Community multiculturalism and self-reported immigrant crime: Testing three theoretical mechanisms

Arjen Leerkes, Tineke Fokkema and Jonathan Bening

Published 8 December 2020
Community multiculturalism and self-reported immigrant crime: testing three theoretical mechanisms

Prof. dr. Arjen Leerkes, Maastricht University & Erasmus University Rotterdam (arjen.leerkes@maastrichtuniversity.nl)

Prof. dr. Tineke Fokkema, Netherlands Interdisciplinary Demographic Institute (NIDI), Erasmus University Rotterdam & University of Groningen (fokkema@nidi.nl)

Jonathan Bening, MSc (jonathan.bening@gmail.com)

Abstract

There is considerable contextual variation in crime among immigrants and their native-born descendants, and this study aims to understand that variation better. It examines whether municipal variation in self-reported crimes among Turkish- and Moroccan-Dutch men living in 35 representative Dutch cities (N=911), including the four largest cities, is associated with municipal variation in multicultural attitudes, or ‘community multiculturalism’, among the native-Dutch (N=2,556). We propose, and test, a mechanism-based theoretical model that links Berry’s acculturation theory to general strain theory, social bonding theory, and collective efficacy theory. Evidence is found for a protective effect of community multiculturalism for immigrant crime, which is mostly explained by collective efficacy theory with somewhat weaker evidence for general strain theory and social bonding theory. We discuss implications for the discussion on the (dis)advantages of multiculturalism, and suggest various avenues for further inquiry into immigrants’ ‘context of reception’, and how the acculturation attitudes among established groups affect social cohesion outcomes in multi-ethnic societies.

Keywords: acculturation theory, immigrant crime, context of reception, local-level variation

JEL Classification: K13, I30, Y80
Community multiculturalism and self-reported immigrant crime: testing three theoretical mechanisms

Introduction

Immigrants’ context of reception – the economic, legal and social conditions in the country of immigration (Portes and Rumbaut (2019) – codetermines immigrant incorporation patterns, and related outcomes such as crime. That context also involves attitudes and policies on migration-related diversity, and there is now an especially rich academic and public debate on the (dis)advantages of multiculturalism – typically understood as a national policy approach. Bloemraad and Wright (2104), for instance, highlight possible advantages of multiculturalism and report that immigrants report less discrimination and higher level of social and institutional trust under multiculturalism. Others dispute that multiculturalism is necessarily advantageous, and argue that it may unintendedly hamper immigrants’ positioning on the labour market to the extent that it puts less pressure on newcomers to learn the destination country’s formal language(s) (cf. Koopmans, 2010, 2013). In Berry’s (2011, 2017) acculturation theory, which informed our analyses, multiculturalism does not necessarily pertain to policies (also see Bourhis et al., 1997); it is an ‘acculturation orientation’ or ideology in the receiving society that – through policies or otherwise – seeks to facilitate immigrants’ and ethnic minorities’ equitable participation, while allowing these groups to maintain heritage cultures to a notable extent.¹

Internationally comparative studies can collect no more than suggestive evidence on the (dis)advantages of multiculturalism, as it cannot identify relevant confounders easily: if international variations in a given outcome are correlated with differences in integration policies, it is typically hard, if not impossible, to assess whether the relationship is caused by these policies or, for instance, reflects international differences in the ethnic composition of
immigrant populations, labour markets, different admission policies, and so forth. Such methodological limitations are among the reasons why scholars have increasingly become interested in *intra-national variation* in the context of reception (Bean *et al*., 2012; Glick Schiller and Çağlar, 2009).

One intriguing contextual difference, both internationally and intra-nationally, pertains to what could be called ‘immigrant (origin) crime’ (for reasons of brevity shortened to ‘immigrant crime’ in this article): crime among foreign-born residents (‘first-generation immigrants’) and their native-born children (conventionally labelled ‘second-generation immigrants’). While both generations tend to be overrepresented among suspected and convicted offenders in Europe – in some countries more than in others – they are not, or considerably less, overrepresented in traditional immigration countries, including the US, Canada and Australia (Bersani, 2014; Bucerius and Tonry, 2014; Kubrin, Kim and Hipp, 2019). Furthermore, there is relevant *local-level variation* (Piopiunik and Ruhose, 2017; Van San and Leerkes, 2001). In the Netherlands, for example, the degree of overrepresentation of residents with a first- or second-generation Moroccan background among local crime suspects differs between municipalities from 1.3 to 4.2, and is generally lower in cities than in smaller towns (De Boom *et al*., 2013).

We carried out two interrelated research projects with a view to better understanding contextual variation in immigrant crime and its relation to multiculturalism. Both projects focus on local-level *multicultural attitudes*, or what we will call ‘community multiculturalism’ (hereafter: ‘CM’), rather than *multicultural policies*, which are typically determined at the national level. In discussions of national policy models, local-level variation in such attitudes is usually overlooked, and the importance of attitudes is often neglected altogether. There is nonetheless considerable local-level variation in acculturation attitudes, even in small countries like the Netherlands, our focal country. There is substantial variation between cities and more
rural environments (Maxwell, 2019, Schwarz et al., 2014) but also among municipalities with comparable demographics (Martínez-Ariño et al., 2019).

The first research project examined how local-level variation in CM among native-Dutch residents living in the four largest cities and 31 other representative municipalities was associated with differences in the number of registered suspected crimes among all male inhabitants (ages 12–65) with a first- or second-generation Turkish or Moroccan background living in these municipalities in 2010. This was done by adding aggregated survey information as a municipal-level variable to a population database with micro-level police data and other administrative information on all registered residents. CM was measured using Wave 1 of the Netherlands Longitudinal Survey (NELLS), a large sociological survey on the living situation of the Dutch population, carried out in the 2008–2010 period. It was found to be associated with a lower number of crimes suspects in each of the two immigrant groups, especially among first-generation immigrants (no significant effects were found for second-generation immigrants with a Moroccan background).

The results of the second research project are reported here. For that project, we similarly used the NELLS to measure CM, but also used it to measure criminal behaviour, as the questionnaire included various items on self-reported criminal offending. Furthermore, by limiting the analysis to the NELLS, we could conduct additional, more direct tests of the three main causal mechanisms that, in our view, promote a negative relationship between CM and immigrant crime, namely: (1) strain reduction (cf. Agnew, 2005, 2016), (2) facilitation of individual-level social bonds (cf. Hirschi, 1969), and (3) facilitation of the extent to which the immigrant group experiences, and is involved in, collective efficacy (cf. Sampson and Wilson, 2012).

Triangulating police data and self-reported offending data is crucial, as both are imperfect indicators of criminal behaviour. Police suspect data evidently measures criminal behaviour,
but also capture residents’ reporting behaviour and law enforcement practices (cf. Newburn, 2003). Self-reported offending data, in turn, is subject to underreporting, and is limited to lighter forms of crime among a sample of people who are willing and able to participate in surveys.

