

# Explaining military problems of corruption in Russia: An Analysis of Russia's Armed Forces in Ukraine

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Master Thesis at the Department of Political Science

UNIVERSITY OF OSLO

Spring 2023

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in Ukraine*

**Word count:** 42,488

University of Oslo (UiO) & Norwegian Defence Command and Staff College (FHS)

## **Foreword:**

This thesis marks the end of my master's studies in political science at the University of Oslo. A master's race that has challenged opinions, expanded thought processes and led to many excellent and contrary discussions. The subject matter of this thesis was first inspired by the many cases of Russian corruption appearing on the Twitter feed after the 24<sup>th</sup> of February 2022, but also by the broader crossroads European history has entered, where Russia stands as a central actor.

There are many people to thank for making this assignment as exciting as it did. First, I would like to thank Stein, who has inspired a young and curious student. Furthermore, I am very grateful for Tormod Heier's role as a supervisor, who met the task with commitment and constructive criticism and shared his knowledge and experience. I would also like to thank Tom Røseth, who gave me the opportunity to be part of a skilled environment at the Norwegian Defence Command and Staff College, which has been near on the conflict and the people involved. This has provided a closeness to the conflict, giving a great motivation for carrying out research that hopefully would yield some form of value.

And last but certainly not least - many thanks to my mother, father, sister, and dog, who have been cheerleaders and supporters for over 20 years. This would not have been possible without you.

Oslo, 03.05.2023

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# Acronyms:

## A

Armored Personnel Carrier  
APC, 98

## B

Battalion Tactical Group  
BTG, 46  
Battle Damage Assessment  
BDA, 68

## C

Center for Analysis of Strategies and Technologies  
CASS, 63  
Command and Control  
C2, 43  
Conflict Intelligence Team  
CIT, 93  
Corruption Perception Index  
CPI, 34

## D

Donetsk Peoples Republic  
DPR, 109

## E

Electronic Warfare  
EW, 51

## G

Globalnaja Navigatsionnaja Sputnikovaja Sistema  
GLONASS, 52

## I

Imagery Intelligence  
IMINT, 68

## L

Luhansk Peoples Republic  
LPR, 97

## M

Main Directorate of Intelligence of the Ministry of  
Defence of Ukraine  
GUR, 136  
Ministry of Defense  
MoD, 16  
Multiple Launch Rocket System

MLRS, 71

## N

National Agency on Corruption Prevention of Ukraine  
NACP, 42  
Next-Generation Light Anti-tank Weapon  
NLAW, 84  
Non-Commissioned Officer  
NCO, 37

## O

Open Source Intelligence  
OSINT, 69  
Organized Crime and Corruption Reporting Project  
OCCRP, 7

## R

Research and Development  
R&D, 16  
Rocket Propelled Grenade  
RPG, 84  
Russian Armed Forces  
RAF, 7  
Russian State Committee for Telecommunications  
Gostelekom, 44

## S

Security Service of Ukraine  
SBU, 40  
Surface-to-air missile  
SAM, 51

## T

The Foreign Intelligence Service of Ukraine  
SZRU, 98  
The Royal United Services Institute  
RUSI, 30

## U

Ultra High Frequency  
UHF, 51

## V

Very High Frequency  
VHF, 51  
VKontakte  
VK, 78  
Vozdushno Desantnye Voyska  
VDV, 16

## **Abstract:**

Corruption has long been a “known” problem within the Russian Armed Forces. However, the scale and effects of corruption have not been fully scrutinized. The war in Ukraine has been the most extensive involvement Russia has had since World War II. This engagement has given a unique opportunity to analyze the corruption within the Russian Armed Forces, as the scale of the operation has forced the corruption to the surface.

This thesis seeks to describe corruption within the Russian Armed Forces and the political elite connected to it and explore why corruption is likely to degrade the Russian Armed Forces’ military capabilities during the war in Ukraine and the years to come. In the extension of this, it is investigated whether organizational theoretical perspectives can explain political and military corruption in Russia. Organizational theory has been applied here to understand why actors within the Russian defense sector act and prioritize as they do. Here, unaccountable servants in organizations are understood from an *instrumental perspective*, emphasizing how the organization's formal structure guides organizational behavior. Alongside an *institutional perspective* that opens for informal norms, traditions, values, and culturally defined rules and conventions that guide the individual's room for action and behavior.

The paper finds that the corruption in the Russian defense sector has been extensive. It has further been found that corruption has significantly affected Russia's military capability in the Ukraine war and likely in the decision to launch a full-scale invasion. Particularly interesting is the finding about how the *method of corruption* changes when one moves up or down within the Russian chain-of-command.<sup>1</sup> Within the chain-of-command, explanations from the instrumental perspective show significant unaccountability and a lack of control mechanisms, transparency, and external jurisdiction linked to the Russian defense sector. Explanations from the institutional perspective show that historical legacy in the professional community is likely related to collusion, lies, and collective expectations. In total, the empirical data shows that large parts of the Russian military apparatus are permeated with corruption. The corruption will highly likely impede Russian military operations in the near future.

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<sup>1</sup> Please see Table 1 on page 106 for a full overview.

# 1. Introduction

## 1.1 Background and research question

Russia's renewed invasion of Ukraine on the 24<sup>th</sup> of February 2022 marked the start of Europe's deadliest armed conflict since World War II. After a steady buildup of military forces along Ukraine's borders since 2021, Russia, at the orders of President Vladimir Putin, launched a full-scale invasion, with Russian ground forces simultaneously attacking from the north, east, and south. Upon the invasion day, the stakes were high, as the war's outcome will define not only the future of Ukraine and Russia, but also the global geopolitical system. In the first phase of the invasion, Russian forces advanced along several corridors. However, this was about to change, after a few days Russian forces ran into effective and likely unexpected levels of Ukrainian resistance from the invasion's outset. While at a quantitative and qualitative disadvantage in personnel, equipment, and resources, the Russian Armed Forces (RAF) underperformed, proving far less resilient and adaptive than the Russian political- and military leadership had expected. Anchored in an incorrect understanding of the reality in the Russian Armed Forces, primarily connected to corruption within its chain-of-command. Alongside, from Western analysts, the general error was to take the best observed Russian performance and set this as the expected standard.<sup>2</sup> Increasing the fear of Russian forces among Ukraine's international partners and Ukraine itself, which Russia has exploited to coerce its adversaries.

Moreover, analysts assess that during the first stage of the war, the Russian military performed poorly overall and was hindered by specific tactical choices, ineffective communication, poor logistics, lack of air superiority, and command-and-control issues.<sup>3</sup> It became apparent that Russia's defense industrial sector and armed forces had organizational and systemic weaknesses firmly connected to *corruption*.<sup>4</sup> These weaknesses would cost Russian lives and prevent them from achieving their initial strategic objectives in Ukraine, particularly occupying and removing the political leadership in Kyiv –seen as the *center of gravity*. Indeed, Russian military officials interviewed by the *Organized Crime and Corruption Reporting Project* (OCCRP), including senior officials, agreed on one thing: “The chaotic and failed campaign [to occupy Kyiv] began largely because of corruption, and it is corruption in

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<sup>2</sup> Bowmen, A. S. (2022, September 14). *Russia's War in Ukraine: Military and Intelligence Aspects*. From Congressional Research Service (CRS) Report: <https://crsreports.congress.gov/product/pdf/R/R47068>, p. 44.

<sup>3</sup> Ibid. pp. 1-2.

<sup>4</sup> Cranny-Evans, S., & Ivshina, O. (2022, May 12). *Corruption in the Russian Armed Forces*. Retrieved from The Royal United Services Institute (RUSI): <https://rusi.org/explore-our-research/publications/commentary/corruption-russian-armed-forces>



the Russian Army that can save Kyiv.”<sup>5</sup> Accompanied by severe corruption data leading up to the war, when Chief Military Prosecutor in Russia, Valery Petrov, stressed that corruption within the armed forces had quadrupled in 2018.<sup>6</sup> At the same time, keeping in mind the basis from 2011, when corrupt officials, dishonest generals, and crooked contractors stole a fifth of the defense budget yearly. That was 1.5 trillion rubles (\$53 billion) for national defense in its 2011 budget, indicating a staggering theft of more than \$10 billion annually.<sup>7</sup> Therefore, corruption within the Russian Armed Forces appears to be a huge problem, unexpectedly creating a major discrepancy between RAFs *expected* and *actual* military performance in Ukraine.

Eventually, over the first several weeks of the war, Putin and the Russian military later had to adjust to various setbacks and a worsening development on the ground. With many of its advances stalled in late March 2022, Russian defense officials announced that Russian military operations would focus on Eastern Ukraine, including the regions of Donetsk and Luhansk. Ordering the Russian Armed Forces to withdraw their forces around Kyiv and Chernihiv in the north only six weeks after the invasion.<sup>8</sup> The initial Russian axis of advance is observed in the picture below. The northern axis, which this thesis focuses on, was the main effort focused on the encirclement and capture of Kyiv:

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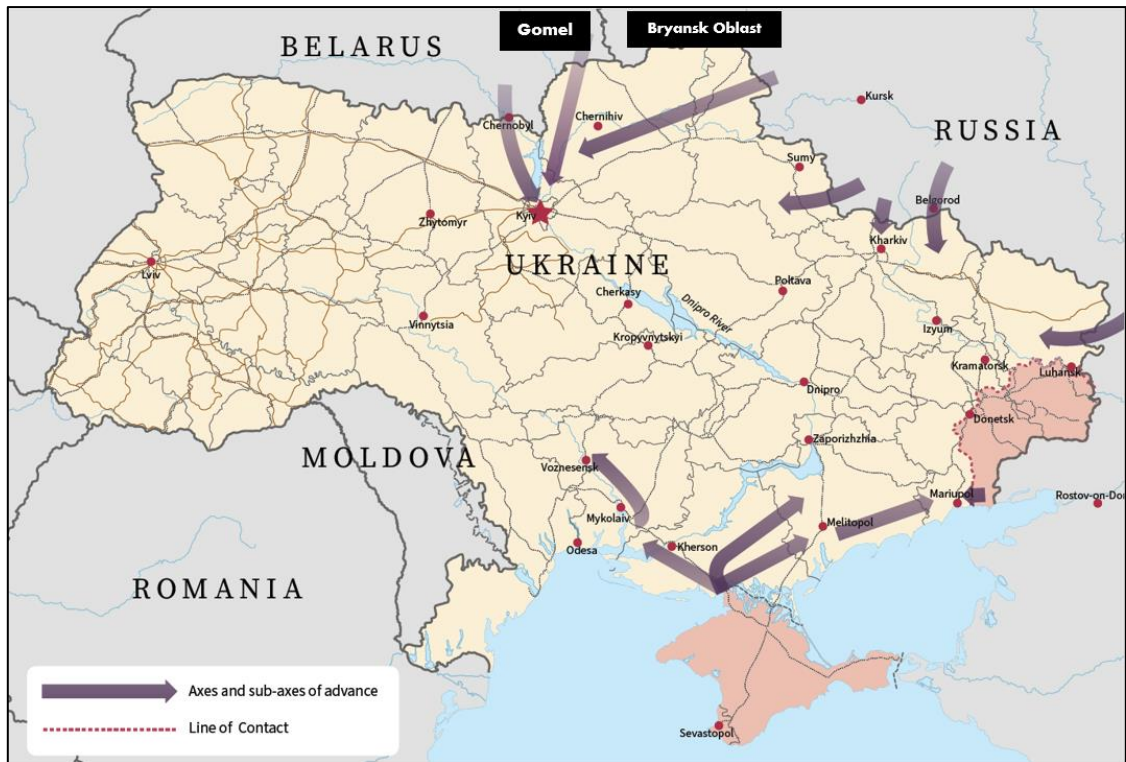
<sup>5</sup> OCCRP. (2022, April 08). *Самый надежный союзник. Как коррупция в российской армии может спасти Украину*. Retrieved from OCCRP - Organized Crime And Corruption Reporting Project:

<https://www.occrp.org/ru/home/37-ccb/ccb/16181-2022-04-07-16-58-46>

<sup>6</sup> TASS. (2019, March 21). *В 2018 году ущерб от коррупции военнослужащих в России вырос до 7 млрд рублей*. Retrieved from TASS/TACC: <https://tass.ru/obschestvo/6242472>

<sup>7</sup> The Moscow Times. (2011, May 24). *A Fifth of Defense Budget Is Stolen*. Retrieved from The Moscow Times: <https://www.themoscowtimes.com/2011/05/23/new-york-minute-snapshot-of-a-citys-art-scene-a7160>

<sup>8</sup> Bowmen, A. S. (2022, September 14). *Russia's War in Ukraine: Military and Intelligence Aspects*, pp. 6-9.



**Figure 1: Initial Axis of Advance<sup>9</sup>**

The figure above shows four axes of advance for North Ukraine, two starting from Belarus, one starting from Russia in Bryansk Oblast, and one east of Sumy. All but the latter axis of advance had the operational objective of advancing toward Kyiv. For the encirclement and capture of Kyiv, the Russians formed two groups of forces commanded by the Eastern Military District Command Post. The first group was formed in the Gomel region of Belarus and used the tactical sign ‘V’ with orders to attack Kyiv along the western bank of the Dnipro River. The second group was formed in the Bryansk region (Oblast) of Russia and used the tactical sign ‘O’ with orders to surround Kyiv from the eastern bank of the Dnipro.<sup>10</sup> Together with the main military objective of a complete encirclement of Kyiv.

The thesis seeks to answer why the initial phase of the Russian invasion with the strategic goal of encirclement and capture of Kyiv failed, grounded in the Russian Armed Forces weak military performance. That includes the build-up and preparations before the invasion on the 24<sup>th</sup> of February 2022 until the retreat from the Kyiv area at the beginning of April 2022. Here

<sup>9</sup> Modified figure originally retrieved from: Zabrodskiy, M., Watling, J., Danylyuk, O., & Reynolds, N. (2022, November 2022). *Preliminary Lessons in Conventional Warfighting from Russia’s Invasion of Ukraine: February–July 2022*, p. 9.

<sup>10</sup> Ibid. p. 9.

the research will mainly focus on how corruption has hurt Russia's strategic, operational, and tactical performance. Keeping in mind that corruption has particularly long traces back in time, leading to inefficiencies on the battlefield within these defining weeks. Considering this, the research question for the thesis is:

***How can corruption in Russia's chain-of-command be described, and to what extent can corruption explain Russia's weak military performance on Ukraine's Northern flank?***

By "weak military performance," I mean that the Russian leadership did not achieve their strategic goals in North Ukraine, swiftly removing Zelensky's regime and occupying Kyiv. Or, as White House Press Secretary John Kirby put it in a briefing after Russian Forces initiated withdrawal: "If you look at what they've been able to do just thus far — [Russian President Vladimir] Putin has achieved exactly zero of his strategic objectives inside Ukraine."<sup>11</sup> Thus, it is arguably fair to state that the Kremlin *failed* with its strategic mission in North Ukraine, which eventually led to the complete withdrawal from the area around Kyiv after a disastrous six weeks of fighting. Furthermore, the research question will scrutinize the phenomenon of corruption within Russian society and dissect the problem of corruption within the RAF.

Corruption is defined as the misuse of public power for private gain.<sup>12</sup> At its core, corruption depends on public servants willing to take advantage of their position and authority to do what is good for them, their family, and their friends, at the expense of the rest of the population.<sup>13</sup> Corruption, therefore, draws upon a deep self-interested instinct in humans to benefit themselves at the cost of society. At the same time, the applied definition of corruption gives only a limited understanding of the meaning of various practices called "corrupt" for the actors involved in such practices for society and institutions at large. Thus, corruption is defined broadly in that it also includes cultural elements that enable and enhance the misuse of public power. These cultural elements include forms of collusion, nepotism, and lying, which are

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<sup>11</sup> Epstein, J. (2022, April 6). *Russian forces finish withdrawing from around Kyiv after 6 weeks of failing to capture Ukraine's capital city*. From Business Insider: <https://www.businessinsider.com/russian-forces-withdraw-kyiv-failure-capture-ukraine-capital-city-war-2022-4?r=US&IR=T>

<sup>12</sup> Bukvoll, T. (2005). *RUSSIAN MILITARY CORRUPTION - Scale and Causes*. Kjeller, Norway: Forsvarets Forskningsinstitutt (FFI), p. 7.

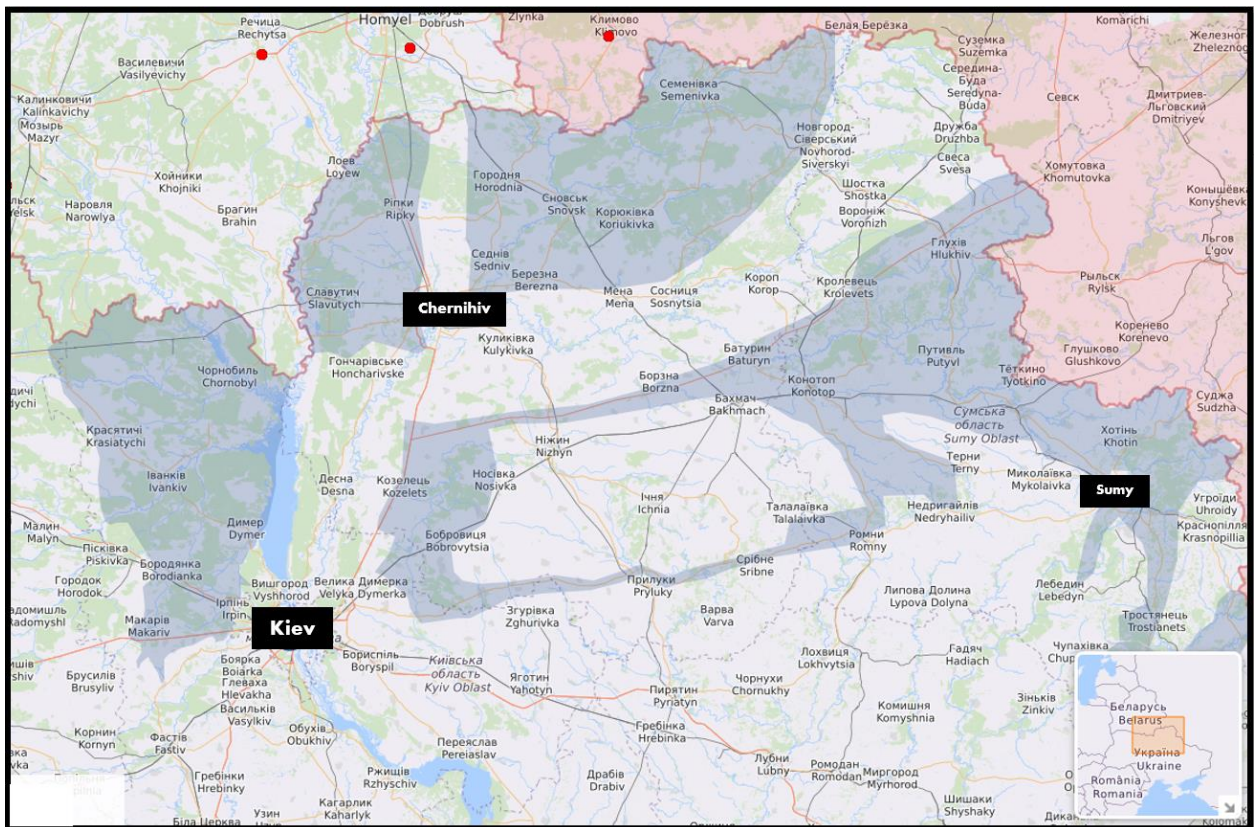
According to Rasma Karklins, this definition is the most widely used. Rasma Karklins, "Institutional Approaches to Explaining Post-Communist Corruption and its Containment," paper presented at the annual convention of the American Political Science Association, 31 August 2001.

The same definition is also used in: Treisman, D. (2000). *The Causes of Corruption: A Cross-National Study*. Journal of Public Economy. 76:3.

<sup>13</sup> Spector, B. (2022). *Curbing Corruption: Practical strategies for sustainable change*, p. 2.

central mechanisms within the Russian power structure. In other words, corruption is also a mode of existence based on mutual trust, exchange of favors, and traditional personal relations in which kinship and friendship are valued higher than professional duties.<sup>14</sup> These structural and cultural mechanisms are part of the corruption representing a hidden political arena of the Putin regime. As such, scholar James C. Scott argued that when hidden politics begins to dominate a regime, any analysis that ignores it will be misleading.<sup>15</sup>

Lastly, the area defined as ‘North Ukraine’ occupied by Russian Armed Forces can be seen in the picture below. The light blue coloring is where Russian forces physically stood after the withdrawal order was distributed. Also, the map is based on open sources, and different variations exist on how far the Russian troops reached. For example, that the Russian forces came closer to encircling Kyiv on the eastern side. Despite the differences, the map still gives a clear picture of the spatial area the thesis will focus on analyzing.



**Figure 2: Map of North Ukraine with Russian withdrawal (marked light blue) after March<sup>16</sup>**

<sup>14</sup> Klitgaard, R. (1998). *Controlling Corruption*. California: University of California Press.

<sup>15</sup> Karklins, R. (2002). Typology of Post-Communist Corruption. *Problems of Post-Communism*, p. 23.

<sup>16</sup> The map was made from the open-source map: <https://www.liveuamap.com>

## 1.2 Relevance of the research question

War takes place within a social and political context. War is fought by a country, its people, and its institutions and is to a large extent a “social endeavor.” Numerous causes can explain why wars take place and why they end. National security concerns, nationalism, imperialism, economic gains, or religious motives are repeatedly stated as a *casus belli* - the cause of war.<sup>17</sup> Alongside, causes of why wars often are lost are generally anchored in the lack of faith in their leader, lack of strategy, high costs relative gains, or lack of public support from their country.<sup>19, 20</sup> These two angles of incidence have a long and rich literature tied to them. However, corruption is seldom used to predict and understand the outcome of a war. From Western intelligence services, most analysts predicted that the Russian ambition to take all of Ukraine could succeed in weeks because they had military superiority.<sup>21</sup>

The predictions of a swift Russian victory indicate that there has been an overestimation of Russia's military capability with too much emphasis on quantitative figures. The number of aircraft, artillery, tanks, and soldiers has been emphasized, while subtle conditions such as corruption and culture have been less highlighted in analyzes of Russia's military capability. Naturally, measuring the effect on the operational capability of military units based on corruption and culture is more complicated than analyzing quantitative quantities. As such, there is little knowledge of how corruption influences military operations in general and how corruption has and still is affecting Russian military operations specifically. This further illuminate how the thesis can be valuable in analyzing how corruption generally affects armed forces' combat effectiveness in war, especially for authoritarian regimes with high corruption scores. Particularly relevant here within the same class, is the rising military power China, which have similar problems connected to corruption at the political level, and within its armed forces.<sup>22, 23</sup> Or North Korea and Iran, which had higher corruption scores than Russia in 2022.<sup>24</sup>

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<sup>17</sup> Howard, M. (2009). *War in European History*. New York: Oxford University Press.

<sup>18</sup> Freedman, L. (2013). *Strategy: A history*. New York: Oxford University Press.

<sup>19</sup> Kilcullen, D. (2009). *The Accidental Guerrilla: Fighting small wars in the midst of a big one*. Hurst & Company.

<sup>20</sup> Summers, H. (1995). *On Strategy: A Critical Analysis of the Vietnam War*. Presidio Press.

<sup>21</sup> Kristoffersen, F., & Hatlebrette, K. (2022). *Etterretning: Oppdragene, Menneskene og Faget: Fra innsiden av den norske Etterretningstjenesten*. Gyldendal Forlag, pp. 225 – 227.

<sup>22</sup> Au, T. H. (2019). *Combating Military Corruption in China*. Southern Illinois University Journal 43. N2, 301-332.

<sup>23</sup> Blasko, D. J. (2015, February 16). *Corruption in China's Military: One of Many Problems*. Retrieved from War on the Rocks: <https://warontherocks.com/2015/02/corruption-in-chinas-military-one-of-many-problems/>

<sup>24</sup> Transparency International (2022). *Corruption Perception Index 2022*. Retrieved from Transparency International: <https://www.transparency.org/en/cpi/2022>

Future *intelligence analysis* of countries entangled in corruption should be careful in mainly emphasizing quantitative figures for military capability.

With that in mind, this thesis will scrutinize the likely impact of corruption as a potent cause of a war's outcome, in order to comprehend Russia's military failures in the initial phase of the war in Ukraine. In doing so, I want to understand the underlying causes of a fundamental problem facing the Russian military apparatus. The ambition is to understand more of how corruption in the Russian state apparatus affects operational objectives. A problem I seek to explain with the use of organizational theory, as corruption takes root and spreads from within. At the same time, I must underline that the thesis is long, and it has been challenging to organize the empirical evidence in Chapter 4 logically and rigorously. To my knowledge, none has academically thoroughly scrutinized this perspective of the Russian Armed Forces in the Ukraine war. Therefore, I seek to explain how corruption has been expressed through a "thick description" to fill the academic gap. With this, the thesis may give valuable insight into the combat ability of the world's second-largest military apparatus, shedding light on why Russia performed so poorly in the war's initial phase.<sup>25</sup> Which, in fact, is a conundrum after Western intelligence, defense experts, and Russian analysts predicted that the overwhelming capabilities of the Russian Armed Forces would quickly dispatch Ukraine's military and force its government to surrender within a few weeks.<sup>26, 27</sup> Instead, Ukrainian resilience has bested Russian incompetence, creating an initial Ukrainian upset that forced the war into attritional combat in Luhansk and the Donbas. Indeed, Western analysts overlooked Russian weaknesses because they fixated on capabilities such as weapons systems and doctrine, ignoring critical factors like morale, logistics, and leadership.<sup>28</sup> All critical factors for military performance, that to some extents are in covariance with *corruption*.

The Ukraine war represents a focal case to illuminate corruption in the Russian Armed Forces because military weakness does not fully appear under regular circumstances - seen in peacetime. For individuals in the Russian Armed Forces, opportunities to abuse power and line their pockets are a systemic perk leading to deficiencies that is easy to assume never will be

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<sup>25</sup> In 2020, Russia was ranked 2nd globally in terms of military strength. This may be changed since then, as China has taken Russia's position.

Source: Aktürk, Ş. (2020). *Turkey's Grand Strategy as the Third Power: A Realist Proposal*. *Perceptions: Journal of International Affairs*, 152-177.

<sup>26</sup> Radin, A. et al. (2019). *The Future of the Russian Military: Russia's Ground Combat Capabilities and Implications for US-Russia Competition*. Santa Monica, California: RAND Corporation.

<sup>27</sup> Dougherty, C. (2022, June 16). Strange Debacle: Misadventures in Assessing Russian Military Power. Retrieved from War on the Rocks: <https://warontherocks.com/2022/06/strange-debacle-misadventures-in-assessing-russian-military-power/>

<sup>28</sup> O'Brien, P. P. (2022, March 31). *How the West Got Russia's Military So, So Wrong*. Retrieved from The Atlantic: <https://www.theatlantic.com/ideas/archive/2022/03/russia-ukraine-invasion-military-predictions/629418/>

exposed to war. Fictitious soldiers and equipment can be fabricated, or military exercises like Zapad can be carefully rigged and choreographed to cover up past sins. Polishing a façade for the leadership as the inefficiencies are kept “below the surface.” As such, in peacetime, corrupt individuals can hide the rot and make the military look good on paper. Leading to an inflated Russian Armed Forces, both for the Russian leadership with its decision-makers and for the analysts in the West who likely underestimated the level of corruption within the Russian Armed Forces before the war. Corruption within the military complex is thus easiest to find when you can see the actual results on the battlefield during wartime. Besides, there is also an element of *scale* for the war in Ukraine that will pressure the systemic and institutional weaknesses that had been masked. Arguably, one must go back to the invasion of Georgia in 2008 to find approaching similarities in the scale the Russian Armed Forces are operating in Ukraine. That campaign did not go smoothly for the Russians. They showed the same kind of problems back then: disunity of command; logistical weaknesses; poorly trained-, poorly motivated-, and poorly led troops – to mention some.<sup>29</sup>

Therefore, the war in Ukraine represents a large-scale war in which the entire Russian defense sector is pressured. This has given an unexpected opportunity to analyze how corrupt the Russian defense sector really is. It is, therefore, here that corruption, often seen as the “silent killer of armies,” is first pushed to the surface. In other words, the friction of war the Russian Armed Forces meets in Ukraine is expected to give new empirical data on corruption. Illuminating the deficiencies largely kept hidden from external observers to identify and gauge the effects of corruption. War itself readily reveals cheating and is a brutal examiner of truth. The thesis relevance can therefore become important in understanding Russia’s military capabilities, what weaknesses it possesses, and how the consequence of corruption more generally lowers the combat power of a modern military actor. Not to forget that the war in Ukraine at the writing moment perhaps is one of the most documented wars in human history, if not the most documented. Giving a myriad of empirical evidence to be critically analyzed.

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<sup>29</sup> Chotiner, I. (2022, April 21). *Is the Russian Military a Paper Tiger?* Retrieved from The New Yorker: <https://www.newyorker.com/news/q-and-a/is-the-russian-military-a-paper-tiger>

### 1.3 Delineation and other causal explanations

From the research question, the thesis will analyze how the role of corruption generated the outcome of the Russian withdrawal from North Ukraine. That said, there is a range of contributing causes to this outcome, which will not be analyzed in this thesis as the paper will become too redundant. While at the same time, it has become more apparent that the corruption accumulated over time within the Russian defense sector has had a significant negative effect on the outcome observed in North Ukraine. Still, some of the other causal explanations that will not be thoroughly scrutinized here are, i) A narrative that has not truly convinced the Russian soldier, leading to a lack of morale among Russian soldiers, ii) Lack of coordination over large areas, iii) Lack of air supremacy. iv) Lack of limitation for the Ukrainian access to the information domain, vi) The unexpected positive effect of Western intelligence on the Ukrainian Armed Forces, vii) Lack of troops to occupy Europe's second largest country. With that in mind, it is likely that there also exists some endogeneity or a posterior cause of corruption attached to the mentioned possible causes. I will, for example, illustrate later how corruption leads to *cultural corrosion* within a unit which, over time, lowers morale. Or how corruption can be detrimental to a functional military logistical system. Mainly, these causes represent unwanted covariance and will be addressed in Chapter 3: Method.

The *space* of the thesis is delineated to Ukraine, Belarus, and bordering areas of Russia to Ukraine, particularly Bryansk Oblast, Kursk Oblast, and Belgorod Oblast. The *timespan* has been set up until the beginning of April 2022 and starting with the first Putin regime in 2000. This latter date might seem odd at first glance. However, corruption has long traces that began years before the invasion and is an endemic and timeless phenomenon that has existed throughout Russian history. For example, corruption in a Research and Development (R&D) program for new tanks that occurred decades before the invasion might lead to inefficiencies in the tanks deployed in Ukraine. Not unlocking the full potential of the money set off for the R&D of the military product. With that in mind, the *timespan* could even have been set before the Putin regime, tracing the corruption effects back to the Soviet era. For example, corruption in the R&D of the Soviet T-72 tank can affect the capabilities of the T-90M tank, which in turn can affect the capabilities of the modern T-14 Armata tank.

Lastly, the relevant *actors* for the thesis are limited to the Russian Ministry of Defense (MoD) with the Russian Armed Forces (RAF), the FSB (Russian internal security and intelligence service), the Russian industrial sector employed for military procurements, and the Russian political elite within the Putin regime, mainly consisting of its government. The thesis



will focus most of its attention on the RAF, as this was the main and deciding element for the outcome in North Ukraine. To attain a better overview of the Russian Armed Forces structure, it is outlined in the figure below. As depicted, the Russian Armed Forces are subject to the Russian MoD, led by Sergei Shoigu, and the General Staff, led by Valery Gerasimov. The Russian military structure has similarities relative to the Western military structures, separating the Army/Ground Forces, Navy, and Aerospace (Space & Air Force). Notice, however, that the Strategic Rocket Forces and Airborne Troops (*Vozdushno Desantnye Voyska – VDV*) are separated arms, not included in the ‘Branches of Service.’ This means that the Army, Navy, or Aerospace Forces do not have operative control over these forces, but the General Staff. Lastly, also separated within the ‘Troops not in other structures’ to the right in the figure are GRU (Russian military intelligence), the Special Operation Forces, and the Logistical Support of the Russian Armed Forces, which includes the Railway Troops.

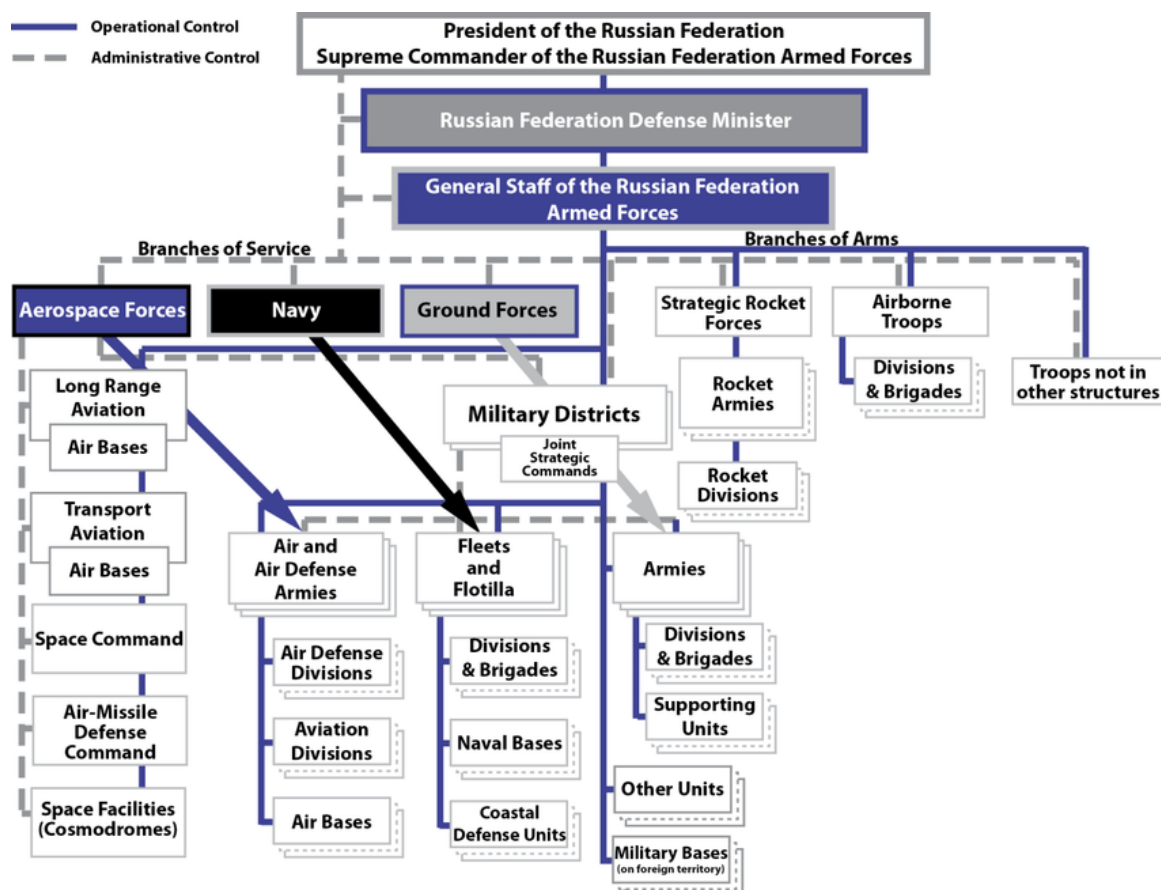


Figure 3: Structure of the Russian Armed Forces (RAF)<sup>30</sup>

<sup>30</sup> Grau, L., & Bartles, C. (2017, August 22). *The Russian Way of War: Force Structure, Tactics, and Modernization of the Russian Ground Forces*. Retrieved from Foreign Military Studies Office, p. 27.

## 1.4 Disposition

This thesis comprises a theoretical part, a methodological part, an empirical description, an empirical analysis, and a conclusion. In Chapter 2, two theoretical frameworks are established with derived empirical expectations and assumed causal relationships. In Chapter 3, these will be further specified by defining a set of indicators that aim to make the empirical expectations more measurable in the face of empirical evidence. In Chapter 4, a rich data basis for the thesis will be described, and in Chapter 5, the data basis and the empirical evidence will be analyzed. In that sense, Chapter 4 is descriptive, while Chapter 5 is more explorative. The purpose of these chapters is to break down the problem into small components so that each part can be examined carefully and methodically. In Chapter 6, all these components will be combined to answer the research question. This methodology is inspired by the book: Heier & Knutsen 2021, “*Tenke og skrive i samfunnsvitenskapene*”.<sup>31</sup> At the very end of the thesis, under Chapter 8: Appendix, I have included a small discussion of corruption and reform in Ukraine. Considering the war’s outcome, this is interesting, but not part of the research question *per se*.

In this introductory chapter, I have presented a research question that deals with how corruption and several other reasons highly likely affected the operational capability of the Russian Armed Forces in North Ukraine. The research question has then been explained and delineated in time and space. We will now look more closely at how corruption can be understood using theoretical explanations rooted in *structure* and *culture*.

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<sup>31</sup> Heier, T., & Knutsen, T. (2021). *Tenke å skrive i Samfunnsvitenskapene*. Bergen: Fagbokforlaget.

## 2. Theoretical Model of Explanation

The theoretical chapter aims to present a model to structure, explain and understand why corruption is likely to undermine Russia's military capabilities, which in turn impede Russia's military performance in Ukraine. In other words, anchoring how Russia's failed invasion in North Ukraine can be comprehended theoretically. Therefore, this chapter aims to look at organizational theory to create a theoretical foundation for the research question. I have chosen to use an instrumental perspective focusing on *structure* and an institutional perspective focusing on *culture*. Towards the end of each perspective, the theory will be concretized in a bundle of empirical expectations that will be taken further into the thesis and used to explain the various aspects of the empirical findings described in Chapter 4. The purpose of the empirical expectations is to highlight which causal relationships one expects to see in the data collected before and during the war in Ukraine. Towards the end of Chapter 2, we shall see the empirical expectations in context and try to illustrate which concrete causal relationships are at play within the Russian Armed Forces.

Organizational theory is chosen as corruption is a phenomenon that grows and takes root from within the state apparatus. Had corruption instead been an external phenomenon, existing and affecting Russian organizations from the outside, it would for example be more relevant using perspectives from international relations (realism, liberalism, constructivism, etc.) as theoretical tools. Besides, understanding war as a "social endeavor" where the health of a country's institutions, its government, military, intelligence services, and media outlets matters just as much as a soldier's will to fight for the outcome of a war.<sup>32</sup> Former Russian revolutionist Leon Trotsky once wrote, "The army is a copy of society and suffers from all its diseases, usually at a higher temperature."<sup>33</sup> Or more generally, scholar Morris Janowitz underlined that the "Armed Forces mirrors society" in his classic book 'The Professional Soldier.'<sup>34</sup> Institutional health may therefore determine the course of the war and how much the Russian army can salvage its reputation in Ukraine — and the reputation of the society it embodies. As such, organizational theory is a valuable tool for scrutinizing the health of a country's military institutions.

