Intraparty competition in urban versus rural settings. The Belgian Lower House elections (2003-2019)

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Abstract

This paper investigates whether intraparty electoral competition – the distribution of preferential votes for candidates running under the same party label – is more intense in urban than in rural areas. Extant research shows that urban voters are less inclined to cast preferential votes, as social distance between voters and candidates is larger than in rural areas. Yet to our knowledge, no study has investigated how these differences at the individual voter level translate to the degree of intraparty competition at the aggregate list level. We hypothesize that urban areas provide a more open electoral market and lead to a more equal distribution of preference votes over co-partisan candidates. We compiled a novel dataset by aggregating 584,973 preferential vote scores for candidates-in-cantons to a dataset of intraparty competition scores for 5,308 party lists-in-electoral cantons. The results of hierarchical linear models indicate that party lists are not necessarily more competitive in urban areas than elsewhere. However, lists containing local officeholders and incumbent MPs are significantly more competitive in urban areas than rural areas.

Key words: Intraparty competition, Urbanization, Preferential votes, Belgium

1. Introduction

This paper investigates differences in the level of intraparty competition on party lists in urban versus rural areas. Is this type of electoral competition more intense in highly urbanized settings, and if so, which underlying mechanism explains these differences? We measure patterns of competition within political parties by looking at preferential vote distributions across candidates running under the same party label. Fairly recently, the topic of intraparty competition has experienced a strong surge in research attention by election scholars (e.g. Bergman et al., 2013; Cheibub and Sin, 2020; Dodeigne and Pilet, 2019; Folke and Rickne, 2020; Isotalo et al., 2020; Passarelli, 2020; Put et al., 2020).

In light of the trends towards personalization of electoral behavior and partisan decline taking place in most established democracies, competition within parties is indeed becoming a more crucial aspect of theories and empirical studies on electoral and party politics. According to Musella and Webb (2015: 226), "the century that has just started will be the age of personalization, just as the previous one was the century of mass collective actors−a trend that political science has a duty to consider with greater attention".

Even though intraparty competition might have 'healthy' effects on electoral democracies, such as declining incumbency advantage vis-à-vis challengers (Ariga, 2015), the majority of studies focus on its negative effects. Some of the regular concerns are (Rahat & Kenig 2018) the increased fractionalization of political parties and the government instability it creates; the "vicious circle" of the development of authoritarian figures (especially in new democracies); or the inability of societies to articulate (legitimate) collective actions over individual interests. Intraparty competition might therefore lead to excessive particularistic behavior from elected representatives and foster political corruption (Cheibub and Sin, 2020).

While the literature contends that intraparty competition is on the rise as a consequence of the broad trend towards personalization of politics, scholars remain silent regarding the effect of other potentially important contextual variables. Intraparty electoral competition does not take place in a vacuum: candidates compete for votes in cities, suburban areas or rural environments. We know from earlier empirical work on preferential voting that the degree of urbanization affects the inclination of voters to cast preferential votes. Yet to the best of our knowledge, no earlier studies have investigated the importance of the urban-rural divide for the level of intraparty electoral competition on party lists. The present study provides a first empirical effort to analyze differences in intraparty competition patterns between urban and rural areas.

We develop a set of theoretical arguments to explain intraparty competition differences between urban and rural areas. More specifically, we contend that the electoral market in urban areas provides more fertile grounds for high levels of intraparty competition (i.e. strong dispersion of preference votes over candidates running under the same party label) than rural areas. Urban areas are characterized by strong population density, more population mobility (the number of citizens moving in and out of a given territory) and higher population diversity. These urban characteristics all contribute to a more open intraparty electoral competition.

We use a novel and built-for-purpose dataset on the distribution of preferential votes over candidates on the same party list for five consecutive Lower House elections in Belgium (2003-2019). To this end, we aggregated 584,973 preferential vote scores for candidates in the different cantons (available for 2003-2019) of their electoral district to a dataset of GINI-coefficient scores, an established indicator of intraparty competition (see e.g.: Dodeigne and Pilet, 2019). We link these intraparty competition scores to data by the public authorities on the demographic characteristics of cantons in mentioned election years, and to data on the presence of prominent politicians on party lists. We run hierarchical linear models to analyze the link between urban characteristics and the level of intraparty competition.

2. How urbanization affects intraparty competition: theory and hypotheses

Over the past half century, the world has witnessed a substantial growth of the population living in urban settings. Today, a majority of 55% of the global population lives in urban areas, a percentage that is expected to increase to 68% by 2050 (United Nations, 2018). Similar to other disciplines in the social sciences, comparative politics has recently shown a novel interest in urbanization as a key factor explaining political behavior and attitudes in established democracies. According to some scholars, the urban-rural divide is gaining importance at the expense of traditional political cleavages (Rodden, 2019; Huijsmans et al. 2020).