A main strength of the NELLS data is that it can rule out two alternative interpretations of the observed negative association between CM and crime found in the first project, namely (1) that it merely points at local variation in residents’ reporting behaviour and law enforcement (e.g. that a lower punitiveness towards immigrants under CM leads to less formal punishment), and (2) that the association is merely due to reverse causality as immigrant crime may decrease CM. If an association between CM and self-reported crime can be demonstrated, the first of the two alternative interpretations apparently cannot (fully) account for the association. If we can empirically demonstrate paths leading from CM to immigrant crime, both alternative interpretations lose plausibility. Data on self-reported offending is generally considered suitable for such theory testing (cf. Junger-Tas and Marshall, 1999). We thus ask: *Is there a negative relationship between CM and the degree of self-reported offending among first- and second-generation immigrant men with a Turkish or Moroccan background, and, if so, can that relationship be explained by municipal differences in the degree to which the men experience strain, social bonds and community collective efficacy?*

The analysis pertains to the same municipalities as the in first project, similarly focuses on men – as men commit most crimes – and similarly focuses on crime among residents with Turkish or Moroccan migration background. The latter focus is partially a consequence of the NELLS, which was designed to also be representative for the two immigrant groups – the two largest ethnic minorities in the Netherlands – not for other immigrant groups. As a result, a considerable number of men with a Turkish or Moroccan background (n=911) answered
questions that were used to answer the research question. About two thirds of these men \((n = 602)\) are first-generation immigrants.

The two immigrant groups also are uniquely suitable to investigate the relationship between CM and immigrant crime. The initial immigrants migrated to municipalities scattered across the country under the influence of the recruitment practices for ‘guest workers’ in the 1960s and 70s (Stearns, Castles and Kosack, 1974), from where they initiated family reunification and formation processes (Leerkes & Kulu-Glasgow, 2011). Both immigrant groups thus had limited influence on their local context of reception, arguably giving their spatial distribution quasi-experimental properties.

**Theory and hypotheses**

**Community multiculturalism**

In Berry’s (2011, 2017) acculturation theory, which informed the analyses, multiculturalism constitutes one of four ideal-typical ‘acculturation orientations of the dominant group’. These orientations result from two analytical dimensions being juxtaposed: (1) the degree to which preservation of the immigrants’ heritage culture is allowed/promoted and (2) the degree to which immigrants’ participation in the host societies’ institutions is allowed/promoted. A dominant group with a *multicultural* orientation tolerates that immigrants and their native-born descendants preserve the heritage culture to a considerable extent, while inviting them to socially participate on an equal basis. The other orientations are ‘melting pot’ or *assimilationism* (participation on an equal basis is allowed provided that cultural differences have been diminished, which typically requires adaptation on the part of the immigrant group), *segregationalism* (the heritage culture may be maintained, but equal participation is not welcomed) and *exclusionism* (the heritage culture may not be maintained and equal participation is discouraged).
In Berry’s model, *multiculturalism* fosters *integration*, which means that migrants are involved in the heritage culture to a considerable extent while also having obtained a notable degree of social positioning in the destination country as indicated, for example, by their position on the labour market, educational attainment, and inclusion in the polity via citizenship acquisition. *Assimilationism, segregationalism,* and *exclusionism* are respectively assumed to promote *assimilation, separation* and *marginalization*.

Immigrants’ acculturation outcomes are well-researched, but there is little empirical research on Berry’s conceptualization of the dominant group’s acculturation orientation. While research confirms that migrants’ preferences and outcomes are indeed bi-dimensional (Berry, 2017), there is some evidence that the dominant group’s orientation, especially when attitudes rather than formal policies are considered, actually tends toward one-dimensionality. The reason may be that *assimilationism, segregationalism* and *exclusionism* all share the component of exclusion of migration-relation diversity in some form (Bourhis, 2017; Bourhis et al., 1997). In our first study, we found that municipal variation in the Netherlands in CM indeed varies ‘diagonally’ in Berry’s two-by-two model, from *exclusionism* to *multiculturalism*. In what follows, we therefore contrast CM and exclusionism when discussing the influence of the dominant’s group acculturation orientation on immigrant crime. The one-dimensionality of these acculturation orientations in the Netherlands could imply that we should perhaps use the term ‘community inclusionism’ (also see Bean et al., 2012) rather than CM. We nonetheless stick to Berry’s terminology, as future research may identify the other acculturation attitudes in other contexts.

**Relation to crime**

In what follows, we offer a multicausal, mechanism-based explanation of the influence of CM on crime, which combines insights from general strain theory, social bonding theory, and
collective efficacy theory. While these theories emerged in different schools of thought (i.e. the functionalist and rational choice paradigms), we see them as complementary rather than contradictory. The three theories all lead us to expect a negative relationship between CM and immigrant crime ($H1$) – especially when relatively unorganized forms of street crime are considered which both predominate in the NELLS survey and in police data.

A leading theory in explaining crime is the general strain theory (Agnew, 2005, 2016). Based on Merton’s (1938) classical anomie theory, it suggests that people are motivated to commit crime because of stressors and negative emotions. To counterbalance or correct these stressors and emotions, people engage in corrective action, including crime. Anger in particular, is conducive to motivate criminal behaviour as it decreases concerns regarding the consequences of one’s actions. Strains do not automatically result in crime, however. The stronger a person’s self-esteem, the higher the probability that possible strains results in other forms of coping than crime (Agnew, 2016).

Three main types of strain exists (Agnew, 2016): the inability to achieve valued goals, the loss of a positively valued stimuli, and the presentation of a negative stimuli. Several characteristics of these strains determine their criminogenic potential. The more severe, frequent and lasting a strain, the more likely it is to motivate anger and crime. For people with a migration background, a good example of such a strain is perceived ethnic discrimination (Leerkes, Martinez and Groeneveld, 2019; Verkuyten, Thijs and Gharaei, 2019), as it will be perceived as painful, unjustified and largely out of control.

Another example is having a relatively low socio-economic status (SES), especially when the immigrant group is relatively well-established, as is the case for the two focal immigrant groups. Such immigrant groups increasingly compare themselves with reference groups in the country of immigration, not just the country of origin. With a lower education and income it is harder to access primary labour markets and to buy valued products or services, and criminal
activities may partially be aimed at overcoming such constraints and/or to cope with the anger they may produce (Agnew, 2016).

While perceived discrimination may paradoxically increase when migrants become more oriented to the destination country, there is evidence that ‘integrated’ migrants, in Berry’s sense, are less likely to perceive discrimination when biculturalism is socially accepted, and generally maintain higher levels of self-esteem (Berry and Sabatier, 2010). Multiculturalism is assumed to facilitate such integration, and Bloemraad and Wright (2014) indeed find that immigrants perceive less discrimination in countries with multicultural policies. There is more disagreement on the effects of multiculturalism on SES. As was mentioned in the introduction, Koopmans (2010) contends that it may slow down immigrants’ social positioning, but Bloemraad and Wright (2014) do not find that multicultural policies are associated with worse outcomes. A study that compared European cities – a study that seems to have the most direct relevance for the present study – indicates that local-level inclusive attitudes are associated with better socio-economic outcomes (Bean et al., 2012).

