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ON THE ROAD TO BETTER GOVERNANCE:

The “Middle Class Particularism” and Quality of Government

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ABSTRACT

This paper merges two large bodies of literature – that concerned with the effects of regime type on institutional quality, and research on the middle classes’ effects on the economy and society at large – with the purpose of providing an answer to: How the size of the middle class affects Quality of Government, and if the size of middle class is a determinant for democracy’s impact on Quality of Government?

I provide a theoretical framework that outlines a “middle class particularism” in terms of their demand of Quality of Government, which differentiates the middle class from both the rich and the poor. I argue that their demand – driven by low future discount rates, expectations on the state, their mitigating role between the upper and lower class, and by their values – interacts differently with the supply side in democracies and autocracies, because of the regime type’s different institutional natures. In this first large-N study on the relationship between the middle class and Quality of Government, I employ a novel operationalization of the middle class – that capture those who can afford to purchase a car, a significantly expensive non-essential item, from which an estimation of the elite is deducted.

The results indicate that the size of the middle class is a strong predictor of Quality of Government in democratic countries, but not so in autocracies. Additionally the empirical findings show only weak support for an interaction effect, between the level of democracy and the size of the middle class, on Quality of Government.

Key words: Quality of Government, Middle Class, Middle Class Particularism, Corruption, Democracy, Autocracy

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Abbreviations

DV	Dependent Variable
GDP	Gross Domestic Product
IV	Independent Variable
QoG	Quality of Government
MC	Middle Class
NGO	Non-Governmental Organization
OECD	Organization for Economic Cooperation and Development
OSL	Ordinary Least Squares
UN	United Nations
WB	World Bank

Introduction

Today democracy is more widespread than ever before, and now, in the aftermath of the Arab spring, 122 countries are electoral democracies, a number which have more than doubled since 1989 (Freedom House 2014). For long democracy has been promoted as a remedy for state mismanagement and as the path towards development. While democracy, as a mode of governing, has enjoyed large success – and indeed a majority of the world’s best governed and most prosperous countries are democracies – for many countries it has failed to deliver on its promises. The mixed performances of democracies is manifest in a recent essay in *The Economist* (2014), where the question “What’s gone wrong with democracy?” is in part answered by the overreach of democratic government, an inherent shortsightedness and leaders inability to fulfill electoral promises.

For a country to prosper, the state needs not only to be able to hear the will of the citizenry, which may best be achieved through democratic institutions, but also to be able to realize that will. I.e. a state must have the capacity to deliver the public goods desired by the people. Undeniably dysfunctional and corrupt government have detrimental economic and societal effects (Rothstein and Teorell 2008), and there is an emerging consensus that variation in institutional quality may be the most important explanation of differences in development across countries (Acemoglu, Robinson et al. 2002, Persson and Sjöstedt 2010). It is perhaps sad for proponents of democracy that, simply having electoral democracy does not necessarily equate in higher Quality of Government¹ (from herein after referred to as QoG), and even more sad that democracy as a mode of governing, has been found to correlate weak, not at all, and even negatively with QoG (Sung 2004). Autocracies with seemingly similar preconditions have come to outperform their democratic counterparts on several – and in extreme cases on most conceivable – measurements of human development and QoG (Sen 2011). As countries in Africa, the Middle East and South East Asia are considering alternatives to democratic governance, the success of the autocratic growth-miracle of China and the high living standards in the autocratic city-state of Singapore pose a challenge to democracy advocates.

¹ A term borrowed from Rothstein and Teorell (2008) as to describe how well a state utilize its’ resources for the public good. In addition to the quality of output, in terms of delivering service to its citizenry, the term also entail that these services are carried out in an efficient, non-corrupt way that doesn’t waste the resources of the state.

Empirical research have shown the relationship between democracy and QoG to take on a U or a J-shape, implying that democracy contains elements that effects a country's QoG negatively under certain circumstances, and positively under other (Bäck and Hadenius 2008). This ambiguous relationship have been explained to be dependent upon; the age of the democracy (Keefer 2007, Keefer and Vlaicu 2007), the depth of democracy (Bäck and Hadenius 2008) and the wealth of the country (Charron and Lapuente 2010). While all intriguing explanations, none is fully satisfying. Time itself is no guarantee for positive development, and while Charron and Lapuente (2010) show that the marginal effect of democracy on QoG change – from negative to positive – when a country move from a low to high level of GDP per capita, they fail to capture the distributional aspects that ought to matter. Whether or not the tools available in a democratic state, such as elections, political debate, referendums etc., work in favor for QoG should be determined by the economic distribution within the state, rather than the overall wealth. I propose that the relative size of the middle class may be key to unlocking the positive traits of democracy.

In a democracy, the means of excreting accountability are dependent on that there are people who are interested in, and in demand of better governance. To incentivize the rulers to provide public goods, these people need to have reached a critical mass, in order to pose a credible threat to the rulers. While the rich, who are arguably doing well for themselves, are likely to prefer a status quo, and the poor are too occupied with day-to-day survival to plan ahead, a critical mass of middle class voters may pose this treat.

Putting our hopes in the middle classes is nothing new. Indeed the middle classes have been accredited great achievements in history; it is argued that the industrial revolution took off in England with the help of “great English middle class” (Landes 1998), made possible through centuries of biological dissemination of middle class values throughout the British society and a hard wiring of long-term thinking (Clark 2007). Already in the Communist Manifesto, Marx and Engels, attributed the “unprecedented increase of productive forces” and the reformation of economies and politics to the “manufacturing middle class” (quoted in Kenny 2011:1). Furthermore the social classification have been expected to be the drivers for democracy since the formulation of Modernization Theory (Lipset 1959) – democracy came about in part because of the demands from the middle classes for political recognition for their increased economic power.

Lately there has been a resurgence of interest in the middle class. Development economists, disappointed with how little wealth that is trickling down from the rich, are interested in middle class role in the fight to end poverty ([Birdsall 2010](#)), and economists are closely monitoring the middle classes in emerging markets to predict consumer demand ([Wilson and Dragusanu 2008](#), [Kharas 2010](#)). Consequently institutions such as the World Bank and OECD have published reports on the middle class ([Kharas 2010](#), [Lopez-Calva, Rigolini et al. 2011](#)). This renewed interest is perhaps best manifested by president Obama's creation of a *Middle Class Task Force* with the goal of including the middle class in the country's economic expansion ([U.S.Gov 2014](#)).

As for the effects on QoG, the thought that the middle class matters dates, at least, all the way back to ancient Greece:

“Thus it is manifest that the best political community is formed by citizens of the middle class, and that those states are likely to be well-administered, in which the middle class is large...”

- Aristotle 306 BC (quoted in Easterly 2001)

In this paper I bridge two large fields of literature. One concerned with the middle classes' effects on the economy and society-at-large, and the other with regime types' effect on institutional quality. Doing so I provide a theoretical framework explaining the middle classes' particular demand of QoG and how this demand interacts with the supply side. Albeit several recent scholars have proposed the link between the size of the middle class and levels of corruption and institutional quality ([Banerjee and Duflo 2008](#), [Birdsall 2010](#), [Kenny 2011](#)), none have, to my knowledge, tested this relationship in a large-N study, as will be done in this paper. In addition to performing an empirical test I provide an original theoretical explanation of the effect of the middle class depending on regime type and the interaction between democratic level and the size of the middle class.

Getting to grip with how and why democracy impact QoG is a particularly salient research topic as the world continues to grow more democratic ([Freedom House 2014](#)). Understanding through what mechanisms an increase in democratic level can impact QoG negatively, and what threshold need to be overcome for the effect to be positive, should therefore not only be of academic value but important for policy makers as well. While it is hard to imagine policy prescriptions urging a democratic state to either grow old or rich, in order to increase QoG, there are several available policy tools as regards matters of economic distribution. For example, as is currently advocated by

Thomas Piketty, by introducing wealth tax, and progressive income taxation with a high marginal tax rate for top earners ([2014](#)).

Disposition

This paper is structured in the following way; first I go through the large field of literature that focus on the effect of regime type on QoG, followed by an extensive discussion on the literature explaining the U/J shaped relationship between democracy and QoG. Second, I explain why the size of the middle class may be a more satisfying explanation to this relationship. Chapter three outlines all the methodological aspects of the paper and provides a review on how the middle class can be measured and operationalized. In chapter four the results from my statistical models are presented and analyzed. Chapter five concludes.

Theory

The following section outlines previous research regarding the counter-intuitive relationship between democracy and QoG, identify the size of the middle class as a potential explanatory variable, and build a theoretical argument as to how and why the size of the middle class matter. The section concludes with the research question and hypothesis that will be investigated and tested.

Previous Research

What has the existing research to say about the effect of regime type on QoG? It offers a mixed picture at best. One strand of the literature emphasize that democracy have a positive impact on several proxies of QoG, in particular that; democracy reduce corruption ([Billger and Goel 2009](#)), democracy accompanied by press freedom, reduce corruption ([Chowdhury 2004](#)) and that universal suffrage, competitive elections and checks and balances, determines the strength of property rights ([Acemoglu, Robinson et al. 2002](#)).

As a counter to the positive traits of democracy, noble laureate Amartya Sen uses a comparative case-study of India and China to highlight the discrepancy between democratic and autocratic regimes, where it becomes evident that autocratic China clearly outperforms India, the world's largest democracy on most indicators of human development and well-being ([2011](#)). Others have argued that electoral democracies allow for more political corruption through vote-buying and illegal party

financing (Porta and Vannucci 1999). And, Chang, Golden et al. (2007) found that electoral accountability has a limited effect on constraining corruption, and that corrupt politicians, in fact, stand a good chance of being re-elected.

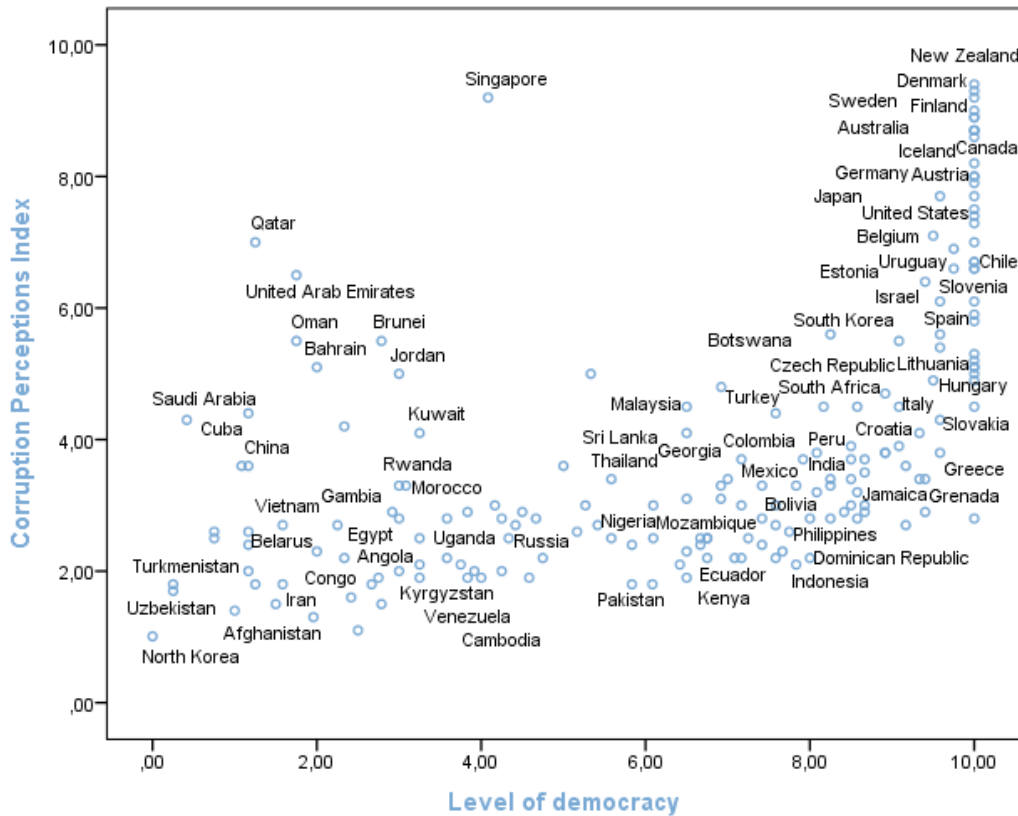
Yet another strand of literature found democracy to have no effect on proxies of QoG when looking at: corruption (Brunetti and Weder 2003), female secondary school enrollment (Baum and Lake 2003) and economic growth and development (Przeworski, Alvarez et al. 2000).

