

German cars in the Russian army during the first world war: features of the military transport crisis

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Abstract. The article discusses the challenges of supplying the formations of the army of the Russian Empire with automotive equipment on the eve and during the First World War. Prior to the war, the utilization of road transport in the army and rear was fragmented. However, as of 1914-1915, the advantages of road transport in military logistics became evident to both the command and government. Nonetheless, ordering new cars from the Entente countries posed several difficulties. Drawing from the documents of the military-technical department of the General Staff of the Russian army, the article highlights the extent of dependence on German production. It delves into the complexities faced by the Russian government at the onset of the war. The research convincingly demonstrates that, contrary to previous studies and customs statistics for Russia, the primary issue lay not in the inability to replace cars from Germany, but rather in the necessity to multiply the number of cars when altering the logistics of supplies from other countries that also had to pass through Germany. These two interconnected problems became key issues that proved insurmountable for Russia, ultimately leading to catastrophic consequences.

1. Introduction

In the years of the First World War, the Russian transport system experienced colossal strains for which it was practically unprepared. This issue became one of the most significant factors contributing to a series of consequences, such as failures on the front, food crises, and economic imbalances within the Russian Empire. Several generations of researchers have formed a contemporary understanding of the reasons, stages, and potential alternatives to the situation that developed during the war. Among thematic works, the multi-volume edition by Rafail Ganelin stands out, as it brings together the accumulated concepts from historiography [1]. Undoubtedly, scholars have primarily focused on attempts to address problems with railway transportation [2-4]. However, within the context of general research, the absence of an analysis of automotive issues is noticeable. At the beginning of the 20th century, this mode of transportation was only sparsely present on Russian roads, primarily involved in cargo and passenger transportation. As the war began, its effectiveness in front-line conditions and the opportunities it presented became evident to both military command and the government. The expansion of the number of automobiles, particularly cargo vehicles, became a priority task. The main difficulties were associated with the underdeveloped industrial base within the country and the predominance of German-made technology, which posed significant challenges for repairs. The requisitioning of automobiles from the population in the summer of 1914 allowed for a relatively quick

resolution of the problem and, to some extent, indicated the necessary direction for further actions [5]. However, such actions continued throughout the war, even after the 1917 revolution [6].

The transport crisis of the Russian Empire during the war years had its roots in various factors, particularly in the realm of foreign trade. The country's significant reliance on imported industrial goods and the dominant role of Germany as a trading partner contributed to the crisis. With the outbreak of the war in August 1914, trade with Germany came to an almost complete halt, exacerbating the existing dependencies. Even before the war, Russia had developed a concerning dependence on German exports. Over the second half of the 19th century, Germany had gradually displaced Great Britain as Russia's primary trading partner and solidified its position by the early 20th century. Despite Germany being a potential military adversary, the structure of foreign trade did not raise significant concerns within the Russian government [7].

Of particular importance among German imports was automotive technology. The Russian auto industry was still in its infancy, producing fewer than a hundred cars annually. By 1914, the country had approximately 14,000 cars, most of which were of foreign origin [8]. Research indicates that German cars constituted “more than 80% of the total number of cars in Russia” [9]. Further insights from Konstantin Kotelnikov's article on imports from Germany to Russia provide more clarity: in 1913, Russia imported 1,629 cars and chassis, along with 222 trucks and chassis of German production. It is worth noting that the customs statistics of Russia accounted for deliveries

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from factories in other countries, such as France, Italy, and Great Britain, if they passed through Germany, attributing them to imports from Germany despite their actual country of production [7].

The analysis of documents from the Russian military department, static data, and contracts concluded with foreign firms at the Russian State Military Historical Archive will provide a comprehensive understanding of Russia's dependence on German automotive technology. This information will serve as a crucial basis for characterizing the military transport crisis the state faced in 1916-1917, particularly concerning the use of cars.

2. War Department statistics

The initial use of cars for military purposes by the Russian Empire's army began in 1911 [9]. Based on its own experiences in equipment testing and drawing from the lessons learned by the allied French army, the Russian Ministry of War recognized the need to procure foreign-made vehicles, primarily trucks. The responsibility for

establishing contacts with companies, trade missions, developing procurement plans, and distributing the equipment was assigned to the 4th branch of the General Staff [10]. In 1912, a commission led by Colonel Pyotr Secretev was sent on a business trip to manufacturing plants in Germany, France, and Great Britain. The commission was tasked with placing an order for 305 trucks of various tonnage, but faced challenges in fulfilling the mission entirely [11]. Competition played a role as several German industries had already committed to contracts for deliveries to the Ottoman Empire, and French firms were also busy fulfilling their government's plans. Consequently, in December 1912, orders were placed for 38 and 14 cars at the German firms Benz and Daimler, respectively [12].

