PERSONALITY TRAITS AND COGNITIVE ABILITY IN POLITICAL SELECTION

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Abstract
A vast scholarship questions whether voters are sufficiently informed to act in their best interest at the polling booth, which may also have implications for the quality of political representation. In this study, we examine cognitive and non-cognitive ability tests conducted on (male) military conscripts by the Finnish Defense Forces and compare local and national election candidates nominated by political parties and representatives elected by voters with each other and the general population. We show that non-elected candidates fare better in the tests than the population, on average, and elected politicians demonstrate even higher levels of ability. Local politicians' cognitive and non-cognitive skills are on par with individuals who work in high-skill occupations or have at least an undergraduate degree, and national politicians are even better. Our findings suggest that, despite the complex decision-making environment inherent in voter-oriented systems, a political class that is more competent, motivated, and honest than the general population emerges. We further discuss the scope for positive political selection of women, show that there is no evident trade-off between politician quality and descriptive representation, and present evidence on the mechanisms for and the policy effects of positive selection. (JEL: D72, J24, P00)

The editor in charge of this paper was Romain Wacziarg.
Acknowledgments: For helpful feedback and discussions, we thank the editor (Romain Wacziarg), four anonymous referees, Olle Folke, Moa Frödin Gruneau, Horacio Larreguy, Leire Rincón García, Daniel M. Smith, Jonas Werth, and seminar and conference participants at Aalto University, ITAM, Research Institute of Industrial Economics (IFN), Stockholm School of Economics, University of Bergen, EPSA-Prague, Helsinki-IntraComp Workshop, Madrid-PERG Workshop, and Political Economy Workshop at the BI Norwegian Business School. We are grateful to Kari Laitinen from the Finnish Defense Forces and Johannes Lummikko and Antti Sykkö from Statistics Finland for their generous help with the data access. We also thank numerous local politicians for sharing their thoughts on candidate selection. Funding from

Journal of the European Economic Association 2025 23(5):1908–1949
https://doi.org/10.1093/jeea/jvaf010

1. Introduction

Trust in politicians, political parties, and government in general is crumbling across democracies. Behind this pervasive trend are perhaps voters' perceptions of politician incompetence, dishonesty, and self-interest (Bøggild, Aarøe, and Petersen 2021; Winsvold et al. 2024). Concurrently, governing elites have come under attack by populists on both sides of the political spectrum (Algan et al. 2017; Guriev and Papaioannou 2022), fomenting the dismal outlook on the political class. Against this backdrop of increasing public disillusionment, it is fundamental to understand the feasibility of achieving high-quality political representation as well as the mechanisms shaping political selection.

Dal Bó et al. (2017) recently documented that, in Sweden, political parties effectively identify and promote individuals who are, on average, more competent and motivated to lead than the general population. However, whether this finding generalizes to other contexts is unclear, for example, due to differences in electoral systems. One feature in which they fundamentally differ from each other is the power that voters vis-à-vis political parties hold in selection (see also Casey, Kamara, and Meriggi 2021). It is far from obvious that voter-driven selection processes would yield similarly competent leaders as those selected primarily by political parties. For one, many have questioned whether voters are sufficiently informed to act in their best interest at the polling booth (Campbell et al. 1960; Achen and Bartels 2004; Healy, Malhotra, and Mo 2010). Delli Carpini and Keeter (1996) go so far as to argue that elections are not a useful mechanism for selecting public leaders if voters lack competence.

To fill this gap, we study the quality of candidates nominated by political parties and politicians elected by voters. Our focus is on the role of personality and intelligence in political selection in Finland, where the candidate nomination stage is fully managed by party organizations, and the election stage is controlled by voters due to the open-list electoral system. We document that both electoral candidates and elected politicians are positively selected on a number of cognitive and non-cognitive abilities. This is our main substantive contribution.

Yrjö Jahnsson Foundation (20207334), University of Turku (Dnro 187/210/2021), Academy of Finland (316239), Asociación Mexicana de Cultura, and the European Union (ERC, INTRAPOL, 101045239). Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union or the European Research Council Executive Agency. Neither the European Union nor the granting authority can be held responsible for them. This study was approved by the Finnish Defense Forces (AQ16121), the Ethical Review Board in Humanities and Social and Behavioral Sciences at the University of Helsinki (Statement 22/2020), and Statistics Finland (TK/129/07.03.00/2020).

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Our second contribution lies within novel measurement of politician quality. Personality and intelligence—two primary psychological features of an individual—have wide-ranging consequences. They shape outcomes such as educational achievement (Deary et al. 2007), labor-market performance (Deming 2017; Jokela et al. 2017; Edin et al. 2022), health (Gottfredson and Deary 2004; Hampson 2017), and occupational choice (Barrick, Mount, and Gupta 2003; Rosenbloom et al. 2008). Yet, we are short of evidence on what kind of cognitive and non-cognitive traits politicians possess. This is important for two reasons. First, decision-makers from executives to individual members of legislatures can influence the outcomes of policy-making, and their personal traits can be important for the quality of policies they put in place.[1] Second, by looking into these types of characteristics, we are able to measure a multitude of factors that are important to voters, who perceive good politicians as honest, intelligent, conscientious, hard-working, and sociable, for example (Kinder et al. 1980; Mondak 1995; Klingler, Hollibaugh, and Ramey 2019; Aichholzer and Willmann 2020).

To be more concrete, we use personality and intelligence tests administered to all conscripts by the Finnish Defense Forces. These data capture an extensive battery of three cognitive and seven non-cognitive abilities. We further combine the data with registers of nominated and elected candidates in municipal elections from 1996 to 2017 and use population registers to facilitate a comparison of aspirants and elected politicians with the reference male population.[2] The data from the Finnish Defense Forces lack information on women, but the administrative registers allow us to partially address this shortcoming by studying the selection of female politicians on observable characteristics that correlate with cognitive and non-cognitive ability.

An analysis of our data reveals a distinct pattern of positive selection of electoral candidates in Finnish local elections in terms of all three dimensions of cognitive ability—visuospatial, verbal, and arithmetic reasoning—and all seven positive personality traits. These traits reflect, among other things, leadership motivation, achievement striving, capacity to work with a team and build consensus, and honesty. Positive selection takes place also at the election phase, resulting in a

1. A large empirical literature inspired by the citizen-candidate models of Osborne and Slivinski (1996) and Besley and Coate (1997) has demonstrated how politician characteristics matter for policy. This scholarship has studied, for example, political partisanship (Lee, Moretti, and Butler 2004), female politicians (Chattopadhyay and Duflo 2004; Clots-Figueras 2012), minority representation (Pande 2003), and politicians' occupational background (Hyytinen et al. 2018). Furthermore, the quality of politicians has attracted a great deal of scholarly attention (Besley 2005; Dal Bó and Finan 2018), under the premise that better political selection improves the quality of government (see also Meriläinen 2022 for supporting evidence).

2. These tests provide data that are representative of the conscripted male population, and they are administered at a young age before any political experience or other later-life influences. These are important distinctions between our study and some of the prior contributions that have been able to compare small surveyed samples of elected officials with their surveyed constituents (see especially Nørgaard and Klemmensen 2019). Compared with Dal Bó et al. (2017), our data cover a more extensive battery of traits. They observe a general intelligence score and a measure for leadership skills, which summarizes social maturity, psychological energy, intensity, and emotional stability.

political class that is more intelligent and possesses more non-cognitive skills than the general population.[3] We believe that these arguments may also apply to women who must be competent to overcome biases of parties and voters and to thrive in politics. Moreover, similar to men, female politicians are positively selected on income and educational attainment. Among men, these measures positively correlate with cognitive and non-cognitive abilities.

Auxiliary data on a sample of national election candidates and elected members of the Parliament (MPs) reveal that these conclusions may be more general and not limited to local elections only. In fact, candidates in national elections and elected MPs appear to be even much more skilled than local politicians. On average, local politicians' cognitive and non-cognitive skills are on par with individuals who work in high-skill occupations or have at least an undergraduate degree.[4] National politicians have slightly higher cognitive ability scores and considerably higher non-cognitive ability scores.

Not all candidates, however, are as competent as the average citizen. That voters are able to separate the wheat from the chaff in a complex electoral setting with multiple parties and a large number of candidates—resulting from the open-list proportional representation system used in Finland—is remarkable, especially given immense skepticism regarding voter competence. Electoral systems such as proportional representation with open lists provide voters with substantial political power. Such systems expand the choice set that voters must manage and increase their cognitive burden, which may even push them toward sub-optimal or even irrelevant decisions (Cunow 2014; Cunow et al. 2021; Söderlund, von Schoultz, and Papageorgiou 2021). It could hence be expected that voters are less equipped to identify competent and honest politicians than political parties, which have the organizational capacity to evaluate candidates more closely. Furthermore, while intra-party competition induced by open lists rewards more experienced candidates (Shugart, Valdini, and Suominen 2005), an open-list system may incentivize politicians to deliver particularistic services to their constituencies (Ames 1995; Carey and Shugart 1995; Hallerberg and Marier 2004; Ashworth and Mesquita 2006; Grimmer, Messing, and Westwood 2012), and to engage in corruption (Chang 2005; Chang and Golden 2007). Such incentives could result in adverse selection of politicians, especially when it comes to honesty.

3. Multivariate regression analyses indicate that the traits vary in their importance. Conditional on the other traits, for both candidate entry and getting elected arithmetic reasoning is more important than verbal, which is more important than visuospatial reasoning, which actually has a negative coefficient. In terms of effect sizes, leadership motivation and dutifulness (i.e., how closely a person follows social norms) are the most important (positive) predictors of entry as a candidate. At the election stage, activity-energy and dutifulness appear to be particularly important traits.

4. Nevertheless, we do not find that there would be a trade-off between having competent politicians and broad representation from different socioeconomic backgrounds. This can be important to voters who may also want to foster descriptive representation (Norris and Lovenduski 1993; Dovi 2002; Murray 2015; Clarke et al. 2018).

These observations prompt us to ask: How exactly is the positive political selection on ability achieved in Finland? While our data do not allow quantifying the relative importance of different mechanisms, we present a number of facts regarding positive selection on ability that align with positive self-selection and successful screening by both parties and voters, all playing a role in this equation. At the election stage, campaigning efforts by candidates themselves may also play some role, and positive selection is indeed stronger in larger municipalities and parties where electoral competition is stronger and voter screening may be more difficult.