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<sup>32</sup> Butler, M. J. (2012). *Selling a 'Just' War: Framing, Legitimacy, and US Military Intervention*.

<sup>33</sup> The Economist (Leaders). (2022, April 30). *How rotten is Russia's army? Leaders | The botched invasion of Ukraine*. Retrieved from The Economist: <https://www.economist.com/leaders/2022/04/30/how-rotten-is-russias-army>

<sup>34</sup> Janowitz, M. (1960). *The Professional Soldier: A social and political portrait*. New York: Free Press of Glencoe.

Within organizational research, one of the most central debates is the dichotomy between the instrumental and the normative. The debate revolves around whether organizations and their institutions are neutral technical instruments designed to safeguard specific objectives or are institutionalized manifestations of cultural dogmas and myths of current power structures. The starting point for the thesis is that the Russian Armed Forces are both parts, a neutral instrument for solving concrete tasks and an institutionalized expression of current norms within the organization and in the environment it embodies. The central question arises as to what role the various actors have in the organization's development and to what extent cultural ties and normative pressure from the organizational field govern these.

The thesis will apply Christensen et al. (2017) organizational perspectives as a framework to categorize the abovementioned two pairs of contradictory dimensions, respectively the *instrumental perspective* (organizational structure) and the *institutional perspective* (organizational culture). The two organizational perspectives are different theoretical approaches to analyze the public sector and are not directly adapted to military organizations. Nevertheless, both studies of organizations and military organizations have overlapping intellectual roots.<sup>35</sup> Naturally making it interesting to combine the two perspectives on the Russian Armed Forces for the war in Ukraine. As such, military entities are considered public organizations, which are political actors with dynamic relations to the political leadership, and to demands or opportunities in the environment they are part of. With that in mind, I will start by describing the instrumental perspective.

## 2.1 The instrumental perspective

The first dimension, the instrumental perspective, describes how formal structures work as an instrument to safeguard the various interests of the different actors that are formulated in concrete objectives. The instrument is intended to solve tasks seen as necessary for society and fulfill the goals set from outside the organization, often at the political level. Taking this rationale to Russia, Putin cannot win the war alone – whether he wishes it or not. Power and authority must be delegated downwards in the system as the task is too sizeable to be solved by one individual, which engenders a possible source for personal enrichment by the Russian military officer or conscript. In other words, through the Russian chain-of-command, political

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<sup>35</sup> Augier, M., Knudsen, T., & M., M. R. (2014). *Advancing the field of organizations through the study of military organizations*. *Industrial and Corporate Change* 23 (6), p. 1418.

orders are received and translated into concrete tasks that opens opportunities for personal enrichment for the Russian officials. This structure further places limitations on the individuals' possibilities and actions. The organizational instrumentality is expressed by the organizational structure, designed on logical and rational end-means assessments, which becomes the governing body for the organizational members' actions.<sup>36</sup> This means that what is rational and logical for the military strategic command in the Kremlin is not necessarily obvious for a Russian Army unit North of Kyiv.

The formal structures follow the expectations for the actors in an organization's various management levels and hierarchies, responsible for lines of control and interaction, alongside a command relation, without regard to personal relationships.<sup>37</sup> Thus, the instrumental perspective describes a set of structural rules that regulate actors' behavior when they encounter new situations, other organizations, and face other members of the same organization. The rules refer to how an organization should go about making decisions and who should be involved in the decision-making process at what point in time. In sum, the actors within a highly hierarchical and bureaucratic organization are delegated roles with expectations. Here, the Russian officials are partly expected to conduct the war on behalf of the leadership, which also enables the possibility for corruption through the formal structures.

The structural control mechanism constrains the individual end-means assessment of an "acceptable" corruption level. Thus, external jurisdiction is centrally linked to corruption and accountability as part of the formal structure. The accountability concept is multidimensional, but regarding control of corruption, *judicial accountability* will set the structure for the room for action at the individual level. In the sense that the Russian official is concerned with the rule of law and receives equal treatment or punishment for similar cases.<sup>38</sup> Judicial accountability, therefore, increases the "risk-profit" calculus at the individual level. Military officials will consider the factors of *personal gain*, *risk of getting caught*, and *punishment* before conducting a corrupt action, as a too-comprehensive corruption level is likely to trigger

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<sup>36</sup> Christensen, T., Egeberg, M., Lægreid, P., Roness, P., & Røvik, K. (2017). *Organisasjonsteori for offentlig sektor*. 3. edition. Universitetsforlaget AS.

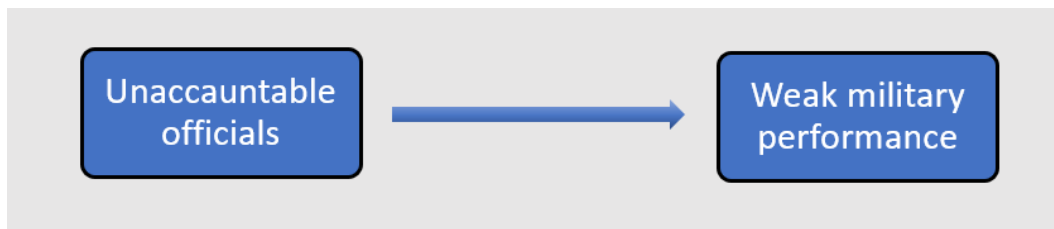
<sup>37</sup> Egeberg, M. (2007). *How bureaucratic structure matters: An organizational perspective*. In B. G. Peters, *The handbook of public administration* (pp. 77-87), p. 78

<sup>38</sup> Byrkjeflot, H., & Christensen, T. (2012). *Changing accountability relations in welfare state reforms. Lessons from Norway*. Bergen: Uni Rokkan Centre.

legal prosecutions.<sup>39</sup> It is, however, difficult to determine this specific level, as it may be fluctuating and situationally independent for different organizations. That said, I will illuminate where the bar may lie through some examples observed in the empirical description (Ch. 4).

I have now described an instrumental perspective that paints a picture of an organization that functions as a tool. In a *top-down approach* that understands the different military organizations within the Russian Armed Forces as means for the Russian political elite to achieve their goals. In other words, this top-down approach emphasizes the importance of division of labor and delegation of authority and command, starting from Putin’s inner circle down to the Russian Army conscript fighting in Ukraine. The hierarchical structure provides opportunities and limitations for corrupt actions within the Russian military complex. If we then understand this theoretical framework in the context of the research question, the following expectation is derived for the empirical evidence:

**Empirical expectation #1:** *Russia’s weak military performance in North Ukraine can be explained due to a corrupt chain-of-command where unaccountable officials exploit the delegation of authority for personal enrichment.*



**Model 1:** The expected causal relationship between unaccountable officials and weak military performance in the Russian Armed Forces.

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<sup>39</sup> Economic theory is a good tool for elaborating the individual assessments the Russian officer might conduct with himself before considering a corrupt action.

For further elaboration, please see: Andvig, J. C., & Moene, K. O. (1990). *How Corruption May Corrupt*. Journal of Economic Behavior and Organization, pp. 63-76.

In Andvig & Moene’s model, an important variable “the perceived fraction of corrupt bureaucrats” is included, which can be understood as a good indicator of a corrupt organizational culture.

## 2.2 The institutional perspective

It is often claimed that formal structures, found inside the instrumental perspective, function as a neutral technical tool for political leaders, regulated by rules, law, and hierarchy.<sup>40</sup> This perspective is inadequate if one wishes to understand how the Russian Armed Forces work in practice. As such, the organizations within the Russian Armed Forces must be understood as political actors with dynamic relations to the political leadership and actors in the political society they are part of. They do not, in any simple and unproblematic way, naturally change and adjust according to changes in political leadership or to shifting demands from their environment.<sup>41</sup> The Russian Armed Forces consist of institutions with their own dynamic and standard operating procedures, norms, understandings, and local rationality that constrain environmental pressure as well as political signals.<sup>42</sup> Such institutional factors, as expressed through cultural traditions, established norms, and socially defined conventions, inhibit and enable the decisions made within public organizations.<sup>43</sup> These cultural factors illuminates why instrumental perspectives are alone insufficient for fully understanding the actions of public organizations, naturally bringing us over to the institutional perspective.

The institutional perspective, which is part of institutional theory, emphasizes informal norms and values that exist in organizations and how internal and external environments become essential for the organization and actors' decision-making behavior based on a logic of what is "culturally appropriate."<sup>44</sup> In that sense, an organization develops institutional features, gradually becoming more complex than its formal structure through the addition of *informal norms* and *practices*.<sup>45</sup> The development of informal norms and expectations can give rise to a kleptocratic culture practicing corruption within the Russian Armed Forces. Rooted in informal behavioral patterns developed over time for the Russian military official, who is repeatedly influenced by "[...] a fairly stable set of taken-for-granted assumptions, shared beliefs, meanings, and values that form a kind of backdrop for the action."<sup>46</sup> Thus, the informal

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<sup>40</sup> Olsen, J. P. (2005). *Maybe it is time to rediscover bureaucracy?* Journal of Public Administration Research and Theory, 16, 1-24.

<sup>41</sup> Christensen, T., & Legræid, P. (2018). *An Orginazation Approach to Public Administration*. The Palgrave Handbook of Public Administration and Management in Europe, p. 1091.

<sup>42</sup> Cyert, R. M., & March, J. G. (1963). *A behavioral theory of the firm*. Englewood Cliffs, NJ: Prentice-Hall.

<sup>43</sup> March, J. G., & Olsen, J. P. (1989). *Rediscovering institutions*. New York: The Free Press.

<sup>44</sup> Christensen, T., & Legræid, P. (2018). *An Orginazation Approach to Public Administration*.

<sup>45</sup> Selznick, P. (1957). *Leadership in administration*. New York: Harper & Row.

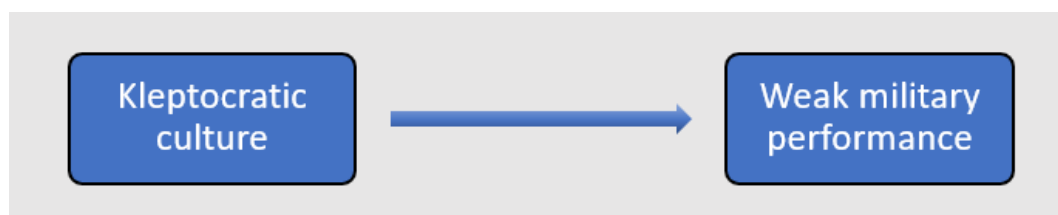
<sup>46</sup> Smircich, L. (1983). *Is the Concept of Culture a Paradigm for Understanding Organizations and Ourselves?* In P. Frost, *Organizational Culture* (pp. 55-72). Beverly Hills, CA: Sage, p. 58.

norms and practices exist independently of the formal structures for those who hold a position at any given time, which means that “the culture persists while actors come and go.”<sup>47</sup>

The institutional perspective focuses on the informal characteristics within an organization that gradually emerges and leads to the organization developing a distinctive identity over time. It is, consequently, comprehensible that the informal institutional rules are primarily directed towards the *past*, while the formal and instrumental rules are more *future-oriented*. For example, the instrumental perspective is expressed through a structural reform with a desired effect based on an end-means analysis, such as an anti-corruption campaign. While the institutional perspective instead will seek to dissect an organization’s cultural past. As such, when informal networks and cultural conditions characterize the Russian defense sector, the instrumental perspective will have less explanatory power as there is little correspondence between words and actions in the organizations' formal decision-making processes.

We have now explored the institutional perspective, where an organization's culture sets the premises and where identification is central in developing informal norms and expectations. If we then see the theoretical framework in the context of the research question, the following expectation is derived for the empirical evidence:

**Empirical expectation #2:** *Russia’s weak military performance in North Ukraine can be explained due to a corrupt chain-of-command where informal norms and expectations nurture a kleptocratic culture.*



**Model 2:** The expected causal relationship between kleptocracy and weak military performance in the Russian Armed Forces.

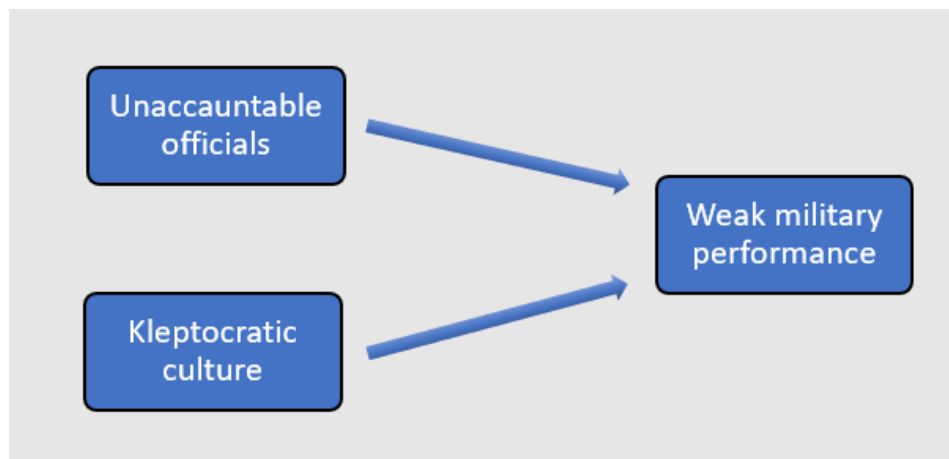
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<sup>47</sup> Scott, W. R. (2007). *Institutions and organizations* (2nd ed.). Thousand Oaks: Sage.



### 2.3 Towards a Model of Explanation

From the two perspectives, organizations within the Russian military complex are, on the one hand, understood as instrumental devices for carrying out concrete tasks on behalf of the Putin regime. On the other side, organizations are also institutional arenas for employees to promote their needs for self-realization, income, and prestige. Anchored in the instrumental and institutional perspective, a complete theoretical explanatory model is outlined below. Combining the two theoretical expectations from Chapters 2.1 and 2.2 on the dependent variable, ‘weak military performance.’ The theoretical model can be used to complement and analyze why the Russian warfighting model has structural and cultural weaknesses for the future.



**Model 3:** Theoretical Model of Expectation

The empirical expectations are expected to “adjust” many honest members of the military complex, or at least people who come into the Russian Armed Forces full of patriotic fervor looking to do “the right thing,” as corruption clearly harms the Russian war effort. Following the two organizational perspectives, the *structure (unaccountable servants)* and *culture (kleptocratic culture)* have a way of pushing “honest” people into line. Corruption, therefore, depends on collective participation, where the organization pushes the individuals seeking to be honest into corruption over time. As such, individuals are subtly pressured to set aside their morals, enabled by the lack of prosecution of the legal structure. By being honest, you discolored yourself as someone who “rocks the boat,” undermining the organization’s cohesion. Marking yourself as an “outsider” and losing the patronage and support you require for promotion and advancement. If corruption is part of an entrenched kleptocratic culture within the Russian Armed Forces, most actors within the system are interested in maintaining it, particularly in peacetime, because there is much to gain from it.

### 3. Method

The aim of Chapter 3 is to operationalize key concepts derived from the two empirical expectations and ensure the correct application and quality of empirical data. Thus, the method chapter aims to ensure validity and reliability in the research design, giving a correct fundament for the empirical description and analysis in Chapters 4 and 5. The chapter starts with an operationalization of the two empirical expectations derived from Chapter 2, discussing the *validity* of the thesis. Afterwards, an evaluation of the applied sources used within the thesis is given, discussing their *reliability*.

#### 3.1 Validity

When empirical data is obtained, it is essential to reflect on which terms I apply so that the data provides the necessary information for the thesis. If the empirical expectations and indicators do not measure corruption, further analysis may not be meaningful, and, in the worst case, the data may not be interpretable. That the concept is measurable, in the sense that the indicators meaningfully capture the ideas in the concept, is defined as *validity*, or *measurement validity*.<sup>48</sup> Furthermore, the indicators applied here look at empirical data backward in time and are therefore defined as *descriptive indicators*.<sup>49</sup> The descriptive indicators will help assess whether sufficient grounds exist to believe corruption exists within the Russian military complex.

I have chosen not to operationalize the dependent variable, as it is assessed to be superfluous because there is an abundance of empirical evidence that makes visible the Russian military weakness concerning the campaign against Kyiv in the winter/spring of 2022. Instead, I have chosen to use the following definition as a basis to narrow down the empirical search in the enormous data material available. Thus, measuring Russia's *weak military performance* is defined as the inadequate management of its tactical forces on Ukraine's Northern front, specifically related to insufficient command and control, logistics, and maintenance of a sustainable force. The definition encapsulates the endemic shortages of ammunition, spare

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<sup>48</sup> Adcock, R., & Collier, R. (2001). *Measurement Validity: A Shared Standard for Qualitative and Quantitative Research*. The American Political Science Review, p. 529.

*Measurement validity* is highly relevant when developing and discussing indicators. Here, Adcock & Colliers (2001) distinguishes between three types of measurement validity: content validation, convergent validation, and nomological validation. Due to the word limit, I have chosen not to discuss the two latter, although they are undoubtedly relevant.

<sup>49</sup> Heuer, R., & Pherson, R. (2015). *Structured Analytic Techniques*. California: Sage. p. 149.

parts, fuel, training, food, and first aid kits necessary to sustain effective combined operations between various segments within the chain-of-command. With that in mind, the empirical expectations derived in Chapter 2 for the independent variables will now be operationalized, as an unequivocal definition of these terms is necessary to proceed further. We start by looking at the instrumental perspective.

### 3.1.1 Indicators for the instrumental perspective

In Chapter 2.1, I outlined the following empirical expectation for the instrumental perspective:

*Russia's weak military performance in North Ukraine can be explained due to a corrupt chain-of-command where unaccountable officials exploit the delegation of authority for personal enrichment.*

I extract the key terms *delegation of authority* and *unaccountability* from the empirical expectation. Before I can apply the key terms to the empirical evidence, they must first be operationalized. Here I want to measure how the structure within the Russian military chain-of-command enables corruption, by operationalizing the concept of “exploiting delegated authority” and “unaccountability” as the independent variable. This gives the following set of indicators for the instrumental perspective on the Russian military institutions:

- Low transparency
- Lack of control mechanisms, with inspections and rigid reporting schemes
- Lack of an independent legal authority with the power to prosecute independently

### 3.1.2 Content validity

Content validity, as a part of measurement validity, requires that the operationalization of the indicators captures the ideas within corruption as a systematized concept.<sup>50</sup> On the one hand, one can argue that the three indicators listed above give concrete content to how delegation and unaccountability are expressed as corruption within the Russian Armed Forces. On the other hand, the indicators may not be central in capturing corruption as a concept within the RAF. It

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<sup>50</sup> Adcock, R., & Collier, R. (2001). *Measurement Validity: A Shared Standard for Qualitative and Quantitative Research*, p. 536.

is precisely this relationship between the theoretical concept and operational goal that content validity revolves around.

Through operationalization, I have aimed to define a set of indicators that measure the concepts of *delegation of authority* and *unaccountability*. In this context, the indicators have been selected based on empirical expectations derived from theoretical perspectives and indexes of corruption. The operationalization of the chosen indicators is based on expectations created by the theory that is expected to be found in the empirical evidence. It will be challenging to set indicators that embrace all aspects of instrumental theory, and my assessment of what is most central to the theory will thus affect the analysis. The indicators are simply assumptions based on general theories. As such, the indicators must each come with their perspective on structural features of corruption, overlapping as little as possible but rather complementing each other.

### 3.1.3 Indicators for the institutional perspective

In Chapter 2.2, I derived the following empirical expectation for the institutional perspective:

*Russia's weak military performance in North Ukraine can be explained due to a corrupt chain-of-command where informal norms and expectations nurture a kleptocratic culture.*

From this empirical expectation, I extract the key concept of *kleptocratic culture*. To give the key concept a measurable format, it needs to be operationalized, as with the indicators from the instrumental perspective. Here I want to measure how the culture within the Russian Armed Forces enables corruption. An operationalization from the institutional perspective for the kleptocratic culture can be derived with the following set of indicators:

- Internal collective expectations with an acceptance of corruption
- A norm of “accepted lying” in reporting
- An expectation of collusion within social networks connected to nepotism, cronyism, and the prioritization of allies

### 3.1.4 Content validity

The main content of the institutional perspective is based on informal and unwritten norms and expectations. The operationalization of the concepts into measurable indicators is thus very demanding from this perspective, as the empirical evidence is necessarily not observable. As

such, the aim in preparing these indicators has been to formulate something that may immediately appear unclear into something more concrete and tangible. The indicators are not exhaustive when describing a kleptocratic culture. Still, I have strived for that the indicator set, in total, should be complementary in measuring the cultural aspect of corruption within a Russian context. These indicators have two main tasks in the empirical analysis and discussion. First, they must ensure that the key concepts from the empirical expectations are operationalized into something measurable, as outlined above, in the sense that the indicators are suitable for measuring structural- and cultural corruption within the Russian Armed Forces. Second, the indicators must provide a framework for obtaining a broad database. This ensures that the conclusions derived in Chapter 6 are based on a *valid* database as possible.

### 3.1.5 Covariance

A methodological problem with this thesis is to isolate the cause of corruption when one tries to comprehend Russia's failures in Ukraine. What is observed in the introduction is that there are likely many other causes to Russia's *weak military performance*, such as the help of Western intelligence or lack of air superiority, to mention some. Alongside, there likely exists high covariance between corruption and other independent variables. For example, morale within the Russian Army, where lack of morale may lead to higher corruption, and vice versa. Therefore, it is evident that the thesis is explicitly structured by a conceptual framework that focuses on some theoretically specific aspects of reality and neglects others. In this thesis, I tried to isolate the corruption problem to avoid unwanted covariance between corruption and other significant variables to present a clearer picture of the extent of the effect.

## 3.2 Reliability

In the previous section, *validity* and *content validity* were assessed, discussing whether the concepts measure what they are intended to measure. Furthermore, a reliability assessment must now be carried out against the empirical data used in the thesis. Reliability means whether the results in this analysis are reliable, stable, and reproducible.<sup>51</sup> In other words, if repeated measurements with the same method would have given the same results. So, if one can at all place trust in the inferences derived in conclusion for Chapter 6, the reliability of the indicators

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<sup>51</sup> Oppen, M., Mørk, B. E., & Haus, E. (2020). *Kvantitative og kvalitative metoder i merkantile fag*. Oslo: Cappelen Damm, p. 93.

must first be assessed. The reliability of this analysis will be evaluated in three areas: the collection of information, processing of information, and the use of information.

### 3.2.1 Collection of information

In qualitative research, such as this analysis, the requirement for stringent reproduction is challenging, partly because the empirical evidence is not collected as systematically as in quantitative research. Thus, it is essential when assessing the quality of the information in a qualitative study to carry out thorough source criticism to strengthen the credibility of the analysis. Access to information and source material is an obvious challenge in investigating military organizations and ongoing military operations. Besides, since the 2008 war with Georgia, the information sphere in Russia has become more closed and securitized.<sup>52</sup> Therefore, the exact picture of the scale of corruption in the Russian Armed Forces cannot be provided. The Russian culture of control and secrecy makes it difficult to work with sources. Some material is simply unavailable to the public, while others are available only in distorted forms. More specifically, politically sensitive topics, such as corruption within the political elite and military structure, are expected not to be reported openly and honestly. This especially applies to Russian mass media and academic research, which is limited in its choice of subjects and conclusions. For example, public opinion surveys must be conducted per a politically defined framework of the Russian Justice Department.

The Ukraine war is still ongoing, which makes it essential to discuss the links of the sources. Regarding the Western sources, I must take reservation that they may possess anti-Russian sentiments as a reaction to the invasion, where the information about Russian corruption is based on open sources from Western actors that stand in opposition to the Russian occupation of Ukraine. To accommodate this possible bias, I have focused on Western sources recognized for thorough source criticism (e.g., *The Economist*, *The Washington Post*, *New York Times*, and *The Guardian*). Here, the author has been very aware that newspaper articles can be colored and that you have not undergone the same assessments as, for example, articles from peer-reviewed journals. I have also chosen to use many reports from *British intelligence*, as intelligence services aim to deliver objective information.<sup>53</sup> As well as Western defense think

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<sup>52</sup> Coffey, M. (2022). *The Dedovshchina Abides: How Discipline Problems Despite Years of Military Reform*. *The Journal of Slavic Military Studies*, 35:3-4, p. 294.

<sup>53</sup> Intelligence organizations can also be used as a tool to form opinions. Still, in the case of the war in Ukraine, I believe it would be too damaging for the confidence and reputation of the organization to be caught in a lie.

tanks such as *War on the Rocks* or *The Royal United Services Institute* (RUSI), where notably the latter has been widely recognized within the defense community for their thorough analysis of the war.

Alongside this, I have also chosen to use Ukrainian sources. The Ukrainian sources have obvious ties, which can be problematic as they find themselves in an information war against Russia. The Ukrainians fight daily for the West's and the world's support to aid their fight. Therefore, I have chosen to focus on *primary sources* from the Ukrainian side. The primary sources are actual findings from the fighting, which are often published on social media platforms (*Telegram, VKontakte, Twitter*) by Ukrainian (or Russian) soldiers, or intercepted audio recordings from Ukrainian intelligence services. The focus on primary sources from the Ukrainian side mitigates the risk of information being incorrect or distorted as part of the war over the information domain. As such, when I have interpreted and described other opinions, the Ukrainian (and Russian) secondary sources used are met with a strictly critical eye.

Regarding the Russian sources, the news articles from Russian news houses are broadly published anonymously, most likely to prevent persecution by the Russian state apparatus. Which at the same time also problematizes the traceability and credibility associated with journalistic articles. In other words, because Russia's heavily censored media has only intensified since the start of the war, the evidence displayed in this thesis might be the tip of the iceberg. Many corruption cases are never detected, or if caught, never prosecuted or simply covered up. Illuminating that measuring corruption in any country or public sector is inherently tricky. Especially for the higher level of corruption within the political or military elite, it is almost always a matter of measuring "who gets caught." Inevitably biasing the perspective on the phenomenon since it makes certain forms of corruption more visible than others. This bias is again further exacerbated by a Russian civil society and media controlled by the elite, making them subject to constraints on their activities and access related to corruption.

To reduce the chance of bias, this thesis mainly emphasizes non-Russian sources and Russian sources that are not directly or indirectly affiliated with the Russian state (e.g., *The Moscow Times, Meduza, and RadioFree Europe*). Lowering the probability of problems related to the "narratives" that seek to be established to gain an advantage in the ongoing information war, where Russia and the West attempt to portray a desired image of the conflict. This makes source criticism even more important, especially on second-hand sources that to some extents have been "processed." Despite the possible connections, integrating data from many different

open sources makes it possible to paint a rough and arguably clear picture of “the state of affairs.” Therefore, the main insights on corruption in the Russian defense sector must be derived from media reports, online platforms<sup>54</sup>, non-governmental (NGO) investigations (e.g., *Transparency International*, *Levada Center*, and *OCCRP*), expert commentaries, interviews, and public statements of the relevant officials detached from Russia’s ruling elite. These NGO entities/organizations significantly increase the level of transparency in the Russian defense and security sector.<sup>55</sup> They contribute by bringing bear resources hidden away from the public or the politicians.

On corruption, the reports inevitably bias the perspective on the phenomenon since it makes certain forms of corruption more visible than others. Considering the war in Ukraine, it is practically impossible to find complete empirical evidence for the extent of the corruption. For example, it is unfeasible to know how much diesel was specifically sold or how many procurement agreements were carried out for personal gains. The occasional nature of reporting prevents a systematic analysis of corruption in the defense sector, increasing the risk of “cherry-picking” source material and impeding the identification of the exact scale of the problem. It is, in other words, expected that many of the corruption cases go unnoticed from top to bottom within the Russian defense sector. At the same time, many of Russia’s major “anti-corruption” campaigns must be viewed through the lens of politics and nepotism. The targets of corruption campaigns are frequently those who have fallen foul of the Putin regime. Despite that, the documented incidents are still indicators of corruption, but the full extent will be difficult to determine based on available evidence. The consequence hereof for the empirical analysis of Russia’s military entities is that the overall picture must be pieced together from various smaller parts.

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<sup>54</sup> The online platforms function as *primary sources*, as do the NGO investigations or parts of the media reports. Either by having reporters on the “ground” in Ukraine or in the form of the large source base this war has provided via electronic platforms. For example, CCTV cameras in Bucha or other parts of Ukraine.

<sup>55</sup> Makarychev, A. (2008). *Addressing corruption in Russia's civil-military relations*. In R. Orttung, & A. Latta, *Russia's Battle with Crime, Corruption, and Terrorism* (pp. 103-121). New York: Routledge, pp. 111-112.



### 3.2.2 Processing and use of information

Reliability is not only about how one obtains sources and which sources one chooses to use but also how the information is processed and applied. To ensure high reliability so that this analysis has credibility and is stable, the author's own role and interpretation of the sources are central.<sup>56</sup> As the American bureaucrat Rufus Miles claimed, it is often, “Where you stand depends on where you sit.”<sup>57</sup> In other words, understanding reality largely depends on the source’s origin and the researcher's point of view.

The author has been employed within Norway’s defense and justice sector, where Russia has been understood as a primary security threat for at least the last decade. It cannot be overlooked that the war in Ukraine has aroused feelings in the author, as it has shaken some fundamental assumptions about the moral limits of the sitting Putin regime. Therefore, it is even more critical when writing a paper about the Russian Armed Forces in Ukraine that one's own cognitive biases and approach to processing and using information can create a bias in the analysis. I have tried to be aware of this during my work by challenging my inclination for a pro-Western bias.<sup>58</sup> It is the truth that stands the highest. My starting point was to investigate a problem to which I needed a better answer. Nor did my curiosity diminish when I conversed with a Ukrainian officer visiting Norway in December 2022 and was told, “We toast to Russian corruption at the front.”<sup>59</sup> Corruption has long been a “known” problem within the Russian Armed Forces, but I wanted to make it more tangible, and scrutinize how it can impair military performance. This has allowed theory, empiricism, and analysis to lead the way to the conclusion.

In this chapter, the empirical expectations derived from the theory have been converted into six concrete indicators. The indicators will then be actively used in obtaining the data material, described in the next chapter.

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<sup>56</sup> Oppen, M., Mørk, B. E., & Haus, E. (2020). *Kvantitative og kvalitative metoder i merkanfile fag*, p. 390.

<sup>57</sup> Heier, T., & Knutsen, T. (2021). *Tenke å skrive i Samfunnsvitenskapene*. Bergen: Fagbokforlaget, p. 105.

<sup>58</sup> The observant reader may already have noticed that I write Kyiv (Ukrainian) instead of Kiev (Russian), which has become a value-based choice caused by this war.

<sup>59</sup> The conversation occurred during the conference “War and Intelligence in the Information Age” on the 8<sup>th</sup> of December 2022, hosted by the *National Defence University of Ukraine* (NDUU). The individual I spoke with was an officer from NDUU, connected to the Special Forces of Ukraine. Link to event:

<https://www.forsvaret.no/forskning/arrangementer/war-and-intelligence-in-the-information-age--8.des-2022>

## 4. Empirical Description

The aim of Chapter 4 is to address the first part of the research question, *describing* corruption within the Russian Armed Forces up until and under the war in Ukraine. The purpose is to provide a basis for the forthcoming empirical analysis in Chapter 5, found in the second part of the research question. Where I will discuss to what extent corruption can explain why the initial Russian invasion of North Ukraine failed. Chapter 4.1 will start by explaining how corruption generally is described within Russian society under the Putin regime. Before moving over to “The Corruption Chain” model, where corruption from top to bottom within the Russian Armed Forces is extensively described. Mainly, the reader should notice how the corruption method changes when moving down the military ranks – starting at the political level.

### 4.1 Corruption within Russian Society

Starting his first presidency in 2000, President Vladimir Putin declared the fight against corruption one of his key political goals.<sup>60</sup> However, today Western and Russian commentators often describe Russia as a ‘kleptocracy’ where the personal enrichment of the ruling elite is a primary goal of regime policy, and the state’s resources are systematically plundered for the benefit of the ruling elite.<sup>61</sup> As such, the *Transparency International Corruption Perception Index* (CPI), which scores countries on how corrupt their public sectors are, has consistently placed Russia among the most corrupt countries in the world. Since 2016, Russia has been ranked as the most corrupt country in Europe. In 2021, Russia’s rating was joint 136<sup>th</sup> out of 180 countries, where they received a corruption score of 29 (lower scores indicate a higher corruption level)—placing them alongside Angola, Liberia, and Mali, just above Myanmar, Pakistan, Uzbekistan, and Mauritania, which received a score of 28. The situation in Russia is neither new nor surprising. Since being included in the CPI in 1996, Russia has firmly occupied

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<sup>60</sup> Olimpieva, I., & Pachenkov, O. (2008). *Who fights corruption in Russia?* In R. Orttung, & A. Latta, *Russia's Battle with Crime, Corruption, and Terrorism* (pp. 121-144). New York: Routledge, p. 121

<sup>61</sup> Beliakova, P., & Perlo-Freeman, S. (2018). *Corruption in the Russian Defense Sector*. World Peace Foundation, p. 2.

The research into defining the Russian state around ‘kleptocracy’ is beyond the scope of this paper. Suffice it to say that numerous authors have placed significant emphasis on this aspect of rule, including Karen Dawisha, Miriam Lansky, Dylan Myles-Primakoff, Daniel Kimmage, Bill Browder, and Alexei Navalny, among others.

a position at the bottom of the list for almost two decades, placed among the most problematic countries in the world.<sup>62</sup>

To explain the lack of development in fighting corruption, a study in 2008 concluded that the main “driving force” in fighting corruption in Russia comes from foreign countries through the financing of NGOs. Here, the funding mainly stemmed from Western and international money: from foundations, banks, and agencies for international development.<sup>63</sup> This source of financing means that all the work done by NGOs on corruption would stop immediately if outside funding dried up. Not to forget, those NGOs that receive financing outside of Russia have been increasingly targeted as “foreign agents.” The obstruction of NGOs indicates that the Russian state is not interested in having an independent and influential civil society that is institutionalized in fighting corruption.

Vladimir Putin has not dealt with corruption sufficiently during his presidency until today. In a study conducted by the Levada Institute in 2021, “corruption and bribery” was placed third (39%) after “poverty, impoverishment of the population” (40%), and “price increase” (58%) when the respondents were asked: “Which of the following problems in our society worries you the most, and can be considered to be the most acute?”<sup>64</sup> Corruption was further placed on top within the “problems of power and governance” category. Indicating that corruption internally in Russia is viewed as highly problematic and remains the most acute problem of government and administration. This can be observed in the graph below, where there has been an almost doubling from 21 percent since the end of 2014, to 39 percent in 2021. Corruption is leading by far, for what the Russian respondents view as the most severe problem within power and governance. Meanwhile, Russian public opinion is becoming relatively less worried about the costs of goods and services, which have steadily increased because of slow economic growth and stagnation after 2014. Instead, as seen in the graph below, the public is more

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<sup>62</sup> Transparency International. (2021). *Corruption Perception Index*. Retrieved from Transparency International: The Global Coalition Against Corruption: <https://www.transparency.org/en/cpi/2021/index/rus>

Transparency International uses a measure based on perceptions of corruption, primarily by businesses.

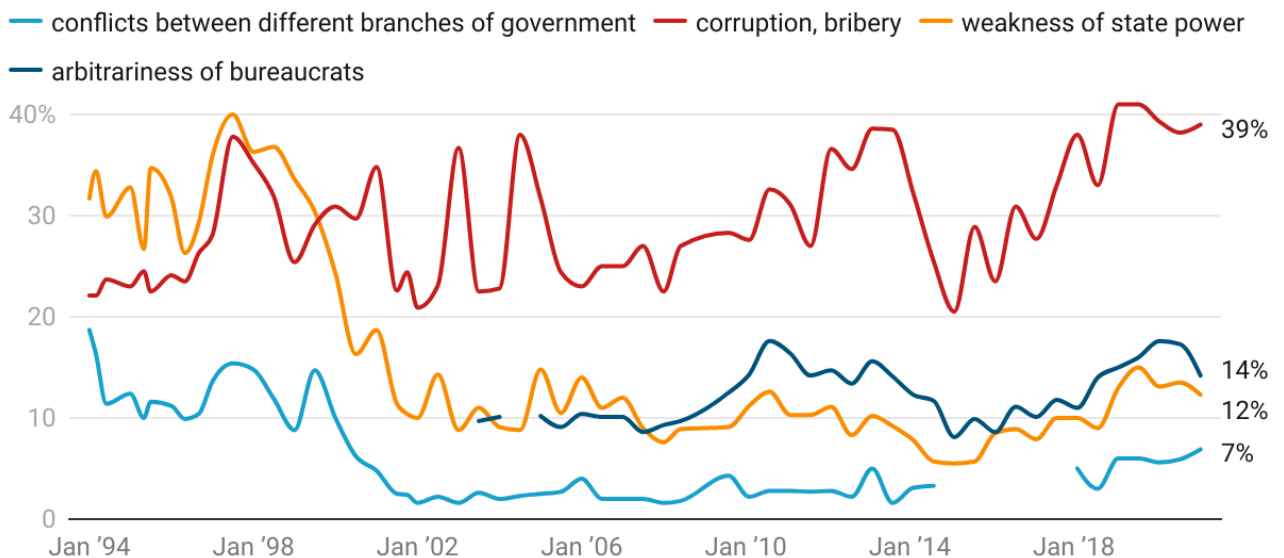
<sup>63</sup> Olimpieva, I., & Pachenkov, O. (2008). *Who fights corruption in Russia?* In R. Orttung, & A. Latta, *Russia's Battle with Crime, Corruption, and Terrorism* (pp. 121-144). New York: Routledge, p. 141.

<sup>64</sup> Levada Center. (2021, March 11). *THE PROBLEMS OF SOCIETY*. Retrieved from The Levada Center: Yuri Levada Analytical Center: <https://www.levada.ru/en/2021/03/11/the-problems-of-society/>

The Levada Center is a Russian independent, nongovernmental polling and sociological research organization that the Russian Justice Department classified as a “foreign agent” in 2016. While in 2022, a London School of Economics post said that Levada is: “The most reputable public opinion data available in Russia are from the Levada Center, a non-governmental research organization conducting regular surveys since 1988.” Source: [What do ordinary Russians really think about the war in Ukraine? | EUROPP \(lse.ac.uk\)](https://www.europp.lse.ac.uk/what-do-ordinary-russians-really-think-about-the-war-in-ukraine/)

That said, after the invasion of Ukraine, the regime has tightened its grip on NGO organizations, where for example, Alexey Navalny has started questioning the independence of the Levada Center.

concerned about corruption, recognizing it as a significant cause of economic stagnation.<sup>65</sup> The importance of corruption as a problem in respondents' eyes has gradually increased since 2015 (24%). This indicates that corruption is part of everyday life in Russia, a norm, possibly widespread in every area across all layers of society.