Most studies thus suggest that CM weakens first- and second-generation immigrants’ exposure to strains and improves migrants’ ability to deal with possible strains through coping mechanisms other than crime. Consequently, we hypothesize that the association between CM and immigrant crimes decreases after controlling perceived ethnic discrimination and SES ($H2$).

Hirschi’s (1969) social control theory argues that social bonds help individuals in restraining themselves from committing crimes: it contends that a person’s desire and/or opportunity to commit crimes is reduced in case of a strong attachment to family, neighbours and institutions (‘attachment’), a strong dedication to conventional norms and values (‘commitment’), a strong participation in conventional activities (‘involvement’), and/or a strong belief in conventional norms (‘belief’).
Different forms of social and institutional trust are indicators of these bonds, as such bonds both require and produce trust. *Particularized trust* pertains to quality of the attachment with known people, such as family, friends and acquaintances. *Generalized trust* pertains to the amount of trust in members of the society in general, and is associated with morality and sociability (‘commitment’ and ‘belief’). *Institutional trust* pertains to a person’s confidence in institutions like the police and justice system and gives an idea of a person’s belief in, and commitment to, conventional norms, laws and legal procedures. An additional indicator of attachment, commitment and belief is *religiousness*. It offers individuals with a clear normative orientation, which typically reduces crime (cf. Baier and Wright, 2001).

Berry’s acculturation theory argues that CM facilitates such trust and religiosity by allowing immigrants to develop bonds to both the receiving society and the immigrant group’s culture and institutions. Compared to exclusionism, it is more likely to grant immigrants opportunities to take on equitable roles (e.g. joining the police), which should foster institutional and generalized trust. ‘Integrated’ migrants also typically have better intra- and interethnic contacts (Berry, 2006), and if multiculturalism indeed facilitates such ties, as Berry’s acculturation theory contends, then CM should be associated with higher levels of particularized trust. The literature is somewhat ambivalent about the CM–religiosity relationship. Berry’s acculturation theory implies a positive relation between CM and religiousness as it facilitates immigrant groups in maintaining heritage cultures without fearing repercussions, also in relation to religion (Berry, 2006). However, some research suggests that exclusionism may also promote religiosity, especially in the second generation (Fleischmann and Phalet, 2012).

The literature thus leads us to expect a positive relationship between CM and social bonds as indicated by social and institutional trust and, possibly less so, religiosity. We thus hypothesize that the negative association between CM and immigrant crime decreases after
controlling the men’s social bonds in the form of particularized trust, generalized trust, institutional trust, and religiosity ($H_3$).

*Collective efficacy theory* (Sampson and Wilson, 2012) argues that communities can reduce crime, and address other shared interests, by exerting external social control. While social bonding theory mostly looks at internal social control by highlighting social ties *at the individual level* (e.g. whether a person has stronger or weaker attachments), collective efficacy theory focuses on external social control *at the community level*. Here, a collectively efficacious community is also expected to socially control community members who would be inclined to commit crimes, for example because they experience strain or have weaker internalized controls.

The individual-level ties that CM facilitates can thus be expected to also have effects *in the aggregate* at the community level. For example, a community’s willingness and ability to intervene in shared problems requires that a sufficient number of community members trust each other and are willing and able to socialize with neighbours, for example. Part of the effectiveness of communities in solving shared public safety issues also depends on the community’s willingness and ability to cooperate with the police, thus synthesizing informal and formal social control. Religious communities, too, are generally found to also exert such external social control (Brauer, Tittle and Antonaccio, 2013). Higher levels of trust and religiousness under CM *at the individual level* can thus similarly be expected to also have aggregated effects at the *community level*. We thus hypothesize that the association between CM and immigrant crime decreases after controlling the local immigrant group’s perception of neighbourhood efficacy, its neighbourhood contacts, its institutional trust, and its religiousness (*$H_4$*).

**Data and methodology**
Data came from the Netherlands Longitudinal Lifecourse Study (NELLS) Wave 1, a large-scale sociological study on the opinions and living situation of people living in the Netherlands (Tolsma et al., 2013). Basic demographic and socio-economic variables, such as age, household structure and education, were measured using face-to-face interviews, which were followed by a self-completion questionnaire. Most information used here, including the information on criminal offending, is from the self-completion questionnaires, which are less sensitive to social desirability bias than interviews.

The NELLS is representative for the Dutch population \((N=5,312)\), including the Turkish- and Moroccan-Dutch minorities, which were oversampled. The survey was carried out between December 2008 and May 2010 and was collected in the four largest cities and 31 other, randomly selected, Dutch municipalities. About half of the Turkish- and Moroccan-Dutch minorities are residing in these 35 municipalities. The NELLS researchers enriched the data by adding information from Statistics Netherlands on certain neighbourhood and municipality characteristics, including level of urbanization (municipality) and ethnic composition (neighbourhood).

We made several choices when deciding on our analytical sample. CM was measured using the native-Dutch respondents only \((n=2,556)\), while the regression analysis only pertain to male participants with a first- or second-generation Turkish or Moroccan migration background \((n=1,107)\). In order to deal with missing data, listwise deletion was used. Multiple imputation was not feasible as most missing data pertained to the dependent variable – criminal offending. We deleted all cases that had missing data on any of the variables included in the regression models, but respondents who did not provide information about their income were kept in the analysis by creating a dummy ‘income missing’. Our final analytical sample consisted of 911 observations across all models. These men were living in 138 different neighbourhoods, as defined by Statistics Netherlands.
Dependent variable

Five items measure criminal behaviour. The participants were asked if, in the last 12 months, they had been involved in the following activities: ‘stolen something from a person or a shop’, ‘damaged or demolished property of others’, ‘carried a weapon (knife, gun)’, ‘threatened someone’, and ‘kicked or punched someone or participated in a fight’. Respondents could answer on a four-point Likert-scale (‘never’, ‘once’, ‘two–three times’ and ‘four times or more’). Participants could also answer, ‘I don’t want to say’, which was coded as missing. We calculated the sum of reported crimes for each participant with the category ‘never’ coded as 0, the category ‘once’ as 1, ‘two–three times’ as 2.5, and ‘four times or more’ counting as 4.

Independent variables

There is considerable debate about the definition and operationalization of ‘community’ (Shearer et al., 2007), and we eventually used measures at both the municipal and neighbourhood level, basing our decisions on the level used on both substantive arguments (e.g. ‘will this aspect of collective efficacy mostly operate at the municipal level or at the neighbourhood level?’) and statistical arguments (‘which operationalization leads to the best model fit?’). The dominant group’s acculturation orientation was operationalized by averaging relevant scores of all inhabitants with a native-Dutch background (operationalized as having two parents born in the Netherlands) by municipality. We had several discussions on Berry’s notion of the ‘dominant group’: there is considerable ethnic diversity in the Netherlands, especially in cities, and ‘established’ first- and second-generation immigrants (e.g. Dutch citizens) should perhaps also be included. We decided to only use the scores of respondents with two Netherlands-born parents as Berry describes the dominant group in ethnic rather than
civic terms, and we wanted to remain close to his acculturation theory. The municipal level is the most appropriate level for this community measure, as most people spend a considerable amount of time outside of their direct neighbourhood, while relevant policy decisions are also taken at the municipal level – e.g. whether institutions that matter to the immigrant community are facilitated or not.

