The relationship between (sub)national identity, citizenship conceptions, and perceived ethnic threat in Flanders and Wallonia for the period 1995-2020: A measurement invariance testing strategy

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Abstract

This article examines the relationship between (sub)national identity and attitudes towards immigrants in the multinational context of Belgium. We extend previous studies by analysing a longer time period (1995-2020) and by making a strong case for the idea that measurement invariance testing and theoretical meaningfulness are closely intertwined. To examine whether and how the relationship between (sub)national identity and perceived ethnic threat has changed over time and between regions, we first test for metric invariance of the latent concepts. Using data from the Belgian National Election Studies, we illustrate that evaluating invariance of measurements is a necessary condition for comparative research, but also that measurement equivalence testing should be considered as an empirical guide showing researchers where substantial conclusions should potentially be revisited and theoretical validity rethought. Next, we verify whether the relationship between (sub)national identity and perceptions of ethnic threat across subnational units can be attributed to different conceptions of community membership -in terms of ethnic and/or civic citizenship conceptions- in Flanders and Wallonia. While we expected that a strong identification with Flanders would primarily be related to an ethnic citizenship representation, and as a result, stronger feelings of threat towards immigrants; we expected that a strong identification with Wallonia would primarily be related to a civic representation of the nation and therefore lower feelings of threat. Thanks to our thorough invariance testing strategy, the conceptualisation and measurement of (sub)national identity had to be adjusted in Wallonia, and the hypotheses had to be qualified.

1 Introduction

The occasion of this study is the debate concerning the relationship between (sub)national identity and perceptions of ethnic threat. It is argued that this relationship will vary across national contexts and will differ depending on the definition of national group membership and citizenship (Raijman et al., 2018; Pehrson et al., 2009b). The concept of citizenship defines who (socially and politically) belongs to the nation state and who is entitled to its rights. Citizenship is often categorized as either 'ethnic' or 'civic' (Brubaker, 1992; Greenfeld, 1992). Ethnic citizenship emphasizes the community of birth and some supposed shared ancestral and cultural homogeneity. It thus defines citizenship on the principle of descent, implying that ethnic status or ancestry determines who is accepted as a full member of the national community and who is not. Civic citizenship is usually interpreted as inclusion according to the principle of adherence to basic liberal values, in particular to legal norms and paying taxes. It defines citizenship in more voluntaristic terms and refers to institutional commitment and participation in society (Pehrson et al., 2009b). Consequently, these two types of citizenship, or social representations of the nation, could underlie different relationships between national identity and perceived ethnic threat (see Billiet et al., 2003).

To test the conditionality of this relationship, Belgium offers an example of a state where people are faced with two competing discourses of nation-building. As such, the case provides an opportunity to examine whether and how (sub)national attachment relates to perceptions of ethnic threat and to what extent that relationship differs across subnational units, more specifically comparing Flemish-speaking Flanders and French-speaking Wallonia. Moreover, the Belgian case allows to investigate whether and how this relationship is dependent on salient conceptions of community membership, embedded in the political cultures of these subnational units, that influence the way people think.

Belgian citizens are not only members of a federal state, they simultaneously are members of subnational units. In Belgium, national identity must be understood in terms of a so-called bipolar

identity (Moreno, 1988),[1] meaning a relatively strong identification with the national and/or the subnational identity. The two main subnational entities, Flanders and Wallonia,[2] have acquired a substantial degree of autonomy during the last decades and are characterized by different discourses and representations of the nation. The Flemish identity appears to be associated with the protection of Flemish cultural heritage and language. The Walloon identity, by contrast, is rooted in the social and economic emancipation of the Walloon region and primarily refers to a concept of civic citizenship that celebrates values of diversity, pluralism and tolerance (Van Dam, 1996; Van Ginderachter and Leerssen, 2012; Meeusen et al., 2017). Although the discursive opposition between Flemish ethnic nationalism and Walloon civic regionalism is constructed and overdetermined, the popular claim is that Flanders adheres to a more ethnic exclusionary concept of (sub)national identity, whereas the Walloon identity is civic and inclusive towards immigrants.

The two opposing nation-building discourses came to loggerheads during the federal elections of 2010, 2014 and 2019. Historically, Flemish nationalism was rooted in the political 'right'. The populist radical-right party 'Vlaams Blok/Belang' incrementally increased its voting share in Flanders from 11.5 per cent in 1991 to 18.7 per cent in 2007. Although the voting share decreased to 5.9 per cent in 2014, the party got a strong electoral revival with 19.1 per cent in 2019. Meanwhile, a new Flemish national party 'New Flemish Alliance' (N-VA) emerged, and recorded an impressive electoral growth from 4.8 per cent of the Flemish votes in 2003 to 31.9 per cent in the 2014 elections. Based on its relatively selective and conditional nationalist appeal to cultural assimilation and earned citizenship, as well as its strategy of issue communitarization (Abts et al., 2019), the right-wing N-VA became the largest political party in Belgium as from 2014. In 2019, N-VA recorded 25.6 per cent, resulting in a voting share of about 45 per cent for the two right-wing Flemish nationalist parties. By contrast, the project of regionalism in Wallonia is politically leftist (Billiet et al., 2012) and reluctant to support further regional autonomy, typically justified by concerns about interregional solidarity and disintegration of the Belgian state.

Assuming that differences in political culture in the two regions affect the respective articulation of identity, one could expect that the collective representations of 'what a nation is' will differ according to its referent: Belgium, Wallonia or Flanders. Consequently, in the Flemish region, citizens who identify intensely with Flanders will be more likely to perceive a threat from immigrants, while those who intensely identify with Belgium will tend to feel less threatened by the arrival of newcomers, as non-nationalist actors in Flanders portray Belgium explicitly as a civic nation celebrating the values of cultural diversity and intercultural harmony. Conversely, the relationship between attitudes towards immigrants and the (bipolar) national identity variable is expected to be more diffuse in Wallonia, where the representations of the Belgian and Walloon identity contrast less. Only a small minority of the adult French-speaking population feels exclusively Walloon (own calculations based on election studies 1995-2020). Assuming that in Wallonia the civic representation of Belgium is somewhat tainted by the ethnic-cultural views of Flemish nationalism, one could expect that the perception of ethnic threat will tend to coincide with an intense Belgian, rather than Walloon identification (Billiet et al., 2003, pp. 243–244). In other words, in Wallonia we expect a negative relationship between national identity and perceptions of ethnic threat, while in Flanders a positive relationship is anticipated; a different conception of nation-building—whether ethnic or civic—may underlie this reversed correlation.

[1] In their study on the measurement of (sub)national identities, Deschouwer and colleagues (2015) show that J. J. Linz (1973) was actually the first author to develop the so-called 'Moreno question'.

[2] The third region, Brussels-Capital, is omitted in this study. The situation there is more complex, because the Flemish and Francophone communities jointly have authority over the Flemish and Francophone institutions that develop activities in the domain of personal affairs (culture, education and well-being) in Brussels. This is one of the reasons why Brussels cannot be put on the same footing as the Flemish and Walloon regions.

These theoretical propositions concerning the context dependency of the relationship between national identity and anti-immigrant attitudes were first tested in an empirical analysis of the 1991 Belgian National Election Surveys (Maddens et al., 2000). Using subsequent cross-sections of the general election surveys up to 2007, the propositions were empirically not rejected (Billiet et al., 2003). These studies indeed show that among the Flemish population, perceptions of ethnic threat are positively related to a stronger identification with Flanders, whereas for Francophone Belgians, perceptions of ethnic threat are negatively associated with a stronger identification with Wallonia (Billiet et al., 2003; Maddens et al., 2000). The Belgian case thus shows that in so-called plurinational states the impact of subnational identification on attitudes toward immigrants may vary across subnational regions of a federal state. The mechanism of exclusion may operate differently in territorial regions that either claim to be a minority nation, show strong separatist tendencies based on ethnic citizenship conceptions, or in which neither of these claims are made. As such, in multinational states regions may have different conceptions of community membership, defining the content of their national identity and therefore also its relationship with anti-immigrant sentiment.

Although very few studies have examined the relationship between subnational identity and anti-immigrant attitudes in plurinational states, similar results were obtained in Spain and Canada (Escandell & Ceobanu, 2010; Bilodeau et al., 2021). In the context of Spain, Escandell and Ceobanu (2010) observed that individuals with a strong regional identification tend to have more negative attitudes towards immigrants compared to those with a dual identification, although the results are significant *only* in the three regions where minority nationalism built on primordial-ethnic elements is strongly politicized, i.e. the Basque Country, Catalonia and Galicia. Those identifying as Basque, Catalan or Galician express more negative attitudes towards immigrants than those identifying as Spaniard, but strong regional identification is not a mechanism of exclusion in the rest of Spain, i.e. all regions without this type of nationalism. A similar pattern can be found in Canada, where Bilodeau et al. (2021) show that strong provincial attachments are associated with significantly less positive attitudes toward immigration, but only in regions claiming a minority status like Quebec (and to a lesser extent in Alberta and Saskatchewan). The authors demonstrate the complexity of the relationship between (sub)national identity and anti-immigrant attitudes in plurinational contexts but at the same time suggest it is linked to how membership to the political community is conceived (Billiet et al., 2003; Raijman et al., 2008; Bilodeau et al., 2021).

In this article, we continue along this line of research by elaborating the study of Billiet et al. (2003), by means of a comparison over time (1995-2020) and between regions (Flanders and Wallonia). We substantially, methodologically and empirically flesh out the relationship between (sub)national identity and attitudes toward immigrants in a multinational context. Given the changed political reality in Belgium in the 2000s and the prominent revival of right-wing nationalist parties in Flanders, the first research goal is to examine *whether and how the relationship between (sub)national identity and perceived ethnic threat has changed over time and between regions*. This goal raises important questions about the over-time and between-region measurement equivalence of the latent concepts '(sub)national identity' and 'perceptions of ethnic threat'; a precondition for the evaluation of structural relationships between the constructs over time. We show that testing the measurement and conceptual validity are not only necessary conditions for comparative and over-time analysis, but also provide important and substantial empirical insights. Changes in the meaning of the concepts are related to transformations in the socio-political context with which researchers must engage in an interactive interpretative process between data and concepts. Showing the relevance of measurement invariance testing as a process rather than an outcome is one of the central aims of this paper.

