

CHAPTER 8

NEVER TOO RICH TO BE MIDDLE-CLASS: AN ASSESSMENT OF THE REFERENCE-GROUP THEORY AND IMPLICATIONS FOR REDISTRIBUTIVE TAXATION

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ABSTRACT

Politicians of all stripes appeal to the support of the middle class and aim their policy proposals at this group. Reference-group theory explains why citizens could believe themselves to be middle class, even if their income level or social status places them above or below. It postulates that, since the reference groups of most people are relatively homogeneous, anyone could feel 'average' compared to the reference group. The authors aim to test this theory by comparing perceptions about the middle class with a categorisation using objective income statistics. A survey of the adult population of the Canadian province of Quebec showed a significant proportion of citizens believing to be part of the middle class, even though their equivalised income levels placed them outside of a generally recognised income range for this group. Most notably, this subjective misplacement on the income distribution was heavily concentrated among individuals whose incomes were too high to be a part of the middle class. Our results also show that support for higher taxes on the rich might be overstated, as some respondents simply do not realise that they are a part of this group.

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1. INTRODUCTION

Politicians consistently refer to the middle class as the intended target of their actions. Middle class seems to both represent ‘ordinary’ citizen and a certain social status they should seek to attain. However, some individuals have too little resources to be part of this class, while others are too privileged to still be considered as part of it.¹ The concept of the middle class is, of course, relatively elastic and political actors have an incentive to keep it that way in an attempt to form solid electoral coalitions. Justin Trudeau, Canada’s prime minister since 2015, for example, likes to appeal to *the middle class and those working to join it* (Government of Canada, 2016), a group that seems to include pretty much every Canadian. One of the planks of Justin Trudeau’s platform was a reduction in the middle bracket of Canada’s personal income tax system. This *middle-class tax cut* forced his party to designate what being a part of the middle class was, as far as income is concerned, and sparked controversy. This controversy inspired this research note. When politicians talk about the middle class, who listens? What distinguishes that middle class from the one that social scientists study?

There are multiple competing theories of what constitutes the middle class. The classical Marxist perspective delineates a working class, middle class and capitalist class. These classes are based mostly on the structure of the economic activity of citizens, as Marxist theory places the origins of social phenomena in relations to work and capital. Such a classification is used much less often today for multiple reasons (Pakulski & Waters, 1996). First, a much smaller share of the population of advanced economies works in the primary or secondary sector, contrary to what was the case at the beginning of the twentieth century. The small share of the population that still works in those sectors enjoys generally high standards of living, partly due to unionisation. The distinction between liberal professionals, the original middle class, and land or factory owners, the original capitalist class, is also blurrier today. Most middle-income individuals are also partial capital owners and a significant proportion of the richest individuals are employees of high-paying sectors such as medicine or law, rather than industrialists. Most recent studies of the concept of the middle class thus rely on definitions based on income rather than profession or sector of activity. There are, of course, competing claims as to what definition of income should be used (see e.g. Reeves, Guyot, & Krause, 2018).

Our research is not only interested in the middle class as a scholarly defined group, but also as a perceived situation by individuals. We are interested in both the statistical measurement of the middle class as well as the experience of belonging to this class. Sociologists and political scientists have developed a theory explaining the appeal of placing one’s political action in defense of this group based on the perceptions of citizens. The *reference-group theory* postulates

that most citizens consider themselves to be a part of the middle class because of nearsightedness to the distribution of economic resources in society. Statistically speaking, most people are in contact with people whose economic situation is slightly better or worse than their own. Most people are surrounded by a limited diversity of income levels (and social status), mainly because people of similar income levels tend to have the same activities and live in the same places. Most people can thus feel ‘average’ when their frame of reference is limited to the people of the same general economic condition as themselves. Such a theory would explain that most people feel as if they are in the middle of the income distribution (Evans, Kelley, & Kolosi, 1992). The reference-group theory is an application of the availability heuristic cognitive bias (Evans & Kelley, 2004). This bias rests on the idea that humans base their judgements on the most easily available information, and that information about the people someone meets in daily life is much more accessible than information about the whole population, such as the median income. Xu and Garand (2010) show that Americans base, in part, their perception about inequality in their country on the level of inequality in their state, which can be considered a larger scope of the same phenomenon, and Ansolabehere, Meredith, and Snowberg (2014) make similar findings for assessment of performance of the labour market.

