# Challenging the loyalty-competence trade-off

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**Abstract**

Even the most powerful autocrats are forced to rely on political allies to remain in power. Among these allies, ministers in charge of policy and decision-making are some of the most important supporters. Consequently, to understand the dynamic of autocratic rule, it is crucial to study how autocrats balance the trade-off between loyalty and competence in their cabinet appointments. To analyze how competence levels of cabinets change under the rule of an incumbent, I leverage newly collected data on 88 autocratic countries between 1966 and 2021 from the novel Paths to Power dataset (data collection is ongoing). The common notion in the literature is that leaders in autocracies reward competence less than democracies. Scholars supporting this argument claim that autocrats will replace competent ministers with less competent ones over time, as the more competent ministers are less likely to be loyal to the autocrat. I challenge this proposed narrative by arguing that competence has several facets. In my analysis, I find no systematic decrease in the share of technically competent ministers under the same leader. The share of politically competent ministers in autocratic cabinets, however, does decrease over time under the same incumbent, and the size of this effect differs across regime types. Autocrats seem not to fear technically competent ministers, but the preference for politically competent ministers is more complex and regime-dependent. My findings have several important implications, advancing existing literature by highlighting the importance of disaggregating the concept of competence and the need for further theoretical development on autocrats' cabinet preferences.

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# 1 Introduction

Although autocratic regimes differ in many ways, they share one important feature: no dictator can rule alone (Bueno de Mesquita 2011). The autocrats rely on a winning coalition that consists of subordinates who can contribute greatly to the leader's ability to stay in power, but they are also the ones who are best able to remove said leader from power (Geddes, Wright, and Frantz 2018). Some autocratic leaders only manage to stay in office for a short period of time, like Pedro Lascuráin, who was the president of Mexico for about 45 minutes. Other leaders are able to stay in power for several decades, like Sultan Qaboos of Oman who stayed in power for almost 50 years (Nyrup and Bramwell 2020). While Sultan Qaboos died on the throne, a large number of autocratic leaders are removed from power through coups (Ezrow and Frantz 2011).

The type of people the autocrat chooses to surround himself with can greatly influence his chance of remaining in office and the type of policies he chooses to pursue (Zakharov 2016; Weeks 2012). Autocrats that are surrounded by civilian political elites have been shown to be less likely to engage in interstate conflict, while autocrats that are surrounded by military officials or yes-men who are unwilling or unable to constrain the autocrat are more likely to engage in interstate conflict (Weeks 2012). Some scholars argue that Putin's decision to invade Ukraine can be partially attributed to the fact that the people he surrounds himself feared the repercussions of objecting to his policies[1] (Gomza 2022; Barany 2023). When autocrats are ousted in coups, the following regimes are often both illiberal and unstable, resulting in civilian suppression and suffering, as well as reduced or negative economic growth that makes the lives of ordinary people even more challenging (Koehler and Albrecht 2021; Fosu 2002). The people surrounding the autocrat can influence important policy decisions and political outcomes that have real life impact on civilians both within and outside the regime, thus underlining the importance of

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[1]In this text I refer to dictators with the male pronouns, as all the autocrats in modern time have been male.

understanding this group of elites better.

Understanding how dictators make their choice of subordinates can help us better understand the inner workings of autocracies. While some authors have argued that autocracies tend to hire more competent bureaucrats and cabinet members(Bell 2015), others have argued that autocrats will prefer less competent ministers over more competent ones (Zakharov 2016; Egorov and Sonin 2011; Frantz and Kendall-Taylor 2014) [2]. These authors argue that more competent ministers are both more likely to stage a coup against the sitting leader and less invested in keeping the current leader in power.

Autocrats thus face a loyalty-competence trade-off when choosing their subordinates (Zakharov 2016). Competent ministers can help run the government successfully and better generate rents for the autocrats, but they are also more likely to successfully stage coups. If the autocrat removes all the competent ministers, he might be safeguarded against palace coups, but might not stand a chance against external threats of invasion from other countries (Pilster and Böhmelt 2011). Building on these strands in the literature, this paper asks the following question: *How do the competence levels of cabinets in autocracies change over time under the same ruler?*

The independent variable in this study is the different leaders' years in power, while the dependent variables are different measures of competency. I rely on data from the newly collected Paths to Power dataset that will eventually have biographical information such as education level, previous work experience and political experience for all cabinet members in 126 countries from 1966 to 2021 (Nyrup et al. 2023). In this paper I include data on the 76 different autocracies, which includes all autocracies that have been coded by the time of writing.

The article proceeds as follows. I review the research on subordinate appointments in autocratic regime. Then I develop my argument on which competences the autocrats value in their ministers and how this changes over time. I test my

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[2]I refer to ministers, cabinet ministers and cabinet members interchangeably.

theoretical arguments through statistical analysis of the relationship between autocrats' time in power and competence levels of their cabinets. The findings of this study suggest that autocrats do not fear technical competence in their ministers, and will not reduce the share of technically competent ministers over time. The case of politically competent ministers is different, where I find a robust negative trend between the time a leader stays in power and the average political competence level of his cabinet. I discuss the implications and points to areas of future research.