Second, we empirically measure and verify *whether or not the variability in the relationship between (sub)national identity and perceptions of ethnic threat across subnational units can be attributed to different conceptions of citizenship in Flanders and Wallonia*. In particular, we test the

mediating role of ethnic and civic citizenship conceptions in the relationship between (sub)national identity and ethnic threat perceptions.

We start by detailing these two research goals in the following subsections. Next, we describe the repeated cross-sections of the Belgian National Election Suvey data and the operationalization of the theoretical concepts. Subsequently, we explain in detail our approach to measurement equivalence and our main conclusions. We end with some considerations and suggestions for the application of measurement equivalence testing.

2 (Sub)national identity and perceptions of ethnic threat: Measurement equivalence, concept validity and structural relationship

In order to investigate whether and how the relationship between (sub)national identity and ethnic threat perceptions differs in Flanders and Wallonia and changes between 1995 and 2020, the two latent concepts must be measured in an equivalent way. As such, we tackle two sub-questions in this part of our study. The first deals with the measurement and conceptual validity: *are we measuring the same concepts over time and between regions?* Although metric and even scalar invariance were not rejected in our previous research for the 1995–2007 period, there were already some empirical indications that the meaning of the latent variable (sub)national identity started to differ between the two regions (Billiet et al., 2003, 2012, 2017b; Maddens et al., 2000). Based on changes in the statistical parameters in the over-time and between-region measurement models, we investigate whether or not it is possible to conclude that in Wallonia the meaning of the latent variable (sub)national identity changed following the 2007 elections. We also examine to what extent any of such changes could be related to fluctuations in the political party system and the electoral landscape in Belgium (for example, the strong appeal of Flemish national parties calling for more independence for Flanders since 2010). In the first part of our study we illustrate how deviations from measurement equivalence may inform about substantial changes in the meaning of concepts that could be related to socio-political transformations.

The second sub-question deals with the *structural relationship between (sub)national identity and perceptions of ethnic threat between Wallonia and Flanders over time.* We highlight that testing for measurement equivalence can give important empirical clues about the way in which structural relationships change over time and how we can interpret these changes sociologically. More specifically, although the measurement of perceived ethnic threat has been very stable over time and between regions (Billiet et al., 2017), the measurement of the latent variable (sub)national identity has always had lower measurement quality (Billiet et al., 2017). This doubt of inequivalence in the measurement of (sub)national identity implicitly points to a socio-political reality: while Flanders is characterized by a stronger sub-state nationalism claiming complete political self-determination of ethno-territorial culture within a sovereign state, there is no such sub-nationalism that relates the cultural and the political community directly to each other in Wallonia. Instead, Wallonia is characterized by regionalism based on a less consolidated cultural identity, but seeking more political autonomy without claiming political sovereignty (Dodeigne and Niessen, 2019, pp. 5; Erk and Anderson, 2009, pp. 191). If nationalism has a different meaning in each of the two regions, this should be detected in the measurement invariance model *and* could have important repercussions for the substantial conclusions about the structural relationship between perceptions of ethnic threat and (sub)national identity.

In sum, we illustrate that evaluating invariance of measurements is a necessary condition for comparative research, but also that measurement equivalence testing should be considered as an empirical guide showing researchers where substantial conclusions should potentially be revisited and theoretical validity rethought. We use the case of the reversed relationship between perceptions of ethnic threat and (sub)national identity in Belgium to make our point. Accordingly, rather than (solely)

focusing on the statistical details of measurement invariance, we illustrate the interplay between measurement and theoretical validity.

3 The mediating role of citizenship conceptions in the relationship between (sub)national identity and perceived ethnic threat

Our second research goal is to empirically investigate the proposition by Billiet and colleagues (2003) that the reversed relationship between (sub)national identity and perceived ethnic threat in Flanders and in Wallonia is partially accounted for by the different representations of the nation in these regions. Although not empirically verified, the authors suggest that ethnic and civic citizenship conceptions—as individual-level proxy variables for the theoretical concept 'representation of the nation' (Guibernau, 2004, pp. 126–127, 133; Smith, 1991, pp. 9–14, 32–33)—may mediate the relationship between (sub)national identity and perceived ethnic threat.

In general, the assumption is that the relationship between (sub)national identity and ethnic threat depends—at least partly—on the particular content and definition of the group identity; that is, how (sub)national groups are defined by their group members (Reicher and Hopkins, 2001). In this regard, Billiet et al. (2003) argue that (sub)national identity is embedded in deeply rooted social-historical representations of national citizenship that link to shared beliefs about who can be regarded as members of the nation and what criteria people need to fulfil to belong to a community of citizens (see also Meeus et al., 2010; Pehrson et al., 2009a). Since these specific citizenship discourses are linked to (sub)national identities, people who strongly identify with a particular identity are more likely to 'adopt the attached dominant discourse, and bring their attitudes (e.g., towards immigrants) in line with this dominant discourse' (Duriez et al., 2013, p. 457). This so-called 'social representation model' thus assumes that the relationship between (sub)national identity and perceived ethnic threat depends on the in-group norms and the citizenship representation attached to a particular (sub)national identity. Accordingly, we expect that the relationship between (sub)national identity and perceived ethnic threat is likely to be mediated by these citizenship representations, and will depend on their content; being either ethnic or civic.

To recapitulate, ethnic citizenship representations assume that citizenship is based on ancestry and kinship, and is restricted to those who share a common heritage. As group membership is only attributed to those who are part of the ethnic-cultural group, it is often described as exclusionist towards ethnic minorities. Civic citizenship representations assume that everybody who is legally part of the nation and fulfils their citizenship obligations—including contributing to collective welfare and society—is considered as an ingroup member. Civic citizenship is thus often perceived as inclusive towards immigrants (Billiet et al., 2003; Pehrson et al., 2009a). In the case of Belgium, a multinational state where citizens are faced with two competing projects of nation building, it has been argued that citizenship defined in ethno-cultural terms is the dominant citizenship discourse in Flanders, while Wallonia is portrayed as a civic nation celebrating values of openness and diversity, thus being predominantly characterized by a civic citizenship discourse (Billiet et al., 2003; Van Dam, 1996; For a critique, see van Ginderachter, 2012). Belgium—where these different discourses thrive in its regions—thus offers an ideal case to test whether the relationship between (sub)national identity and ethnic threat is differently mediated in Flanders and Wallonia by the way in which people define the criteria of citizenship: (a) the more strongly Flemish people identify with Flanders, the more likely they are to adopt an ethnic citizenship representation, and as a result, the more likely they are to feel threatened by ethnic minorities; and (b) the more strongly Walloon people identify with Wallonia, the more likely they are to share a civic representation of the nation, and the less likely they are to feel threatened.

4 Data, measurement and analysis strategy

4.1 Data: 1995–2020 Belgian National Election Studies[3]

On each occasion since 1991 when a federal parliamentary election was held, survey data was collected in the three Belgian regions (Brussels Capital, Wallonia and Flanders). Participants were selected by means of regionally stratified, two-step, random samples of the 18–85 year old population of Belgian citizens (for more details, see Swyngedouw et al., 2009). The samples were drawn from the National Population Register with equal selection probabilities of the secondary sampling units. Only the samples of Flanders and Wallonia[4] of 1995, 2003, 2007, 2014, and 2020 were used in the current study, because in these five repeated cross-sections, the constructs of perceived ethnic threat and (sub)national identity were measured in an identical or almost identical way.

The response rates vary according to region and per year. Net response rates[5] for the Flemish samples are about 64 per cent for 1995, 2003 and 2007; for the Walloon samples these increased from 51 per cent in 1995 to 64 per cent in 2003 and 2007 (Baudewyns et al., 2010; Swyngedouw et al., 2009). The response rates in both regions were substantially lower in the 2014 surveys (48 per cent in Flanders and 34 per cent in Wallonia) and 2020 surveys (39 per cent in Flanders and 26 per cent in Wallonia)[6]. Data collection was organized by means of computer-assisted personal interviews (CAPI) (Billiet and Matsuo, 2012, pp. 281) and the sample sizes vary between 1778 and 1043 in Flanders, and between 1041 and 616 in Wallonia. Since our main focus is not the estimation of population parameters but the relationships between latent variables, we decided not to weight the samples for age and education, but to include these as control variables in the structural equation models.

4.2 Operationalization and measurement

Perceived ethnic threat. From 1995 onwards, perceived ethnic threat (THREAT) was measured by at least eight items, of which four are strictly identically worded and optimally usable for over-time and between-region comparisons. The set includes three negatively worded items and one positively worded item. These four items are metric invariant within Flanders and Wallonia for the whole 1995–2020 period (see also Billiet et al., 2019). In order to be able to control for an agreeing response style (ARS),[7] an additional positively worded item asking respondents whether they agreed or disagreed with the statement 'immigrants who work here contribute to our society' was included. Although this

[3] The surveys were organized by the Institute for Social and Political Opinion Research at the universities of Leuven (ISPO) and Louvain-La-Neuve (PIOP) between 1991 and 2010, by ISPO and a team at the university of Liège (CLEO) in 2014 and by ISPO in 2020.

[4] The main reason for not including the Brussels region is the lack of data quality of the samples from Brussels and the fact that purposive oversampling in the Brussels region was not carried out in 2014. Purposive oversampling was also not carried out in the German speaking communalities of the Walloon region. Consequently, only a handful of sample units were located in the German speaking community. These were excluded in the current study.

[5] The net response rate takes only usable addresses into account and therefore excludes respondents who were deceased, did not have sufficient knowledge of the language, were ill or disabled, were not allowed to vote, had moved, did not have a traceable address or had a non-existent address (Swyngedouw et al., 2009, pp. 19).

[6] The low response rates of the 2020 cross-section is partly caused by data collection during the COVID-pandemic of 2020. Because of the nation-wide first lockdown in March 2020, on-going data collection was postponed. After its restart in the summer of 2020, the data collection had to be shut down completely in the second lockdown of November 2020 (Meuleman et al., 2021).