Despite half a century of testing theories of regime effect on; growth, delivery of public goods, corruption etc., there is still no consensus as to how regime type impacts on QoG. This is highlighted by the development of corruption levels across countries over the last two decades:

“Of the 21 countries that have made significant progress on control of corruption since 1996, 12 are electoral democracies—but so are 10 of the 27 countries where control of corruption has weakened.” – Mingiu-Pippidi (2013: 102)

Clearly not all democracies are equally blessed with the mechanisms that curb corruption and enable a state’s administrative capacity. It has been empirically proved that the impact of democracy on QoG is not linear, and there are a significant number of autocracies that have lower levels of corruption compared to countries that have partially democratized (Montinola and Jackman 2002, Sung 2004, Keefer 2007). *Figure 2.1* plot one of the trademark measurements of QoG, Transparency International’s Corruption Perception Index, against the level of democracy. For a discussion on the measurements see *section three*.

FIGURE 2.1: THE RELATIONSHIP BETWEEN LEVEL OF DEMOCRACY AND CORRUPTION



In the top right side corner we find consolidated democracies like the Scandinavian countries, New Zealand, Australia, Canada and Japan, where democracy is rated as both very free and fair, and where we also observe well-functioning institutions. While in the top left quadrant of the graph we find autocratic and semi-autocratic regimes like Singapore, Qatar, United Arab Emirates and Malaysia that display high levels of QoG, outperforming consolidated democracies, such as Greece, Italy and Slovakia.

Figure 2.1 suggest that – perhaps counter to intuition – democracy affects QoG negatively in the early stages of democratization, up to a certain threshold, after which the effect of democratization is reversed, to have a positive impact on QoG. In other words, the relationship is non-linear.

Previous research have explained this ambiguous relationship to be dependent on; the age of the democracy (Keefer 2007, Keefer and Vlaicu 2007), the depth of democracy (Bäck and Hadenius

2008) and the wealth of the country (Charron and Lapuente 2010). The following section go into the arguments and explain through which mechanisms democracy impact QoG negatively and positively given the conditions outlined by the authors.

Age of democracy

Keefer (2007) and Keefer and Vlaicu (2007) are first out to provide an explanation as to why: "...in 2004 more than one-third of all democracies exhibited as much or more corruption than the median non-democracy." (Ibid.: 372). The authors argue that in a country that has recently democratized, politicians have no or low reputation and thus no means of making credible electoral promises to the citizenry. The politicians must therefore rely on local patronage networks and provide targeted goods to their supporters, in order to attain, and to stay in power. Consequently, a young democracy will typically over provide targeted goods, such as jobs, public work projects, etc., while at the same time under provide non-targeted goods, such as healthcare, education, protection of property rights etc. (Keefer 2007). The main strengths of the papers are that Keefer and Vlaicu (2007) provide and test (Keefer 2007) a theoretical framework and mechanisms explaining the non-linear relationship between democracy and QoG. However, a critique to be brought towards the empirical test of the latter paper is the author's operationalization of the mechanism of "reputation building". It is simply proxied by the passing of time since democratization, measuring the consecutive years of free and fair elections. Intuitively, the passing of time is no guarantee for reputation and political credibility to increase. In addition, there are those that argue that credible commitment cannot predate credible enforcement (D'Arcy and Nistotskaya 2013). It is not only theoretically plausible that a state may become trapped in a vicious spiral, where low QoG cements a low-trust situation that function as an impediment for reputation-building (at least for good reputation), there are also several empirical examples to support this. A case in point would be South Africa, where at the time of democratization the ANC (African National Congress) enjoyed relatively high support, and instead of seeing a consolidation of reputation and trust, we have rather seen their reputation erode over time (Southall 2008).

Depth of democracy

Accepting the notion that time itself doesn't mean anything but rather what development a country experience during that time, Bäck and Hadenius (2008) build on Keefer's (2007) research to test if the depth the democracy is better, than age, in explaining differences in states' administrative capac-

ity. The authors argue that there are two distinct types of governance – steering and monitoring from above and from below – that determine a country’s QoG. The first, autocracies are particularly apt at by utilizing strict hierarchies and their repressive capacity to create an incentive structure deterring corrupt practices. The latter, democracies are better suited for because of mechanisms to exert accountability through regular elections ([Bäck and Hadenius 2008](#)). A country that have lost its ability to govern from above – due to the shift from autocracy to democracy – and not yet gained the ability to govern from below will be worse off. A lack of, for example, free media or active voters, which are required for the mechanism of bottom-up control to functioning properly, explain the bottom arch of the J/U-shaped curve. See *figure 2.1*

Wealth of the country

It is on the idea of changeable preferences that Charron and Lapuente (2010) build their argument that: in contrast to the previous authors, it may not always be preferable neither for rulers to supply, nor for the ruled to demand QoG. The authors create an innovative theoretical framework by merging an institutionalist approach, focusing on the supply side of QoG, with a culturalist approach, concerned with the demand from citizens (the consumers of public goods). Low-income countries, it is argued, over-value a state which deliver goods for immediate consumption, such as patronage jobs or even direct cash transfers distributed through clientilistic networks, and typically under-value medium-to-long term investments in reforms such as; establishing a meritocratic bureaucracy, upholding the rule of law and contract enforcement (*Ibid.*). With higher levels of economic development, however, the need for immediate consumption disappears, allowing the citizens to think about and plan for their future. With this follows a change in preference, the citizenry will be less impatient to consume, for economists – their future discount rate decrease. In response, the rulers’ incentives to provide the reforms needed for improving QoG, change as well (*Ibid.*).

Autocratic rulers on the other hand, are not expected to be responsive to the citizenry in the same way, but rather follow their interest to maximize their own revenues ([Olson 1993](#)). This explains how autocracies, at low levels of economic development can ignore the impatience of the citizenry, and provide a somewhat higher degree of public goods. Indeed, lest the rulers have access to rents from natural resources it may very well lie in their interest to provide some public goods – such as QoG – that raise productivity in sectors that they then can extract rents from. Because autocratic leaders only have an incentive to improve QoG up to a certain level, this also explains why the level

of QoG is more rigid in autocracies. For the rulers the optimal level is just below where it becomes a constraint on their ability to extract rents from the population (Charron and Lapuente 2010). With Singapore as a clear outlier this explains why a majority of the world's top performing countries, in terms of QoG, are democracies.

The authors test their hypothesis by proxying the impatience to consume, or future discount rate, by a country's wealth, measured in GDP per capita. By creating an interaction term between democracy and GDP per capita, Charron and Lapuente (2010) show that the marginal effect of democracy on QoG change, from negative to positive, when a country move from having low to high GDP per capita. This is all well, however, it must matter how the economic resources are distributed in the society. The measurement of GDP per capita fails to capture this. Albeit the authors do control for income distribution by testing the impact of the GINI-coefficient, this says little about the distribution that may determine whether or not the tools available in a democracy can be utilized to achieve better QoG. While the GINI-coefficient has something to say about the relationship between the very top and the very bottom, it does not consider the middle segment of society². Indeed what ought to be of interest is how large proportion of the citizenry that has the patience to commit to medium- to long-term investments, in relation to those that cannot afford to be patient.

I agree that the rulers' willingness to provide QoG is contingent on the incentives they face, which in a democracy are dependent on the preferences of the voters. However, this mechanism is dependent upon that the rulers – driven by their self-interest to stay in power – face a realistic threat of losing power, should they not provide QoG. A critical mass of middle class voters can pose this threat. For the middle class, improved QoG is desirable. The middle class enjoy an economic security that allows them to plan for their future. They are often home owners and may be the ones to suffer from inadequate property rights, and as small business owners the middle class are likely to gain the most from functioning mechanism for contract enforcement and dispute-settlements. All key components of QoG.

² While the size of the middle class is also a measure of income distribution it differs significantly from the GINI-coefficient. To such an extent that in several developing nations, for example in China and Ecuador an increase of the size of the middle class has led to a higher GINI-score (more unequal) and conversely in South Africa a decline of the middle class resulted in a lower GINI-score (Birdsall 2010). Moreover my measurement of the middle class and the World Bank's Gini Index does not exert a statistically significant correlation (see appendix I, table 5).

Evidently, the relative size of the middle class is an overlooked variable in explaining the non-linear relationship between democracy and QoG. This constitutes a gap in the research on this particularly salient research topic.

Theoretical framework – the middle class particularism and QoG

“The middle class, the large group of households that are neither wealthy nor poor... ...form the backbone of both the market economy and democracy in most advanced societies.”

– Birdsall, Graham et. al. (2000: 1)

Today’s high hopes on the middle class as a progressive force in society have its historical precedents, dating back to the thoughts of Marx and Engels (1848), and Aristotle (306 BC). But what is it that makes the middle class exceptional? And why would its size be a determinant for a democratic state’s ability to constrain corruption and achieve high QoG? And how may its size impact QoG in non-democracies? To answer these questions we first need to clarify why the middle class would act differently from other social groups, i.e. the rich and the poor. Surveying the vast body of literature concerned with the effect of the middle class on society-at-large, I have identified four primary explanations as to why the middle class would have a particular demand of QoG. These are outlined below, followed by an explanation of how these demands interact differently with the supply-side in democratic and autocratic states.

Beyond the horizon

Firstly, the middle class differs in that their future discount rate is low as compared to people living in poverty. Meaning that future returns – say on an investment – are not discounted greatly compared to an immediate return. Essentially this has to do with a person’s ability to plan and invest in their future – and as I hypothesize – also their state’s future. Indeed this argument is proposed by Charron and Lapuente (2010), however, I move their argument forward by proposing that the discount rate is of particular interest for the middle class. Along the avenue of this argument, Clark (2007: 256) argues that the biological "hardwiring" of a low future discount rate of the English middle class during the 18th century was the key factor for why the industrial revolution began in England and not elsewhere.

There are several reasons for why people belonging to the middle class are less likely to discount future gains as heavily as their poorer compatriots; generally it is because they enjoy a relative economic security, allowing for room of maneuver when it comes to investments. Acemoglu and Zilibotti's (1997) argue that the possibility to accept more long-term returns is a prerequisite for entrepreneurship. Banerjee and Duflo (2008) find that the key factor that differentiates the middle class from the poor is their employment situation. The middle class are more likely to get paid on a monthly basis, as opposed to the poor who are more likely to receive casual pay. The knowledge that there is an income arriving at the end of the month, add a time aspect that enable the middle class to expand their time horizon. This, makes the middle class more prone to plan and invest in their future by prioritizing, for example, their children's education and family healthcare (Ibid), which in turn create a demand for public goods such as schools and hospitals (Birdsall 2010). Education is key in part because functioning education is one aspect of QoG, but also because it provides citizen with the tools needed to evaluate the performances of officials, it is thus a requisite to hold them accountable. Although the poor would benefit from these public goods just as well, when faced with the option of receiving goods for immediate consumption (targeted jobs, cash), they are more likely to demand this rather than applying pressure on their leaders to provide goods for future consumption. Their demands differ, simply because they are struggling to satisfy their basic needs (Charron & Lapuente 2010). Surviving today trumps being better off in some distant future.