## 2 Literature review

Cabinet ministers can be a great resource for any sitting leader, but they can also pose a threat. From the existing literature, we know that coups staged by regime insiders are one of the main ways autocrats are removed from office (Ezrow and Frantz 2011), and that a large share of authoritarian regimes end as a result of coups (Geddes, Wright, and Frantz 2018). Nevertheless, despite the potential threat that these insiders represent no dictator can rule alone.

Autocrats have several tools that they can use to limit the threat of their subordinates. One of these tools is to purge the potentially threatening elements. Although no one is truly safe from being purged, Goldring and Matthews (2021) find that autocrats are more likely to purge first-generation elites. These elites are understood as the ones that enter political power with the leader. Purging elites is a risky and costly process, however, as the regime insiders can respond by attempting to remove the new leader from power (Svolik 2012). This is therefore not a tool that is available to all autocrats, and autocrats might prefer less drastic measures. Another tool avaible to autocrats is reshuffling of cabinet ministers between different positions. This reshuffling limiting them from acquiring a stable power base within the departments that they lead (Woldense and Kroeger 2023).

Leaders have to balance the potential threat that subordinates pose with the benefit that having competent cabinet ministers bring. In their work, Egorov and

Sonin (2011) argue that autocrats thus face a loyalty-competence trade-off when appointing subordinates. Cabinet ministers represent the country internationally, develop and implement policies, protect the country and regime?, and because of their intimate knowledge of the regime they also know the regime and potentially also the leader's weakest points (Egorov and Sonin 2011). Subordinates who are able the best able to protect the regime, might also be the same ones who best know how to remove the leader as well. Furthermore, competent subordinates can potentially have less vested interests in keeping the leader in office, as they are better able to find equally rewarding outside employment than their less competent colleagues (Zakharov 2016). When the cabinet minister's privileges and power is contingent on the current leader is kept in office, the effort they invest in ensuring said leader's survival would be larger than if not (Zakharov 2016).

The existing debate on subordinate appointments in autocratic regimes, there exists two strains in the literature. One side of the debate argues that autocracies tend to staff their bureaucracies with competent technocrats, and that autocratic leaders value competence in their appointees more than democratic leaders (Bell 2015; Zakaria 1994). The other side of the debate argues that rather than purely embracing competence in their subordinates, autocrats will appoint loyal subordinates willing to go to great lengths to keep the leader in power, rather than the most competent candidates. Case studies the Pahlavi regime in Iran (Katouzian 1998), the Trujillo regime in Haiti (Hartlyn 1998) and Hitler's regime in Nazi-Germany (Egorov and Sonin 2011) provide anecdotal support for this side of the debate. Similarly, Aaskoven and Nyrup (2021) find that prior to the start of WWII, regional leaders who performed better economically were more likely to be promoted, but this changed after the outbreak of the war, while after the outbreak of the war, ministers who exhibited loyal traits where more likely to be promoted.

Competence is a multi-faceted concept, however, and the type of competence autocrats want might differ across time and regime type. Indeed, in their work Lee and Schuler (2020) find that autocrats are more likely to promote cabinet ministers

who are technically competent, but less likely to promote the politically competent ministers. Similarly, Ketchley and Wenig (2023) find that the military leaders of Egypt who took power in 1952 were more likely to keep on government employees that had experience of government work, but purged those who were deemed more threatening because of their close ties to the royal family, experience as cabinet ministers under the previous regime and military experience. From these studies, we see how competence is not just one thing, and that some types of competence are valued by autocrats and others are less rewarded. Yet no study has tested whether the assumption that autocrats over time reduce the competence levels of their cabinets actually has empirical support, and this is the contribution this article makes.

## 3   Theory

One of the main underlying assumptions of this paper is that autocrats want to maximise their potential gains by staying in office, and that their actions will be motivated by this goal. Cabinet members also want to maximise their potential gains, but the best way to do so will be dependent on their competence levels. Less competent subordinates are not able to find equally rewarding employment outside of their employment under the current dictator, and therefore they are expected to exert greater efforts to keep the dictator in power than the more competent ministers. The latter ministers will have outside offers that are potentially equally rewarding and stand a higher chance of being rehired if the leader is changed (Zakharov 2016).

Competence amongst the cabinet members come with potential benefits for the leader. Technically competent ministers might be better at developing policies and generating growth (Lee and Schuler 2020). When a leader fears outside threats, such as from other states, competent ministers might also be better at both assessing the potential threat that outside actors pose to the sitting leader and better suited to handle these challengers (Egorov and Sonin 2011). A less competent cabinet member

may be less able to handle these threats, even if he is more loyal to the leader (Zakharov 2016). Especially when setting up a state following a revolutionary coup, leaders need to rely on the competence of others to help run the day-to-day activities needed for the state to function (Ketchley and Wenig 2023). Revolutionaries might be competent at staging revolutions, but different skills are needed to run the state, and this fact means that leaders need to rely on the competence of others.