[7] The way in which ARS is measured as a latent variable behind one (or more) sets of content Likert type agree-disagree items is extensively discussed in Billiet and McClendon (2000). This paper models a common ARS factor behind two balanced sets of indicators that measure two latent concepts. The ARS factor is modelled as an additional factor with identical slopes for the latent concepts (see also Welkenhuyzen-Gybels et al., 2003, pp. 705-710).

particular item was formulated identically in the surveys up to 2007, and again in 2020, the wording changed somewhat in 2014 (see Appendix 1 for the full question wording of the scales). This change in question wording will be paid particular attention to from the viewpoint of invariance measurement.

*(Sub)National identity***.** (Sub)National identity (SUB_NAT) is operationalized with four indicators. The first is a four-point scale based on two questions about the first and second territorial identification preferred by the respondent: Flemish/Walloon (score 4), Belgium (score 1) and intermediate positions (score 2–3) (VW_ID). The second indicator is the so-called *Moreno question* (Linz, 1973; Moreno, 1988) about exclusive or dual identity, where low values express exclusive identification with Belgium and high values exclusive identification with Flanders/Wallonia (EXCLU_VW). The next variable (DECIDE) is an eleven-point scale, with scores depending on the degree to which the respondent agrees that the federal level (the Belgian state) should decide everything (lower scores), or the degree to which the respondent endorses the opposite view; that Flanders/Wallonia should decide (higher scores). The last item (INDEPNT) is measured by five ordered categories where respondents had to mark their preference with regard to the Belgian constitutional state structure, ranging from 'the unitary Belgian state should be restored' (score 1), to 'splitting up Belgium into two separate states' (score 5). The response scales are shown in Appendix 1.

*Citizenship conceptions***.** The varying results regarding the relationship between (sub)national identity and perceived ethnic threat in Flanders and Wallonia are often explained by referring to differences in the social representations of the nation. In the current study, citizenship conceptions are measured by a set of seven indicators that are expected to assess both ethnic and civic dimensions of citizenship (see Appendix 1 for the full question wording). Respondents were asked to indicate how important certain characteristics are in terms of becoming a full Belgian or Flemish/Walloon citizen. Ethnic citizenship is measured by two items related to descent and ancestry (a person should be born in the country; a person should have ancestors born in the country) as well as two items referring to cultural assimilation (a person should fully assimilate to Western culture; and a person needs to know the history, tradition and customs of the country). Civic citizenship is measured by two items referring to contributions people are supposed to make to the country (a person needs to contribute to society and the economy; and a person needs to be able to stand on their own feet financially). The measurement model is presented in the empirical section. Since the direct measurements of civic and ethnic citizenship conceptions were only included in the 2014 and 2020 Belgian National Election Survey, we only test the mediation model on the 2014 and 2020 cross-sections.[8]

4.3 Invariance testing strategy

Our selection strategy for the invariance testing and measurement model was guided by three considerations: an epistemological viewpoint concerning the drive of researchers to obtain invariant measures at all costs; the aim of analysing the structural relationships between the latent variables; and prior knowledge derived from previous studies (e.g., Billiet et al., 2003, 2012, 2017; Maddens et al., 2000) about the concepts measured on several occasions between 1995 and 2020. In order to improve the transparency of our approach to invariance testing, we discuss these considerations and their consequences for the choices made in the following sections.

(1) The drive to demonstrate measurement invariance at any costs. In order to meaningfully compare constructs in samples from different populations, researchers try to demonstrate that items are interpreted in a similar way and that constructs are represented on the same measurement scale (see Byrne and Van de Vijver, 2010). Measurement invariance is an important presumption in survey

[8] Given the ordinal nature of our variables and items, we used a polychoric correlation matrix for the estimation of our models (see Jöreskog, 1990).

research with samples from different cultural groups or different periods over time. Several levels of measurement invariance are distinguished: configural, metric and scalar.[9] The required level of measurement invariance depends on the purpose for which the constructs will be used in the analyses (for example, to compare structural relations and/or latent means between samples). Since violations of the equivalence assumption are often detected (Meuleman and Schlüter, 2018), a number of studies have been devoted to strategies to analyse the constructs, even in the case of non-invariant measured indicators. Widely accepted strategies include changing the scope of the concepts used by reducing the number indicators of the measured variables, re-grouping or excluding some population samples, or allowing less strict criteria by relaxing the conditions for obtaining 'partial' invariance (Cieciuch et al., 2018; Davidov et al., 2012).

In our approach, non-equivalence is not something that should be avoided at all costs but instead offers an opportunity to obtain more, and potentially better, insights into substantial evolutions and differences between cultures. This basic philosophy of our methodology is in line with other approaches that try to achieve trustworthy estimates of latent means in the presence of a number of non-invariant indicators (see Asparouhov and Muthén, 2014) and that try to explain non-invariance by finding out *why* invariance is absent (Cieciuch et al., 2018) or how sensitive the theoretically expected relations between the measured constructs are to modifications in the model parameters (Oberski, 2018). In our model selection strategy, the *understanding* of non-invariance is achieved by a careful inspection of the modification indices that provide information about local indications of non-invariance, in combination with thorough knowledge of and experience with question wording effects in surveys (see Billiet and Matsuo, 2012). For example, in some cases, high modification indices were observed in slope parameters and residual co-variances that on theoretical grounds were expected to be zero. However, experience with question wording effects enabled us to understand *why* the modification indices were high. This approach is highly informative, not only with regard to statistical invariance, but particularly with regard to empirical insights into the substantive research question. Our account in the consequences of a change in the wording of the "contribute" item (CONTRIBUTE) as indicator of 'perceptions of ethnic threat' illustrates this convincingly.

(2) The aim of analysis. Given the substantial questions we aim to answer about the relationship between perceptions of ethnic threat and (sub)national identity over time, our first objective is to test whether the respondents in the ten samples (five samples each in Wallonia and Flanders) attach the same meaning to the items; that is, metric[10] invariance over time in the ten samples. Metric invariance is obtained when the slope parameters of each indicator of a construct (or latent variable) are identical between the samples (Cheung and Rensvold, 1999). Slope regression coefficients for the indicators (response variables) reflect the relationship between the indicators and the latent predictor variable.

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[9] Configural invariance indicates that the same indictors measure the same theoretical constructs across groups or time points. Metric invariance is more restrictive. It indicates that respondents interpret the intervals on the response scale in a similar way across groups and/or time points, and it requires the corresponding slopes of the indicators with the latent variable to be identical. Scalar invariance is the most restrictive level of invariance with continuous latent variable indicators. It requires that the intercepts of each indicator are the same across groups and/or time points (Davidov et al., 2018, p. 158).

[10] In previous studies on perceptions of ethnic threat in Flanders and Wallonia it was found that the latent variable 'perceived ethnic threat', measured with the four mentioned indicators, was scalar invariant (e.g., Billiet et al., 2017b; Swyngedouw et al., 2021). Scalar invariance was required for these studies, as they examined the evolution of ethnic threat over time and between regions by comparing the latent means. In the current study, scalar invariance was explored for the set of five indicators (adding the positively worded indicator 'CONTRIBUTE' to the scale). Scalar invariance was not confirmed in either the Flemish or the Walloon samples. However, partial scalar invariance over time and between regions was realized. For the purpose of our study, we focus on metric invariance over time within each region. Nevertheless, the exploration of the over-time, between-regions scalar model offered additional insights. This is in line with the logic of our approach: insights obtained through the testing strategy itself are, in combination with theoretical knowledge, helpful for model selection.

Less evident are the decisions about *which* samples or groups the slope parameters should be constrained to be invariant, and what type of standardization is most relevant. Equality constraints could be set to all corresponding parameters according to samples and regions, between all samples within each region, or between the two regions within each survey wave. Based on previous research findings, and since we expected deviations between the two regions, we preferred to start with a model *without* constraints between the regions. This means that the loadings over time are only constrained *within* each of the two regions.

(3) Knowledge derived from past studies. Given our prior knowledge about the measurements (Billiet et al., 2017; Maddens et al., 2000), we utilize a so-called top-down approach for invariance testing. While a bottom-up approach starts with a (nearly) completely unconstrained model and constrains additional parameters one step at a time so as to be identical with the previous ones, top-down invariance testing starts with a model in which all corresponding factor loadings (slope parameters) are constrained to be equal between the selected five samples within each region. Subsequently, step-by-step parameters for which the equality constraints are unacceptable according to modification indices[11] (MIs) are freely estimated.

In sum, it is specific to our metric invariance testing approach that it is not only guided by the measurement properties of the numeric parameters, but also by the theoretical meaningfulness of the parameters and the methodological insights obtained by changes in the wording of some indicators. For example, we were more eager to estimate a residual covariance (that is, not setting it to zero) with a theoretical meaning or question wording logic than to accept an unexpected cross-loading of a particular indicator on the latent concept that was not intended. This is an illustration of the basic philosophy that conceptual (or theoretical) validity and measurement validity belong together (Billiet, 2016).