This theory, though intuitive, is still the object of debate. Compelling evidence of its existence at the microlevel has been found (Cruces, Perez-Truglia, & Tetaz 2013; Engelhardt & Wagener, 2014) but things are not as clear when international data are used (Curtis, 2013). Of particular interest to economists is the idea that these, perhaps biased, perceptions about the distribution of income among classes influence demand for redistribution through public policy (see e.g. Hauser & Norton, 2017; Page & Goldstein, 2016). This note attempts to contribute to the ongoing testing of that theory. It compares citizens’ perceptions about the middle class and their place within it against what research says about this group. We first try to measure whether citizens who say they are a part of the middle class are actually a part of it, according to the scientific understanding of what is the middle class. In addition to this more direct test of the reference-group theory, we also try to measure how citizens perceive the middle class in terms of size, bounds and fiscal burden, in comparison with the low- or high-income class.

This introduction is followed by a section describing the Data and Methods used, two sections about results, one on Perceptions about Income Classes and one on Perceptions about Taxes, a section that discusses what those results imply, and a Conclusion.

2. METHODS AND DATA

Using survey data, we compare perceptions of being part of the middle class with classifications of social class based on household income. We use a generally recognised definition of the middle class: people who are part of the group of households whose equivalised household income is between 75% and 150% of the median income of their region (see Bigot, 2009; Foster & Wolfson, 2010;

Grabka & Frick, 2008; Reeves et al., 2018, for insights on which research objectives fit with such a definition). This definition has been shown to be a relatively good measure of the thickness of the middle of income distribution in the region that is of interest to us, among others (Delorme, St-Cerny, & Godbout, 2014). Using shares of the median income is a common way of identifying the middle class (Thurow, 1984 is one of the first to use it, see also Pressman, 2007) and 75–150% is the most common range used when looking at our sampled population.

For practical reasons, this definition is operationalised using total household income. Total income represents the sum of all income components of a household, including public transfers, but before considering the effect of taxes (Diemer, et al., 2013). Since we based the analysis on survey data, we chose to include a very large definition of annual income, which includes social transfers, to make sure that we did not create ambiguity for respondents. The case of retirees was of particular interest to us as their income can be a mix of salaries, private pensions, public pensions and public transfers. Asking respondents about all sources of income, whether public or private, avoids forcing respondents to determine what counts as income for the purpose of the survey. We use a definition of income that excludes taxes for similar reasons; most people have a much clearer idea of the gross income they receive, annually, monthly or even hourly, than they have of their after-tax income (Collins & White, 1996).

Using official statistics from Canada's Survey of Labour Income Dynamics, we calculated the bounds of the middle class for different household sizes. A single person was thus considered part of the middle class if his or her annual income was between \$29,000 and \$57,000, in 2015 Canadian dollars. These amounts were adjusted for bigger households by using the square root equivalence scale. This caused the bounds of the middle class for households of four to roughly double the ones for a single individual: \$57,000 and \$114,000.²

The survey was administered to 900 adults of the Canadian Province of Quebec³ at the end of 2016, using an election polling commercial web panel. Members of the panel from every demographic group answered the question online and their answers were weighted to ensure a demographic breakdown of age, gender, education, region and mother tongue comparable to official statistics from the Canadian census.⁴ Table 1 highlights the weighted distribution of basic demographic characteristics in the sample.

Quebec has a distinct national identity from the rest of Canada and has been the main focus of our research. Our results nonetheless add to the international literature on the reference-group theory by using data from a North American population, as most research on the subject has used European data. Respondents were asked questions about the social class to which they felt they belonged (low income, middle class or high income), the share of the population they believed belonged to each of those groups and the income thresholds they thought separated them. They were also asked what they thought about the share of income taxes paid by each of these groups and what they thought about the fairness of such a distribution.