In this paper, we contend that not only *inter*party, but also *intra*party competition is shaped by the urban or rural context in which voters reside. We already know from earlier studies that the inclination to cast preferential votes is affected by the urban character of a voter's local environment. A robust finding is that voters in urban contexts are less inclined to cast preference votes, as social distance between voters and candidates is larger than in rural areas (André et al., 2012; Passarelli, 2017; Wauters et al., 2012).[1]

Such tendencies in the use of preferential votes also have consequences for the degree of intraparty competition, which has long remained the neglected dimension of electoral competition. Intraparty competition refers to the level of competition between candidates running under the same party label in the same multimember district (Herron et al., 2018). This type of competition within parties can be fierce with an equal distribution of votes over co-

[1] A notable exception is Allen (2015), who finds moderate support for a positive correlation between urbanization and the increased rate of preference votes. The alternative argument presented in this work on the case of Indonesia is that voters in urban centers have more expansive media markets with increased information about candidates, which leads to higher levels of personal voting.

partisans, or rather limited with a strong concentration of preferential votes for only a few candidates (Andeweg, 2005; Folke et al., 2016).

Only recently empirical studies on different aspects of intraparty competition have been mushrooming. This includes research on party strategies to contain intraparty competition (Cheibub and Sin, 2020), successful candidate positioning strategies in terms of ideology (Isotalo et al., 2020; von Schoultz and Papageorgiou, 2019; Folke and Rickne, 2020), the development of indicators measuring intraparty competition (Dodeigne and Pilet, 2019), or studies looking into the effect of the institutional and electoral context on the degree of intraparty competition (Pachon and Shugart, 2010; Söderlund, 2019).

What is lacking in this line of research, however, are empirical studies investigating the effect of the voters' environment on intraparty competition. Contrary to what is the case for preferential voting (cf. supra), we do not know how differences between urban and rural areas affect the distribution of preference votes over candidates running from the same party list. In what follows, we present a set of arguments as to why and how the degree of urbanization impacts intraparty competition.

The urban nature of an area or 'urbanicity' can be considered a multidimensional concept referring to multiple features of modern urban areas and the aspects of urban living. A great deal of empirical research looking at the effect of urban environments on human behavior uses the urban-rural dichotomy to describe urbanicity, which is increasingly considered inadequate (e.g. Vlahov and Galea, 2002; Dahly and Adair, 2007). Following this simple measurement approach, urban and rural environments are typically juxtaposed based on differences in one dimension, such as population size or density. There are at least two underlying problems with this dichotomy. First, modern urbanicity is a complex concept which comprises more than just an area with a strong concentration of population. Literature on the link between urbanization and health presents alternative approaches where various aspects of an urban environment –

such as changes in size, population mobility, density, economic activity, population heterogeneity, segregation – are combined in urbanicity scales (e.g. Vlahov and Galea, 2002; Cyril et al., 2013). Second, while urban and rural areas were clearly separable in the past, modern rural areas are now experiencing changes traditionally linked with urban areas, such as rural gentrification processes (e.g. Phillips and Smith, 2018).

By the same token, a simple binary variable disentangling urban and rural areas to investigate the effect of urbanization on political behavior raises many concerns. A lot of the cited research on preferential voting follows a similar approach, all the more because urbanization only takes the role of control variable in many of those studies. As it is our main ambition, however, to assess the role of urbanicity in explaining levels of intraparty competition, we propose to conceptualize urbanicity in a more comprehensive manner, and point to multiple features of urban areas that can affect intraparty competition: population density, population mobility (i.e. citizens moving in and out of the area), and population diversity. For each of these dimensions, we now discuss the underlying mechanisms which affect intraparty competition.

Population density is the first and most classical feature to investigate urbanicity, and measures the number of people living in an area or administrative unit per square kilometer. Large urban centers typically concentrate high numbers of voters, which has consequences for electoral competition between individual candidates. In line with the central argument raised in the literature on preferential voting, social distance between voters and candidates is larger in urban areas. In rural areas, social networks are generally denser and voters are more likely to know one or more specific local politicians directly (André et al., 2012). Urban voters tend to be more individualistic and atomized, which leaves them less sensitive to local identities and less attached to local communities (Nemoto and Shugart, 2013). As candidate-voter relations are more loose in urban areas with strong voter concentrations, it will be harder for candidates to

truly stand out in election campaigns and carve out personal constituencies (Cheibub and Sin, 2020).

In addition to being more densely populated areas, urban centers are also characterized as having higher levels of *population mobility* (e.g. Leviton et al., 2000). Different mechanisms explain why the *in*- and *out*-mobility of citizens – and thus voters – is considerably higher in urban versus rural contexts. First, as mentioned in the discussion on population density, urban dwellers have lower levels of local attachment which makes them less likely to live in the same local environment for their entire lives. Second, as housing prices are often considerably higher in city centers than elsewhere, urban voters are less likely to be homeowners and thus move more frequently than do rural voters (Ramseyer and Rosenbluth, 1993; Hicken, 2007). Third and somewhat related to the previous point, global processes of urban change significantly alter the composition of inner-city neighborhoods. More specifically, gentrification of traditional working-class neighborhoods leads to the influx of a wealthier, new urban middle class population with limited previous connections to the city, and the physical displacement of longstanding neighborhood inhabitants who cannot afford to stay (Ley, 1996; Smith, 2002). All these elements contribute to greater difficulties for candidates to develop and maintain a core group of supporters. Put another way, winning personal votes is more costly for any type of politician in such dynamic areas, which again leads to a more level playing field in terms of preference votes.