5 Empirical results

The reporting of our results is guided by the following central research questions:

1) the measurement and conceptual validity of 'perceptions of ethnic threat' and '(sub)national identity': are we measuring the same concepts over time and between regions? To answer this research question we performed metric invariance testing over time within regions, controlling for ARS, making use of all five cross-sections of the Belgian National Election Study (1995-2020);

2) the structural relationship between (sub)national identity and ethnic threat perceptions in Wallonia and Flanders: how are both concepts related and does the relationship change over time within the regions? Based on the measurement model from part 1, we estimated the structural relationship between the concepts over time (1995-2020), controlling for ARS, age and education;

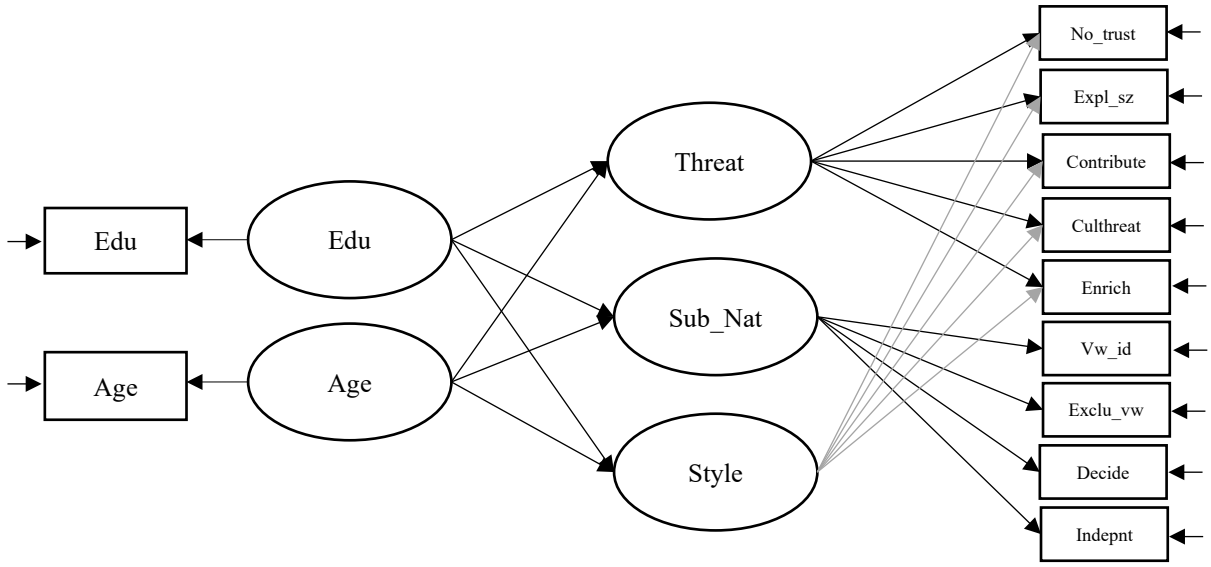
3) the mediation between (sub)national identity and perceptions of ethnic threat via citizenship conceptions: do ethnic and civic citizenship conceptions (partially) account for the variability in the relationship between ethnic threat and identity? To answer this more substantial research question, we only used the 2014 and 2020 cross-sections and combined metric invariance testing for the constructs with a structural equation model in both regions.

[11] These are modifications that substantially alter the slopes or estimated correlations between the latent variables.

5.1 Measurement model: Are (sub)national identity and perceived ethnic threat equivalently measured in Flanders and Wallonia in the period 1995-2020?

The first research question deals with the comparability of perceptions of ethnic threat (THREAT) and (sub)national identity (SUB_NAT) over time and between regions. Figure 1 provides a visual representation of the measurement model. We tested whether or not the direction and size of the relationships between the indicators and the latent variables are as expected, and whether there are changes over time within the regions. However, because of our theoretical and historical insights into the political development of Belgium, we preferred to use separate tests within each region. Based on this approach, subtle but important and theoretically meaningful differences between the slope parameters within each region could be detected.

Figure 1. Measurement model: Latent variables (ovals) and observed indicators (rectangles) (without parameter values, controlled for education and age)



In the Flemish samples over time, the metric invariant measurement model showed an acceptable fit with the data: Chi-square = 896.71; df = 213; RMSEA = 0.052; SRMR = 0.043; CFI = 0.961.[12] This means that the corresponding slopes (factor loadings) are identical in the observed period over the five Flemish samples. Hence, a comparison of the correlations between perceptions of ethnic threat (THREAT) and (sub)national identity (SUB_NAT) over time is warranted. Although according to conventional practice this is an acceptable model (Hu and Bentler, 1999), it could be substantially improved by freely estimating one additional parameter, namely the third indicator (CONTRIBUTE) of perceived ethnic threat in 2014 (a drop in the Chi-square value of 69.49 units for a loss of one degree of freedom is a significant improvement with $p < 0.001$). In the 2014 sample, the estimate of the item's slope parameter was considerably lower compared to the other cross-sections. This was precisely what we could expect because of the substantial change in the wording of the survey item in 2014 compared with the previous waves: a shift from 'Immigrants contribute to the welfare of our country' in 1995–2007 and 2020 to 'Immigrants *who work here* contribute to affordable pensions' in the 2014 survey has not only affected the response distribution of that item (systematically more respondents endorsed the 2014 item) but also the slope parameter that expresses the contribution of the item to the variance

[12] For the meaning of the fit indices, see West et al. (2012).

of the measured latent variable. The relevant parameters of this metric invariant model are presented in the first part of Table 1 (Flanders). As expected, the slope parameters of the ASR factor are substantially lower than those of the content factors, but the variances are significantly different from zero.

As in Flanders, an acceptable metric invariant model for the Walloon samples was also obtained after freeing one slope parameter in the 2014 sample. Compared with the full metric invariance model, freeing the parameter of the CONTRIBUTE indicator in the 2014 sample resulted in a drop of 35.59 Chi-square units[13]. This means that the effect of the change in question wording in the model parameters in 2014 is similar among French-speaking and Dutch-speaking respondents (see Table 1 for the parameter estimates). In general, the slope parameters of (sub)national identity are much lower in the Walloon sample compared to the Flemish samples. Further exploration of the modification indices revealed that the model fit might be considerably improved by freely estimating the residual covariances between the two items that strictly deal with identity (VW_ID and EXCLU_VW). Following our invariance testing strategy, relaxing residual covariances is only acceptable when clear theoretical considerations apply. In our case, the two indicators involved clearly share an additional source of variation not covered by the other indicators of the latent variable (sub)national identity. The model with freely estimated residual covariances between the two identity items in the five Walloon samples showed a decrease of Chi-square value of 142.43 units for 5 degrees of freedom.

At this point, three considerations persuaded us to reconsider the conceptualisation of (sub)nationalism in Wallonia: the indications of lower measurement quality of (sub)national identity in the Walloon samples; the non-zero residual covariance between the two identity indicators; and, last but not least, the theoretical argument that the concept of (sub)nationalism in Wallonia is substantially different compared to Flanders and rather characterized by *regionalism* than *sub-nationalism* (Van Ginderachter, 2012; Meeusen et al., 2017; Moscovitz, 2020; Brigevich, 2016).

The insights derived from the measurement invariance testing and theoretical reflections suggest that the four items of the originally conceptualized (sub)national identity latent variable SUB_NAT actually refer to two different concepts instead of one common concept. The item that taps primordial (sub)national identity (VW_ID) and the item about the exclusiveness of the (sub)national feelings (EXCLU_VW) point to an expressive dimension of (sub)national consciousness and ethno-territorial identification (in Tables referred to as 'TERR_ID'). The two other items refer to an instrumental dimension of the Belgian state reform process: more autonomy for the regions, and a shift in decision-making powers from the federal state to the regions. We therefore name this sub-factor 'support for state reform' (STA_RE).

This alternative model with two subfactors for (sub)national identity in Wallonia showed good fit: Chi-square = 439.59; df = 188; RMSEA = 0.043; SRMR = 0.050; CFI = 0.972. As one can see in Table 2, the slope parameters of the model with two latent subfactors are evidently higher than in the original model with the single (sub)national identity scale. Although higher slopes may indicate higher measurement quality, this does not necessarily mean higher theoretical (conceptual) validity (Billiet, 2016). In order to make any conclusions about the superiority of the alternative conceptualization and measurement, it is necessary to consider not only the quality of the measurement part, but also the relationships in the structural part of the models: are the size and direction of the correlations between the latent variables theoretically as expected? Moreover, theoretical reflections on the meaning of the concepts are required.

Although this alternative model was also acceptable in Flanders[14], we decided not to adopt this model in Flanders because the correlations between the two latent variables territorial identity (TERR_ID) and support for state reform (STA_RE) were all positive and larger than 0.73, up to 0.84 in

[13] One should notice that the sample sizes are systematical lower in the Walloon samples.
[14] Chi-square = 588.49; df = 188; RMSEA = 0.048; SRMR = 0.032; CFI = 0.977.

1995 and 0.80 in 2020. Moreover, as opposed to Wallonia, in the Flemish samples the correlations between these two identity subfactors and perceived ethnic threat are all very similar in size within the time samples. The choice to use a different conceptual model for Wallonia compared to Flanders is, as already argued, in line with the suggestion that national identity in Wallonia points more to *regionalism* than to *subnationalism.* On the one hand, Flemish identity has become a consolidated national identity, mirrored in robust and unified institutions, strong support for state reform, and a Flemish nationalism that relates the cultural and political community directly. As a consequence, ethno-territorial identity is strongly related to the political claim of sovereignty—rendering the boundaries of the nation congruent with those of its governance unit. On the other hand, the Walloon identity has remained a kind of light regional identity (De Winter, 2007; see also Moscovits, 2020: 15), seeking decentralization—or even federalism—but not the total self-determination of a sovereign state. Accordingly, the Walloon identity is less politically mobilized around a communitarian division and less connected to strong claims for state reform. In Wallonia, the majority of the population is satisfied with the status quo, or would prefer the Belgian federal state to have more power, making state reform issues less salient in the region.

We should add some final remarks about the latent variable STYLE, capturing the agreeing response style. When (quasi) balanced sets of Likert items are used as indicators for latent variables, ARS should be modelled. Otherwise, exploratory factor analysis could potentially find one factor for the positively worded items and another for the negatively worded ones[15], overruling the content factors (Billiet and McClendon, 2000). The slopes of the indicators of the STYLE factor and the structural relationships with the latent content factors were fixed to zero since it is presumed that response style is independent from content (see Billiet and McClendon, 2000)[16]. When there were indications that one or another slope was not identical with the other response style slopes within a sample, these were relaxed. Due to the change in the wording of the CONTRIBUTE item in 2014, STYLE could not be measured as reliably as we would have preferred. Because a substantive proportion (about 20 per cent) of the respondents who endorsed the positively worded CONTRIBUTE item also endorsed the negatively worded EXPL_SZ or CULTHREAT items in the set, the slope of the indicator CONTRIBUTE of THREAT was considerably lower in 2014 than in previous samples. Moreover, all the estimated slopes of the STYLE variable were much higher than in previous cross-sections. As a consequence, STYLE could have been affected by some invalidity in 2014, because in that year it captured a mixture of 'yes' answers and a moderate attitude towards immigrants.