**Figure 4: Severity of problems of power and governance, as %% of respondents<sup>66</sup>**

The emergence of kleptocracy in Putin's Russia since the 2000s illustrates how corrupt plunder can become an end in itself, and a force in consolidating domestic political control and projecting power abroad. Externally, the kleptocracy has supplied additional means to ends towards traditional great-power politics, as corruption has constituted one of Russia's most important levers of influence in post-Soviet states. A clear example was Moscow's relationship with former Ukrainian president Victor Yanukovich, who effectively functioned as a Russian proxy until the Euromaidan Revolution in 2014.<sup>67</sup> Alongside, internally in Russia, former KGB officers have been embedded in government bodies, businesses, and other influential institutions throughout Russia.<sup>68</sup> The network of former KGB officers surrounding Putin has

<sup>65</sup> Levada Center. (2021, March 11). *THE PROBLEMS OF SOCIETY*.

<sup>66</sup> Ibid. Figure created by Datawrapper.

<sup>67</sup> Please see the following article for elaboration on the corruption of Victor Yanukovich: [SPECIAL REPORT-Putin's allies channeled billions to Ukraine oligarch | Reuters](#)

<sup>68</sup> Lansky, M., & Myles-Primakoff. (2018). *Power and Plunder in Putin's Russia*. *Journal of Democracy*, Volume 29, Number 1, 76-85. p. 77.

primarily established *de facto* ownership of the entire Russian economy, with all significant property rights effectively conditional on the regime's goodwill.<sup>69</sup>

Corruption can be considered a core element of the Russian political system, which in many ways is designed to put the state's resources and major sectors of the Russian economy – especially energy and banking – at the disposal of President Putin and his inner circle.<sup>70</sup> In other words, corruption is the thread that internally holds the Putin regime together, and money is its lifeblood, where nobody has more of it than Putin himself, at least an estimated \$200 billion hidden away in secret funds worldwide.<sup>71</sup> This fortune makes him the second richest man on the planet, after Elon Musk (\$219 billion) for 2022.<sup>72</sup> Regardless, this thesis will not exclusively analyze the corruption within the civilian sectors of Russia but instead look at how corruption within the military sector hinders the military's core goals as a political tool. The thesis shows that the political- and military sphere is largely intertwined in Russia, for example, impairing the development of Russian military capabilities. Or, as an exiled Russian oligarch emphatically said this spring: “Why should the Army be good when everything else in the country is crap?”<sup>73</sup>

## 4.2 *The Corruption Chain - Military corruption from top-to-bottom*

If corruption is present as an organizational cultural phenomenon within the Russian Armed Forces, it must exist throughout the organization. Corroborating if the Russian military suffers corrupt leadership and from more profound organizational shortfalls. Widespread organizational corruption means that the entire chain-of-command is permeated from the top political and strategic level, following the ranks down through the mid-ranking officer, ending at the non-commissioned officer (NCO) and conscripts. To illuminate this, the following section will look at empirical evidence from before and under the invasion, which is likely to

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<sup>69</sup> Ledeneva, A. V. (2013). *Can Russia Modernise? Sistema, Power Networks and Informal Governance*. Cambridge University Press.

<sup>70</sup> Beliakova, P., & Perlo-Freeman, S. (2018). *Corruption in the Russian Defense Sector*. World Peace Foundation, p. 18.

<sup>71</sup> Khan, M. (2022, March 2). *Putin claims he makes \$140,000 and has an 800-square foot apartment. His actual net worth is a mystery no one can solve*. Retrieved from Fortune: <https://fortune.com/2022/03/02/vladimir-putin-net-worth-2022/>

<sup>72</sup> Peterson-Withorn, C. (2022, April 5). *Forbes' 36th Annual World's Billionaires List: Facts And Figures 2022*. Retrieved from Forbes: <https://www.forbes.com/sites/chasewithorn/2022/04/05/forbes-36th-annual-worlds-billionaires-list-facts-and-figures-2022/?sh=74a3ecf27e30>

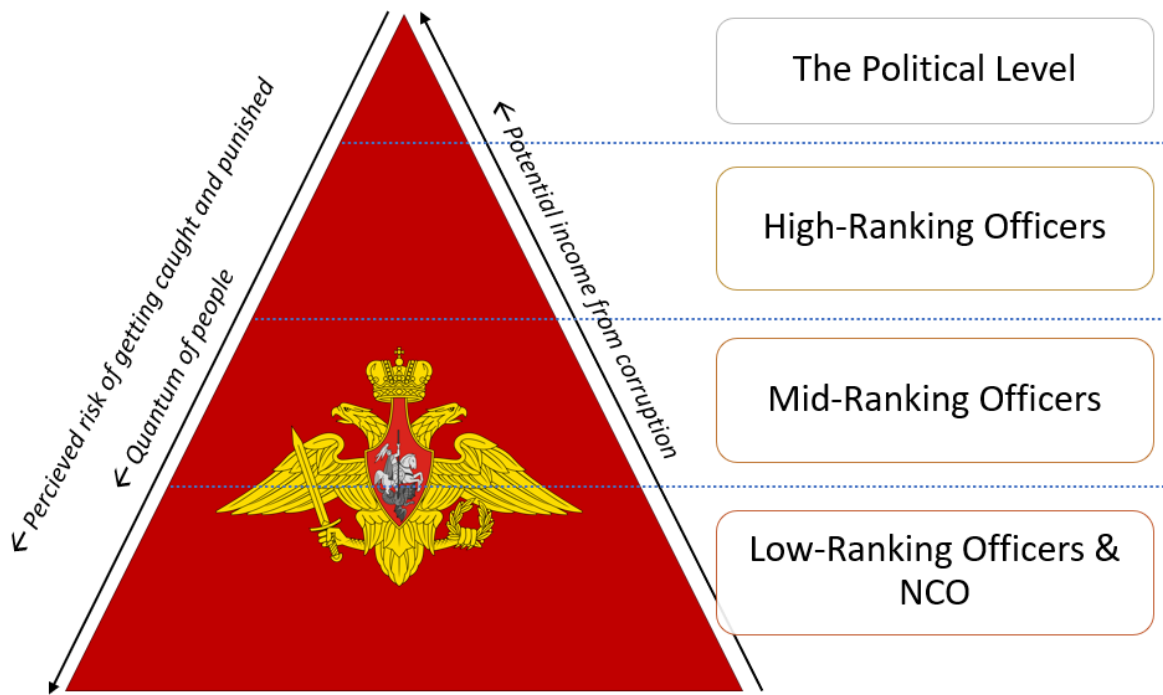
<sup>73</sup> Dalsjö, R. (2023). *Krig styrs av mer än förnuft*. Retrieved from Axess: <https://www.axess.se/artiklar/krig-styrs-av-mer-an-fornuft/>

have influenced the war's outcome. One of the main rationales behind the delineation from the political to the low-ranking officers and NCOs is to address how corruption changes when moving down the ranks from top to bottom. With this follows a set of opportunities for corruption connected to each level. Attached to these opportunities is a relative difference in the *potential for profit and personal gain*, which intensifies when one moves up the levels. For example, the higher-ranking officer (the generals) has a range of opportunities of being corrupt that can yield a higher income, which the conscript at the tactical level does not possess. Moving up the levels, the *quantum of people* shrinks as there are more enlisted than operational commanders than political elites within Putin's inner circle. Finally, at the top, the *perceived risk of being caught and punished* is relatively lower, given that one stays "in line" with your associates and leadership. In the Russian system, long and faithful service is awarded with "authorized" opportunities for corruption. Consider, for example, in 2005, about 160 generals and admirals were investigated for corrupt activities, but only a tiny portion have been sentenced and punished. At the time, these generals and admirals represented only 0.3% of Russia's officer corps but were responsible for 12,3% of the sums lost to corruption from 1991 – 2001.<sup>74</sup> In that sense, the perceived risk of being caught and punished is expected to be higher at the lower levels, as they are essentially "unauthorized" acts of corruption.

In sum, three main attributes arguably delineate the levels in the corruption chain; i) *potential for profit and personal gain*, ii) *quantum of people*, iii) *perceived risk of being caught and punished*. Furthermore, the delineation of the four different levels, should not be understood as autonomous levels affecting the degree of corruption. The different levels are not theoretically independent from each other, as the distinction is mainly made to structure the empirical description. Alongside, the different levels are also used to corroborate, and to some extent exclude, how the possibilities of corruption methods for an individual connected to the Russian Armed Forces change from the *political level* to the *low-ranking officers and NCOs*. Therefore, the division of levels must be understood as a gradual transition because the differences in, for example, corruption opportunities between high-ranking and mid-ranking officers are not categorical. Together, a rough delineation based on the variables and levels of corruption is outlined in Model 4 below:

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<sup>74</sup> Bukvoll, T. (2005). *RUSSIAN MILITARY CORRUPTION - Scale and Causes*. Kjeller, Norway: Forsvarets Forskningsinstitutt (FFI), p. 20.



**Model 4: The Corruption Chain of the Russian Armed Forces<sup>75</sup>**

#### 4.2.1 Political level / Political leadership:

As seen in Chapter 4.1, corruption in the Russian defense complex is not limited to the military-industrial complex but also penetrates the political level. At the political level, we find the government and the top level of the Russian MoD followed by political allies and state secretaries, where one controls several of the core elements in the defense sector. At the political level, which consists of the political elite, one can amass vast wealth. This stands in contrast to the military officers starting from the *high-ranking officer* level and downwards, whereby it is generally accepted that military officers are underpaid. One of the main methods of corruption at the political level is to use private companies in State Defense Orders (*gosoboeonzakaz*), as these procurements orders distributed out by the Russian MoD offer a substantial income that can be reaped. This corruption method will be extensively explained in Chapter 4.2.2, “R&D-phase” of “Strategic Procurements,” where key individuals in the Russian political elite have used shell companies and “fly-by-night” companies to amass huge incomes. Using these “companies” as an intricate corruption method, indicates how military corruption has gradually become more sophisticated.

<sup>75</sup> Figure made in PowerPoint to sum up the different aspects of the corruption chain.

Lastly, the perceived risk of being caught and punished is relatively lower at the political level because of the personal connections (*krysha*) in the Kremlin and the MoD to individuals that can stop or prevent investigations.<sup>76</sup> Such coverage is progressively less available the lower the rank the Russian official possess. For those few prosecuted at the political level, corruption sentences are used *selectively* to weaken and *control* political opponents rather than punish actual crimes.<sup>77</sup> Thus, those who fall out of favor with the political elite will find their corrupt activities shockingly “discovered.”

#### 4.2.1.1 Sergei Shoigu – nepotism and incompetence?

Another damaging aspect of corruption at the top level is *nepotism* and *cronyism*. Russian high-level corruption is based on networks of nepotism and clientelism. The Putin regime revolves around appointing allies to political appointees instead of merited employees with professional skills and relevant competence, such as military experience. Putin is dependent on the professional military to win in Ukraine. Still, he *rewards loyalty over competence* for his appointees at the political level. Loyalty is the single most important attribute of a subordinate because if your subordinates are loyal to you, they will not unite against you. The prioritization of loyalty over competence likely leads to figures like Sergei Shoigu, the Minister of Defense, not having a large support base within the Russian Armed Forces beyond his personal ties within Putin’s inner circle. As such, reports from the front emphasize that Russian officers and soldiers with first-hand war experience routinely ridicule Shoigu for his ineffectual and out-of-touch leadership when Russian progress stalled. Giving an example when a Russian Colonel, Maxim Vlasov, had an intercepted phone call by the Security Service of Ukraine (SBU), where Vlasov blasted Shoigu as a “totally incompetent layman...he is simply a showman” – while in a discussion addressing the lack of contractors within the Russian Army, mocking how one could expect recruitment with a salary of 30,000 rubles (\$400).<sup>78</sup>

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<sup>76</sup> “Krysha” literally means roof in Russian. In the metaphorical sense of holding the roof up for another individual, that protects one from unwanted outside influences. *Krugovaya poruka* is also highly connected to this term, which is discussed in Chapter 4.3.2.

<sup>77</sup> An example of this method is former Moscow region official Alexander Shestun who was “suddenly” found guilty of years of corruption and sentenced to 15 years in prison. Source: The Moscow Times. (2020, December 25). *Russia Jails Ex-Official 15 Years in High-Profile Corruption Case*. Retrieved from The Moscow Times: <https://www.themoscowtimes.com/2020/12/25/russia-jails-ex-official-15-years-in-high-profile-corruption-case-a72486>

<sup>78</sup> Yehoshina, V., & Tolstiaikova, K. (2022, May 30). «Плеяда у\*банів», «Путін – с\*ка», «Шойгу – профан». *Російські полковники обговорюють керівництво армії РФ – «Схеми» (АУДІО)*. Retrieved from Radio Svaboda: <https://www.radiosvoboda.org/a/skhemy-rosiyski-polkovnyky-perekhoplennya/31875531.html>



Sergei Shoigu has spent most of his career in the construction sector and the Ministry of Emergency Situations, struggling to overcome his reputation of lacking military experience. On top of that, Shoigu has gathered around him officers from the Ministry of Emergency Situations to the Russian MoD.<sup>79</sup> A form of *krugovaya poruka* (“circular loyalty”) that likely has worsened the competence level of the leadership within the Russian MoD. When Putin came into power, he gave the country’s most essential branches to his like-minded elite. Shoigu is following this method recruiting his loyal followers to key positions within the Russian MoD. The problem, however, is that the nepotism prevents analytical variation and breeds a culture where loyalty is placed above competence. Few and inadequate perspectives increase the chances of flawed analysis, which may lead to poor judgments within the Russian MoD. Thus, despite Shoigu’s loyalty to Putin, recent independent Russian media reports have claimed that due to the problems Russia is facing from the initial failure of the war, Shoigu was, by August 2022 de-lined within the Russian leadership. With operational commanders instead briefing Putin directly on the course of the war.<sup>80</sup> An indication that Putin was not sufficiently satisfied with the work of Shoigu, replacing him with commanders with substantially more military experience.

Recent investigations show that top officials in the Russian MoD own property that significantly outmatches their income, pointing to possible involvement in corrupt deals. Anchored in that graft and corruption is one of the perks that Putin can offer to those willing to deliver unquestioned loyalty. As such, corruption is a tool for Putin to aggregate absolute power to himself, but the effect of this prioritization is a less competent military cabinet at the political level. The Russian political elite tries to pacify the indignation of corruption among their ranks by staging show trials of low-level embezzlers, where their main effort goes to suppressing any independent investigation by labeling them as “foreign agents.”<sup>81, 82</sup> This measure can thus be understood as part of the perceived risk of being (caught and) punished is relatively lower at the political level, protected by “Putin’s hand.” A significant source in

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<sup>79</sup> Ibid. Yehoshina, V., & Tolstiakova, K. (2022, May 30).

<sup>80</sup> The British Ministry of Defence. (2022, August 29). *Latest Defence Intelligence update on the situation in Ukraine - 29 August 2022*. Retrieved from The British Ministry of Defence: <https://twitter.com/DefenceHQ/status/1564117176474279937?s=20&t=1vNjF41XLLeYGmLXI7kKIA>

<sup>81</sup> RBC. (2019, October 15). *Дело против ФБК охватило новые регионы. Веерные обыски прошли у бывших и нынешних работников фонда*. Retrieved from RBC: <https://www.rbc.ru/politics/15/10/2019/5da56d5b9a79479a3bf8512a>

<sup>82</sup> Meduza. (2022, August 10). *Russian federal agents arrest at least half a dozen Telegram channel administrators involved in anti-corruption reporting*. Retrieved from Meduza: <https://meduza.io/en/news/2022/08/10/russian-federal-agents-arrest-at-least-half-a-dozen-telegram-channel-administrators-involved-in-anti-corruption-reporting>

providing empirical evidence of corruption on the political level is opposition politician Alexei Navalny, who has become a key figure in the fight against corruption within Russia.

According to research published by Navalny, Shoigu has built himself a \$19 million mansion (\$24 million today) in Moscow that he purportedly controls by registering it in the name of family members. The mansion sits on a 9,000-square-meter plot and was owned by Shoigu's 18-year-old daughter in 2009, Ksenia Shoigu. It is however unclear how the 18-years old student became the owner of land that costs at minimum \$100,000 per 100 square meters. Or, how Sergei Shoigu came to own this property when he declared that his family income was 173 million rubles (\$2.66 million) for 2010-12, considerably less than what the property was worth in 2009, even considering the stronger ruble during those two years.<sup>83</sup> Alongside, Shoigu's previous mistress Yelena Shebunova, a former airline stewardess, made \$100 million from deals with the ministry he ran. Shebunova co-owned companies allegedly earning 6.5 billion rubles from contracts with the MoD and the Ministry of Emergency Situations, which Shoigu both controlled. Shebunova served as an executive at companies that build military camps and is linked to contracts to provide the military with clothing equipment. Contracts that were signed on non-market terms and without a competitive bidding process.<sup>84</sup>

Sergei Shoigu's corruption highlights how the defense budget is used for rigged contracts and allocated in the direction to suit special interests. Which, in this case, appears to be to please his wife, who suddenly went from air stewardess to major Russian defense contractor. Further adding fuel to the critics of Shoigu's lacking military competence and ineptness in leading the "special military operation" in Ukraine. Because of Shoigu's inability to prevent corruption from festering within the Russian Armed Forces during his ten years tenure as Minister of Defense. It eventually led to the Head of the National Agency on Corruption Prevention of Ukraine (NACP), Oleksandr Novikov, sending Shoigu an official letter where

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<sup>83</sup> Schrek, C. (2015, October 27). *Russian Defense Chief Shoigu Accused Of Owning \$18 Million Mansion*. Retrieved from RadioFreeEurope Radioliberty: <https://www.rferl.org/a/russian-dm-shoigu-accused-owning-mansion/27330203.html>

<sup>84</sup> The Moscow Times. (2019, August 1). *Russian Defense Chief's Reported Ex Made \$100M From Ministry Deals, Media Reports*. Retrieved from The Moscow Times: <https://www.themoscowtimes.com/2019/08/01/russian-celebrities-show-their-support-for-pro-opposition-protesters-a66665>  
Original source: Yezhov, S. (2019, July 31). *Стюардесса специального назначения. Как любовница Шойгу заработала миллиарды на контрактах с МЧС и Минобороны*. Retrieved from The Insider: <https://theins.ru/korruptsiya/162826>

he praised him for “his efforts to ensure the high level of corruption in the Russian army.”<sup>85</sup> Sergei Shoigu has perhaps been a genius in maneuvering the political system within Russia, surviving purges, and being in every Russian Government since 1991. However, this has had damaging effects on the reformation of the Russian Armed Forces as the reforms have arguably been too light - not solving corruption at its root.

#### 4.2.1.2 Dmitry Medvedev’s advisor – unencrypted communication

Russia’s five-day war in Georgia in 2008 laid bare some of the Russian Armed Forces’ most pressing battleground problems – tactical communications. Some units were unable to communicate with the command structure, giving grave examples when General Borisov, commander of the airborne troops, was forced to use helicopters to deliver “courier mail” with orders for his troops stationed in mountainous regions. As such, fighting in the Georgian-Ossetian war was affected by the lack of communication, leading to Russian aircraft bombing their troops and forcing most communication over to mobile phones instead of military radios.<sup>86</sup> To cope with communication deficiencies, the Russian General Staff Deputy Chief, Yevgeny Meychik, pledged that “by the end of 2011, we plan to bring a radio station to every serviceman, to every combat vehicle”, under orders from Russia’s then-president, Dmitry Medvedev. The Russian MoD would thoroughly revise its approach to the military command and control (C2) system, “... and particularly the communication systems.”<sup>87</sup> However, evidence from the war in Ukraine makes one question how successful the development of tactical communications has been, questioning the “lessons learned” from Georgia in 2008.

At the time, Yevgeny Meychik's plan presupposed upgrading the main-level army radio system known as Akveduk. Sidelineing Meychik’s proposal, the MoD instead opted to pursue the development of a wholly new sixth-generation communication system known as “Azart.” Chosen to create this new communication system was the upstart manufacturer Angstrom, which received an 18.5-billion-ruble contract in 2009 to develop and produce a wholly new

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<sup>85</sup> National Agency on Corruption Prevention. (2022, March 10). *Ukraine’s corruption prevention agency praises Russia’s minister Shoigu for corruption in the army*. Retrieved from NACP:

<https://nazk.gov.ua/en/news/ukraine-s-corruption-prevention-agency-praises-russia-s-minister-shoigu-for-corruption-in-the-army-video/>

<sup>86</sup> Tsyganok, A. (2020, 2 28). *Связь и навигационное обеспечение в войнах и конфликтах XXI века*. Retrieved from Nezavisimoye Voyennoye Obozreniye: [https://nvo.ng.ru/wars/2020-02-28/1\\_1083\\_communication.html](https://nvo.ng.ru/wars/2020-02-28/1_1083_communication.html)

<sup>87</sup> Turchenko, S. (2009, October 20). *Армейские связисты создают военный Интернет*. Retrieved from Svobodnaya Pressa: <https://svpressa.ru/society/article/15723/>

radio. As such, Angstrom set out to create an encrypted radio where every soldier was supposed to receive one. Yet, one of the primary owners of Angstrom had apparently been a close adviser to President Medvedev.<sup>88</sup> The name of the primary owner was Leonid Dododzhonovich Reiman, who attained at least 50% of the shares to Angstrom in 2007-2008 – just over a year before they received the contract. Naturally, it is not known what brought forth this decision. Still, it would be naïve to disregard that part of the decision stemmed from nepotism and, thus, corruption in allocating the MoD's defense budget.<sup>89</sup>

Leonid Reiman is a native of St. Petersburg, having previously occupied different mid- to high-level positions in the city's telecommunication agencies before his ascension to the political level in July 1999 with the post of the First Deputy Chairman of the Russian State Committee for Telecommunications (Gostelekom). It is, however, unknown outside of the St. Petersburg region how Reiman suddenly rose to this position. Later it became clear that Reiman is known to belong to Putin's Saint Petersburg "entourage," where Reiman is referred to as "Putin's friend and traveling companion."<sup>90</sup> A circle also Medvedev is part of, who was president at the time (with Putin) when Reiman received extensive funding for Angstrom's R&D contract. As an indication of Reiman's close ties to Medvedev and Putin, he was already appointed by Putin in August 1999, who had just become prime minister, to Gostelekom Chairman. Since then, Reiman moved up the career hierarchy in the government, gaining the position of Minister of Communication from 1999 – 2008 and Advisor to the President from 2008-2010. This shows that despite Putin or Medvedev being in power, or any other of the St. Petersburg "team" for that matter, Reiman was a trusted person whom Putin quickly assigned to a central position when he received the role of Prime Minister in 1999. Not gaining the positions because of competence, but of loyalty to Putin. Thus, giving the contract to Angstrom and Reiman to develop a new encrypted communication system is understood as corruption in the form of *cronyism*. Medvedev likely turned down Meychick's initial plan of developing the "Akveduk" to prioritize the personal acquaintances of his and Putin's St. Petersburg clique.

Fourteen years later, despite more repeated promises from Angstrom, it is hard to describe the development and supply of Azart military radio as a success. During its use in Syria,

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<sup>88</sup> Dobrynin, S., & Krutov, M. (2022, March 19). *Communication Breakdown: How Russia's Invasion Of Ukraine Bugged Down*. Retrieved from RadioFreeEurope RadioLiberty: <https://www.rferl.org/a/communication-lapses-russia-invasion-failures/31761259.html>

<sup>89</sup> Tadvisor. (2019). *Angstrom Group of Companies*. Retrieved from Tadvisor: [https://tadviser.com/index.php/Company:Angstrom\\_\(group\\_of\\_companies\)](https://tadviser.com/index.php/Company:Angstrom_(group_of_companies))

<sup>90</sup> Starr, R. (2000, April). *KGB & Other Buddies in Putin Apparatus*. Retrieved from Hoover Institution on War, Revolution, and Peace. Volume 10, No 4, p. 7.

Russian troops said that “outside the bases of the Russian Armed Forces in Syria, everyone uses mobile phones and Chinese ‘balalaikas’,” referring to the unencrypted civilian walkie-talkies manufactured by Baofeng.<sup>91</sup> The mobile phones and Baofeng walkie-talkies were connected to local open-access Syrian communication systems because the Azart system could not deliver clear communication when the distance from the military bases increased. Moreover, it appears that the Russian soldiers do not fully trust the Azart system. As such, Ramzan Kadyrov suggested that a commander in his guards’ corps, Colonel Daniil Martynov, was traveling to Moscow on the eve of the war to obtain clean Ukrainian SIM cards.<sup>92</sup> Kadyrov’s units were part of the spearhead rolling towards Kyiv before meeting a brutal stop near Hostomel, where a convoy of 56 Chechen tanks was destroyed along with his close commander, General Magomed Tushaev.<sup>93</sup> It is reasonable to assume that Kadyrov knew that his units would likely outrun their communication support, as their primary mission was to storm Kyiv and capture President Zelensky.

The failure to modernize a sufficient communication system within the Russian Armed Forces has damaged Russia’s operation in Ukraine. Firstly, the lack of adequate communication systems causes a lack of coordination, leading to operational and tactical challenges. As such, failure to ensure a modern communication system represents a significant stumbling block because it leads to poor coordination among different arms, ground, sea, and air, but also within the arms. In turn, hampering the combined arms and C2 ability of the Russian Armed Forces, which is critical for an operation on the scale of the war in Ukraine. Part of this is target data that requires the Azart (or the Akveduk) radios to operate optimally to support the transfer of target packs between units. Documents from the war show the Russian Air Force operates by making sorties to designated targets with little or no ability to communicate with ground forces.<sup>94</sup> Making it highly problematic to request a change of target or call for air support, further questioning the capability of a combined arms concept for the

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<sup>91</sup> Orlov, V. (2019, September 18). *Современный вооруженный конфликт диктует новые правила для ВПК*. Retrieved from Soldier-Moskva: <https://soldier-moskva.livejournal.com/420587.html>

<sup>92</sup> BBC News Russia. (2022, February 26). "В районе Майдана или Крещатика танцы подготовим". *Что человеку с голосом Кадырова докладывали накануне вторжения России в Украину*. Retrieved from BBC News Russia: <https://www.bbc.com/russian/features-60528746>

<sup>93</sup> McCloskey, J. (2022, February 26). *Russian troops enter Ukraine's second city of Kharkiv and fierce fighting breaks out after Putin was said to be 'raging' at stalled invasion: Ukrainians obliterate Chechen special forces column of 56 tanks outside Kyiv and kills top general*. Retrieved from The Daily Mail: <https://www.dailymail.co.uk/news/article-10555871/Kyiv-comes-huge-aerial-artillery-bombardment-leaving-pulsing-glow-sky.html>

<sup>94</sup> Dobrynin, S., & Krutov, M. (2022, March 19). *Communication Breakdown: How Russia's Invasion Of Ukraine Boggled Down*. Retrieved from RadioFreeEurope RadioLiberty: <https://www.rferl.org/a/communication-lapses-russia-invasion-failures/31761259.html>

Russian Armed Forces. Within the arms, Russian soldiers interviewed by the OCCRP were baffled when they had to use Boafeng walkie-talkies in Ukraine. On top of that, there were an insufficient amount of walkie-talkies distributed, which in combination led to the units not being able to interact normally. The Russian soldier describes that “... even with preparation when the National Guard supported our flank on the right, which does not stupefy what is happening at all. Or, when the rockets are flying, you don’t know if they are yours – it’s [all] a game”.<sup>95</sup> One can only imagine this chaotic situation and the pertinent risk of friendly fire the Russian soldiers using their walkie-talkies were experiencing. Thus, for March 2022, most of the radio exchanges of Russian troops at the brigade-BTG (Battalion Tactical Group) level consisted of information about the locations of units and individual elements and only 10–20 percent related to combat management.<sup>96</sup> In the picture under, a Boafeng UV-82HP walkie-talkie found on a Russian soldier three days after the invasion.



**Picture 1: Chinese Boafeng UV-82HP taken from a Russian soldier<sup>97</sup>**

<sup>95</sup> OCCRP. (2022, April 08). *Самый надежный союзник. Как коррупция в российской армии может спасти Украину*. Retrieved from OCCRP - Organized Crime And Corruption Reporting Project: <https://www.occrp.org/ru/home/37-ccb/ccb/16181-2022-04-07-16-58-46>

<sup>96</sup> Zabrodskyi, M., Watling, J., Danylyuk, O., & Reynolds, N. (2022, November 2022). *Preliminary Lessons in Conventional Warfighting from Russia’s Invasion of Ukraine: February–July 2022*. p. 32.

<sup>97</sup> Picture retrieved from the Ukrainian military’s Twitter: [https://twitter.com/mil\\_in\\_ua/status/1497961913292001283](https://twitter.com/mil_in_ua/status/1497961913292001283)

The operation in Ukraine suggests that Russia has fewer modern radios in service than it has claimed. The most generous estimate of the total number of Azart is 60,000 units.<sup>98</sup> A quantum that is far from sufficient to give every Russian soldier in Ukraine a device and far from the promised goal set out in 2009 when the contract to Angstrom was given. On that note, the number of Azarts actually in the hands of Russian troops in Ukraine is undoubtedly less than 60,000. Part of the shortages stems from corruption below the political level.

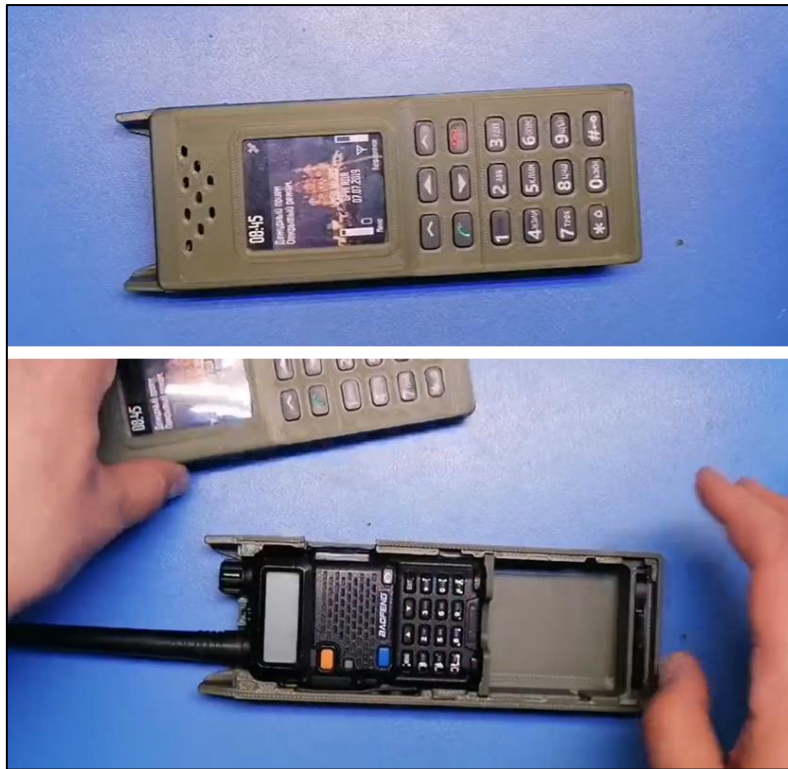
At the *high-ranking officer* level, Major General Alexander Oglobin was in 2022 sentenced to four and a half years in prison and a fine of 800,000 rubles for the embezzlement of 1.6 billion rubles in the procurement of the Azart.<sup>99</sup> Oglobin, who later pleaded guilty, inflated the price of the radio for the state contract and then cut costs by buying components in China, pocketing the difference. Oglobin crimes were committed from 2013 to 2015, likely with cheap Chinese analogs supplied with re-glued labels instead of Russian devices. He later chose to cooperate with the prosecutors, which led to more high-ranking officers being arrested and a total of 6.5 billion rubles allegedly being embezzled in the procurement process.<sup>100</sup> Perhaps part of this embezzlement scheme is the Azart radio shown in the picture below. Where an Azart radio hides a Chinese Baofeng UV-5R under its plastic case, all the front buttons are fake, and the "screen" is a simple sticker. It is difficult to track the device's origin, but it is possible that this radio was embezzled in the procurement to fill a quota of "ordered" Azart-radios.

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<sup>98</sup> Dobrynin, S., & Krutov, M. (2022, March 19). *Communication Breakdown: How Russia's Invasion Of Ukraine Bogged Down*.

<sup>99</sup> BFM. (2022, February 14). Суд приговорил генерала Оглобина к 4,5 года колонии и штрафу за хищения. Retrieved from BFM Russia: <https://www.bfm.ru/news/492897>

<sup>100</sup> Senatorov, Y., & Sergeev, N. (2019, October 12). *Причинно-подследственные связи*. Retrieved from Kommersant: <https://www.kommersant.ru/doc/4124586>



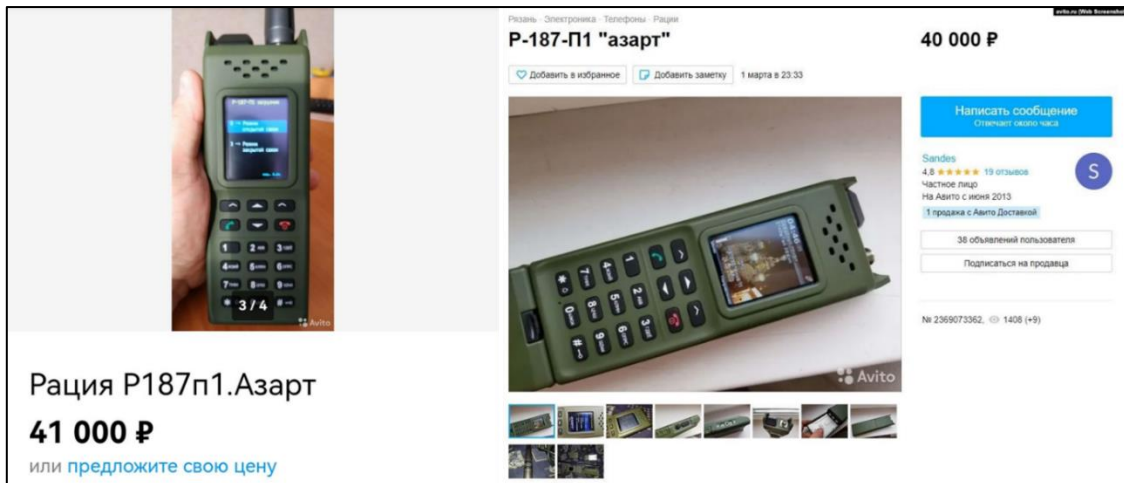
**Picture 2: Fake Azart radio containing a Boafeng UV-5R<sup>101</sup>**

The second form of corruption affecting the undersupply of Azart-radios occurs at lower levels of the corruption chain within the Russian Armed Forces. Being theft at *the unit level*, possibly conducted by *the supply officer*, to increase his meager income. The characteristics of the supply officer is further outlined in detail under the ‘Lower ranking officer & NCO’ section (Ch. 4.2.3.1). Either way, an example is given below, where Azart-radios regularly are sold on Avito, the Russian equivalent of eBay. Not great for a device with supposedly secret encryption.

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<sup>101</sup> Pictures retrieved from video found on Twitter:  
<https://twitter.com/CaptainBlackSe1/status/1567856756373454851?s=20>





Picture 3: Azart radio sold on Avito<sup>102</sup>

The last two are examples of corruption further down from the political level, where the corruption from Major General Oglobin is connected to *strategic procurements* during the ordering and production phase. In contrast, the Azart radios sold on Avito are connected to *the supply officer* or a conscript stealing his unit's radio to trade for an extra income. These forms of corruption lead to supply shortages of the Azart system within the Russian Armed Forces. Russia does have other radios to compensate, but Azart may not be compatible with them. So, suppose an elite airborne unit has modern Azart radios, but the artillery supporting unit uses a legacy system like the Akveduk. In that case, the two will have problems communicating and coordinating an attack. At the same time, it would be unlikely to expect a walkie-talkie to fill this information gap, as it is too basic to support coordinated operations.

It appears that every stage of the Azart development and supply has been hindered by corruption. Hence, the aggregated effect of all the types of corruption – from top to bottom - is a lack of adequate communication systems for modern warfare. In the first months of the war, it led to confusion about the location and composition of units, causing paralysis in command when units deviated from their pre-assigned tasks. Commanders could not communicate with their units, and when no new statement of intent was being provided to tactical commanders, they had to rationalize on their combat management.<sup>103</sup> An aspect of the Russian military

<sup>102</sup> Right picture retrieved from Twitter: [https://twitter.com/ChrisO\\_wiki/status/1542272027322621954?s=20](https://twitter.com/ChrisO_wiki/status/1542272027322621954?s=20)  
 Left picture retrieved from: Dobrynin, S., & Krutov, M. (2022, March 19). *Communication Breakdown: How Russia's Invasion Of Ukraine Bugged Down*.

<sup>103</sup> Zabrodskiy, M., Watling, J., Danylyuk, O., & Reynolds, N. (2022, November 2022). *Preliminary Lessons in Conventional Warfighting from Russia's Invasion of Ukraine: February–July 2022*. p. 31.

culture has little historical experience in doing, as it is based on a centralized, top-down command hierarchy that gives decision-making authority only to the highest levels. It appeared that the main problem with the Russian-produced military radios was their *range*, highlighted earlier in the war in Syria. Creating a lack of understanding for Russian commanders as to the location or condition of their unit and the lack of situational awareness of their tactical commanders approaching Kyiv (or Mykolaiv).

Indeed, one documented story of a captured Russian soldier stated, “The officers started stationing themselves further and further away from the fighting ... they are out of radio range at this point, and no one can contact them.” Further explaining the lack of long-range communications equipment prevented anyone from contacting the Central Command of the deployed forces – forcing them over to cellphones to gain some situational awareness.<sup>104</sup> Or forcing senior generals to make risky trips to the front lines to resolve logistical and operational issues, making them highly vulnerable to Ukrainian artillery or snipers. Arguably leading to VDV’s Major General Andrei Sukhovetsky being killed by a Ukrainian sniper on the 28<sup>th</sup> of February 2022 during the critical moments at Hostomel Airport.<sup>105</sup> Sukhovetsky likely had to move to the airport according to US sources, “... as [the Russians] secure communications system failed on the first day” and is “... why they’ve been dependent on Ukrainian cellphone towers ever since.”<sup>106</sup> Radio communication is a crucial prerequisite for an advancing force, as commanders and personnel are an army’s brain, and the strike assets its limbs. Radio communication is its nervous system, disrupting the nervous system and the brain and limbs communicate with great difficulty, creating apathy and confusion. Eventually, the general confusion among Russia’s ground forces gradually eased towards the end of March as senior officers came forward to establish situational awareness.<sup>107</sup> Perhaps finally establishing an overview that the ambition to occupy and capture Kyiv was too ambitious, leading to the withdrawal from the region a few weeks later.