Finally, we examine policy consequences of positive selection on ability and show that traits that exhibit particularly strong patterns of positive selection also matter for policy. We ask whether political selection matters for one aspect of local government performance, namely fiscal sustainability (see also Meriläinen 2022). Electing more politicians who score high on leadership motivation leads to better fiscal health. Similarly, there is some indication that representation of politicians with higher cognitive ability would have similar effects on policy, although these estimates are statistically insignificant. To estimate the policy effects causally, we adopt the empirical strategy originally proposed by Hyytinen et al. (2018). This strategy utilizes close elections that occur frequently within political parties to compute unexpected changes in political representation.[5]

In sum, our work communicates with different literatures in political and labor economics, political psychology, and political science, some of which we discuss in further detail in the third section that lays out a conceptual framework. What we discover about the role of cognitive and non-cognitive traits in politics echoes recent research that points toward positive political selection on ability (Dal Bó et al. 2017; Thompson et al. 2019; Bhusal et al. 2020; Dahlgaard and Pedersen 2024).[6] Understanding how political selection works across different contexts is crucial, for instance, for the optimal design of electoral systems. As we discussed above, scholars have been particularly skeptical about the performance of open-list systems. Our results contrast with these views. An open-list system, in which self-selection and screening by parties and voters all play a role, is able to generate a group of decision-makers who are more competent, motivated, and honest than the general population, on average.[7]

5. Our findings are robust to different specifications and pass the standard validity tests. We additionally propose a new validity check. Namely, studying heterogeneities in the personal incumbency advantage can help us understand whether high- and low-ability candidates end up in close elections because of bad luck or because they have other traits that systematically correlate with both ability and popularity (see Marshall 2024 for a recent discussion of this concern).

6. Some formal theorists have sought to model political selection processes as a result of self-selection by candidates and screening by voters (Besley 2004; Caselli and Morelli 2004; Poutvaara and Takalo 2007; Mattozzi and Merlo 2008; Smart and Sturm 2013); others have proposed theories that bring in political parties (Carrillo and Mariotti 2001; Mattozzi and Merlo 2015; Besley et al. 2017; Galasso and Nannicini 2017). These theoretical approaches cast doubts regarding the feasibility of positive selection. For example, less able individuals might have a comparative advantage in entering politics.

7. This resonates with Hangartner, Ruiz, and Tukiainen (2019), who find that politicians elected from open lists are of higher quality than those elected from closed lists in Colombia.

Studying cognitive ability and personality traits in the context of politicians' labor supply is particularly relevant given the abundant evidence of their importance in the conventional labor markets. Our main findings resemble earlier results from labor economics, where the importance of cognitive and non-cognitive skills in shaping labor market outcomes has been documented extensively (Murnane, Willett, and Levy 1995; Heckman, Stixrud, and Urzua 2006; Case and Paxson 2008; Lindqvist and Vestman 2011; Deming 2017; Jokela et al. 2017; Edin et al. 2022). Research in political psychology has touched upon the personality traits of politicians, but it is often based on voters' (Caprara, Barbaranelli, and Zimbardo 1997, 2002; Aichholzer and Willmann 2020; Nai and Maier 2021) or experts' (Rubenzer, Faschingbauer, and Ones 2000; Nai and Martínez i Coma 2019) evaluations of politicians' personality characteristics or ideal politician profiles. This might not give a broad picture of elected officials' abilities that are relevant for policy-making or the overall quality of political selection, nor is the evidence informative about what kind of individuals enter electoral races in the first place.

2. Background

We examine political selection in Finnish local governments. In this section, we describe the role of municipalities and local decision-making in Finland, and the electoral system that is used to elect local politicians. The third subsection provides a conceptual framework that guides our analyses and their interpretation.

2.1. Finnish Municipalities

Decision-making in Finnish municipalities is led by local councils, which are responsible for their operation and economy. Municipal governments, and thus local politicians, have a central role in the Finnish's highly decentralized system. During our analysis period 1996–2017, municipalities employ around 20% of the total workforce and have annual budgets of more than €5,000 per capita, on average. The majority of this expenditure is used to take care of statutory responsibilities, including social care, healthcare, and primary education. To cover their expenditures, Finnish municipalities are allowed to set and collect income and property taxes, and out-of-pocket payments from users of municipal services. In addition, municipalities receive a share of corporate taxes and fiscal grants from the central government.

2.2. Local Politics in Finland

The decisions in Finnish municipalities are taken by a simple majority of local council members. The local councils are elected using an open-list at-large proportional representation system. The Finnish electoral system has a simple design. Voters need to identify a single individual candidate and write the number of that candidate on the ballot. Voters are not able to cast a vote for a party list, but the individual votes are

pooled at the level of the party list in a district. After this, each list is awarded seats in proportion to its share of the total vote, and the individual votes determine who gets elected within each party list.[8]

Candidate nomination is controlled by political parties, which almost always present their candidate lists in an alphabetical order leaving voters without cues regarding candidate quality or party preferences. Parties' influence over political selection is thus largely limited to choosing the candidates.[9] This leads to a highly candidate-centered electoral environment with intense within-party competition and high incentives for the candidates to cultivate a personal vote (Carey and Shugart 1995).

From voters' perspective, the electoral setting is complex. There is a great deal of candidates at display and to choose from. The median number of candidates in our data is 76, and the median number of candidates per party is 10. The number of parties is also large: eight parties are represented in the national parliament and also dominate the political field in municipalities, the median number of parties fielding candidates being six.[10]

2.3. Conceptual Framework

Political selection in proportional electoral systems is often conceptualized and evaluated in terms of parties. A crucial institutional feature when it comes to control over political selection is the openness of the ballot, which regulates the balance of power between voters and parties and shapes both the incentive structure of candidates aspiring for office and the information processing of voters.

In proportional systems with closed or flexible lists, parties exercise full or significant control over which individuals will represent the party in office. Under such conditions, candidates have limited incentives to cultivate a personal reputation, and voters generally make their electoral choices based on parties as collective actors. Even when ballots are semi-open and voters have the opportunity to influence the rank order of candidates through preference votes, they tend to support candidates at the top of the list, confirming the party's preferred ordering (Hix 2004).

8. The number of seats in each municipal council is a deterministic step function of the population in the municipality, and it varies between 13 and 85 with a median of 27.

9. The barriers to entry as a candidate are rather low. According to many local party activists that we spoke with, in smaller municipalities (and especially in smaller parties), most "reasonable" individuals who approach parties with the intent to run for election are admitted as candidates. For instance, individuals with incompatible ideologies or criminal records could be left out. In larger municipalities, more extensive screening may be necessary due to excess supply of candidates—which is also possible due to greater party resources.

10. Municipal elections held between 1996 and 2008 were dominated by three large parties from the political left, center, and right: the Social Democratic Party, the Center Party, and the National Coalition Party, respectively. In 2012, the populist party True Finns became the fourth largest party. Other parties that hold seats in both municipal councils and national parliament include the Left Alliance, the Green Party, the Swedish People's Party, and the Christian Democrats. A small number of candidates—about 3% in our data—ran as independent candidates.

In contrast, under proportional representation with open lists, such as in the Finnish context that we study, parties have much weaker control over who is elected, while voters face more complex choices and candidates must establish personal reputations. While we have rich data on cognitive and non-cognitive abilities of candidates and elected officials, we cannot empirically separate the relative importance of different selection mechanisms: self-selection of candidates, party gate-keeping, and voter choice. However, by examining which theoretical predictions are most consistent with observed patterns, we can provide insights into how these abilities shape political selection. In what follows, we examine how cognitive and non-cognitive abilities might matter at each stage of the selection process, paying particular attention to how the institutional context shapes incentives and constraints.

2.3.1. Self-Selection into Politics. The first stage of political selection occurs when individuals decide whether to enter politics. The self-selection may be based on candidate ability in an ambiguous manner.[11] On the one hand, open-list proportional representation encourages candidates to cultivate a personal reputation independently of the party, which is expected to cause lower party cohesion (Hix 2004) and incentivize politicians to deliver particularistic services to their constituencies (Ames 1995; Carey and Shugart 1995; Hallerberg and Marier 2004; Ashworth and Mesquita 2006; Grimmer, Messing, and Westwood 2012) and to engage in corruption (Chang 2005; Chang and Golden 2007). Such incentives could result in adverse self-selection of politicians, especially when it comes to honesty. Furthermore, less competent individuals might have a comparative advantage in entering politics (Caselli and Morelli 2004; Messner and Polborn 2004), which could lead to an incompetent and dishonest political class even if parties wanted to recruit good candidates.

On the other hand, cognitive and non-cognitive abilities correlate with prosocial attitudes and public service motivations. If self-selection is based on such attitudes, we would expect to observe positive selection. Elinder and Erixson (2022), for instance, show that different dimensions of intelligence are positively associated with various prosocial behaviors. Others have documented similar relationships for the Big Five personality traits and (especially political) prosociality (Carlo et al. 2005; Denny and Doyle 2008; Gerber et al. 2011a,b). Two of these traits that are particularly well measured with our data are extraversion and conscientiousness.

It is less likely that competent individuals would be encouraged to enter politics due to monetary or other material incentives. Local politicians in Finland are so-called leisure politicians who keep their everyday job even after election, and the economic returns to local political offices are small (Kotakorpi, Poutvaara, and Terviö

11. Anecdotally, it is fairly easy to become a candidate in local elections, especially in smaller municipalities and smaller parties. For instance, the left-wing party Left Alliance writes on their website to prospective municipal election candidates: "Anyone can run in municipal elections, and a diverse group of people is essential for a functioning society to make decisions. We need you specifically!" (see https://vasemmisto.fi/li-anderssonin-5-1-vinkkia-kuntavaaliehdokkuutta-harkitsevalle/; accessed May 15, 2024).

2017). Surveys of electoral candidates usually indicate that public service and policy motivations are important triggers of participation in local politics (Kestilä-Kekkonen et al. 2018): People who run for election to the local council oftentimes do so because they want to do something good for their community. Municipalities have a wide range of important responsibilities, and individual councilors and their traits are known to matter for the outcomes of policy-making (Hyytinen et al. 2018; Harjunen, Saarimaa, and Tukiainen 2023).

2.3.2. Party Gate-Keeping. Parties are the second key player at the candidate selection stage. They have a wide range of tools available to them to select the best possible candidates (Hazan and Rahat 2010), and previous research indeed points toward parties being skilled in screening for human capital, both in terms of cognitive and non-cognitive skills. In a study from the flexible-list proportional representation electoral system (in practice closer to a closed list) of Sweden, Dal Bó et al. (2017) demonstrate using the general male population as a baseline that cognitive ability leadership skills increase up the career ladder from nominated politicians to elected ones. This confirms that political parties are well equipped to identify, recruit, and award people with high motivation and intellectual capacity. However, whether this generalizes into systems in which voters exercise significant control over the final stage of the selection process is unclear.

Under proportional representation with open lists, such as in the Finnish context that we study, parties have much weaker control over who is elected. The role of parties is, at large, limited to the first step of the selection process where they act as gate-keepers, determining the choices that are available to voters (Norris 1997; Gulzar and Khan 2018).