[INSERT TABLE 1 ABOUT HERE]

[INSERT TABLE 2 ABOUT HERE]

[15] This indeed happened when the indicators where explored by means of an exploratory factor analysis.

[16] This means that there are no reported standard errors. The evaluation of the measured latent ARS is based on the statistics of the latent variable (standard error and critical ratio t-value). These should be different from zero. Otherwise, both the measurement of and the idea of controlling for the structural relations between the content variables is meaningless. The critical ratio (t-values) of the variance of ARS is not significantly different from zero in the 2007 Walloon sample, but differs from zero in the other Walloon samples. The variances of ARS are all significant in the Flemish samples.

5.2 Structural model: The relationship between (sub)national identity and perceived ethnic threat over time

The second objective is to investigate how (sub)national identity and ethnic threat are related in each region, and whether or not this relationship has changed over time (see Figure 2a and b). Age and education level are included as control variables, but they may also provide information about the construct validity of the core concepts. The structural relationships are presented in Table 1 (Flanders), in Table 2 (Wallonia), and in Appendix 2 (including the control variables and ARS factor).

Figure 2a. Structural model for Flanders and Wallonia (one-factor solution for national identity) (see Table 1)

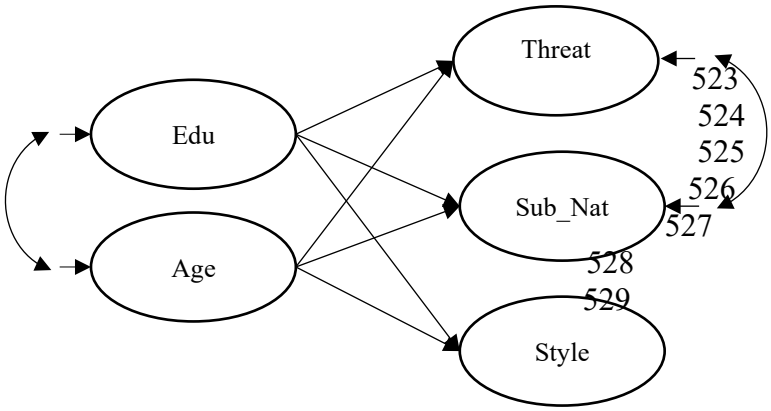
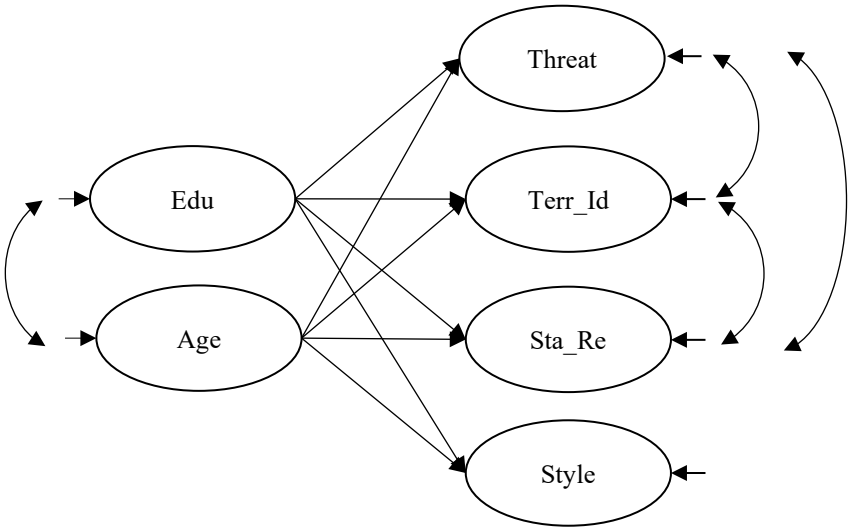


Figure 2b. Structural model for Wallonia (two-factor solution for national identity) (see Table 2)



Given our prior knowledge and insight into the (historical) socio-political context of Belgium, we expected an inverse relationship between perceived ethnic threat and (sub)national identity in Flanders and Wallonia. This expectation was indeed confirmed by the data: the correlations between perceived ethnic threat and (sub)nationalism are positive in the Flemish samples, but weaker in the samples before 2007 (r values between 0.18 and 0.11) compared to the more recent ones (r values between 0.23 and 0.38). This seems to be in contrast to Wallonia, where perceived ethnic threat and (sub)nationalism—

measured as one latent variable (Figure 2a and Table 1)—are negatively and weakly correlated in 1995 (r = -0.12) and negatively but not statistically significant in the later years. Thus, while a stronger (sub)national identity is related to a stronger perception of ethnic threat in Flanders, the reverse seems to be true in Wallonia, where a stronger (sub)national identity is more likely to coincide with less perceived threat, or is not at all related in more recent cross-sections.

When we consider the relationships in the Walloon model with the two sub-factors of (sub)national identity ('Territorial identity' TERR_ID and 'Support for state reform' STA_RE) (Figure 2b and Table 2), we find that the relationship between territorial identity and ethnic threat is not different from zero, except in 2003 where it is weakly positive. We also find that the inverse relationship found in the Walloon samples up to 2007 is largely driven by the state reform dimension. The negative relationship between support for state reform and ethnic threat is not surprizing since Walloon regionalism originates in the political left since the end of the sixties.

In line with other studies (e.g., Huang et al., 2009; Meeusen et al., 2013), we found a negative relationship between education and perceived ethnic threat and age to be (mostly) positively related to threat perceptions (Appendix 2). In general, the older and the less educated people are, the more likely they are to feel threatened by the presence of immigrants.

With regard to ARS, we expected that lower-educated and older participants are more likely to agree with Likert items regardless of the content (Billiet and McClendon, 2000). The results are ambiguous and cannot reject or confirm these hypotheses in a consistent way across the samples.

5.3 Structural model: The role of ethnic and civic citizenship conceptions

Finally, we test whether the relationship between (sub)national identity and ethnic threat is differently mediated by the way people define the criteria of citizenship in Flanders and Wallonia. In terms of the statistical strategy we first tested for the metric invariance of ethnic and civic citizenship, perceptions of ethnic threat and (sub)national identity between 2014 and 2020. Except for the slopes of the CONTRIBUTE item of the ethnic threat scale, the latent scales proved to be invariant between the two time points (see Appendix 3 for the parameters and model fit of this measurement model). Next, we included the latent ethnic and civic citizenship conceptions in the structural equation model as presented in Figure 3. The model shows a good fit with the data for Flanders (Chi-square = 329.566; df = 246; RMSEA = 0.038; SRMR = 0.050; CFI = 0.983) and for Wallonia (Chi-square = 443.246; df = 225; RMSEA = 0.038; SRMR = 0.055; CFI = 0.971) (see Table 3). In the structural model, we specify ETHNIC and CIVIC so that high values represent stronger endorsement of, respectively, ethnic and civic citizenship conceptions. Table 3 presents both the direct and indirect effects of (sub)national identity and citizenship conceptions on perceived ethnic threat.

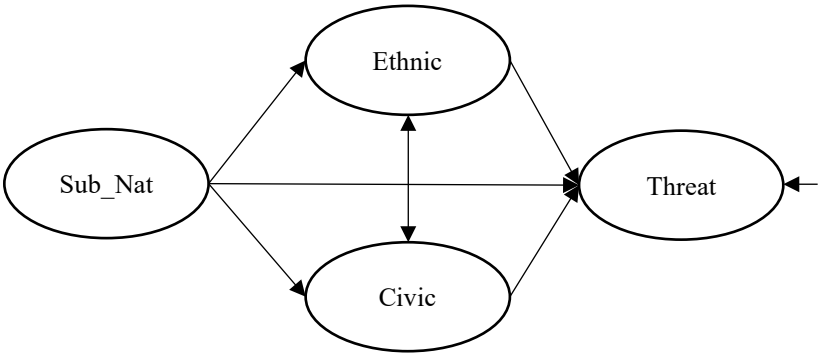
The results confirm that the more strongly Flemish citizens identify with the subnational identity, the more likely they are to endorse quite strict citizenship conditionality, both in ethnic and civic terms. In Wallonia, neither (sub)national territorial identification nor support for state reform is related to the way people perceive national group membership. This means that the Flemish identity is both more exclusionary (ethnic) and conditional (civic) in content, whereas the Walloon identity is less pronounced in ethnic/civic terms. In Flanders and Wallonia, only the preference concerning ethnic citizenship is positively related to perceived threat, but the relationship might be somewhat stronger in Flanders compared to Wallonia.

In Flanders there is a significant direct relationship between subnational identity and ethnic threat, but also an indirect relationship via conceptions of ethnic citizenship. The mediation by ethnic citizenship preferences is only present in Flanders, not in Wallonia. This suggests that citizens who identify strongly as Flemings generally endorse ethnic citizenship representations to a greater extent,

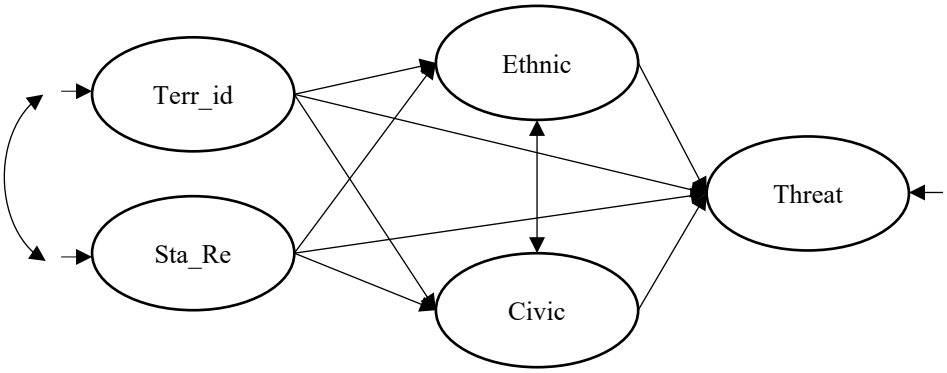
and this involves perceptions of immigrant threat. In Wallonia, there is no mediation of the citizenship preferences.