Table 1. Survey Sample Characteristics.

	Weighted Respondents	%
Total	900	100
Male	456	51
Female	444	49
Age 18–24	71	8
Age 25–34	176	20
Age 35–44	149	17
Age 45–54	177	20
Age 55–64	147	16
Age 65 and up	179	20
Highschool diploma or less	305	34
Collegial or Trades Diploma	399	44
University Diploma	196	22
Less than \$20,000 household income	114	13
\$20,000 to \$39,999 household income	193	21
\$40,000 to \$59,999 household income	216	24
\$60,000 to \$79,999 household income	148	16
\$80,000 to \$99,999 household income	96	11
\$100,000 to \$149,999 household income	96	11
\$150,000 or higher	37	4

Notes: Responses were weighted to correspond to the distribution of the population according to the Canadian census, a common practice for such surveys. Subsequent survey results are weighted the same way.

3. PERCEPTIONS ABOUT INCOME CLASSES

As shown in Fig. 1, respondents were relatively accurate in estimating the shares of the different classes when compared with the ones we calculated using official income statistics. When asked which share of the general population belonged to each class, they gave estimates that, even if they are significantly (p -values < 0.000) different from official data, correctly represent the order of each class and show a realistic magnitude. Americans surveyed by other researchers (Chambers, Swan, & Heesacker, 2014; Norton & Ariely, 2011) seemed to show bigger perception errors about the general distribution of income in their country.

Past research on Quebec's middle class has shown it to be bigger in proportion than the middle class of Canada and the United States (Delorme et al., 2014). It has also shown that the polarisation of incomes that alarmed public commentators in the United States and Canada over the last years is less pronounced in Quebec and that Quebecers seem to be aware of that.

On top of the size of each class, respondents had to estimate the income level that separated each of them. Answers to questions on income thresholds of the middle class were less informed and varied a lot in conjunction with the respondents' level of income, as shown in Fig. 2. There is a positive correlation between the estimated bounds of the middle class and the approximate⁵ income decile of the respondent (0.42 for the lower bound and 0.28 for the upper bound). Higher bound estimates rise markedly at the highest deciles, creating the impression that people stretch their definition of the middle class as their income rises.

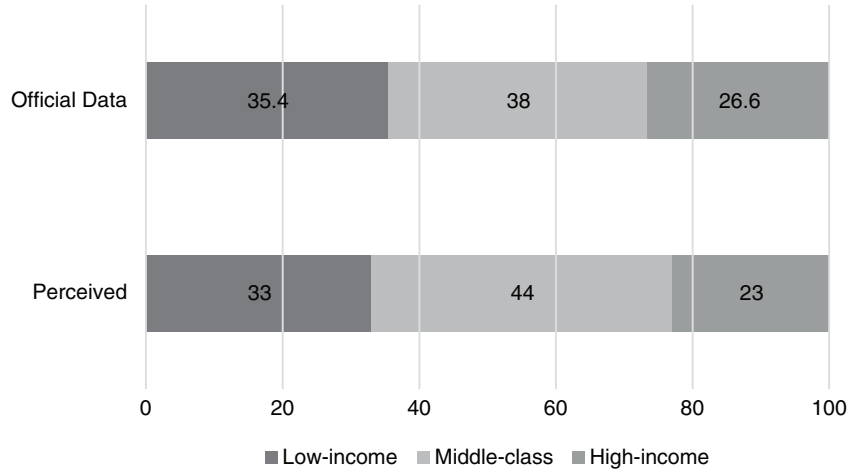


Fig. 1. Size of the Three Classes, Estimation by Respondents and Official Data (Percentages). *Source:* Authors' Calculations Using Statistics Canada's Survey of Income and Labour Dynamics. *Note:* In your opinion, what percentage of Quebecers belongs in each of the following categories? [Those whose income is higher than the middle class/The middle class/Those whose income is lower than the middle class].