The significant expansion of supplies occurred in 1913. Table 1 indicates that orders from Germany, which would later become Russia's adversary in the war, although not dominant, were noteworthy. Out of a total of 376 vehicles delivered, German production accounted for 31.4% of the orders.

Table 1. Car orders in 1913 [13].

Manufacturer	Country	Type	Quantity
Daimler	Germany	Truck	23
Büssing	Germany	Truck	24
Mulag	Germany	Truck	8
Opel	Germany	Passenger car	11
Adler	Germany	Truck	12
White	USA	Truck	10
Benz-Gaggenau	Germany	Truck	38
A. Saurer	Switzerland	Truck	53
Fiat	Italy	Truck	50
J.P.A.	France	Truck	19
Renault	France	Truck	47
Renault	France	Passenger car	21
Delage	France	Truck	11
Buire	France	Truck	21
Berliet	France	Truck	23
Panhard et Levassor	France	Truck	3
Benz	Germany	Passenger car	2

By the beginning of 1914, the Russian army possessed a mere total of 410 trucks [14]. In the preceding summer and autumn, there were extensive deliberations about the “big program” to procure cars from industrial enterprises in Europe and the USA, as part of the general rearmament plan for the Russian army. By March 1914, a plan was formulated to replenish existing units and establish new ones, requiring over 83 million rubles for implementation. Approximately half of the total amount was designated for priority orders, while the rest was intended for future purchases without specifying specific dates [14]. A total of 3,376 vehicles were needed to supply aviation detachments, fortresses' garrisons, create 24 automobile units, establish a training system, support

communications and intelligence services, and recruit infantry, cavalry, and Cossack regiments, as well as for command purposes [10]. The plan envisioned procuring these vehicles over a span of four years until the end of 1918. However, it was observed that “the production of orders would be desirable in Russia, but currently, only the Russian-Baltic Carriage Works with low annual productivity and I.P. Puzyrev, which was essentially closed, are available” [10].

To address the problem of dependence on foreign car manufacturers, the solution seen was state support for the construction of industrial enterprises in Russia. Several companies, including Renault, Fiat, Bussing, and A. Saurer, made specific proposals to the Russian

government and expressed their willingness to begin equipment production in the third year after contract conclusion. Unfortunately, the outbreak of war thwarted these plans. The leadership of the Russian-Baltic Plant in Riga also expressed readiness to commence truck production, but this endeavor did not progress beyond the production of several test models [10].

With the outbreak of hostilities in August 1914, the urgent and substantial increase in the number of vehicles became evident, as they proved highly beneficial in military transport logistics. A priority list was compiled, primarily focused on acquiring trucks of various tonnage and ambulances, amounting to a total of 1,958 units [13]. However, this list rapidly expanded. The critical change was that cooperation with German manufacturers and deliveries through Germany's territory were no longer possible. In autumn 1914, the commission led by Pyotr Secretev was dispatched to England in an attempt to resolve not only purchasing vehicles but also organizing their delivery through Arkhangelsk and Vladivostok [13]. Despite these efforts, only one Mercedes truck was purchased, which ended up in an English warehouse [15]. Additionally, the Russian government was offered the opportunity to repurchase over 1,500 trucks manufactured in the USA and Switzerland for orders meant for the German army but undelivered due to the outbreak of hostilities. However, this opportunity was not utilized [16].

The loss of the ability to purchase ready-made vehicles and their parts from German companies (of which a significant volume was accounted for by automobiles) could not in itself undermine Russia's transportation system and the defense capability of its army. The stock of imported transport before the war (excluding automobiles) could not significantly support it, as the needs of wartime far exceeded the capabilities of the park that was available by August 1914. Foreign purchases only partially satisfied them due to many circumstances: a reduction in exports and a shortage of currency, the overload of the industry by the allies' own orders, a shortage of merchant fleet for delivering purchased goods, and so on. In these conditions, the industrial potential of Russia became crucial. And it was precisely in this regard that dependence on imports from Germany turned out to be one of the key factors contributing to the transport crisis.