Nevertheless, competent ministers can also pose a great threat to the leader. The competence that allows them to protect the state and the leader against outside threats, can also be turned around and used to overthrow the sitting leader (Egorov and Sonin 2011). If a cabinet member is good at garnering political support and "playing the political game," they can also use that skill to rally people around themselves as a potential new leader (Lee and Schuler 2020). First-generation elites, who came into power with the sitting leader, might be especially threatening, as they could be seen as more legitimate challengers and may have a political network that exceeds the later elites (Goldring and Matthews 2021).

These factors cause the autocrat to face a dilemma when choosing the competence level of his cabinet members. If he chooses to fill his cabinet only with competent people they would be better able to handle external threats and develop good policies, but these competent cabinet members might also be less invested in keeping him in power. As they are more competent, they have better outside options and higher chances of being rehired if the leader is replaced, and they are also better able to assess the probability of whether coups might be successful or not (Zakharov 2016; Egorov and Sonin 2011).

Trying to coup-proof the regime by replacing more competent members with less competent ones, however, might also negatively affect the regimes' ability to handle external threats (Pilster and Böhmelt 2011). Furthermore, replacing competent ministers in the cabinet with less competent ones might be a stabilising move in the short-run, but may actually leave the regime, and thus also the autocrat, more vulnerable to external and internal threats in the long run.

## 3.1 Technical and political competence: a conceptual distinction

Competence is a contested concept, as can be seen from the various ways that it has been defined in the literature (see Lee and Schuler (2020)). Indicators that have been used to measure competence include measures of income (Galasso and Nannicini 2011), education levels (Galasso and Nannicini 2017), party affiliation (Pekkanen, Byblade, and Krauss 2006), or professional background (Camerlo and Pérez-Liñán 2015).

One way to think of competence, is to think of it as a cabinet member's ability to analyse the political game. Egorov and Sonin (2011) define in their work on the competence of a vizier, or high-ranking political advisor, as his or her ability to determine the threat of a coup. This ability could stem from the vizier's competence in assessing the political climate at any given time. The dictator wants a vizier who can protect him against external threats. The vizier's ability to analyse the power-differences between the external challenger and the incumbent dictator, however, this might also be what makes him prone to participate in a coup against the dictator. As the subordinate is better able to analyse both the strength of the incumbent and the competitor, the competent minister could also be more likely to side with the competitor if they think that they would be better off under a new leader. Therefore, a more competent minister could pose a threat to the autocrat. Egorov and Sonin (2011, 905) further argue that loyalty and incompetence, in their model, "... are two sides of the same token".

But competence does not only involve the ability to navigate the political system and build coalitions; a minister's tasks often require more technical abilities. Zakharov (2016) argues that subordinates differ in their task capabilities that are unrelated to their ability to keep the dictator in office, such as providing public goods, generating economic growth or establishing a functioning education system. Dictators also differ in how much they value this competence in their subordinates.

Zakharov (2016) assumes that when leaders face high exogenous threats of removal, more competent ministers will be hired. These cases include when states have a history of coups, is a military regime, has a more democratic neighbour, is ethnically heterogeneous, or suffers from an on-going interstate conflict. Zakharov 2016.

Competence is not just one thing. As mentioned in the literature review,Lee and Schuler (2020) enters the conversation by dividing the competence measurement into two components: political competence and technical competence. This division follows the convention on the research on minister appointment in democracies (Lee and Schuler 2020). They define the concept of political competence as "... the ability to build a coalition of support among colleagues or the public for oneself, one's party, or policy" (537). On the other hand, they define the concept of technical competence as "... the ability to identify the correct policies within a specific policy domain" (537). What they find in their study of appointments of ministers in East Asia, is that autocrats seem to fear the politically competent ministers, as these are less likely to be promoted to ministerial positions (Lee and Schuler 2020). The technically competent ministers, however, are not less likely to be promoted than the less technically competent ones.

| Concept | Technical competence | Political competence |
|---------|----------------------|----------------------|
| Definition | The ability to identify good policies in their relevant domains, provide publig goods or other technocratic skills that increase provision of rent. | The ability to read and understand the rules of politics, notice external political threats and build a coalition of support. |
| Indicator | Education | Political experience |

**Table 1:** Conceptualisation of technical and political competence

Building on these previous conceptualisations of competence, the definitions of technical and political competence is as follows. Technical competence is the ability to identify good policies in their relevant domains, to provide public goods and other technocratic skills that increase provision of rent. Following Lee and Schuler (2020) and Besley, Montalvo, and Reynal-Querol (2011), I assume that this is positively correlated with education. That is, the more educated ministers are, the more

technically competent they are compared to less educated ones.