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<sup>104</sup> Cranny-Evans, S., & Withington, T. (2022, March 9). *Russian Comms in Ukraine: A World of Hertz*. Retrieved from RUSI:

<https://rusi.org/explore-our-research/publications/commentary/russian-comms-ukraine-world-hertz>

<sup>105</sup> Batchelor, T., & Dalton, J. (2022, March 07). *Russian Major General Andrei Sukhovetsky killed by Ukrainians is ‘major demotivator’ for invading army*. Retrieved from Independent:

<https://www.independent.co.uk/news/world/europe/andrei-sukhovetsky-russian-general-killed-b2029363.html>

<sup>106</sup> Chotiner, I. (2022, April 21). *Is the Russian Military a Paper Tiger?* Retrieved from The New Yorker: <https://www.newyorker.com/news/q-and-a/is-the-russian-military-a-paper-tiger>

<sup>107</sup> Zabrodskiy, M., Watling, J., Danylyuk, O., & Reynolds, N. (2022, November 2022). *Preliminary Lessons in Conventional Warfighting from Russia’s Invasion of Ukraine: February–July 2022*. p. 32.

Secondly, the other negative effect of the corruption is the lack of secure communication. The Boafeng radio uses open Very- or Ultra High Frequency (V/UHF), which are despite the wording, low-frequency wavebands that lack military-grade encryption. These wavebands are relatively easy for electronic warfare (EW) units to exploit, either by eavesdropping on communication or being susceptible to jamming. Or using rudimentary communications intelligence equipment (such as triangulation) to follow the movement of the transmissions and hence the movement of troops. Given that the soldiers keep their unencrypted radios switched on. It is even possible to conduct deception operations by feeding false or misleading traffic into networks depending on these radios.<sup>108</sup> Sowing disorganization, doubt, and demoralization into the Russian units. That said, it is likely that the Boafeng radios are mainly being used for squad communication at the tactical edge by infantry. Disrupting these units by jamming, eavesdropping, or deception will likely help to blunt or slow Russian maneuvers. Not to forget that the use of civilian V/UHF low-frequency wavebands might limit Russian EW systems from a heavier wave of electronic attacks to avoid friendly fire against the civilian communications their troops rely upon.<sup>109</sup> Indeed, because of the “friendly fire,” communication became a greater threat to the Russian operation than jamming Ukrainian surface-to-air missile (SAM) systems, as their electronic warfare assets began to greatly scale back their operations after the first two days after the invasion.<sup>110</sup>

Alongside, the cellphones used are connected to cellular networks still controlled by Ukraine, giving the Ukrainian military or intelligence a relatively easy and secure opportunity for eavesdropping. It also allows the Ukrainians to easily intercept the conversation and determine the caller’s location. According to US military sources, many Russian generals talk on unsecured phones, leading to at least one case where the Ukrainians geolocated a call and killed the general and his staff in an attack on the location.<sup>111</sup> The name of the general is not mentioned in the article. Still, there are other examples, when Major General Andrey Simonov, Chief of the Russian Electronic Warfare Troops, was located and killed by Ukrainian artillery

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<sup>108</sup> Cranny-Evans, S., & Withington, T. (2022, March 9). *Russian Comms in Ukraine: A World of Hertz*.

<sup>109</sup> Ibid.

<sup>110</sup> Bronk, J., Reynolds, N., & Watling, J. (2022, November 7). *The Russian Air War and Ukrainian Requirements for Air Defence*, p. 13. Retrieved from RUSI: <https://rusi.org/explore-our-research/publications/special-resources/russian-air-war-and-ukrainian-requirements-air-defence>

<sup>111</sup> Barnes, J., Cooper, H., & Schmitt, E. (2022, May 4). *U.S. Intelligence Is Helping Ukraine Kill Russian Generals, Officials Say*. Retrieved from The New York Times: <https://www.nytimes.com/2022/05/04/us/politics/russia-generals-killed-ukraine.html>

near Kharkiv.<sup>112</sup> Radio problems indirectly kill Russian generals and commanders, as the Russian Armed Forces have not been sufficiently supplied with encrypted high-frequency radios with adequate range. By the end of March 2022, at least 15 senior Russian commanders had been killed in the field, according to the Ukrainian MoD.<sup>113</sup> Meaning that Russia lost a General a week on average in the first months of the war.

It is evident that the corruption connected to Angstrom's failure to create an adequate tactical and secure communication system has damaged the range and scale of the operation in Ukraine, hampering Russian advancements through a lack of coordination and leading to the loss of key officers. The Azart system is, therefore, a severe weakness of the Russian Armed Forces communications, based on the emerging clues from Syria and the war in Ukraine. Developing a reliable and secure communication system is tricky, which both the British Army with their Bowman radio in the 2000s and America with the waste of billions on their Joint Tactical Radio System has experienced. Yet, it does not help that approximately a third of the total procurements budget of 18.5 billion rubles distributed to Angstrom in 2009 allegedly was grafted.<sup>114, 115</sup> Where cheap Chinese components likely were substituted instead of developing Russian ones when the R&D process failed, pocketing the difference in cost. Thus, the corruption connected to Angstrom and the Azart system has given the Ukrainians superiority within the war's electromagnetic spectrum—an opportunity they have largely exploited. Besides, Angstrom has also been responsible for developing and supplying products in the interests of the GLONASS (Globalnaja Navigatsionnaja Sputnikovaja Sistema) satellite project, which will be discussed under the *Strategic Procurement* section. The contract included developing and supplying power supervisors, comparators, standard logic integrated circuits, analog-to-digital converters, operational amplifiers, intelligent power switches, diodes, and transistors. The components were being developed as part of the import substitution

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<sup>112</sup> Twitter video where Major General Andrei Simonov allegedly was attacked:

<https://twitter.com/GlobalNewsEU/status/1520567045229887488?s=20>

<sup>113</sup> Booth, W., Dixon, R., & Stern, D. (2022, March 26). *Russian generals are getting killed at an extraordinary rate*. Retrieved from The Washington Post: <https://www.washingtonpost.com/world/2022/03/26/ukraine-russian-generals-dead/>

I also recommend the Twitter user "KIU • Russian Officers killed in Ukraine", which documents through open sources the losses of Russian officers in the war: <https://twitter.com/KilledInUkraine>

<sup>114</sup> The Economist. (2022, March 28). *Why Russian radios in Ukraine are getting spammed with heavy metal*. Retrieved from The Economist: <https://www.economist.com/the-economist-explains/2022/03/28/why-russian-radios-ukraine-war-intercepted-heavy-metal>

<sup>115</sup> Rubnikovich, O., & Sergeev, N. (2021, April 3). *К военным поставкам подходят с гражданским азартом*. Retrieved from Kommersant: <https://www.kommersant.ru/doc/4712794>

program to meet Western sanctions targeted toward the Russian space industry.<sup>116</sup> The GLONASS project has been riddled with failures and corruption since the Soviet era, which I will return to later. Angstrom is therefore likely somewhat connected to the inability of GLONASS, leading to inaccurate satellite data for the Russian Armed Forces in Ukraine. Giving yet another example of the corruption linked to the company, likely stemming from the political elite.

In sum, at the top political level, the amount of corruption measured in dollars is likely immense. Corruption gives rise to a wealth that starkly differentiates from the rest of Russian society – including the military. In 2021, the top 0.001% of Russia’s population (500 people) was wealthier than the poorest 114.6 million, or 99.8% of the adult population.<sup>117</sup> The estimate likely does not include all the hidden assets of Putin’s political elite. In fact, 90% of the money of the wealthiest individuals in Russia was not gathered by the people’s skills, abilities, or cognition but was attained through the connection to Putin.<sup>118</sup> Economic inequality within Russian society may therefore be understood as a result of corruption at the political level. Anchored in that corruption at the political level gives opportunities for control of the defense budget, with budget direction to suit special interests. Which has resulted in the absence of any functioning market mechanisms in the Russian procurement system, such as competition, that creates some leeway in pricing military goods. This form of corruption has shown to be highly damaging for the “special military operation” in Ukraine. Exemplified by the immense loss of generals in Ukraine because of unencrypted communication or the lack of Russian-produced night vision and satellite communication GLONASS which will be further substantiated under the Strategic Procurement section. All examples stem from corruption tied to private companies and allocating the state budget to suit nepotistic interests. Giving massive wealth to a select political elite, but a cost borne by the Russian Armed Forces. Corruption clearly eats up the national defense budget, preventing the RAF’s modernization, which has given clear operational weaknesses for the war in Ukraine.

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<sup>116</sup> Tadvisor. (2019). *Angstrom Group of Companies*. Retrieved from Tadvisor: [https://tadviser.com/index.php/Company:Angstrom\\_\(group\\_of\\_companies\)](https://tadviser.com/index.php/Company:Angstrom_(group_of_companies))

<sup>117</sup> The Moscow Times. (2021, June 10). *Russia’s 500 Super Rich Wealthier Than Poorest 99.8% – Report*. Retrieved from The Moscow Times: <https://www.themoscowtimes.com/2021/06/10/russias-500-super-rich-wealthier-than-poorest-998-report-a74180>

<sup>118</sup> Romanova, E. (2022, December 9). *Putin’s Russia: How propaganda bolsters corruption*. Retrieved from European Centre for Press & Media Freedom: <https://www.ecpmf.eu/putins-russia-how-propaganda-bolsters-corruption/>

#### 4.2.2 Higher-ranking officers:

The high-ranking officer level consists of the senior military leadership. These are the *generals* that control the higher-level functions in the military, which gives some great options available for corruption. One of the most prevalent options here is corruption tied to *military procurement* in the State Defense Order (*gosoboeonzakaz*), where the client is the Russian Ministry of Defense (MoD). Here the senior officer may create fictitious contracts and rigging of contracts such that only a few can win. Or use influence over strategy to secure procurements, prioritizing military strategies and doctrines that give personal gains with the choice of strategy and the procurements that follow the specific strategy. Or persuade the political leadership to go for the military- instead of diplomatic solutions. The generals also possess the opportunity to diverge funds and sell positions and postings. Relative to the elites at the political level, the generals do not necessarily use private companies for large corrupt deals but are more bound to the military structure, being less influential in the MoD's process of deciding the national defense budget. Alongside, there is a larger quantity of generals, and your actual income might have fallen substantially compared to the political elite. As such, one general charged with smuggling told investigators: "Why should I, a general, receive 30,000 rubles a month while businessmen grab millions? I have no apartment and no prospect of one ... Practically, the whole army is dirtying its hands with this kind of thing."<sup>119</sup> That also underlines that the perceived risk of being caught and punished has increased at the *high-ranking officer level* because most generals are not part of "Putin's inner circle." Which means that the state apparatus will not necessarily protect them should allegations of corruption arise.

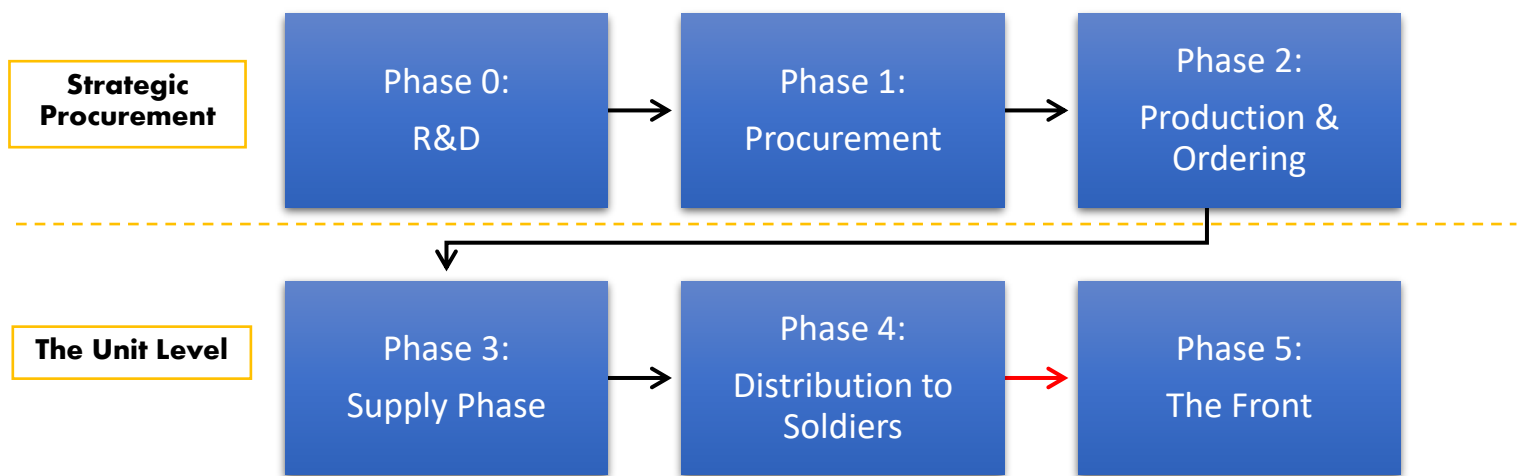
##### 4.2.2.1 Strategic Procurements

Today, corruption still constitutes a significant problem facing the Russian military-industrial complex. Below is a model of how corruption might affect a State Defense Order set out by the Russian MoD before the "intended" product reaches the user. The corruption affects the procurement order in six phases before reaching 'Phase 5: The Front in Ukraine'. The different phases are summarized in the model below. Notice also that there is a separation drawn by the orange dotted line between the 'Strategic Procurement,' mostly connected to the generals and the MoD at the high-ranking officer level. Corruption at the 'Strategic Procurement' level is also firmly connected to economic inefficiencies in the procurement process. First, corruption

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<sup>119</sup> Leiven, A. (1993, January 28). *Russians take criminal path to justice*. Retrieved from The Times.

prevents fair competition. Second, corruption lowers the willingness to invest in innovation and the construction of military goods from private actors (both foreign and domestic). Thus, the productivity of the Russian military-industrial complex could likely be significantly higher had not corruption existed. After the intended product is procured, it reaches ‘The Unit Level,’ connected to the local units at the low-ranking officer level. As such, the model should be understood as a part of the whole “corruption chain” within the Russian Armed Forces, where the different levels offer different opportunities for corruption. I will now describe the six phases of the model, with relevant examples connected to the war in Ukraine.



**Model 5: The Phases of Corruption in Military Procurements<sup>120</sup>**

### Military Procurements - Phase 0: R&D

Before a strategic procurement order is given to a firm, Research & Development (R&D) is conducted on the product, innovating and improving its qualities. Therefore, the first phase of the model is ‘Phase 0: R&D’. Typically, corruption within R&D is connected to fake contracts, embezzlement, and fraudulent companies. The result of imaginary R&D activities is a lack of technological innovations within the Russian defense complex, leading to an obsolete armed force relative to Ukraine, fitted with Western weapon systems. While also forcing the Russians to be more dependent on importing Western or Chinese components as their own technological

<sup>120</sup> I have created this figure on my own in Word, taking some inspiration from the YouTube video, “How Corruption Destroys Armies - Theft, Graft, and Russian failure in Ukraine” by Perun. Retrieved from: <https://www.youtube.com/watch?v=i9i47sgi-V4>

innovations never materialized due to embezzlement and fraud. The lack of modern equipment is then further damaged by Western sanctions conducted after the annexation of Crimea in 2014, limiting their arsenal of precision missiles, drones, or night vision, to mention some. Continuing with the example of night vision, it is unclear exactly how many Russian military vehicles and units are fitted with night-vision technology. Although newer Russian tanks come with thermal imagers derived from a design by Thales, a French defense supplier, which Russia imported.<sup>121</sup> However, because of the Western sanction regime imposed in 2014, these thermal scopes and other demanded military equipment are no longer available through the open market for the Russian arms industry.

### Corruption Phase 0: R&D - Shell companies and night vision

For corruption in ‘Phase 0: R&D’, a commonly employed method is to use shell companies to reap the distributed money in a strategic procurement contract. Shell companies must also be understood as methods of corruption used primarily on the *political level*, and to a lesser extent, on the *high-ranking officer level*. Mainly because the potential income from using private companies for corruption is immense and not made available for all the generals within the Russian defense complex, but only for a selected few within Russia’s political elite. Still, there is a gradual transition in the method of shell companies. To explain the whole model of corruption in military procurement (Model 5), it is discussed here under the “higher ranking officer” section.

In 2012, Deputy Prime Minister Dmitry Rogozin who oversaw the country’s defense industry, promised that Russia would by 2013 stop being dependent on imported thermal image sensors. It had become a matter of national security concern to produce the sensors domestically. As such, the Russian MoD set out a contract for the R&D of new night vision goggles to the Russian company ‘Fotoelektronnye Pribory’ (Photoelectric Devices).<sup>122</sup> Besides the state funds distributed by the MoD, there were also private investors in these companies,

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<sup>121</sup> The Economist. (2022, April 14). *Why Russian forces can’t match Ukraine’s night-vision equipment*. Retrieved from The Economist: <https://www.economist.com/the-economist-explains/2022/04/14/why-russian-forces-cant-match-ukraines-night-vision-equipment>

<sup>122</sup> On February 6, 2014, TASS published an article on the project stating that the total investment to build the microbolometer photodetector array production could reach 3 billion rubles - approximately \$170 million when the article appeared. It is, however, not known if that was the full budget from the MoD in the development of the new night vision goggles.

Source: Taia Global. (2015). (JSC CRI) *Cyclone: Exposing an FSB Technology Transfer Operation*. Taia Global Inc. Retrieved from <https://www.documentcloud.org/documents/2089227-fsb-cyclone-operation>, p. 8.



where the financing was supposed to fill the crucial missing link of night vision in the Russian arms industry. However, the private investors, which are large owners of the companies involved, put up only a fraction of the capital needed for the R&D. The remainder, approximately 85 percent of the budget, came from the state funds through the MoD contract.

After thorough investigative journalism by the OCCRP, it was discovered that the private companies involved were in fact shell companies with links to the political elite in Russia, hidden in opaque offshore jurisdiction. Scrutinizing the private company ‘Photoelectric Devices,’ which was responsible for the thermal imaging in the new night vision goggles, it came forth that this company had some dubious links to the political elite. The first fifty percent of the company Photoelectric Devices belonged to Tsyklon (“Cyclone”), a state scientific research institute and one of the few Russian enterprises manufacturing thermal imagery with imported sensors.<sup>123</sup> The last fifty percent of Photoelectric Devices belonged to an offshore company registered in Cyprus called Rayfast Investments. In turn, Rayfast Investments was further owned by the companies Bluebell Investments Trading and Baron Commercial, both registered in Panama. The latter company, Baron Commercial, owned through Rayfast Investments a quarter of the company Photoelectric Devices.

Later, through leaked emails, it was discovered that Baron Commercial was owned by two young men closely related to senior officials, namely Alexander Tarasov and Alexey Beseda. Alexander Tarasov is the son of Victor Tarasov, who was the deputy general of Cyclone, which already owned the other 50 percent of Photoelectronic Devices.<sup>124</sup> The other individual, Alexey Beseda, has a surname that rings a bell for those who have closely followed the war in Ukraine. Alexey Beseda is the son of the FSB General Sergey Beseda, leader of FSB’s Ukraine directorate. Therefore, the failure in the R&D of Russian night visions is likely linked to the corruption of Sergey Beseda. As such, it has become apparent that Sergey Beseda is a figure that seemingly can be connected to the outcome of military failure in North Ukraine, of whom corruption I will further outline later with the purchase of “Dead Souls” and intelligence failure in Ukraine (Ch. 4.2.3.3). In 2016, three years after the contract was handed out, Alexey Beseda

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<sup>123</sup> Weinberger, S. (2015, May 28). *Hacked Emails Reveal Russian Plans To Obtain Sensitive Western Tech*. Retrieved from The Intercept: <https://theintercept.com/2015/05/28/u-s-cyber-firm-alleges-hacked-emails-reveal-russian-front-operation/>

Allegedly, Cyclone tried to hide its military links — since Cyclone is known as a military supplier — by changing its name to Photoelectric Devices LLC, making it easier to import Western components.

<sup>124</sup> Shmagun, O., & Anin, R. (2018, June 26). *Secret Deals Undermined Tech Firm Working for Russian Military*. Retrieved from OCCRP: <https://www.occrp.org/en/investigations/8252-secret-deals-undermined-tech-firm-working-for-russian-military>

suddenly became the sole owner of Rayfast Investments.<sup>125</sup> As such, the son of the FSB general now owned half of Photoelectric Devices, a company worth millions of rubles. To exacerbate the corruption tied to the Beseda-family, the Russian newspaper Vedomosti reported that at the age of just 26, Alexey Beseda had acquired two luxury homes with 4.3 hectares of valuable land in the Moscow region. He lived beside neighbors of huge and influential state firms, including the president of Transneft, the head of Rostec, and the head of Russian Railways.<sup>126</sup> On top of that, the board of directors of Photoelectronic Devices had a man named Roman Rogozin from the moment of its founding. Roman is evidently the nephew of Dmitry Rogozin, the deputy prime minister who was responsible for overseeing the state contract in the first place.

Ultimately, the R&D project for the new Russian night vision failed, not domestically mass-producing thermal sensors— leading to a waste of hundreds of millions of rubles that had been invested from state funds. The use of shell companies for corruption in the R&D of night vision tied to the Beseda- and Rogozin families is summarized in the figure below. All the shell companies are not included to make the figure more comprehensible. In sum, the R&D of night vision goggles is a telling example of how shell companies are employed for corruption in public-private partnerships within the Putin regime.<sup>127</sup> What is striking about this major corruption at the political level is that both Sergey Beseda and Dmitry Rogozin continued in highly influential jobs within the Russian state apparatus, despite their corruption and failure to produce night vision uncovered for the public. Missing the target by miles in creating the sensors within 2013, which Dmitry Rogozin perhaps bombastically stated on Russia 24 national television channel.<sup>128</sup>

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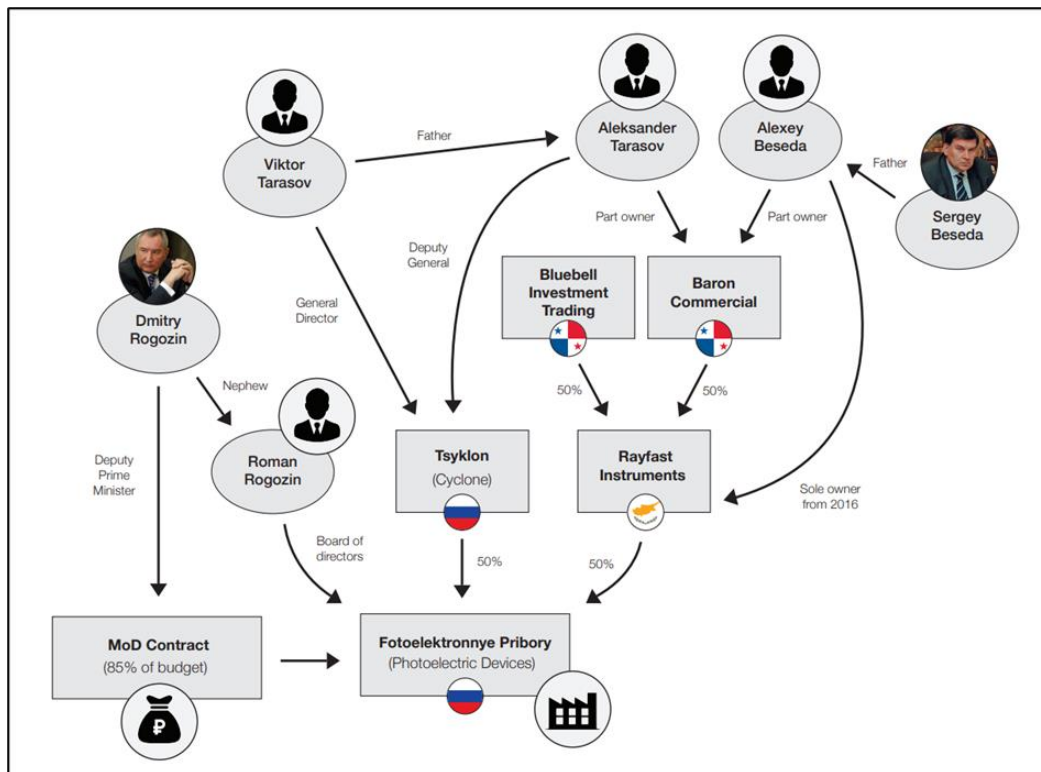
<sup>125</sup> Ibid. Shmagun, O., & Anin, R. (2018, June 26).

<sup>126</sup> Shleynov, R., & Vinogradova, E. (2013, July 1). *На берегах Злодейки*. Retrieved from Vedomosti: <https://www.vedomosti.ru/newspaper/articles/2013/07/01/na-beregah-zlodejki>

<sup>127</sup> Interestingly, in the original report of the “FSB Cyclone Operation” that first discussed the leaked emails. The same Leonid Reiman, connected to Angstrom, is referred to as: “The Russian poster boy for corruption techniques using Russian company ownership moved offshore and obfuscated through multiple layers for money laundering, capital flight, and tax avoidance.”

Source: Taia Global. (2015). *(JSC CRI) Cyclone: Exposing an FSB Technology Transfer Operation*. Vancouver: Taia Global Inc. Retrieved from <https://www.documentcloud.org/documents/2089227-fsb-cyclone-operation> pp. 6 -7.

<sup>128</sup> Shmagun, O., & Anin, R. (2018, June 26). *Secret Deals Undermined Tech Firm Working for Russian Military*. Retrieved from OCCRP.



**Figure 5: The use of shell companies for corruption in strategic procurements<sup>129</sup>**

With the lack of adequate night vision tied to corruption, accompanied by Western sanctions, the Russian procurement system turned to illegal imports from the West. As such, in June 2021, five individuals were charged in a scheme to export thermal imaging scopes and night vision goggles to Russia. Charged with conspiring to violate the Arms Export Control Act by the US Justice Department and risks facing up to 20 years in federal prison if convicted. The scheme had gone on for nearly four years, in which the defendants purchased dozens of thermal imaging devices, most of which cost between \$5,000 and \$10,000. Three of the individuals charged were of Russian origin. Who allegedly obtained many of the items using aliases, falsely assuring the sellers they would not export the items from the United States. The thermal imaging devices were then shipped to co-conspirators in Russia using aliases and false addresses to conceal their activities.<sup>130</sup> Besides the severeness of the illegal import, the act must

<sup>129</sup> Figure created using data from: Shmagun, O., & Anin, R. (2018, June 26). *Secret Deals Undermined Tech Firm Working for Russian Military*. Retrieved from OCCRP.

Picture of Dmitry Rogozin, taken by Mikael Svetlov, extracted from: <https://www.newsweek.com/dmitry-rogozin-putin-roscosmos-fired-1725447>

<sup>130</sup> The United States Department of Justice (2021, June 21). *Five Charged in Scheme to Export Thermal Imaging Scopes and Night Vision Goggles to Russia, in Violation of Arms Export Control Act*. Retrieved from The United States Department of Justice: <https://www.justice.gov/opa/pr/five-charged-scheme-export-thermal-imaging-scopes-and-night-vision-goggles-russia-violation>

also be understood to indicate the undersupply of sufficient night vision goggles within the Russian Armed Forces. Which the Russian government is willing to use considerable resources with professionalized personnel to attain them from the West.

Today night vision is essential for any modern warfare. Compared to Western forces, Russia does not routinely issue night-vision gear to dismounted troops. Only a select few special forces and reconnaissance units receive the equipment.<sup>131</sup> The war in Ukraine clarified that the Russians lacked adequate night vision in the initial launch toward Kyiv. The Russian soldiers who were lucky to have night vision still had inferior night vision compared with their Ukrainian counterparts. For example, the US donated a batch of 2,500-night vision goggles in 2018, which was enough to equip at least ten army battalions for nighttime warfare.<sup>132</sup> Not to forget that the firing unit of the portable Javelin missile includes a thermal imager that can magnify objects nine-fold, which is still useful after all the missiles are expended. Hence, the lack of night vision had operational implications for the Russian Armed Forces moving towards Kyiv, as they were limited to mainly conducting offensive operations in the daytime. In late February, there is only effective sunlight for almost 12 hours in Kyiv, meaning the Russians could only conduct large-scale attacks half of the day. This restriction led to crucial time lost for the initial “Blitzkrieg” phase, decreasing the speed of the Russian advancement and not fully utilizing the initial “shock effect” of the unexpected attack in North Ukraine.

On top of that, given that large-scale operations are limited to half of the day, it also makes the Russian Army more predictable. The relative disadvantage means that the Ukrainian Forces can rest, re-group and restock during the night, as the Russians are unlikely to conduct large-scale attacks and have an operational advantage when conducting counterattacks at night. While also making the Russian commanders dependent on fighting the old-fashioned way at night, lighting up the battlefield with flares and star shells. Curiously, although the Russian Army vastly outspends the Ukrainian Army monetarily, it does not have sufficient resources to issue every soldier with the latest military equipment, like night vision, deemed necessary for modern warfare.

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<sup>131</sup> The Economist. (2022, April 14). *Why Russian forces can't match Ukraine's night-vision equipment*. Retrieved from The Economist: <https://www.economist.com/the-economist-explains/2022/04/14/why-russian-forces-cant-match-ukraines-night-vision-equipment>

<sup>132</sup> Ponomarenko, I. (2018, February 14). *US donates 2,500 night-vision devices to Ukraine's Armed Forces*. Retrieved from Kyiv Post: <https://www.kyivpost.com/post/7884>

## Corruption Phase 0: R&D - ROSCOSMOS and the GLONASS program

In May 2018, the same Dmitry Rogozin connected to the corruption of the night vision was appointed director general of Roscosmos, a state corporation overseeing the Russian space program. Part of Roscosmos space program is the Global Navigation Satellite System (GLONASS), providing a satellite navigation system equivalent to the America-produced GPS or the European Galilea systems. GLONASS is a system that has existed since the Soviet era but requires regular maintenance and modernization to meet military developments. The system has therefore received considerable R&D funding to develop and maintain its navigational maps – providing real-time positioning and velocity determination for both military and civilian users. As such, GLONASS has been a cornerstone of the Russian space program, being the most expensive program of Roscosmos, consuming a third of its budget in 2010.<sup>133</sup> Before Rogozin was appointed general director of Roscosmos, GLONASS had suffered from severe corruption. In 2012, the Russian MoD reportedly refused to adopt GLONASS as part of the military GPS due to its technical shortcomings. Anchored in that one of the system's 24 satellites malfunctioned, and the modernized GLONASS system was still in its testing phase planned to be completed at the end of 2012.<sup>134</sup> Later that year, it became clear that the modernization of GLONASS was not being met, especially when the inspector of Roscosmos uncovered several violations in the use of budgetary funds allocated to the R&D and maintenance of GLONASS. The investigators concluded that 6.5 billion rubles (over \$200 million) were embezzled from the funds, using schemes including “*fly-by-night*” companies.<sup>135</sup> As a result of the corruption scandal, the leader of the Russian Space Program, Yury Urlichich, was sacked from his post as general director of GLONASS in 2012.<sup>136</sup>

Interestingly, in evidence discovered from Russian operations in Ukraine and Syria, it appears that the corruption followed Dmitry Rogozin to the new organization he was taking leadership of. Recent photos from Russian cockpits indicate that it is highly likely that the

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<sup>133</sup> Camacho-Lara, S. (2013). *Current and Future GNSS and Their Augmentation Systems*. In S. Madry, & S. Camacho-Lara, Handbook of Satellite Applications. Springer, New York, NY.

<sup>134</sup> Russia Today. (2012, December 22). *Russian military's support of GLONASS on ice after corruption scandal, technical failures - report*. Retrieved from Russia Today (RT): <https://www.rt.com/news/russia-glonass-corruption-failure-543/>

<sup>135</sup> *Fly-by-night companies* = companies that cannot be trusted because they are likely to get into debt and close down the business to avoid paying the debts or meeting the satisfying agreements. Existing for a short time only to make quick profits. This can, alongside shell companies, be understood as a measure of corruption mainly available for the political elite at the political level.

<sup>136</sup> The Moscow Times. (2012, November 19). *Director of Glonass Contractor Sacked Over Corruption Scandal*. Retrieved from The Moscow Times: <https://www.themoscowtimes.com/2012/11/19/director-of-glonass-contractor-sacked-over-corruption-scandal-a19492>

Russian Air Force is not satisfied with the state of the GLONASS as a guiding tool because it is too inaccurate. Images taken from Russian cockpits have shown commercial GPSs attached, mainly connected to the American company Garmin. In the left picture below, taken from the cockpit of a SU-34 in Syria, one can observe a ‘Garmin eTrex Legend HCx,’ sold for \$100 on Amazon.<sup>137</sup> Or a ‘Garmin GPSMAP 276C’ in the right picture below, taken from a SU-25SM3 at an unknown location in 2021, sold for approximately \$600 online.<sup>138</sup> The bottom picture below is from a SU-25SM3 flying over Ukraine with a ‘Garmin GPSMAP 65’ attached to its cockpit, selling for \$350 on Amazon.<sup>139</sup> These pictures give clear indications that Russian pilots are reliant on Western Garmin GPS systems instead of their own GLONASS.



**Picture 4: Russian pilots using Garmin-GPS for navigation<sup>140</sup>**

<sup>137</sup> Link to Garmin eTrex Legend HCx, sold on Amazon: <https://www.amazon.com/Garmin-eTrex-Legend-Personal-Navigator/dp/B000PDR27G?th=1>

<sup>138</sup> Link to Garmin GPSMAP 276C, sold on Amazon: <https://www.amazon.com/Garmin-GPSMAP-276C-GPS-Receiver/dp/B0001MALWY?th=1>

<sup>139</sup> Link to Garmin GPSMAP 65, sold on Amazon: <https://www.amazon.com/Garmin-Navigator-Satellite-Multi-Band-Rechargeable/dp/B08KTYTW86>

<sup>140</sup> Link to first left picture, from SU-34: Finnerty, R. (2022, May 13). *Russian pilots in Ukraine using insecure, non-military navigation equipment: UK defence secretary*. Retrieved from FlightGlobal:

Alongside, the pictures cast doubt on the numerous Russian official analysis that has praised the “exceptionally high precision” of the GLONASS system. For example, the Moscow-based Center for Analysis of Strategies and Technologies (CASS) argued after operations in Syria that GLONASS allowed the Russian military to form a unique “ecosystem” of combined arms, which in many respects minimized Russian combat casualties and enabled “the delivery of high-precision strikes against terrorists.”<sup>141</sup> Which included deliveries from aircraft and Kalibr-NK cruise missiles, both of which have seen a large quantum used in Ukraine. However, the pictures make one ponder if the GLONASS truly is that precise; why is there still popping up evidence of Russian cockpits with American made GPS-systems?

The lack of Russian GPS adapted for fighter jets may cause significant problems with navigation for Russian pilots. Evidence has further been substantiated by reports from the Ukrainians who have downed Russian aircraft with basic GPS devices taped to the dashboard because they cannot rely on their fighter jets’ inbuilt navigation systems.<sup>142</sup> Due to the poor quality of their systems, likely linked to the failed modernization of the GLONASS system. Where British Defense Minister Ben Wallace stated in May 2022 that: American GPS receivers had been found taped to the dashboards of downed Russian Su-34s, so the pilots knew where they were. According to Wallace, it is even evidence of downed fighter jets being found with paper maps that date back to the 1980s.<sup>143</sup> Or, while questioning a shot down Russian fighter pilot, Major Andrey Fedorchukov, captured on June 18, 2022, it turned out that he had a Garmin navigator and a smartphone with the ProNebo software (an open access GPS navigation app). Allegedly, he used the app and GPS to attain more accurate navigation than the onboard navigation aids of the Russian Aerospace Force, underlining that pilots do not trust their GLONASS positioning, everyone prefers to use American GPS instead.<sup>144</sup> Indeed, Russian

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[https://www.flightglobal.com/fixed-wing/russian-pilots-in-ukraine-using-insecure-non-military-navigation-equipment-uk-defence-secretary/148656.article](https://www.flightglobal.com/flightglobal.com/flightglobal.com/flightglobal.com/fixed-wing/russian-pilots-in-ukraine-using-insecure-non-military-navigation-equipment-uk-defence-secretary/148656.article)

Link to right picture, from SU-25SM3, Retrieved from VK: [https://vk.com/wall-123538639\\_1943674](https://vk.com/wall-123538639_1943674)

Link to bottom picture, taken at 1:06 in video of SU-25SM3. Retrieved from Twitter:

[https://twitter.com/orko\\_8/status/1531531882600488960?s=20&t=K8XfB9DD1\\_Ms5uRFG1TJw](https://twitter.com/orko_8/status/1531531882600488960?s=20&t=K8XfB9DD1_Ms5uRFG1TJw)

<sup>141</sup> Nikolsky, A. (2017, March 1). «Глонасс» и Силы спецопераций – причины военных успехов России в Сирии. Retrieved from Vedemosti: <https://www.vedomosti.ru/politics/articles/2017/03/01/679434-glonass-spetsoperatsi>

<sup>142</sup> Jewers, C. (2022, May 10). *Russian pilots are taping basic GPS devices to their dashboards in Ukraine because they cannot rely on 'poor quality' inbuilt navigation systems, UK's defence minister reveals*. Retrieved from The Daily Mail: <https://www.dailymail.co.uk/news/article-10802319/Ben-Wallace-Russian-pilots-taping-basic-GPS-devices-dashboards-Ukraine.html>

<sup>143</sup> Ibid.

<sup>144</sup> Global Defense Corp. (2022, June 21). *Russia Exposed: Captured Russian Pilots Admit That RuAF Distributed Garmin GPS and Pronebo Mobile App to Navigate in Ukraine*. Retrieved from Global Defense Corp:

pilots appear to be resorting to cellphones or tablets when they conduct missions over Ukraine. A cellphone/tablet can be observed in the first picture below, taken from the cockpit of a Russian SU-25SM3 conducting an attack over Ukraine, which perhaps relied on the ProNebo app for navigation:



**Picture 5: Possible Smartphone and blurred device on Russian Su-25SM3<sup>145</sup>**

After receiving mockery and heavy critique on Telegram for using cellphones and Garmin GPS, the Russian MoD later released the video officially, but blurring the part of the cockpit to the pilot's left shown in the bottom picture. Because of its inaccuracy, it is evident that the Russian Air Force is not using its own GLONASS, but instead relying on Western GPS systems to coordinate their attacks over Ukraine. Not to forget that these Garmin GPS systems also

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<https://www.globaldefensecorp.com/2022/06/21/exposed-captured-russian-pilots-admit-that-russian-air-force-distributed-garmin-gps-and-pronebo-mobile-app-to-navigate-in-ukraine/>

<sup>145</sup> Link to the first picture, taken from a SU-25SM3 using a Garmin GPS device. Retrieved from Telegram: [https://t.me/fighter\\_bomber/7435](https://t.me/fighter_bomber/7435)

Link to the second picture, taken from a SU-25SM3. Retrieved from Twitter: Retrieved from Twitter: [https://twitter.com/orko\\_8/status/1531531882600488960?s=20&t=K8Xfb9DD1\\_Ms5uRFG1TJw](https://twitter.com/orko_8/status/1531531882600488960?s=20&t=K8Xfb9DD1_Ms5uRFG1TJw)



have been found in attack aircrafts, fighter bombers, and attack helicopters.<sup>146</sup> The lack of sufficient GPS is likely hampering combined arms maneuvers and increases the chance of imprecise bombing by missiles. Besides, inaccurate global positioning data would also explain, to some extent, the Russian heavy reliance on unguided munitions, as their inadequate global positioning system affects the guidance systems of missiles. The GLONASS constellation is most effective at the north and the south pole, where the chance of erroneous data increases as one approaches the equator, making GLONASS targeting particularly ineffective in the Middle East, Africa, and South-East Asia.<sup>147</sup> Eventually, the inaccuracy leads to unnecessary havoc in urban areas of Ukraine, as pilots must resort to mass indiscriminate barrages, and Kalibr cruise missiles have minor, but significant inaccuracies in their targeting.