There is a division between the poor and the middle class, but how about the rich, who arguably have an even lower discount rate than the middle class? Firstly, the rich are doing quite well for themselves in the existing systems and are therefore reluctant to alter the status quo. Second, you can easily imagine the rich elite to oppose governmental reforms as they are likely to be, both employed by, and in control of the state (Birdsall 2010), and are likely to fear the empowerment of any group outside their own class or ethnic group (Easterly 2001).

Social contract

“...[the middle class] is the group that has the sense that government exists for it, and shapes its consciousness accordingly.”

- Lionel Trilling 1945 (Quoted in Philips 1985)

In other words, a second reason for why the middle class' demand of QoG would differ is connected to their stake in society and the expectations on the state that follows. The theory of a social contract between a state and its subordinate builds on Hobbes' idea – that citizens give up some of their rights in return for the protection of their remaining rights (Hobbes 2008). It is the same theoretical underpinnings that explain the expectations on government from people who pay a share of their income in tax to the state. Again, as opposed to the poor, the middle class are typically in possession of certain assets, such as land, housing, cars, which are susceptible to taxation. Additionally, formal occupation enable the state to tax the middle class' income to a larger extent than the poor (Banerjee and Duflo 2008). Paying taxes reinforce a connection, a social contract if you will, between the citizenry and the state, which is why the tax-paying middle class will come to expect a certain provision of public goods in return. Indeed alienation between the state and its citizenry – made possible when a state doesn't need to tax its population – is considered a major element of the natural resource curse, causing resource rich countries to remain impoverished and with inadequate QoG (Collier 2007). Development economists now urge dysfunctional states to tax their middle class in order to create a more pervasive social contract, conducive for development and the creation of a functioning state (Collier 2007, Birdsall 2012).

In support of this theory, the OECD's 2011 Latin American Economic Outlook found that the middle class is more likely to consider that people should pay their taxes than both the poor and the rich populations, and are less likely to consider tax levels too high or justify tax evasion. At the same time, the middle class were less satisfied with the provision of public goods being provided, then the rich (OECD 2011). While the rich also should to be in demand of good schooling and healthcare, they generally have the possibility to satisfy this demand through private alternatives and thus will not demand the same provision of public goods and QoG.

The middle way

“[The middle class] plays a mitigating role in moderating conflict since it is able to reward moderate and democratic parties and penalize extremist groups”

- Lipset (1959: 78)

Thirdly, the middle class is expected to take a mediating role, between the rich and the poor, when it comes to several economic policies. Thus avoiding conflict and enabling consensus-based solutions on policy, which supposedly are more stable, forming a predictable business-friendly climate

conducive for economic growth (Easterly 2001). As for policy areas, the middle class are thought to side with the rich on market friendly ideas, such as, openness to trade, property rights (in part because they have assets to protect), while siding with the poor as regards matters of economic redistribution (Amoranto, Chun et al. 2010, Birdsall 2012).

The modern and postmodern values

Finally, can we expect the values of the middle class to affect their demand for QoG? Inglehart and Welzel (2005) find that as societies grow wealthier their values shift toward “self-expression values”, like freedom of speech, tolerance and trust (2005), and with it, the citizens build an repertoire of actions to take in order to achieve these values (Welzel and Inglehart 2008). This is supported empirically by a PEW research project on global attitudes, that found people belonging to the middle class significantly more likely to consider a fair judicial system, a free press, and freedom of speech, as “very important”, when compared with their fellow poorer citizens (PEW 2009).

In another perspective the middle class role as consumers is highlighted, as their value for quality and safety enable them to pay a little bit extra, which in turn drives product differentiation and investments (Murphy, Schleifer et al. 1989). It is upon this that much hope is placed on the emerging middle classes in Asia, as to replace, or complement, the middle classes in North America and Europe in driving global demand for consumer goods (Kharas 2010). Whereas this might feel disconnected from a country’s QoG, it is not necessarily so. We can call this Shopping for QoG. Products of higher standard does not only have to pass internal quality controls, but demand a rigorous state apparatus that make sure the producers comply with safety regulations, environmental standards etc. While of course no one would like the plastic toy their kids occasionally chew on, to contain carcinogenic toxics, it is plausible that reaching a certain welfare standard makes you more prone to care about the products you consume. In other words, when the middle class have overcome the immediate threats to a happy life – facing the poor – they focus on the next threats. When it comes down to it, you need a functioning state to handle several of these threats.

It should be noted that the PEW Global Attitudes (2009) study bunt together the middle class and the rich, and indeed it is unlikely that the rich prefer toxic toys, why in terms of values, Kenny (2011) may be right in that there is no or only weak support for a “middle class particularism”. And that the gradual shift of values with income, only put middle class values in between the ones of the rich and the poor population (Ibid.). Whether or not this is true matters little for three previous

mechanisms proposed, as there is still theoretical support as to why the rich would have a different demand of QoG than the middle class, despite sharing a similar set of values. QoG is simply not a prerequisite for the rich to satisfy their needs.

Supply-side in democracies and autocracies

Based on the mechanisms above I argue that there is support for a “middle class particularism” when it comes to their demand of QoG. This demand should be similar no matter the type of regime they live in. But how about the supply side in autocracies and democracies? It is reasonable to believe that the way that the demand interacts with the supply side, is different because of the different institutional natures, generating different effects on QoG.

Clearly, the possibility to utilize the tools that a democracy offers to increase QoG, are dependent upon the size of the population that is in demand of reforms that can produce these outcomes. Freedom of expression and a free media works as tools through which the citizens demands can be voiced, thus there is a bottom up information channel available, and a possibility to rule from below (Bäck and Hadenius 2008). Indeed the middle class has been found to be more in favor for democracy (PEW 2009), and more politically active than both their poorer and richer countrymen (Amoranto, Chun et al. 2010). As a workhorse model of democracy, the median voter theorem, predict that the median voter will utilize their democratic powers to redistribute wealth towards themselves, as well as vote for policy and a provision of public goods of most benefit for her (Alesina and Rodrik 1994). How well democracy works to increase state capacity and the provision of public goods depends on the relative size of the voting populations that are in demand of it, and prepared to vote accordingly.

“...if elites are not under strong domestic pressure to make these [democratic] institutions effective, they are likely to corrupt them, rendering democracy ineffective.”

– Welzel and Inglehart (2008: 130)

I.e. it matters greatly if the median voter is middle class. Of course, voicing concerns and requesting reforms could be done even in a democratic country where the middle class is small, however, it will likely fall on deaf ears. When it comes to excreting accountability through elections, the majority of the electorate may still support the candidates who have secured support through patronage, clientilistic networks and targeted goods (Charron and Lapuente 2010, Keefer 2007). Additionally,

in a democratic system, the elites can resort to funding of political parties, think tanks, lobby and pressure groups in order to maintain the current state of affairs and to uphold de facto power in response the challenge to their de jure power that democracy pose (Piketty p 533, in ([Milanovic 2014](#))). An even more direct way to capture democracy is through vote-buying, which the middle class is likely more resistant to than the poorer population because of their lower discount rates. As the world's largest democracy is currently heading to the polls, stories are rife of direct vote-buying³. The Election Commission of India ([2014](#)) writes, in a checklist to police officers to keep an eye for:

“...[political] candidates indulging in various methods to induce the voters, which include outright payment of cash that amounts to bribery and other forms of inducements such as supply of liquor, food packets, holding of lunch and dinner parties...”

A quick google search on “India vote buying” generates about 90 million hits, whereas the equivalent search for the US lands a mere 6 million hits. Of course a google search holds no scientific value, but it may none the less be a hint about the extent of the problem in the two countries. Thus, where the median voter is in demand of short-term kickbacks and targeted goods, rather than long-term institutional reinforcing reforms, the later will not come about.

On the other hand, when the size of the middle class is sufficiently large, the demand can affect the supply. For this to happen the middle class needs to reach a critical mass in order to pose a credible threat to rulers so that, in turn, the ruler's incentives to supply higher QoG are altered. When it is suddenly possible for politicians to run for office, by promising and, at least partly, delivering on reforms that enhance the public goods provision and overall institutional capacity, they may well start to do so (Keefer 2007, Charron and Lapuente 2010), and once this possibility of steering and monitoring from below is in place a democratic state is expected to deliver higher QoG (Bäck and Hadenius 2008).

How about autocratic states? While the middle classes living in autocratic states may have a similar demand for QoG, they cannot exert their will through (meaningful) elections. They lack exit options through which they can dispose of corrupt leaders ([Charron and Lapuente 2012](#)). Furthermore autocracies provide less means for citizens both to voice their demands on QoG, and to

³ See [The Economist \(2014\)](#) and [The Guardian \(2014\)](#)

monitor the state, because of limitations on freedom of speech and a partly effective media censorship. But there may be other tools available.

At a dinner party in Shanghai, I was discussing the value of village elections in China together with a woman – arguably middle class – who had happily sold her vote in the elections of her home village for enough money to buy her “a new smart phone or the latest tablet”. While some commentators have seen the cost of vote buying in a positive vein and argued that the relative high price of buying votes means that there is power to be acquired through these elections – perhaps a seed that can grow in the future ([Kennedy 2010](#)). Others, and indeed my fellow dinner guest reason, that piecemeal elections are not an effective way of exerting accountability in an otherwise autocratic society. Firstly, the expectation that all potential candidates would act similar in enriching themselves through lucrative land deals is discouraging. But perhaps even more important is that there are other tools at hand. Due to the information revolution there are more tools at the disposal for concerned citizens than ever before in history, also in autocratic states ([Qiang 2011](#)). Is it possible that the users of these can account for the variation in levels of QoG across autocratic states? Why, in particular, may we expect a higher level of QoG in autocratic states where the middle class, the ones likely to utilize the new tools, is large, than in states where the middle class is small or non-existent?

Last year, a reasonably high ranking official in Shaanxi, China was convicted of corruption, after concerned citizens had begun to post pictures of the official, wearing watches, he should not have been able to afford on his governmental paycheck ([Lie 2013](#)). “Brother Watch”, as the official became known, is in no way alone. Examples are numerous where social media users, have brought on the downfall of officials, through sharing pictures and conducting full blown investigations online ([Qiang 2011](#)). While incidents like these can perhaps work to thwart some corruption, they are unlikely to have a significant effect on corruption levels nationwide. Although, by voicing concern and their will, citizens can at least let the regime know its preferences. As *The Economist* (2014) points out: “... [the] regime’s obsession with control paradoxically means it pays close attention to public opinion”, thus working as an information-channel to the leaders of the will of the people. This enables the rulers to, at least in less sensitive cases and when not challenging vested interests, cater to the needs and will of the people. China is estimated to have around 500 million social media users, and the government is estimated to employ close to 2 million people to monitor their activity ([BBC 2013](#)). Primarily employed to censor harmful opinions, but clearly the govern-

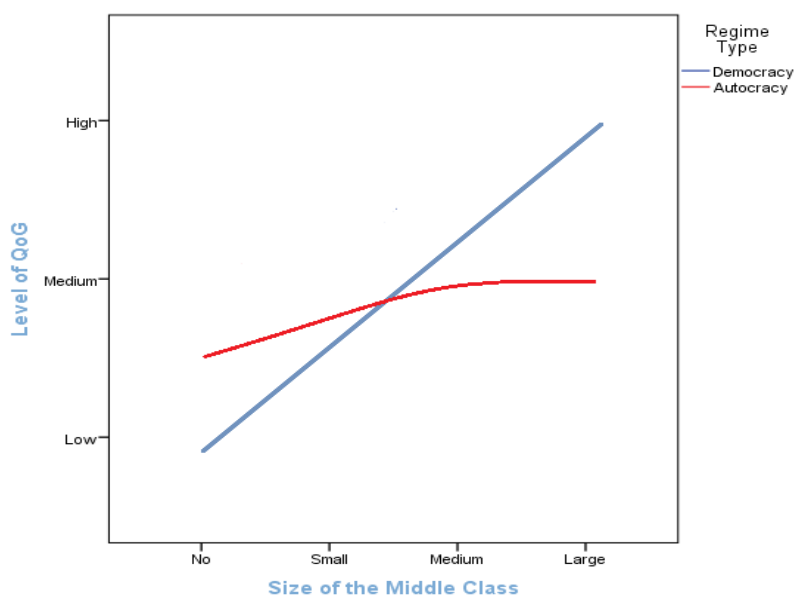
ment sometimes picks up, and acts on what is trending. Although on a different scale we see the same mechanism at play in other autocratic states, such as Singapore, Vietnam, and Cambodia.