Political competence, on the other hand, is the ability to read and understand the political game, to notice external political threats and to build a coalition of support. I assume here that political competence is correlated with political experience, i.e. that the ministers who have either partisan experience or who have held political office will be more politically competent than those ministers that do not have political experience (Pekkanen, Byblade, and Krauss 2006).

Although I am not explicitly measuring loyalty in this paper, the previously mentioned authors have proposed ways to indirectly measure loyalty. Egorov and Sonin (2011) argue that appointing unqualified family members to government positions that require either professional or political competence is a manifestation of the reliance on loyalty over competence in subordinates. Similarly, Camerlo and Pérez-Liñán (2015) measures loyalty by the absence of either professional or political experience. Building on these authors, then, we assume that the less competent ministers are more likely to be loyal, as they have less outside options than the more competent ministers.

## 3.2  Theoretical expectations

When autocrats come into power, the elites from the old regime are still in place, although the size of this group differs. One way to handle these elites, is to purge them all (Machiavelli 2008). If all autocrats would prefer incompetent ministers over competent ones, we would expect that when an autocrat comes into power, he would replace all the competent ministers with incompetent ones. Nevertheless, this does not seem to be the case (Ketchley and Wenig 2023).

When they enter power, the autocrat and his allies often lack the experience and competence needed to run the state apparatus. From Ketchley and Wenig (2023)'s study of purges following the 1952 Egyptian Revolution, we can see that the existing political elites are treated differently based on what type of competencies they pos-

sess. Specifically, the elites that have features that are deemed threatening, such as being a senior-level official, having close ties to the previous leader or previously held political offices, are all more likely to be purged than ministers with less threatening features (Ketchley and Wenig 2023). These threatening factors are features that closely resemble the previously presented conceptualisation of political competence.

Similarly, Lee and Schuler (2020)'s finding that the more politically competent candidates are less likely to be promoted to high prestige minister positions in autocratic regimes, indicate that autocrats are indeed sceptical of political competence. Furthermore, in their study on purges in autocracies, Goldring and Matthews (2021) show that first-generation elites, who have had more access to political power than the later generations, are also more likely to be purged over time than other political elites. When they entered office with the autocrat, they had a stronger bargaining position vis-à-vis the autocrat and were also able to negotiate for more power (Goldring and Matthews 2021). This political power, then, makes them a larger threat than other elites. Again, we see that political competence is viewed as a threat by the autocrat.

Nevertheless, because of the bargaining position of his allies at the start of the period, who might have been active in political movements alongside the autocrat, we might expect that some of these politically competent allies are able to gain minister positions at the start of the regime. Over time, however, the autocrat seems to purge more of these first generation elites, and replace them with less politically competent ones. Building on this, I derive the first hypothesis:

**H$_1$: As the dictator's time in power increases, the political competence level of the cabinet will decrease.**

Nevertheless, these autocrats need people with the ability to fill technical and administrative positions, and this might require a type of competence that the autocrat and his allies does not possess (Groth 1972). Indeed, following the Egyptian Revolution in 1952, ministers who had university education and experience as state

elites were able to stay in their position longer, keeping all other characteristics constant (Ketchley and Wenig 2023).

Autocrats also have longer time horizons than democratically elected leaders, who often remain in power for only one or two terms (Bell 2015). Since they have the opportunity to stay in power longer, they might also be better able gain the benefits of technically competent ministers (Lee and Schuler 2020). Therefore, the technically competent ministers could also help legitimise the government of the autocrat if they are able to use this competence to generate economic growth, provide public goods or otherwise contribute to the stability of the regime (Lee and Schuler 2020). In their study on minister promotions, Lee and Schuler (2020) find that the technically competent ministers, measured by education levels, are more likely to be promoted to minister positions than those with lower levels of education. Autocrats, then, seem to value technically competent ministers.

Given the assumption that autocrats do value technical competence, and are even willing to retain some former state elites given that their technical competence is high enough, it would logically follow that they would want to fill their cabinets with technically competent ministers from the beginning. Therefore, we should not expect a significant correlation between the leader's years in power and the technical competence level of his cabinet. This leads me to the second hypothesis:

**$H_2$: As the dictator's time in power increases, the technical competence level of the cabinet will remain the same.**