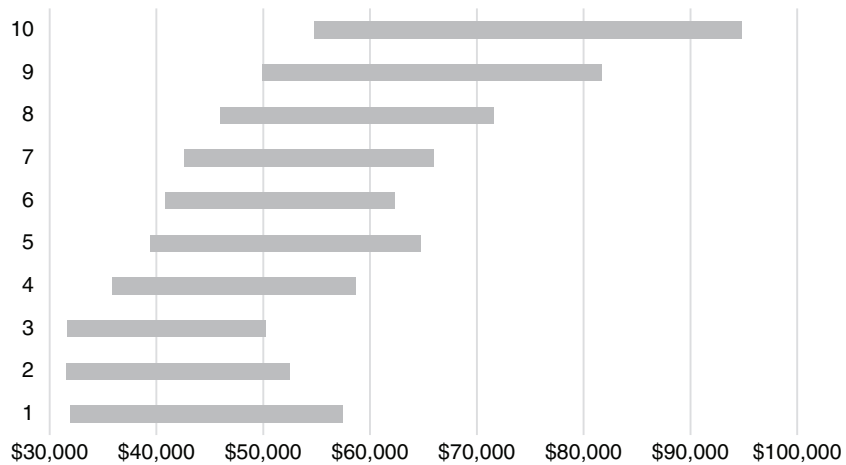


Fig. 2. Household-size Adjusted Estimated Bounds of the Middle Class by Approximate Decile. *Note:* In your opinion, what is the minimum total annual income, before taxes and deduction, that [a person who lives alone like yourself/a family of X people such as yours] must earn to be considered as part of the middle class? 'And for a [person who lives alone like yourself/family of X people such as yours], what is the minimum amount of total annual income, before tax and deductions, that would place you above the middle class?

With questions about income and the size of the household, it was possible to assess the shares of respondents belonging to each of the three classes in the sample and compare it to answers they gave when asked directly which class they felt they belonged to. Fig. 3 shows, as was expected, that respondents were much less accurate when assessing their own position within that income distribution than when assessing its general shape, with 58% of them considering themselves middle class while only 42% of them were according to the calculated bounds. Respondents' self-assessment diverged significantly (p -value < 0.000) not only from the one calculated by the authors, but also from their own assessment of the size of the middle class, which was 44% of the population.

Most interesting was that this misplacement error was heavily concentrated among high-income respondents. Fig. 4 shows that 68% of low income and 71% of middle-class respondents correctly self-assessed their social position while a similar proportion (75%) of high-income respondents incorrectly classified themselves as middle class.

Our respondents were questioned about the shares of income taxes paid by low income, middle class and high-income households. They were also asked if these tax shares were too high, fair or too low. Even if we have seen that their estimations of the size of these three classes was accurate, Fig. 5 shows that their estimations of their share of taxes paid massively discounted the contribution of high-income households (p -values < 0.000).

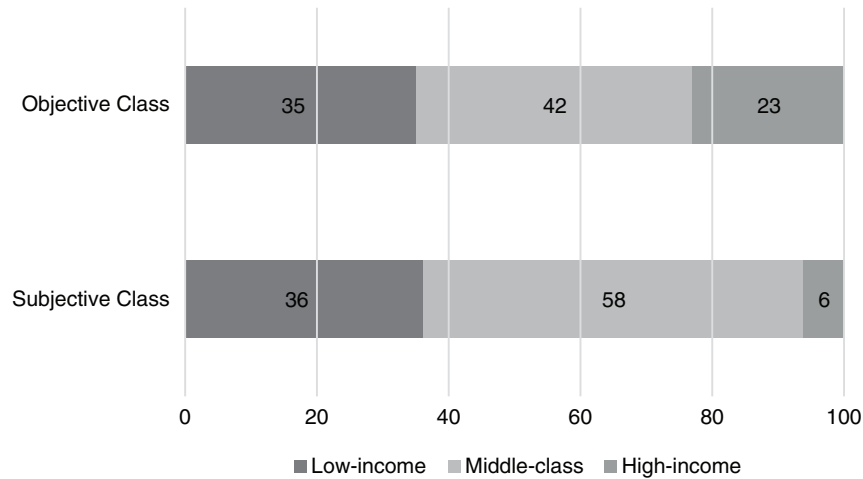


Fig. 3. Objective and Subjective Class (Percentages). *Note:* We often hear references in the media about the middle class; however, not everyone seems to agree on who exactly is considered to be part of the middle class and who is not. Do you personally think that: [Your income is lower than that of the middle class/You are part of the middle class/Your income is higher than that of the middle class/Don't know]?