The Kalibr cruise missiles have been widely used in Ukraine, launched from ships, submarines, or fighter planes. The cruise missile has a substantial cost of about \$5 million to \$6 million in retail price. Moreover, the missiles have two guidance systems. The first is fully autonomous, and the second is controlled by GPS and GLONASS, with its possible inaccuracies.<sup>148</sup> This substantiates why various Russian missiles were experiencing failure rates of 20 to 60 percent to hit targets in Ukraine.<sup>149</sup> Part of this high failure rate can be explained by the fact that Russia opted for anti-ship missiles (Kh-22 ‘Kitchen,’ P-800 ‘Oniks’) and anti-air missiles (S-300VM, S-300V1) when their stockpile of missiles in the land-attack role started to run low.<sup>150</sup> Still, the erroneous data from GLONASS may explain the Russian Air Force’s underperformance in Ukraine, as missiles were ineffective in taking out the

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<sup>146</sup> Global Defense Corp. (2022, June 21). *Russia Exposed: Captured Russian Pilots Admit That RuAF Distributed Garmin GPS and Pronebo Mobile App to Navigate in Ukraine.*

<sup>147</sup> Global Defense Corp. (2023, July 23). *Here’s Why, The Russian Kalibr Cruise Missiles Hitting Beach Toilet, and Pilots are using Garmin GPS Navigator.* Retrieved from GDC:

<https://www.globaldefensecorp.com/2022/07/23/heres-why-the-russian-kalibr-cruise-missiles-hitting-the-beach-toilet-and-pilots-are-using-garmin-gps-navigator/>

<sup>148</sup> Techjournalist. (2022, October 1). *How Kalibr missiles could determine the outcome of the Ukraine war.*

Retrieved from Tech Journalism: <https://techjournalism.medium.com/how-kalibr-missiles-could-determine-the-outcome-of-the-ukraine-war-47b71a3b6f87>

This source also stressed that more than 60 percent of Russian cruise missiles miss targets, according to NATO statistics. Although the article gives a thorough analysis, I have yet to be able to trace this statistic.

High accuracy can also be achieved with laser pointers on the ground (JTAC), which requires the presence of Russian collaborators/agents.

<sup>149</sup> Schneider, M. B. (2022, October). *Lessons from Russian Missile Performance in Ukraine.* Retrieved from U.S. Naval Institute: <https://www.usni.org/magazines/proceedings/2022/october/lessons-russian-missile-performance-ukraine>

Failure was defined as the inability to launch or hit the target, not including missiles that did not explode when they hit targets.

<sup>150</sup> Bronk, J., Reynolds, N., & Watling, J. (2022, November 7). *The Russian Air War and Ukrainian Requirements for Air Defence*, p. 31.

Ukrainian Air Force and air defense.<sup>151</sup> Making it difficult for the Russian Air Force to gain total air superiority in North Ukraine in the initial phase, which led to Russian fighter pilots having to operate in a risk-averse style and rarely penetrating deep behind Ukrainian lines. The failure to gain air superiority also illuminates the Moscow CASS beforementioned possible flawed analysis of the operation in Syria, as “Russia’s air combat training has highly likely been heavily scripted and designed to impress senior officials, rather than to develop dynamic initiatives amongst aircrews.”<sup>152</sup> While the Russians quickly gained air superiority in South Ukraine, this was not the case for the North.<sup>153</sup> Which caused a higher weight of effort falling to the ground troops in North Ukraine, who were becoming increasingly exhausted.

In total, the insufficiency of the GLONASS is connected to years of corruption in its R&D program tracing back to early 2000. Therefore, the corruption in ROSCOSMOS is a major explanation for why the Kremlin has been unable to maintain the space industry that was a source of immense pride during the Soviet Union, recently suffering from a series of humiliating failures. It is not unthinkable that Rogozin’s attitude towards corruption, tied to the R&D of Russian night vision goggles, followed him when he became head of ROSCOSMOS in 2018. Where he enhanced or rather did not seek to solve the current corruption problem in the organization he inherited. It is also possible that the corruption he inherited was too vast to grapple with. Nonetheless, the corruption maintained in ROSCOSMOS, as Alexander Bastrykin, the head of Russia’s Investigative Committee, stressed in May 2019: “Billions [of rubles] are being stolen there, billions.” Adding that investigations into corruption at ROSCOSMOS have been ongoing “for around five years, and there is no end in sight [of the corruption].”<sup>154</sup> Including the multimillion-dollar construction of the new Vostochny Cosmodrome in the Far East, a facility meant to become a crowning jewel of Russia’s space program. The Kremlin itself estimated that 11 billion rubles (\$150 million) of the 91 billion rubles allocated for Vostochny had been stolen by officials in the company, leading to failure

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<sup>151</sup> Most of the reason Ukrainian air defense capabilities survived the initial phase is connected to urgent warnings from partner states, which allowed them to relocate most of their mobile air-defense systems shortly before the first wave of missiles struck their positions. of Russian missiles. Source: Ibid. p. 26.

<sup>152</sup> The British Ministry of Defence. (2022, May 2). *Latest Defence Intelligence update on the situation in Ukraine - 2 May 2022*. Retrieved from Twitter: <https://twitter.com/defencehq/status/1520987841702080512>

<sup>153</sup> Zabrodskiy, M., Watling, J., Danylyuk, O., & Reynolds, N. (2022, November 2022). *Preliminary Lessons in Conventional Warfighting from Russia’s Invasion of Ukraine: February–July 2022*, p. 34.

<sup>154</sup> Phys.org. (2019, May 28). *Russian space sector plagued by astronomical corruption*. Retrieved from Phys.org: <https://phys.org/news/2019-05-russian-space-sector-plagued-astronomical.html>

in its development.<sup>155</sup> On top of that, the lack of modernization of Russia's satellite program had likely damaging consequences for the insufficient battle damage assessment (BDA), which proved to be a critical weakness in the initial phase of the war. Here it appears to be an overestimation of Russia's technical capabilities, as the Russian Armed Forces had little to no reliance on imagery intelligence (IMINT) from satellites that could find and confirm targets. Such as the Russian military's inability to detect on time a significant volume of strategic railway movements by the Ukrainian forces, which, in March 2022, amounted to three–four echelons per day – providing critical military equipment to stall the attack on Kyiv.<sup>156</sup> Or being highly vulnerable to Ukrainian deception, leading to a considerable wastage of ammunition.<sup>157</sup>

In sum, the pervasive corruption within ROSCOSMOS makes one ponder why Putin appointed an individual with a history of corruption to the leader of an organization already drowning in corruption. But as we observed earlier, “corruption” is a cornerstone of the power dynamics at the political level in Russia. Despite that, notwithstanding the steady stream of critical reports about alleged corruption in ROSCOSMOS and military failure in Ukraine, Dmitry Rogozin was eventually replaced in July 2022.<sup>158</sup> Putting another barrage to the bulge of ROSCOSMOS's and the Russian space program's reputation, which has been steadily dwindling since the Soviet era.

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<sup>155</sup> Roth, A. (2019, November 22). *Russia cracks down on spaceport mega-project mired in corruption*. Retrieved from The Guardian: <https://www.theguardian.com/world/2019/nov/22/russia-launches-crackdown-on-spaceport-corruption-vostochny-cosmodrome>

<sup>156</sup> Zabrodskyi, M., Watling, J., Danylyuk, O., & Reynolds, N. (2022, November 2022). *Preliminary Lessons in Conventional Warfighting from Russia's Invasion of Ukraine: February–July 2022*, p. 25.

The lack of IMINT from Russian satellites is substantiated by the fact that the Russian Aerospace Forces began buying additional satellite images of the territory of Ukraine and individual military facilities on the world market in April 2022. (Ibid. p. 25)

<sup>157</sup> Ibid. p. 26.

<sup>158</sup> Eckel, M. (2022, July 15). *Controversial Director Of Russian Space Agency Dismissed By Kremlin*. Retrieved from RadioFreeEurope RadioLiberty: <https://www.rferl.org/a/kremlin-dismisses-controversial-director-russian-space-agency/31945264.html>

## Phase 1: Procurement, Phase 2: Production & Ordering – Rupturing tires

Moving further along the model of strategic procurements, brings us next to ‘Phase 1: Procurement’. At this stage, there is a gradual transition between the political- and high-ranking officer levels within the corruption chain. Where Russian officials inside the MoD ask the question of, which product should be prioritized after the R&D process. Should one pursue a completely new product or “upgrade” an old Soviet model? It is tempting if corruption allows it to choose the cheaper product, pocketing the cost difference. For example, stealing \$6000 per unit for a product that on paper costs \$30,000 per unit. Or give the contract to people with whom the higher-ups have shareholdings, or their family is linked to. After the decision of the chosen product is made, it is time to start the production of a set quota in the order. Then, bringing the intended product over to ‘Phase 2: Production & Ordering’. Here, the primary possibility for corruption is to cut a deal with the producer or divert the funds.<sup>159</sup> For example, using cheaper input factors in the production process or paying the manufacturer for not producing the agreed quota from the MoD, embezzling the difference. As such, the money is still being spent and goes straight into the senior commander’s pocket, replacing the modern gear with older Soviet gear or cheaper and dysfunctional gear to fill the quota. Leading to that all the promised modern equipment never makes it to the unit, either because the equipment does not exist or because it is dysfunctional. The main difference between ‘Phase 1’ and ‘Phase 2’ is that the former is a decision conducted within the MoD, while in ‘Phase 2’, the corruption opportunities have moved to the manufacturers who will produce the military procurement.

In the initial weeks of the war, it became clear that logistical issues undermined Russia’s war effort due to their vehicles getting bogged down. Reports indicated that a potential explanation for the logistical shortcomings could be traced back to ‘Phases: 1 & 2’ of corrupt defense procurement deals. Mainly because the tires being used by the vehicles had disintegrated, marooning the vehicle and blocking the roads. Starting with ‘Phase 2: Procurement’, from open source intelligence (OSINT) reports during the initial invasion, it became apparent that the tires were Chinese-made, suggesting that the Russian high-level military officers had prioritized the procurement of cheap tires.<sup>160</sup> Saving cash on tires for their

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<sup>159</sup> In Phase 3, cutting a deal with the factory also includes stealing the produced goods. As such, Colonel Alexander Denisov is accused of stealing seven V-92C2 engines that were to have been installed on T-90 tanks. These engines are made in the Chelyabinsk Tractor Plant and are used exclusively in the T-90 and T-72B3 tanks. Source: Kommersant (2023, April 26). *Какой ты, на фиг, танкист?* Retrieved from Kommersant: <https://www.kommersant.ru/doc/5954243>

<sup>160</sup> The Economist. (2022, April 30). *Russia’s army is in a woeful state*. Retrieved from The Economist: <https://www.economist.com/briefing/how-deep-does-the-rot-in-the-russian-army-go/21808989>

trucks and armored vehicles by opting for cheap Chinese alternatives instead of buying more expensive tires that would have withstood the cold temperatures and attrition from the Ukrainian roads. Before the war, Russian state TV channels frequently broadcast how the Russian military has one of the best off-road capabilities in the world. However, those demonstration vehicles were mounted with expensive Michelin tires, not the Chinese-manufactured tires observed in Ukraine.<sup>161</sup>

To compare, NATO vehicles use Michelin XZL tires on their military trucks and armored vehicles. China's equivalent version of these tires is the Yellow Sea YS20, consisting of significantly poorer quality, not constructed for months in cold and muddy terrain. A set of 50 Michelin XZL tires retails on Alibaba at approximately \$36,000, whereas 50 sets of the Chinese equivalent retail at around \$208.<sup>162</sup> The price difference between the premium Michelin XZL tires and the Chinese knock-offs is astonishing, whereas the NATO tires are over 170 times more expensive. This leaves enormous opportunities for corruption in pocketing the difference in the prices for the tire contractors and the defense officials who approved the procurement. The consequence, however, is several pictures of Russian vehicles finding themselves stuck in Ukrainian mud. Disabling some of the Russian Armed Forces' most modern systems, because the vehicles break down before reaching the front. Such as the two Pantsir-S1 SAM observed in the pictures below, potentially leading to a lack of air defense, making your troops more vulnerable to attacks from Bayraktar-drones. Notice also how the right rear tire in the left picture has fallen off completely, likely caused by a rupture:

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<sup>161</sup> Tchantouridze, L. (2022, Summer). *Shoddy clothes. Cheap tires. Missing tank armor. The Russian army battles the endemic corruption of its own country.* Retrieved from Norwich Record | The Alumni Magazine for Norwich University: <https://www.norwich.edu/record/3852-corruption-in-russia-and-the-war-in-ukraine>

<sup>162</sup> Brown, T. (2022, May 1). *'Cheap Chinese tyres bought by corrupt officials' may be to blame for Russian trucks and armoured vehicles getting stuck in the mud in Ukraine.* Retrieved from The Daily Mail : <https://www.dailymail.co.uk/news/article-10772127/Cheap-Chinese-tyres-bought-corrupt-officials-blame-Russias-stalled-advance.html>



**Picture 6: Russian Pantsir-S1 SAM vehicles stuck in the mud after its tires burst<sup>163</sup>**

Later, at ‘Phase 3: Production & Ordering’ of the model, there is evidence of old Soviet tires on Russian vehicles bogged down in Ukraine. This possibly stems from a high-ranking military that has diverted funds or fabricated the production quotas in the procurement order—falsely claiming that the contracted work had been done and pocketing the unused money without doing the work. As such, they are replacing the modern gear with older Soviet gear or cheaper and dysfunctional gear at the manufacturer to fill a quota for “modernization.” Here, photos appeared from the front near Prudianka north of Kharkiv on May 2022, showing tires with obvious cracks and rubber peeling, indicating that these are old tires. In fact, the tires on the BM-21 MLRS (Multiple Launch Rocket System) artillery in the picture below were “Made in

<sup>163</sup> Left picture: Dumskaya. (2022, March 1). *Шестой день широкомасштабного вторжения России: Украина дает отпор врагу (обновляется, фото, видео)*. Retrieved from Dumskaya.net: <https://dumskaya.net/news/shestoy-den-shirokomasshtabnogo-vtorzheniya-ross-160517/>

Right picture: Retrieved from a Twitter video showing other Pantsir-S1 SAM with burst tires from 28<sup>th</sup> February 2022. Source:

[https://twitter.com/kemal\\_115/status/1498328319732981767?s=20&t=JcmoOUS2Cd6eXL7XfhCzg](https://twitter.com/kemal_115/status/1498328319732981767?s=20&t=JcmoOUS2Cd6eXL7XfhCzg)

According to Oryx, three Pantsir S1 vehicles were captured after being abandoned; these are likely two of those. Also, a video of a logistic truck possibly with Chinese-made tires, retrieved from Twitter:

[https://twitter.com/visegrad24/status/1500597046583205889?s=20&t=jRMCbxVP\\_7F14gqP5acZDw](https://twitter.com/visegrad24/status/1500597046583205889?s=20&t=jRMCbxVP_7F14gqP5acZDw)

the USSR.” Meaning that these tires may be older than 32 years, produced before the dissolution of the Soviet Union.<sup>164</sup>



**Picture 7:** Tires on BM-21 Grad MLRS, May 2022, “Made in USSR” marked with a red circle.<sup>165</sup>

The tire ruptures were likely highly problematic for the Russian advancement towards Kyiv. Tire ruptures first hamper the logistics of the operation. Secondly, potential tire ruptures may force the Russian Armed Forces to stick to roads to avoid the risk of losing their vehicles in the muck. There is a substantial operational implication in this. Vehicles left on the road are more exposed to drone attacks and military ambushes. While the lack of roads in Northern Ukraine also prevents operational opportunities in the attacking phase, limiting maneuverability, as the Russians cannot risk using tires off-road in muddy and cold terrain, which becomes even more limiting during the *Rasputitsa* (Mud season). It is also tempting to conclude that this was part of the explanation for the enormous Russian military column on 64 kilometers moving at snail’s pace towards the capitol, observed in the last phase of the Russian attempt to capture

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<sup>164</sup> It is also possible they are younger due to the sudden disintegration of the Soviet Union. It may have taken time before the entire production apparatus of tires could have been rearranged and updated to every detail, leaving the “Made in USSR” mark on for tires produced after the dissolution.

<sup>165</sup> Picture retrieved from Twitter account, Björn Stritzel, chief correspondent for foreign and security policy at German Bild. Posted 1st of May 2022:  
<https://twitter.com/bjoernstritzel/status/1520750841279533059?s=20&t=4BvkbllqRLXWy9XZ1cVEA>

Kyiv.<sup>166</sup> The convoy stood stuck for nearly two weeks, crucially impeding Russian advances in the north, as trucks carrying ammunition, fuel, or food did not reach the frontline.<sup>167</sup> In this line, later reports have concluded that the convoy was, in fact, an “almighty traffic jam” because the Russian vehicles needed to divert to paved roads to avoid the soft ground.<sup>168</sup> Which forced thousands of vehicles to group into a single vulnerable column.

While tracked vehicles might be able to move alongside the road where the terrain is reasonably permissive, tires in general, especially *neglected tires*, will, on the other hand, fail to get through mud and must stick to paved or solid paths not to rupture, as the convoy did. Interestingly, Russian advancement had far more success in capturing territory in southern Ukraine. This area, relative to North Ukraine, has dryer terrain, posing less risk to fragile tires of Chinese or USSR origin. However, the full explanation of tires breaking down can only partially be connected to corruption in strategic procurements. Part of the explanation is likely related to a lack of *maintenance culture* within the Russian Armed Forces. Because leaving tires in direct sunlight for months often causes them to rip. Rubber tires need to be periodically moved to exercise the inflation system and to avoid exposing any one part to continuous sunlight.<sup>169</sup> If not, it increases the chance of them bursting, breaking down, adding to the number of abandoned vehicles the Ukrainians have encountered in various parts of the country. That Russian forces have not conducted basic maintenance is likely another indicator of endemic corruption. Maintenance is costly and can easily be overlooked in peacetime, as skimping maintenance offers opportunities for grafting. Combined are the two pictures above an indication that Russia has lacked a sufficient supply of functional tires in its stretched logistical system, thanks to poor maintenance and institutional corruption that has hindered the advancement of its active vehicles.

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<sup>166</sup> The Economist. (2022, March 4). *Why a huge Russian convoy remains stalled north of Kyiv*. Retrieved from The Economist: <https://www.economist.com/europe/2022/03/04/why-a-huge-russian-convoy-remains-stalled-north-of-kyiv>

<sup>167</sup> Dalsjö, R., Jonsson, M., & Norberg, J. (2022). *A Brutal Examination: Russian Military Capability*. Survival: Global Politics and Strategy, p. 12.

<sup>168</sup> Press, C., & Libet, S. (2023, February 22). *How Russia's 35-mile armoured convoy ended in failure*. Retrieved from BBC News: <https://www.bbc.com/news/world-europe-64664944>

<sup>169</sup> For a more technical analysis of why the tires rupture, please see: <https://twitter.com/TrentTelenko/status/1499164245250002944?s=20&t=lms45pbeHBz1obyM1A4daQ>



## Military Procurements - The Unit Level

In Model 5, after the strategic procurement has been produced, the corruption reaches the unit, which will be elaborated in detail further in Chapter: 4.2.4, 'Lower ranking officer & NCO.' To be short, in 'Phase 3: The Supply Phase', the military products ordered are distributed to the different units within Russia. At this level, the local unit commander or supply officer has gained control of the military equipment. When reaching the unit, the supply officer will seek to sell a large share of the modern equipment, for example, replacing parts of the modern military with more outdated Soviet equipment in the units' supply depot. Still, the local unit officers cannot leave the troops with nothing, as that will raise suspicion. He, therefore, seeks to graft an amount that will not cause legal prosecutions.

After the products are "counted" and placed in their warehouses, weapons storages, and supply depots, the corruption reaches 'Phase 4: 'Distribution to Soldiers' of the model. Here, the Russian soldier finally receives his "brand new" equipment ordered by the MoD and discussed in military news channels. Unfortunately for the Russian soldier, he later discovers that he has received a dysfunctional product of an outdated Soviet model. At that point, after discussing with his comrades, the Russian soldier acknowledges that his superiors likely are crooks all up to high-ranking officer's level. So, why should he not try to sell off some of the unit's equipment for a few extra rubles used for better food and a good time? With that, the Russian soldier decides with his fellow comrades that it is acceptable to "steal everything that isn't nailed." Which eventually accompanies the discrepancy of modern military equipment first ordered by the Russian MoD, and a decay of military vehicles as many of the spare parts and engines have been stolen. This "corruption cycle" continues for years if no structural mechanisms or prosecution is enacted. Then suddenly - likely unexpected to the unit level - the information reaches the local unit, and it turns out you are suddenly going to war; Russia has invaded Ukraine. The dysfunctional, lost, or old Soviet military equipment will be sent with the Russian soldier to 'Phase 5: The Front'. As such, a great share of inadequate military equipment is sent with the Russian units to Ukraine, unknown to the political- and strategic level surrounding Putin - likely affecting the war's outcome.

#### 4.2.2.2 Body armor: Applying all the phases of corruption in military procurements

Piecing together information, one can use Model 5 in applying empirical data on the phases of corruption connected to body armor vests.<sup>170</sup> Starting with the top level of the model – *the strategic procurement*. In 2008 the Military Investigation Department sent to court the criminal case of the former Head of the Supply Department of the Main Missile and Artillery Directorate in the Russian MoD, Major General Valery Znakhurko. He was accused of severe corruption related to fraud, embezzlement, and abuse of power. In 1999, Znakhurko entered into an agreement for the development (Phase 0), procurement (Phase 1), and production (Phase 2) of body armor to the Russian Army with the Moscow diversified company CJSC Artess, that allegedly specialized in the manufacture and sale of civilian clothing. From 1999 to 2005, CJSC Artess sold about 14,000 body armor kits to the army for a total of 203 million rubles. After the first deliveries, the supplied units began complaining about the body armor's poor quality. The suppliers were also dissatisfied, surprised by the discrepancy between the price and the quality of the products. As a result of tests carried out in 2005 by investigators from the Main Military Prosecutor's Office concluded that the bulletproof vests supplied by CJSC Artess were unusable. Accusing Major General Znakhurko of specifically ordering cheap products and appropriating the difference in the price of 93 million rubles – almost half the budget of 203 million rubles.<sup>171</sup> As such, this case reveals how corruption tied to the State Defense Order at the high-ranking officer level led to a complete waste of 110 million rubles produced on dysfunctional body armor. The rest of the money might have disappeared, totaling a complete loss of 203 million rubles in the Russian defense budget.

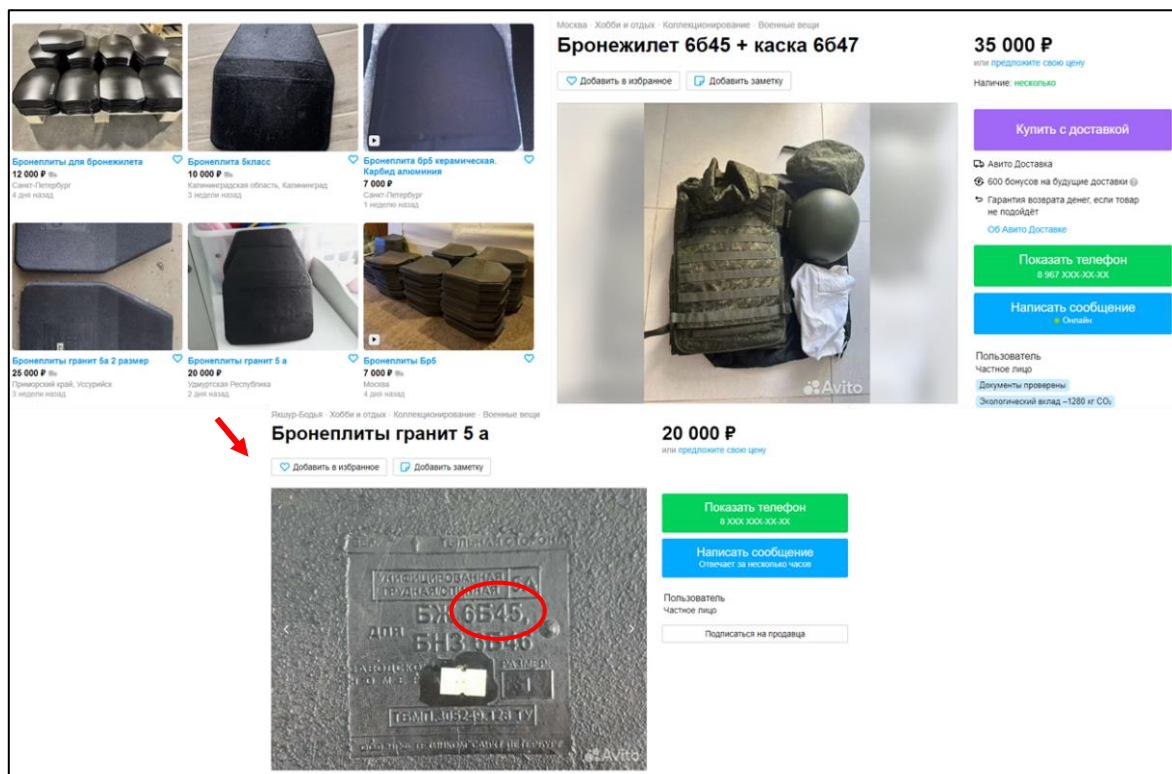
Despite this, some strategic procurement deals breed forth functioning body armor. When the portion of functioning body armor reaches *the unit level*, it leaves new opportunities for corruption. For example, it might be stolen by the supply officer, which characteristics I will elaborate on further under the low-ranking officer level. Reaching 'Phase 3: The Supply Phase', the supply officer will be tempted to steal the functional body armor to make a profit, writing it off the local armory. Or, in 'Phase 4: Distribution to Soldiers', the Russian conscript may seek a petty theft of one or two body armor plates during or after his conscription is over. Luckily for the supply officer or conscript, Russia has a large and unregulated market for body

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<sup>170</sup> More equipment cases within the Russian Armed Forces could also be used in Model 5 – corruption in strategic procurements. An example is Azart, where the R&D (Phase 0) process has been flawed with Angstrom. Generals have further embezzled them, replacing them with cheap Chinese copies (Phase 1 & 2). And finally, one can find Azart radios being sold on Avito (Phase 3 & 4) with a simple search.

<sup>171</sup> Pravo RU. (2008, December 17). *В суд передано уголовное дело бывшего начальника управления снабжения Минобороны РФ*. Retrieved from Pravo.ru: <https://pravo.ru/news/view/5958/>

armor, where their stolen armor may quickly be sold on Avito. From the picture below, extracted from Avito with the search word “бронеплиты” (armor plates), different armor plates are available in large quantities. For example, the Russian Ratnick 6645 (6B45) armor plates are sold for 10,000 rubles (approximately \$150) a piece on average. Also, in the right picture, a full body armor sets with helmets are also readily available at the price of 35,000 rubles (approximately \$500), where the seller markets the product as “brand new”:



Picture 8: Sales of body armor on Avito, 6B45-plate marked with a red circle<sup>172</sup>

Curiously, the Russian government has not made selling body armor illegal in stores or online shops. A measure that would drastically lower the supply of body armor in the private market of military equipment, decreasing the profits and thus the temptation of stealing. As such, in 2021, a Russian captain of the Taman 2nd Guards Motor Rifle Division was convicted and

<sup>172</sup> Both pictures are extracted from Avito on the 18<sup>th</sup> of January 2023. Retrieved from: [бронеплиты - Avito | Объявления во всех регионах: купить вещь, выбрать исполнителя или работу, подобрать недвижимость и транспорт по низкой цене | Avito \(avito.ru\)](https://www.avito.ru/obъявления-во-всех-регионах-купить-вещь-выбрать-исполнителя-или-работу-подобрать-недвижимость-и-транспорт-по-низкой-цене)

The bottom picture of the 6B45 armor plate is from the same advertisement selling two plates for 20,000 rubles, marked with the little red arrow.

sentenced to six years in prison for stealing Ratnick equipment and at least 56 sets of body armor.<sup>173</sup> Who was most likely seeking to reap an extra income on the stolen military equipment, planning to sell it online. On top of that, the law of supply and demand does not help to reduce the scale of corruption tied to body armor. In April 2022, a 6B45 protective vest was worth as much as \$190 when sold online. Since then, demand for military products in Russia has risen sharply because of the war and the large-scale mobilization, more than tripling the prices of the same protective vests, which in October 2022 cost \$640 online.<sup>174, 175</sup> The price increase will further boost the incentives for the supply officer, the conscript, or any other in the supply chain to steal the body armor.

Regardless, when the dysfunctional or non-existing body armor finally reaches the last phase – ‘Phase 5: The Front’. The soldier on the ground is faced with three scenarios. i) He is “lucky” and receives a functioning body armor, ii) He does not receive any body armor at all, as it has been stolen further back in the corruption chain, or iii) He knowingly or unknowingly receives a dysfunctional set of body armor, because some General has made a fraudulent procurement deal during ‘Phase 0: R&D’. If the latter is the case, he will likely not find it out before it is too late. In the picture below, we can clearly see that iii) has been the case, where a Ukrainian soldier has captured two pieces of dysfunctional Russian body armor.

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<sup>173</sup> Tadaev, G., & Lebedeva, E. (2021, February 26). *Офицера российской армии осудили за продажу экипировки «солдата будущего»*. Retrieved from RBC: <https://www.rbc.ru/society/26/02/2021/6038ecdf9a794775b41955ce>

<sup>174</sup> The British Ministry of Defence. (2022, October 15). *Latest Defence Intelligence update on the situation in Ukraine - 15 October 2022*. Retrieved from Twitter: <https://twitter.com/DefenceHQ/status/1581152307101593601?s=20>

<sup>175</sup> It would be highly interesting if one could create a dataset, shown on a graph, that followed the price increase on Russian body armor on Avito from the start of the war until today.



**Picture 8: Dysfunctional Russian body armor captured by Ukrainian soldier<sup>176, 177</sup>**

In the bottom picture, one can see that the plates are not bulletproof at all. Indicating that there likely has been a rigged contract during the strategic procurement phase. Giving the contract to a company with no experience in the type of work required or for work fulfilled only very poorly. The contracted company has likely provided a cheap substitution of steel plates instead of high-tech granite plates. Reaping the economic difference spared, just like the example presented with Major General Valery Znakhurko and the CJSC Artess company. In the video, where the two pictures are extracted, one can even see that the AK-47 round goes clean through

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<sup>176</sup> Both pictures are retrieved from the video: OSINTtechnical. (2022, August 26). *Ukrainian soldiers from the 95th Air Assault Brigade inspect a set of captured ballistic vests*. Retrieved from Twitter:

<https://twitter.com/Osinttechnical/status/1562977443862163458>

According to the video, the body armor is taken from a DNR soldier. The DNR and LNR soldiers are generally worse equipped than soldiers of the Russian Armed Forces, so the type of body armor in the video might not be representative of what is handed out to the Russian soldiers.

Another video with dysfunctional body armor:

<https://twitter.com/osinttechnical/status/1581708111500279808>

<sup>177</sup> Other examples of dysfunctional body armor on Russian soldiers from Crimea, retrieved from Telegram: <https://t.me/Crimeanwind/12441>

two stacked metal plates. That said, some armies use steel inserts in body armor, as they are much less expensive than ceramics, but these are different from the ones shown in the video, as real body armor made of metal is rugged and made of high-grade steel.<sup>178</sup>

Besides, there are reports elsewhere of Russian soldiers in Ukraine that had to resort to crowdsourcing equipment in postings on Russian-language social media sites such as Telegram or VKontakte (VK), increasingly calling for donations to replace their dysfunctional kit.<sup>179</sup> Or a phone call intercepted by the Ukrainian Security Services (SBU) in May 2022, which appeared to show a Russian soldier appealing to his mother to send money so that she could buy her son better body armor. The mother asks her son: “How much do you need? And what kind of equipment?”. “Body armor,” he replies. “It is just that what we have now is terrible.”<sup>180</sup> In addition, according to British Intelligence, many reservists have likely been required to purchase their own 6645 body armor vest, partly explaining the steady price increase since the 24<sup>th</sup> of February 2022.<sup>181</sup> These shortfalls of vital military equipment, such as body armor, likely led to higher casualty rates and fueled poor morale among Russian forces sent to the front. Increasing the chance of soldiers abandoning weaponry and refusing to obey orders. The picture below substantiates that there are even worse examples of fraudulent body armor. Taken from early March 2022, where a Russian soldier of a Barnaul-T C2 armored vehicle met his end, as he unknowingly was wearing body armor made of cardboard (!).

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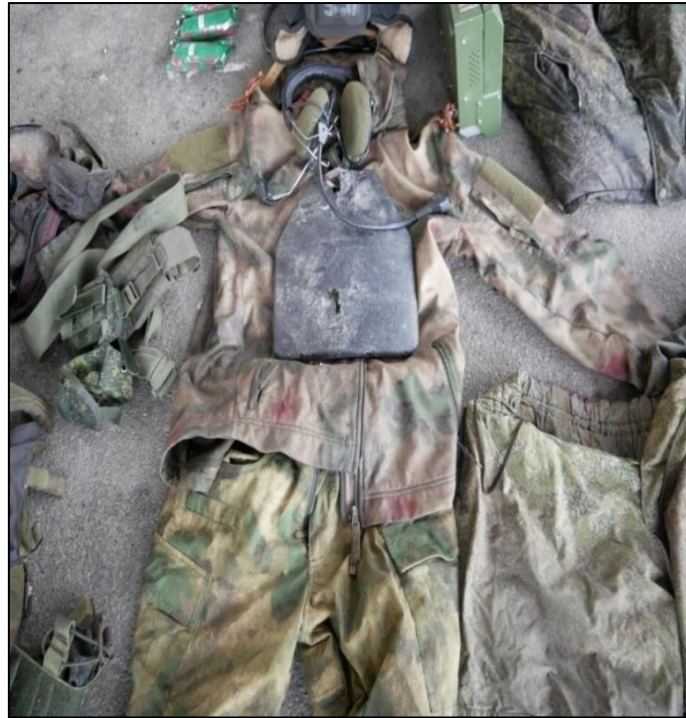
<sup>178</sup> Armor plates made of high-grade steel: <https://www.armorco.com/online-store/AR500-Steel-NIJ-III-10-x12-SAPI-QUAD-Cut-Curved-inserts-p373037673>

<sup>179</sup> Milmo, C. (2022, May 15). *Russian troops in Ukraine resort to crowdsourcing equipment as soldiers ask parents to pay for body armour*. Retrieved from iNews: <https://inews.co.uk/news/russian-troops-in-ukraine-resort-to-crowdsourcing-equipment-as-soldiers-ask-parents-to-pay-for-body-armour-1631682>

Or a crowdfunding post on a pro-Russian channel on VKontakte (VK), asking for donations to body armor: [https://vk.com/public213407036?w=wall-213407036\\_492](https://vk.com/public213407036?w=wall-213407036_492)

<sup>180</sup> Vavra, S. (2022, May 12). *Putin’s Desperate Troops Beg for Parents’ Money to Buy War Gear*. Retrieved from The Daily Beast: <https://www.thedailybeast.com/desperate-russian-troops-plead-for-parents-money-to-buy-better-protective-gear-in-ukraine?ref=scroll>

<sup>181</sup> The British Ministry of Defence. (2022, October 15). *Latest Defence Intelligence update on the situation in Ukraine - 15 October 2022*. Retrieved from Twitter: <https://twitter.com/DefenceHQ/status/1581152307101593601?s=20>



**Picture 9: Russian body armor made of cardboard with bullet holes<sup>182</sup>**

In sum, the corruption connected to all the phases of body armor acquisition is a clear indication of fundamental weaknesses in the Russian military procurement system and a sign of endemic corruption. Showing a severe lack of effective monitoring, accountability, and control, as the body armor is either dysfunctional or siphoned out of the Russian Armed Forces into the private market in several of the phases. This form of corruption is likely affecting Russian troops on the ground in Ukraine, remaining one of the underlying causes of Russia’s poor performance in Ukraine. The example also illuminates how corrupt procurement deals at the top level, can literally have a deadly impact on soldiers on the tactical level who fight at the front. This shortage can be anchored in the price increase of body armor since the war on Avito and mothers of Russian soldiers deployed in Ukraine that had conducted “crowdfunding” to give their children sufficient body armor. It has therefore become evident that the Russian government does not have control of the scale of corruption. As such, in 2020, the Russian authorities announced that 300,000 sets of Ratnick 6645 body armor had been supplied to the

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<sup>182</sup> National Agency on Corruption Prevention. (2022, March 10). *Ukraine’s corruption prevention agency praises Russia’s minister Shoigu for corruption in the army*. Retrieved from NACP: <https://nazk.gov.ua/en/news/ukraine-s-corruption-prevention-agency-praises-russia-s-minister-shoygu-for-corruption-in-the-army-video/>

Russian Armed Forces, which was abundant to equip the force deployed in Ukraine.<sup>183</sup> However, empirical evidence from the war has shown that this clearly was not the case. These body armor sets likely existed on paper, on bills, and in inventories. Still, the 300,000 sets procured by the Russian MoD have apparently not ended up in Ukraine.

#### 4.2.3 Middle-ranking officers:

At the third level of the corruption chain, we find the *mid-ranking officers*, roughly delineated at the military ranks from Colonel to Major. At this level, there still are many opportunities for corruption. You control a unit, and that unit will turn you a profit. At this level, you can no longer influence procurement through fraudulent schemes. So, you are instead focused on selling or diverting what is being procured, which unfortunately yields a lower income than the high-ranking officers at the strategic level. Therefore, your key tactic is signing rigged contracts for your unit, commanding troops which can be used as your private labor force, overseeing bases where you can reap a profit from the equipment, and skimping on exercise funding. Besides, the mid-ranking officer also has the opportunity to steal the men's wages and bonuses, given that they are paid in cash.<sup>184</sup> Or manipulate budget allocations to claim money for non-existent personnel. At the front, it is also possible to delay the death reports of your subordinated troops, declaring them missing after weeks or months, pocketing their income as if they still were alive. The motive among the mid-ranking officers is still the same for the other levels – to reap an extra income – but the room for maneuver to conduct corruption has changed and is often limited to the leadership of a specific military unit.