The third and final dimension of urbanicity which we deem relevant for explaining differences in intraparty electoral competition is the level of population diversity. In earlier empirical work on the link between urbanicity and health, urban environments are often associated with more diverse populations in terms of ethnicity (e.g. Acevedo-Garcia, 2001). We argue that higher levels of ethnic, cultural or religious diversity in urban settings also affects patterns of intraparty competition. Azabar et al. (2020) show that voters who belong to Muslim faith are more likely

to vote for Muslim candidates. Another study on local elections in Brussels demonstrates that candidates with certain ethnic minority backgrounds receive significantly higher preferential vote shares as their ethnic group's concentration in the population increases (Janssen, 2020). Farrer and Zingher (2018) find that party selectorates themselves are responsive to demographics during candidate recruitment, and therefore select more ethnic minority candidates. Urban contexts with their greater population diversity provide more incentives for parties to balance their ticket. We expect that the increased level of descriptive representation on party lists leads to higher levels of intraparty competition in urban areas. As ethnic, religious or cultural groups are likely to behave as a "voting bloc" according to voter-candidate similarities, the number of candidates on the party list with a substantial share of preference votes increases and it becomes harder for a limited group of candidates to truly dominate intraparty competition.

In sum, we hypothesize that the degree of urbanicity, shaped by an area's demographic characteristics as discussed above, is positively associated with intraparty competition (H1).

However, previous research demonstrates that the specific composition of party lists affects the structure of intra-party competition as well. The presence of prominent candidates leads to a greater concentration of preferential votes, as these politicians have the potential to dominate intra-party competition (Dodeigne and Pilet, 2019; Poguntke and Webb, 2005; Wauters et al., 2018). What constitutes well-known candidates or '*big fish'* largely depends on the level of observation. While at the electoral district level only party leaders, cabinet members and MPs will have the capacity to convincingly dominate electoral competition within the same list, on a more disaggregated and local level of observation, we expect that incumbent local office-holders (i.e. mayors, aldermen and local councilors) are able to do the same. When looking at preferential vote distributions on party lists in specific local areas, one can expect that the concentration of preferential votes will be higher with political office-holders present. These

prominent politicians thus include national or regional level politicians as well as local-level politicians. We therefore hypothesize that the presence of political office-holders on party lists is associated with lower levels of intraparty competition (H2).

4. Data, case selection and methods

We use a unique and built-for-purpose dataset on the Belgian Lower House elections to analyze the link between urbanicity and intraparty competition. This dataset was compiled using three different sources of information. *First*, the distribution of preferential votes over candidates running on the same party list was analyzed for five consecutive Lower House elections (2003-2019). For every party list, preferential vote results are available for distinct subdistrict levels (electoral cantons, which comprise up to maximum five municipalities). These more disaggregated preference vote scores can be leveraged to analyze the effect of heterogeneity in urbanicity indicators on preference vote distributions. We web-scraped 584,973 preferential vote scores for Lower House candidates in the different electoral cantons in the electoral district where they ran from the official election results websites hosted by the Federal Public Service Home Affairs. Subsequently, these preferential vote scores of candidates-in-cantons where used to calculate the level of intraparty competition on lists-in-cantons.

Second, we collected data on the political offices served by candidates on the lists (i.e. party leaders, cabinet positions or MP at regional or federal level, MEPs, mayor, alderman or local councilor) and the place of residence of 5,700 federal election candidates running for ten Belgian political parties with permanent parliamentary representation during the period under investigation: CD&V, cdH, sp.a, PS, (Open) VLD, MR, Agalev/Groen, Ecolo, N-VA and Vlaams Belang. With this information, we can take into account the composition of party lists – i.e. the presence of 'big fish' – and examine the effect of prominent candidates in the canton.

Third, we collected data on the three mentioned aspects of urbanicity from the General Directorate Statistics of the Federal Public Service Economy. For population density, we use the number of inhabitants per squared kilometer (this was recalculated for the electoral cantons based on the sum of inhabitants and surface areas of municipalities included in the respective canton). Regarding population mobility, yearly municipal data on the internal immigration and emigration were used, which is the absolute number of inhabitants moving in and out of the respective municipalities. Subsequently, the population mobility was calculated as the sum of internal immigration and emigration per 1,000 inhabitants.[2] This was again recalculated for the respective electoral cantons. Finally, for the population diversity indicator, we use the percentage of Belgian citizens in the municipalities with a different nationality at the time of birth. While this percentage does not represent a perfect measurement of the share of inhabitants with different ethnic, cultural or religious backgrounds, we contend that it is a proxy that can be used to tap the level of diversity in a municipality's population. Similar as for the other indicators, we also recalculated this percentage for the different electoral cantons.