The following items measured tolerance: (1) It would be better for our country if all inhabitants had the same customs and traditions, (2) It would be better for our country if different beliefs exist, (3) It would be better for our country if all inhabitants spoke the same language, and (4) Immigration to our country has to stop to reduce tensions. These items were measured on five-point Likert scales ranging from 1 ‘disagree strongly’ to 5 ‘agree strongly’. After reverse coding some of the items, we obtained a scale with a fair internal consistency (\(\alpha = .65\)). Reliability could not be improved by dropping items.

To measure perceived social distance to Turkish- and Moroccan-Dutch communities two similar sets of three items were used. The items asked: ‘I have a problem with someone of Turkish/Moroccan origin (1) becoming my boss, (2) moving next door, and (3) marrying my son/daughter’. The questions were measured on three-point scales: 1 ‘no problem at all’, 2 ‘not a problem’, and 3 ‘would be a problem’. The Cronbach’s alpha for perceived social distance indicated excellent internal consistency (\(\alpha = .93\)).

The aggregated scores on tolerance correlated negatively and strongly with aggregated social distance \((r = -0.78)\), and the items loaded strongly on one underlying construct. We therefore decided to calculate a single score on a 1–3 scale, which we called community multiculturalism (CM), by averaging the scores for tolerance, which we recoded to a 1–3 scale, and the inverted scores for perceived social distance. In Berry’s model, variation in CM thus runs ‘diagonally’ from exclusionism to multiculturalism. Segregationalism and assimilationism cannot be separately identified at the municipal level in the Netherlands.
To operationalize strain theory, we used *perceived ethnic discrimination* and *SES*. *Perceived ethnic discrimination* was operationalized by averaging five items: ‘Did you in any of the following situations experience that you were discriminated on the basis of your ethnic background (1) during a job application, (2) at work, (3) at school, (4) on the street, in stores, or in public transport, (5) in associations or sports clubs, (6) during nightlife or discotheques?’ The three answer options were 0 ‘no, never’, 1 ‘yes, once in a while’ and 2 ‘yes, quite often’. The Cronbach’s alpha of these items indicated a very good internal consistency (α = .82). Participants’ *SES* was assessed using *monthly income* and *educational attainment*. Monthly income of the respondent, and his possible partner, was classified into ‘low’ (net monthly income up to €1,499), ‘middle’ (€1500–€2,499) and ‘high’ (€2500 or more). For the 91 participants who did not report income we created a dummy called ‘missing income’. Highest educational attainment (in the Netherlands or elsewhere) was classified into: ‘no formal education or primary education’, ‘secondary education’ (high school, lower professional education), and ‘tertiary education’ (higher professional education, university degrees). When participants were still attending school their unfinished level of education was used.

Social bonding theory was operationalized using four individual-level variables: *particularized trust*, *generalized trust*, *institutional trust* and *religiosity*. *Particularized trust* was measured with ‘I know many people I can trust completely’ with answers ranging from 1 ‘totally applicable’ to 4 ‘totally not applicable’. *Generalized trust* was based on ‘Nowadays you really do not know who you can trust’, measured on a Likert-scale ranging from 1 ‘completely agree’ to 5 ‘completely disagree’. *Institutional trust* was based on ‘Please indicate how much trust you have in the police and justice’, with four answering options ranging from ‘a lot’ to ‘very little’. *Religiosity* was based on ‘How important is religion to you personally?’ with answering options ranging from 1 ‘very important’ to 5 ‘not important at all’. Some items were reverse coded, so that higher scores indicated higher trust and religiousness.
Collective efficacy theory was operationalized using four indicators, two at the neighbourhood level and two at the municipal level. At the neighbourhood level, we used the local immigrant groups’ perceived neighbourhood collective efficacy, which is average score of all Turkish- and Moroccan-Dutch respondents, including female respondents, living in a given neighbourhood on six 4-point items, each ranging from 0 to 3, namely people in this neighbourhood: (1) ‘greet each other’, (2) ‘trust each other’, (3) ‘go along well’, (4) ‘know each other’, (5) ‘like to help each other’ and (6) ‘would say something against youth causing nuisance’ ($\alpha = 0.84$). As an additional neighbourhood indicator, we used the local immigrant community’s degree of neighbourhood contact, which is average score of all Turkish- and Moroccan-Dutch respondents living in a given neighbourhood on a seven-point scale from never (0) to daily (6). At the municipal level, we used the local immigrant community’s trust in the police and justice system and its religiousness. These measures were obtained by averaging the individual scores of all residents of Turkish or Moroccan origin by municipality respectively. We also experimented with measures that were based on the scores of all local respondents (including those of native-Dutch origin), which led to comparable findings, but a somewhat worse model fit. Immigrant crime thus seems to be controlled less by general local levels of local collective efficacy than by forms of collective efficacy with a considerable involvement of the local immigrant group, which partially seem to transcend the immediate neighbourhood.\textsuperscript{5}
Confounders

As individual-level controls we used age (and its square divided by one-hundred to take the age-crime curve into account (Hirschi and Gottfredson, 2017)), immigrant generation, national origin and household composition. Immigrant generation is categorized into two groups. First-generation immigrants were born in either Turkey or Morocco; second-generation immigrants were born in the Netherlands and had at least one parent born in Turkey or Morocco. Immigrants are often found to have a lower prevalence of criminal behaviour than their native-born children (Bersani, 2014), although only limited generational differences in self-reported offending have been found (Leerkes et al., 2019). We controlled national origin to account for possible ethnic differences in offending; the Turkish-Dutch are typically found to have somewhat lower crime rates than the Moroccan-Dutch, although ethnic differences in self-reported offending are small (Leerkes et al., 2019). These ethnic differences are usually attributed to differences in intra-ethnic social cohesion (cf. Bovenkerk and Fokkema, 2015). Three dummies measure household composition: ‘living with partner/child’, ‘living with parents’ and ‘other’. Household composition is a potential confounder since living with a spouse or having children is generally considered to prevent crime (Glowacz and Born, 2015).