Candidates with high cognitive and non-cognitive abilities might be better at campaigning and governing (Meriläinen 2022; Nunnari, Proto, and Rustichini 2024), but they may be harder to control. Less able candidates often demonstrate stronger party loyalty and might invest more effort in party-oriented tasks to compensate for their lower abilities (Galasso and Nannicini 2011; Buisseret et al. 2022). At the same time, a key strategic consideration for parties is that they can nominate numerous candidates, and fielding more candidates can help secure greater representation. This creates a potential tension between candidate quantity and quality, particularly given parties' goal of appealing to different voter segments.[12]

While parties generally act as gatekeepers by determining which choices are available to voters, and they should care about various characteristics of the candidates,

12. For example, the Social Democratic Party explicitly instructs the local party organizations to field a diverse set of candidates (see https://www.sdp.fi/omasdp-opas/ehdokkuus/#ehdokashankinta; accessed April 22, 2024): "Candidate nomination is a central part of achieving good election results. [...] The candidate list must be diverse and should include suitable candidates for as many people as possible. Representation of different groups (age, gender, residential area, profession, social background) on the list is important. [...] Candidate recruitment should be planned with an emphasis on making the list as comprehensive as possible [...]."

such as their policy stance and ability to govern, in our understanding, Finnish local party organizations tend to accept a large share of willing candidates. This permissive approach to candidate selection suggests that self-selection might be more important than party screening in determining the ability distribution of candidates, although we cannot empirically verify this claim.[13]

2.3.3. Voter Selection. The final sorting from the pool of nominees to the elected representatives is controlled by voters. Having at least some high-quality candidates is a precondition for achieving positive selection. As political scientist V. O. Key put it in his book *The Responsible Electorate* (Key 1966): "If the people can choose only from among rascals, they are certain to choose a rascal." However, it is unclear whether parties have the same preferences for candidates as voters, or if candidates that voters might like self-select into candidacy.[14] Conditional on the set of candidates available, it is the preference votes cast by voters that determine the ranking of candidates and which of the nominees will hold the seats that the party manages to win.

Voters are faced with a complex choice setting, where they need to decide not only which party they would like to support, but they also need to identify a single candidate to support out of a large selection. This inevitably means a higher cognitive burden for voters (Downs 1957; Canache, Mondak, and Conroy 1994; Lau and Redlawsk 1997). The literature on voters' decision-making points toward a trade-off between the number of candidates to choose from and the quality of the choices voters make (Cunow 2014; André and Depauw 2017; Cunow et al. 2021; Söderlund, von Schoultz, and Papageorgiou 2021). With many options available to them, voters may turn to voting local celebrities (Isotalo and Schoultz 2024) or even make their voting choices based on possibly irrelevant factors such as candidate placement on the alphabetically ordered candidate list (Söderlund, von Schoultz, and Papageorgiou 2021) or candidate looks (Berggren, Jordahl, and Poutvaara 2010). Thus, it is not obvious that voters would choose the best possible representatives out of all options presented to them.

A contrasting view is that voters use what has been described as *low-information rationality* (Popkin 1991). Voters may apply coping strategies such as heuristics or information shortcuts—for example, making a vote choice based on candidate occupation or educational background—which allow them to make reasonable voting decisions even when overloaded with information (Mondak 1993; Lupia 1994). This,

13. Parties have low incentives to care about the distribution of votes under open-list proportional representation from a theoretical point of view (Shugart and Taagepera 2017). However, Matakos et al. (2024) argue that Finnish parties are able to strategically curate the candidate lists based on candidates' policy stances. Moreover, it is possible that parties, in their attempt to manage competition and control selection, signal to voters which candidates that they consider being serious contenders or high-quality candidates. That said, the role of party financing of electoral campaigns is rather minimal. A survey of candidates running in the 2017 municipal election found that the modal candidate received no funding from their party.

14. Parties have some knowledge about voter preferences given that they observe individual candidates' vote shares. Thus, we do not think that selection patterns would differ between the candidate nomination and election stages because of parties not knowing what kind of candidates voters like.

in turn, speaks in favor of voters being able to identify and support candidates who can act in their best interest. Studies of voter preferences have shown that voters want to be represented by individuals who are intelligent, extroverted, conscientious, honest, and so forth (Kinder et al. 1980; Mondak 1995; Klingler, Hollibaugh, and Ramey 2019; Aichholzer and Willmann 2020).[15] These are precisely the types of traits that our data capture.

Voter screening may be facilitated by electoral campaigns, as candidates' campaigning skills and resources might reflect their cognitive and non-cognitive abilities. At the same time, many of the municipalities are rather small, and electoral campaigns do not play an important role everywhere.[16] A recent survey asked voters how they knew the candidate that they voted for in the 2017 municipal election. About half of the respondents said they knew the candidate personally, and less than 10% stated they learned about the candidate through their electoral campaign (Borg 2018).

3. Data and Measurement

To investigate the importance of cognitive ability and (non-cognitive) personality traits in politics, we combine several administrative registers. The test scores come from the Finnish Defense Forces. We are able to merge them with information on electoral candidates from the Finnish Ministry of Justice and population registers from Statistics Finland. This merging can be done without any errors using unique personal identifiers. The final data are comprised of a random sample that is fully anonymized and accessible only in Statistics Finland's remote access system, which helps us tackle ethical and data protection concerns.

3.1. Cognitive Ability and Personality Tests

The main novelty of our data is the test scores from the cognitive ability test (*Peruskoe 1*) and personality test (*Peruskoe 2*) administered by the Finnish Defense Forces (Finnish Defense Forces 2015). The contents of these tests are summarized in Table 1. The cognitive abilities and positive personality traits are mostly positively correlated with each other, but not perfectly and to a varying extent. This indicates that the scores capture different dimensions of ability (see Online Appendix Figure A1).

All conscripts must take the cognitive ability and personality tests early in their military service, which means that around 80% of the male population is included

15. Judge et al. (2002) further argue that individuals with higher extraversion tend to be more assertive, dominant, and sociable in group situations, which may help to explain their benefits for leadership emergence and success. Electoral success also requires organizational skills and being viewed as competent and reliable by others, which are related to conscientiousness.

16. For instance, in the 2017 election, the median amount of money spent on campaigning was less than €200. Furthermore, the median candidate spent around 5 h on campaigning per week during the 4 weeks preceding the election (Borg 2018; Kestilä-Kekkonen et al. 2018).

TABLE 1. Components of the cognitive ability and personality tests.

Score	Questions	Explanation
Panel A: Cognitive ability test		
Verbal	40	The participant needs to identify synonyms or antonyms of a given word, select a word that belongs to the same category as a given word pair, choose which word on a list does not belong in the group, and choose similar relationships between two word pairs
Arithmetic	40	The participant must complete a series of numbers that follow a certain pattern, solve short verbal problems, compute simple arithmetic operations, and choose similar relationships between two pairs of numbers
Visuospatial	40	The participant needs to decide which of the given alternative figures completes a matrix containing a pattern with one removed part
Panel B: Personality test		
Leadership motivation	30	The score measures how much the person prefers to take charge in groups and influence other people
Activity-energy	28	The score measures how much the person exerts physical effort in everyday activities and how quickly the person prefers to execute activities; e.g., whether the person tends to work fast and vigorously and prefers fast-paced work
Achievement striving	24	The score measures how strongly the person wants to perform well and achieve important life goals; e.g., whether the person is prepared to make personal sacrifices to achieve success
Self-confidence	32	The score measures the person's self-esteem and beliefs about his abilities; e.g., whether the person feels to be as good and able as others and can meet other people's expectations
Deliberation	26	The score measures how much the person prefers to think ahead and plan things before acting; e.g., whether the person prefers to spend money carefully
Sociability	33	The score measures how fond of company a person is and his preference for socializing with other people; e.g., whether the person likes to host parties and not withdraw from social events
Dutifulness	18	The score measures attitudes and behaviors related to honesty, i.e., how closely the person follows social norms and whether he considers them to be important; e.g., whether the person would return money if he was given back too much change at a store
Masculinity	27	The score captures the extent to which the person's occupational and recreational interests are traditionally considered as masculine (instead of feminine); e.g., whether the person would like to work as a construction manager

Source: Jokela et al. (2017).

in the data. For our research, we acquired a 90% random sample of the individuals that took the tests, excluding active military personnel. The cognitive test scores are available for the years 1982–2014, and the non-cognitive test scores for the years 1982–2000. The test measuring personality traits was revised in 2001, when an entirely new section on leadership skills was added to the test.

A clear strength of the data is that they contain a large and stable share of Finnish men over an extensive period of time.[17] This allows us to register test scores for a substantial share of men at a certain point in life—typically around the age of 18, prior to political experience and occupational and final educational influences—and to differentiate between the general male population, those who later become electoral candidates, and those who are successful in this selection process.

The Finnish Defense Forces use the test scores as one of the criteria in selecting conscripts to military officer training. Therefore, the tests are constructed to screen high-quality military leaders, and thus, they are likely to capture skills that are also relevant for political leaders. The validity of the test and its predictive power for successful military service have been evaluated in several internal reports (Nyman 2007): The tests have good internal consistency, and the test scores correlate with other components of leadership selection such as peer review and evaluations by army personnel. Furthermore, there is evidence that the test scores are positively correlated with desirable outcomes even outside the military, in ways that would suggest to their usefulness also in the political arena. Jokela et al. (2017) and Izadi and Tuhkuri (2024) show that both cognitive and non-cognitive abilities correlate positively with labor market success in adulthood, Grinblatt, Keloharju, and Linnainmaa (2011) argue that higher levels of intelligence are associated with higher (risk-adjusted) stock market returns, and Aghion et al. (2023) document that individuals with higher cognitive abilities have a higher potential for innovative ideas.

The cognitive test is composed of three subtests that measure visuospatial, verbal, and arithmetic reasoning (40 questions each). The visuospatial test is similar to the widely used Raven's Progressive Matrices. In the verbal part of the test, the test-takers are asked to identify synonyms and antonyms, form groups of words that belong to the same category, find words that do not belong to a group, and point out the relation between two words. Finally, the arithmetic subtest tests conscripts' ability to construct number sequences, solve verbally given mathematical problems, solve simple algebraic problems, and explain the relationship between two numbers.

The personality test captures eight non-cognitive personality traits, most of which can be thought of as non-cognitive skills. In total, the test includes 218 statements, and the respondents must state whether they agree or disagree with these.

The first personality trait captured by the non-cognitive test is leadership motivation, which measures the preference for taking charge in groups and influencing

17. The test items have remained unchanged during the period that we examine, so the scores are comparable across cohorts. Importantly, the test results are not public information. Details regarding the test contents are a military secret, and the conscripts do not know how the test is scored. This makes gaming the test more complicated.

other people.[18] Second, the activity-energy score gauges how much a person exerts physical effort in everyday activities and how quickly he prefers to execute activities. Third, the test measures achievement striving with questions about how strongly the person wants to perform well and achieve important life goals. Fourth, the self-confidence score measures the person's self-esteem and beliefs about his own abilities. Fifth, the personality test includes questions that allow us to measure deliberation, that is, how much the person prefers to think ahead and plan things before acting. Sixth, the test allows measurement of sociability based on the self-expressed level of gregariousness and preference to socialize with others. Thus, the measure can be informative about how well a person can work together with a team. Seventh, the dutifulness score captures how honest a person is—it tells us how closely he follows social norms and considers them to be important (e.g., whether the person would return money if given back too much change at a store). These are all characteristics that we would expect to be useful in politics, ranging from electoral campaigning to successful policy-making.

The eighth and last non-cognitive trait is masculinity, which is measured based on occupational and recreational interests that are traditionally considered as masculine as opposed to feminine. Although this trait hardly resembles a non-cognitive skill in the same sense as the other traits in our data, we include it in our analyses for the sake of completeness.