The five Belgian Lower House elections taking place between 2003 and 2019 are organized using a flexible list proportional representation system. Belgian voters are able to cast one or multiple (as many as there are candidates on the list) preference votes, or a list vote which endorses the party list and its pre-electorally determined order of candidates. As is the case for all flexible list PR systems, in Belgium there are specific rules on the weight of preference votes in the intra-party seat allocation process. Renwick and Pilet (2016) coin the Belgian flexible list variant as the transfer type, where candidates are elected in the order of the preference votes they receive, but list votes are ascribed to the highest pre-electorally ranked candidate to reach the necessary number of votes to get elected. The remaining list votes are cascaded down the list until all are used. In practice, the pre-electoral rank order and list votes are more decisive

[2] This indicator is also referred to as the 'internal migration intensity' by the General Directorate Statistics.

than preferential votes to determine who gets elected. However, Belgian voters use preferential votes to communicate about their candidate preferences to parties, which subsequently use electoral success to decide on rank promotions (André et al., 2017).

Over the years, the use of preferential votes has been growing and reached its top with 66% of all voters casting candidate preferences in 2003 (Wauters et al., 2015). After those elections, the share of voters casting preferential votes has consistently gone down as a result of a growing pattern of centralized personalization and declining rates of decentralized personalization (Wauters et al., 2018). Our data on the presence of 'big fish' on the party lists allows us to disentangle these effects of list composition on intraparty competition from the characteristics of the voters' environment. While our country case is located in the heart of Western Europe, which is one of the most urbanized areas in the world, Belgium still displays considerable within-country variation in terms of urbanization, especially for the south of the country. According to Eurostat's cross-national classification of local administrative units over three categories of urbanization (1: cities; 2: suburban areas and towns, 3: rural areas),[3] in 2018 40.4% of all Belgian municipalities could be considered as rural, 53.7% as suburban areas or towns, and the remaining 5.9% as cities. We can therefore expect that the different urbanicity indicators will vary substantially over Belgian cantons.

As regards the dependent variable for the empirical analysis, we calculate the Gini coefficient which captures the statistical dispersion of votes among candidates on a given party list (Dodeigne and Pilet, 2019). This coefficient measures how much of the preferential votes are concentrated on prominent candidates or spread out over all candidates, and produces scores between 0 (which equals perfect intraparty competition where all candidates attract an equal amount of votes) and 1 (which represents party lists where one candidate receives all preference

[3] https://ec.europa.eu/eurostat/web/gisco/geodata/reference-data/population-distribution-demography/degurba

votes).[4] The Gini coefficient provides both scale and population independence, implying that scores are comparable for party lists with different electoral strengths and with varying numbers of candidates running for election. Three independent variables of interest are included regarding canton characteristics: population density, population mobility and population diversity. We use a logged version of these three variables.

In addition, we include a variable measuring the presence of political office-holders on the party list, and the share of non-locally rooted incumbents on the list. We register the absolute number of party leaders, cabinet members (regional + federal), MPs (regional + federal), local officeholders (councilors + executive) on the party lists. We also distinguish between office holders which are locally rooted in the electoral canton and those who are not. In line with previous research on the role of politicians' local ties (e.g. Shugart et al., 2005; Tavits, 2010), we expect that concentration of preferential votes might be stronger in the presence of locally rooted political office-holders.

The number of candidates running on the party list and party magnitude (i.e. the number of seats the party won in the previous election in that district) are added as control variables, while party and year fixed effects are included to account for unobserved differences between these groups. We run two-level linear hierarchical models (random intercept, fixed slopes) with party lists-in-cantons as level 1 and cantons as level 2. By using hierarchical models, we avoid underestimating standard errors of coefficients for higher level predictors (i.e. the three urbanicity indicators) as a result of nested data structures. As a matter of fact, the variance of intraparty competition observed at the canton is substantial (44 percent) and significantly decrease once including fixed-canton variables (30 percent, and even 19 percent once including some random effects for some of them).

[4] We only look at the distribution of preferential votes on lists of effective candidates. The lists of successor candidates (and therefore also the composition of successor lists) are excluded from the analysis.

5. Results

To begin with, we look at some descriptive statistics of the different variables of interest included in the empirical analyses. Table 1 summarizes these statistics for the dependent variable (Gini-coefficient) and the three urbanicity indicators.

Table 1: Descriptive statistics on variables of interest in hierarchical models.

	N	Mean	Median	St. Dev.	Min.	Max.
Gini	5,308	0.42	0.42	0.13	0.04	0.80
Population density	5,308	1,005.16	342.99	2503.85	25.69	19,986.23
Population mobility	5,308	100.47	95.64	28.65	34.39	220.66
Population diversity	5,308	5.93	3.94	5.65	0.41	30.34
Number of candidates on list	5,308	15.86	16	5.81	4	24