At the municipality level we controlled degree of urbanization, which is taken from Statistics Netherlands and has four categories: ‘small village’, ‘big village’, ‘small city’ and ‘big city’. Criminal behaviour is generally more prevalent in big cities (Glaeser and Sacerdote, 1999), possibly suppressing the effects of CM, which also has a positive relationship with urbanization. We also controlled the percentage of co-ethnics at both the municipal and neighbourhood level, using Statistics Netherlands data. The percentage of co-ethnic is defined as the number of first- and second-generation immigrants of Turkish (for ‘Turkish’ respondents) or Moroccan (for ‘Moroccan’ respondents) origin as a percentage of the number of residents in the municipality and neighbourhood respectively. The latter controls we used in
order to rule out the possibility that CM-related differences in social bonds merely reflect municipal or neighbourhood differences in the opportunity and/or need to interact with co-ethnics.6

Analytical strategy

The hypotheses were tested in Stata 16 using weighted negative binomial regression with robust standard errors allowing for clustering of observations at the municipal level. Robust regression was preferred to multilevel regression, because the NELLS includes individual-level weights only, making proper weighted multilevel analyses difficult (highly similar results were obtained using unweighted multilevel analysis). Negative binomial regression was used because the dependent variable – the amount of self-reported crimes – was highly skewed (cf. Land, McCall and Nagin, 1996).

We estimated five models. The first specified the relation between CM and criminal behaviour, while controlling the demographic variables mentioned. It tested $H1$ and served as a benchmark model. The strain indicators were added to Model 1 in Model 2, the social bonds indicators were added in Model 3, and collective efficacy measures were added in Model 4. Finally, we estimated a fifth model (M5) combining all the variables in M1–M4. Hypothesis 2–4 were tested by comparing the more complex models to the benchmark model (e.g. we tested $H2$ by comparing the coefficient of CM in Model 2 and Model 5 to the coefficient of CM in Model 1). Postestimation tests did not indicate multicollinearity issues for the variables of interest.7 As an additional control, Model 1 and Model 2 (without perceived discrimination) were also estimated for native-Dutch men and found no effect of CM among these men (not reported). Table 1 shows the means, standard deviations and the level of measurement per variable.

[Insert Table 1 here]
Results

Table 2 presents the regression results. In Model 1, CM has a negative association with the number of self-reported crimes. A one-unit increase in CM decreases the difference in logs of the expected number of criminal offences by 12.33 \( (p < .001) \). We thus accept \( H1 \) that CM is associated with lower levels of immigrant crime. The effect is quite strong: an increase in CM with one standard deviation reduces the incidence rate ratio by 0.29 (not shown).

Model 2 adds perceived ethnic discrimination and SES, leading the coefficient of CM to go down from -12.33 to -10.94 \( (p < .01) \), a decrease of 11.3%. A notable part of the association between CM and criminal behaviour is thus explained by differences in strain, leading us to accept \( H2 \). Additional analyses (not shown) indicate that perceived discrimination, educational attainment and income all contribute to the decrease. We also find that a low income has a significantly weaker effect on crime when CM increases, which could indicate lower vulnerability to certain strains under CM.

Model 3 adds the individual-level indicators of social bonds, leading the coefficient of CM to go down from -12.33 to -11.00 \( (p < .001) \). That decrease of 10.7% suggests that the negative association between CM and crime is partly explained by individual-level social bonds, leading us to accept \( H3 \). Only particularized trust and religiousness (significant in Model 5) turn out to contribute significantly and independently to the decrease. Individual-level generalized trust and institutional trust are positively associated with CM, but do not predict immigrant crime.
The collective efficacy indicators are added in Model 4, leading the coefficient of CM to decrease from -12.33 to -7.02 ($p < .05$), a decrease of 41.1%. That observation leads us to accept $H4$. All four indicators of collective efficacy independently contribute to the decrease.

When testing all theories simultaneously in one comprehensive model, the coefficient of CM is no longer significant at conventional levels of significance ($b = -2.97$, $p = .06$), suggesting that the mechanisms of strain, social bonds and collective efficacy indeed explain (most of the) the negative association between CM and immigrant crime.

**Discussion**

Immigrants’ context of reception codetermines immigrant incorporation patterns, and related outcomes such as crime. Departing from acculturation theory, we conducted two interrelated research projects. The projects aim to (1) contribute to the discussion on the (dis)advantages of multiculturalism for immigrant incorporation and related outcomes, (2) help solve the puzzle of the contextual variation in immigrant crime through linking Berry’s acculturation theory with relevant sociological-criminological theory, and (3) show the usefulness of going beyond the country-level and formal policy models when studying immigrants’ context of reception and its influences. The projects focused on municipal variation in CM in the Netherlands and municipal variation in criminal behaviour among men with a first- or second-generation Turkish or Moroccan background. In the first project, we focused on police data, and conducted indirect tests of mechanisms that, in our view, promote a negative relationship between CM and immigrant crime. The second project, which is reported here, focused on self-reported offending and involved more direct tests.

We find significant negative effects of CM on immigrant crime in both projects, and also find direct and more indirect evidence that three main mechanisms cause these effects: CM reduces crime (1) by reducing strains in the immigrant group, (2) by strengthening social bonds
in the immigrant group, including intra-ethnic bonds, and (3) by promoting the immigrant groups’ involvement in collective efficacy.

All these observations indicate that CM reduces immigrant crime, and that the effects observed in the first project do not, or not only, reflect local differences in crime reporting and enforcement. Furthermore, in spite of not having conducted longitudinal analyses, we also feel safe to conclude that the negative association between CM and immigrant crime is not, or not only, caused by reverse causality: the evidence for the hypothesized paths between CM and crime make strong reverse causality unlikely (in the first project, two-stage regression analyses also pointed in that direction). The findings do not lend much support to Koopman’s (2010) claim that multiculturalism impedes immigrants’ labour market positioning, at least not when community attitudes rather than national policies are considered.

Evidently, we do not claim that CM annuls all immigrant crime, or that it necessarily reduces all types of crime. When comparing the two projects, we observe that the association between CM and self-reported offending is stronger than the association between CM and registered crime. This may indicate that CM primarily reduces relatively common and ‘lighter’ forms of crime: surveys measure less serious types of crime than are typically registered by the police. Possibly, CM may also trigger mechanisms that increase specific forms of offending. Higher levels of trust and neighbourhood contacts may increase opportunities to commit certain crimes, such as certain ‘organized’, non-street crimes that police data and surveys measure poorly. Higher level of generalized trust and less institutional distrust may diminish the fear of formal punishment, which for some reduce the threshold to commit certain crimes (e.g. by weakening the fear of deportation). Possibly, such opposite mechanisms explain why individual-level institutional trust and generalized trust did not have significant negative effects on the men’s crimes. Should such opposite mechanisms matter, they were clearly too weak to
prevent a negative association between CM on crime among men in the two immigrant groups examined.