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<sup>183</sup> MilitaryLeak. (2021, January 3). *Rostec Delivers Almost 300,000 Units of "Ratnik" Combat Equipment to Russian Armed Forces*. Retrieved from MilitaryLeak: <https://militaryleak.com/2021/01/03/rostec-delivers-almost-300000-units-of-ratnik-combat-equipment-to-russian-armed-forces/>

<sup>184</sup> According to British Intelligence, the lack of payment for Russian soldiers deployed in Ukraine partly stems from the corruption among commanders, likely stealing the soldier's payment. Source: The British Ministry of Defence. (2022, September 4). *Latest Defence Intelligence update on the situation in Ukraine - 4 September 2022*. Retrieved from Twitter: <https://twitter.com/DefenceHQ/status/1566285175830478850?s=20>



#### 4.2.3.1 The “Dead Souls” of the Russian Armed Forces

Creating non-existing troops is a historical phenomenon in the Russian forces, referred to as ‘dead souls’ from a classic novel in 1842 by Nikolai Gogol. Here Gogol refers to ‘dead souls’ as the serfs that were no longer living, only existing on paper as fictitious property of the landowner. The ‘dead souls’ could then be bought off the landowner, used as an asset for mortgaging and bank loans to acquire capital like any other chattel.<sup>185</sup> This trick is exactly what the main character Pavel Chichikov uses in his challenging struggle to reach the upper class and become rich. Moreover, Gogol's novel is a historical picture of 19th-century Russia in terms of how small-town life works, the corruption of the institutions, and the collusion (*krugovaya poruka*) among the ruling class. A remark that largely resonates in today's Russia.

Historically, in 1854, *The Economist* newspaper noted how much the Russian forces in the Crimean War were under strength, arguing that “The Russian armies are often armies on paper only.” Underlining that “Not only are their numbers far fewer than are stated in official returns ..., but they are also notoriously ill-provided with everything to the effective action of a soldier.”<sup>186</sup> Earning an extra income on registered soldiers incentivizes the mid-ranking officer to attain a large quantity of fictitious troops in the books and as small as possible of a number on the field. Pocketing the income and the extra rations of the ‘dead souls’ in the difference between the real and fictitious figures. This corruption method was also pointed out in the 1854 *Economist* article, where; “They [The colonels and officers of the commissariat] have an interest in the men being as inadequately fed and clothed as possible – inasmuch as they pocket the difference between the sum *allowed* and the sum *expended* on the soldier rations and accouterments.”<sup>187</sup>

Much has changed since 1854, however, one can still find examples of “dead souls” in modern Russia. As such, the Russian MoD still engages in creative methods of counting the number of servicemen in the armed forces. In 2010 it was set a target of 1 million servicemen, where former Defense Minister Anatoly Serdyukov declared on national TV that the “one

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<sup>185</sup> Gogol, N. (1996). *Dead Souls*. New Haven: Yale University Press.

<sup>186</sup> The\_Economist\_No.581. (1854, October 14). Weekly Commercial Times, p. 2/28

Retrieved from The Economist through Wikipedia:

[https://commons.wikimedia.org/wiki/File:The\\_Economist\\_1854-10-14-Vol\\_12\\_Iss\\_581\\_\(IA\\_sim\\_economist\\_1854-10-14\\_12\\_581\).pdf](https://commons.wikimedia.org/wiki/File:The_Economist_1854-10-14-Vol_12_Iss_581_(IA_sim_economist_1854-10-14_12_581).pdf)

<sup>187</sup> Ibid. p. 2/28

million” goal had been reached the same year.<sup>188</sup> Nevertheless, signs emerged later the same year that this target was not being met. Major-General Evgeny Burdinskiy, the Deputy Chief of Staff for the Joint Strategic Command in the Western Military District, stated that the 2010 fall draft was “fulfilled” by 83 percent, or a shortfall of 55,250 personnel in his district.<sup>189</sup> In the Russian newspaper *Nezavisimoye Voyennoye Obozreniye*, journalist Vladimir Mukhin stressed that the General Staff is now calculating exactly how much the fall draft failed to meet the set goals of one million, suggesting it to be as much as 20 percent lower, which meant that 200,000 soldiers were missing from the military census. Later, defense minister Serdyukov admitted during a closed session of the Duma in December 2010 that the draft requirements were “not being fully met.”<sup>190</sup> As such, in modern times, Gogol’s ‘dead souls’ approach and the tampering of force structures can be understood as an incentive to maximize the cash flow into the armed forces and increase an officer’s personal profit. This possibility is further enhanced by Russian military salaries being largely paid in cash and not transferred to bank accounts. The ‘dead souls’ have serious implications for the level of combat readiness within the Russian Armed Forces and put severe uncertainty for operational officers who combine arms for military operations. At the operational level, the officer is arguably more familiar with the “function” rather than the informal details of a unit, relative to a low-ranking officer. The unreliability lowers the general confidence level for an operation, creating uncertainty about how many ‘dead souls’ or dysfunctional equipment a particular unit possibly has. Where the officer meets the question during the military planning if the assigned unit, in fact, is at full strength, 80 percent combat power, or even less?

#### 4.2.3.2 “Dead Souls” in Battalion Tactical Groups?

The problem of “dead souls” becomes even more critical with the observed lack of the Battalion Tactical Groups’ (BTG) ability to absorb losses. Within the Russian Armed Forces, the BTG formation sees battalions integrated with a full range of supporting sub-units, including armor, reconnaissance, and artillery – where especially the latter is a departure from usual Western practice. The BTG-formation has been a central element for Russian ground forces operations

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<sup>188</sup> Retrieved from Zvezda TV on December 17, 2010, in: McDermott, R. (2011, January 18). *Gogol's "Dead Souls" and Russia's Myth of One Million Men Under Arms*. Retrieved from Jamestown Foundation: Eurasia Daily Monitor Volume 8, Issue 12: <https://jamestown.org/program/gogols-dead-souls-and-russias-myth-of-one-million-men-under-arms/>

<sup>189</sup> Retrieved from *Nezavisimoye Voyennoye Obozreniye* on January 12, 2011, in: McDermott, R. (2011, January 18). *Gogol's "Dead Souls" and Russia's Myth of One Million Men Under Arms*.

<sup>190</sup> McDermott, R. (2011, January 18). *Gogol's "Dead Souls" and Russia's Myth of One Million Men Under Arms*.

in the last ten years, including the initial invasion of Ukraine. At the start of the war, Russia committed over 120 BTGs, which were approximately 65 percent of its entire ground combat strength.<sup>191</sup> Recent data have shown that a BTG, which has lost 30 percent of its initial combat power, with many of its supporting elements still intact, became incapable of executing its assigned tasks. Leading to even more confusion and frustration for Russian commanders into why their operational goals failed for the initial phase.<sup>192, 193</sup> The BTG formation has proven that the battalion staff is insufficient to manage all the assigned enablers. The commander does not know their people, being unfamiliar with the people from the different arms, because the BTG is a composite formation drawing from multiple units - only generated for military operations.<sup>194</sup> This unfamiliarity makes the BTG concept more prone to “dead souls,” increasing the commanders’ difficulty of “knowing” the informal details of an assigned BTG-unit.

The standard Russian BTG structure can be seen in the figure below, consisting of units from different arms, such as (three) motorized rifle companies, an artillery battery, an air defense platoon, and a reconnaissance platoon, to mention some. The three motorized rifle companies are based on one motorized rifle battalion. With its attached units, the size of a full BTG based on motorized rifle battalions is between 700 to 900 soldiers, according to Russian doctrine.<sup>195</sup>

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<sup>191</sup> The British Ministry of Defence. (2022, May 2). *Latest Defence Intelligence update on the situation in Ukraine - 2 May 2022*. Retrieved from Twitter: <https://twitter.com/defencehq/status/1520987841702080512>

<sup>192</sup> Zabrodskiy, M., Watling, J., Danylyuk, O., & Reynolds, N. (2022, November 2022). *Preliminary Lessons in Conventional Warfighting from Russia’s Invasion of Ukraine: February–July 2022*, p. 46.

<sup>193</sup> According to British Intelligence, the BTG concept was likely abandoned in late August 2022. Source: <https://www.kyivpost.com/russias-war/british-defence-intelligence-update-ukraine-29-november-2022.html>

<sup>194</sup> Zabrodskiy, M., Watling, J., Danylyuk, O., & Reynolds, N. (2022, November 2022). *Preliminary Lessons in Conventional Warfighting from Russia’s Invasion of Ukraine: February–July 2022*, p. 46.

<sup>195</sup> Berkowitz, B., & Galocha, A. (2022, March 30). *Why the Russian military is bogged down by logistics in Ukraine*. Retrieved from The Washington Post: <https://www.washingtonpost.com/world/2022/03/30/russia-military-logistics-supply-chain/>

This article also has a great overview of all the vehicles used in a Battalion Tactical Group.

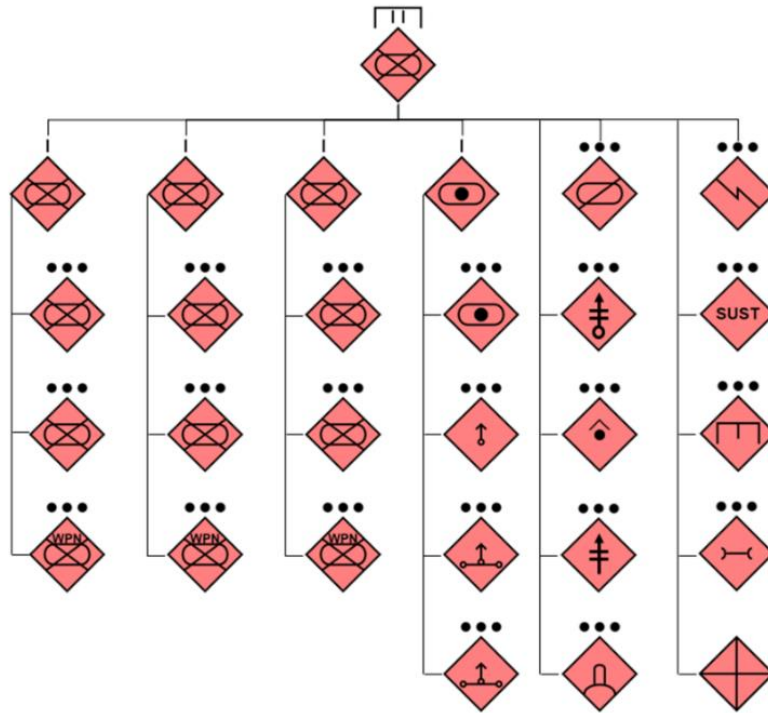


Figure 6: Standard Russian BTG structure<sup>196, 197</sup>

Reports indicate that “dead souls” were a pertinent problem within BTGs for the invasion of Ukraine. Firstly, there is a discrepancy between the 120 BTGs deployed in Ukraine and the declared “170 combat ready BTGs in 2021” that Sergei Shoigu stressed, “[...] were ready for deployment in an hour after an alert signal”.<sup>198</sup> Besides, the BTGs that in fact were deployed in Ukraine appeared to be changed, as the motorized rifle units had seen a reduction in the number of personnel. Instead of 539 to 461 soldiers from the motorized rifle battalions distributed for the three motorized rifle companies in the BTG, they often had only 230 to 280 soldiers, being at 2/3 or ¾ strength from the original numbers.<sup>199</sup> Indicating a clear infantry deficit, and, partly explaining why the BTG formations were brittle to combat losses in the first place. Besides, the lack of motorized rifle infantry gives less availability of dismounted units

<sup>196</sup> Figure retrieved from: Grau, L. (2014, February). *Restructuring the Tactical Russian Army for Unconventional Warfare*. Red Diamond, Fort Leavenworth KS, Volume 5, Issue 2, pp. 4-8.

<sup>197</sup> See the article below for a more modern and extensive explanation of the elements in the BTG structure: Grau, L., & Bartles, C. (2022, April 14). *Getting to Know the Russian Battalion Tactical Group*. Retrieved from RUSI: <https://rusi.org/explore-our-research/publications/commentary/getting-know-russian-battalion-tactical-group>

<sup>198</sup> TASS. (2021, August 10). *Russian Army operates around 170 battalion tactical groups — defense chief*. Retrieved from TASS: <https://tass.com/defense/1324461>

<sup>199</sup> Kofman, M., & Lee, R. (2022, June 2). *Not Built for Purpose: The Russian Military's Ill-Fated Force Design*. Retrieved from War on the Rocks: <https://warontherocks.com/2022/06/not-built-for-purpose-the-russian-militarys-ill-fated-force-design/>

and is expected to have a negative effect on Russia's ability to operate in urban terrain, support the armor with dismounted infantry, and control or seize terrain. Because tanks and armored personnel carriers are highly vulnerable without infantry to protect them from anti-tank teams, armed with rocket-propelled grenades (RPGs), Next-generation Light Anti-tank Weapons (NLAWs), or Stugna-P.

The Russian Army places a huge stock on armored vehicles, but those platforms struggle without infantry. This symbiotic relationship becomes particularly important in urban environments, heavy forests, close fortifications, or mud, where armored vehicles are less mobile, and the view line is limited. As such, the lack of infantry in the BTGs profoundly affected their strategic objective, as the Russian forces that advanced toward Kyiv mainly had to operate in urban terrain. Indicating that the Russian military likely would have been better off with fewer and fully manned BTGs, consisting of sufficient infantry. Naturally, there are variations in the size of the BTGs deployed in Ukraine, some are 900 strong, but many are half that size. Captured documents indicate that the shortfall in personnel is an issue for units related to different military districts. The Southern Military District appears to have the best-manned units on paper, but still suffered from shortfalls in personnel. While the two battalions deployed from the 138<sup>th</sup> Motorized Rifle Brigade in the attack on Kharkiv reportedly had 310 and 226 infantries, and the BTGs formed from these battalions had 666 and 499 personnel, respectively.<sup>200</sup>

Secondly, in 2019, the Russian MoD claimed to have 394,000 contract soldiers, of whom one could expect a significant fraction of these would naturally be deployed in Ukraine.<sup>201</sup> However, shortages of soldiers in the war indicate that there were not that many. In February 2022, US intelligence put the Russian force poised to invade Ukraine at nearly 200,000.<sup>202</sup> But the estimated 169,000 to 190,000 soldiers the Pentagon cited explicitly included personnel from the National Guard and in the two separatist army corps in Donbas, not part of the Russian Armed Forces. The total number of Russian forces in theatre before the invasion was possibly less than 150,000. Some of that total included administrative and conscript personnel assigned to peacetime garrisons in Crimea and Russian Oblasts neighboring Ukraine, not assigned for

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<sup>200</sup> Ibid.

<sup>201</sup> TASS. (2019, March 11). *Nearly 400,000 contractors serve in Russian army*. Retrieved from TASS: <https://tass.com/defense/1048138>

<sup>202</sup> U.S. Mission to the OSCE. (2022, February 18). *U.S. Statement for the Vienna Document Joint PC-FSC Chapter III Meeting*. Retrieved from U.S. Mission to the OSCE: <https://osce.usmission.gov/u-s-statement-for-the-vienna-document-joint-pc-fsc-chapter-iii-meeting-2/>

combat operations.<sup>203</sup> Thus, the Russian MoD's figure of 393,000 contract soldiers and the US 200,000 soldier estimate appears to have been overestimated for the first wave of Russian forces. Likely because the US assessment was mainly based on the specific units stationed at the Ukraine border before the invasion, which had shortfalls in personnel.

Shortfalls in military personnel have likely been a critical weakness when one seeks to occupy Europe's second-largest country and second-largest army. Giving an invasion force that is too small for the task, measured in straight numbers related to the numbers of combat units and combat formations put on the battlefield. According to a rule of thumb for 'force ratio' used by military tacticians, an invading force needs 20 soldiers for every 1,000 of a country's population. For a country the size of Ukraine, that calculation means 880,000 troops - far more than 150,000 troops.<sup>204</sup> That said, it is hard to determine if the lack of soldiers within the units is mainly connected to "dead souls," meager recruitment, or perhaps both. But statements exemplified with Shoigu's "170 combat ready BTG" in 2021 indicate that the senior military leadership may not have known how bad the problem of "dead souls" was. Despite its possible causes, the lack of qualified soldiers, particularly light infantry, used to seize and occupy territory, constitute a second echelon, or replace losses in fighting units (e.g., in the BTG), likely was a contributing factor for the failure to occupy North Ukraine. When commanders at the operational level that received newly formed BTGs right up until the 24<sup>th</sup> of February were left with few options and little time to address the sudden discovery of "rot" in their assigned units.

#### 4.2.3.3 Sergey Beseda's "Dead Souls" in Ukraine?

An even more detrimental example of "dead souls" for the invasion of North Ukraine is allegedly given by Colonel-General Sergey Beseda, head of the Fifth Service, the FSBs Ukraine directorate. Beseda and the Fifth Service were mainly in charge of providing intelligence about the political situation in Ukraine and cultivating political support for the Kremlin in Ukraine.<sup>205</sup> In March 2022, three weeks after the invasion, Beseda and his closest

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<sup>203</sup> Dalsjö, R., Jonsson, M., & Norberg, J. (2022). *A Brutal Examination: Russian Military Capability*. Survival: Global Politics and Strategy, p. 17.

<sup>204</sup> Sly, L. (2022, April 8). *Nine ways Russia botched its invasion of Ukraine*. Retrieved from The Washington Post: <https://www.washingtonpost.com/world/2022/04/08/how-russia-botched-ukraine-invasion/>

<sup>205</sup> Miller, G., & Belton, C. (2022, August 19). *Russia's spies misread Ukraine and misled Kremlin as war loomed*. Retrieved from The Washington Post: <https://www.washingtonpost.com/world/interactive/2022/russia-fsb-intelligence-ukraine-war/>

associates were placed under house arrest and then transferred to the notorious Lefortovo prison in Moscow.<sup>206</sup> The Lefortovo prison is where Stalin's disgraced aides were once held, and it was widely assumed that Beseda was to be left languishing for years in solitary confinement.<sup>207</sup> These imprisonments must therefore be understood as a very negative sanction that may indicate that the leadership in Kremlin was dreadfully dissatisfied with the Fifth Service's performance. While the war rages on, one does not arrest the generals responsible for the strategy, except if something severe has occurred.

The punitive sanctions have generally been assessed in the West to that the Kremlin was dissatisfied with the intelligence assessments that formed the basis of the invasion, understood as a severe *intelligence failure*.<sup>208</sup> This particularly relates to the assessments of President Volodymyr Zelensky's support among the population, which turned out to be stronger than the FSB assumed. But also, misjudgments of the training standard of the Ukrainian forces and the defense will of the population. The news that Sergey Beseda was placed in Lefortovo prison received much attention, many questioning why. Lead investigator of *Bellingcat*, Christo Grozev, reported that the arrest of the FSB associates in March 2022, including Sergey Beseda, had been connected to the billions of rubles that were intended to be spent by the FSB on recruiting an intelligence network within the Ukrainian government, military, security services, and universities to prepare for the war and a coup in Kyiv. Instead, Beseda and his associates within the Fifth Service bought "dead souls" in Ukraine, apparently stealing 90 percent of the funds for themselves.<sup>209</sup>

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<sup>206</sup> Soldatov, A. (2022, April 12). *Why is a Russian Intelligence General in Moscow Lefortovo Prison?* Retrieved from The Moscow Times: <https://www.themoscowtimes.com/2022/04/11/why-is-a-russian-intelligence-general-in-moscow-lefortovo-prison-a77301>

The journalist Andrei Soldatov has allegedly received this information through various personal contacts in the state apparatus, gaining access to important information from the Russian intelligence services.

<sup>207</sup> Soldatov, A., & Borogan, I. (2022, October 14). *Putin Pulls Russian Spy Agency Out of Ukraine*. Retrieved from The Moscow Times: <https://www.themoscowtimes.com/2022/05/12/putin-pulls-russian-spy-agency-out-of-ukraine-a77642>

Beseda supposedly got out of prison later the same year, but that was considered as a means of contributing to the narrative that the "special military operation" was still going "according to plan."

<sup>208</sup> Zabrodskiy, M., Watling, J., Danylyuk, O., & Reynolds, N. (2022, November 2022). *Preliminary Lessons in Conventional Warfighting from Russia's Invasion of Ukraine: February–July 2022*.

<sup>209</sup> Retrieved from YouTube-interview with Christo Grozev, 13. March 2022 - Христо Грозев: «В ФСБ будут чистки»: <https://www.youtube.com/watch?v=MVj-tpgAnaQ>, the percentage is mentioned at 8:05.

Also stressed in Tweet from the same date: <https://twitter.com/akoz33/status/1503092710089052174> Grozev received the information after telephoning the arrested FSB Generals and others within the 5<sup>th</sup> Directorate, who were reportedly under house arrest. When others picked up the phone instead, they provided the information of the reason for their "house arrest."

Hence, the Fifth Service created fictitious human sources (HUMINT) they could reap an income from, for example through fabricated bribes or disbursement receipts. A creative method of corruption, as HUMINT has strict source protection and thus little opportunity for inspection and control by external investigative bodies. That said, this corruption method does not appear to be new, as it is outlined by former KGB Colonel, Oleg Antonovich Gordievsky. After he arrived as a KGB agent in Copenhagen in 1966, he remarked how many of the intelligence officers at the *residentura* ('Soviet residency') spent far more energy on cheating with fabricated disbursement receipts than on actual espionage. Just as in Ukraine, the KGB's responsibility at the time was to nurture contacts, enlist informants and point out possible agents. Gordievsky quickly realized this was an "invitation to corruption" since most intelligence officers made up their connections with the Danes, falsified receipts, made fictitious reports, and pocketed the remuneration. It was particularly striking for Gordievsky that very few of the intelligence staff in Copenhagen were good at Danish, and that some did not speak the language at all.<sup>210</sup> Gordievsky's remark makes one wonder how enormous the historical scope of fictitious HUMINT-sources has been within Soviet and Russian intelligence services. Fundamental in this context is the unanswered question of how many fictitious reports were created by the Fifth Service leading up to the 24<sup>th</sup> of February 2022, and how many of these reports entered the decision-making process for the decision to invade Ukraine.

Eventually, the alleged corruption within FSBs Fifth Service was detrimental to planning the invasions, leading to a non-operational agent network in Kyiv and a lack of intelligence. That ultimately caused many of the Fifth Service's roughly 150 officers to be arrested or "certainly no longer working for the FSB," according to Grozev.<sup>211</sup> In other words, the purge of the FSB's Fifth Service and placement of Beseda and his associates in house arrest and the Lefortovo prison is attributed to corruption causes. Given that the information presented is accurate, it would lead to false assumptions of a swift victory and takeover in Kyiv, which would turn out to be a disastrous assumption for the whole military operation. Mainly because the FSB was the main contributor to the information and contact network in Ukraine that laid

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<sup>210</sup> Macintyre, B. (2019). *The Spy and the Traitor*. Penguin Books Ltd, p. 33.

This form of corruption is also described later in the book after Gordievsky became an agent for MI6 ten years later, in 1974. He explained that the "KGB officers in Copenhagen used much more time to make up contacts (HUMINT sources) to justify their expenses rather than actually meeting someone." p. 89.

<sup>211</sup> Jankowicz, M. (2022, April 12). *Putin purged large numbers of FSB agents in retribution for poor Ukraine intelligence, Russia expert says*. Retrieved from Business Insider: [https://www.businessinsider.com/putin-purges-fsb-over-ukraine-failures-bellingcat-expert-2022-4?utm\\_medium=referral&utm\\_source=yahoo.com&r=US&IR=T](https://www.businessinsider.com/putin-purges-fsb-over-ukraine-failures-bellingcat-expert-2022-4?utm_medium=referral&utm_source=yahoo.com&r=US&IR=T)



the foundation for the military strategy and a falsely assumed "coup in Kyiv."<sup>212</sup> At any rate, there are many indications that the FSB conducted an unsatisfactory job leading up to and including the initial invasion of Ukraine. Another indication of the possible *intelligence failure* connected to corruption, is that the political intelligence for which the FSB was traditionally responsible in Ukraine was transferred to the military intelligence service, GRU.<sup>213</sup> This is also very unusual, which strengthens the opinion that the deliveries from the FSB in the prior planning of the war did not measure up to what was expected.

#### 4.2.3.4 “Private labor force”

Another “corruption method” available for the mid-ranking officer is using soldiers as your private labor force. A practice that has long historical traces back to the Tsar and Soviet era.<sup>214</sup> Some officers have no interest in training conscripts, they instead seek to increase their income. A choice that can be further exacerbated by a lack of funds and limited resources that has earlier been siphoned further up in the corruption chain. An unnamed Russian army-related human rights lawyer describes this as the typical situation for the entire Russian Army. Stressing that conscripts are not prepared for war at all, and military contractors are getting worse and worse at soldiering because military classes and shootings are canceled. Where it seems that people go to the army, but they do housework instead – repairing barracks and cutting the grass. This applies not only to motorized infantry but also to armored forces. As such, a contracted soldier states, “We first enter the tank when the authorities arrive for inspection.”<sup>215</sup> Another soldier in the engineering units of the Russian Army describes how often he saw suitable military equipment and personnel sent to work at civilian construction sites. All the junior personnel worked for free, while the civilian customer of the construction site paid the commander for the work.<sup>216</sup> A form of corruption likely connected to the picture below:

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<sup>212</sup> Miller, G., & Belton, C. (2022, August 19). *Russia’s spies misread Ukraine and misled Kremlin as war loomed*.

<sup>213</sup> Soldatov, A., & Borogan, I. (2022, October 14). *Putin Pulls Russian Spy Agency Out of Ukraine*.

<sup>214</sup> Cockburn, A. (1983). *The Threat Inside the Soviet Military Machine*. London: Hutchinson & Co, pp. 31 – 52.

<sup>215</sup> OCCRP. (2022, April 08). *Самый надежный союзник. Как коррупция в российской армии может спасти Украину*. Retrieved from OCCRP - Organized Crime And Corruption Reporting Project:

<https://www.occrp.org/ru/home/37-ccb/ccb/16181-2022-04-07-16-58-46>

<sup>216</sup> Cranny-Evans, S., & Ivshina, O. (2022, May 12). *Corruption in the Russian Armed Forces*. Retrieved from The Royal United Services Institute (RUSI): <https://rusi.org/explore-our-research/publications/commentary/corruption-russian-armed-forces>



**Picture 10: Russian soldiers help build a parking lot in Volgograd<sup>217</sup>**

Instead of military training, Russian soldiers are put to work on building sites, in fields, and even in factories while the officers higher up in the chain-of-command may turn a blind eye for a cut of the profits. Skimping on exercises leads to a lack of training that also affects soldiers' ability to cope with the physical demands of combat.<sup>218</sup> Furthermore, there exist examples even in Russia's elite forces, exemplified when Russian officer Vladimir Kontonistov of the nuclear missile troops was convicted for hiring out his soldiers to local firms for cash that he then pocketed.<sup>219</sup> Elite units, like the missile forces, are well-paid relative to the Russian Army, where one could expect that it was not "necessary" for officers to hire out their troops to supplement their meager wages. It is therefore a dangerous indication of the overall corruption level within the Russian Armed Forces, as it likely has spread and infected other parts of the armed forces.

The major impact of this conduct, along with the possible skimping on exercises, is the lack of appropriate training for the Russian personnel deployed in Ukraine, as they are instead used

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<sup>217</sup> Photo: Maria Chaseovitinia (2019), retrieved from V1-RU: <https://v1.ru/text/gorod/2019/03/06/66007846/>

<sup>218</sup> From Telegram, we find sources of mobilized Russian soldiers from the Altai region addressing their lack of training, where they had zero shooting, training tactical drills with a wooden stick, and only learned to set a tourniquet after 3 weeks of "training." Source Readovka News: <https://t.me/readovkanews/47261>

<sup>219</sup> Walsh, N. P. (2006, February 3). *Russian officer hired out troops for slave labour*. Retrieved from The Guardian: <https://www.theguardian.com/world/2006/feb/03/russia.nickpatonwalsh>

as a “private labor force.” This situation is naturally not ubiquitous; some formations like the Airborne Troops (VDV), Spetsnaz, and Marine Infantry appear to be well-trained. Reflected in their frequent use and presence at most of the significant Russian breakthroughs in the war.<sup>220</sup> Besides, forced labor is primarily placed on conscripts, which are not found in these elite units.<sup>221</sup> That said, retired Major-General Yuriy Sosedov, the Chairman of the Council of Veterans of the 76th Air Assault Division in Pskov, questioned the declining numbers of contract personnel in the elite units. Sosedov recounted one instance involving an unnamed commander of the Spetsnaz GRU brigade (2nd Guards Separate Special Purpose Brigade) in Pskov, who ordered not to extend contracts to existing personnel but to replace these with drafted soldiers and sergeants after they completed three-month accelerated courses in training sub-units.<sup>222</sup> A decision that cut training expenses in the long run, which would likely save the unit and the commander a substantial amount for pocketing. Despite this, the impact of inadequate training has likely been most significant on units of the Russian Army deployed in Ukraine, reflected in their underperformance.

In sum, the phenomena of “dead souls” and the use of private labor force are attributable to the Russian military's systemic corruption, which has likely affected both the quantity and quality of Russian forces deployed in Ukraine. Indeed, the war suggests that the training, equipping, and recruitment of forces in the past ten to fifteen years yielded neither the quality nor the quantity of forces the Russian MoD had boasted of and that many analysts abroad believed existed.<sup>223</sup> As such, mounting evidence suggests that the use of “dead souls” and a “private labor force” likely are part of the systemic corruption that played a vital role in the drama.

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<sup>220</sup> Zabrodskiy, M., Watling, J., Danylyuk, O., & Reynolds, N. (2022, November 2022). *Preliminary Lessons in Conventional Warfighting from Russia's Invasion of Ukraine: February–July 2022*.

<sup>221</sup> Freeman, S., & Elgin, K. (2022, March 17). *What the use of Russian conscripts tells us about the war in Ukraine*. Retrieved from Politico: <https://www.politico.eu/article/what-the-use-of-russia-conscripts-tells-us-about-the-war-in-ukraine/>

<sup>222</sup> From Nezavisimoye Voyennoye Obozreniye, January 12 2011, in: McDermott, R. (2011, January 18). *Gogol's "Dead Souls" and Russia's Myth of One Million Men Under Arms*. Retrieved from Jamestown Foundation: Eurasia Daily Monitor Volume 8, Issue 12: <https://jamestown.org/program/gogols-dead-souls-and-russias-myth-of-one-million-men-under-arms/>

<sup>223</sup> Beliakova, P. (2022, March 2022). *Russian military's corruption quagmire*. Retrieved from Politico: <https://www.politico.eu/article/russia-military-corruption-quagmire/>



Picture 11: Russian cartoon on the lack of military training<sup>224</sup>

#### 4.2.3.5 Biased Selection of Soldiers

The corruption starts even before a Russian citizen joins the military. In Russia, the issue of conscription is intimately tied up with corruption and the ability of people who control whether a young man serves in the military to extract bribes from his family.<sup>225</sup> Hence, mainly the poor or uneducated “allow” themselves to be conscripted into the Russian Armed Forces. The rest get out of conscription by bribing a doctor or a recruitment officer, found at the mid-ranking officer level. Many middle-class Russians pay up or skip service because of education, but it is significantly harder for people with low incomes.<sup>226</sup> In October 2021, one of the commanders of the military commissariat in St. Petersburg was convicted of corruption, having a price tag for escaping military service at 200,000 rubles (\$2600).<sup>227, 228</sup> Corruption in the recruitment system of selected Russian soldiers leads to a selection bias for the Russian Armed Forces, as

<sup>224</sup> The conscript asks: “Comrade Major! When will they give us automatic weapons?”

Where the Major responds: “As a fighter, are you going to sweep the parade ground with a machine gun?”

Source: <https://dzen.ru/a/YD6gW19rjSb-OPIU>

<sup>225</sup> Makarychev, A. (2008). *Addressing corruption in Russia's civil-military relations*. In R. Orttung, & A. Latta, *Russia's Battle with Crime, Corruption, and Terrorism* (pp. 103-121). New York: Routledge, p. 114.

<sup>226</sup> The Economist. (2022, September 24). *How Russia is conscripting men to fight in Ukraine*. Retrieved from The Economist: <https://www.economist.com/the-economist-explains/2022/09/24/how-russia-is-conscripting-men-to-fight-in-ukraine>

<sup>227</sup> Johansen, P. A., & Wikan, V. S. (2022, July 9). *De lyver, stjeler og sender unge i døden. De er ryggraden i Putins regime*. Retrieved from Aftenposten: <https://www.aftenposten.no/verden/i/7d8yE4/de-lyver-stjeler-og-sender-unge-i-doeden-de-er-ryggraden-i-putins-regime>

Original data: [https://www.dp.ru/a/2021/10/15/Bivshij\\_vrach\\_Gorvoenkomata](https://www.dp.ru/a/2021/10/15/Bivshij_vrach_Gorvoenkomata)

<sup>228</sup> The Telegram Channel *Baza* (April 5, 2023) describes how bribes to escape conscription into the Russian Armed Forces are reported to have almost doubled in cost since the start of the war in Ukraine. The Muscovites must pay the most, \$7,000 to evade conscription and \$19,000 to escape mobilization.

Source: <https://t.me/bazabazon/16761>

soldiers with low economic backgrounds and little to no education are prioritized. The corrupt selection validates unprofessionalism and gives rise to a military culture where troops are more likely to commit all kinds of crimes and looting, such as harassing civilians or stealing washing machines and other household utensils and sending them home. Notwithstanding that they are also poorly paid and accustomed to corruption and robbery among their ranks. Perhaps most importantly, the selection bias increases the chance of selecting soldiers with a problematic background anchored in their low economic status. The skewed selection gives a higher proportion of soldiers with mental problems and alcohol problems, which can be worsened by all kinds of abuse from their superiors, such as “dedovshchina,” – an enduring hazing tradition.<sup>229</sup>

For instance, the head of Russia’s Air Force in 2007, Colonel General Vladimir Mikhailov, stated that more than 30 percent of the 11,000 men conscripted annually into the Russian Air Force were “mentally unstable”, 10 percent suffered from alcohol and drug abuse, and 15 percent were ill or malnourished. Twenty-five percent had never known their fathers, 3 percent did not know their mothers, and another 3 percent were orphans of the conscripted men.<sup>230</sup> Or data from the war, where an intercepted call by GUR (Ukrainian military intelligence) shows how a Russian military serviceman of the 3<sup>rd</sup> Separate Motorized Brigade of the 1<sup>st</sup> Army Corps warns of possible inspections by the military commandant due to cases of alcohol and drug use that previously led to the death of soldiers.<sup>231</sup> Or on the 27<sup>th</sup> of March 2023, when a Russian Telegram news channel reported that there have been “extremely high” numbers of incidents, crimes, and deaths linked to alcohol consumption amongst the deployed Russian forces in Ukraine. Where British intelligence stresses that Russian commanders likely identify prevalent alcohol abuse as particularly detrimental to combat effectiveness.<sup>232, 233</sup> The inclination towards

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<sup>229</sup> For description of “dedovshchina”, please see:

Coffey, M. (2022). *The Dedovshchina Abides: How Discipline Problems Despite Years of Military Reform*. The Journal of Slavic Military Studies, 35:3-4, 283-299.

<sup>230</sup> Arnold, C. (2007, March 21). *Russia: Conscript's Prostitution Claims Shed Light On Hazing*. Retrieved from RadioFreeEurope: <https://www.rferl.org/a/1075412.html>

<sup>231</sup> Source: The Main Directorate of Intelligence of the Ministry of Defence of Ukraine (GUR), video extracted from Twitter user @wartranslated:

<https://twitter.com/wartranslated/status/1640376178660761600?s=46&t=pKm2kzIOWdvQR0oiUQ9JRg>

<sup>232</sup> The British Ministry of Defence. (2022, September 4). *Latest Defence Intelligence update on the situation in Ukraine - 4 September 2022*. Retrieved from Twitter:

<https://twitter.com/DefenceHQ/status/1566285175830478850?s=20>

The source is from after the failed invasion of North Ukraine, as I have not been able to retrieve sources from that time period, which illuminated this deficiency.

<sup>233</sup> The data here is linked later to the war through mass mobilizations. In that context, it is likely that the “Lanchester Square Law Collapse” is at play. Stressing how each generation of new Russian troops mobilized is

alcohol and drug abuse can naturally have many other causes as the soldiers experience severe stress. Still, the problem is not diminished by recruiting soldiers with poor and “troubled” backgrounds. On that note, statistics from the war have illuminated how people from poorer regions disproportionately man the Russian Armed Forces. A war independent monitoring group *Conflict Intelligence Team* (CIT) reported that 23 of the 26 regions with the highest proportion of recruits have incomes below the national average.<sup>234</sup> The sharp socioeconomic discrepancies with men from Russia’s poorest regions are also reflected in the high death percentage from poor regions:



**Figure 7: Top ten regions of killed soldiers recorded from open sources<sup>235</sup>**

less skilled than the last, possessing less military training, experience, and discipline. Thus, the Russian troops die faster, in larger numbers, and with less military effect, which lowers the morale and increases the experienced stress. That, in turn, increases the inclinations towards alcohol and drugs.

<sup>234</sup> Savina, S., & Bonch-Osmolovskaya, K. (2022, October 5). *Какие регионы отдали больше всего мужчин на войну*. Retrieved from iStories: <https://istories.media/stories/2022/10/05/kakie-regioni-otdali-bolshe-vsego-muzhchin-na-voinu/>

The biased selection is likely also connected to the fact that the authorities do not want to touch more prosperous regions for fear of rallies, for example, giving Moskva Oblast one of the lowest recruitment percentages. In Moskva Oblast, the recruitment percentage is 0.73%, and the per capita income is 93,000 rubles. In comparison, in Krasnoyarsk Krai (Oblast), the per capita income is 40,425 rubles, with the highest recruitment percentage of 5.33%.

Another explanation is that the current soldiers’ salaries can provide upward mobility for a soldier from poor regions. Ethnicity might also be an explanation, but ethnicity is in high covariance with income for Russia.

<sup>235</sup> The Moscow Times. (2022, June 3). *In Graphs: How Putin’s Invasion of Ukraine Impacted Russia*. Retrieved from The Moscow Times: <https://www.themoscowtimes.com/2022/06/03/in-graphs-how-putins-invasion-of-ukraine-impacted-russia-a77882>

In Figure 7, we can see that soldiers from Russia’s poorest region, such as the North Caucasus republics of Chechnya and Dagestan, as well as the Siberian republic of Buryatia, top the list of Russian reported casualties.

#### 4.2.4 Lower-ranking officers & NCOs:

At the fourth and bottom level of the corruption chain, we find the *lower-ranking officer & NCOs*, consisting of the military ranks from captains to sergeants to privates. At this level, you are no longer in charge of a unit, but part of it, subordinated to a unit commander (mid-ranking officer). The low-ranking level can further be divided into an important distinction connected to its attributes, *the supply officer* and *the enlisted/conscript*. The supply officer runs the unit's armory, warehouse, or store. They cannot control large contracts or use soldiers as labor. Instead, the supply officer can sell military equipment and write it off, falsifying records and pulling off all sorts of petty diversions to increase their quantum of sellable items. While the conscripts and the enlisted, who sits at the bottom of the corruption chain, do not have much left to sell or divert other than petty theft and diversion. They "steal everything that isn't nailed" to increase their meager income, typically fuel, military equipment, and spare parts.