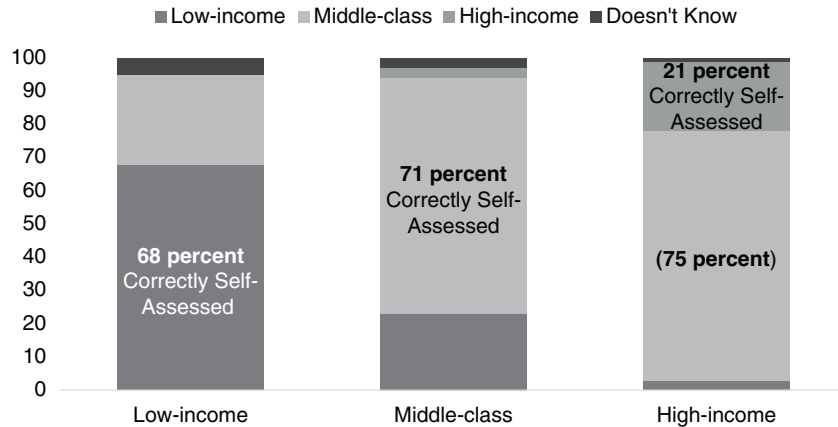


Fig. 4. Self-assessment Errors (Percentages).

4. PERCEPTIONS ABOUT TAXES

Respondents correctly estimated that high-income individuals pay a larger share of taxes than their weight in the population (28% of taxes for 23% of the population), and that the opposite applies to low-income individuals (21% of taxes for 33% of the population). However, they significantly underestimated how much the distribution of taxes is skewed towards higher income individuals (who pay 259% of their population weight in taxes compared to an assessed 122%) compared to individuals with low income (who pay 6% of their relative weight compared to an assessed 64%), and individuals in the middle of the distribution (who pay 74% of their weight and not 116% as respondents estimated).

We then asked respondents if each of the classes paid enough, too much, or too little tax.

Their views can be summarised as considering low income and middle-class individuals as appropriately or overtaxed (98% of respondents consider the middle class this way and 93% see low-income individuals' contribution the same way) and high-income individuals as under-taxed (67% of respondents believing so). It is worth noting that Fig. 6 shows a more negative assessment of the taxes paid by the middle class than the low-income class, with higher percentages of them believing that they do not pay enough taxes (7% against 2%) and lower percentages of them thinking that their tax burden is too heavy (49% vs. 57%, p -values < 0.000).

These opinions seem consistent with respondents' general belief that middle-class individuals pay the biggest share of taxes among the three groups, as highlighted in Fig. 5. Looking at the opinion of respondents about the taxes of the richest in comparison to their perceived and measured social class also reveals an interesting pattern.

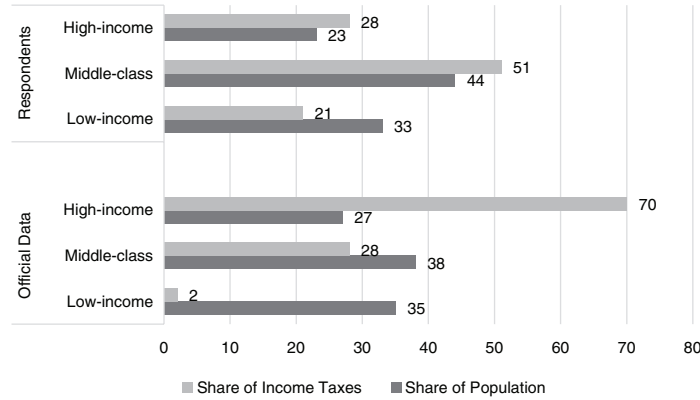


Fig. 5. Respondents' Assessment of the Size and Fiscal Contribution of Each Class and Comparative Official Data (Percentages). *Source:* Authors' Calculations Using Statistics Canada's Survey of Income and Labour Dynamics. *Note:* In 2015, the federal government and the government of Quebec collected a combined 50 billion dollars in income taxes from Quebecers. In your opinion, what percentage of those taxes was paid by [Those whose income is higher than the middle class/The middle class/Those whose income is lower than the middle class].