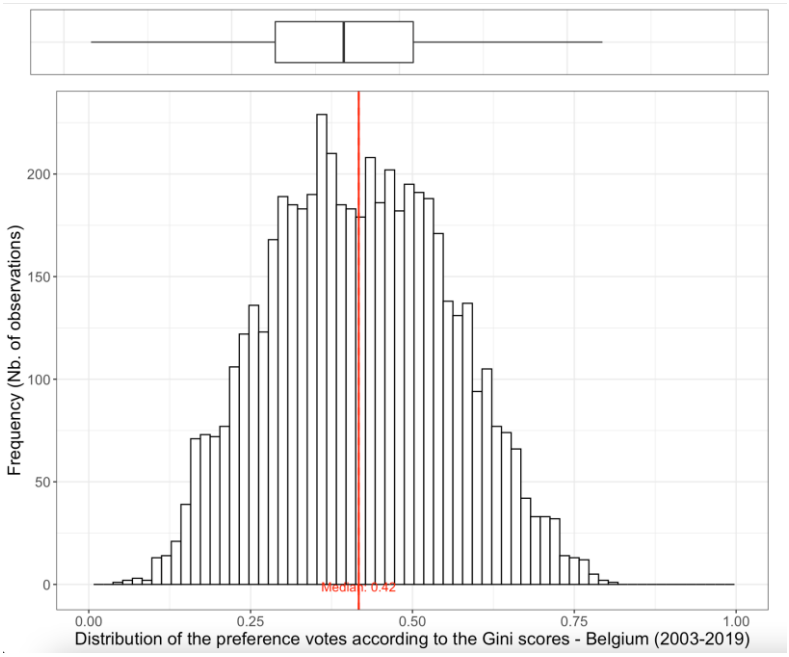

Figure 1:The distribution of Gini-coefficient scores in electoral cantons (Lower House Elections 2003-2019).

The Gini-coefficient in our dataset is normally distributed with a mean and median of 0.42. The lowest Gini-score – and therefore highest level of intraparty competition – can be found on the Ecolo list for the electoral district of Luxembourg in 2003, and in the canton of Florenville specifically. Indeed, the 198 preference votes casted for the four effective candidates on that list are distributed almost perfectly equal (i.e. 49, 54, 51 and 44 votes respectively). The highest Gini-score – and thus the strongest concentration of preference votes we detected in the entire dataset – is linked to the party list of Cdh for the electoral district of Hainaut in 2019, in the canton Merbes-le-Château. Unsurprisingly, David Lavaux, who since 1995 has been the mayor of Erquelinnes which is one of the two municipalities included in this electoral canton, strongly dominates intraparty competition in 'his' canton with a more rural character. With 1,520 preference votes behind his name, Lavaux beats the first-placed candidate Catherine Fonck, federal Lower House incumbent who only collected 376 votes, by a landslide. Apart from these two candidates, only two other candidates received more than 100 preference votes. None of the remaining 14 candidates even received more than 25 votes, leading to a very high score on the Gini-coefficient.

As for the urbanicity indicators, we see that especially population density and diversity have more rightly skewed distributions. While density is lowest in the electoral canton Etalle in Luxembourg (25.69 inhabitants per square kilometer), it reaches one of the highest levels in Europe in the electoral canton of Saint-Gilles (19,986.2 inhabitants per square kilometer) in the Brussels capital district (or BHV district before the 2014 election). Regarding population diversity, we find the lowest absolute number of inhabitants with a different nationality at birth in the electoral canton Horebeke in the electoral district of West Flanders. In 2003, only 0.41% of all inhabitants had a different nationality at birth. The electoral district of Molenbeek-Saint-Jean reported the highest share of inhabitants with a different nationality at birth in 2019 (i.e. 30.34%). Finally, population mobility expresses the number of inhabitants moving in and out

of the canton per 1,000 inhabitants. Mobility is highest in Saint-Gilles with 220.64 inhabitants either moving in or out of the canton in the election year 2010, and lowest in the canton Comines-Warneton where only 34.39 out of 1,000 inhabitants emigrated or immigrated in 2003.

Table 2 reports the results of five hierarchical linear models which analyze the level of intra-party competition on 5,308 lists-in-cantons over five consecutive Lower House elections in Belgium (2003-2019). Model 1 includes the three urbanicity indicators and the number of candidates on the list and party magnitude as control variable, as well as the party family and election year fixed effects. The results indicate that population density and mobility bear no effect on the Gini-coefficient. Population diversity, on the contrary, is significantly associated with higher Gini-scores and thus stronger concentration of preference votes on party lists. This runs counter to H1 which expected to see higher dispersion of preference votes over candidates in more diversely populated areas.

In Model 2, the two variables tapping the composition of party lists are added to the analysis. As expected, the presence of political office-holders, both locally rooted in the canton as well as those who are not leads to an increase in the Gini-coefficient and thus a decrease in the level of intra-party competition. The exception is the insignificant coefficient for party leaders who are local, and the significant and negative, albeit very small effect of non-local MPs. The results show no dramatic differences between locally rooted and non-locally rooted political officeholders. These results are largely in line with H2.

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Table 2: Hierarchical linear models analyzing intraparty competition on party lists-in-cantons.