Jokela et al. (2017) show that traits measured in the non-cognitive test capture some of the Big Five personality traits. More precisely, the sociability, leadership motivation, activity-energy, and self-confidence scores are closely related to extroversion, that is, how energetic, sociable, and friendly a person is. Achievement striving, deliberation, dutifulness, and self-confidence correlate positively with conscientiousness, or how careful or diligent a person is. Self-confidence is also negatively correlated with neuroticism (disposition to experience negative affects). However, agreeableness—how warm, friendly, and tactful a person is—and openness to new experiences are not well captured by the personality tests used by the Finnish Defense Forces.

3.2. Election Results

We have information on municipal election candidates for six local government elections held in 1996, 2000, 2004, 2008, 2012, and 2017 (Finnish Ministry of Justice 2017).[19] These data come from the Finnish Ministry of Justice, and they contain the candidates' social security numbers, which allow Statistics Finland to merge the

18. Also Dal Bó et al. (2017) examine leadership motivation in their study of political selection in Sweden. However, they observe the score only for a selected sample of individuals who scored high enough in the cognitive ability test and were being considered to be selected for leadership training. In our case, all conscripts take the personality test, leading to a more representative sample.

19. All municipalities hold municipal elections at the same time. The number of municipalities decreases over time due to municipal mergers. In the 2017 election, there were 311 municipalities.

data with other sources without any errors. The data cover both elected and non-elected electoral candidates. In total, we have around 230,000 candidate-election year observations. Slightly more than half of these are unique individuals. The data include information on candidates' election status, number of votes, and *encoded* political party and municipality.[20]

We complement the data on local politicians with a sample of non-elected and elected candidates in parliamentary elections. We have a sample of these candidates for three elections in 2007, 2011, and 2015 (Finnish Ministry of Justice 2015). The sample comprises around 87% of male candidates who have completed their military service, slightly less than a thousand individuals.[21]

3.3. Population Registers

To construct our final data set, we merge our test score and municipal election data with administrative registers from Statistics Finland (Statistics Finland 2024).[22] These data serve us with two purposes.

Firstly, the administrative registers contain diverse measures of socioeconomic background characteristics of the politicians and the population. We can measure individuals' current socioeconomic status with their educational attainment, disposable income, and socioeconomic group, which we observe for each election year in our data.[23] Moreover, we use modern population registers and the 1970 census to measure the family background of the individuals by their own childhood socioeconomic group, defined as the occupational class of the household head.

Secondly, we use the population registers to construct our final sample in accordance with our data use permission. For each municipality and election year, we draw a 10% random sample of the adult population who were not politicians. This sample includes both men and women, but most of our analyses use data on men only given our focus on selection on personality and intelligence.

In the end, we are left with a large sample of office-eligible citizens, electoral candidates, and elected politicians. The number of observations we have varies across analyses from around 243,000 to around 385,000. We lack data for a small share of men who opted for civil service instead or who were excused from military

20. Due to the sensitive nature of our data, we cannot compare selection across political parties.

21. Similar to local politicians, the basis of the data is a 90% random sample (of male candidates). On top of this, 3% of the individuals were removed from the random sample as there was a high risk that they could be identified despite the anonymization. Thus, the final sample of national election candidates may be somewhat selected.

22. The sample of parliamentary election candidates cannot be linked to the background information from the population registers in order to preserve the anonymity of the subjects in our data.

23. Our education variable contains three groups: secondary education, undergraduate degree, and graduate degree. Disposable income is rounded to the closest €500 for incomes below €90,000 and truncated at €90,000. The socioeconomic group variable contains five occupational categories: entrepreneurs, skilled non-manual workers, non-skilled non-manual workers, manual workers, and others (e.g., students and pensioners).

service for medical reasons. The most obvious and serious weakness of our data is that they exclude women. We thus complement our main analyses by studying the selection of female politicians on observable characteristics—labor market outcomes and educational attainment—that correlate with cognitive and non-cognitive ability.

4. Patterns of Political Selection

We proceed to presenting a detailed characterization of the psychological profiles of the Finnish political elites and their constituents. We first describe selection on cognitive abilities and then proceed to selection on non-cognitive traits. The third subsection compares politicians with individuals in different occupations or with different levels of education. In the fourth subsection, we examine what matters the most for candidate entry and election. In the final subsection, we discuss political selection over time.

4.1. Selection on Cognitive Abilities

We find that both political parties and voters select their candidates positively on all cognitive ability traits.[24] Nominated (but non-elected) politicians have higher scores than normal citizens, on average. Panel A of Table 2 suggests that the visuospatial reasoning scores are somewhat higher for non-elected candidates than the population: The difference is slightly more than half a point or 0.09 standard deviations.[25] Similarly, the elected candidates have obtained higher scores on average than the non-elected candidates. The difference between them is small, about 0.14 points or 0.03 standard deviations.

The differences are more striking for verbal and arithmetic reasoning scores. The verbal test scores are 1.5 points (or 0.21 standard deviations) higher for the nominated but non-elected candidates than the general population, and 0.92 points (or 0.14 standard deviations) higher for the elected politicians than the non-elected candidates. Similarly, the non-elected candidates got on average 1.2 points more in the arithmetic test than regular citizens, whereas the elected politicians got on average 1.3 points more than the non-elected candidates. These differences correspond to 0.16 and 0.17 standard deviations, respectively.

Moving beyond the average differences, Figure 1 plots complete test score distributions for the population, the non-elected candidates, and the elected local councilors. All panels exhibit a clear gradient: The test score distributions are more skewed to the right for (non-elected) candidates than the population and for elected

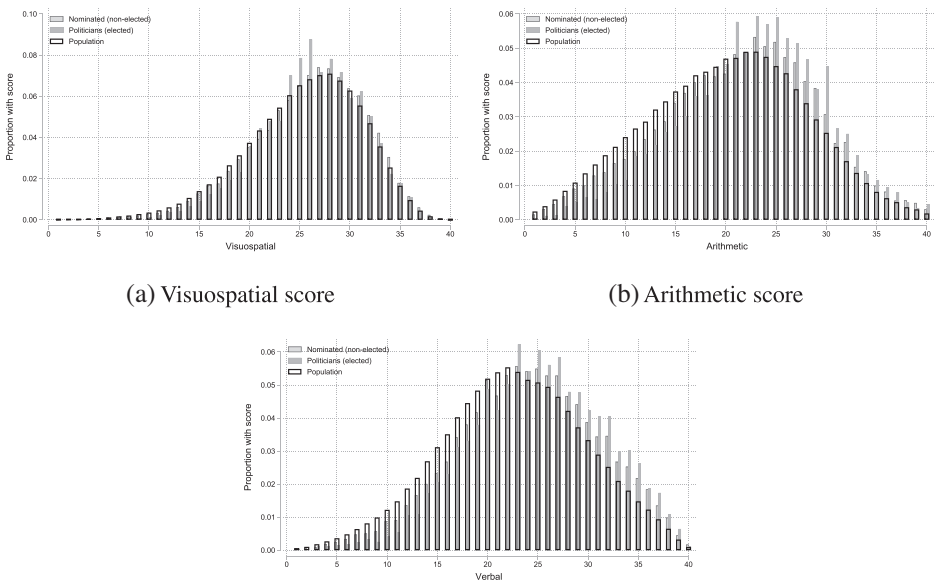
24. Given our large sample size, the differences are statistically significant with p-values well below 0.01. The only exception is the visuospatial reasoning score for which the difference between non-elected and elected candidates is significant with $p \approx 0.05$.

25. We have constructed the standardized measures (or z-scores) using the full sample by deducting the mean and dividing by the standard deviation. Thus, the standardized variables have a mean of 0 and a standard deviation of 1.

TABLE 2. Average cognitive ability and personality test scores by group.

	Population			Nominated (non-elected)			Politician (elected)		
	N	Raw	*z*-score	*N*	Raw	*z*-score	*N*	Raw	*z*-score
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Cognitive abilities									
Visuospatial	350,691	25.42	−0.04	24,946	25.96	0.05	8,694	26.10	0.08
Verbal	350,709	22.51	0.03	24,946	23.99	0.24	8,694	24.98	0.38
Arithmetic	350,514	20.11	−0.01	24,937	21.36	0.15	8,694	22.65	0.32
Panel B: Personality traits									
Leadership motivation	269,399	14.65	−0.01	21,408	17.31	0.33	7,947	18.10	0.43
Activity-energy	270,574	16.12	−0.01	21,480	16.84	0.13	7,985	17.91	0.33
Achievement striving	270,341	13.44	−0.01	21,458	14.56	0.22	7,980	15.18	0.35
Self-confidence	270,418	22.45	−0.01	21,470	23.03	0.09	7,987	23.66	0.20
Deliberation	270,473	16.41	−0.002	21,465	16.63	0.04	7,985	17.31	0.17
Sociability	270,519	20.53	−0.01	21,468	22.25	0.21	7,987	22.93	0.30
Dutifulness	270,233	10.89	−0.01	21,457	11.79	0.24	7,987	12.39	0.40
Masculinity	270,440	18.51	0.004	21,451	18.01	−0.17	7,981	18.45	−0.02

Notes: The table reports raw and standardized means of cognitive and personality test scores for the population, non-elected candidates, and elected candidates. We pool together all data from election years 1996, 2000, 2004, 2008, 2012, and 2017. The differences between the groups are statistically significant, with p-values < 0.01, except for visuospatial reasoning, where the difference between non-elected and elected candidates is marginally significant at $p \approx 0.05$.



(a) Visuospatial score

(b) Arithmetic score

(c) Verbal score

FIGURE 1. Distributions of cognitive ability scores.

politicians than the candidates who were not elected. In tally with our conclusions on the average differences, this pattern is particularly clear for the arithmetic and verbal test scores.

The Finnish Defense Forces use the cognitive test score data to construct stanine test scores measured on a scale from 1 to 9 and a general intelligence score, also measured on a stanine scale. We complement the results here by presenting summary statistics on these stanine test scores in Online Appendix Table A1 and their distributions in Online Appendix Figure A2. The general intelligence score is comparable with the metric used by Dal Bó et al. (2017). Selection on intelligence in Finland is very similar to selection in Sweden, despite the crucially different electoral systems.

4.2. Selection on Personality Traits

Candidates and elected politicians are positively selected on seven out of eight non-cognitive traits covered by our data.[26] Masculinity is the only trait for which we do not detect any clear pattern.

Panel B of Table 2 reveals that non-elected candidates have 2.7 points higher leadership motivation scores than the regular population, and elected politicians score 0.8 points higher than non-elected candidates. These differences are meaningful in terms of their magnitude, as correspond to about 0.34 and 0.10 standard deviations.