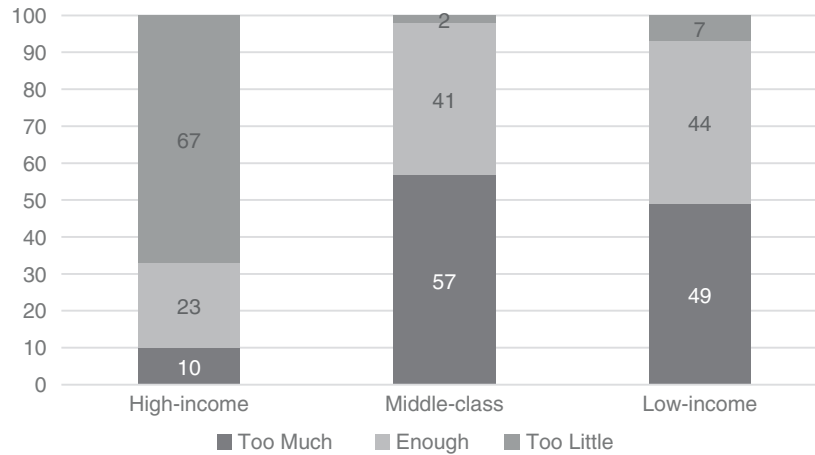


Fig. 6. Opinions About the Fiscal Contributions of Each Class (Percentages). *Note:* Would you say that each of the following groups pays too much, just the right amount or not enough income taxes? [Those whose income is higher than the middle class/The middle class/Those whose income is lower than the middle class].

The view that taxes for the rich should be raised is held by a majority of every group (64–73%), except for the few people who correctly assessed their high-income status. The fact that a significant minority of that group (41%) still sees taxes on their group as too low is also an interesting finding (Fig. 7).

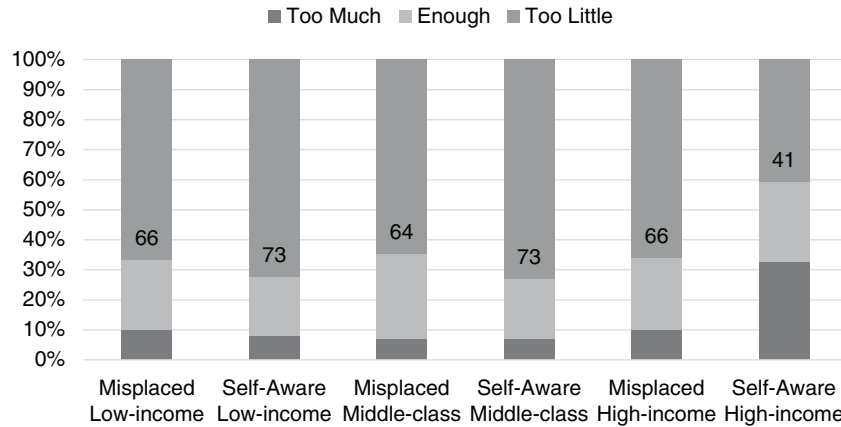


Fig. 7. Opinion on Tax Burden of High Earners.

5. DISCUSSION

Our results generally do not sit perfectly well with the reference-group theory. Even though we see some misplacement of many respondents in the middle class, this misplacement is not symmetric. The theory, as described by [Cruces et al. \(2013\)](#) for example, would imply that both low-income and high-income respondents incorrectly assess themselves as middle class in comparable numbers, as [Fernández-Albertos and Kuo \(2018\)](#) have found for Spain and [Engelhardt & Wagener \(2017\)](#) for Germany. Not only do our high-income respondents consider themselves middle class in a much larger proportion, our middle-class respondents incorrectly consider themselves as low income in much larger numbers than they incorrectly consider themselves as high income. There seems to be more of a tendency towards underestimating one's economic class than towards seeing one's self as in the middle of the distribution, as [Karadja, Mollerstrom, and Seim \(2017\)](#) have found for Sweden.