3. Conclusion

Summarizing the information presented above, it is evident that the Russian army had a substantial reliance on imported cars, particularly from Germany, even before the war. By 1913, the Russian General Staff had procured 376 foreign cars, with 118 of them originating from German manufacturers [13]. At the onset of the war, the army possessed only 711 full-time vehicles, to which 475 trucks and 3,562 cars requisitioned from the population were added for military service [7]. It is apparent that a significant portion of these additional vehicles were also of German origin. Throughout the war years, Russia redirected its car orders to markets in Great Britain, France, Italy, and the USA, but the deliveries primarily

arrived from the second half of 1916 onwards [17]. Until then, the existing cars had to be utilized. Even by July 1, 1917, German cars still accounted for a significant share in the Russian army, amounting to 1,053 out of 12,378 vehicles [18]. However, the presence of a considerable number of German cars also presented operational challenges due to the cessation of Russian-German trade, leading to a lack of spare parts and tools that were previously supplied by Germany [7]. This hindered repair shops' productivity, resulting in almost 30% of cars being constantly idle for repairs in 1917 [18].

Based on the analysis, it is crucial to note that during the war, the Russian military command faced not so much the inability to replace approximately 30% of the supply of automotive equipment from Germany but rather the need to increase the number of vehicles significantly when changing supply logistics from other countries that had previously transited through Germany. These two interrelated problems proved insurmountable for Russia, leading to catastrophic consequences.

The presence of a significant number of vehicles from German factories, of various brands, had a downside. It caused operational problems related to the cessation of Russo-German trade, namely a shortage of spare parts and tools (Germany previously supplied various car parts and tyres: 172.6 tons and 50.2 tons in 1913); this hindered the work of repair shops, whose productivity was catastrophically insufficient. It is no coincidence that almost 30% of cars in 1917 were constantly under repair. Another negative consequence of the impressive import of cars from Germany at the beginning of the 1910s was that the production capacities of the enemy's automotive industry, designed for export (and Russia was the largest customer, purchasing 25% of German export cars), could easily be reoriented to the needs of the enemy army; Germany entered the war with car factories producing more than 18,000 cars per year. Russia, however, had nothing to reorient. The cheap and high-quality import of pre-war years served as an insurmountable obstacle to the emergence of a viable automotive industry. Several private enterprises closed before the start of the war, having managed to produce about one and a half hundred cars. Only the automotive department of the Russo-Baltic plant remained operational, which could produce less than a hundred cars per year, which it did until the evacuation from Riga in 1915. However, even this small production relied on foreign components and government military orders, not due to competitive price and quality of products. The requests of entrepreneurs to protect the market from foreign goods, voiced in the 1900-1910s, remained unheard, and by 1914 Russia approached, practically without having an automotive production.

The dependence on German exports of means of production and the consequences of its cessation during the war years practically did not affect only two types of transport - water and horse-drawn, the production of which was weakly dependent on foreign components. However, it became one of the key factors in the crisis in more sensitive segments: it hindered the creation of the automotive industry and increased the productivity of locomotive and wagon-building enterprises. The war showed how much the structure of foreign trade of the

Russian Empire, namely the excessive share of German goods in its import of means of production, contradicted Russia's place on the international stage. The capabilities of factories and plants trying to overcome the consequences of this situation during the war were insufficient. If in 1915 industrialists and public figures still expressed optimism and considered the industrial potential of the country inexhaustible, then in 1916 the limits of industrial mobilization became visible. On the railways, where the approach of "disorder" and even "ruin" was felt especially strongly, it was understood that successful mobilization and modernization of industry cannot take place without a sufficiently developed basic branch of engineering - machine tool building. But it was impossible to do this before the end of the First World War.

Examining specific aspects of foreign car purchases and their utilization during the First World War expands our understanding of the broader challenges that the Russian Empire encountered, particularly the transport crisis. While the system initially coped with assigned tasks, it later became virtually unmanageable. The short-sightedness of Russian leadership, as evidenced by trade with Germany, significantly contributed to the food and military crises, the implications of which are of paramount significance. The study's scientific significance and relevance ultimately lie in its exploration of the general causes and context that led to the onset of revolutionary events in Russia.

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