Future research could delve deeper into factors that are likely to moderate the effects of CM on crime, including immigrant generation, local size of the immigrant group, and ethnic origin. The NELLS survey does not have enough observations to test whether the effects CM differ by generation, local size of the immigrant group, and national origin, which led us to conduct a pooled analysis. In the first project, in which we did have that statistical power, we found that the effects of CM are concentrated among first-generation immigrants, among immigrants living in municipalities with a substantial local ethnic community, and among the Turkish-Dutch (no significant effects were found for second-generation men with a Moroccan background). It is probable that CM’s tolerance for ethno-cultural diversity is partially responsible for its advantageous effects on strain, social bonds, and collective efficacy. If that is so, then its effects on crime should be weaker when the desire and/or ability of immigrant groups to maintain the heritage culture is low. This should be the case in second- and later immigration generations, in contexts with few co-ethnics, and in more ‘fragmented’ and socially excluded immigrant groups like the Moroccan-Dutch (cf. Fennema and Tillie, 1999). When the local size of the immigrant group is small, its level of social and institutional trust will also have a more limited impact on the extent to which residents with a migration background are exposed to collective efficacy: if there are few immigrants, collective efficacy will mostly depend on the dominant group. Possibly, CM mostly benefits the first generation, while assimilationism is more favourable for later generations, but that is not something we could test directly as ‘community assimilationism’ (and separationalism) could not be identified in the Netherlands at the municipal level.

Another avenue for future research is to rethink some of Berry’s concepts. We focused on connecting his theory with relevant sociological/criminological theory, and wanted to stay
close to his framework, which we regard as parsimonious and useful. We should nonetheless consider adding more complexity and de-essentialized thinking to it. The notion of the ‘dominant group’, for example, could be made more dynamic by also including certain ‘established’ first- and/or second-generation immigrants. We may also want to distinguish different types of integration, and different dominant groups, at different levels (e.g. local, national, transnational). By considering local-level variation among the dominant group, we have gone some way in exploring the possibility of a plurality of dominant subgroups within a given country.

Finally, future research could examine how CM is related to other indicators of social cohesion than crime, perceived discrimination, religiousness, trust, and neighbourhood contacts. Based on the present results, we suspect that CM also affects immigrants’ fear of crime, interethnic identifications, neighbourhood satisfaction, and so forth. Furthermore, if Berry’s acculturation theory is right, CM should also be associated with better outcomes in the population at large when levels of ethno-cultural diversity reach a certain threshold. There is some evidence that migration-related diversity puts pressure on social cohesion at local and national levels in particular (cf. Van der Meer and Tolsma, 2014), but such effects partially depend on how we all deal with that diversity.
References


Table 1.
Descriptive statistics of the variables for Turkish and Moroccan participants.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level of measurement</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criminal behaviour</td>
<td>Individual</td>
<td>0</td>
<td>14</td>
<td>0.36</td>
<td>1.44</td>
</tr>
<tr>
<td>Community multiculturalism</td>
<td>Municipal</td>
<td>1.84</td>
<td>2.28</td>
<td>2.11</td>
<td>0.10</td>
</tr>
<tr>
<td>1st generation</td>
<td>Individual</td>
<td>0</td>
<td>1</td>
<td>0.66</td>
<td>0.47</td>
</tr>
<tr>
<td>Turkish</td>
<td>Individual</td>
<td>0</td>
<td>1</td>
<td>0.52</td>
<td>0.50</td>
</tr>
<tr>
<td>Age</td>
<td>Individual</td>
<td>14</td>
<td>49</td>
<td>31.79</td>
<td>9.14</td>
</tr>
<tr>
<td>Age$^2$/100</td>
<td>Individual</td>
<td>1.96</td>
<td>24.01</td>
<td>10.94</td>
<td>5.57</td>
</tr>
<tr>
<td>Big city</td>
<td>Municipality</td>
<td>0</td>
<td>1</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>Small city</td>
<td>Municipality</td>
<td>0</td>
<td>1</td>
<td>0.29</td>
<td>0.45</td>
</tr>
<tr>
<td>Big village</td>
<td>Municipality</td>
<td>0</td>
<td>1</td>
<td>0.21</td>
<td>0.41</td>
</tr>
<tr>
<td>Living with partner/child</td>
<td>Individual</td>
<td>0</td>
<td>1</td>
<td>0.57</td>
<td>0.50</td>
</tr>
<tr>
<td>Living with the parents</td>
<td>Individual</td>
<td>0</td>
<td>1</td>
<td>0.27</td>
<td>0.44</td>
</tr>
<tr>
<td>Percentage of co-ethnics</td>
<td>Municipality</td>
<td>0.18</td>
<td>9.18</td>
<td>5.38</td>
<td>2.68</td>
</tr>
<tr>
<td>Percentage of co-ethnics</td>
<td>Neighbourhood</td>
<td>0</td>
<td>31.00</td>
<td>8.58</td>
<td>7.38</td>
</tr>
<tr>
<td>Perceived discrimination</td>
<td>Individual</td>
<td>0</td>
<td>2</td>
<td>0.44</td>
<td>0.45</td>
</tr>
<tr>
<td>Low income</td>
<td>Individual</td>
<td>0</td>
<td>1</td>
<td>0.45</td>
<td>0.50</td>
</tr>
<tr>
<td>Middle income</td>
<td>Individual</td>
<td>0</td>
<td>1</td>
<td>0.28</td>
<td>0.45</td>
</tr>
<tr>
<td>Missing income</td>
<td>Individual</td>
<td>0</td>
<td>1</td>
<td>0.10</td>
<td>0.30</td>
</tr>
<tr>
<td>Category</td>
<td>Level</td>
<td>Value</td>
<td>Frequency</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>----------------</td>
<td>-------</td>
<td>-----------</td>
<td>------</td>
<td>-----</td>
</tr>
<tr>
<td>Primary education</td>
<td>Individual</td>
<td>0</td>
<td>1</td>
<td>0.54</td>
<td>0.50</td>
</tr>
<tr>
<td>Secondary education</td>
<td>Individual</td>
<td>0</td>
<td>1</td>
<td>0.28</td>
<td>0.45</td>
</tr>
<tr>
<td>Particularized trust</td>
<td>Individual</td>
<td>1</td>
<td>4</td>
<td>2.94</td>
<td>0.75</td>
</tr>
<tr>
<td>Generalized trust</td>
<td>Individual</td>
<td>1</td>
<td>5</td>
<td>2.54</td>
<td>1.04</td>
</tr>
<tr>
<td>Institutional trust</td>
<td>Individual</td>
<td>1</td>
<td>4</td>
<td>2.38</td>
<td>0.86</td>
</tr>
<tr>
<td>Religiosity</td>
<td>Individual</td>
<td>1</td>
<td>5</td>
<td>4.33</td>
<td>0.97</td>
</tr>
<tr>
<td>Perceived neighbourhood efficacy</td>
<td>Neighbourhood</td>
<td>2.33</td>
<td>4</td>
<td>3.21</td>
<td>0.21</td>
</tr>
<tr>
<td>Neighbourhood contacts</td>
<td>Neighbourhood</td>
<td>1.79</td>
<td>6</td>
<td>4.08</td>
<td>0.58</td>
</tr>
<tr>
<td>Community trust in police and justice</td>
<td>Municipality</td>
<td>1.8</td>
<td>3.25</td>
<td>2.38</td>
<td>0.11</td>
</tr>
<tr>
<td>Community religiosity</td>
<td>Municipality</td>
<td>3.5</td>
<td>5.0</td>
<td>4.45</td>
<td>0.27</td>
</tr>
</tbody>
</table>
Table 2. Regression coefficients for the independent variables on criminal behaviour