[Fig. 8](#) clearly shows that overestimation of one's economic status is not as widespread as underestimation. Assessment errors are much more pronounced for under-estimators than they are for over-estimators. This holds true even when ignoring the first and last deciles where assessment errors are logically one-sided.

Since income is left-bound, no one generally has less than zero income, but incomes can rise quite high, it is possible that it gets harder to assess one's position in the income distribution the further one moves away from the bottom of the distribution. This would imply that people do make assumptions about their relative income position using reference groups, but that the formation of such groups does not follow the same process for individuals of different income levels. Perhaps income reference groups are aspirational or they are more based on consumption patterns than on income. The other possibility is that having higher income is seen poorly from a moral perspective ([Reeves, 2001](#)). This could explain why people tend to wrongly assess their position as being lower than it really is.

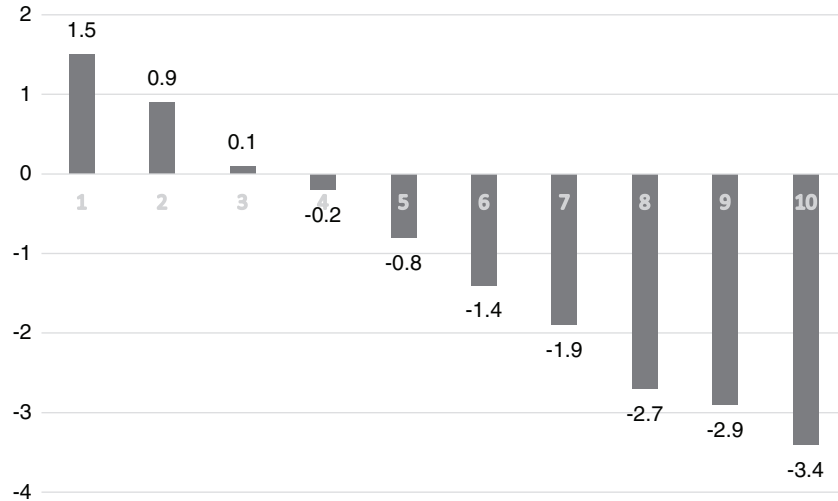


Fig. 8. Average Decile Misplacement by Approximate Decile. Source: Authors' Calculations Using Statistics Canada's Survey of Income and Labour Dynamics.

Note: Imagine that you were asked to divide all Quebecers into 10 groups of equal sizes, ranging from lowest to highest income categories. In the first group, you would find the 10% of Quebecers whose incomes are the lowest, while the last group would consist of the 10% of Quebecers with the highest incomes. In which of these groups would you say you belong? [10% of Quebecers with the lowest income/.../10% of Quebecers with the highest income].

It is also possible that low-income people are more aware of the size of their income gap with high-income people than the opposite. Finally, income and inequality perceptions have a dynamic nature, which is captured by income mobility, which we did not investigate here. Finding what lies behind the general trend towards underestimation of citizens' economic position is beyond the scope of this note.

This trend towards relative income underestimation could have two implications for perceived inequality. First, citizens might perceive inequality to be lower than it is. If they perceive their distance to the middle of the distribution to be lower than it truly is, they could extrapolate that the average distance to the middle is lower than it is. The other possibility is that they might perceive income to be more concentrated at the top end than it really is. Millionaires that see themselves as middle class logically believe that the richest in society are much richer than themselves, so they could overestimate the number, or relative wealth, of billionaires. If that is the case, these individuals would perceive incomes to be more polarised than they are, rather than more or less unequal (see Foster & Wolfson, 2010 or Wolfson, 1997 for work on the differences between income inequality and polarisation).