We see clear differences also for the other non-cognitive traits. The activity-energy score is, on average, 0.72 points (0.14 standard deviations) higher for the nominated but not elected candidates than the population, and 1.1 points (0.2 standard deviations) higher for the elected politicians than the non-elected. The test results also suggest that politicians have more determined or hard-working personalities than their constituents: The achievement striving score is 1.1 points or about 0.23 standard deviations higher for the non-elected candidates than the population and 0.62 points or about 0.13 standard deviations higher for the elected local councilors than their non-elected competitors. Politicians are also more self-confident than the regular population. The average self-confidence score is 0.58 points (0.10 standard deviations) higher for the candidates who ran for election unsuccessfully than for the population. The elected representatives have 0.63 points (0.11 standard deviations) higher self-confidence scores than the non-elected candidates. In terms of deliberation, the non-elected candidates moderately score 0.22 points higher (0.04 standard deviations) than the population, and the elected candidates score 0.68 points higher (0.13 standard deviations) than the non-elected candidates. Politicians exhibit higher levels of sociability, which suggests that they are good team players. The difference between the non-elected candidates and the population is large, 1.7 points (0.22 standard deviations), and the difference between the politicians and non-elected candidates is

26. For these traits, all the differences between politicians, non-elected candidates, and the office-eligible population in their average scores are statistically significant with $p < 0.01$.

0.7 points (0.09 standard deviations). The differences are also notable for dutifulness—despite prevalent concerns regarding politician honesty in various contexts. Electoral candidates who did not get elected have, on average, 0.9 points higher dutifulness scores than the population. Non-elected candidates score 0.6 points above those who did not get elected. These raw differences translate into 0.25 and 0.16 standard deviations, respectively.

In the last row, we consider the masculinity trait. We do not see any systematic pattern. Candidates are less masculine than the population, but elected politicians are more masculine than other candidates. This indicates that the role of this trait in political selection is distinct from that of the non-cognitive skills.

Figure 2 echoes our remarks regarding the average differences. The graph plots the distributions of the non-cognitive personality test scores. Positive selection is clearly visible in all panels except for the masculinity score that we look at in the last panel. For all other traits, we see that the distributions for the nominated but non-elected candidates are more skewed to the right than the distributions for the population, while the distributions for elected politicians are even more skewed to the right.

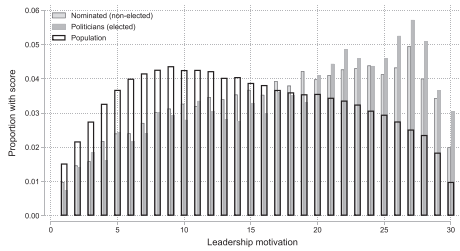
4.3. Test Taking Attitudes of Politicians and Citizens

One concern is that (future) politicians might give different answers to the tests not because of their psychological traits but because their political aspirations drive them to give socially desirable answers.[27] One way of detecting this is to use the so-called Lie-score (see also Jokela et al. 2017). Lie-score measures attempts to give an overly favorable impression of one's conduct, and it is also captured in the tests conducted by the Finnish Defense Forces. High scores suggest that the person is attempting to "fake good". Supporting our interpretation that the test score differences reflect actual positive selection on cognitive and non-cognitive skills, there are only very small differences between the general population (average score = 6.2), non-elected candidates (6.4), and elected candidates (6.5)—less than one-tenth of the standard deviation.

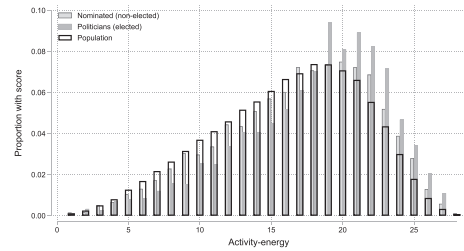
4.4. What Matters the Most for Entry and Election?

It is undeniable that both politicians and citizens select positively based on cognitive and non-cognitive profiles, but our findings thus far suggest that parties and voters may not pick politicians based on the entirely same criteria. The traits that we observe are correlated with each other and with other later-life outcomes, which may further matter for candidate entry and getting elected. Moreover, candidates who possess certain traits might also be sorted into certain political parties or be more likely to run for election in certain types of municipalities, which could also play a role here. To

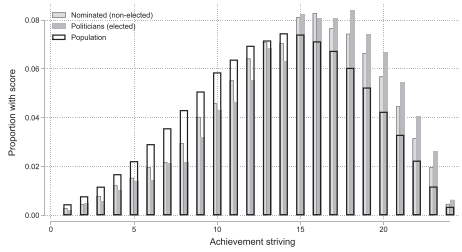
27. Gneezy et al. (2019) propose that the motivation to do well in a test can be an important driver of test scores.



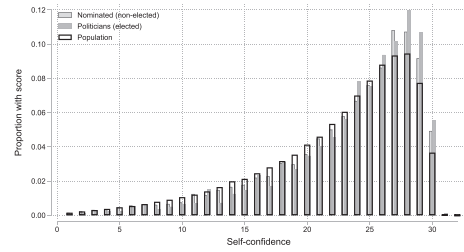
(a) Leadership motivation score



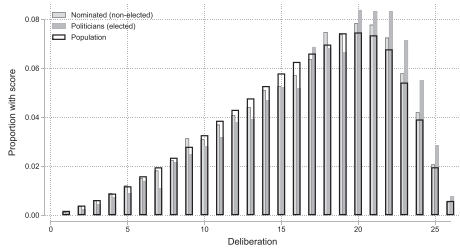
(b) Activity-energy score



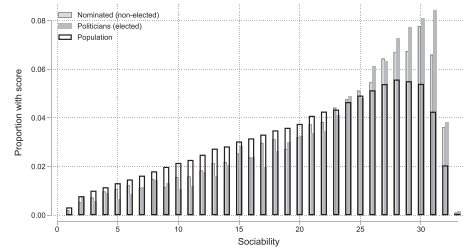
(c) Achievement striving score



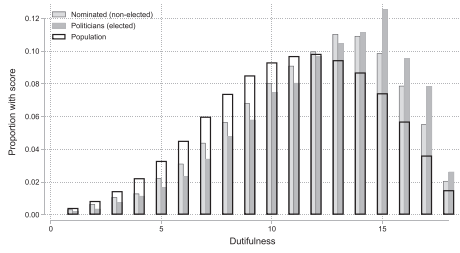
(d) Self-confidence score



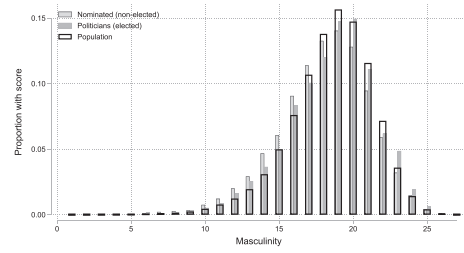
(e) Deliberation score



(f) Sociability score



(g) Dutifulness score



(h) Masculinity score

FIGURE 2. Distributions of personality trait scores.

better understand what matters for candidate entry and election, we will thus estimate multivariate regressions.

Note that we fundamentally care about the unconditional selection characterized in our main analysis. It is important to learn whether parties, voters, and the election system in general select politicians positively on, for example, dutifulness—regardless of whether it is because of dutifulness itself or because dutifulness is correlated with some other observed or unobserved characteristic. Here, we offer a complementary view and take a step toward answering if the positive selection takes place because of some trait or another.[28]

Before summarizing the main takeaways, let us walk the reader through the contents of Table 3, where the dependent variable is entry as a candidate in columns (1)–(3) and getting elected in columns (4)–(6). We multiply the dependent variables by 100 so that the estimation results can be interpreted as percentage points. To facilitate comparisons between the different scores that are measured using different scales, we have standardized them. Thus, the regression coefficients can be interpreted as changes in the dependent variable that are associated with a one-standard-deviation change in the regressors.

We present regression results from various different specifications. For each outcome, the first column does not include additional covariates. We then add controls for indicators for current socioeconomic group, educational attainment, and income decile in the second column. One important caveat with these analyses is that some of the covariates may be at least partially determined by the personality traits and cognitive abilities, which could induce post-treatment bias in our estimations. Finally, the third column adds fixed effects for municipality and election year. In column (6), we additionally control for party fixed effects, as we observe the political party of those individuals who run for office.[29]

Columns (1)–(3) examine the correlates of entry. As we only observe samples of the electoral candidates and the population, we weigh our data with inverse sampling probabilities. Throughout the table, verbal reasoning, arithmetic reasoning, leadership motivation, and dutifulness are systematically positively associated with entry. Some of the characteristics seem to discourage individuals from running for office; the point estimates are systematically negative and statistically significant for visuospatial reasoning, self-confidence, deliberation, and masculinity throughout the estimated models.

We observe that some of the non-cognitive skills are more important determinants of candidate entry than cognitive skills. In particular, leadership motivation stands out as an important predictor of entry. An increase of one standard deviation is associated

28. To complement these analyses, Online Appendix Figure A3 shows estimation results from univariate regressions. All traits except for masculinity are positively correlated with entry. Furthermore, all traits except for visuospatial reasoning are positively and significantly associated with election probability.

29. Online Appendix Tables A2 and A3 present results from additional specifications. Full regression results that report the estimates for these covariates as well as additional specifications are available in Online Appendix Tables A4 and A5.

TABLE 3. Cognitive and non-cognitive traits as determinants of candidate entry and election.

	Entry as a candidate			Election		
	(1)	(2)	(3)	(4)	(5)	(6)
Visuospatial	−0.086***	−0.091***	−0.046**	−2.350***	−2.265***	−2.162***
	[0.016]	[0.018]	[0.018]	[0.505]	[0.515]	[0.495]
Verbal	0.103***	0.094***	0.132***	1.291**	0.848	1.774***
	[0.034]	[0.033]	[0.028]	[0.549]	[0.576]	[0.536]
Arithmetic	0.131***	0.120***	0.183***	4.378***	2.482***	2.983***
	[0.035]	[0.030]	[0.027]	[0.608]	[0.623]	[0.602]
Leadership motivation	0.483***	0.540***	0.650***	−2.152***	−1.766**	0.328
	[0.070]	[0.074]	[0.068]	[0.717]	[0.728]	[0.691]
Activity-energy	0.026	−0.008	−0.118***	4.506***	3.477***	2.014***
	[0.024]	[0.025]	[0.021]	[0.579]	[0.581]	[0.570]
Achievement striving	−0.047**	−0.054**	0.005	−0.594	−1.373**	−0.794
	[0.023]	[0.024]	[0.020]	[0.571]	[0.593]	[0.580]
Self-confidence	−0.285***	−0.288***	−0.184***	−2.438***	−2.514***	−1.297**
	[0.025]	[0.026]	[0.028]	[0.652]	[0.662]	[0.627]
Deliberation	−0.121***	−0.141***	−0.193***	0.117	−0.296	−0.803
	[0.031]	[0.036]	[0.031]	[0.534]	[0.550]	[0.511]
Sociability	0.030	0.028	0.047**	0.923	1.927***	1.734***
	[0.023]	[0.025]	[0.024]	[0.648]	[0.670]	[0.631]
Dutifulness	0.249***	0.256***	0.220***	2.794***	2.596***	2.264***
	[0.029]	[0.031]	[0.029]	[0.557]	[0.578]	[0.571]
Masculinity	−0.156***	−0.178***	−0.270***	1.854***	1.821***	0.433
	[0.044]	[0.046]	[0.031]	[0.454]	[0.437]	[0.375]
N	284,985	243,162	243,158	28,193	25,247	25,246
Individual characteristics		✓	✓		✓	✓
Year FE			✓			✓
Municipality FE			✓			✓
Party FE						✓

Notes: Columns (1)–(3) of the table report results from a weighted least squares regression where inverse sampling probabilities have been used as weights and the dependent variable is an indicator for entering politics as an electoral candidate multiplied by 100. Columns (4)–(6) report results from an OLS regression where the dependent variable is an indicator for an electoral candidate getting elected multiplied by 100. Individual characteristics include indicators for current socioeconomic group, educational attainment, and income decile. Party FEs mean indicators for each party label. Standard errors that are clustered at the municipality level are reported in brackets. ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

with a 0.5–0.7 percentage point higher probability of running as a candidate. The regression coefficients are small, but this is expected given the low baseline entry rate. For instance, in the year 2017, the average office-eligible population was around 14,200 inhabitants, and the average number of candidates was 250. This suggests an average entry rate of around 1.8%.