<table>
<thead>
<tr>
<th>Model</th>
<th>M1</th>
<th>M2</th>
<th>M3</th>
<th>M4</th>
<th>M5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community multiculturalism</td>
<td>-12.33***</td>
<td>-10.94***</td>
<td>-11.00***</td>
<td>-7.02***</td>
<td>-2.97*</td>
</tr>
<tr>
<td>Generation (ref. 2nd generation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st generation</td>
<td>-0.18</td>
<td>-0.34</td>
<td>-0.25</td>
<td>0.08</td>
<td>-0.50</td>
</tr>
<tr>
<td>Ethnicity (ref. Moroccan)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkish</td>
<td>-0.18</td>
<td>-0.14</td>
<td>-0.15</td>
<td>0.01</td>
<td>0.11</td>
</tr>
<tr>
<td>Age</td>
<td>-0.25*</td>
<td>-0.32**</td>
<td>-0.25*</td>
<td>-0.22*</td>
<td>-0.30**</td>
</tr>
<tr>
<td>Age^2/100</td>
<td>0.42*</td>
<td>0.52**</td>
<td>0.40**</td>
<td>0.32*</td>
<td>0.42**</td>
</tr>
<tr>
<td>Urbanization (ref. large city)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>-1.69**</td>
<td>-1.47**</td>
<td>-1.70**</td>
<td>-1.09***</td>
<td>-0.87***</td>
</tr>
<tr>
<td>Small town</td>
<td>-2.58**</td>
<td>-2.34**</td>
<td>-2.50***</td>
<td>-1.23*</td>
<td>-0.82*</td>
</tr>
<tr>
<td>Village</td>
<td>-3.15**</td>
<td>-2.65**</td>
<td>-2.54*</td>
<td>-0.42</td>
<td>1.54*</td>
</tr>
<tr>
<td>Household composition (ref. other composition)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Living with a partner/child</td>
<td>-1.43***</td>
<td>-1.38***</td>
<td>-1.18***</td>
<td>-1.13***</td>
<td>-0.68**</td>
</tr>
<tr>
<td><strong>Living with the parents</strong></td>
<td>-0.58*</td>
<td>-0.96**</td>
<td>-0.46</td>
<td>-0.38</td>
<td>-0.73*</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------</td>
<td>---------</td>
<td>-------</td>
<td>-------</td>
<td>--------</td>
</tr>
<tr>
<td>Percentage of co-ethnics municipality</td>
<td>0.11</td>
<td>0.08</td>
<td>0.12</td>
<td>0.16</td>
<td>0.12</td>
</tr>
<tr>
<td>Percentage of co-ethnics neighbourhood</td>
<td>-0.10*</td>
<td>-0.10*</td>
<td>-0.10**</td>
<td>-0.09*</td>
<td>-0.10**</td>
</tr>
<tr>
<td>Perceived discrimination</td>
<td>0.78**</td>
<td>1.34***</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Monthly income (ref. high income)**

<table>
<thead>
<tr>
<th>Low income</th>
<th>2.07**</th>
<th>2.27*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle income</td>
<td>2.39**</td>
<td>2.53*</td>
</tr>
<tr>
<td>Missing income</td>
<td>1.97+</td>
<td>2.72*</td>
</tr>
</tbody>
</table>

**Educational attainment (ref. tertiary education)**

<table>
<thead>
<tr>
<th>Primary education</th>
<th>1.87**</th>
<th>2.15**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary education</td>
<td>1.58**</td>
<td>2.14***</td>
</tr>
<tr>
<td>Particularized trust (individual)</td>
<td>-0.63**</td>
<td>-0.81***</td>
</tr>
<tr>
<td>Generalized trust (individual)</td>
<td>0.08</td>
<td>0.15</td>
</tr>
<tr>
<td>Trust in the police (individual)</td>
<td>-0.02</td>
<td>0.25</td>
</tr>
<tr>
<td>Religiosity (individual)</td>
<td>-0.29+</td>
<td>-0.28*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Perceived neighbourhood efficacy</td>
<td>-1.21*</td>
<td>-1.24*</td>
</tr>
<tr>
<td>Neighbourhood contacts</td>
<td>-0.09</td>
<td>-0.41*</td>
</tr>
<tr>
<td>Community trust in police and justice</td>
<td>-1.21*</td>
<td>-4.55***</td>
</tr>
<tr>
<td>Community religiosity</td>
<td>-1.97***</td>
<td>-2.16***</td>
</tr>
<tr>
<td>Constant</td>
<td>30.08**</td>
<td>24.54**</td>
</tr>
</tbody>
</table>

*Note. ***p < .001, **p < .01, *p < .05, +p < .10*
While we focus on attitudes, CM may lead to local integration policies (Jørgenson, 2012; Scholten, 2013) and/or affect the implementation of national policies.

We acknowledge that native-born sons and daughters of immigrants never migrated themselves and should perhaps be called first-generation native-born rather than ‘second-generation immigrants’, but we stick to established conventions here.

In the NELLS, the incidence density of self-reported crimes is about four times higher among Turkish- and Moroccan-Dutch men than among Turkish- and Moroccan-Dutch men (0.36 against 0.09).

As the NELLS did not measure self-esteem, we could not test whether there is a lower vulnerability to strain under CM, which possibly attenuates the relationship between strain and crime.

First-generation immigrants in particular indeed have more contact with co-ethnics than with other ethnic groups, and some forms of external social control in particular, such as community religiosity, will transcend the neighbourhood.

We also estimated models with percentage of co-ethnics and native-Dutch in the neighbourhood, which did not lead to substantively different conclusions.

In Model 5, all VIF values were between 1.14 and 3.60 with the exception of age (because age square is also included). The VIF value for CM ranges from 2.7 in Model 1 to 3.6 in Model 5.

When estimating Model 1 by generation and origin separately, the coefficient of CM was -22.5 for first-generation ‘Moroccans’ (p<0.01, n=286), 8.2 for second-generation ‘Moroccans’ (p=0.06, n=151), -31.6 for first-generation ‘Turks’ (p<0.01, n=316), and -9.54 for second-generation ‘Turks’ (p<0.05, n=158). When we estimated Model 1 separately for 18 municipalities with and 17 municipalities without at least 1,200 co-ethnics (as we did in project 1), the coefficient of CM is -16.77 (p<0.01, n=817) and -4.55 (p=0.5, n=94) respectively.
The UNU-MERIT WORKING Paper Series