	Model 1	Model 2 (Interactions with density)	Model 3 (Interactions with mobility)	Model 4 (Interactions with diversity)
Population density (log)	0.004	0.01**	0.005	0.003
	(0.005)	(0.004)	(0.005)	(0.005)
Population mobility (log)	0.01	0.02	0.02	0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Population diversity (log)	0.01***	0.01***	0.01***	0.02***
	(0.003)	(0.003)	(0.003)	(0.003)
National party leader (local)	0.01	0.04	0.10	-0.05
	(0.01)	(0.08)	(0.17)	(0.09)
National party leader (not local)	0.03***	0.05***	0.13***	0.03*
	(0.003)	(0.02)	(0.05)	(0.02)
Cabinet member (local)	0.04***	0.09***	0.02	0.10**
	(0.01)	(0.04)	(0.10)	(0.04)
Cabinet member (not local)	0.02***	0.04***	0.09***	0.06***
	(0.002)	(0.01)	(0.02)	(0.01)
MP (local)	0.02***	0.11***	0.16***	0.11***
	(0.003)	(0.02)	(0.05)	(0.02)
MP (not local)	-0.001*	0.01***	-0.03***	-0.001
	(0.001)	(0.003)	(0.01)	(0.003)
Local office-holder	0.01***	0.04***	0.09***	0.06***
	(0.003)	(0.01)	(0.03)	(0.01)
Executive local office-holder	0.02***	0.10***	0.06	0.11***
	(0.003)	(0.02)	(0.05)	(0.02)
Nat. party leader (local) x urban indicator		-0.02	-0.02	0.01
		(0.04)	(0.04)	(0.01)
Nat. party leader (not local) x urban indicator		-0.02**	-0.02**	-0.0001
		(0.01)	(0.01)	(0.002)
Cabinet member (local) x urban indicator		0.01	0.01	-0.01
		(0.02)	(0.02)	(0.005)***
Cabinet member (not local) x urban indicator		-0.02***	-0.02***	-0.01
		(0.01)	(0.01)	(0.001)
MP (local) x urban indicator		-0.03***	-0.03***	-0.01***
		(0.01)	(0.01)	(0.002)
MP (not local) x urban indicator		0.01***	0.01***	0.0001
		(0.002)	(0.002)	(0.0004)
Local office-holder x urban indicator		-0.02**	-0.02**	-0.01***
		(0.01)	(0.01)	(0.001)
Executive local office-holder x urban indicator		-0.01	-0.01	-0.01***
		(0.01)	(0.01)	(0.002)
Candidates on list	0.01***	0.01***	0.01***	0.01***
	(0.001)	(0.01)	(0.01)	(0.01)
Party magnitude	0.01***	0.01***	0.01***	0.01***
	(0.001)	(0.01)	(0.01)	(0.01)
Party family FE	Yes	Yes	Yes	Yes
Election year FE	Yes	Yes	Yes	Yes

Constant	0.21***	0.10**	0.16***	0.13**
	(0.05)	(0.05)	(0.06)	(0.05)
AIC	-12,309.64	-12,513.43	-12,358.89	-12,528.74
N (level 2)	215	215	215	215
N (level 1)	5,308	5,308	5,308	5,308

Notes: Standard errors are indicated between brackets; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Models 3, 4 and 5 add an interaction term between each of the urbanicity indicators on the one hand and the presence of political office holders on the other hand. Separate models are presented as a simultaneous inclusion leads to multicollinearity issues (VIF scores amount to substantially high levels). In each of these models, we see a negative and significant coefficient for the interactive term between the urbanicity indicator and two types of political office: MPs and local officeholders. These results indicate that, when comparing party lists with local officeholders and MPs over different areas, intraparty competition is significantly higher in urban than in rural settings.

It seems that mayors, aldermen, local councilors, federal and regional MPs are more able to dominate intraparty competition in rural areas, regardless of whether they are locally rooted or not. For Belgian party leaders and cabinet members, however, this result does not materialize. In other words, for those most prominent positions in Belgian politics, urban and rural voters are equally seduced to cast preferential votes for them. The results are substantively similar for all three urbanicity indicators. This implies that H1 is confirmed only for lists with local officeholders and MPs present. In those cases, we see a more even distribution of preferential votes in urban centers than in other areas, pointing to higher levels of intraparty competition.