We then present the estimation results for the probability of getting elected in columns (4)–(6). To study the relationship between election probability and cognitive and non-cognitive traits, we restrict our estimation sample to those individuals who ran for election in the first place. The signs of the regression coefficients partially align with those that we show in columns (1)–(3). There are a few notable exceptions,

which indicate that different abilities have a different role in the candidate selection and election phases. However, these differences vanish if we do not condition the regression on running (Online Appendix Table A6).

We find indicative evidence that leadership motivation is *negatively* correlated with the probability of getting elected, while its correlation with entry is positive and in general both candidates. Note, however, that the point estimates become positive and statistically insignificant when we add the fixed effects controls and that, in general, elected politicians have higher leadership motivation scores. Activity-energy is an important determinant of election, whereas the regression results on entry suggested a negative (if any) relationship. There is some indication that voters care about candidate sociability, as the trait is positively associated with election. Masculinity is also positively correlated with election in most specifications, but not when we add the fixed effects. As before, visuospatial reasoning and self-confidence have a negative and statistically significant relationship with the probability of getting elected. In contrast, scoring higher on verbal or arithmetic reasoning and dutifulness seems to boost the chances of election. The estimates for achievement striving and deliberation do not point toward any systematic relationship.

4.5. Political Promotions and Selection in National Politics

It is possible that ability matters for political promotions in local politics. For example, more able individuals might be more likely to be nominated in the executive branch of the local government.[30] We are not allowed to combine information on board membership with the data from the Finnish Defense Forces, but we have used other quality proxies to examine the correlates of political promotions. Data from Kuntaliitto (2013) and Meriläinen and Tukiainen (2018), Meriläinen and Tukiainen (2022) show that having a university degree or one standard deviation higher earnings is associated with around a 25% increase in the probability of promotion to municipal board (2 percentage points higher than the baseline of 8%). Within parties that nominate board chairs, comparable with mayors in many other systems, having a university degree or experiencing one-standard-deviation increase in earnings is associated with about a one-third increase in the probability of acquiring the board chairpersonship (1 percentage point higher than the baseline of 3%). Given the strong correlation between these human capital measures and our cognitive and non-cognitive ability metrics, we believe it is also likely that the latter positively correlate with the likelihood of political promotion.

For some, local politics is a springboard to national politics. We corroborate our arguments regarding positive selection in politics further in panel A of Table 4, where we report average test scores for (non-elected) candidates to the Finnish Parliament and elected MPs (i.e., professional politicians). Columns (1)–(3) present means of

30. Members of the municipal boards are typically elected local councilors. The selection of board members is entirely at the hands of the parties, although electoral performance matters for the promotion choices (Meriläinen and Tukiainen 2018).

TABLE 4. Average cognitive ability and personality test scores for politicians and by occupation and field of education.

	Cognitive abilities			Personality traits							
	Visuospatial	Verbal	Arith-metic	Leadership motivation	Activity-energy	Achievement striving	Self-confidence	Deliberation	Sociability	Dutifulness	Masculinity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Panel A: Average scores for politicians and general population											
MPs	26.82	27.76	25.27	23.52	19.60	17.67	25.67	18.23	26.87	14.29	18.50
Parliamentary election candidates (non-elected)	27.38	26.11	23.31	19.28	16.89	15.26	24.18	16.79	23.09	12.34	17.66
Municipal politicians (elected)	26.10	24.98	22.65	18.10	17.91	15.18	23.66	17.31	22.93	12.39	18.45
Population	25.42	22.51	20.11	14.65	16.12	13.44	22.45	16.41	20.53	10.89	18.51
Panel B: Average scores by occupation											
Managers	27.42	26.46	24.62	19.32	18.25	16.13	24.96	17.61	23.86	12.36	18.47
Professionals	28.31	27.21	25.19	17.75	17.06	15.71	24.65	18.19	22.26	12.49	18.05
Technicians	26.73	24.53	22.33	16.53	17.09	14.70	23.78	17.20	22.04	11.66	18.63
Clerical support workers	26.08	23.76	21.54	14.92	15.72	13.66	22.62	16.37	20.89	11.06	18.19
Service or sales workers	25.37	22.37	19.73	15.58	16.58	13.70	22.83	16.07	21.86	11.05	18.38
Skilled agricultural, forestry, and fishery workers	22.81	20.07	17.08	11.06	15.86	11.93	20.40	17.18	16.88	10.54	18.73
Craft and related trades workers	24.17	19.80	17.26	12.07	15.47	11.80	21.12	15.51	18.84	9.79	18.97
Plant and machine operators, and assemblers	23.74	19.98	17.18	12.10	15.35	11.77	21.03	15.70	19.02	9.96	18.88
Elementary occupations	24.41	20.64	18.14	12.58	15.12	12.04	21.10	15.33	19.45	9.94	18.53
Panel C: Average scores by level of education											
Graduate degree	28.79	28.99	27.27	19.19	17.47	16.70	25.34	19.02	22.87	13.17	17.78
Undergraduate degree	26.97	25.21	23.06	16.36	16.96	14.86	23.76	17.49	21.63	11.77	18.66
Secondary education	25.03	21.59	19.10	13.58	15.84	12.77	21.96	16.10	19.94	10.53	18.64

TABLE 4. Continued

	Cognitive abilities			Personality traits							
	Visuospatial	Verbal	Arithmetic	Leadership motivation	Activity-energy	Achievement striving	Self-confidence	Deliberation	Sociability	Dutifulness	Masculinity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Panel D: Average scores by field of graduate degree											
Education	27.22	27.72	24.35	19.30	17.65	15.72	24.80	17.68	24.25	13.06	17.24
Arts and humanities	27.59	28.97	24.85	17.75	15.47	15.67	23.98	18.05	21.99	13.12	15.57
Social sciences, journalism, and information	27.32	28.53	25.98	19.30	16.83	16.63	24.85	18.44	23.04	13.09	17.21
Business, administration, and law	27.82	28.33	26.95	20.93	18.34	17.55	25.83	18.77	24.73	13.15	18.03
Natural sciences, mathematics, and statistics	29.02	29.04	27.53	16.92	16.30	15.93	24.51	18.95	20.79	12.98	17.57
Information and communication technologies	30.19	29.53	28.33	18.60	16.98	16.66	25.54	19.57	21.73	13.19	17.98
Engineering, manufacturing, and construction	29.77	29.25	28.36	19.11	17.81	16.87	25.70	19.52	22.56	13.14	18.49
Agriculture, forestry, fisheries, and veterinary	27.93	29.47	26.54	18.85	18.35	16.85	25.09	19.56	22.14	13.49	18.30
Health and welfare	28.96	30.26	28.14	19.94	17.68	16.68	25.59	19.44	23.27	13.71	16.98
Services	28.23	28.54	26.47	22.38	20.56	17.66	26.93	18.73	25.77	13.49	18.71

Notes: The table reports raw means of cognitive and personality test scores for a sample of MPs and national election candidates (panel A), for different occupational groups (panel B), by level of education (panel C), and by field of education for individuals with a graduate degree (panel D). Averages for MPs and non-elected parliamentary election candidates are constructed using data for the years 2007, 2011, and 2015, and in panel B, we pool together all data from election years 1996, 2000, 2004, 2008, 2012, and 2017.

cognitive ability scores. We see that the positive selection is not limited to local contexts, where voters might be closer to the politicians and hence better aware of their capabilities—positive selection appears to take place also in national politics. Both non-elected candidates and elected MPs included have higher scores than the population, and MPs have higher verbal and arithmetic reasoning skills than non-elected candidates. Parliamentarians' average visuospatial reasoning score is about one-fourth of the standard deviation higher than the average score of the general population, and the same differences in verbal and arithmetic reasoning scores are about three-fourths of the standard deviation and two-thirds of the standard deviation, respectively.

Columns (4)–(11) focus on average personality trait scores. We first confirm that the positive selection on useful personality traits happens also in national politics: MPs score higher than non-elected candidates in all seven non-cognitive skills, and national politicians' scores are higher than those of the regular citizens.

4.6. Politicians Versus Different Occupations and Educational Backgrounds

Table 4 further allows comparisons between politicians and different occupations and educational backgrounds. Thus, the table also serves as a sanity check in the sense that the test scores that we use seem to capture meaningful skills outside of the political sphere. Both the cognitive reasoning and the desirable personality trait scores tend to increase as we move toward more high-skilled occupations or when the level of education increases.

Panel B reports average scores by occupational groups. We show the averages for nine different occupational categories: managers (e.g., CEOs and top bureaucrats); professionals (e.g., economists, teachers, lawyers, and medical doctors); technicians (e.g., opticians, police, and therapists); clerical support workers (e.g., librarians, secretaries, and accountants); service or sales workers (e.g., chefs, waiters, and childcare workers); skilled agricultural, forestry, and fishery workers; craft and related trades workers (e.g., painters, plumbers, and masons); plant and machine operators and assemblers; and elementary occupations (e.g., waste management workers, cleaners, and fast-food chain workers).

Local politicians have, on average, similar cognitive abilities as people who work in technician occupations. MPs score higher than any other occupational groups in both verbal and arithmetic reasoning, but they do not appear to have superior visuospatial reasoning skills. Moreover, local politicians' non-cognitive ability profiles resemble those of people who work in most skilled occupations as managers, professionals, and technicians. National politicians are even more skilled, on average, than workers in any of the occupational groups.

We then look at groups of citizens by level of education in panel C. In terms of their visuospatial, verbal, and arithmetic reasoning skills, local politicians place somewhere between men with secondary education or an undergraduate degree. MPs score slightly higher in verbal and arithmetic reasoning than individuals with an undergraduate degree, on average. Panel D splits the data by field of graduate education. For instance,

we can see that MPs' average cognitive reasoning skills are on par with fields like education or arts and humanities.

MPs' score higher than any group in the non-cognitive ability tests, while local politicians typically have average scores between undergraduates and graduates. Nevertheless, it is difficult to see any systematic pattern when we consider fields of graduate degrees. The political class appears to match with diverse educational groups depending on the trait. For example, it is interesting that natural sciences, mathematics, and statistics graduates score higher in cognitive skills than MPs, but they appear to possess less desirable non-cognitive skills.