## 4 Data and method

To test these hypotheses, I rely on the new Paths to Power (PtP) dataset that contains biographical information on the social profile of cabinet members from 128 countries in the period 1966 to 2021 (Nyrup et al. 2023). Whereas previous research has been limited by the lack of data, with this new dataset I have data on how cabinet

compositions and average competence levels change over time. The PtP dataset contains information on ministers' education, previous occupations and political experience, allowing me to measure their technical and political competence.
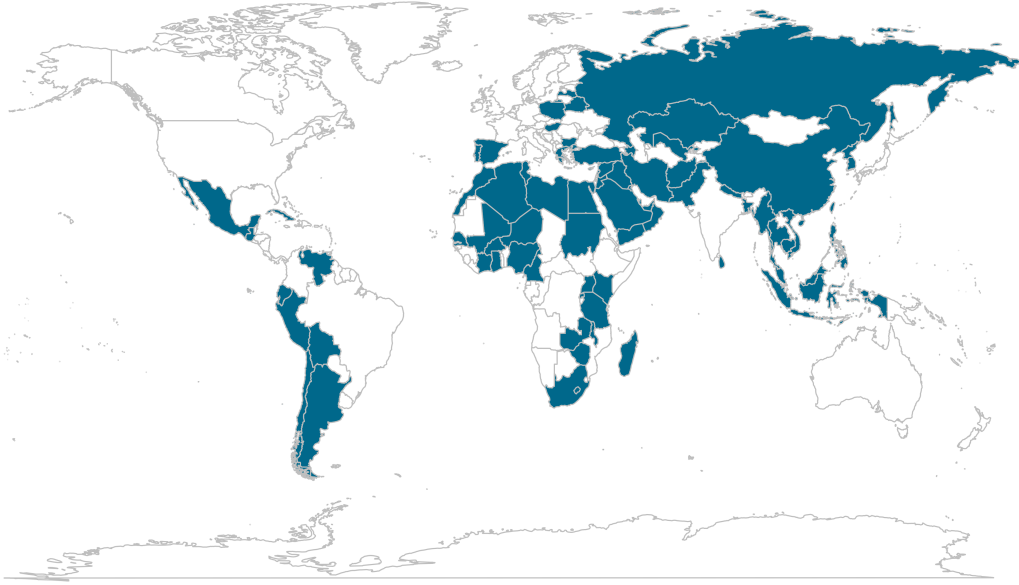


**Figure 1:** Map of countries included in this article.

I rely on the dichotomous measurement of autocracy-democracy from Boix, Miller, and Rosato (2013) and only include country-years in which the countries have been coded as autocracies. In the current version of the paper, the dataset contains information on 76 different countries, 326 different autocrats and 2806 cabinet-years. A full list of included countries is in Appendix XXX[3].

The dependent variables in this study, are different measures of technical and political competence of a given cabinet in a given year. The measure for technical competence is constructed by taking the average level of education for all cabinet ministers in a given year. The levels range from no higher education (0), bachelor's degree (1), master's degree (2) and doctorates (3). For the ministers who have been coded to have "Some university education, unclear which if any degree" I have also coded these as 1. I then calculate the average level in every cabinet-year.

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[3]The data collection is on-going, and in the final version I will include information on all autocratic regimes with a population above 10 million people in addition to the countries already included in this sample.

| Concept | Technical competency | Political competency |
|---|---|---|
| **Operationalisation** | The level of education attained by the minister prior to joining the cabinet for the first time | The level of political experience the minister has prior to joining the cabinet for the first time. |
| **Values** | 0 = no university education, 1 = bachelor's degree or some university education, unclear which degree 2 = master's degree, 3 = doctoral degree | 0 = no previous political experience, 1 = partisan without holding political office, 2 = previously held political office |

**Table 2:** Operationalisation of dependent variables

Political competence, on the other hand, is measured by an ordinal variable that takes the value 0 if the minister has no prior political experience, 1 if the minister has been partisan without holding political office and 2 if the minister has held political office prior to joining the cabinet. Here, political office includes having been a member of parliament, governor or mayor. Similarly, I code the average for every cabinet-year.

The main independent variable in this paper, is the leader's time in power. For every year the same leader remains in power, this variable increases by 1. In the WhoGov-dataset (Nyrup and Bramwell 2020), on which I base my tenure variable, the ministers and leaders are coded based on who is in power in July every year, except for in 1966 where the data was only available for September, and 1970, where the coders have used January instead of July (Nyrup and Bramwell 2020). The longest-sitting Leader in the sample is Sultan Qaboos, who was in power for 50 years. Some of the shortest-sitting leaders include Choi Kyu-hah, who was president in South Korea from 1979 to 1980, and Roberto Eduardo Viola who was the president of Argentina in 1981.

To control for potential confounders, I run different models with several control variables. In the baseline model, I run the regressions with only time- and leader-fixed effects. Then I rerun the analysis with control variables for logged GDP per capita and logged population size, using data from the World Bank (Arel-Bundock 2022). Countries that have a higher GDP per capita have more money to spend on education, and regimes in lower income countries also have a higher chance of

breaking down than higher income countries (Djuve, Knutsen, and Wig 2020).