Figure 3. Mediation model of ethnic and civic citizenship conceptions (2014 & 2020)

Flanders



Wallonia



[Table 3a and Table 3b around here]

6 Discussion and conclusion

In this study, we have examined the relationship between (sub)national identity and perceived ethnic threat in Belgium. We investigated this relationship across regions (Flanders and Wallonia) and over time (1995–2020), using a stepwise approach. In the first step, we investigated whether the main constructs—national or subnational identity and perceived ethnic threat—are metric equivalent and/or conceptually valid over time and across regions. In the second step, we tested how (sub)national identity and perceived ethnic threat are related in Flanders and in Wallonia, and whether this relationship has changed during the last two decades. In the final step, we explored the mediating role of (ethnic and civic) citizenship conceptions in the relationship between (sub)national identity and perceived ethnic threat in Flanders and Wallonia. The main conclusion resulting from our sequential

approach is that testing for measurement equivalence and evaluating the conceptual validity of measurements is not only a necessary condition for comparative and over-time analysis, but that it also provides very substantial empirical insights that call for further elaboration and feedback on theoretical validity. In turn, this may result in adjustment and/or recalibration of the empirical analysis strategy.

Our test for measurement equivalence of national identity and perceived ethnic threat showed that the two latent scales are partially metric equivalent over time, but only for Flanders. For Wallonia, the modification indices indicated that the original concept 'national identity', consisting of four items, potentially needed to be re-conceptualized. In particular, among the Walloon population the four items actually referred to two distinct concepts—ethno-territorial identification (cultural dimension/(sub)national belonging) and support for state reform (political dimension/state structure)—instead of one common concept as was the case for Flanders. Since the preferred level of equivalence is closely linked to the research question and the intentions of the study, instead of striving for measurement equivalence at any cost, we opted to loosen the strict 'one-size-fits-all' approach, allowing us to consciously detect potential subtle changes in the opinion structure and to gain more insight into substantial transformations within regions and cultural differences between the regions. In this approach, a thorough inspection of modification indices provides empirical insights that can make a substantive contribution. At the same time, it is up to researchers to interpret these indices and to see whether they are theoretically meaningful. If not, there is no added value in including them just to make the model fit better.

The results derived from testing the measurement invariance allowed us to gain additional insights. First, it appeared that in Flanders and Wallonia, the latent ethnic threat scales were metric equivalent over time, except for one item for which the question wording was changed substantially in the 2014 cross-section. Our results make clear that even a seemingly small change in the wording of one observed indicator can have major consequences for measurement invariance of the latent variable, and thus for comparisons between groups and over time. Although it is often legitimate to adapt the content of items to an evolving social and cultural context and public debate, anyone focusing on longitudinal research should be careful about changing items along the way. This can result in a comparative researcher facing an important trade-off: strict equivalence of the measurement guaranteeing comparison over time, versus partial equivalence in which measurements are adapted to the sociological reality. Second, the MIs suggested that for Wallonia from 2007 onwards, it is better to proceed using two factors for (sub)national identity, where in the past we had assumed a one-factor solution, as used for Flanders. In terms of theoretical validity, the different measurements of (sub)national identity in the two regions are in line with the distinction between (Flemish) nationalism and (Walloon) regionalism. The one-factor model in Flanders refers to the logic of Flemish nationalism that directly relates the cultural community, consolidated in a strong sub-state identity, to an unequivocal claim for political sovereignty and a political project characterized by institutional self-determination, or at least a sweeping state reform transferring competences to the regions. The two-factor model in Wallonia points more to regionalism, where the Walloon identity is less culturally consolidated and much less politically mobilized, and is certainly not directly connected to a pronounced political project of sub-state sovereignty and state reform.

The two-factor structure is possibly also due to Walloon public opinion shifting in reaction to drastic changes in the Flemish party system between 2003 and 2014—as the Flemish-nationalist N-VA became the largest party in Flanders with a 27.8 per cent share of the vote—and salient nationalist discourses from 2003 onwards. At the 2010 federal elections, the two political parties that have independence for Flanders or at least co-federalism on their program (Vlaams Belang and N-VA), gained approximately 45 per cent share of the vote in Flanders. The period of the mid-2000s is sometimes even labelled as 'the golden age' of Belgian federalism, since the Flemish parties put forward new demands for greater self-rule and autonomy that were firmly opposed by the French-speaking political parties in Wallonia and Brussels (Dodeigne and Niessen, 2019, p. 3). The fear in

Walloon public opinion regarding the splitting up of Belgium might be reflected in the rise of the answering option 'Only feel Belgian' in the EXCLU_VW indicator (from 28 per cent in 2007 to 38 per cent in 2014) at the cost of the middle position 'Feel both Belgian and Walloon'. At the same time, the support for more self-rule autonomy (DECIDE) in Wallonia increased over time. In this sense, the different measurement models detected substantial differences in Flanders and Wallonia, giving insights into the distinct logics of 'nation building'.

The results only partially support the hypothesis that (sub)national identity and perceived ethnic threat are inversely related in Flanders and Wallonia. In particular, (sub)national (territorial) identification had a direct positive relationship with perceived ethnic threat, both in Flanders and in Wallonia, falsifying the 'reverse' thesis that, among Francophone Belgians, a stronger identification with Wallonia would be related to more positive attitudes towards immigrants. Both Flemish and Walloons with a strong territorial attachment to the sub-state are more likely to perceive threat. Compared to studies performed in Spain and Canada (Escandell & Ceobanu, 2010; Bilodeau et al., 2021), this result does not confirm the hypothesis that strong subnational territorial identification affects anti-immigrant attitudes *only* in regions characterized by minority nationalism. However, for Wallonia, as citizens make a clear distinction between the 'cultural community' (ethno-cultural territorial identification) and the 'political community' (sub-state sovereignty), it becomes clear that those who support further regional autonomy are more tolerant towards immigrants. This could be related to the historical leftist—i.e., liberal-socialist and anti-clerical—position of the Walloon regionalist movement (Kesteloot, 1993). Thus, while past studies have documented a negative (or zero) effect of subnational identity on ethnic threat in Wallonia, our two-factor model of national identity provides important additional insights and in fact shows a much more complex reality. Where we first thought that subnational identification was negatively correlated with ethnic threat in Wallonia, it actually turns out to be mainly attributed to the effect of support for state reform. These initially reported correlations appeared to be the sum of two opposite relationships for ethno-territorial identification and preferences for sub-state sovereignty. If rigorous measurement invariance testing had not been carried out in the first step, this important insight would not have come to light. Compared to the conclusions made by other scholars for the Spanish and Canadian case (Escandell & Ceobanu, 2010; Bilodeau et al., 2021), our results make clear that the mechanism of exclusion is indeed more pronounced in regions characterized by salient separatist tendencies based on primordial-ethnic referents (i.e. Flanders) as compared to regions without such claims (i.e. Wallonia). Nevertheless, it is not a strong regional identification as such, but the politicization of minority nationalism in primordial-ethnic terms that explains the differential impact on attitudes towards immigrants.

The relationship between national identification and ethnic threat depends on the nature of the citizenship representation linked to the particular subnational identity. For the Flemish case, the relationship with a strong subnational identification is not only intrinsic, but also partly determined by its ethnic content, and thus shaped by the ethnic conceptions of who can belong to the national group. Although our results confirm that the Flemish identity is more ethnic in content, we do not find evidence for the current image of an 'ethnic' Flanders as opposed to a 'civic' Wallonia, as the intrinsic effect of subnational identification on perceived ethnic threat in Wallonia is not tempered by conceptions of civic citizenship. It is not the assumed civic nature of the Walloon identity, but instead a left-wing inspired regionalism in Wallonia—calling for further regional autonomy—that is responsible for the inverse relationship between subnational identification and perceived ethnic threat in Flanders and Wallonia often reported in previous research. As a consequence, there is only partial evidence that the differential ethnic-civic content of subnational identity is responsible for the different patterns of perceived ethnic threat in the regions. Our results nuance the assumption of previous studies (Billiet et al., 2003; Raijman et al., 2008; Bilodeau et al., 2021) that variations across subnational units are linked to salient conceptions of community membership in these regions.

One limitation of the current study concerns the conceptual validity of the measurements of (sub)national identity, ethno-territorial identification, state reform attitude and even ARS. In these cross-sections, only two indicators could be used to measure the theoretical concepts territorial identification and state reform attitude in Wallonia, which is too limited to fully grasp their scope. The core indicator of territorial identity is the Linz-Moreno question, which has been seriously criticized because territorial identifications other than the regional versus national—such as province and local community—compete. However, if we want to compare over time, we are stuck with the items at hand. Future research should develop new measurements and more items to validate the two-factor structure in Wallonia. In addition, it becomes clear that including an agreeing response style factor in a measurement model improves the quality of the concepts, in particular when (quasi)balanced sets of items are used to measure the latent variables (Billiet and McClendon, 2000). Indeed, when exploratory factor analysis of perceived ethnic threat was applied without controlling for ARS, the set of five indicators was split into two factors that are strongly correlated and redundant: one for the three positively worded items and one for the two negatively worded ones.

The central aim of this study was to show that testing for measurement invariance is not only a necessary condition for comparative research, but that it is also a very meaningful exercise in its own right. Taking this step seriously and inspecting deviations from strict invariance can provide important and substantial insights; however, these can only be validated by linking them to contextual input and interpretation. As is the case with sociological research in general, theory, empirics and statistics should triangulate when evaluating measurement invariance and structural relationships in a meaningful way.