4.7. Differences over Time

Recent work in labor economics has highlighted the growing importance of non-cognitive abilities in determining individuals' labor market outcomes (Deming 2017; Edin et al. 2022). To understand whether the role of cognitive and non-cognitive abilities in political selection has been changing over time in a similar manner, we plot the average test scores in Online Appendix Figures B1 and B2. We do not detect any systematic trends.

4.8. Is There a Trade-Off between Competence and Representation?

Besides electing able representatives, voters may want to choose politicians who resemble them in terms of their social status and background (Norris and Lovenduski 1993; Dovi 2002; Murray 2015). However, the Finnish political class appears to be different from the general population in many ways (see Online Appendix Figure C1). Both electoral candidates and elected politicians have higher educational attainment than their voters, they have higher incomes, and they work in distinct occupations. Having said that, they are somewhat similar in terms of their socioeconomic background or parental occupational class.

This raises the question whether there might be trade-offs between electing more politicians with certain cognitive or non-cognitive traits and descriptive representation. One result that would speak against this possibility is that positive selection happens within different socio-economic groups and backgrounds.

Online Appendix Figures C2–C6 present the average cognitive scores by group. Positive selection is particularly clear when we look at selection by occupational groups, income deciles, and parental background—but less so when we split the population in educational categories. We present similar illustrations for non-cognitive traits in Online Appendix Figures C6–C9. Resonating with what we have seen thus far, (non-elected) electoral candidates and elected politicians are, on average, positively selected from the population based on their non-cognitive skills. Positive selection is not present only in the case of the masculinity trait.

Another lesson from this analysis relates to the underlying mechanisms. If positive selection is based on self-selection to candidacy, then we would expect the patterns of selection to vary across different socio-economic groups that face differential

opportunity costs of political participation. This is indeed the case, which gives us one reason to believe that self-selection is at least partially behind our findings. We discuss other evidence on the mechanisms in the next section.

To further demonstrate that there is no trade-off, we construct metrics of the quality of selection and representativeness of the local government. Correlating the selection and representation indices for each of our three cognitive test scores and eight non-cognitive test scores, we see no meaningful or statistically significant relationships (Online Appendix Figures C10 and C11). This indicates that electing politicians with certain traits does not mean that voters would be trading off representation of different class backgrounds. In sum, Finland—just like its Nordic neighbors Sweden and Denmark (Dal Bó et al. 2017; Dahlgaard and Pedersen 2024)—is an "inclusive meritocracy".

4.9. Selection of Female Politicians

The main shortcoming of our cognitive ability and personality trait data is that they do not include women, who constitute about 39% of all candidates and 35% of elected politicians in the data that we have. However, we have several good reasons to believe that the general conclusion regarding positive selection extends to women as well.

Firstly, women must be skillful to overcome voter and party biases and other obstacles they face in politics (Fox and Lawless 2010; Esteve-Volart and Bagues 2012; Le Barbanchon and Sauvagnat 2021). Secondly, we do find positive selection of female candidates and elected politicians on observable characteristics that are strongly correlated with cognitive and non-cognitive abilities and commonly used as markers of politician quality (Dal Bó et al. 2017; Dal Bó and Finan 2018; Gulzar 2021; Meriläinen 2022). In Online Appendix D, we show that female politicians and non-elected candidates are more educated than the general population, they have higher incomes, and they come from more skilled occupational classes. Thirdly, evidence from other contexts examining political selection by gender points toward positive selection of women. For example, Anderson et al. (2022) present evidence from Uganda, and Paredes-Haz (2022) shows that women were more positively selected than men in Chile before the implementation of gender quotas.

Having said that, work in personality psychology suggests that men and women do not necessarily share the same personality traits (Weisberg, DeYoung, and Hirsh 2011), and we also know that voters do not evaluate male and female candidates' qualifications in a similar manner (Bauer 2020). Whether this has implications for which dimensions of ability matter for female candidates calls for further research.

5. Mechanisms

Our conceptual framework highlighted three stages of political selection: self-selection of candidates, party gate-keeping, and voter screening. While we cannot definitively separate these mechanisms, we present several pieces of evidence that help us

understand which of them are relevant in terms of explaining the unconditional selection patterns that we observe.

5.1. Evidence on Self-Selection

Only a very small share of the population runs for election to the local council, but re-running rates are high. Almost 70% of elected candidates and around 44% of nominated but non-elected candidates run again in the next local election. Individuals who ran before have already been screened by the party (and voters) once, which suggests that self-selection may play a greater role when we consider re-running candidates. Discussions with party activists also hint that the choice whether to re-run or exit is made by the candidates themselves and rarely by the party. Therefore, analyzing the traits of candidates by their re-running choice is informative about self-selection.

Table 5 presents average scores for incumbent and non-incumbent candidates, re-runners, exiters, elected re-runners, and non-elected re-runners. The first observation that arises from the table is that incumbents systematically have higher test scores than non-incumbent candidates in the elections held between 1996 and 2017 (columns 1 and 2). Some of the non-incumbents may have run before, while others may be newcomers. Columns (3) and (4) then focus on a sample of candidates in election t who run again in election $t + 1$, splitting the data by election status in election t. We see that re-running politicians have higher scores than re-runners who were not elected in the previous election.

We can also contrast these scores with those of exiting candidates. On average, exiters have lower scores than re-runners when it comes to nominated but non-elected candidates. For elected politicians, the differences are less pronounced. We take this nevertheless as suggestive evidence that higher-quality candidates are more likely to self-select into re-running while candidates with lower scores are more likely to opt out of candidacy.

5.2. Party Gate-Keeping and List Composition

To further understand the relevance of party screening, we examine contexts where parties face different incentives for candidate selection. A key institutional feature is that parties can nominate up to one and a half times the local council size in candidates. While parties rarely reach this limit (the median "list fill" rate is around 25%), cases where they do provide insight into party screening intensity. When parties field the maximum number of candidates, we expect greater recruitment efforts and more intensive screening. Consistent with this, Table 6 shows that non-elected candidates from parties with full lists have higher test scores than those from parties with unfilled lists (columns 1 and 3). This suggests that more intensive party screening can contribute to positive selection on ability.

Council size provides another window into party screening. Larger councils typically operate in more professional political environments, increasing parties'

TABLE 5. Cognitive ability and personality test scores by re-running choice and electoral success.

	Current candidates		Rerunners		Exiters		Elected rerunners		Non-elected rerunners	
	Incumbent	Non-incumbent	Politician (elected)	Nominated (non-elected)	Politician (elected)	Nominated (non-elected)	Politician (elected)	Nominated (non-elected)	Politician (elected)	Nominated (non-elected)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Cognitive abilities										
Visuospatial	26.00	26.00	26.08	25.99	26.13	25.95	26.13	26.14	25.89	25.96
Verbal	25.16	24.09	25.23	24.27	24.68	23.86	25.42	24.83	24.49	24.18
Arithmetic	22.72	21.52	22.81	21.67	22.46	21.20	23.04	22.58	21.95	21.54
Panel B: Personality traits										
Leadership motivation	18.14	17.41	18.18	17.23	18.01	17.36	18.32	17.88	17.63	17.14
Activity-energy	17.81	17.00	17.85	16.72	17.98	16.90	17.97	17.52	17.39	16.60
Achievement striving	15.13	14.65	15.20	14.52	15.14	14.58	15.33	14.97	14.69	14.45
Self-confidence	23.61	23.13	23.65	22.99	23.68	23.06	23.72	23.61	23.39	22.90
Deliberation	17.35	16.71	17.39	16.70	17.20	16.59	17.52	17.21	16.90	16.62
Sociability	22.87	22.35	22.88	22.17	22.98	22.29	23.01	22.77	22.39	22.09
Dutifulness	12.46	11.86	12.48	11.85	12.28	11.76	12.56	12.25	12.15	11.79
Masculinity	18.39	18.09	18.41	17.95	18.51	18.05	18.43	18.36	18.31	17.89

Notes: The table reports raw means of cognitive and personality test scores for incumbents and newcomers (columns 1 and 2) and elected politicians and nominated but non-elected candidates (columns 3–10). We pool together all data from election years 1996, 2000, 2004, 2008, 2012, and 2017.

TABLE 6. Cognitive ability and personality test scores by the degree of political competition.

	Binding		Not binding		Large councils		Small councils	
	Nominated (non-elected)	Politician (elected)	Nominated (non-elected)	Politician (elected)	Nominated (non-elected)	Politician (elected)	Nominated (non-elected)	Politician (elected)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Cognitive abilities								
Visuospatial	26.01	26.08	25.86	26.05	26.11	26.25	25.01	25.64
Verbal	24.18	24.81	23.83	24.90	24.21	25.30	22.61	23.96
Arithmetic	21.90	22.65	21.15	22.54	21.61	22.95	19.77	21.71
Panel B: Personality traits								
Leadership motivation	17.73	18.45	17.11	17.99	17.56	18.61	15.72	16.57
Activity-energy	17.12	18.28	16.79	17.86	16.83	17.94	16.90	17.81
Achievement striving	14.72	15.20	14.46	15.12	14.67	15.35	13.87	14.63
Self-confidence	23.33	23.53	22.92	23.62	23.18	23.91	22.12	22.92
Deliberation	16.96	17.79	16.57	17.26	16.62	17.27	16.68	17.43
Sociability	22.68	22.89	22.09	22.86	22.39	23.35	21.34	21.65
Dutifulness	12.01	12.59	11.72	12.35	11.84	12.47	11.50	12.13
Masculinity	17.87	18.26	18.09	18.47	17.94	18.33	18.47	18.82

Notes: The table reports raw means of cognitive and personality test scores for nominated (non-elected) and elected candidates. "Binding" refers to the subsample of candidates running for parties that have nominated the maximum number of candidates; "Not binding" refers to cases where the constraint is not binding. Large (small) councils are local councils with more (less) than the median number of seats. We pool together all data from election years 1996, 2000, 2004, 2008, 2012, and 2017.

incentives to field high-quality candidates. As shown in columns (5)–(8) of Table 6, candidate quality is indeed higher in most dimensions in municipalities with large councils, providing further evidence that party screening contributes to positive selection at least in some circumstances.

5.3. Voter Screening and Electoral Competition

Besides having been screened by parties, individuals who ran for election before have already been screened by voters once. We compare elected re-runners with non-elected re-runners in columns (7)–(10) of Table 5 to better understand the importance of voter screening. We see that re-runners who do get elected have higher scores than re-runners who do not get elected. This conclusion holds even when comparing previously non-elected re-runners with re-running incumbents who do not get elected. One interpretation of this is that voters learn about candidates in repeated elections, and this information enables them to elect competent candidates.

Furthermore, the effectiveness of voter screening varies with electoral context. Full-party lists create more complex choice environments for voters while simultaneously intensifying intra-party competition. Our results show that even with these longer lists, voters manage to select candidates with high abilities (columns 2 and 4 of Table 6). Notably, the quality of elected politicians is similar whether they come from full or non-full lists, despite the higher average quality of candidates in full lists. This suggests voters can identify able candidates even in more demanding choice environments.

