

Pager, D., & Shepherd, H. (2008). The Sociology of Discrimination: Racial Discrimination in Employment, Housing, Credit, and Consumer Markets. *Annual Review of Sociology, 34*(1), 181–209. https://doi.org/10.1146/annurev.soc.33.040406.131740

Phelps, E. S. (1972). The Statistical Theory of Racism and Sexism. *American Economic Review, 62*(4), 659–661. Retrieved February 8, 2020, from http://www.jstor.org/stable/1806107

Schmid, L. (2015). *Ethnische Diskriminierung bei der Wohnungssuche. Feldexperimente in sechs deutschen Großstädten* (Doctoral dissertation). Retrieved February 8, 2020, from University of Konstanz website: https://kops.uni-konstanz.de/bitstream/handle/123456789/31349/Schmid_0-295831.pdf?sequence=3

Stadt Mannheim (2017). Einwohner mit Migrationshintergrund. Retrieved February 8, 2020, from https://www.mannheim.de/de/stadt-gestalten/daten-und-fakten/bevoelkerung/einwohner-mit-migrationshintergrund

Steinführer, A., & Haase, A. (2009). Flexible–inflexible: Socio-demographic, Spatial and Temporal Dimensions of Flat Sharing in Leipzig (Germany). *GeoJournal, 74*(6), 567–587. https://doi.org/10.1007/S10708-008-9248-3

1 The exact wording of the applications and further statistics are available on request.

jascha.draeger@gesis.org

doi: 10.15464/isi.64.2020.16-21

Herausgeber

GESIS –
Leibniz-Institut für Sozialwissenschaften
Wissenstransfer | Publikationen
Postfach 12 21 55
D-68072 Mannheim

Redaktion

Dr. Stefan Weick

Telefon 0621 / 12 46-0
www.gesis.org/isi

Gestaltung

Bettina Zacharias

GESIS ist Mitglied der Leibniz-Gemeinschaft

ISSN 0935-218X (Print)
ISSN 2199-9082 (Online)