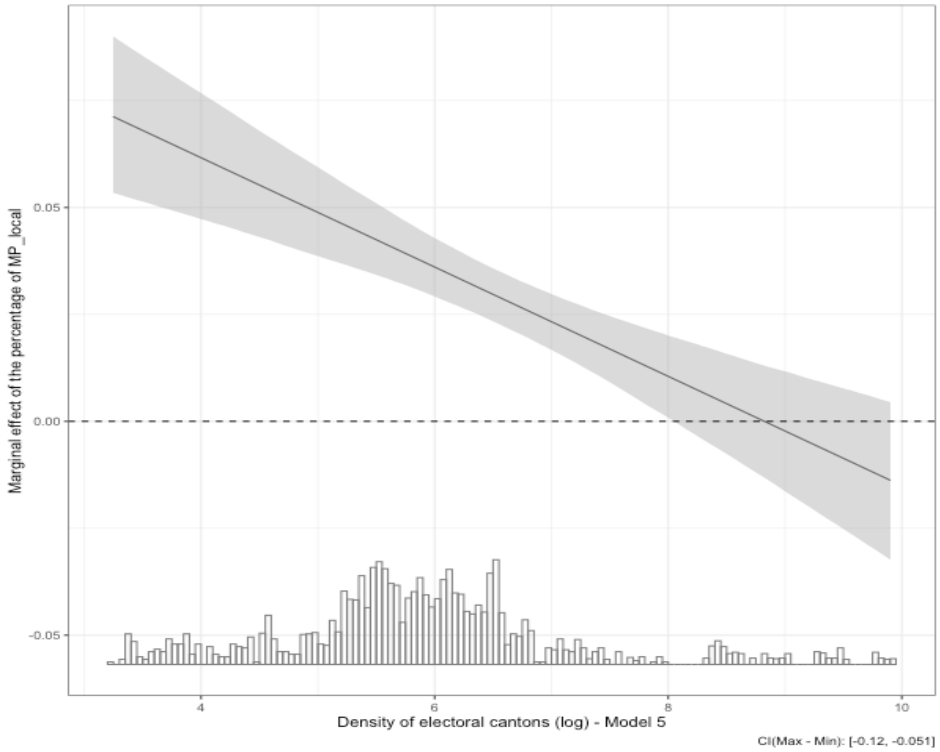

Figure 1: The average marginal effect of the presence of locally rooted MPs conditional on the population density of the canton. Grey areas indicate 95% confidence intervals. The distribution of population density is summarized in the histogram. Estimates are obtained from Model 3 in Table 2.

To ease the interpretation of these interactive effects and their substantive effect sizes, we show the marginal effects of the presence of locally rooted officeholders conditional on the values of the urbanicity indicators. Figure 1 shows the average marginal effect of the presence locally rooted MPs conditional on the values for population density in the canton. While an increase in locally based officeholders clearly has a positive effect on the Gini-coefficient in areas with low density, we see that their presence makes no difference in the highly dense cantons present in the dataset. In terms of substantive interpretation, every additional locally rooted MP leads to a 0.05-0.07 one point increase in the Gini-coefficient in very low density areas such as the canton of Fauvillers in the electoral district of Luxembourg and no significant increase in the different cantons of the Brussels capital region.

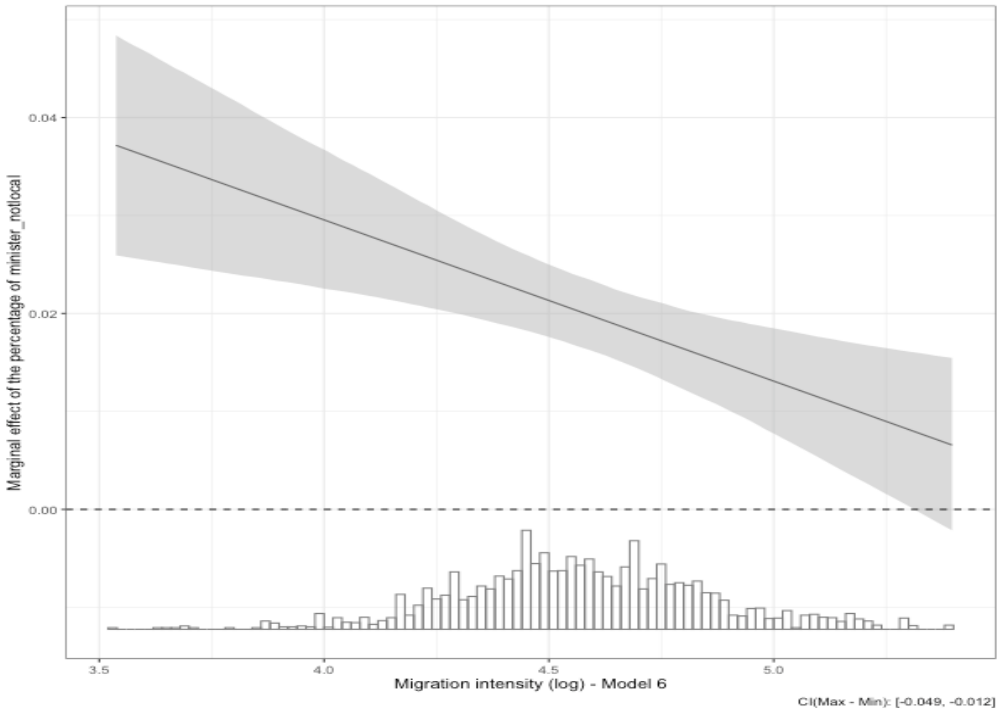

Figure 2: The average marginal effect of the presence of local officeholders conditional on the population mobility in the canton. Grey areas indicate 95% confidence intervals. The distribution of population mobility is summarized in the histogram. Estimates are obtained from Model 4 in Table 2.

Figure 2 presents a similar marginal effect plot conditional on population mobility scores, and this time for local office-holders. In those cantons where mobility is low, for instance where around 35-55 out of 1,000 inhabitants have moved in or out of the canton during the election year, an additional local officeholder from the canton can lead to a 0.04 increase in the Gini-score. Indeed, the effect of those politicians on intra-party competition is quite substantial in areas with more static populations. Figure 2 also shows that the marginal effect is only insignificant for a very small set of hypermobile cantons (180-220 out of 1,000 inhabitants moving in or out) which are gain located in the Brussels capital region.