What I argue is not that the tools themselves are key, but rather the demand of QoG. Social media is just a platform through which this demand can be articulated. Similarly to the logic of Olson's (1993) "stationary bandit theory" – that autocratic rulers have incentives to provide some QoG to its subjects, Barro (1999: 159) argue that:

"In some models, an autocrat would voluntarily relinquish some authority—for example, by establishing a constitution, empowering a legislature, expanding voting rights, and extending civil liberties—in order to deter revolution and to encourage the private sector to invest (and, thereby, to expand the pie that the government can tax)."

However well autocracies can perform, we are still faced with the empirical fact that all countries – except Singapore – on the top end of the QoG-ladder are consolidated democracies. This suggests that there are inherent problems in autocratic states that constrain QoG to surpass a certain level. In other words, the supply will only partly satisfy the demand. This is illustrated by figure 2.2 that show a rough estimation on the predicted level of QoG in democracies and autocracies depending on the size of the middle class.

FIGURE 2.2: PREDICTED LEVEL OF QoG IN DEMOCRATIC AND AUTOCRATIC STATES DEPENDING ON SIZE OF THE MIDDLE CLASS



In democracies the level of QoG is expected to be responsive to the size of the middle class, whereas this relationship is less elastic in autocracies. Olson's (1996) theory predicts that an autocrat will only provide public goods up to a level where an additional unit would constrain his ability to govern, which would make his piece of the pie smaller. Thus an autocratic ruler would be very unresponsive to the middle classes' demand after a certain level of QoG.

For example when it comes to rule of law – autocratic states have great difficulty in depersonalizing political authority (Gerring, Bond et al. 2005), which is the very difference between *rule of law* and *rule by law*. The former a key trait of QoG. Because of this, in autocracies, utilizing the available tools may be a balancing act not to overstep into what the state cannot tolerate and thus risk facing the repressive power of the state. It is possible that the long-term thinking associated with a higher demand of QoG, may also be accompanied by a “long-term fear”, where middle class citizens may fear to descend from their economic relative security. Perhaps to such extent that they would refrain from articulating their demand for QoG.

As with several phenomena in social research, the issue of reversed causality must be addressed. In the case that high QoG cause economic growth, and to the extent that growth functions as a “tide that lifts all boats”, it follows that the middle class would expand due to an increase in institutional capacity. While noting the possibility of causality running in this direction, and indeed the likelihood of a reinforcing virtuous circle, the mechanisms presented above largely theorize the causality to run from the size of the middle class towards QoG. Thus an increase in the size of the middle class will result in an increase in demand, which depending on the elasticity of the supply side will increase the provision of QoG.

Research question and hypotheses

From the discussion above we arrive at the following research question – *How does the size of the middle class affect QoG, and can it account for the non-linear relationship between democracy and QoG?* This paper will take a deductive, theory testing approach. To help in this endeavor the following hypotheses will be tested:

H1: The size of the middle class has a positive impact on the level of QoG.

H2: The size of the middle class has a weaker effect on QoG in non-democracies than in democracies.

H3: The effect of democratic level on QoG is negative/weak in countries with small middle classes and positive/strong in countries with large middle classes.

Data and methods

Section three discusses the operationalization of my variables, with a focus on how to measure the middle class, where I argue that cars per capita minus the elite, can serve as a proxy for the middle class. In addition I account for why a cross-sectional and time-series regression analyses are particularly apt in testing my hypotheses, as well as discuss the strengths and limitations of the data.

Dependent variable – Quality of Government

As with any abstract concept, QoG is difficult to capture. The definition “how well a state utilizes its resources for public goods” (Rothstein and Teorell 2008) imply not only final output in terms of delivering service to its citizenry, but also that these are carried out in an efficient, non-corrupt way, that doesn’t drain the resources of the state. A few studies have used “hard” measures to capture corruption levels (one aspect of QoG), for example the number of court cases dealing with corruption, or the conviction rate of these cases (Goel and Nelson 1998). There are, however, grave concerns for the validity of such measurements as they are likely to measure the effectiveness of the legal system rather than corruption itself, and indeed would fail to capture the reality in countries where corruption is endemic. Given this, the majority of studies concerned with corruption and QoG make use of “soft”, perception based measures, where the population and country experts are asked to rate the country on certain indicators (Kaufmann, Kraay et al. 2008).

In this paper I use the variable *Government Effectiveness* from the World Bank’s Worldwide Governance Indicators. It aggregates perceptions of; quality of public service provision, the quality of bureaucracy, the independence of the civil service from politics, and competence of civil servants (Kaufmann, Kraay et al. 2008). For simplicity and to make the graphs more comprehensible when visualizing the data, the variable is rescaled to range from 0, representing low QoG, to 5 representing high QoG.

The main benefit of using this proxy instead of the International Country Risk Guide’s (ICRG) QoG-indicator, used by Charron and Lapuente (2010), and Bäck and Hadenius (2008), or Trans-

parency International's (TI) Corruption Perception Index (CPI) is availability. The variable has observations for 191 countries as compared to 139 for ICRG and 184 for TI's CPI. It should be noted that these three proxies of QoG correlate significantly at > 0.9 (see Appendix I, Table 1). Because of the availability of scores for relatively large number countries, the TI's proxy will be used as a robustness check in the cross-sectional analysis.

Independent variables

For the variable democracy, I use an aggregated measurement combining Freedom House and Polity IV democracy-score into a single measurement ranging from 0 to 10. By using the imputed version, where missing Polity IV scores have been regressed using the average of the Freedom House score, more observations are available. In addition Teorell and Hadenius (2005) have shown that this combined measurement outperform the individual variables as regards validity and reliability (Teorell, Charron et al. 2013).

In addition to the level of democracy I employ a binary division of regime type composed by Cheibub, Gandhi & Vreeland (2010), to visualize the different effect of the middle class in democracies and non-democracies. A regime is classified as a democracy if “the executive and the legislature is directly or indirectly elected by popular vote, multiple parties are allowed, there is de facto existence of multiple parties outside of regime front, there are multiple parties within the legislature, and there has been no consolidation of incumbent advantage ” (Teorell, Charron et al. 2013).

To test for the hypotheses of previous research, on the non-linear relationship between democracy and QoG, I control for the following variables; GDP per capita, as well an interaction term between GDP per capita and democracy (Charron and Lapuente 2010); democracy squared (Bäck and Hadenius 2008); and years of democracy (Keefer 2007).

In addition I control for a set of variables that have been used in previous studies as predictors of different proxies of QoG. These are; ethnic fractionalization (Easterly 2001), where a higher score represents higher ethnic and linguistic fractionalization; openness to trade (Sandholz & Gray 2003), measured as exports plus imports divided by GDP per capita; oil and gas export (Ross 2012); and income inequality (Li et. al. 2000) using the World Bank's Gini Index, where a score of 0 represents perfect equality, and 100 represent perfect inequality.

Explanatory variable – The middle class

Who is middle class and how can we measure it across countries? Thus far there exists no consensus on how to best define the middle class. Is it a set of values that best define a household's belonging to this social strata, or an absolute or relative level of income? Broadly speaking we are searching for those who have the ability to live a somewhat comfortable life without an overwhelming risk of falling into poverty, i.e. those who have a low future discount rate.

In defining the middle class there are two primary divisions, either a definition that is absolute on the global scale, or one definition relative for each country or region (Kahrzas 2010). A few authors have used a relative approach in defining the middle class, for example Easterly (2001) define the middle class as those between the 20th and 80th quintile, i.e. the middle 3/5 of the population. There are clear drawbacks of such a definition for the purpose of this study. Firstly, it doesn't capture the size of the middle class in relation to the rest of the population, as the size will always be constant. Rather it is used to capture how much of the wealth that is owned or how much of total income that is earned by this middle segment of society. Second, it includes the poor and hence say nothing meaningful about the economic security, which I argue may be the very constrain on whether or not a household are in demand of QoG and can afford to hold their leaders accountable. Furthermore, as (Kenny 2011) points out, it is hard to imagine any policy prescriptions that will enlarge any relative definition of the size of the middle class, and hence such a definition isn't very action-oriented. Although I'm not necessarily undertaking this research with the goal of prescribing policies, a relative definition is not suitable as I am interested in the effect different sizes of the middle class may have on QoG.

Other researchers have tried to define the middle class with absolute measures of household income or consumption levels. This is generally done by setting a lower limit for what constitutes being middle class, and a higher limit, after which a household is considered rich. *Table 3.1* indicates the lack of consensus in this undertaking.

TABLE 3.1: EXISTING DEFINITIONS/IDENTIFICATIONS OF THE MIDDLE CLASS

Author/s	Lower limit	Upper limit	Focus
Easterly (2001)	20 th quintile	80 th quintile	World
Milanovic and Yitzhaki (2001)	\$ 12	\$ 50	World
Banerjee and Dufflo (2008)	\$ 2	\$ 10	Developing world
GoldmanSachs (2008)	\$ 16	\$ 80	World
Kahras (2010)	\$ 10	\$ 100	World
Ravallion (2009)	\$ 2	\$ 13	World
Birdsall (2010)	\$ 10	95 th quintile	Developing world
Lopez-Calva et- al. (2011)	\$ 10	\$ 50	Latin Am. and the Caribbean
Dadush and Ali (2012)	Car ownership	None	Developing world

The definitions vary widely. For example, Milanovic and Yitzhaki (2001) use the mean income level of Brazil, at \$12, as the lower limit, and the mean income for Italy, at \$50, as the upper cut-off point and identify the global middle class as households earning between these income levels. Banerjee and Dufflo (2008), and Ravallion (2009), on the other hand, use the World Bank's poverty level, at \$2, as the lower limit and \$10 and \$13, as upper limit. Consequently there is no overlap between the middle class population identified by Milanovic and Ytzhaki (2001) and that identified by Banerjee and Dufflo (2008) and only a small overlap with the population identified by Ravallion (2009). This is further illustrated in *Table 3.2*, which display the size of the middle class in five developing nations, measured in millions of people, and the population percentage within brackets.

TABLE 3.2: SIZE OF MIDDLE CLASSES IN MILLIONS OF PEOPLE, AND AS PROPORTION OF SOCIETY WITHIN BRACKETS, FOR THE YEAR 2009. AUTHOR'S CALCULATIONS USING POVICALNET (2014), AND DATA FROM DADUSH AND ALI (2012).

Author/s	Brazil	China	India	Mexico	South Africa
Milanovic and Yitzhaki (2001)	47 (24,4)	76 (5,6)	6 (0,5)	26 (23,1)	7 (14,5)
Banerjee and Dufflo (2008)	105 (54,5)	860 (64,2)	368 (30,5)	71 (62,9)	23 (48,14)
Kahras (2010)	66 (33,9)	115 (8,6)	9 (0,8)	36 (32,2)	10 (19,9)
Birdsall (2010)	61 (31,5)	71 (5,3)	2 (0,2)	32 (28,2)	9 (18,4)
Ravallion (2009)	124 (64,3)	910 (67,9)	373 (30,8)	84 (74,1)	26 (53,8)
Dadush and Ali (2012)	84 (43,5)	107 (7,9)	71 (5,8)	82 (72,3)	19 (38,9)

When using absolute values to measure the size of the middle class, it is common⁴ to utilize the World Bank's PovcalNet-tool, which enable you to calculate the proportion of the population that are living under any given monthly income or consumption level. You can then the calculate proportion of society living within an interval (the middle class), by subtracting the percentage living under your lower limit, from the percentage living under your upper limit. The analysis tool provided by PovcalNet uses data from over 800 household surveys, carried out in 126 developing countries, to estimate distributional parameters and average monthly household income or consumption for the years 1981 to 2010, converted into 2005 PPP dollar (PovcalNet 2014)⁵.