Electoral competition also shapes selection patterns. In larger councils, which typically feature more candidates and parties, voter screening becomes more challenging but competition intensifies. Our analysis shows that elected politicians in larger councils score higher on almost all ability measures (columns 6 and 8), though this partly reflects the higher overall quality of the candidate pool. Additional analyses of within- and between-party competition (presented in Online Appendix Table E1) support these conclusions.

5.4. Insights from Voter and Politician Surveys

The patterns in our data are in line with the interpretation that positive self-selection and successful party and voter screening all contribute to the aggregate selection outcome. Furthermore, campaigning may play some role—although it is important to bear in mind that campaigning would not matter unless voters react to it. These conclusions are supported by surveys of citizens and politicians, although we stress that we cannot link any of the survey data with our administrative registers. We discuss this survey evidence in detail in Online Appendix D.

6. Does Political Selection Matter for Policy?

Finally, we assess evidence on the policy consequences of positive selection on ability. A key purpose of this exercise is to understand whether politicians with certain traits could be more likely to become candidates and/or get elected due to being better at governing. With this goal in mind, we focus on the traits for which we find the strongest positive selection: verbal and arithmetic reasoning, leadership motivation, and dutifulness.

6.1. Measurement of Local Government Performance

To understand how political selection shapes the performance of local governments, we need an outcome that has a normative interpretation in the sense of "the more, the better". For example, one could hardly claim that more or less public spending per se is necessarily a good outcome. We thus follow Meriläinen (2022) and focus on fiscal sustainability. More precisely, we use data on municipal finances collected from Statistic Finland's publicly available databases to construct a fiscal sustainability index based on so-called crisis municipality criteria used by the Finnish Ministry of Finance.[31]

Our index measures how many of the following six criteria a municipality *does not* satisfy: (i) the net result is negative; (ii) debt per capita exceeds the national average by more than 50%; (iii) the local government has a budget deficit; (iv) the municipal income tax rate is 0.5 percentage points higher than the national average; (v) the solvency ratio of the municipality is less than 50%; and (vi) the relative indebtedness is at least 50%. Most municipalities satisfy at least one crisis municipality criterion, and the average of the resulting index is 4.7. The crisis municipality criteria—and whether a municipality satisfies them or not—are salient to voters.

The index is informative about government performance for three reasons. First, it is based on policies that are directly under the control of the local government. Second, failing to satisfy the criteria can lead to costly fiscal adjustment, such as forced austerity measures like spending cuts, a shutdown of public services, or a municipal merger. Third, the index is positively correlated with incumbent vote shares and survey-based measures of citizen satisfaction with their home municipality (Meriläinen 2022).

6.2. Empirical Strategy

We explore the relationship between fiscal sustainability and political selection by correlating our index with the average scores of local councilors and by relying on close elections between high- and low-scoring candidates (i.e., candidates with above and below median scores). The latter approach follows the identification strategy originally

31. We were not allowed to combine our data with further measures of local government performance to ensure that individual municipalities cannot be identified from the data.

proposed by Hyytinen et al. (2018). This strategy hinges on unexpected shifts in political selection generated by the randomness in the outcomes of tight electoral races between different types of candidates within political parties.[32]

Formally, these unexpected shifts are defined as the difference between the realized and the expected outcome (for municipality m at election t):

$$\frac{100}{\text{Council size}_{mt}} \sum_{p}^{M_{mt}} \left(\sum_{i}^{N_{pmt}} C_{ipmt} E_{ipmt} H_{ipm} - \frac{\sum_{i}^{N_{pmt}} C_{ipmt} H_{ipm}}{\sum_{i}^{N_{pmt}} C_{ipmt}} \sum_{i}^{N_{pmt}} C_{ipmt} E_{ipmt} \right).$$

Here, C_{ipmt}, E_{ipmt}, and H_{ipm} are indicators for a politician i running for party p being involved in a close election, getting elected, and having a high (above-median) score, respectively. N_{pmt} is the number of candidates, and M_{mt} is the number of political parties. The first term within the parentheses expresses the number of high-ability candidates elected in close elections from a particular party, and the second is the expected number of high-ability candidates elected in close elections.[33] We sum this difference across parties and scale the resulting quantity such that it is expressed as a seat share.

To define electoral closeness, we construct election margin for each candidate. For the elected (the non-elected) candidates, it is the difference between their votes and the number of votes acquired by the first non-elected (the last elected) person in their party. We scale the resulting difference by the total number of votes that the party acquired to account for differences in party size and the number of voters.[34] We experiment with different definitions of closeness; in what follows, we report results using bandwidths of $\varepsilon = 0.4$, $\varepsilon = 0.8$, and $\varepsilon = 1.2$. About 8%, 16%, and 25% of all candidates fall within these bandwidths, respectively, and the median distances from the threshold for getting elected in terms of the absolute number of votes are 3, 8, and 13.

6.3. Regression Results

Table 7 shows our estimation results. In panel A, we report the ordinary least squares (OLS) results from a specification that correlates the average verbal reasoning (column 1), arithmetic reasoning (column 2), leadership motivation (column 3), and dutifulness

32. This is a rather demanding empirical approach, especially in our case. The fact that we do not have the test score data for all electoral candidates biases our estimates toward zero and induces noise in the estimation. Nevertheless, we take our analysis as a first step toward understanding the policy consequences of electing people with higher cognitive and non-cognitive skills.

33. The number of high-ability candidates elected from the close elections follows a hypergeometric distribution.

34. We visualize the distributions of these metrics and also show robustness to alternative bandwidths in Online Appendix C.

TABLE 7. Selected traits and fiscal sustainability of local governments.

	Verbal	Arithmetic	Leadership motivation	Dutifulness
	(1)	(2)	(3)	(4)
Panel A: OLS				
Average score	0.030**	0.030**	0.019*	0.013
	[0.013]	[0.013]	[0.010]	[0.026]
Panel B: Close elections, $\varepsilon = 0.4$				
Unexpected shift	0.028	0.006	0.080	−0.008
	[0.056]	[0.053]	[0.055]	[0.048]
Panel C: Close elections, $\varepsilon = 0.6$				
Unexpected shift	0.019	0.024	0.083**	−0.014
	[0.044]	[0.039]	[0.041]	[0.037]
Panel D: Close elections, $\varepsilon = 0.8$				
Unexpected shift	0.032	0.037	0.085**	0.015
	[0.036]	[0.033]	[0.035]	[0.033]
N	947	947	947	947
Mean of dependent variable	4.68	4.68	4.68	4.68
SD of dependent variable	1.33	1.33	1.33	1.33

Notes: The table reports results from OLS regressions where the dependent variable is an index of fiscal sustainability. Standard errors that are clustered at the municipality level are reported in brackets. ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

score (column 4) of the local councilors with our fiscal sustainability index. We focus only on these four traits to avoid multiple testing issues and because they are the most robust determinants of political selection based on our analysis above. We see a positive and statistically significant relationship in columns (1)–(3), hinting that locations with a stronger positive selection on these traits also have more sustainable local public finances.

Panels B, C, and D then present our causal analyses that hinge on close elections. The point estimates are systematically positive in columns (1) and (2), hinting toward possible positive impacts of electing individuals with higher verbal and arithmetic reasoning skills on fiscal sustainability. However, the point estimates come with very wide confidence intervals. In column (3), we see clearer evidence that leadership motivation matters: a 1 percentage point increase in highly motivated politicians' seat share leads to an increase of about 0.08 in the fiscal sustainability index. Lastly, the point estimates for dutiful local councilors in column (4) are small in magnitude and statistically insignificant.

To get a better sense of the effect magnitude that we see in column (3) of panels B, C, and D, consider a median-sized local council with 27 local councilors. In such a council, increasing the representation of councilors with a high leadership motivation would induce an improvement of 0.3 in the fiscal sustainability index. This is about one-fourth of a standard deviation. This magnitude is in line with the effects that

Meriläinen (2022) documents for the representation of high-income and re-elected incumbent politicians.

6.3.1. Validity Checks. In Online Appendix F, we report that municipalities that get more or less high-ability representation by chance are not different from each other in terms of a set of pre-treatment characteristics. This supports the validity of our empirical design. We also discuss post-treatment balance to get a better sense of the bundled nature of the treatment arising from different types of skills being positively correlated. Moreover, we propose a test to tackle concerns regarding compensating differentials. For instance, Marshall (2024) argues that the effects of politician ability would be difficult to identify because high-ability and low-ability candidates end up in close races only if they have also (potentially unobservable) bad or good traits, respectively. To understand whether this is the case, we explore heterogeneities in the personal incumbency advantage. We find indicative evidence that, on average, high-ability candidates are more electable than low-ability candidates. This further hints that they ended up in close elections simply because of bad luck and not because of compensating differentials.

7. Concluding Remarks

This paper characterizes the importance of cognitive and non-cognitive abilities in political selection. The Finnish electoral system combined with rich administrative data provides us with a unique opportunity to compare politicians with citizens who stay outside of politics and to assess the abilities of candidates selected by parties and politicians elected by voters.

We present two main results. First, electoral candidates are positively selected on different cognitive and non-cognitive skills relative to the population. This points to parties being successful at screening for able individuals, which is in line with earlier results on political selection from contexts where the selection process is to a great extent controlled by political parties. In part, the positive selection may be due to positive self-selection, although we believe it is unlikely this is the only mechanism. Second, voters elect more capable politicians relative to non-elected candidates and the population. This hints that voters are able to screen for competent politicians, which goes against an extensive scholarship questioning voters' ability to make good decisions in challenging electoral environments (Downs 1957; Lau and Redlawsk 1997; Söderlund, von Schoultz, and Papageorgiou 2021). Our main analyses focus on men due to data limitations, but it is likely that the general finding of positive selection on ability generalizes to women.

These findings are good news for democracy and the performance of voter-centered electoral systems in particular. This is perhaps encouraging also considering the recent trend toward "institutional personalization", reflected in reforms of electoral systems that to greater extent offer voters a choice between individual candidates.

Besides the intrinsic value of positive political selection on competence and honesty, we present tentative evidence that traits for which positive selection is particularly strong also matter for government performance. In particular, having politicians with better verbal and arithmetic reasoning abilities, and especially with more leadership motivation, seems to lead to better fiscal sustainability outcomes. Exploring the consequences of positive political selection on cognitive and non-cognitive ability beyond fiscal performance is one promising avenue for further work. Similarly, the determinants of political selection warrant further attention. Although the overall selection is positive, the extent of positive selection varies across the municipalities and party groups. Our analysis suggests that one reason behind this can be electoral competition, which shapes the importance of party and voter screening and candidates' incentives to campaign. Future research should seek to provide causal evidence on how and why different contextual factors affect political selection. One important gap is that we are short of evidence on what factors matter for entry as a candidate (Dal Bó and Finan 2018; Gulzar 2021).

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Supplementary Data

Supplementary data are available at *JEEA* online.

Journal of the European Economic Association 2025 23(5):1908–1949
https://doi.org/10.1093/jeea/jvaf010