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7 Tables

Table 1. Measurement model: Within-group standardized solution of over-time metric invariant model for perceptions of ethnic threat (THREAT) and (sub)national identity (SUB_NAT) in Flanders and Wallonia

Flanders

Predictors (β's)	1995 Flanders (N = 1778)			2003 Flanders (N = 1062)			2007 Flanders (N = 1080)			2014 Flanders (N = 1127)			2020 Flanders (N = 937)		
	Threat	Sub_Nat	Style *	Threat	Sub_Nat	Style *	Threat	Sub_Nat	Style *	Threat	Sub_Nat	Style *	Threat	Sub_Nat	Style *
No_trust (-)	0.758		0.224	0.766		0.155	0.768		0.150	0.756		0.263	0.800		0.269
Expl_sz (-)	0.828		0.224	0.837		0.155	0.839		0.150	0.826		0.263	0.875		0.269
Contribute (+)	-0.730		0.224	-0.739		0.155	-0.740		0.150	-0.397		0.263	-0.771		0.269
Culthreat (-)	0.782		0.224	0.760		0.155	0.792		0.150	0.779		0.263	0.826		0.269
Enrich (+)	-0.693		0.224	-0.700		0.155	-0.702		0.150	-0.691		0.263	-0.732		0.269
Vw_id		0.795			0.712			0.738			0.726			0.755	
Exclu_vw		0.805			0.721			0.747			0.735			0.764	
Indepnt		0.822			0736			0.762			0.750			0.780	
Decide		0.638			0.571			0.591			0.582			0.605	
Correlations **	Threat (cr)			Threat (cr)			Threat (cr)			Threat (cr)			Threat (cr)		
SUB_NAT	**0.18** (6.46)			**0.11** (3.40)			**0.33** (9.51)			**0.23** (6.57)			**0.38** (10.72)		
Overall fit statistics: *Chi-square* = 827.22; *df* = 212; *RMSEA* = 0.049; *SMRM* = 0.043; *CFI* = 0.965															

* All fixed to be equal.
** Between brackets: *cr* = Critical Ratio = Unstandardized parameter/SE (controlled for age and education). In bold if these are significant at 0.05 alpha level.

1 **Wallonia**

Predictors (β's)	1995 Wallonia (N = 1041)			2003 Wallonia (N = 631)			2007 Wallonia (N = 736)			2014 Wallonia (N = 675)			2020 Wallonia (N = 543)		
	Threat	Sub_Nat	Style *	Threat	Sub_Nat	Style *	Threat	Sub_Nat	Style *	Threat	Sub_Nat	Style *	Threat	Sub_Nat	Style *
No_trust (-)	0.774		0.178	0.733		0.185	0.722		0.126	0.744		0.316	0.756		0.241
Expl_sz (-)	0.816		0.178	0.773		0.185	0.761		0.126	0.784		0.316	0.797		0.241
Contribute (+)	-0.754		0.178	-0.714		0.185	-0.703		0.126	-0.403		0.316	-0.736		0.241
Culthreat (-)	0.813		0.178	0.770		0.185	0.758		0.126	0.781		0.316	0.794		0.241
Enrich (+)	-0.765		0.178	-0.724		0.185	-0.713		0.126	-0.735		0.316	-0.747		0.241
Vw_id		0.660			0.656			0.557			0.464			0.648	
Exclu_vw		0.609			0.606			0.531			0.429			0.599	
Indepnt		0.588			0.585			0.513			0.414			0.578	
Decide		0.550			0.547			0.479			0.387			0.540	
Correlations **	Threat (cr)			Threat (cr)			Threat (cr)			Threat (cr)			Threat (cr)		
SUB_NAT	**-0.12** (-2.86)			-0.07 (-1.31)			-0.08 (-1.87)			-0.02 (-0.41)			-0.00 (-0.09)		
Overall fit statistics: *Chi-square* = 728.55; *df* = 212; *RMSEA* = 0.057; *SMRM* = 0.080; *CFI* = 0.940															

2 * All fixed to be equal.
3 ** Between brackets: *cr* = Critial Ratio = Unstandardized parameter/SE (controlled for age and education). In bold if these are significant at 0.05 alpha level.

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Table 2. Measurement model: Within group standardized solutions of over-time metric invariant model for perceptions of ethnic threat (THREAT), territorial identity (TERR_ID), and attitudes toward state reform (STA_RE) in Wallonia

Predictors (β's)	1995 Wallonia (N = 1041)				2003 Wallonia (N = 631)				2007 Wallonia (N = 736)			
	Threat	Terr_Id	Sta_Re	Style*	Threat	Terr_Id	Sta_Re	Style*	Threat	Terr_Id	Sta_Re	Style*
Distrust (-)	0.788			0.171	0.766			0.173	0.731			0.126
Exploit sz (-)	0.825			0.171	0.802			0.173	0.766			0.126
Contribute (+)	-0.760			0.171	-0.719			0.173	-0.706			0.126
Cult_threat (-)	0.830			0.171	0.807			0.173	0.770			0.126
Enrich (+)	-0.761			0.171	-0.746			0.173	-0.711			0.126
Vw_Id		0.711				0.697				0.704		
Exclu_id		0.640				0.626				0.633		
Decide			0.637				0.697				0.576	
Independent			0.570				0.624				0.516	
Correlations ** (*cr*)	Threat	Terr_Id			Threat	Terr_Id			Threat	Terr_Id		
Terr_Id	ns				0.17 (2.78)				ns			
Sta_Re	**-0.21** (-4.38)	**0.73** (10.32)			**-0.28** (-4.80)	**0.55** (6.14)			**-0.10** (-2.00)	**0.46** (5.67)		
Overall fit statistics: Chi-square = 436.59*; df* = 188*; RMSEA* = 0.043*; SRMR = 0.055; CFI* = 0.972.												

(Table 2: continued)

Predictors	2014 Wallonia (N = 675)				2019 Wallonia (N = 543)			
	Threat	Terr_Id	Sta_Re	Style*	Threat	Terr_Id	Sta_Re	Style*
Distrust (-)	0.755			0.299	0.761			0.229
Exploit sz (-)	0.791			0.299	0.797			0.229
Contribute (+)	-0.409			0.299	-0.734			0.229
Cult_threat (-)	0.766			0.299	0.802			0.229
Enrich (+)	-0.735			0.299	-0.740			0.229
Vw_Id		0.601				0.782		
Exclu_id		0.541				0.703		
Decide			0.535				0.580	
Independent			0.479				0.519	
Correlations ** (cr)	Threat	Terr_Id			Threat	Terr_Id		
Terr_Id	ns				ns			
Sta_Re	ns	**0.20** (2.25)			ns	**0.58** (6.06)		
(id)								

* All fixed to be equal.

** Between brackets: cr = critical ratio = Unstandardized parameter/SE (controlled for age and education). In bold if these are significant at 0.05 alpha level.

Table 3a. Structural relationships of mediation model for Flanders (standardized parameters in 2014 and 2020 samples)

	Total effects on Explanatory variables			Effects on THREAT		
Flanders 2014 (N = 1182)	Sub_nat (cr)	Ethnic (cr)	Civic (cr)	Direct (cr)	Indirect (cr)	Total (cr)
AGE6	0.139 (4.019)	0.206 (5.362)	0.031 (0.686)	-0.012 (-0.310)		
EDUC5	0.162 (4.612)	-0.320 (-9.130)	-0.163 (-3.950)	-0.143 (-3.880)		
SUB_NAT		0.274 (6.694)	0.212 (4.419)	0.086 (2.344)	0.183 (6.192)	0.269 (8.470)
ETHNIC				0.668 (7.751)		
CIVIC		0.754 (24.120)*		0.003 (0.033)		
Flanders 2020 (N = 1023)	Sub_nat (cr)	Ethnic (cr)	Civic (cr)	Direct (cr)	Indirect (cr)	Total (cr)
AGE6	0.053 (1.385)	0.157 (3.479)	0.017 (0.361)	0.014 (0.351)		
EDUC5	0.012 (0.331)	-0.339 (-7.599)	-0.218 (-4.684)	-0.218 (-5.286)		
SUB_NAT		0.337 (7.064)	0.279 (6.010)	0.185 (4.396)	0.178 (5.300)	0.363 (11.960)
ETHNIC				0.579 (5.341)		
CIVIC		0.735 (18.901)**		-0.060 (-0.632)		
R^2 and Fit indices	R^2_{2014} = 0.565; R^2_{2020} = 0.534; *Chi-square* = 329.566; *df* = 246; *RMSEA* = 0.038; *SRMR* = 0.050; *CFI* = 0.983					

Note. Structural model is based on metric invariant measurement model presented in Appendix Table 2A. Style is included in the model but not shown. *Cr* = Critical Ratio

* Correlation

Table 3b. Structural relationships of mediation model for Wallonia (standardized parameters in 2014 and 2020 samples)

	Total effects on Explanatory variables				Effects on THREAT		
Wallonia 2014 (N = 719)	TER_ID (*cr*)	STA_RE (*cr*)	ETHNIC (*cr*)	CIVIC (*cr*)	Direct (*cr*)	Indirect (*cr*)	Total (*cr*)
AGE6	-0.002 (-0.031)	0.048 (0.833)	0.206 (3.495)	0.115 (1.900)	0.077 (1.627)		
EDUC5	0.039 (0.667)	0.274 (4.792)	-0.325 (-5.425)	-0.115 (-1.770)	-0.096 (-1.635)		
TER_ID			0.051 (0.572)	-0.042 (-0.437)	0.181 (2.677)	0.017 (0.382)	0.199 (2.870)
STA_RE	0.274 (2.954)*		-0.094 (-0.995)	-0.092 (-0.907)	-0.180 (-2.488)	-0.052 (-1.088)	-0.233 (-3.311)
ETHNIC					0.441 (3.427)		
CIVIC			0.726 (12.749)*		0.122 (1.091)		
Wallonia 2020 (N = 599)	TER_ID (*cr*)	STA_RE (*cr*)	ETHNIC (*cr*)	CIVIC (*cr*)	Direct (*cr*)	Indirect (*cr*)	Total (*cr*)
AGE6	-0.027 (-0.460)	-0.102 (-1.604)	0.185 (2.616)	0.084 (1.296)	0.082 (1.414)		
EDUC5	-0.181 (-3.216)	0.087 (1.301)	-0.128 (-1.514)	-0.068 (-0.868)	-0.263 (-4.284)		
TER_ID			-0.008 (-0.055)	-0.079 (-0.588)	0.167 (1.774)	-0.001 (-0.017)	0.166 (1.973)
STA_RE	0.274 (2.954)*		-0.060 (-0.423)	-0.077 (-0.596)	-0.143 (-1.516)	-0.027 (-0.400)	-0.170 (-1.961)
ETHNIC					0.492 (4.026)		
CIVIC			0.685 (13.429)*		-0.035 (-0.295)		
R^2 and Fit indices	$R^2_{2014} = 0.449$; $R^2_{2020} = 0.421$; $Chi^2 = 443.246$; $df = 246$; $RMSEA = 0.038$; $SRMR = 0.055$; $CFI = 0.971$						