Yet another way of measuring the middle class is through subjective social class measures, used by Amoranto et. al. (2010). Such self-identifications are available for 52 countries in the World Value

⁴ See for example: Birdsall (2010), Kahars (2010), Ravallion (2009)

⁵ For an in-depth description of methodology and data availability of the PovcalNet analysis tool, see Chen and Ravallion (2010)

Survey's sixth wave. Apart from the low number of available countries, another problem with self-identification measures are, that in developed countries a large share categorize themselves as working class (34 percent of the Finns and 31 percent of the Germans) however, a large part of them are still likely to enjoy enough economic security to be able to plan for their future, and thus are expected to be in demand of QoG (WVS 2014).

From the discussion above it is evident that any definition of the middle class will be arbitrary in one way or another. It thus comes down to identifying the one definition which best suit the explanatory mechanisms of the phenomenon you seek to explain. For this study none of the above is ideal. A better dividing line, between having long and short time horizons, may be the possibility to consume non-essential goods.

Dadush and Ali (2012) propose that the amount of passenger cars in circulation can be used as a direct measurement of the middle class in developing countries. I would argue that for the threshold described above, it is useful for the developed world as well. Passenger cars certainly constitute non-essentials. They are significantly expensive items, which ownership separates one from the poorest strata of society. Of course the proxy may overstate the middle class as some households may purchase more than one car. On the other hand, some households may choose not to purchase a car, despite being able to afford it.

Another concern is that the measurement also includes the rich elite. Dadush and Ali (2012) argues that because the rich are typically very few, in developing countries, it does not matter much whether or not you include them when estimating the size of the middle class. This is all very well, however, adding an upper limit is – at the very least – theoretically logical. In societies where large shares of the “non-poor” are rich, the will of the rich is likely to prevail. Adding an upper limit of the identification could be done by, for example, deducting luxury cars from the measurement, or simply following Birdsall's example, and use the 95th quintile as cut off between the middle class and the rich (2010). While “there is no empirical evidence to assume in any particular country a household at the 96th percentile of per capita income or consumption is more reliant on income from capital or privileges or “rents” broadly speaking than a household at the 94th percentile” (Birdsall 2010: 7), it is nevertheless theoretically satisfying to include an upper limit. For some countries the cut off for those gaining from a status quo, i.e. have no demand QoG, may be higher than the 95th percentile, it could well be that you'd have to belong to the top one or two percent of the population to gain from a corrupt system.

While noting that the operationalizing of any abstract concept is an art of squaring a circle in an acceptable way, I propose the size of the middle class to be equal to the amount of passenger cars per 100 persons, minus five, to deduct the elite.

Two caveats should be added. Firstly, while I will talk about the size of the middle class as a percentage of the population it is rather a value lower than the actual percentage. For example it is reasonable to believe that everyone living in a household that can afford to purchase a non-essential item such as a car would have long time horizons. Perhaps the best way of coping with this would be to multiply the cars per 100 persons with the average household size, as is indeed suggested by Dadush and Ali (2012). Unfortunately, the available data for average household size covers only limited number of countries and few observations over time. Another option to arrive closer at the actual percentage would be to simply multiply the number of cars per 100 persons by two, implying that for every car there are two middle class citizens. As this would not change the variance and thus not any of the results in the analyses, I stick with the original value. Second, because some countries have no, or a middle class below five percent, their value after subtracting the rich will be negative. Instead of recoding those values to zero I keep the negative values, thus maintaining the variance in the data, which can represent the dominance of the rich, and to what extent they are unchallenged by a middle class.

Data on the amount of cars per capita are taken from the World Bank's World Development Indicator *Passenger cars*⁶. For the cross-sectional data, observations was collected for the year 2009 with a span of +/- 3 years. To maximize the number of countries included, when missing, data for an additional 13 countries⁷ was collected from the World Development Indicator *Motor Vehicles*, which in addition to cars include busses and freight vehicles. This indicator is slightly larger and may overstate the size of the middle class somewhat, albeit for poor countries such as the 13 countries undoubtedly are, the difference is marginal. For the panel data I use the values for the years 2005, 2008 and 2011.

The variable has a clear intuitive appeal, it is easy to picture that a person who can afford to purchase a non-essential, such as a car enjoy some economic security, i.e. are middle class. But the main strength, however, is that data is available for most countries in the world. A critique to be

⁶ "Passenger cars refer to road motor vehicles, other than two-wheelers, intended for the carriage of passengers and designed to seat no more than nine people including the driver" - World Bank (2014)

⁷ Benin, Democratic Republic of Congo, Equatorial Guinea, Gabon, Ghana, Grenada, Lesotho, Malawi, Mauritania, Micronesia, Papua New Guinea, Trinidad and Tobago

brought against the measurement would be that, because it is consumption based, there is a risk that it captures the same socioeconomic aspects as the variable GDP per capita does. If this was true it would be problematic, as wealth measured as GDP per capita is one of the contending theories which I position this study against (Charron & Lapuente 2010). However, it will become clear in the empirical section that GDP per capita and my proxy capture quite different aspects (see table 4.1).

To test the validity of my operationalization, that I actually measure what I claim, in the cross-sectional analysis I employ Birdsall's definition of the middle class as a second proxy for the middle class. It should be noted that my operationalization of the middle class correlate significantly with Birdsall's operationalization at .804 (see Appendix I Table 5).

Methods

To test my three hypotheses, I first examine the relationship between the key variables visually. Bivariate to address hypothesis one, that the middle class have an positive impact on QoG, and then in multivariate graphs to examine the relationship between the middle class and QoG depending on regime type, addressing hypothesis two, that the size of the middle class has a weaker effect on QoG in non-democracies than in democracies.

To statistically determine my hypotheses I run several ordinary least squares (OLS) regression analyses. To test the third hypothesis, that the effect of democratic level on QoG is negative/weak in countries with small middle classes and positive/strong in countries with large middle classes, I create an interaction variable by multiplying the size of the middle class with the level of democracy. A significant interaction effect between the variables would yield a statistically significant result in the following model (Brambour, Clark et al. 2006):

$$QoG = a + b_1 Dem + b_2 MC + b_3 MC * Dem + e$$

Where; a is the intercept, b₁ effect of democracy, b₂ the effect of the size of the middle class and b₃ size the of the interaction effect. Additionally the cross-sectional regression allow me to test for competing theoretical explanations of the relationship between democracy and QoG, as well as for other known determinants of QoG. Furthermore I employ the TI's CPI as a proxy for QoG in a robustness check.

As the maxim haunting social science researchers goes "correlation does not imply causation", I cannot claim a causal effect between the independent and dependent variables by examining their relationship at a specific point in time. To address this issue I perform a time-series regression anal-

ysis and draw upon previous studies (eg. Charron and Lapuente 2010, Bäck and Hadenius 2008) and measure all independent variables at $t - 1$, so that the model take into account that input, pre-dates the output. While appreciating the arbitrariness of any specific amount of time lag, I settle for following in the footsteps of the previously mentioned authors, using one year.

The time series model use balanced data for 128 countries, for the years 2005, 2008 and 2011, resulting in 384 observations. Because of the rigid nature of institutions, it would have been preferable to conduct a time series analysis over one, or even two decennia. However, data for Cars per 1000 persons, are only available from 2004 and onwards, and doesn't allow for analysis over a longer time span. This should be taken into consideration, and causal claims should therefore only be done with caution.

Descriptive statistics of the cross-sectional data are available in appendix I, table 2. And for the panel data see Appendix I, table 3.

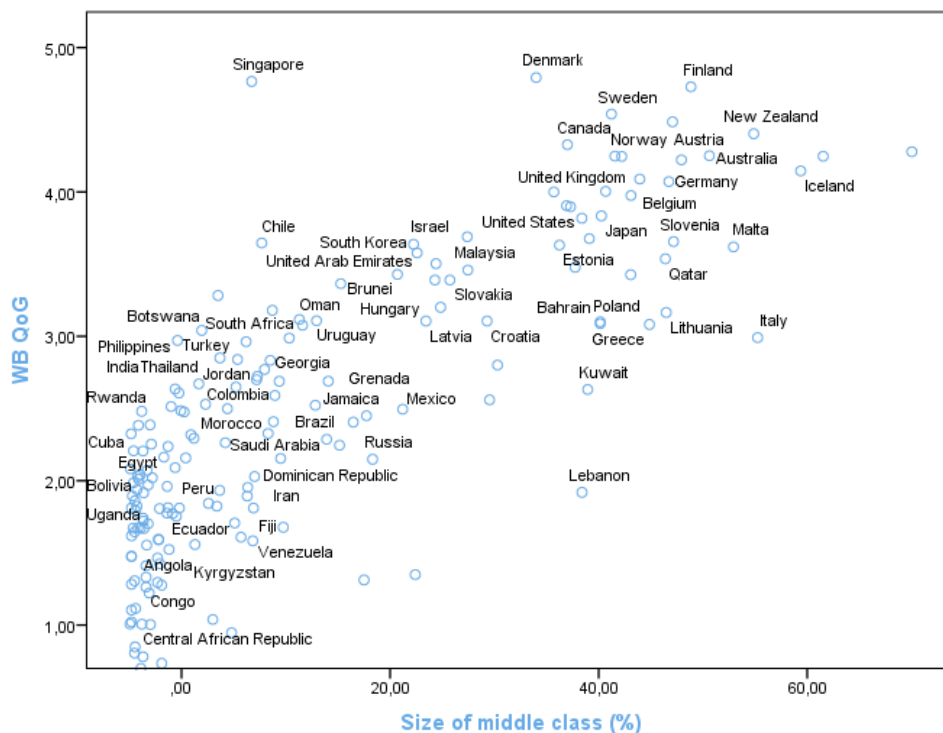
All variables, unless otherwise specified, are taken from the Quality of Government Institute's dataset (Teorell, Charron et al. 2013). All analyses in this paper are performed in IBM SPSS.

Empirical Findings

In this section I present and discuss the results from my statistical models, starting with a basic overview and visualization of the data. Second, I perform a cross-sectional regression analysis to see how the size of the middle class and my interaction term performs in competition with previous research, as well as checking for the robustness of my model. Finally I take on the issue of reverse causality, the arch nemesis of statistically significant relationships, and perform a time series regression, where the independent variables are measured at $t - 1$, giving a hint about the causal direction.

So what does the data say about the effect of the size of the middle class on QoG? *Figure 4.1* plots the rescaled WB's Government Effectiveness score against my operationalization of the middle class, for the year 2009. At a glance there seem to be a correlation and a clear linear relationship between the variables.