In the third model I include a control variable for failed coup attempts that is lagged by one year. From previous research we know that the replacement rate of cabinet ministers increase after failed coup attempts (Bokobza et al. 2022). Therefore, it is interesting to see whether the composition of the competence level of the cabinet ministers also changes after failed coup attempts. To estimate this, I rely on the dataset of Powell and Thyne (2011). In the Paths to Power-dataset, the leader that is coded in the dataset, is the one that is in power in July of any given year. The coup attempts that occur before July 1st in any given year is coded as a 1 for the same year, while those that occur after July 1st are coded as a 1 in the next year.

In this study I am not interested in the effect of autocratisation per se on the competence level of the cabinets, but rather of tenure. Therefore, in the fourth model I also include a control for the V-Dem Polyarchy score (Coppedge et al. 2023). I also run a fifth model where a control variable for mass mobilisation lagged by one year is included, using V-Dem's mass mobilisation measurement. Mass mobilisation has been shown to correlate with regime change (Hellmeier and Bernhard 2023), and some studies have also found that mass mobilisations affects promotion and selection of political elites (Mirić and Pechenkina 2022).

To estimate how leaders' time in power correlates with the competence levels of their cabinet, I run linear regressions with time- and leader-fixed effects. The two-way fixed effects equation takes the following form:

$$y_{it} = \alpha_i + \beta_t + \gamma X_{it} + \epsilon_{it} \quad i = 1, \ldots, N \quad t = 1, \ldots, T \tag{1}$$

where $y_{it}$ is the dependent variable for cabinet $i$ at time $t$, $\alpha_i$ is the unit fixed effect for cabinet $i$, $\beta_t$ is the time fixed effect for time $t$, $X_{it}$ is a vector of explanatory variables for unit $i$ at time $t$, $\gamma$ is a vector of coefficients for the explanatory variables and $\epsilon_{it}$ is the error term. Cabinets will have traits that remain relatively stable

across the tenure of the same leader, but that will differ across different leaders. These effects are not easily measured, but will remain relatively stable over time. Therefore, by using leader-fixed effects I account for this. Likewise, time-fixed effects controls for external shocks, such as global financial crises, that are likely to affect all units in a given year.

# 5 Analysis

To start off the analysis, I look at single-country plots of how technical and political competence have changed over time in different countries. Then I run statistical models testing how first leaders' time in power correlates with political and technical competence levels of their cabinets.
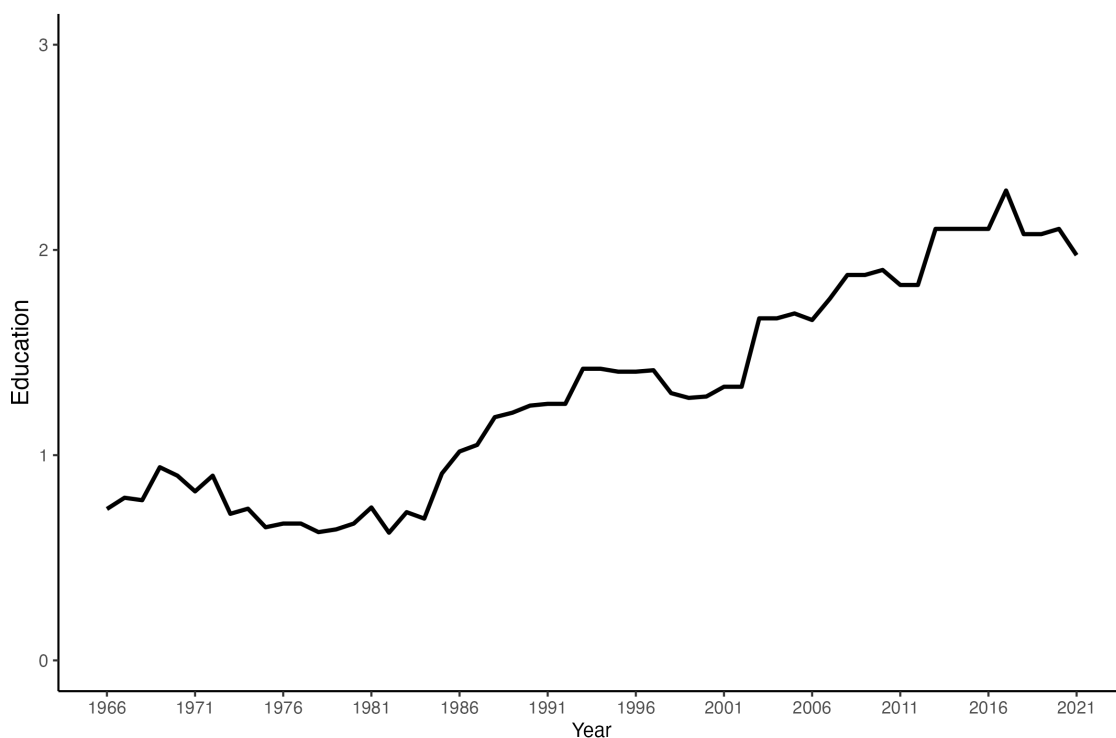


**Figure 2:** Average technical competence level in China

In Figure 2, we see how the technical competence level of Chinese cabinets have changed over time. We see that it is relatively low in the late 1960s and throughout the 1970s. In the middle of the 1980s we see an increase that continues until it

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reaches its max in 2017 before it starts declining again slightly. We see that in the Maoist period (until 1976), the technical competence level of the cabinets remain relatively low and declining slowly, but the same trend is not as clear under the other state leaders. Although we do see a slight decrease in the average technical competence level of Chinese cabinets in recent years, it is unclear whether this is just a stagnation or whether the trend will continue with further decreases in the future.