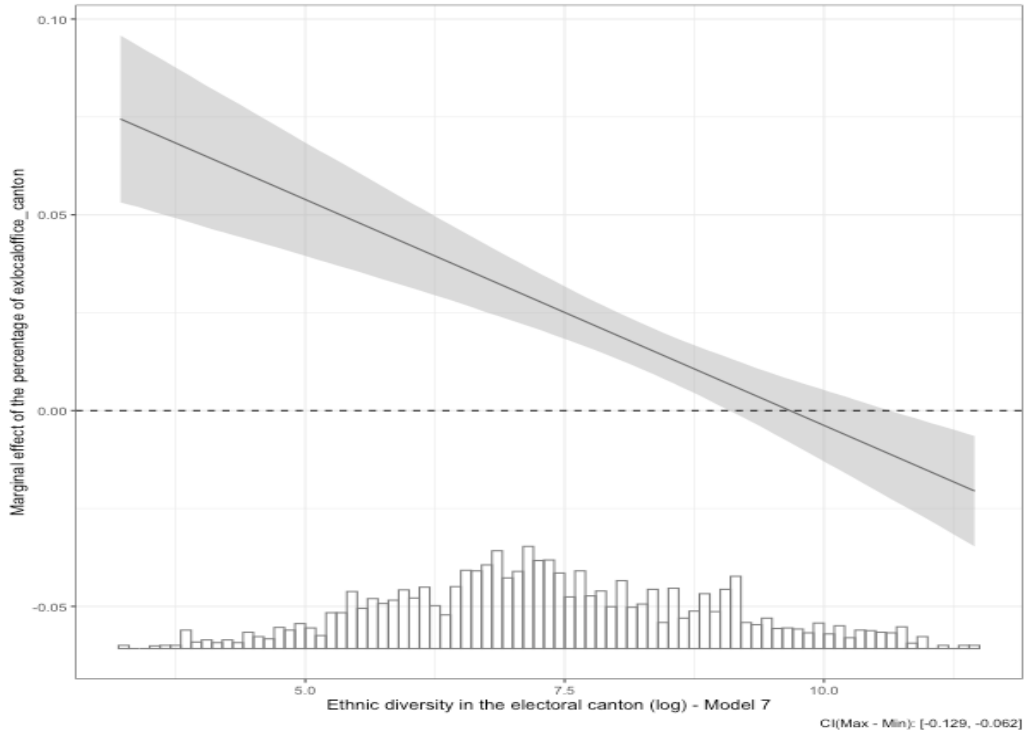

Figure 3: The average marginal effect of the presence of executive local officeholders conditional on the population diversity in the canton. Grey areas indicate 95% confidence intervals. The distribution of population diversity is summarized in the histogram. Estimates are obtained from Model 5 in Table 2.

Finally, Figure 3 shows a similar story for the conditioning effect of the third urbanicity indicator (this time for executive local officeholders). Big fish are able to dominate intra-party competition in areas where diversity is very low, but in highly diverse cantons their presence makes no difference for the Gini-coefficient score.

6. Discussion and conclusion

In this paper, we analyzed how intraparty competition patterns differ between urban and rural settings. The preliminary findings indicate that urban characteristics indeed shape the concentration or dispersion of preference votes on party lists, but conditional on the composition of party lists. We find that the urban nature of an area strongly determines whether prominent politicians can dominate intraparty competition.

We envisage a number of next steps for this project, which we will briefly discuss next. First, while this paper analyzes canton-level data, we aim to analyze the municipality level data for the two most recent federal elections in Belgium. As municipalities provide stronger levels of attachment both from the voter and candidate perspective, we expect to see stronger effects and confirmations of your hypotheses based on the analysis of this second dataset. Second, we also want to run analyses excluding the Brussels cantons, as these indicate the more extreme values on the urbanicity indicators and therefore beg the question whether much of the reported results are driven by voting behavior in the capital region.

Third, we intend to better include the effects of political parties in our future models because the latter determine the degree of intraparty competition in two ways. The first reason is related to the historic electoral context of cantons: Belgian political parties are differently established at the local level with varying local electoral successes. Therefore, some of these cantons are local party strongholds, resulting in a stronger concentration of power on a few local politicians which affect personalization of elections. The second reason is about the characteristics of poltiical parties themselves. While some of them are long-established parties with larger "tanks" of political personals for recruitment; others are new parties with more limited organizations for candidate selection. In those parties, voters are less familiar with the parties – and their candidates – while campaign tend to be concentrated on the prominent figures of the party. Overall, a better sophistication of the party effects should, therefore, be taken into account. Hence, exploratory manipulations show that random effects of political parties substantially explain up to 50% of the variance remaining at the canton level in our models. A more simplistic and minimal solution would be to split models for the different parties as robustness-checks.

Last but not least, our first analysis of the data reveals that intraparty competition seems to be – almost systematically – a non-linear political phenomenon: the degree of competition seems

to increase as our three indicators of population increases whereas it stabilizes – or even decreases – after having reached a certain threshold. This observation is also verified when considering the profiles of candidates such as lis incumbents (see appendix). The inclusion of such quadratic effects would, however, require careful thinking as this means three terms interactions with lists and cantons' variables.

In conclusion, the first results of this paper confirmed that intraparty competition is a complex phenomenon that needs to be unpacked at multiple levels of analysis (candidate, list, party, cantons, district and over time) in which urbanization plays unmistakably a decisive role. That is to say, the nature of competition between candidates is heavily conditioned by the places in which they run their electoral campaigns.

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