Note. Structural model is based on metric invariant measurement model presented in Appendix Table 2A. Style is included in the model but not shown. *Cr* = Critical Ratio= Standardized parameter/SE

* Correlation

8 Appendices

Appendix 1: Question wording of observed indicators for perceived ethnic threat (THREAT) and (sub)national identity (SUB_NAT) in the five cross-sections

Item	**Perceived Ethnic Threat**
NO_TRUST (-)	In general, immigrants cannot be trusted
EXPL_SZ (-)	Guest workers come here to take advantage of our social security system
CULTHREAT (-)	Immigrants are a threat to our culture and customs
ENRICH (+)	The presence of different cultures enriches our society
CONTRIBUTE (+)	Immigrants contribute to the welfare of our country (1995, 2003, 2007, 2020) Immigrants who work here contribute to affordable pensions (2014)
Item	**(Sub)national Identity**
VW_ID	Which group do you consider yourself to be a member of: in first place, and in second place? (response card with 8 (+ 'other') entities listed) Transformed into a 4-point scale: 1 = *first identification with Belgium*; 4 = *first identification with Flanders/Wallonia*. The second choice was taken into account for ranks 2 and 3.
EXCLU_VW (Linz-Moreno question)	5-point scale (1 = *exclusively Belgium*; 5 = *exclusively Flemish/Walloon*) Order was reversed in the questionnaire.
DECIDE	The preferred form of administrative state for the country is still being discussed. Some think that 'Flanders/Wallonia must be able to decide about everything itself'. Others think that 'Belgium must be able to decide about everything'. Where would you place yourself? 11-point scale (0 = *Belgium should make decisions*; 10 = *Flanders/Wallonia should make decisions*) Order was reversed in the questionnaire.
INDEPNT	In your opinion, how far should Flanders/Wallonia evolve in self-determination? (1) Independence; (2) Merger with another country; (3) Independent part of Belgium; (4) Flanders: Strive for the independence of Flanders; Wallonia: Stop the division of Belgium. (5-point Likert item, scale to be reversed in Flanders). Additional follow-up question: 'Should we return to a unitary Belgium?' (Yes/No) (1995) (1) Restoration of a unitary Belgian state; (2) A federal state, but more power for the central authorities; (3) A federal state, but more power for the communities and regions; (4) Keep the present situation. The latter was last on the response card, but in the analysis it is considered as the middle category. (2003[1]) (1) Restoration of a unitary Belgian state; (2) A federal state should stay, but with more power for the central government than is now the case; (3) The present situation should be kept; (4) The federal state should stay, but with more power for the communities and regions than is now the case; (5) Belgium should be split. (2007, 2014, 2020)

Note: [1]It should be noted that the wording was adapted to the actual position of state reform at the time of the survey.

Appendix 2: Structural model: Within-group standardized solution of metric invariant model in Flanders and in Wallonia including the control variables age and education

Predictors (β's)	1995 FLANDERS		2003 FLANDERS		2007 FLANDERS	
	AGE (cr)	EDUCAT (cr)	AGE (cr)	EDUCAT (cr)	AGE (cr)	EDUCAT (cr)
E_THREAT	0.10 (4.78)	-0.23 (-11.05)	0.07 (2.00)	-0.40 (-11.35)	0.17 (5.35)	-0.31(-9.01)
SUB_NAT	(ns)	0.12 (5.19)	(ns)	0.09 (2.46)	(ns)	0.18 (4.72)
STYLE	(ns)	(ns)	(ns)	(ns)	(ns)	-0.17 (-2.99)
Predictors (β's)	1995 WALLONIA		2003 WALLONIA		2007 WALLONIA	
	AGE (cr)	EDUCAT (cr)	AGE (cr)	EDUCAT (*cr*)	AGE (cr)	EDUCAT (cr)
E_THREAT	(ns)	-0.36 (-9.49)	(ns)	-0.31 (-7.45)	0.12 (3.30)	-0.39 (-9.98)
SUB_ID	(ns)	(ns)	(ns)	(ns)	(ns)	(ns)
STA_RE	-0.15 (-3.04)	0.22 (4.26)	-0.15 (-2.56)	0.20 (3.60)	-0.20 (-2.43)	0.19 (3.27)
STYLE	0.12 (2.05)	(ns)	0.16 (2.41)	0.19 (2.83)	0.22 (3.97)	(ns)

(Appendix 2 continued)

Predictors	2014 FLANDERS		2020 FLANDERS	
	AGE (cr)	EDUCAT (cr)	AGE (cr)	EDUCAT (cr)
E_THREAT	0.17 (5.02)	-0.31 (-8.72)	0.13 (3.67)	-0.44 (-11.11)
SUB_NAT	0.16 (4.34)	0.20 (5.29)	(ns)	(ns)
STYLE	(ns)	(ns)	(ns)	(ns)
Predictors	2014 WALLONIA		2020 WALLONIA	
	AGE (cr)	EDUCAT (cr)	AGE (cr)	EDUCAT (cr)
E_THREAT	0.19 (5.23)	-0.32 (-8.32)	0.22 (5.30)	-0.40 (-9.15)
SUB_ID	(ns)	(ns)	(ns)	-0.25 (-3.96)
STA_RE	(ns)	0.25 (3.70)	(ns)	0.12 (1.99)
STYLE	0.15 (1.95)	-0.41 (-4.29)	0.36 (4.04)	(ns)

Note. No equality constraints of structural parameters were introduced in the model. Between brackets: *cr* = Critical Ratio = Unstandardized parameter/SE (controlled for age and education).

Appendix 3: Measurement part of structural equation model in 2014 and 2020 samples of Flanders and Wallonia

Flanders	THREAT		SUB_NAT		ETHNIC		CIVIC		STYLE*	
	2014	2019	2014	2019	2014	2019	2014	2019	2014	2019
No_trust (-)	0.780	0.810							0.294	0.238
Expl_sz (-)	0.827	0.861							0.288	0.238
Contribute (+)	-0.351	-0.714							0.153	0.238
Culthreat (-)	0.793	0.829							0.287	0.238
Enrich (+)	-0.732	-0.730							0.300	0.238
Vw_id			0.726	0.736						
Exclu_vw			0.763	0.814						
Decide			0.664	0.696						
Indepnt			0.582	0.504						
Born					-0.700	-0.627				
Ancestors					-0.682	-0.632				
W_Cult_adj					-0.825	-0.846				
Know_hist					-0.683	-0.657				
Contrib_econ							-0.781	-0.827		
Own_fina							-0.894	-0.977		
Model fit	*Chi-square* = 610.011; *df* = 194; *RMSEA* = 0.044; *SRMR* = 0.036; *CFI* = 0.984									

Note. Metric invariance model for ethnic threat, civic and ethnic citizenship, and (sub-)national identity in Flanders for wave 2014 and 2020. Estimation via Mplus 7.0 with estimator WLSMV. Error correlation between item BORN and ANCESTORS was included. CONTRIBUTE item from the ethnic threat scale was not constrained to be equal between two waves.

* Unstandardized slopes of the STYLE factor are fixed to be equal. Correlation between STYLE and ETHNIC THREAT was set to be zero.

(Appendix 3 continued)

Wallonia	THREAT		TERR_ID		STA_RE		ETHNIC		CIVIC		STYLE*	
	2014	2019	2014	2019	2014	2019	2014	2019	2014	2019	2014	2019
No_trust (-)	0.790	0.706									0.298	0.208
Expl_sz (-)	0.756	0.798									0.298	0.242
Contribute (+)	-0.353	-0.602									0. 298	0.265
Culthreat (-)	0.830	0.844									0. 298	0.233
Enrich (+)	-0.708	-0.665									0. 298	0.215
Vw_id			0.526	0.691								
Exclu_vw			0.600	0.693								
Decide					0.459	0.489						
Indepnt					0.635	0.601						
Born							-0.614	-0.578				
Ancestors							-0.569	-0.522				
W_Cult_adj							-0.761	-0.708				
Know_hist							-0.517	-0.535				
Contrib_econ									-0.725	-0.663		
Own_fina									-0.797	-0.952		
Model fit	*Chi-square* = 411.970; *df* = 181; *RMSEA* = 0.044; *SRMR* = 0.043; *CFI* = 0.974											

Note. Metric invariance model for ethnic threat, civic and ethnic citizenship, territorial identity, and state reform in Flanders for wave 2014 and 2019. Estimation via Mplus 7.0 with estimator WLSMV. Error correlation between item BORN and ANCESTORS was included. CONTRIBUTE item from the ethnic threat scale was not constrained to be equal between two waves.

* Unstandardized slopes of the STYLE factor are fixed to be equal. Correlation between STYLE and ETHNIC THREAT was set to be zero.

9 Article type

Original research

10 Manuscript Formatting

11 Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

12 Author Contributions

JB designed the study, identified the relevant theoretical frameworks, analyzed the data and drafted the article. CM designed the study, analyzed the data and modified the first and final draft of the article. KA designed the study, identified the relevant theoretical frameworks and corrected the final draft of the article.

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15 Data Availability Statement

The data for this study is documented in the 1995, 2003, 2007, 2014 and 2020 *General Election Study Belgium. Codebook and Questionnaire. ISPO-KULeuven / PIOP-UCL and* ISPO-KU Leuven/CLEO –Université de Liège. The datasets are available at request.

16 Figure Legends

Figure 1. Measurement model: Latent variables (ovals) and observed indicators (rectangles) (without parameter values, controlled for education and age)

Figure 2a. Structural model for Flanders and Wallonia (one-factor solution for national identity) (see Table 1)

Figure 2b. Structural model for Wallonia (two-factor solution for national idenity) (see Table 2)

Figure 3. Mediation model of ethnic and civic citizenship conceptions (2014 & 2020)

17 Supplementary Material

Supplementary Material should be uploaded separately on submission, if there are Supplementary Figures, please include the caption in the same file as the figure. Supplementary Material templates can be found in the Frontiers Word Templates file.

Please see the Supplementary Material section of the Author guidelines for details on the different file types accepted.