Since our data included questions on the distribution of taxes, we can make a few observations about the way political opinions about taxes interact with

perceived and measured social position. The trend that we observe in opinions about the tax burden of low-income, high-income and middle-class individuals is very similar to what has been observed in other similar studies (see e.g. [Shaw & Gaffey's, 2012](#) comparison of 14 years of American surveys). It is also consistent with Norton and Ariely's (2011) results showing that Americans desire a much more equal distribution of income even if they underestimate actual inequality. Authors have shown that the level of redistribution in societies is considerably more associated with the perceived level of inequality ([Engelhardt & Wagener, 2014](#); [Gimpelson & Treisman, 2018](#); [Gründler & Köllner, 2016](#); [Niehues, 2014](#)) than with its actual level ([Meltzer & Richard, 1981](#)). Our national micro-level data seems to support these results. As shown in [Fig. 4](#) only a fifth of high-income respondents consider themselves as such and [Fig. 7](#) shows that they are the only group that significantly diverges from the others as far as the desired level of taxation of the rich is concerned. High-income individuals who believe themselves to be middle class have opinions on redistribution that are similar to real middle-class individuals. This result is coherent with previous work by [Karadja et al. \(2017\)](#) showing that high-income individuals who are informed of their true relative income position tend to demand less redistribution and stands opposed to [Kuziemko, Norton, Saez, and Stantcheva \(2015\)](#) who see only little effect on redistributive preferences.

From this observation, we can hypothesise that the support for higher taxes on the most privileged is thus somewhat overestimated. Support for taxes on high-income individuals would logically wane when some of their supporters learn that they are the intended target. It also seems important to note that our respondents strongly underappreciated the progressive nature of Quebec's income tax, as shown in [Fig. 5](#). Some evidence seems to show that tax reforms that aim to raise taxes are more successful when they antagonise a group rather than when they seek to make taxes fairer in an abstract manner (see [Tough, 2012](#) for historical evidence or [Szyner et al., 2017](#) for a political psychology perspective). Under this logic, the desire for higher taxes on the rich could be interpreted as having more to do with a general disdain for that group than a desire to raise more revenue for governments. Such a disdain would also sit well with the hypothesis that people underestimate their economic position out of shame rather than out of a lack of information.

6. CONCLUSION

Our research sought to test a common and intuitive theory about the appeal of using the middle class as a political target. Our survey tested the strength of the reference-group theory, which states that most people would tend to see themselves as a part of the middle class due to the limited scope for comparison that they have. The data gathered does not fully support this theory, at least in its purest form, as high-income individuals are much more likely to incorrectly consider themselves as middle class than low-income people are. Perhaps individuals assess their position using reference groups, but we don't clearly understand how they build their reference groups yet.

The general tendency towards underestimation of respondents' economic status is worthy of future exploration. It could be caused both by information availability and treatment biases, as the reference-group theory is, or social considerations such as an amoral association with high incomes. Further studies combining detailed measures of how citizens perceive the distribution of income and taxes in their society and how they assess their own position would bring answers to some of the questions our work raised. Qualitative work in that regard would most probably make macro or international research on such issues more solidly grounded.

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NOTES

1. Social scientists have shown a sustained interest in the middle class. It is historically associated, for example, with the advent of the modern welfare state (Esping-Andersen, 1990; Svallfors, 1997).
2. All income thresholds were rounded to be more easily accessible to respondents.
3. Quebec is Canada's second largest province. It has close to 8 million inhabitants, a large majority of which have French as their first language. Compared to the rest of Canada and the United States, the province can be summarily described as having a relatively low level of income, a high level of unionization, a large public sector and a very strong national identity, with French as the main spoken language.
4. The survey was commissioned to CROP, a well-established polling firm in Quebec. Voluntary participants are incentivized with a monthly draw to win cash prizes. The survey suffers from the biases of all web surveys concerning low-income or low literacy potential respondents. These biases must however be put in perspective with biases from phone-only surveys, which don't reach younger audiences and suffer from very large and non-random non-response rates.
5. Income deciles were calculated with the same official data as the median income used to establish the bounds of the middle class. However, since respondents were asked their income on a discrete rather than continuous scale, precise deciles could not be calculated. Instead, each respondent was given up to three deciles in which he could belong, according to his income adjusted for the size of his household. The deciles presented here are thus approximate deciles, which account for the uncertainty in the data.

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