FIGURE 4.2: THE RELATIONSHIP BETWEEN THE SIZE OF THE MIDDLE CLASS AND QOG



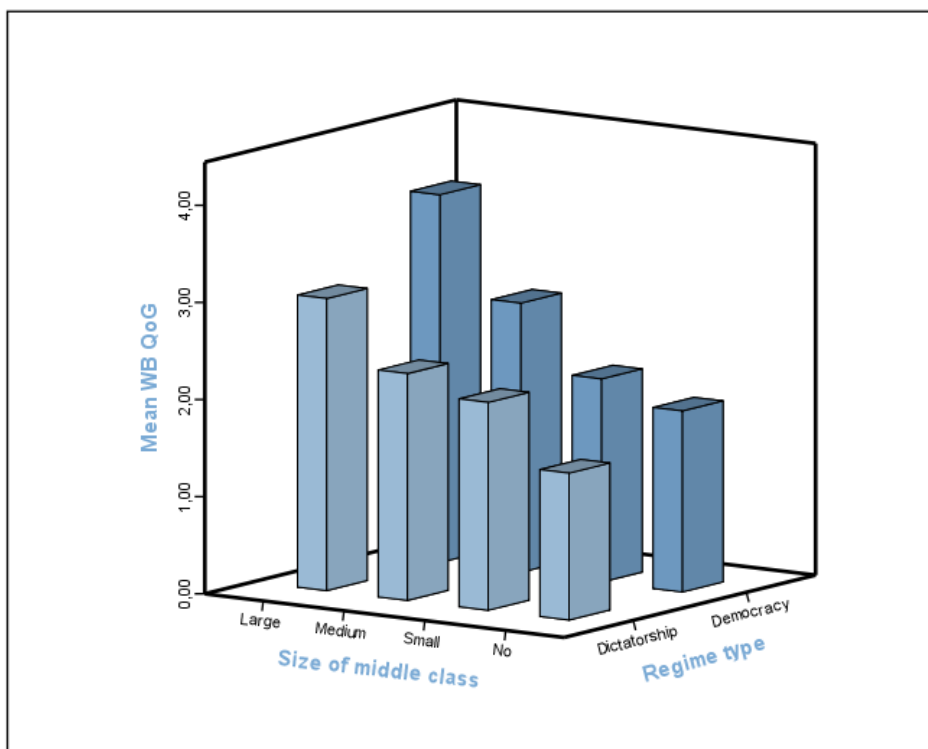
The plot also reveals a few weaknesses in the operationalization of the size of the middle class. While it is not exceptional that Singapore turn out as a statistical misfit in cross country data, here it is more likely due to fact that an operationalization based on cars per capita will fail to capture the reality in a city state such as Singapore. Also the famously bike-friendly nation of Denmark is accredited a smaller middle class than Lebanon, likely because of the Danes' preference for non-motorized two-wheelers. Nevertheless the measurement's positive aspects, the large number of observations and intuitive appeal, outweigh these measurement problems.

In the bottom left corner we observe numerous countries, with a negative size of the middle class. Here we find all countries that have less than 5 cars per 100 persons. Here the middle class is non-existent, leaving the rich to rule unchallenged.

Because we see a lot of dispersion in the data in *figure 4.1* we will move forward by exploring this relationship in yet another dimension, by adding a binary division of regime type, as shown in *figure 4.2* the visualization shows a linear relationship between the size of the middle class and QoG in both democracies and autocracies. As predicted, while both positive, the coefficient of this relation-

ship is larger for the former and smaller for the latter, giving support to the second hypothesis of this thesis – that the size of the middle class have larger impact on QoG in democracies, and smaller positive impact in autocratic countries.

FIGURE 4.2: QOG AS A FUNCTION OF THE SIZE OF MIDDLE CLASS AND REGIME TYPE



See Annex I, table 4, for descriptive statistics for respective group

Not too surprisingly, the highest QoG is found in the group of countries which are both democratic and boost a large middle class. Here we find the Scandinavian countries, Australia, Slovenia, the US, etc., where the middle classes, because of their size are likely to constitute the median voter. On the other side of the spectrum, the lowest level of QoG is found in autocracies where there exists no middle class, such as in Laos, Eritrea, North Korea and 28 additional low performers.

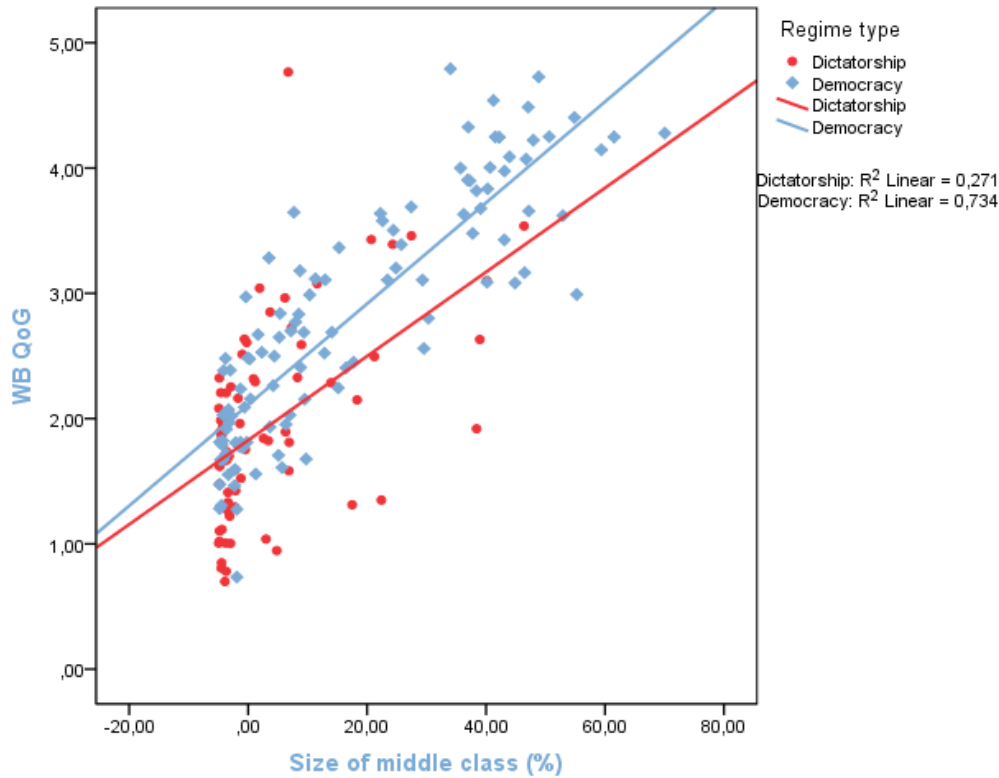
Particularly interesting are the groups with small middle classes, where the group of dictatorships slightly outperforms the democratic group. Because of overlapping confidence intervals this cannot be statistically determined. In the democratic group we find countries where the small middle class

have limited means of perusing their demand through the democratic institutions. Here we find: Armenia and Moldova where oligarchs have traditionally dominated the political sphere (Petrosyan 2013), Thailand where political the dynasties compete for power by populist politics (Bohane 2009), and Nigeria where political power is de facto reserved for the country's elites (Campbell 2013). In the autocratic group, the countries provide on average an equal or higher QoG, perhaps primarily driven by the rulers' incentive to maximize their rents (Barro 1999, Charron and Lapuente 2011). This would likely have been the case for Syria, prior to the outbreak of civil war, and to a large extent in China. In the latter, due the population size, even a small middle class equals a large group in absolute numbers. Equipped with some tools available to voice their demands, they can do so loudly (Qiang 2011).

In countries where the size of the middle class is either medium or large, the democratic groups enjoy an on average higher QoG than their autocratic counterparts. For example, while autocratic Bahrain which has a middle class on par with that of the Netherlands, just over 40 percent, the demands of the middle classes are met more adequately in the Netherlands, which score 4,25 on the WB's level of QoG while Bahrain score 3.10. A similar difference can be observed between Ireland and Kuwait where the middle class make up 38 percent of the population in both countries, but where the former enjoy a QoG of 3.82, while the latter only score 2.6. In general there are indications that the level QoG is influenced by the size of the middle class, but that this relationship varies depending on the regime in which they live.

While these examples are primarily illustrative, *Figure 4.3* shows to what extent the relationship between the size of the middle class and QoG is linear for democracies and autocracies. The graph indicates that there is a strong linear relationship between the size of the middle class and QoG in democracies ($R^2 = .734$), whereas in autocracies the relationship is weaker ($R^2 = .271$).

FIGURE 4.3: LINEAR RELATIONSHIPS BETWEEN THE SIZE OF THE MIDDLE CLASS AND QoG



$$\text{Model}_{\text{democracy}} \quad QoG = 2.1 + 0.040 * \text{Size of the middle class}$$

$$\text{Model}_{\text{dictatorship}} \quad QoG = 1.8 + 0.034 * \text{Size of the middle class}$$

From these bivariate regression models we can derive that in democracies, an increase in the size of the middle class of 10 percent results in a 0.4 increase in QoG, whereas the same increase in an autocracy is predicted to increase the level of QoG by 0.34. Such a small difference would offer only weak support to the hypothesis that the effect of the size of the middle class on QoG is stronger in democracies than in autocracies. More interesting, however, is the fit of the model. For democracies the high R² of 0.734 indicates that the model is a good fit of the data, while for autocracies the low R² of 0.271 indicates that the model is a poor fit of the data. Thus, the size of the middle class alone, can only account for 27 percent of the variance of QoG in dictatorships, which inevitably leaves us wondering what variables account for the remaining variance.

The two regression models in *Table 4.1* provide an additional test for the second hypothesis - that the effect of the middle class is stronger in democracies than in non-democracies - by controlling for additional independent variables.

TABLE 4.1: CROSS-SECTION REGRESSION ANALYSIS TESTING H2

Model:	Democracy 1	Autocracy 2
MC size	.017*** (.004)	.009 (.009)
GDP per capita	.362*** (.075)	.364*** (.110)
Years of Dem	.009*** (.002)	
Oil and gas export	-.040 (.019)	-.063* (.027)
Openness to trade	.000 (.001)	.030 (.308)
Ethnic fractionalization	.017 (.221)	.002 (.002)
Constant	-.965 (.077)	-1.097 (.863)
R ²	.841	.494
Observations	96	64

Multivariate OLS regression analysis displaying unstandardized beta coefficients and standard errors within parentheses. Dependent variable is the World Bank's Government Effectiveness (0-5), higher scores representing higher QoG.

*Legend: * $p < .05$ ** $p < .01$ *** $p < .001$.*

In model 1 the size of the middle class remains strongly significant in predicting QoG, when controlling for an additional set of independent variables. It is of particular interest the middle class holds in competition with GDP per capita, a variable strongly related to QoG. This indicates that in democracies it is not only the overall wealth that determines the level of QoG, but also how this wealth is distributed in society. Furthermore the significant effect of years of democracy, suggest that democracy benefits from maturing when it comes to its effect on QoG. Model 1 should be considered a very good fit of the data as it can account for 84 percent of the cross country variance of QoG in democratic states.

In model 2, the size of the middle class falls out of significance, while GDP per capita remains significant. In addition high oil and gas exports are negatively related to the level of QoG in autocratic states while insignificant in democratic state. Because only 49 percent of the variance is ex-

plained by the model, there are clearly additional explanations of what determine QoG in autocratic states.

To take an example from the data, the four countries, Trinidad and Tobago, Slovenia, Oman and Bahrain, all have a similar level of GDP per capita (\$23 000 +/- \$1 000). In democratic Trinidad and Tobago, the 30 percent large middle class enjoy a QoG of 2.80, while in democratic Slovenia the 47 percent large middle class live in a state providing a QoG of 3.66. Counter to this relationship, the two autocratic countries Oman and Bahrain, where the middle class make up only 11 percent of the population in the former, and 40 percent in the latter, boost almost the same level of QoG (3.08 and 3.10).

While these examples are only illustrative, the two regression models indicate that in democratic countries it matters more for QoG, how wealth is distributed in society, than it does in non-democratic countries. This suggests that there is a disconnect between the supply and demand side in autocratic countries, and that the level of QoG is determined by other mechanisms. Perhaps by the rulers' self-interest in increasing the size of the pie from which they then can extract larger rents (Olson 1996, Barro 1999).