The relative income connected to corruption for the soldier at the lowest level of the corruption chain has shrunk considerably. It is here that the form of corruption that Tor Bukvoll defines as *individual corruption* is most potent, in the sense that it is used as an individual risk-profit calculus to provide a minimal standard of living.<sup>236</sup> Despite the low income, corruption can still be devastating for a military operation, as the quantum of people has risen sharply – that in total leads to a significant loss of equipment, fuel, and parts to military vehicles. When these petty thefts accumulate over time, they may have detrimental implications for the military complex and the military performance in Ukraine. Besides, there are likely corruption-cases where the profit may not even be the goal, but a consequence of earlier corruption. For example, troops may strip down spare parts of stored vehicles to keep theirs running and avoid disciplinary action, but the end result is still the same. We start by looking at the *supply officer* of the Russian Armed Forces.

##### 4.2.4.1 The supply officer

At the low-ranking officer level, we find the *supply officer* who controls the unit's armory, warehouse, or store. The supply officer does not have the opportunity to control large contracts or use soldiers as private labor. Instead, they can falsify the records, sell things and write them off, and pull off all sorts of petty diversions to increase their income. The supply officer

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<sup>236</sup> Bukvoll, T. (2005). *RUSSIAN MILITARY CORRUPTION - Scale and Causes*. Kjeller, Norway: Forsvarets Forskningsinstitutt (FFI), pp. 20-21.

typically controls body armor, field rations, clothing, radios, guns, and ammunition from the local depot or armory at the unit level.<sup>237</sup> Some of which we have seen examples from earlier in the thesis. Starting with food rations, there are indicators from the war in Ukraine that food supplies are being lost or stolen. On the 28<sup>th</sup> of February, four days after the invasion, there appeared pictures of Russian field rations that expired seven years ago, in 2015—shown in the image below:



Picture 12: Expired Russian field rations found in Ukraine<sup>238</sup>

Under the finger of the Ukrainian soldier, it says “срок годности до,” meaning “expiration date”, which is set on the 10<sup>th</sup> of February 2015. Using expired rations indicates shortages in the food supply, as unexpired rations are likely stolen from the supply depots to be sold on the Internet or in Russian supermarkets. In fact, Russian military rations are not supposed to be

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<sup>237</sup> Many other examples of supply officers’ corruption could also be described in this section, but I have chosen one example here because of the word limit. For the curious reader regarding military clothing, the VChK-OGPU Telegram channel reports that Ivan Popov, head of the clothing depot of a military unit in Khankala, Chechnya, stole and sold 12.6 million rubles (\$153,733) worth of uniforms and ammunition, as part of an organized criminal enterprise. Stealing 20,000 items from the unit for their subsequent resale. Source, Telegram 15. April 2023: <https://t.me/vchkogpu/37805>

Or, mobilized soldiers from the 21<sup>st</sup> Infantry Brigade in Altai Krai in the Siberia region who complained that they were been given low-quality uniforms, as the uniforms they should have been given likely were resold at the local Voentorg store. Source: Twitter, 20. November 2022: [https://twitter.com/ChrisO\\_wiki/status/1594405257336979456?s=20](https://twitter.com/ChrisO_wiki/status/1594405257336979456?s=20)

<sup>238</sup> Pictures are extracted from the video that circulated on the 28<sup>th</sup> of February on Twitter: <https://twitter.com/christogrozev/status/1498421431079735297?s=20&t=maPOh7Au9wQVwh6q0gi4UQ>



resold, as commercial sales are forbidden. Still, they are readily available in Russian supermarkets for about 256,00 rubles (4 dollars) and from online shops in Russia and the West.<sup>239</sup> Interestingly, a stolen field ration is likely shown in the picture under, taken from a Russian supermarket where there is sold a more modern version of a field ration than the one observed in Ukraine – symbolized by the modernized “Армия Россия” (Russian Army) star:



**Picture 13: Modern Russian Army field ration found in a Russian supermarket<sup>240</sup>**

Besides, from the war, there have been reports of Russian soldiers going without food for three days, which likely indicates poor planning and logistics but also points to corruption.<sup>241</sup> In addition, the Russian citizen Vyacheslav Zabaluev was sentenced to five years in prison in November 2021 for complicating the supply of rations to Russian troops in Donetsk and

<sup>239</sup> Internetua. (2022, April 8). *Надпись не помогла: в России начали торговать сухпайками, предназначенными для оккупантов*. Retrieved from Internetua: <https://internetua.com/nadpis-ne-pomogla-v-rossii-nacsali-torgovat-suhpaikami-prednaznacsennymi-dlya-okkupantov>

<sup>240</sup> Ibid.

<sup>241</sup> OCCRP. (2022, April 08). *Самый надежный союзник. Как коррупция в российской армии может спасти Украину*. Retrieved from OCCRP - Organized Crime and Corruption Reporting Project: <https://www.occrp.org/ru/home/37-ccb/ccb/16181-2022-04-07-16-58-46>

Luhansk.<sup>242</sup> He allegedly diverted rations if bribes were not received in time, working for a company called Voentorg (“Военторг” – its logo can be seen in Picture 12 above). Voentorg is a primary supplier of food and catering services for the Russian Armed Forces and has subcontracted a company called Main Line with reported links to Evgeny Prigozhin, which has close ties to Putin.<sup>243</sup> The example of Vyacheslav Zabaluev also indicates inefficiencies and mismanagement in the logistical supply chain, likely causing food to go to the wrong places while those who need it most go hungry.

To assess the impact of the lack of rations on the outcome of the initial invasion, Napoléon once said, “An Army marches on its stomach.” In other words, expired and poor rations are expected to have somewhat affected morale through cultural corrosion. It is however unlikely that lacking rations has significantly impacted the military performance of the Russian soldier in the initial phase of the invasion. Partly because the Russian soldier during the initial phase could loot supermarkets and local homes to replace their poor combat rations.<sup>244</sup> Making it highly unlikely that starvation and malnutrition have occurred on a broad scale within the Russian Armed Forces who were invading Kyiv. However, in the long run of the Ukraine war, the negative impact of the inadequate food supply is expected to increase as looting becomes less of an opportunity, while calorie consumption increases during the winter months.

#### 4.2.4.2 The enlisted/conscript

At the bottom of the Russian Armed Forces, we find the enlisted or the conscript with few corruption opportunities. According to the corruption chain model, there is little income to be made for you as a private. You can mainly conduct petty theft or other forms of diversion to attain fuel, military items, spare parts, metals, or other materials which can easily be resold.

Right before the outbreak of the war, on the 15<sup>th</sup> of February 2022, Russian troops were stationed for a snap exercise in the town of Khoyniki in Belarus, 50 kilometers north of the

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<sup>242</sup> Zakharov, A., Pshukarskaya, & Varabanov, I. (2021, Desember 16). “Явка с повинной”. В ростовском суде фактически признали: в ДНР и ЛНР находились российские войска. Retrieved from BBC News Russia: <https://www.bbc.com/russian/features-59664123>

<sup>243</sup> Davlyatchin, I. (2021, 11 15). Говядина с сальмонеллой: Расследование о том, кто и как кормит российскую армию. Retrieved from Собеседник (Companion): <https://sobesednik.ru/rassledovanie/20211115-govyadina-s-salmonelloi-rassledovanie-o>

<sup>244</sup> For example, in the New York Times documentary about the Bucha massacre, VDV paratroopers can be observed looting with a shopping cart at 15:57: Al-Hlou, et al. (2022, December 22). *Caught on Camera, Traced by Phone: The Russian Military Unit That Killed Dozens in Bucha*. Retrieved from The New York Times: <https://www.nytimes.com/2022/12/22/video/russia-ukraine-bucha-massacre-takeaways.html>

Ukrainian border. Here, the local Belarusians remarked that Russian troops “drink a lot and sell a lot of their diesel fuel.”<sup>245</sup> Elsewhere, Ukrainian spies from the foreign intelligence service, the SZRU, came upon a disciplinary mayhem of Russian troops in mid-February—meeting lines of stranded Russian vehicles accompanied by troops who had bartered fuel and other supplies for alcohol.<sup>246</sup>

The extent of the fuel sale is naturally hard to determine, but most Russian troops stationed in Belarus did not know they would invade Ukraine. Most military units stationed in Belarus did not receive orders until 24 hours before they entered Ukraine, unaware of the intention to invade and occupy Ukraine to gain an operational surprise.<sup>247</sup> It is worth emphasizing that the Russian deception plan was largely successful through the constricting information security measures. Still, as a “two-edged sword,” it also impacted the combat effectiveness of Russian troops by failing to brief them with sufficient time to prepare, becoming a considerable cost.<sup>248</sup> Therefore, the tactical units in Belarus likely proceeded to sell their fuel as they always had done in past exercises, trying to increase their scant income.<sup>249</sup> They lacked fuel, food, ammunition, and, most critically, a clear understanding at the tactical level of how their actions fit into the overall plan.<sup>250</sup> Later, on the 26<sup>th</sup> of February, two days after the invasion, there were reports of several Russian armored personnel carriers (APCs) and tanks headed toward Kyiv that had stopped because of fuel shortages. The picture below shows a bypassing Ukrainian north of Kyiv, driving in his car, then stops and asks: “Vehicle broke?” – “No, waiting for diesel,” the Russian soldier replies. The Ukrainian replies mockingly, “I can tug you back to Russia!”:

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<sup>245</sup> Original article: Radio-Svaboda. (2022, February 15). «Шмат п'юць, гандлююць палівам». Што пра расейскіх жаўнераў у Беларусі расказваюць відавочцы. Retrieved from Radio-Svaboda: <https://www.svaboda.org/a/31704770.html>

English article posted four days later: RFE/RL's-Belarus-Service. (2022, February 19). 'They Drink A Lot, Sell Their Fuel': Belarusians Give Low Marks To Russian Troops Deployed For Drills. Retrieved from RadioFreeEurope | RadioLiberty: <https://www.rferl.org/a/russian-troops-belarus-exercises-ukraine/31711282.html>

<sup>246</sup> Miller, G., & Belton, C. (2022, August 19). *Russia's spies misread Ukraine and misled Kremlin as war loomed*. Retrieved from The Washington Post: <https://www.washingtonpost.com/world/interactive/2022/russia-fsb-intelligence-ukraine-war/>

<sup>247</sup> Zabrodskiy, M., Watling, J., Danylyuk, O., & Reynolds, N. (2022, November 2022). *Preliminary Lessons in Conventional Warfighting from Russia's Invasion of Ukraine: February–July 2022*, p. 12.

<sup>248</sup> Ibid. p, 22.

<sup>249</sup> A central question is, would the Russian soldiers change their behavior, moderating their fuel sales, if they knew they would invade Ukraine? As such, did the “deception plan” enable corruption on a larger scale?

<sup>250</sup> Zabrodskiy, M., Watling, J., Danylyuk, O., & Reynolds, N. (2022, November 2022). *Preliminary Lessons in Conventional Warfighting from Russia's Invasion of Ukraine: February–July 2022*, p. 26.



**Picture 14: Russian vehicles out of fuel North of Kyiv<sup>251</sup>**

The deficit in fuel has been particularly fragile for military performance in North Ukraine, where there are large distances from railheads, creating a greater dependence on roads and trucks. Thus, the lack of fuel may be a cause of poor logistics. Meanwhile, one should not underestimate the aggregated level of corruption at the lowest level. Given that hundreds of soldiers sell their fuel in Belarus, it is reasonable to assume that it would lead to shortages when pushing the miles south toward the strategic objective of Kyiv. Corruption at the lowest level has likely given rise to the iconic pictures of Ukrainian tractors towing away Russian tanks, artillery, and APCs, undamaged but stranded and abandoned because they ran out of fuel or broke down—both causes which are linked to corruption at the lowest level through petty theft of fuel and spare parts. Plenty of pictures could have been shown here, but below there is a captured TOS-1 MLRS likely used towards the eastern invasion of Kyiv from Bryansk Oblast, marked with “O”.

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<sup>251</sup> Original video retrieved from Twitter the 26<sup>th</sup> of February 2022:

<https://twitter.com/Liveuamap/status/1497485623225200640?s=20&t=pxQk5eP20oGRWFdNFgJe4g>

Also mentioned in: Thorburn, J. (2022, February 26). 'Need a tow back to Russia?' Ukrainians taunt soldiers after their tank runs out of fuel on its way to Kyiv. Retrieved from Daily Mail UK:

<https://www.dailymail.co.uk/news/article-10554929/Video-claims-Ukrainians-mocking-Russian-tank-stuck-without-fuel-road-Kyiv.html>



**Picture 15: Ukrainian farmer towing away TOS-1 MLRS with “O” marking<sup>252</sup>**

In addition, the problem with fuel shortages is confirmed by an intercepted conversation a Russian military official, as well as Western intelligence data.<sup>253, 254</sup> It is therefore likely that the long-standing tradition of corruption in fuel supply decreased the pace of Russian advancement in North Ukraine. In other words, the black market for gasoline sales that occurred right up until the invasion damaged the strategic goal of a swift and victorious conquest in North Ukraine. Stopped military vehicles also leave invading forces in a dangerous and damaging position, as they become easy targets for Ukrainian soldiers armed with anti-armor missiles and rockets. Being vulnerable to Javelin missiles or ambushes by local resistance may lead to destroyed Russian equipment and captured equipment that the Ukrainians can use as soldiers flee their stuck and vulnerable vehicles. As such, just three days

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<sup>252</sup> Picture retrieved from Twitter, posted May 15, 2022:

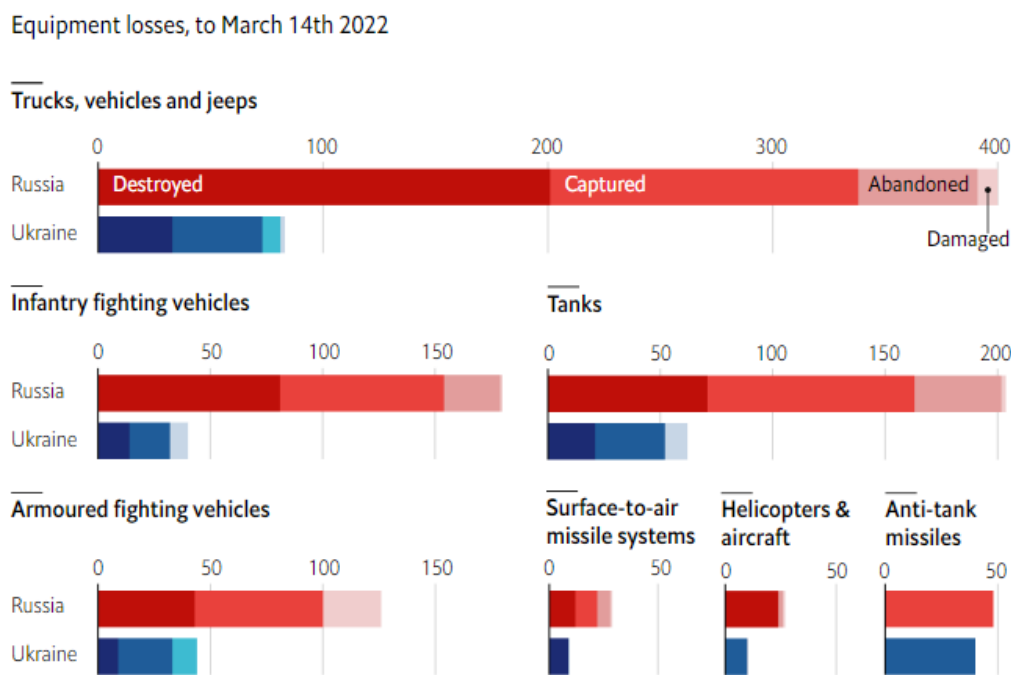
[https://twitter.com/EuromaidanPress/status/1525937518797115393?s=20&t=5kNcCyfJAoQndjA\\_z5X4sA](https://twitter.com/EuromaidanPress/status/1525937518797115393?s=20&t=5kNcCyfJAoQndjA_z5X4sA)

<sup>253</sup> Russian soldier that has been intercepted, addressing the situation on Telegram:

<https://t.me/uniannet/40524>

<sup>254</sup> Original source: OCCRP. (2022, April 08). *Самый надежный союзник. Как коррупция в российской армии может спасти Украину.*

after the invasion, the Ukrainian resistance had set fire to dozens of, if not hundreds of Russian vehicles moving toward Kyiv.<sup>255</sup> Alongside, corruption at the lowest level partly explains the high number of vehicles captured by the Ukrainians. In mid-May 2022, Russia had lost 3,675 vehicles, of which 1,284 have been captured by the Ukrainians, exceeding the total Ukrainian losses.<sup>256, 257</sup> The sale of fuel (and spare parts), therefore, illustrates how petty corruption in fuel supply at the lowest level, on aggregate, will eventually impact the strategic objective of capturing Kyiv. In the table below, based on data for March 14<sup>th</sup>, 2022, by Oryx, one can observe that almost 1/5 of all documented ground vehicles left in Ukraine were abandoned.



**Figure 8: Russia's enervated armory<sup>258</sup>**

<sup>255</sup> Ahronheim, A. (2022, February 27). *Fuel and logistics problems frustrate Russian advance - analysis*.

Retrieved from The Jerusalem Post: <https://www.jpost.com/international/article-698800>

<sup>256</sup> Original Source for data: Mitzer, S., & Janovsky, J. (2022, May 19). *Attack On Europe: Documenting Russian Equipment Losses During The 2022 Russian Invasion Of Ukraine*. Retrieved from Oryx:

<https://www.oryxspioenkop.com/2022/02/attack-on-europe-documenting-equipment.htm>

<sup>257</sup> On the 19<sup>th</sup> of May, the Ukrainians lost 163 tanks but captured 239 Russian tanks. For armored personnel carriers, Ukraine had lost 80 but captured 131, and for infantry fighting vehicles, 117 were lost, but 226 were captured by the Russians, according to Oryx.

<sup>258</sup> Figure made by The Economist on data from Oryx.

The Economist. (2022, March 14). *Russia's armed forces are suffering substantial losses in Ukraine*. Retrieved from The Economist: <https://www.economist.com/graphic-detail/2022/03/14/russias-armed-forces-are-suffering-substantial-losses-in-ukraine>

Ineffective control over fuel consumption in the Russian military is not a new phenomenon and has historically created opportunities for embezzlement that preceded long before the war in Ukraine started. Fuel is often called the Russian military's "second currency." In 2017, the annual supply of petroleum products to the troops exceeded two million tons, based on official data from Deputy Minister of Defense, Army General Dmitry Bulgakov.<sup>259</sup> However, the Russian military did not have data on how this colossal amount was spent.<sup>260</sup> Indicating a lack of instrumental control mechanisms, which for example, could be solved through a digital accounting system, potentially lowering the opportunities for petty theft and embezzlement of fuel within the Russian Armed Forces.

The lack of data on the rearmament of the armed forces and its costs has enabled corruption on a broad scale. Examples include when in 2021, Major General Oleg Kislov was accused of the disappearance of 300 tons of fuel from the Russian military base on Kapustin Yar, near Volgograd.<sup>261</sup> Or, when three Russian conscripts in Sevastopol got sentenced for stealing more than 126 tons of fuel to a value of 3,6 million rubles in 2019.<sup>262</sup> Or, in 2013, when two other servicemen got sentenced for stealing 15,9 tons of diesel from the fuel tanks of Ural vehicles in Kaliningrad.<sup>263</sup> Or in 2013, when Colonel Valery Konopatov, leader of the fuel and lubricants service of the Western Military District, got suspected of involvement in the theft of fuel worth 87 million rubles.<sup>264</sup> In sum, from these cases, fuel theft is evident across all military ranks, occurring within the whole Russian chain-of-command. Thus, the ineffective control

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<sup>259</sup> Mil.Press-военное. (2018, September 7). *Топливо утекает сквозь пальцы: почему военные не могут контролировать расход ГСМ*. Retrieved from Mil.Press-военное: <https://xn--b1aga5aadd.xn--p1ai/2018/%D0%A4%D0%B8%D0%BD%D0%B0%D0%BD%D1%81%D1%8B31/>

<sup>260</sup> Bulgakov also had a major role in the logistics for the invasion of Ukraine. As such, on September 24, 2022, the Russian MoD announced Bulgakov's dismissal from the post of deputy defense minister in charge of logistics, a move widely seen as punishment for the logistical failures in the Russian invasion of Ukraine (Source: [Dmitry Bulgakov: Putin fires deputy defence chief amid supply failures - BBC News](#))

<sup>261</sup> Kommersant. (2021, November 21). *Капустин Яр зачистили от мазута и коррупции*. Retrieved from Kommersant: <https://www.kommersant.ru/doc/5090092>

<sup>262</sup> Tass. (2019, March 22). *Троих военнослужащих осудили в Севастополе за хищение более 126 тонн топлива*. Retrieved from Tass: [https://tass.ru/proisshestiya/6248259?utm\\_source=google.com&utm\\_medium=organic&utm\\_campaign=google.com&utm\\_referrer=google.com](https://tass.ru/proisshestiya/6248259?utm_source=google.com&utm_medium=organic&utm_campaign=google.com&utm_referrer=google.com)

<sup>263</sup> New-Kaliningrad. (2016, February 12). *В Черняховске задержаны матросы, похитившие 6 тонн топлива из цистерн «Уралов»*. Retrieved from New Kaliningrad: <https://www.newkaliningrad.ru/news/briefs/incidents/8302319-v-chernyakhovske-zaderzhany-matrosy-pokhitivshie-6-tonn-topliva-iz-tsistern-uralov.html>

<sup>264</sup> NewsRU. (2013, September 17). *В Петербурге по подозрению в мошенничестве арестован высокопоставленный офицер*. Retrieved from NewsRU: <https://www.newsru.com/russia/17sep2013/zvo.html#>

over fuel consumption and the long-standing tradition of stealing fuel supply within the Russian Armed Forces likely decreased the pace of Russian advancement in Ukraine.

Lastly, as outlined above, the enlisted and supply officers within the Russian Army have been shown to be corrupt, consequentially making corruption a cause of poor logistics. According to three Russian military personnel who participated in the war in Ukraine, their unit had significant problems with warm clothes, fuel, and reserve parts for military equipment - mainly for logistical trucks.<sup>265</sup> The lack of fuel and spare parts for trucks, which are a cornerstone for Russian logistics, illuminates how corruption can damage the logistics of a military operation - giving covariance between the two variables. Corruption undermines the supply lines, as supply vehicles break down, fuel is lost, or equipment and field rations are missing, which means that poor logistics for the war in Ukraine cannot be understood as an isolated cause of military failure but affected by the scale of the corruption.

#### 4.2.5 Summing-up the corruption chain

When summarizing the empirical evidence of the “corruption chain” that emerged during the conflict, it appears that corruption is (still) a major problem for the Russian Armed Forces. The reports from before and under the war indicate that corruption in the Russian military is endemic and is part of an accepted organizational culture. Corruption occurs from top to bottom, leading to a lack of skills, morale, and equipment, thus reducing Russian combat power. From the different categories above, one can also observe that the corruption incentives at the individual level changes when we move up or down the “corruption chain” with its attributes. Firstly, the perceived *risk of being caught and punished is relatively lower* when one moves up the levels. However, there is perhaps not a progressive increase tied to this variable, as recent data stress that prosecutions for large-scale bribery have surged, while petty corruption charges declined in 2020. The number of convictions related to large-scale bribes — over one million rubles (\$13,000) — had surged 12-fold since 2012.<sup>266</sup> Indicating a change from previous practice, where *the perceived risk of being caught and punished* is low only for the political level, and corruption convictions no longer mainly belong to the lower levels

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<sup>265</sup> OCCRP. (2022, April 08). *Самый надежный союзник. Как коррупция в российской армии может спасти Украину*. Retrieved from OCCRP - Organized Crime and Corruption Reporting Project:

<https://www.occrp.org/ru/home/37-ccb/ccb/16181-2022-04-07-16-58-46>

<sup>266</sup> The Moscow Times. (2021, April 22). *Corruption Convictions Fall to Lowest Level Since 2012*. Retrieved from The Moscow Times: <https://www.themoscowtimes.com/2021/04/22/us-envoy-sullivan-leaves-russia-for-consultations-amid-strained-ties-a73697>

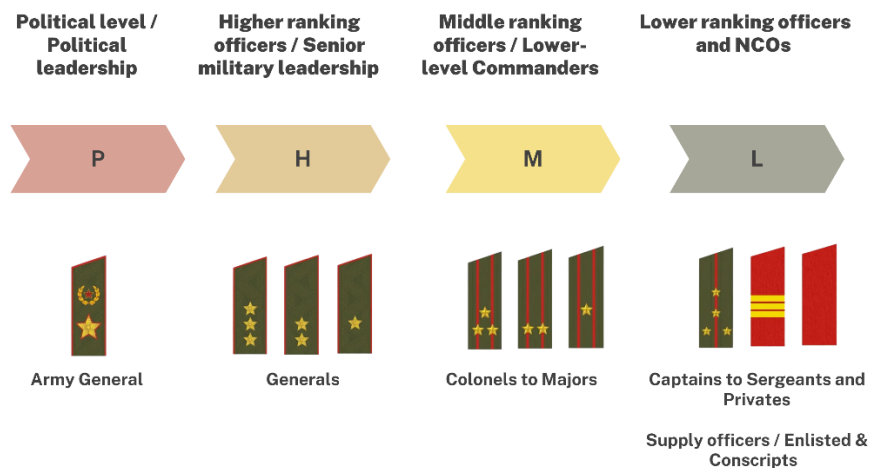


within the Russian Armed Forces. In addition, within the “corruption chain,” there are many more *opportunities for corruption* as you move up the military ranks. For example, at the mid-ranking officer level, you can use conscripts as *private labor*. Exploiting your troops to build your own dacha or hiring them out to others to work in building sites, fields, or factories, where they receive no compensation for their work. These corruption methods are not available at the low-ranking officer & NCO level.

Lastly, we saw how the *individual economic gains increase* from corruption when the Russian official moves up the corruption chain from conscript to the political elite. Still, if one aggregates the whole effect of corruption at the lowest level through petty theft and low morale, it might be detrimental to a military operation. In doing so, widespread corruption by low-ranking soldiers can destroy a military more thoroughly than 100 corrupt politicians, substantially affecting the Russian Armed Forces’ capability and morale. From the corruption chain, I have summed up different methods of corruption attached to the different levels of the RAF in the table on the next page. The fact that corruption exists at all levels, through all military ranks within the Russian chain-of-command, can undoubtedly be interpreted that the Russian defense sector is virtually permeated in a corrupt organizational culture.

### CORRUPTION LEVELS IN THE RUSSIAN ARMED FORCES

From top to bottom



**Figure 9: Rough delineation of the corruption chain with Russian Army ranks<sup>267</sup>**

<sup>267</sup> Model made using the Russian Army ranks extracted from: <https://www.militaer-wissen.de/ranks-of-the-russian-army/?lang=en>

## Corruption Levels in the Russian Armed Forces



→ From top to bottom →

<b>Political level / Political leadership</b> (Army General)	<b>Higher ranking officers / Senior military leadership</b> (Generals)	<b>Middle-ranking officers / Lower- level Commanders</b> (Colonels to Majors)	<b>Lower-ranking Officers and NCOs</b> (Captains to Sergeants and Privates)	
			<b>Supply officers</b>	<b>Enlisted &amp; Conscripts</b>
<p>You control several core elements for the whole defence sector:</p> <ul style="list-style-type: none"> <li>- State budgets</li> <li>- Senior appointments</li> <li>- Top-level procurements (R&amp;Ds)</li> </ul> <p><u>Typical examples:</u></p> <ul style="list-style-type: none"> <li>- Contracts to connected companies, shell companies, “fly-by-night” companies</li> <li>- Grossly overstated prices</li> <li>- Nepotism &amp; cronyism: Appointment of allies, political appointees instead of people with military experience</li> <li>- Budget direction to suit interests</li> <li>- Fictitious contracts awarded to (shell) companies with no experience of the type of work required, work which is not carried out at</li> </ul>	<p>You control the higher-level functions in the military. Some great options available for corruption:</p> <ul style="list-style-type: none"> <li>- Strategic procurements</li> <li>- Production and Ordering</li> </ul> <p><u>Typical examples:</u></p> <ul style="list-style-type: none"> <li>- Rigging of contracts such that only a few can win:</li> <li>- Incomplete information about requirements, poorly defined contract terms, late publication of requirements</li> <li>- Changing prices of procured goods, by:                             <ul style="list-style-type: none"> <li><i>i</i>) Replacing some components with cheaper alternatives</li> <li><i>ii</i>) Increasing the price of goods by adding profit tax and value-added into their costs</li> <li><i>iii</i>) Hiding or adding expenses</li> </ul> </li> <li>- Diversion of funds</li> <li>- Sale of positions and postings.</li> </ul>	<p>You control a unit, and that unit will turn you a profit. At this level, you cannot influence procurements anymore, so instead, you are focused on selling or diverting what is being procured.</p> <p><u>Typical examples:</u></p> <ul style="list-style-type: none"> <li>- Misuse of troops as labour</li> <li>- Diversion of supplies and critical resources</li> <li>- Skimping on exercise and maintenance funding</li> <li>- Laundering diverted or sold resources as they are used</li> <li>- Steal the income of your soldiers</li> <li>- Delay reports of “missing” and killed soldiers, pocketing their income</li> <li>- Create “dead souls” and pocket their income</li> <li>- Bribes in the recruitment process to avoid military service</li> <li>- Use of fictitious HUMINT sources and meetings</li> </ul>	<p>You control the armoury/warehouse/store for your unit. You can’t control large contracts, but:</p> <ul style="list-style-type: none"> <li>- Sell things and write them off</li> <li>- Falsify records</li> <li>- Pull off all sorts of petty diversions</li> </ul> <p><u>Typical examples:</u></p> <ul style="list-style-type: none"> <li>- Theft of body armour plates, field rations, clothing, radios, guns, and ammunition from warehouses</li> </ul>	<p>You are at the bottom of the corruption chain, and there is not much left other than:</p> <ul style="list-style-type: none"> <li>- Petty theft</li> <li>- Diversion</li> <li>- “Steal everything that isn’t nailed”:</li> </ul> <p><u>Typical examples:</u></p> <ul style="list-style-type: none"> <li>- The vehicle won’t start because someone stole the wiring</li> <li>- The ammo is ancient &amp; someone sold the fuel</li> </ul>

all or fulfilled only very poorly	<ul style="list-style-type: none"> <li>- Improper disposal of assets, especially property fraud</li> <li>- Influence over strategy to secure procurements</li> <li>-Persuade the political leadership to go for military solutions</li> <li>- Prioritise military strategies and doctrines that give personal gains</li> </ul>			
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**Table 1: The corruption chain of the Russian Armed Forces<sup>268</sup>**

### 4.3 Introduction: Russian cultural phenomenon's

Elena Romanova, an investigative journalist focused on corruption cases for more than 22 years, stressed that; “corruption is a part of the Russian culture.” She underlines that Russians became accustomed to corruption over time, becoming able to tolerate it. Anchored in the Russian mentality of being able to endure, accepting the status quo, which also implies acceptance of living with corruption.<sup>269</sup> Exactly that cultural logic has put danger and risk to future developments in constraining corruption, as the public tolerance for corruption in general is particularly high in Russia.

With that in mind, in Chapter 4.2, we saw how different methods of corruption within the Russian society and defense complex structurally materialized. Now we will look deeper into the Russian cultural phenomenon that can impact corruption through institutional mechanisms. Here, *lies* (*vranyo*) and *collusion* (*krugovaya poruka*) are essential parts of a kleptocratic culture, as these cultural phenomenon's enable and reinforce the opportunities for corrupt activity within Russia. Finally in this chapter, the effect of corruption on soldiers' morale is briefly discussed through cultural corrosion.

<sup>268</sup> The idea for the table started with the YouTube video, “How Corruption Destroys Armies - Theft, Graft, and Russian failure in Ukraine” by Perun. Retrieved from: <https://www.youtube.com/watch?v=i9i47sgi-V4>  
The reader may also notice from the table that not all the “Typical examples” have been discussed under 4.2 ‘The Corruption Chain,’ mainly due to the word limit.

<sup>269</sup> Romanova, E. (2022, December 9). *Putin's Russia: How propaganda bolsters corruption*. Retrieved from European Centre for Press & Media Freedom: <https://www.ecpmf.eu/putins-russia-how-propaganda-bolsters-corruption/>

#### 4.3.1 «Vranyo» - A Culture of Lies

“Vranyo” (враньё) is a cultural phenomenon within the Russian Armed Forces that presumably has a reinforcing effect on corruption, as one allows lying to a greater extent as an organizational culture. Vranyo, literally meaning “lies” in Russian, was explained by David Shipler in his 1983 book *Russia: Broken Idols, Solemn Dreams* as: ‘You know I am lying, and I know that you know, and you know that I know that you know, but I go ahead with a straight face, and you nod seriously and take notes.’<sup>270, 271</sup> In other words, *vranyo* is a lie with a dismissive feel, that no one would take seriously, an excuse or a ducking of responsibility. It can be a mindless fib, like the story of how the dog ate your homework or a tall tale.<sup>272</sup> *Vranyo* is therefore an element of “accepted” lying within Russia in the sense that both parties acknowledge the lying but do not react on it. This kind of internal deception primarily serves the purpose of making everyone look good within an organization. As such, in broader terms, *vranyo* is in this thesis understood as a word for a culture of lying within the RAF.

To be clear, *vranyo* is a lie not to deceive the enemy or external force (*maskirovka*) but to cover oneself and pretend everything is good when in fact everything is not good. Eventually, the “accepted lie” gets forwarded up the chain-of-command to an unknowing commander, giving a distorted and inaccurate picture of what is happening on the ground. Even so, the effect of false reporting is likely to be compounded as lie moves up the chain-of-command. When false reports from small unit commanders is aggregated with more false statements from higher-ups to which senior officers add their own false reports. Then creating an issue where wrong information from below becomes a bad plan for the higher echelons. Thus, *vranyo* is a symptom of a military culture that does not encourage honest reports of failure partly because those who fail are usually replaced or threatened with punishment.<sup>273</sup> And partially because it opens opportunities for personal enrichment through corruption. Like endemic corruption,

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<sup>270</sup> Schillinger, L. (2018, February 23). *McMaster Gives a Belated Russian Lesson*. Retrieved from Foreign Policy: <https://foreignpolicy.com/2018/02/23/mcmaster-and-maskirovka/>

<sup>271</sup> Similar understandings of *vranyo* are also found in: Gorokhova, E. (2011, October 21). *From Russia With Lies*. Retrieved from The New York Times: <https://www.nytimes.com/2011/10/23/magazine/from-russia-with-lies.html>

<sup>272</sup> Bermel, N. (2022, April 12). *Ukraine war: ‘vranyo’ – Russian for when you lie and everyone knows it, but you don’t care*. Retrieved from The Conversation: <https://theconversation.com/ukraine-war-vranyo-russian-for-when-you-lie-and-everyone-knows-it-but-you-dont-care-181100>

Grammatically, *vranyo* is a noun formed from the verb, *vrat’*. That verb also means “to lie,” but it has a more colloquial, pejorative flavor. *Lozh* (ложь) is the word for straight-up lying in Russian, originating from the verb ‘*lgat’*, the act of lying.

<sup>273</sup> Zabrodskiy, M., Watling, J., Danylyuk, O., & Reynolds, N. (2022, November 2022). *Preliminary Lessons in Conventional Warfighting from Russia’s Invasion of Ukraine: February–July 2022*, p. 51.

shared participation is critical for vranynos' existence. A culture of lies only functions with collective or majority participation within an organization, remaining unsanctioned.

Reports show that vranyno has clearly been a problem for the war in Ukraine. Creating an information disconnect at the top of how bad the situation really was in Ukraine, leading to Ramzan Kadyrov publicly threatening to go and brief Putin himself, replacing the briefings that normally would be provided by Sergey Shoigu and Valery Gerasimov.<sup>274</sup> Or, when propagandist like Vladimir Solovyev goes on Russian state television, bursting out on the amount of lying within the Russian Armed Forces. Substantiating that there is a constant thread that commanders at every level of the operation are lying. To each other, to higher command, and to their men.



**Picture 16: Vladimir Solovyev's outburst on Russia-1 national television<sup>275</sup>**

In the video, he further targets the lying “About what they had in caches.”, “About the condition of the vehicles,” “About how many fighters are on the frontline.” As such, Soloyev outlines how vranyno enables corruption within the Russian Armed Forces, creating a visible connection

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<sup>274</sup> Walker, S. (2022, September 11). *Putin loyalist Kadyrov criticises Russian army's performance over Ukraine retreat*. Retrieved from The Guardian : <https://www.theguardian.com/world/2022/sep/11/putin-loyalist-kadyrov-criticises-russian-armys-performance-over-ukraine-retreat>

<sup>275</sup> Pictures retrieved from video found on Twitter channel, @wartranslated: <https://twitter.com/wartranslated/status/1590827196079550464?s=20>

with the delineated corruption methods presented earlier in the corruption chain. For example, referring to lies about “what they had in caches” can be connected to the supply officer, writing things off. Secondly, “the condition of the vehicles” can be related to Phases 1 & 2 of strategic procurements, such as cheap substitutes of Chinese or USSR tires. Thirdly, “how many fighters are on the frontline” is clearly linked to the use of “dead souls,” discussed within the BTGs. Besides, vranjo has likely played a role in the insufficient R&D and corruption of new Russian military products addressed earlier. The consequence of the lying and corruption are likely to have been very grave for the Russian military, also connected to soldiers who have spoken of their inadequate training and equipment, being poorly able to cope with the demands of war. Creating a distorted picture of the readiness of the Russian Armed Forces before the war, which many Western analysts bought into. Lastly, it is possible that vranjo played a role in the FSBs Fifth Service’s poor intelligence of Ukraine, likely in an interrelationship with corruption. Analysis of the war have indicated that the Russian special services, at a fundamental level, “[...] lack self-awareness, or at least the honesty to report accurately about own efforts.”<sup>276</sup> As such, vranjo is a symptom of a reporting culture where officers are encouraged to have a significant optimism bias, creating unrealistic estimations of the likelihood of success for the higher-ups, in for example capturing Kyiv.

Alongside, several military bloggers on Telegram address the problem of lying in their posts. The Vostok battalion / Donetsk Peoples Republic (DPR) commander Aleksandr Khodakovsky states in a Telegram post from 12<sup>th</sup> September 2022: “Everything that happens on the ground stays on the ground, and we will only send to the top the things that will not disturb anyone’s sleep. That is why they [the unit commanders] do not allow military correspondents at positions. If they do, a person with a camera follows them and takes pictures so that the military reporters do not say anything extra ... And not because the enemy will see it – the enemy is aware of us better than ours [commanders], but because the first leader [senior officer] will see it.”<sup>277</sup> Another report from the Telegram channel “Private Gubarev” addresses how they saw their commanders encircling themselves with “a wall of lies” and “... writing nonsense in their reports” when they “plunged us into a sea of blood and a swamp of corpses

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<sup>276</sup> Watling, J., Danylyuk, O. V., & Reynolds, N. (2023, March 29). *Preliminary Lessons from Russia’s Unconventional Operations During the Russo-Ukrainian War, February 2022–February 2023*. Retrieved from RUSI: <https://rusi.org/explore-our-research/publications/special-resources/preliminary-lessons-russias-unconventional-operations-during-russo-ukrainian-war-february-2022> p. 34.