2020-01 Debating the assumptions of the Thirlwall Model: A VECM analysis of the Balance of Payments for Argentina, Brazil, Colombia, and Mexico by Danilo Spinola
2020-02 The La Marca Model revisited: Structuralist Goodwin cycles with evolutionary supply side and balance of payments constraints by Danilo Spinola
2020-03 Uneven development and the balance of payments constrained model: Terms of trade, economic cycles, and productivity catching-up by Danilo Spinola
2020-04 Time-space dynamics of return and circular migration: Theories and evidence by Amelie F. Constant
2020-05 Mapping industrial patterns and structural change in exports by Charlotte Guillard
2020-06 For real? Income and non-income effects of cash transfers on the demand for food by Stephan Dietrich and Georg Schmerzeck
2020-07 Robots and the origin of their labour-saving impact by Fabio Montobbio, Jacopo Staccioli, Maria Enrica Virgillito and Marco Vivarelli
2020-08 STI-DUI innovation modes and firm performance in the Indian capital goods industry: Do small firms differ from large ones? By Nanditha Mathew and George Paily
2020-09 The impact of automation on inequality across Europe by Mary Kaltenberg and Neil Foster-McGregor
2020-10 What matters in funding: The value of research coherence and alignment in evaluators’ decisions by Charles Ayoubi, Sandra Barbosu, Michele Pezzoni and Fabiana Visentin
2020-11 The productivity impact of business visits across industries by Mariacristina Piva, Massimiliano Tani and Marco Vivarelli
2020-12 Technological revolutions, structural change & catching-up by Jan Fagerberg and Bart Verspagen
2020-13 Semi-endogenous growth models with domestic and foreign private and public R&D linked to VECMs with evidence for five countries by Thomas Ziesemer
2020-14 The economic impact of public R&D: an international perspective by Luc Soete, Bart Verspagen and Thomas H.W. Ziesemer
2020-15 Taking the challenge: A joint European policy response to the corona crisis to strengthen the public sector and restart a more sustainable and social Europe by Jo Ritzen, Javi Lopez, André Knottnerus, Salvador Perez Moreno, George Papandreou and Klaus F. Zimmermann
2020-16 Migration of higher education students from the North Africa Region to the United Kingdom by Samia Satti Osman Mohamed Nour
2020-17 Overview of the Sudan Uprising by Samia Satti Osman Mohamed Nour
2020-18 Inter-country Distancing, Globalisation and the Coronavirus Pandemic by Klaus F. Zimmermann, Gokhan Karabulut, Mehmet Huseyin Bilgin and Asli Cansin Doker
2020-19 How does innovation take place in the mining industry? Understanding the logic behind innovation in a changing context by Beatriz Calzada Olvera & Michiko Iizuka
2020-20 Public universities, in search of enhanced funding by Jo Ritzen
2020-21 Ph.D. research output in STEM: the role of gender and race in supervision by Giulia Rossello, Robin Cowan and Jacques Mairesse
2020-22 Labour market effects of COVID-19 in sub-Saharan Africa: An informality lens from Burkina Faso, Mali and Senegal by Racky Balde, Mohamed Boly, and Elvis Avenyo
2020-23 Occupational sorting and wage gaps of refugees by Christopher F Baum, Hans Lööf, Andreas Stephan and Klaus F. Zimmermann
2020-24 Policy opportunities and challenges from the Covid-19 pandemic for economies with large informal sectors by Rajneesh Narula
2020-25 Economic gender gap in the Global South: how institutional quality matters by Elena Bárcena-Martin, Samuel Medina-Claros and Salvador Pérez-Moreno
2020-26 How important is GVC participation to export upgrading by Gideon Ndubuisi and Solomon Owusu
2020-27 Patterns of growth in structuralist models: The role of the real exchange rate and industrial policy by Gabriel Porcile, Danilo Spinola and Giuliano Yajima
2020-29 The political economy of public research, or why some governments commit to research more than others by Andrea Filippetti and Antonio Vezzani
2020-30 Economic preferences across generations and family clusters: A large-scale experiment by Shyamal Chowdhury, Matthias Sutter and Klaus F. Zimmermann
2020-31 International student mobility decision-making in a European context by Talitha Dubow, Katrin Marchand, Melissa Siegel
2020-32 Supply and demand in Kaldorian growth models: a proposal for dynamic adjustment by Guilherme R. Magacho and Danilo Spinola
2020-33 Productive efficiency, technological change and catch up within Africa by Emmanuel B. Mensah, Solomon Owusu and Neil Foster-McGregor
2020-34 Optimal social distancing in SIR based macroeconomic models by Yoseph Getachew
2020-35 Towards a new index of mobile money inclusion and the role of the regulatory environment by Godsway Korku Tetteh, Micheline Goedhuyys, Maty Konte and Pierre Mohnen
2020-36 Segmented paths of welfare assimilation by Yip-Ching Yu and Zina Nimah
2020-37 Self-selection in physical and mental health among older intra-European migrants by Amelie F. Constant and Nadja Milewski
2020-38 The role of innovation in industrial dynamics and productivity growth: a survey of the literature by Mphehmet Ugur and Marco Vivarelli
2020-39 Does gender matter for promotion in science? Evidence from physicists in France by Jacques Mairesse, Michele Pezzoni and Fabiana Visentin
2020-40 Automation, globalisation and relative wages: An empirical analysis of winners and losers by Antonio Francesco Gravina and Neil Foster-McGregor
2020-41 Stagnant manufacturing growth in India: The role of the informal economy by Gbenoukpo Robert Djidonou and Neil Foster-McGregor
2020-42 Intra-EU migration: Shedding light on drivers, corridors and the relative importance of migrant characteristics by Miriam Mack, Sarah Roeder, Katrin Marchand and Melissa Siegel
2020-43 Roots of dissent: Trade liberalization and the rise of populism in Brazil by Francesco Iacoella, Patricia Justino and Bruno Martora
2020-44 The role of domestic-firm knowledge in foreign R&D collaborations: Evidence from co-patenting in Indian firms by Nanditha Mathew, Lorenzo Napolitano and Ugo Rizzo
2020-45 Is sub-Saharan Africa deindustrializing? by Emmanuel B. Mensah
2020-46 Does value chain participation facilitate the adoption of industry 4.0 technologies in developing countries? by Michele Delera, Carlo Pietrobelli, Elisa Calza and Alejandro Lavopa

2020-47 Inter-sectoral and international R&D spillovers by Rene Belderbos and Pierre Mohnen

2020-48 Economic adjustment during the Great Recession: The role of managerial quality by Gilbert Cette, Jimmy Lopez, Jacques Mairesse and Giuseppe Nicoletti

2020-49 Schumpeter and Keynes: Economic growth in a super-multiplier model by Önder Nomaler, Danilo Spinola and Bart Verspagen

2020-50 Addressing the productivity paradox with big data: A literature review and adaptation of the CDM econometric model by Torben Schubert, Angela Jäger, Serdar Türkeli and Fabiana Visentin

2020-51 Social assimilation and labour market outcomes of migrants in China by Shu Cai and Klaus F. Zimmermann

2020-52 Parental gender stereotypes and student wellbeing in China by Shuai Chu, Xiangquan Zeng and Klaus F. Zimmermann


2020-54 Women, leadership and violent extremism: A potential security risk? by Aurélie Wertz and Dorcas Mbuvi

2020-55 Community multiculturalism and self-reported immigrant crime: Testing three theoretical mechanisms by Arjen Leerkes, Tineke Fokkema and Jonathan Bening