Moreover, and indeed very important, the models show empirically that my proxy for the middle class and GDP per capita do in fact capture different socioeconomic aspects, as GDP per capita remains significant in model two, whilst the size of the middle class does not.

In table 4.2 the binary division of regime type is removed in favor for a variable of the level of democracy, so that the effect of democratic level, as well as an interaction between democratic level and the size of the middle class can be tested.

TABLE 4.2: CROSS-SECTIONAL REGRESSION TESTING H1 AND H3

Model #	Baseline Proxy 1 1	Interaction Proxy 1 2	Baseline Proxy 2 3	Interaction Proxy 2 4	GDP p.c. 5	Charron & Lapuente 6	Bäck & Ha-denius 7	Keefe 8	Control 9	Robustness check 10
Democracy	.086*** (.016)	.090*** (.018)	.091*** (.018)	.075*** (.020)	.086*** (.014)	-.218* (.105)	-.006 (.073)	.057*** (.017)	.060** (.023)	.149*** (.037)
MC size	.035*** (.003)	.038*** (.008)			.017*** (.004)	.012** (.004)	.033*** (.003)	.031*** (.003)	.028*** (.005)	.075*** (.006)
MC size * Dem		.000 (.001)								
MC Birdsall's proxy			.013*** (0.02)	.001 (.006)						
MC Birdsall's proxy * Dem				.002* (.001)						
GDP p.c.					.340*** (.049)	.183* (.072)				
GDP p.c. *Dem						.034** (.012)				
Dem ²							.009 (.007)			
Years of Dem								.011*** (.003)		
Openness trade									.001 (.001)	
Ethnic fract.									-.385 (.228)	
Oil/Gas Export									-.006 (.019)	
Gini Index									.013* (.006)	
Constant	1.484*** (.100)	1.466*** (.110)	1.395*** (.114)	1.480*** (.120)	-1.267*** (.416)	.157*** (.636)	1.666*** (.172)	1.533** (.097)	1.207*** (.290)	2.182*** (.234)
R ²	.695	.695	.450	.468	.757	.769	.698	.730	.639	.634
N (Countries)	177	177	124	124	170	170	177	166	80	173

Multivariate OLS regression analysis for a cross-section for the year 2009. Dependent variable for model 1 to 9 is the World Bank's Government Effectiveness (0-5) and for model 10 Transparency International's Corruption Perception Index (0-10), higher scores representing higher QoG.

Legend: * $p < .05$ ** $p < .01$ *** $p < .001$. Standard errors within parentheses

Model 1 test the explanatory power of the level of democracy and the size of the middle class. Both variables gain significance, indicating that QoG is higher in countries where the democratic level is high and the size of the middle class is large. The model explains close to 70 percent of the variance of QoG across countries, and must be seen as a good fit of the data. Moreover the standardized beta coefficient⁸ for the size of the middle class is approximately 2.5 times larger than the coefficient for democracy suggesting that the middle class is the stronger predictor of the level of QoG, than democracy.

In model 2 I add an interaction term, to test if the effect of democracy on QoG is contingent on the size of the middle class, which cannot fully be captured by the binary division of regime typed used in figure 4.3 and 4.4, and table 4.1. Both the level of democracy and the size of the middle class remain strongly significant offering empirical support to hypothesis 1 that - the size of the middle class has a positive impact on QoG. However, the interaction term is not significant, thus offering no support to the third hypothesis – that the effect of the level democracy on QoG is dependent of the size of the middle class.

Model 3 and 4 replicate the previous models using Birdsall's proxy for the middle class. The considerable difference in the R², shows that my proxy can account for 23-24 percent more of the variance in QoG across countries. Furthermore we can note the large difference in observations, with 53 more countries included for my proxy. While model 3 resemble the results of model 1, offering support of the validity of my operationalization, model 4 does not. Model 4 exhibits a weak significant relationship between the interaction and QoG, in support of the third hypothesis. From the methods section we remember that my proxy and Birdsall's proxy for the middle class correlate closely at > .804, indicating that the different results in model 2 and 4 are primarily driven by omitted observations in the latter model, rather than that the proxies capture fundamentally different groups. Furthermore, the omitted observations are mainly developed nations (not available in the PovcalNet database), which suggests that for developing nations there may be an interaction effect between the size of the middle class and democratic level, whereas this interaction disappears when developed nations are included in the sample.

Model 5 and model 6 tests for the theory of Charron and Lapuente (2010) – that the effect of democracy on QoG is dependent on the overall wealth of a country – and while their results remain

⁸ Standardized beta values for all models and variables in table 4.2 are found in Appendix I, table 6

robust, the size of the middle class remains significant, indicating that in addition to the wealth of a country it does matter how the wealth is distributed. While *table 4.1* showed that GDP p.c. and my proxy for the middle class capture different socioeconomic aspects there are reason to interpret the coefficients in model 5 and 6 with care. This is due to the high correlation between the independent variables GDP per capita and the size of the middle class. Thus there may be an issue of multicollinearity at hand, which limits the possibility to separate the unique effect from each independent variable in the model (Brambour, Clark et al. 2006).

In model 7 I control for Bäck and Hadenius' (2008) theory that – the impact of democracy is dependent on the level of democracy in itself. When controlling for democracy squared the size of the middle class remains significant while neither, democracy or democracy² are significant, implying that the size of the middle class is a greater predictor of the level of QoG than democratic level.

Model 8 tests Keefer's (2007) hypothesis, which receives support in the model, albeit both democracy and the size of the middle class remain significant. Moreover the latter have a standardized beta coefficient (.571) more than double that of the two former (.235 and .177) indicating that the middle class is the strongest predictor of QoG in the model.

Model 9 include four control variables out of which only the GINI-index is significant, at the weakest level. Interestingly the sign of the beta value suggest that, somewhat counterintuitive, a higher inequality predicts a higher QoG. If this reflects the situations where a rising middle class contributes to rising inequality is only speculation at this point. It should be noted than when including the GINI-index the number the number of observations are considerably reduced, due to a lack of data. Running model 7 excluding the GINI-index enable for 169 observations and produce a similar result, with the exception that openness to trade is significant at the $p < .01$ level.

Model 10 provides a robustness check, testing the reliability of my model. The results remain robust when the dependent variable is substituted with Transparency International's Corruption Perceptions Index, another common proxy for QoG. The amount of variance explained by the model is only marginally lower (6 percent) than in model 1.

TABLE 4.3: TIME-SERIES REGRESSION ANALYSIS TESTING ROBUSTNESS AND CAUSAL CLAIM

	Baseline	Interaction	GDP p.c.	Charron & Lapuente	Bäck & Ha-denius	Ha- Keefer	Control
Model #	1	2	4	5	6	7	8
Democracy	.088*** (.011)	.076*** (.013)	.080*** (.010)	-.290*** (.078)	-.093 (.059)	.050*** (.012)	.064** (.022)
MC size	.033*** (.002)	.027*** (.006)	.013*** (.002)	.008** (.003)	.030*** (.002)	.030*** (.002)	.031*** (.003)
MC size * Dem		.000 (.001)					
GDP p.c.			.390*** (.036)	.180** (.056)			
GDP p.c. * Dem				.041*** (.009)			
Dem ²					.016** (005)		
Years of Dem						.010*** (.001)	
Openness trade							.003*** (.001)
Ethnic fract.							-.426* (.185)
Oil/Gas Export							-.001 (.013)
Gini Index							.013* (.006)
Constant	-.875*** (.077)	-.855*** (.087)	-4.045*** (.306)	-2.136*** (.498)	-.473** (.149)	-.801*** (.074)	-1.295*** (.277)
R ²	.685	.687	.756	.770	.693	.720	.716
Countries	128	128	125	125	128	128	80
Observations	384	384	374	374	384	384	208

Multivariate OLS Regression analysis for the years 2006, 2008 and 2011. Dependent variable is the World Bank's Government Effectiveness (-2.5 to 2.5), higher scores representing higher QoG. All independent variables are measured at $t - 1$.

Legend: * $p < .05$ ** $p < .01$ *** $p < .001$. Standard errors within parentheses

By and large the results from time-series regression analysis in Table 4.3, resemble the results from the cross-sectional regression in Table 4.2, indicating that the previous results are robust. The effect of the size of the middle class remains strongly significant when controlling for competing hypotheses in respective models. Like before, the interaction term between the size of the middle class and democracy is not statistically significant. As opposed to the cross-sectional regression, model 6 offers support to Bäck and Hadenius' (2008) hypothesis, furthermore the control variables openness to trade and ethnic fractionalization is significant in the panel data, as opposed to in the cross-section data.

Although we cannot fully solve the issue of reverse causality the results from time-series regression offer – in addition to the theoretical framework – some reason to believe that causality run from the independent variables, in the direction of the dependent variable. Thus, the findings in this first large-N study on the effect of the middle class on QoG, suggest that an increase in the size of the middle is expected to cause an increase in QoG. However, the results should be interpreted with care as the time-series only examine the relationship over a period of seven years. And indeed there is a likelihood of a reinforcing virtuous circle between the size of the middle class and QoG.

Summary of results

What can we say about the three hypotheses after testing them empirically?

Firstly, H1 - that the size of the middle class impacts QoG positively, is supported by the results in all regression models in Table 4, when controlling for other plausible variables. Moreover these results were consistent in the models in Table 5, where all independent variables were lagged by one year, suggesting that causality may run in the hypothesized direction.

Second, when testing H2 – that the size of the middle class has a weaker effect on QoG in non-democracies than in democracies, the relationships was examined in a binary division of democracy/autocracy. The findings show this relationship to be very strong in democratic states, even when controlling for GDP per capita and years of democracy. In autocracies, however, the relationship was found to be weaker and could only account for a small variance in the dependent variable. When faced with control variables the size of the middle class was no longer statistically significant in predicting the level of QoG in autocratic states, rather GDP per capita and oil and gas exports accounted for the cross country variance of QoG.

While the demand of QoG is likely to be similar for middle classes irrespective of which country they live in, the supply side is more responsive in democratic countries. In addition, and indeed very important, because that the size middle class is significant in democratic but not so in autocratic countries (and GDP per capita is significant for both regime types) it is evident that the two variables capture different socioeconomic aspects. This further validates my operationalization of the middle class, making it suitable to be employed in future research.

Thirdly, H3 - that the effect of democratic level on QoG is negative/weak in countries with small middle classes and positive/strong in countries with large middle classes, did only receive weak empirical support, when employing Birdsall's proxy for the middle class (Table 4.2, model 4). The same model employing my operationalization did not yield any significance for the interaction variable, but did so for the middle class and democracy level separately. Because Birdsall's proxy only included observations for developing nations it could be that there is an interaction effect between the size of the middle class and democratic level at a certain development stage. However due to the low significance this finding shouldn't be emphasized without additional tests and the inclusion of control variables.

Lastly, the time-regression offer an initial indication that causality may run from the independent variables towards the dependent variable. However, until tested over a longer time span, causal claim should be done with caution.

Conclusion

As a point of departure this thesis used the mixed findings of previous research on the effect of regime type on QoG, and took the middle class along for the drive. The middle class offered an extensive body of literature that, previously, had only qualitatively and theoretically linked its size to QoG. This was clearly an untapped source. I have bridged these two fields of literature by creating a theoretical framework, explaining middle classes' particular demand of QoG.

The empirical findings indicate that the size of the middle class positively affects QoG in democratic states. A finding that holds when controlling for GDP per capita, the age of democracy, and other contending variables. Furthermore, the results suggest that in autocracies, the middle class is neither as strong nor as precise a predictor of QoG, as in democracies. When controlling for additional variables, the middle class was no longer a significant predictor of QoG in autocracies.

The findings offer initial support to my theoretical model which predicts that the middle classes' demand – driven by low future discount rates, expectations on the state, the middle classes' mitigating role between the upper and lower class, and their values – interacts differently with the supply side in democracies and autocracies because of the regime types' different institutional natures. The results also justify the study in retrospect, as indeed there are indications that, in addition to the overall wealth, in democracies, it also matters how this wealth is distributed.