<sup>277</sup> Post from “Aleksandr Khodakovsky” Telegram Channel, the 12<sup>th</sup> of September 2022: [https://t.me/aleksandr\\_skif/2376](https://t.me/aleksandr_skif/2376)

on the front line.”<sup>278</sup> Leading to the death of at least 120 men, by Gubarev’s reckoning, after eight failed attempts to retake Lyman by his unit in the autumn of 2022, when the Kharkiv front collapsed. Other examples include soldiers’ accounts of their commanders falsely reporting combat successes and subsequent attacks launched based on false information.<sup>279</sup> A common point with the Russian military bloggers is how they stress that pervasive lying to soldiers severely damages soldiers’ morale and undermines their willingness to fight.<sup>280</sup> In total, *vranyo* is a sign of an organizational culture where lying is somehow accepted, which increases the opportunities, and thus, the distribution of corruption within the Russian Armed Forces from top to bottom. Besides, “accepted lying” also lowers morale and complicates military decision-making on the battlefield, increasing the risk of intelligence failure.

#### 4.3.2 “Krugovaya poruka” – Circular Responsibility

Today, *krugovaya poruka* (круговая порука - meaning ‘circular responsibility’) is a cultural phenomenon in Russia that describes how corrupt officials can assure mutual protection for each other. It can be understood as a form of symbiosis, where individuals help each other as they are “tied up” in a social unit by joint responsibility and mutual obligations. Thus, it implies that if one is part of the social unit, one is expected to stand up and behave in a way that benefits the other group members, even if it causes damage to one’s surroundings in the process.<sup>281</sup> As such, the use of corruption or a “tactical lie,” such as *vranyo*, is readily accepted if it is done for the benefit of the in-group. Historically, *krugovaya poruka* has long been part of the informal politics of Russia, remaining embedded in everyday practices and understandings during the Soviet period and the post-Soviet era when it came to designating “mutual cover-up in illicit affairs.”<sup>282, 283</sup> The mutual cover-up then provides the opportunity for pulverization of

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<sup>278</sup> Post from “Private Gubarev” Telegram Channel, the 4<sup>th</sup> of October 2022: <https://t.me/pgubarev/522>

<sup>279</sup> Please follow the Twitter thread from ChrisO\_wiki (Chris Owen) for more examples of “Vranyo”:  
[https://twitter.com/ChrisO\\_wiki/status/1570169288849326082?s=20](https://twitter.com/ChrisO_wiki/status/1570169288849326082?s=20)

<sup>280</sup> On the post of the popular Telegram channel to Russian hard-liner Igor Strelkov, he makes a joke with a recipe on how the Russian military personnel should communicate through lies to ensure “high morale” and that everyone is promoted: <https://t.me/strelkovii/3083> (Posted 13th August 2022)

<sup>281</sup> Ledeneva, A. V. (2006). *How Russia Really Works*. London: Cornell University Press, p. 91.

The exact meaning of *krugovaya poruka* has changed over time, and now in Russian, it has a negative meaning of mutual cover-up and collusion.

<sup>282</sup> Ozhegov, S. I., & Shvedova, N. (1999). *Tolkovyi slovar' russkogo iazyka*. Russian Academy of Sciences, Institute of Russian Language, 4th edition. Moscow: Azbukovnik.

<sup>283</sup> A unique cultural artifact of *krugovaya poruka* from the Soviet period is the song “Bound by One Chain” (Скованные одной цепью) by the Nautilus Pompilius group (1988), which grasps the essence of the phenomenon. Found on YouTube: [https://www.youtube.com/watch?v=sljdb6l\\_IA](https://www.youtube.com/watch?v=sljdb6l_IA)

responsibility, because everyone is bound to the collective, where everyone has something illegal on each other (*kompromat*), making the legal responsibility diffuse. To convict one individual, you need testimony from another, but they are both so deeply enmeshed in joint crimes that the second will never testify against the first.

A central aspect of the *krugovaya poruka* is for “the circle” to dig itself into new authority structures and protect each other against investigations or reprimands from higher-ups.<sup>284</sup> An example is when a unit commander works with the regional military prosecutor’s office. They both seek to expand their structural control to reap an income from corruption without the central or regional government noticing. Thus, when the contracted sergeant tries to file a risky complaint to Moscow about corruption in his local unit, it will not necessarily work because any complaints will be referred to the regional military prosecutor’s office. Where the chief of the office may be a partner of the unit commander, as he hired him there in the first place and keeps him “satisfied” by sharing a fraction of the corrupt income. They are now both involved in mutual corruption in the act, further strengthening the incentives to sustain the “*krugovaya poruka*.” This example illustrates how *krugovaya poruka* can become an institutional norm among many Russian officers and have a self-reinforcing effect on corruption, where mutual protection prevents the existing legal structures from reporting forward cases of corruption at the lower level.

Part of the *krugovaya poruka* is also an inclination towards *nepotism*. As such, it appears that Russian military officers have been promoted based on patronage instead of military ability. The consequence of nepotism is that the best-qualified leadership is not necessarily selected, which increases the chance of poorer planning and decision-making seemingly inclined toward corruption.<sup>285</sup> It was earlier addressed how Sergei Shoigu brought many of his accomplices from the Minister of Emergency Situations to the MoD. These people may be part of Shoigu’s “*krugovaya poruka*,” inhibiting a loyal bond. Besides, how corruption functions as a means of *control* and *reward* at the top political level can also be understood as part of the *krugovaya poruka*. In the past, for the Soviet bureaucrats, violating the unwritten rules was in fact way more serious than violating the written ones. Where those bureaucrats that did play

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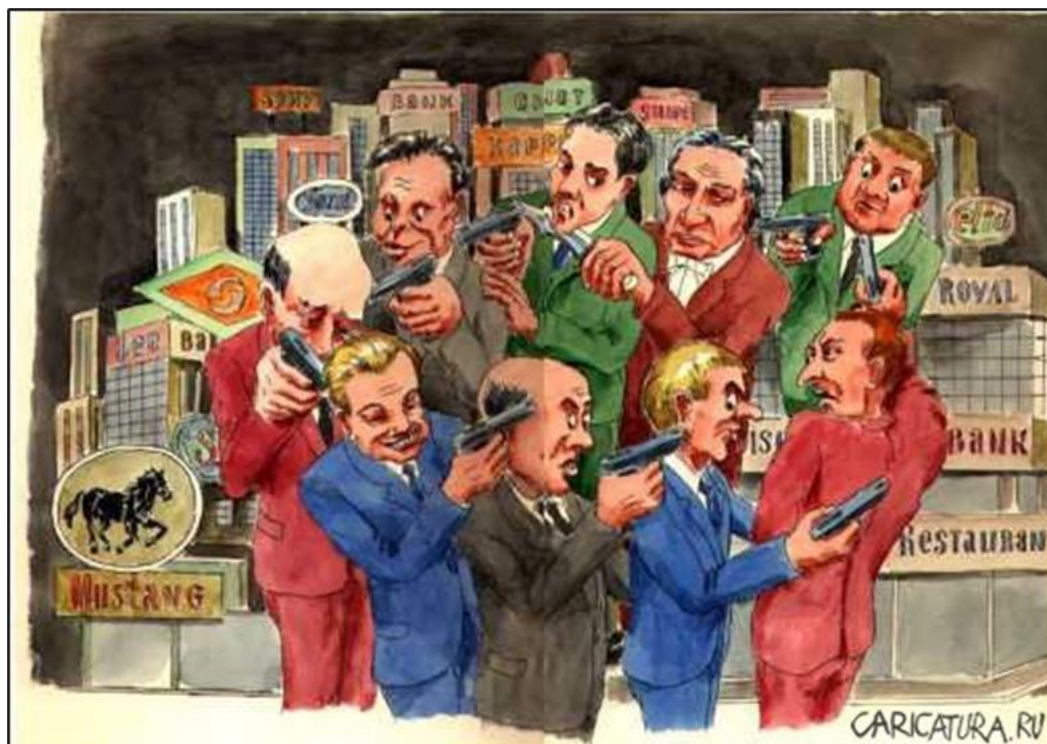
<sup>284</sup> Ledeneva, Alena (ed.). (2018). *The Global Encyclopedia of Informality; Understanding Social and Cultural Complexity*, Volume 1. London: UCL Press, p. 254

<sup>285</sup> Chotiner, I. (2022, April 21). Is the Russian Military a Paper Tiger? Retrieved from The New Yorker: <https://www.newyorker.com/news/q-and-a/is-the-russian-military-a-paper-tiger>



by the “krugovaya poruka rules” were often saved from accountability by patrons at the higher level.<sup>286</sup>

Today, Putin applies the same logic, using complicity in crime (corruption) to guarantee complete loyalty, which becomes crucial when the public opinion for the “special military operation” falters. While also illuminating why Putin has chosen not to institute radical personnel changes since the war started.<sup>287</sup> He perhaps fears that bringing new faces with a “clean record” could lead to disloyalty and a crisis in his inner circle. As such, Putin had a position before he became Director of the FSB in 1998, where he collected *kompromat* for his *krugovaya poruka*.<sup>288</sup> This means there is hardly anyone in the Putin regime with a clean record, unconnected to corruption – allowing Putin to take them down when it suits him.



**Picture 17: Illustration of *krugovaya poruka***<sup>289</sup>

<sup>286</sup> Ledevna, A. (2001). *Unwritten Rules: How Russia Really Works*. London: Center for European Reform, pp. 12-13.

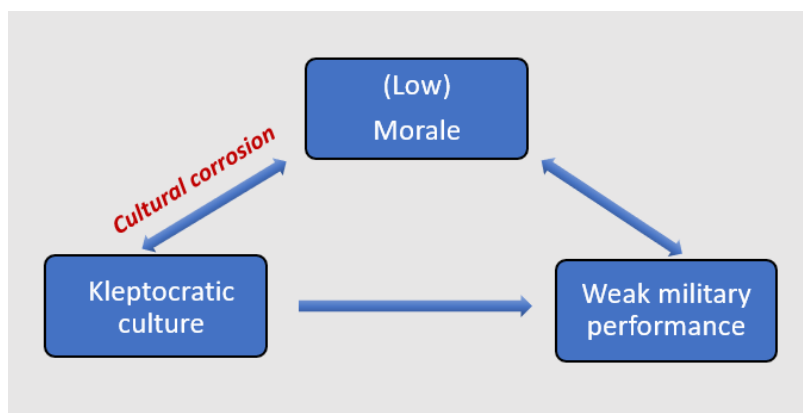
<sup>287</sup> Domanska, M. (2023, February 17). *Putin's neo-totalitarian project: the current political situation in Russia*. Retrieved from OSW | Centre for Eastern Studies: <https://www.osw.waw.pl/en/publikacje/osw-commentary/2023-02-17/putins-neo-totalitarian-project-current-political-situation>

<sup>288</sup> Belton, C. (2020). *Putin's People*. New York: Farrar, Straus and Giroux.

<sup>289</sup> Vladimir Romanov, “*Krugovaya poruka*” (2001). Source: <https://caricatura.ru/art/rom/url/parad/rom/460/>

### 4.3.3 Cultural Corrosion

Corruption can rust cultures just as much as equipment. It engenders a cynicism that opposes military ideals because corruption breeds selfishness, self-centeredness, and fear. Corruption is still illegal within Russia and revolves around personal gains at the cost of something else – usually the common good. Therefore, cultural corrosion will reduce combat power, as military culture and culture generally affect combat effectiveness in war. The Russian soldier will consciously or unconsciously ask, “Why should I have ideals like self-sacrifice and unity when I know my superiors are crooks”? Or, to put it more bluntly, “Why should I risk my life in war for an officer that feeds me dog food, pocketing the difference spared?”<sup>290</sup> ... “Serving me unreasonably small meals that may carry E-coli and a quality of housing that is reportedly worse than our prisons.”<sup>291</sup> The kleptocratic culture likely reinforces the cultural corrosion, which leads to lower morale among the Russian soldiers. Lower morale then leads to an increased inclination for corruption. Thus, there may be a self-reinforcing effect between the two variables. The effect is outlined in the model below, where (low) *morale* is included as a confounder affecting *kleptocratic culture* and *weak military performance*. The main impact of increased cultural corrosion is an increased probability of weak military performance.



**Model 6: Theoretical model with confounding effect of morale<sup>292</sup>**

<sup>290</sup> Grove, T. (2011, May 19). *Whistleblower says Russian troops fed dog food*. Retrieved from Reuters: <https://www.reuters.com/article/us-russia-troops-dogfood-idUSTRE74I4TH20110519>

It has previously emerged that Russian soldiers have been served dog food apparently to save money, and from the Ukraine war, for example, we have observed Russian food rations that expired in 2015. The cause is unknown, but one can imagine that the Russian soldiers will speculate that the poor-quality food relates to corruption and personal gain for someone above him in the system. These forms of corruption will have a negative effect on morale and corrode the military culture.

<sup>291</sup> Petelin, G., & Meatnaya, E. (2015, Desember 24). *Бифштекс для солдата*. Retrieved from Gazeta: <https://www.gazeta.ru/social/2015/12/03/7933403.shtml>

<sup>292</sup> I have included an arrow pointing both ways between the variable's morale and weak military performance. Anchored in the recognition that “a losing war” can weaken morale even more among the soldiers. That said,

## 5. Empirical Analysis

The research question for this analysis was derived in Chapter 1:

*How can corruption in Russia's chain-of-command be described, and to what extent can corruption explain Russia's weak military performance on Ukraine's Northern flank?*

The descriptive part of the research question was presented in Chapter 4, describing corruption inside the Russian chain-of-command before and during the invasion of North Ukraine. I now turn to the second part of the research question: 'To what extent can corruption explain Russia's weak military performance?' The analysis will focus on the two theoretical aspects, i) *unaccountable officials* and ii) *kleptocratic culture*. As such, the broader aim of Chapter 5 is to explore why corruption is likely to degrade the Russian Armed Forces' capabilities during the war in Ukraine and in the years to come. Attaching the organizational theory to the empirical evidence from Chapter 4, the purpose is to deduce conclusions for the final chapter (Ch. 6). I will first answer the research question by applying the instrumental perspective, followed by the institutional perspective.

### 5.1 Analysis of unaccountable officials

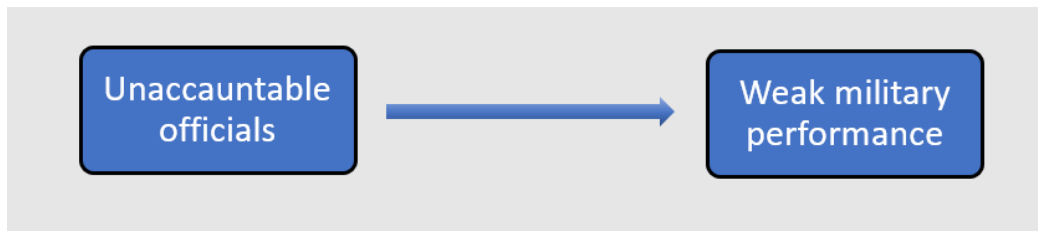
The instrumental perspective emphasizes that an organization is seen as a tool for solving tasks that are important for society. This created the following empirical expectation:

*Russia's weak military performance in North Ukraine can be explained due to a corrupt chain-of-command where unaccountable officials exploit the delegation of authority for personal enrichment.*

The empirical expectation was further concretized by picking out "unaccountability" and "delegation of authority" as key terms and placing them in an assumed causal context. With a background in relevant instrumental theory, the causal connection argues that the hierarchical structure gives delegation power and thus opportunities for personal enrichment because the organization is "unaccountable" to an external control body. The key term of unaccountable officials was further placed in the following assumed causal relationship:

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history is full of embattled armies like the Imperial Japanese Army in World War II, which fought ferociously even though they knew they would not win. While history also records other losing armies that "quite quit" — stopped attacking the enemy or did the bare minimum to stay alive.



**Model 1:** The expected causal relationship between unaccountable officials and weak military performance

The instrumental perspective created an empirical expectation where the lack of accountability and delegation of responsibility and authority within a hierarchical structure would be expressed through corruption within the Russian chain-of-command. I will now analyze the empirical evidence described in Chapter 4.

This analysis shows an apparent lack of accountability within the Russian defense sector, with no practical “top-down” initiatives undertaken by the government to fight corruption. Few external control bodies exist, such as inspections and rigid reporting regimes that follow up. Decisions on defense policy in Russia, such as reformation and procurements, are made behind closed doors and never discussed in public. Therefore, Russian civic society has little room for publicity and transparency, as the NGOs are missing in action, and marked as “foreign agents.” And without their voices, the information environment on corruption is further thinned. The lack of transparency allows political or military interest groups to pursue corrupt goals with little public oversight. On top of that, the military sector is particularly vulnerable to corruption, as it is shrouded in secrecy and “need-to-know” principles that prevent structural control and transparency. In this regard, a seemingly absent civilian judicial control body could have played a leading role in forcing the government to remove the secret stamps from the military budget and its procurements.

From the corruption chain, it was outlined how at the political level, there is almost a non-existent independent legal authority that can judge the political leadership within the Putin regime because corruption is “authorized.” A shortfall of independence in an institution that could investigate and punish corruption, means the corruption activity is directed by the aims of political actors and the organizations they are set to control. As such, “authorized” corruption schemes are placed out of the reach of domestic jurisdiction and the public and, for example, hidden in opaque offshore jurisdiction set in Panama or Cyprus. At the high-ranking level,

regarding state defense orders connected to the MoD, there appears to be an evident lack of openness and transparency for social oversight, which likely could diminish the production losses and transaction costs within the Russian military-industrial complex. At the bottom of the corruption chain, a huge problem for the Russian Armed Forces is that payments are still made in cash, which problematizes the control of external jurisdiction bodies at the mid- and low-ranking levels. On top of that, the levels in the corruption chain illuminate the military hierarchy of the Russian chain-of-command. With military hierarchy, power follows, and with power, discipline, and silence follows, that ultimately can enable corruption. In sum, the natural enemy of corruption is transparency and control. The main finding in line with the instrumental perspective is a clear absence of control and transparency within the Russian Armed Forces. That has prevented accountability, not sufficiently increasing the Russian official's individual "risk-profit" calculus for corruption. Consequently, creating a range of cases with little to no loyal and rigorous follow-up of the political management signals, as individuals across the Russian chain-of-command essentially resort to corruption for personal gains.

### 5.2.1 Dependent variable

On the dependent variable, 'weak military performance', there has been a substantial shortages of Russian-made military goods. For capabilities, corruption has prevented the development of the Russian Armed Forces' (RAF) modern military equipment. The lacking modernization is mainly connected to the political level, as corruption has prevented the R&D of radio systems, night vision goggles, and a modern satellite system that highly likely would have increased the Russian military performance in North Ukraine. The weak military performance is reflected in the substantial amount of Russian senior commanders lost during the first weeks, disadvantages in the electromagnetic spectrum, and a deficit BDA-process. In total, substantially damaging the Russian C2 ability during the first six weeks in North Ukraine. Here, the lack of C2, BDA-process, and satellite intelligence further led to RAFs' failure to take out the train logistics of military material, which was critical for maintaining Ukrainian resistance in the north. Both because the Ukrainians had to relocate some of their forces to the north from the east and received critical Western military equipment these first six weeks. Thus, in general, the corruption at the political level has prevented the modernization of the Russian Armed Forces' negatively affecting capacities and capabilities. The lack of modernization has meant that the RAF relies to a greater extent on old and partly outdated equipment.

At the high-ranking level, corruption has bred several dysfunctional military equipment in the procurement processes, such as rupturing tires, dysfunctional body armor, or clothing, that have likely increased Russian losses and hampered logistics in North Ukraine. At the mid-ranking level, corruption and lacking control-mechanism have given untrained soldiers, missing soldiers (“dead souls”), and a biased selection of soldiers, likely decreasing the general competence level and degrading the combat power of the assigned units in North Ukraine.

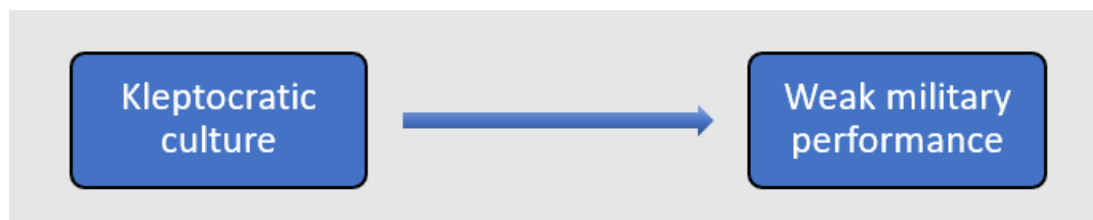
Lastly, the supply officer, NCOs and enlisted have stolen military goods at the unit level, leading to a lack of military equipment, food, med-kits, clothing, fuel, spare parts, and even radios for the Russian Armed Forces’ operation in Ukraine. The undersupply of military equipment has impeded the Russian Armed Forces’ war effort, which has not been helped by increasing wartime demand, creating even more incentives for the corruption of military supplies. Every kind of item, from uniforms to body armor, food rations, and even the latest Russian military radios Azart, have ended up being sold on Avito. As such, had the Russian government put in laws that prevented the resale of military goods, it would likely decrease the incentives to steal and sell military goods. Alongside, the large-scale sale of fuel has likely left many Russian soldiers standing on the road, becoming vulnerable targets and causing a shortage of initiative for the defining first weeks of the invasion. But also increased Ukrainian capabilities, as approximately 1/5 of Russia’s ground vehicles left in Ukraine were abandoned. In sum, the consequence of unaccountable servants has deteriorated Russia’s military performance in North Ukraine, lowering capacities and hampering capabilities caused by years of corruption.

## 5.2 Analysis of kleptocratic culture

From the institutional perspective, culture is central to the organization's decisions and operations. Actions are guided mainly by what the organization identifies with and what is considered appropriate behavior. As such, giving the following empirical expectation:

*Russia's weak military performance in North Ukraine can be explained due to a corrupt chain-of-command where informal norms and expectations nurture a kleptocratic culture.*

Based on the empirical expectation, "kleptocratic culture" was defined as a key term within the institutional perspective. The key term was further placed in the following assumed causal relationship:



**Model 2:** The expected causal relationship between kleptocracy and weak military performance

The analysis finds clear collective expectations of corruption within the Russian defense sector, represented through informal norms and practices that guide defense employees' behavior. Which means a widespread perception has attached among Russian officials that at least some types of corrupt behavior are legitimate, even if considered formally illegal. What is particularly interesting here is how the corruption method changes when one moves up or down in rank within the Russian chain-of-command. The method varies according to the possibilities, which indicates an attitude towards corruption throughout the organization rooted in an internal collective expectation of what freedoms one is allowed as a Russian military official. Alongside, the empirical findings point to the existence of an organizational culture strongly characterized by nepotism, collusion (*krugovaya poruka*), and an acceptance of lies (*vranyo*), closely linked to Russia's cultural past. These are essential mechanisms in allowing and reinforcing the concentration of corruption within the Russian Armed Forces and likely negatively affecting morale through cultural corrosion.

More specifically, vranyo is an expression of a norm of systematic misreporting up the chain-of-command to promote and enrich oneself. Admitting mistakes or corruption is not career-promoting within the Russian Armed Forces. At the same time, one of the most critical implications of krugovaya poruka is the lack of working legal institutions.<sup>293</sup> If krugovaya poruka is still practiced within Russian society, no absolute equality can be observed in the face of the law. As such, a cultural phenomenon within Russia prevents the structural control and accountability mechanisms from functioning correctly – indicating a covariance between the two independent variables. Fair and legal prosecution sustained over time is a measure that could diminish the scale of the kleptocratic culture within the Russian Armed Forces. However, there appears to be a lack of risk connected to the officials involved in corruption, as the kleptocratic culture still is collectively accepted. In the future, institutional reforms that may threaten Putin’s “krugovaya poruka” in prosecuting all involved in corruption will likely continue to be blocked or distorted if Putin or his accomplices hold power in Russia. Thus, it will be very challenging to change the kleptocratic culture of the Russian Armed Forces when it is popularly perceived that the people at the top still engage in corruption. Because if people think their boss is a crook, they will feel they might have a license to be crooks themselves, as that is only “fair.”

### 5.2.1 Dependent variable

From Chapter 4.3, we observed how corruption and exploitation are part of the “ethos” within the Russian Armed Forces, damaging the morale values, which perhaps is reflected in how Russians treat Ukrainian civilians who get in their way. The acceptance of exploitation within the RAF, has likely led to a lack of military training, as unit commanders capitalize on their “private labor force.” Moreover, this kleptocratic culture leads to cultural corrosion, lowering the morale of the Russian soldiers, which in turn can significantly affect the “weak military performance” in North Ukraine. Here, parts of the Russian infantry units have shown low morale, which led to poor unit cohesion and inter-unit cooperation. At the same time, a culture of lies (vranyo) likely causes intelligence failure, giving the Russian command a distorted view of the battlefield, and causing insufficient C2 capabilities. Alongside, krugovaya poruka is likely negatively affecting the military decision-making, as military officials connected to the operation are selected on loyalty rather than competence.

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<sup>293</sup> Ledeneva, A. V. (2006). *How Russia Really Works*. London: Cornell University Press, p. 114.



A military culture, with an acceptance of lies, exploitation, and corruption, further undermines the trust within the Russian military complex. The *kleptocratic culture* then undermines the combined arms operations of the RAF, as a prerequisite for combined arms is that the various parts involved in a military operation trust each other to function properly.<sup>294</sup> In North Ukraine, a shortfall of combined arms impacted the "weak military performance" of the BTGs-structure and the harmful coordination between the Russian Air Force and the soldiers on the ground stationed North of Kyiv. For the operation in North Ukraine, there is little Russian independent maneuvering with small units, effective combined arms have largely been absent, there is limited learning from one's own mistakes (presupposes correct reporting), and little trust between the specialized units, nor between those leading the war and the lower command and the privates. Some sub-units have even opened fire on other Russian units, and Russian units have been fired upon by their own artillery due to erroneous data. It should therefore come as no surprise that there is a gap between Russian and Ukrainian losses for the campaign to Kyiv.

On top of that, the culture of lies, accompanied by strong collusion, likely increased the general level of corruption within the Russian Armed Forces. Which, in sum, lead to the inadequate management of Russian tactical forces on Ukraine's Northern front, hampering logistics and maintenance of a sustainable force. Lastly, it must also be emphasized that the level of corruption within military units in the Russian Armed Forces is most likely different at the tactical level – anchored in their military culture of professionalism. Highly selected and competent units such as the GRU, the Special Forces, the Marine Infantry, and the VDV most likely have a less pervasive kleptocratic culture relative to the Russian Army or the Railway Troops. The difference will likely result in a weaker military performance for the latter units when meeting war demands in Ukraine.

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<sup>294</sup> Biddle, S. (2004). *Military Power: Explaining victory and defeat in modern battle*. Princeton University Press.

## 6. Conclusion

In the previous chapter, the empirical descriptions from Chapter 4 were analyzed using the empirical expectations and the indicators derived from them. In Chapter 6, it is time to combine all the sub-elements to create a foundation to conclude the thesis research question.

‘The Corruption Chain’ has illuminated how corruption is a pervasive problem from top to bottom within the Russian Armed Forces—a constant pattern across all levels, from the political elite through the entire military chain-of-command. The thesis outlines how corruption is part of an accepted organizational culture within the Russian Armed Forces and the political elite. Perhaps the most interesting find was explored in the empirical description in Chapter 4, outlining how the *method of corruption* changes when one moves up or down the Russian chain-of-command. Chapter 5 addressed how uncountable servants and a kleptocratic culture have bred a damaging level of corruption, which has hampered Russian capabilities and likely strongly contributed to the Russian Armed Forces' weak military performance in North Ukraine.

The findings of this thesis have shown how corruption destroys military institutions. Corruption causes far more damage than the actual amount stolen or misappropriated, essentially hampering military capabilities. Given that there had been no corruption, Russia would have had more and better equipment, better-trained troops with higher morale, better logistics, and plenty of fuel and food. Mainly because corruption is in *covariance* with these variables, which have a determinant effect on the military outcome. That likely had enabled the Russian Armed Forces to seize Kyiv, Kharkiv, and Chernihiv in the early days of the war. It will likely take years for Russia and outside analysts to work out all the ways in which corruption has harmed its efforts in Ukraine. Still, based on this thesis, the effect has been substantial, negatively affecting military operations in several domains. Russia set out for war with an armed force that for decades has been hollowed out by corruption at every level, as the Russian model of society and the Putin regime revolves around corruption and kleptocracy. This pervasive corruption can be seen as a form of “cancer,” which degrades combat efficiency at all levels, spreading and festering to every unit operating within the Russian chain-of-command.

One thing is that money is lost through corruption, which there has been extensive research on, in the past.<sup>295</sup> Yet, this thesis addresses how corruption also produces other visible effects that affect a war's outcome, such as missing soldiers, the lack of modern equipment rooted in unsuccessful R&D programs, defective and missing equipment, biased selection, and incompetence through the Russian chain-of-command. In other words, corroborating how corruption has long traces which does not necessarily appear in peacetime, and how corruption has far more significant effects than the isolated cost measured in rubles, likely substantially contributing to Russia's weak military performance in North Ukraine. While also illuminating the general point that assessing military capability with too much emphasis on quantitative figures is insufficient for countries that are permeated with corruption.<sup>296</sup> To conclude the research question: *It is highly likely that Russia's efforts to conquer North Ukraine have partly failed because of the impact of military corruption.*

For the future, Russia has put itself in a situation where the whole military defense sector is permeated by corruption, creating a major hindrance in restoring Russian military might. Under the Putin regime, corruption has not been dealt with seriously, cementing it as part of an organizational culture. As such, it is unlikely that Russia will make any significant progress against corruption in the future under the Putin regime, still hampering their war effort. One can neither exclude the fact that Russia failed in their strategic objective of taking Kyiv, where things are not looking too optimistic for Russia's future war effort after a year of fighting. As such, on February 14<sup>th</sup>, 2023, Chairman of the US Joint Chiefs of Staff General Mark Milley stressed that "Russia has lost. They've [Russia] lost strategically, operationally, and tactically. Paying an enormous price on the battlefield."<sup>297</sup> Concerning the initial objectives, Mark Miley's words hold true. The war in Ukraine appears to be a strategic disaster for Russia, however the fight ends. Not to forget that Ukraine's fate is still up in the air, where foreign support and its future efforts can make an enormous difference in its eventual fate.

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<sup>295</sup> Bukvoll, T. (2005). *RUSSIAN MILITARY CORRUPTION - Scale and Causes*. Kjeller, Norway: Forsvarets Forskningsinstitutt (FFI).

Beliakova, P., & Perlo-Freeman, S. (2018). *Corruption in the Russian Defense Sector*. World Peace Foundation.

<sup>296</sup> ***This perhaps illuminates a grander point, as analysts urgently need to improve the art of assessing the military capabilities of other countries, missing the more "difficult-to-measure" factors, such as corruption, morale, maintenance, leadership, and initiative of lower command when assessing military capability.***

<sup>297</sup> The Guardian. (2023, February 14). *Russia has lost 'strategically, operationally and tactically' in Ukraine, says US general – video*. Retrieved from The Guardian: <https://www.theguardian.com/us-news/video/2023/feb/14/russia-has-lost-strategically-operationally-and-tactically-in-ukraine-says-us-general-video>

Resolving the issue of corruption is likely beyond Russia's capabilities at present (spring 2023), as there probably still is extensive resistance to reform efforts because the whole organization is entangled in corruption from top to bottom. One can further assume that the stronger the Putin regime's grip on Russian society becomes, the more widespread the use of corruption as means of reward and control will be in the future. This suggests that the corruption level will likely rise when the autocratic grip on Russian society increases.

All in all, the decision of Russia's political leadership to go to war in Ukraine has exposed the full effects of systemic corruption and cheating within Russia's Armed Forces, meeting the same old mistakes of the Soviet era in a failure to reform government. The Russian Armed Forces have been permeated in corruption, in a kleptocratic culture of nepotism, collusion, deception, and lies which has weakened the operational capabilities in Ukraine. However, one should be careful in creating a perception that the Russian Armed Forces is insolubly corrupt and systematically incompetent, consisting of a military force incapable of adapting. This is a dangerous narrative, partly because it is inaccurate, but also because it encourages complacency that likely will lead to erroneous analysis for the future assessments of the Russian Armed Forces. In other words, the Russian military did notably worse than Western observers expected, but the thesis should not be considered a strictly reliable guide to future assessments. Historically, the Russian state has somehow always bounced back, even after horrible reverses. The Russian Empire survived many crises before it fell. The USSR survived the German invasion and rebuilt itself as a global superpower. Modern Russia rebuilt its global position after the mess of the 1990s. However, during many of these crises, the Russian state rebounded from defeat on the back of certain advantages like demography, resources, and landmass – those advantages have eroded in relative terms.<sup>298</sup> Causing the military balance to swing further and further away and questioning the conventional military threat from Russia for the medium and long term (not the nuclear).

Finally, the war in Ukraine has shown that the main threat from Russia is not its conventional power, as it has been substantially weakened by corruption and institutional inertia. As such, the main threat from Russia in the short term is not its conventional capabilities per se, but its brutality, appetite for risk, and nuclear weapons. While the Putin regime sits behind the walls of the Kremlin, Russia is to be considered Europe's last empire prepared to go to war to recreate

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<sup>298</sup> Alongside, Russian demographic decay is serious. There are not enough children born to maintain a sufficient workforce. While many of Russia's most talented go "overseas" after the mobilization to find jobs elsewhere.

what was during the Soviet empire.<sup>299</sup> Expected to seek the claim of being “a great power,” a revisionist state that facilitates the coercion of its weaker neighbors, at times through smaller wars where Russia has shown to be successful.

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<sup>299</sup> Shinar, C. (2017). Vladimir Putin’s Aspiration to Restore the Lost Russian Empire. *European Review*, 25(4), 642-654.

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## 8. Appendix

### 8.1 Discussion – What about Ukraine?

We have, through this text, observed how corruption damaged Russia’s military capabilities in Ukraine. This naturally leads us to the question of why corruption has not been a major problem for Ukraine in the war. Compared to Ukraine, which was below Russia on the Corruption Perception Index in 2015 (being more corrupt), Russia has not been able to implement genuine political will for a comprehensive reform program.<sup>300</sup> That said, one has to be somewhat critical of reports on corruption in Ukraine, as Russian intelligence has strategically fabricated investigations on corruption to influence Ukrainian and Western opinion.<sup>301</sup> Where part of the score of the CPI index score is based on “perceptions of corruption,” which could be influenced by fabricated corruption campaigns. Still, Ukraine has lowered its corruption score since 2015, being less corrupt than Russia since 2016 until today, as measures highly likely were catalyzed after the Maidan Revolution and the annexation of Crimea in 2014 that represented a serious “wake-up call” for the Ukrainian Forces. Yet, corruption cannot be the whole story of the different outcomes observed in the war. What differentiates Russia from Ukraine in this conflict is arguably the difference in morale. Ukrainian soldiers are fighting an *existential war* of survival for their country. While on the other side, many Russian soldiers did not even know they were going to war until they were ordered over the border.

Recalling that the Ukraine state has faced an *existential crisis* since 2014, which has pressured systemic change, gradually departing from a “Soviet system” through eight years of reforms. In this departure, there have been NATO reforms since 2016, including civil-military relations for territorial defense and information resilience. Or, for example, the focus on clear boundaries between the political and military spheres and a cyclical change of political and military leadership – often including younger people that can present new perspectives. In Russia, the current leadership within Russia’s National Security Council is 62 years old on average (the median age is 65), and there is little replacement of individuals within the

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<sup>300</sup> Transparency International. (2021). *Corruption Perception Index*. Retrieved from Transparency International: The Global Coalition Against Corruption: <https://www.transparency.org/en/cpi/2015>  
In 2015 Russia had a corruption score of 29, placing them at rank 119 (a higher score indicates a lower corruption level), while Ukraine had a corruption score of 27, placing them at rank 130 and more corrupt.

<sup>301</sup> Watling, J., Danylyuk, O. V., & Reynolds, N. (2023, March 29). *Preliminary Lessons from Russia’s Unconventional Operations During the Russo-Ukrainian War, February 2022–February 2023*, pp. 7 - 8.

government, mainly reshuffling.<sup>302</sup> In Ukraine, the leader of the military intelligence service (GUR), Kyrylo Budanov, is 37 years old (!).<sup>303</sup> Including that in 2021, the average age of a member in the Ukrainian government was 41 years old.<sup>304</sup> Finally, there have not been clear delimitations between military and political decision-making in Russia. For example, Putin and Gerasimov are involved in tactical decision-making at a level normally undergone by a colonel or a brigadier.<sup>305</sup> As such, these are some of the explanations why corruption mainly has harmed Russian operations, not Ukrainian – for the war in Ukraine. Russia still has a political system and a culture anchored in nepotism and collusion, where digging out corruption requires genuine political will from the top. A reformation process the Zelensky regime had proven far more willing to proceed than the Putin regime. Likely because picking the system apart represents a more considerable internal threat/cost for the actors involved in the latter regime. The reformation since 2014, is perhaps encapsulated in the two pictures below – showing a departure from a “Soviet system”, with Soviet military equipment.

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<sup>302</sup> Meduza. (2022, January 31). *The old guard: The average age among Russia’s political elite is almost on par with the Brezhnev era. But Putin’s top officials are still younger than their American counterparts.* Retrieved from Meduza: <https://meduza.io/en/feature/2022/01/31/the-old-guard>

One can likely +1 year on most of the score, as there has gone a year since the article was published, with few replacements.

<sup>303</sup> President of Ukraine | Volodymyr Zelenskyy. (2020, August 10). *President introduces new Chief of Main Intelligence Directorate of Ministry of Defense.* Retrieved from President of Ukraine:

<https://www.president.gov.ua/en/news/prezident-predstaviv-novopriznachenogo-nachalnika-golovnogo-62637>

<sup>304</sup> Soldak, K. (2021, August 23). *Ukraine Is 30 And Fabulous.* Retrieved from Forbes:

<https://www.forbes.com/sites/katysoldak/2021/08/23/ukraine-is-30-and-fabulous/?sh=791ab6cb15a9>

<sup>305</sup> The Moscow Times. (2022, May 17). *Putin Involved in Tactical Decision Making in East Ukraine – Reports.*

Retrieved from The Moscow Times: <https://www.themoscowtimes.com/2022/05/17/putin-involved-in-tactical-decision-making-in-east-ukraine-reports-a77699>



Picture 18: The reformation of Ukrainian troops since 2014<sup>306</sup>

<sup>306</sup> Upper picture retrieved from: <https://eu.savannahnow.com/story/news/2014/04/16/ukraine-repels-pro-russia-uprising/13550255007/> (Photo: Sergei Grits). Picturing Ukrainian army troops set up a position at an airport in Kramatorsk, eastern Ukraine, Tuesday, April 15, 2014.

Bottom picture retrieved from: <https://eu.usatoday.com/story/news/politics/2022/01/27/ukraine-russia-military/9232378002/> (Photo: Efrem Lukatsky). Picturing Ukraine's volunteer military unit members training in a city park in Kyiv on Jan. 22, 2022.