**Figure 3:** Average political competence level in Iraq

For an example of how political competence levels of cabinets change over time in a single country, I plot the political competence levels in Iraq over time in Figure 3. We see that it increases both under the rule of Ahmad Hassan al-Bakr and under the rule of Saddam Hussein until 1990. Following the Gulf war, however, we see a decline in the share of politically competence levels of the cabinet that continues until the end of Saddam Hussein's rule in 2003. After the removal of Saddam we see an increase in the political competence level of cabinets that continues until it reaches its peak in 2011, before it starts declining again, reaching down to same

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level as in 1966 in 2019 and 2021. Although these simple descriptions can show us some trends over time, statistical analyses are needed to say anything about the systematic correlation between leaders' time in power and the different competence levels of their cabinets.

**Table 3:** Regression outputs

| Dependent Variables: | Average political competence | | | | | Average education level | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Model: | (1A) | (1B) | (1C) | (1D) | (1E) | (2A) | (2B) | (2C) | (2D) | (2E) |
| Years in power | -0.0200** | -0.0252*** | -0.0257*** | -0.0254*** | -0.0202** | -0.0041 | -0.0063 | -0.0058 | -0.0065 | -0.0024 |
| | (0.0096) | (0.0096) | (0.0095) | (0.0096) | (0.0094) | (0.0051) | (0.0059) | (0.0058) | (0.0058) | (0.0062) |
| log(GDP/Capita) | | 0.0412** | 0.0409** | 0.0435*** | 0.0430*** | | 0.0311 | 0.0323 | 0.0263 | 0.0259 |
| | | (0.0160) | (0.0166) | (0.0158) | (0.0156) | | (0.0287) | (0.0321) | (0.0301) | (0.0307) |
| log(population) | | -0.0463 | -0.0024 | -0.0004 | -0.0305 | | 0.2467*** | 0.2730*** | 0.2667*** | 0.2428*** |
| | | (0.0965) | (0.1021) | (0.1030) | (0.0931) | | (0.0859) | (0.0924) | (0.0940) | (0.0929) |
| Failed coup$_{t-1}$ | | | 0.0424 | 0.0416 | 0.0538 | | | 0.0447 | 0.0462 | 0.0559 |
| | | | (0.0484) | (0.0483) | (0.0450) | | | (0.0369) | (0.0369) | (0.0366) |
| Mass mobilisation$_{t-1}$ | | | | 0.0071 | 0.0036 | | | | -0.0163 | -0.0191 |
| | | | | (0.0128) | (0.0127) | | | | (0.0129) | (0.0126) |
| Polyarchy | | | | | 0.7145*** | | | | | 0.5665** |
| | | | | | (0.2641) | | | | | (0.2244) |
| Leader | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 2,806 | 2,453 | 1,879 | 1,863 | 1,863 | 2,806 | 2,453 | 1,879 | 1,863 | 1,863 |
| $R^2$ | 0.91043 | 0.91570 | 0.93354 | 0.93373 | 0.93595 | 0.88815 | 0.89740 | 0.90865 | 0.90914 | 0.91068 |
| Within $R^2$ | 0.01308 | 0.02712 | 0.03783 | 0.03899 | 0.07117 | 0.00049 | 0.02060 | 0.03072 | 0.03495 | 0.05138 |

*Clustered (leader) standard-errors in parentheses*
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

To test the first hypothesis, namely that the political competence level of cabinets decrease as the leader's time in power increases, I start off by running a regression with the average political competence level of the cabinet as the dependent variable, and the leader's time in power as the independent variable. To account for potential immeasurable confounders, I also include time- and leader-fixed effects. The result of this model can be seen under Model 1A in Table 3. The result of this regression is negative and significant at the 0.05 level. When adding controls for both GDP per capita and population size in Model 1B, the variable increases in size and significance, with the result now being significant at a 0.01 level. The results remain at the same significance level when adding controls for failed coup attempt (1C) and mass mobilisation in previous year (1D), and only drops down to 0.05 when adding control for polyarchy scores (1E). These findings all provide support for Hypothesis 1, namely that the longer an autocrat stays in power, the lower the average political competence level of his cabinet.