Moreover the results emphasize the disconnect between the supply and demand side of QoG in autocratic states. Although there are a limited tool-set available in autocracies, this is not sufficient.

The results offer, at best, weak support for the last hypothesis - that the middle class is a determining factor for the impact of democracy on QoG. An interaction term between the size of the middle class and the level of democracy was only found to show a weak significance, and only so for developing nations. The interaction would need to face further empirical scrutiny, before any claims could be made.

The academic implications of paper are clear. Firstly, the novel operationalization of the middle class (using passenger cars suggested by Dadush and Ali (2012) and deducting the elite), is strengthened by the results, as the variable falls out of significance in predicting QoG in autocracies whilst GDP per capita does not. In other words, the two variables capture different socio economic aspects. Therefore, this proxy can be employed in future research concerned with the impact of the middle classes. Second, by theoretically and empirically connecting the size of the middle class to the level of QoG, I have carried out an initial test on a relationship that warrants further attention. As is common in any research endeavor, despite answering a few questions, in sum, I have ended my journey with more questions than at departure. Could disaggregating the theoretical framework, reveal which mechanisms impact QoG the most? And similarly, are there certain aspects of QoG that are especially responsive to the demands of the middle class? Evidently, I have but contributed with one small piece to a very large puzzle.

As regards implications outside of academia one should be cautious with drawing policy prescriptions from a study of a previously untested relationship. However, if the findings are proven robust in future research – and given the positive societal outcomes associated with a high QoG ([Rothstein 2011](#)) – strengthening the role of the middle classes, deserves a position on the global development agenda.

To conclude, this paper offers empirical support to what Aristotle pointed out some twenty-three-hundred years ago. Political communities where the middle class is large are indeed well-administrated. At least when they are democratic.

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Appendix A

TABLE 1: CORRELATION DV VARIABLES (QOG)

	TI	WB	ICRG
TI Corruption Perception Index			
Pearson correlation	1***	.939***	.906***
N.	181	181	139
WB Government Effectiveness			
Pearson correlation	.939***	1***	.929***
N.	181	191	139
ICRG Quality of Government			
Pearson correlation	.906***	.929***	1***
N.	139	139	139
*p<.05 ** p<.01 ***p<.001			

TABLE 2: DESCRIPTIVE STATISTICS FOR CROSS-SECTION DATA

Variable	N	Mean	Minimum	Maximum	Standard deviation
QoG – WB	191	2.437	.23	4.79	.992
QoG – TI CPI	181	3.982	1.01	9.40	2.089
Regime Type	192	.61	0	1	.488
Democracy	193	6.673	.00	10.00	3.105
MC Size	178	12.46	-4.94	70,04	19.25
MC Size*Democracy	178	112.3	.00	700.3	2121
MC Birdsall	124	11.27	-5.0	86.89	21.36
MC Birdsall * Democracy	124	93.74	-40.0	837.7	183.1
Democracy ²	193	54.12	.00	100.0	36.84
GDP (log)	179	8.742	5.72	11.13	1.258
GDP*Democracy	179	58.52	.00	107.42	29.57
Years of democracy	171	18.16	0	70	21.59
Trade Openness	185	89.09	1.96	401.5	47.52
Oil and gas export (log)	193	2.104	-2.54	9.39	2.949
GINI Index	85	40.64	26.00	65.77	9.084
Ethnic fractionalization	187	.438	.00	.93	.257

TABLE 3: DESCRIPTIVE STATISTICS FOR PANEL DATA

Variable	N	Mean	Minimum	Maximum	Std. deviation
QoG – WB	565	-,0641	-2,34	2,36	,99930
Democracy	575	6,6462	,00	10,00	3,12765
MC Size	396	15,4919	-5,00	109,63	21,27535
MC Size*Democracy	575	53,9374	,00	100,00	36,87784
Democracy ²	528	8,6981	5,58	11,21	1,28881
GDP (log)	531	58,9877	,00	112,12	31,61208
GDP*Democracy	575	53,9374	,00	100,00	36,87784
Years of democracy	585	19,7556	,00	80,00	22,66107
Openness to trade	550	90,9735	1,89	418,97	48,03129
Ethnic Fractionalization	559	,4402	,00	,93	,25651
GINI-Index	240	44,2050	20,54	69,71	7,10843
Oil and gas export (log)	585	1,8589	-4,44	9,51	2,90441

TABLE 4: MEAN OF QOG FOR SIZE OF MIDDLE CLASS IN DEMOCRACIES AND AUTOCRACIES

Size of middle class	Regime type	Mean	N	Std. Deviation	Std. Error of Mean
No	Dictatorship	1,5130	31	,49142	,08826
	Democracy	1,8636	19	,33858	,07768
	Total	1,6462	50	,46853	,06626
Small	Dictatorship	2,1399	24	,81507	,16638
	Democracy	2,0926	29	,56004	,10400
	Total	2,1141	53	,68065	,09350
Medium	Dictatorship	2,3351	9	,69748	,23249
	Democracy	2,7715	18	,52111	,12283
	Total	2,6260	27	,60926	,11725
Large	Dictatorship	3,0064	6	,62706	,25600
	Democracy	3,7869	41	,54121	,08452

	Total	3,6872	47	,60561	,08834
Total	Dictator- ship	1,9616	70	,79115	,09456
	Democracy	2,8154	107	,96283	,09308
	Total	2,4777	177	,98943	,07437

TABLE 5: CORRELATION OF INDEPENDENT VARIABLES (CORRELATIONS OF PARTICULAR INTEREST ARE HIGHLIGHTED)

		Dem.	MC Size	MC Size * Dem	Birdsall MC	Birdsall MC * Dem	Dem ²	GDP p.c. (log)	GDP pc * dem	Years of Dem	Open. trade	Oil/Gas exp log	Gini Index	Ethnic fract.
Dem	Pearson Correlation	1	,505**	,601**	,430**	,527**	,978**	,364**	,967**	,603**	,016	-,294**	,180	-,331**
	Sig.		,000	,000	,000	,000	,000	,000	,000	,000	,830	,000	,099	,000
	N	193	178	178	124	125	193	179	180	171	185	193	85	187
MC Size	Pearson Correlation	,505**	1	,957**	,804**	,805**	,591**	,802**	,653**	,602**	,162 [†]	,129	-,206	-,372**
	Sig.	,000		,000	,000	,000	,000	,000	,000	,000	,033	,087	,064	,000
	N	178	178	178	120	121	178	170	171	166	174	178	82	173
MC Size * dem	Pearson Correlation	,601**	,957**	1	,751**	,825**	,683**	,713**	,746**	,676**	,124	,044	-,206	-,400**
	Sig.	,000	,000		,000	,000	,000	,000	,000	,000	,102	,557	,064	,000
	N	178	178	178	120	121	178	170	171	166	174	178	82	173
Birdsall MC definition	Pearson Correlation	,430**	,804**	,751**	1	,941**	,497**	,720**	,579**	,162	,186 [†]	,074	-,043	-,356**
	Sig.	,000	,000	,000		,000	,000	,000	,000	,080	,038	,412	,699	,000
	N	124	120	120	124	124	124	123	123	117	124	124	82	118
Birdsall MC * Dem	Pearson Correlation	,527**	,805**	,825**	,941**	1	,598**	,674**	,666**	,167	,189 [†]	,001	-,010	-,326**
	Sig.	,000	,000	,000	,000		,000	,000	,000	,071	,036	,991	,932	,000
	N	125	121	121	124	125	125	123	124	118	124	125	82	119
Dem ²	Pearson Correlation	,978**	,591**	,683**	,497**	,598**	1	,459**	,978**	,641**	,031	-,249**	,145	-,389**
	Sig.	,000	,000	,000	,000	,000		,000	,000	,000	,677	,000	,186	,000
	N	193	178	178	124	125	193	179	180	171	185	193	85	187
GDP p.c. (log)	Pearson Correlation	,364**	,802**	,713**	,720**	,674**	,459**	1	,567**	,547**	,268**	,311**	,077	-,461**
	Sig.	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,485	,000
	N	179	170	170	123	123	179	179	179	165	179	179	85	173
GDP p.c. (log) * dem	Pearson Correlation	,967**	,653**	,746**	,579**	,666**	,978**	,567**	1	,698**	,043	-,178 [†]	,174	-,412**
	Sig.	,000	,000	,000	,000	,000	,000	,000		,000	,563	,017	,111	,000
	N	180	171	171	123	124	180	179	180	166	179	180	85	174
Years of Dem	Pearson Correlation	,603**	,602**	,676**	,162	,167	,641**	,547**	,698**	1	,024	,093	,474**	-,338**
	Sig.	,000	,000	,000	,080	,071	,000	,000	,000		,760	,228	,000	,000
	N	171	166	166	117	118	171	165	166	171	169	171	81	169
Openness to Trade	Pearson Correlation	,016	,162 [†]	,124	,186 [†]	,189 [†]	,031	,268**	,043	,024	1	-,129	-,048	-,139
	Sig.	,830	,033	,102	,038	,036	,677	,000	,563	,760		,081	,663	,064
	N	185	174	174	124	124	185	179	179	169	185	185	85	179
Oil/gas exp log	Pearson Correlation	-,294**	,129	,044	,074	,001	-,249**	,311**	-,178 [†]	,093	-,129	1	,083	,089
	Sig.	,000	,087	,557	,412	,991	,000	,000	,017	,228	,081		,449	,223
	N	193	178	178	124	125	193	179	180	171	185	193	85	187
Gini Index	Pearson Correlation	,180	-,206	-,206	-,043	-,010	,145	,077	,174	,474**	-,048	,083	1	,100
	Sig.	,099	,064	,064	,699	,932	,186	,485	,111	,000	,663	,449		,374
	N	85	82	82	82	82	85	85	85	81	85	85	85	82
Ethnic frac.	Pearson Correlation	-,331**	-,372**	-,400**	-,356**	-,326**	-,389**	-,461**	-,412**	-,338**	-,139	,089	,100	1
	Sig.	,000	,000	,000	,000	,000	,000	,000	,000	,000	,064	,223	,374	
	N	187	173	173	118	119	187	173	174	169	179	187	82	187

** Correlation is significant at the 0.01 level (2-tailed).[†] Correlation is significant at the 0.05 level (2-tailed).

TABLE 6: STANDARDIZED BETA VALUES FOR THE CROSS-SECTION REGRESSION ANALYSIS (TABLE4.2)

Model #	Baseline Proxy 1 1	Interaction Proxy 1 2	Baseline Proxy 2 3	Interaction Proxy 2 4	GDP p.c. 5	Charron & Lapuente 6	Bäck & Hadenius 7	Keefe 8	Control 9	Robustness check 10
Democracy	.270***	.280***	.374***	.308***	.268***	-.648*	-.019	.177**	.242*	.220***
MC size	.664***	.718***			.316***	.222**	.623***	.571***	.577***	.662***
MC size * Dem		-.061								
MC Birdsall's proxy			.418***	.038						
MC Birdsall's proxy * Dem				.435*						
GDP p.c.					.441***	.238*				
GDP p.c. *Dem						1.103**				
Dem ²							.316			
Years of Dem								.235***		
Openness trade									.043	
Ethnic fract.									-.138	
Oil/Gas Export									-.323	
Gini Index									.181*	
R ²	.695	.695	.450	.468	.757	.769	.698	.730	.639	.634
N	177	177	124	124	170	170	177	166	80	173

Multivariate OLS regression analysis for a cross-section for the year 2009. Dependent variable for model 1 to 9 is the World Bank's Government Effectiveness (0-5) and for model 10 Transparency International's Corruption Perception Index (0-10), higher scores representing higher QoG.

Legend: *p<.05 **p<.01 ***p<.001.