From these findings, we can assume that as leaders remain in power, they start replacing more of the potentially more politically threatening ministers, that are threatening due to their political competence, with less politically experienced ministers. Although these less competent ministers might not be as good at spotting potential political threats, they might also be less able to successfully stage coups against the dictator. Furthermore, we know from previous research that the people that come into power with the autocrat, the first generation elites, are more likely to be purged than other elites (Goldring and Matthews 2021). Many of these elites have often been part of a political movement, and these ministers getting replaced could explain why we see a drop in political competence in cabinets under the same ruler.

What then about technical competence? To test how the technical competence level of cabinets change as the leader's time in power increases, I start off by running a regression with the share of university educated ministers as the dependent variable, the leader's years in power as the independent variable, and I include leader-

and time-fixed effects. As can bee seen from Table X in Model 1, the relationship is not statistically significant. The results statistically insignificant across the different model specifications, implying that there is no clear linear relationship that my model is able to capture between the time a leader stays in power and the education level of the cabinet.

Substantively, this result indicates that autocratic leaders might not fear the technically competent ministers, or at the least that they do not strategically reduce the technical competence levels of their cabinet as their time in power increases. This finding substantiates the findings of Lee and Schuler (2020), which finds that individuals with higher education are actually more likely to be hired by autocrats than those with less education. Although autocrats might fear politically competent ministers, the same does not seem to be the case with technically competent ministers. Similarly, Ketchley and Wenig (2023) find that university educated elites were less likely to be purged following the 1952 Egyptian revolution than those without university education, further substantiating the finding that autocrats, rather than fearing technically competence, value technically competent ministers.

# 6    Discussion and conclusion

Where the previous research on the loyalty-competence trade-off has been largely theoretical or limited to single-country or regional studies with relatively short time-spans, my study is the first to test the theoretical implications of the loyalty-competence trade-off on a global sample with a sizeable temporal scope. From the results of the analysis, it is clear that the arguments related to the trade-off needs to be nuanced.

First, the existing theories on the how the loyalty-competence trade-off manifests in autocracies have either operated with concepts of competence that are hard to translate into measurable indicators (Zakharov 2016; Egorov and Sonin 2011), only apply to specific cases (Aaskoven and Nyrup 2021), or that cannot be applied

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far back in time (Lee and Schuler 2020). The concepts of competence in the theoretical papers have often been vague and has treated all competence as one, but in line with Lee and Schuler (2020) I argue that competence needs to be disaggregated into different types of competence, and follow their two-folded concepts. The indicators developed in this study can easily be applied to different countries and historically, thus allowing for a more substantial test of the implications of the loyalty-competence trade-off than previous research.

Furthermore, previous research has also been limited by a lack of data. In the current version of the paper I include data on 76 autocratic regimes with cabinets from all continents. Where the Lee and Schuler (2020) study was limited to East Asia, I am still able to substantiate their findings, namely that autocrats do not fear technical competence in their cabinets, but that they are more weary of politically competent ministers. Intuitively this also makes sense, as the technically competent ministers can help generate rent through sound policy development and implementation that less technically competent ministers might struggle to develop. This competence, however, is not necessarily the same that will make them better able to stage coups, and therefore it does not seem clear that autocrats fear this competence.

Politically competent ministers, on the other hand, have experience from parties or from holding political office, work that may have given them experience in gathering political support for their own goals and ambitions. Similar to the findings of Ketchley and Wenig (2023), my findings imply that autocrats may be more suspicious of politically competent ministers, thus wanting to reduce the share of the cabinet they represent over time.

In this study, I collapse all autocratic regimes into one type, and do not differentiate between military, civilian and royal autocracies. A possible extension of this study is to test whether the trends found in this study is more prevalent in certain regime types. A further extension could be to test whether cabinet compositions are affected by external factors, such as civil wars, protests and other shocks.

# 7 Bibliography

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# 8 Appendix A: List of countries

Afghanistan, Algeria, Argentina, Azerbaijan, Bahrain, Bangladesh, Belarus, Bolivia, Bulgaria, Burkina Faso, Cambodia, Cameroon, Chile, China, Côte d'Ivoire, Cuba, Cyprus, Ecuador, Egypt, German Democratic Republic, Ghana, Greece, Guatemala, Hungary, Indonesia, Iran, Iraq, Jordan, Kazakhstan, Kenya, (North) Korea, (South) Korea, Kuwait, Lebanon, Libya, Madagascar, Malawi, Malaysia, Mali, Mexico, Morocco, Myanmar, Nepal, Niger, Nigeria, Oman, Pakistan, Peru, Philippines, Poland, Portugal, Qatar, Russia, Rwanda, Saudi Arabia, Senegal, Singapore, South Africa, South Sudan, Spain, Sri Lanka, Sudan, Syria, Taiwan, Tanzania, Thailand, Tunisia, Turkey, Uganda, United Arab Emirates, Uzbekistan, Venezuela, Vietnam, Yemen, Zambia, Zimbabwe.