

Organization of War Economies: Industrial Mobilization (Italy)

By [Piero Di Girolamo](#)

Industrial mobilisation in Italy during the first World War took on particular characteristics as a result of the country's reduced economic capacity. To respond to the challenges of the war, a special governmental structure was created, *Mobilizzazione Industriale* (Industrial Mobilization). This organization tended to assume increasingly rigid principles, but was, at the same time, pragmatic in its management of the industrial response to the conflict.

Table of Contents

- [1 Preface](#)
- [2 Mobilizzazione Industriale: a Technical or Political Solution?](#)
- [3 Alfredo Dallolio: from "minor figure" to "forger of victory"](#)
- [4 The End of Mobilizzazione Industriale](#)

[Notes](#)

[Selected Bibliography](#)

[Citation](#)

Preface

If [state intervention](#) in the economy was, albeit to different extents and in different ways, a characteristic feature of all the countries at war, the solutions adopted in [Italy](#) presented a rather significant degree of originality. Italy's industry was not only less developed than those of its main allies, but was still economically, financially, and [technologically](#) dependent on some foreign powers, particularly [France](#) and [Germany](#). These belligerent nations held significant influence over the various sectors of the Italian economy, and their conflict effectively prevented the nation from forming a unitary industrial policy.^[1] Furthermore, Italy entered the war at the end of a lacerating debate between [neutralists](#) and [interventionists](#), without the support of the Socialist Party and the [workers' trade unions](#). A consequence of this political acrimony was the preoccupation of the governmental structure responsible for [industrial mobilisation](#) with the issue of the workers rather than the development of a strategy of control or coordination of production. As a result, "the last of the great powers" required both extensive state intervention and the [mobilisation of civil society](#) during the war in order to "[establish] itself in contrast with a previous culture of government strongly anchored to liberal and non-interventionist elements."^[2] This ultimately "[gave] rise to a mixture of strongly authoritarian and repressive elements and to a substantial inability to assume an effective executive role," which extended into the post-war period.^[3]

To implement these changes, and to feed the operating armed forces, a structure to mobilize the economy for wartime industrial production was established in Italy, *Mobilizzazione Industriale* (Industrial Mobilization), entrusted to the leadership of General [Alfredo Dallolio](#) (1853-1952). Dallolio, head, in 1915, of the General Directorate of Artillery and Engineers, was also appointed Under-Secretary of State for [Arms](#) and Ammunition in August 1915. In 1917 he was promoted to Minister of Arms and Ammunition. Under his leadership, *Mobilizzazione Industriale* did not go through a crisis when faced with initial resistance from the left; rather, despite opposition and very limited resources, it fully achieved the objective for which it had been planned and

conceived – the arming of the country. Choices relating to manpower also allowed the structure to withstand growing insubordination and resistance in the country and navigate the military defeats of 1917, labour agitations, revolt in Turin, disputes between the Milanese founders and metallurgists, and unrest in Liguria, among other major events.

Despite these challenges, the Dallolio organization was always able to ensure that the fighting army received necessary supplies. They continued to manage this herculean task even in the dramatic moments following the devastation of the Italian army at the [Battle of Caporetto](#) in October 1917, and the great productivity which had been achieved by the Italian armaments industry was made evident in its response to this crisis. In October 1917, at the start of the battle, the Italian [artillery](#) had 7,138 [weapons](#) of all kinds; at the end of the withdrawal, 3,986 pieces were available and 3,152 were lost.^[4] To make up for these very serious shortcomings, the Italian army was initially able to dispose of only that part of the 1,994 pieces built between July and November 30, 1917 that had been kept in reserve, yet:

Faced with the gravity of the situation, entrepreneurs and workers displayed a patriotic spirit allowing the formulation, on December 12, 1917, of an emergency programme according to which, for some time, the production of small calibre artillery shells was suspended in view of the high number of unloaded bullets available, and every resource concentrated in the production of guns. It was thus possible to prepare by the end of April 1918 another 471 new batteries plus 682 spare parts. In May, 352 complete batteries were produced for which the total production in the six months considered exceeded four thousand pieces.^[5]

General Alfredo Dallolio's contribution and management capacity were equal to his determination and his desire for Italy to receive redemption after its massive [loss](#). As he later wrote to his daughter Gina:

Believe me, the results are greater than any expectation. If not completely, it is certain that in April nine tenths of the Caporetto failure will be remedied. And I have fought against all the crises, I have fought with difficulties that are maddening.^[6]

In addition to restructuring industrial production, another function of General Dallolio's *Mobilizzazione Industriale* which proved highly successful was the management of manpower. This aspect of the mobilization effort has been under-studied by scholars, yet was key to liberal Italy's success in the conflict.

Mobilizzazione Industriale: a Technical or Political Solution?

At the outbreak of the European conflict – and as it became clear that the possibility of an entry into the war alongside the Central Powers was no longer likely – the problem of supplying the army took on immense importance. The land artillery sector in particular proved increasingly important as the centrality of land-based [warfare](#), which would come to be understood as characteristic of the First World War, became evident. Thus, the figure of General Alfredo Dallolio, as head of the Artillery and Corps of Engineers Department, had a special importance from the beginning of the conflict.

Called "the dictator" of the economic conduct of the war (Luigi Einaudi) and the "forger of victory" (Enrico Michels), Dallolio was central to the history of *Mobilizzazione Industriale* and the Italian war effort. As General Manager of Artillery and the Corps of Engineers in May 1911, the Bolognese administrator was already responsible for supplying the military with all needs relating to weapons and ammunition, even of small calibre, before the outbreak of war. Between 1911 and early 1915, after moving to the Ministry of War, he witnessed the formation of a new framework of state responses in the face of changing demands of modern war. Most critically, he observed the transformation of the concept of "military mobilization" into "[national mobilization](#)," a shift which foreshadowed the coming total war.^[7]

Between August and October 1914, Dallolio refused the post of Inspector General of Artillery and the Corps of Engineers in the place of General [Onorato Moni \(1848-1914\)](#), who had died unexpectedly. He also turned down the post of Under Secretary for War in the place of General [Giulio Cesare Tassoni \(1859-1942\)](#), and the post of Minister of War offered to him by General [Ugo Brusati \(1847-1936\)](#) Aide de Camp to the King in the name of the Sovereign [Vittorio Emanuele II \(1820-1878\)](#) and Prime Minister [Antonio Salandra \(1853-1931\)](#). These refusals could only be reconciled with a dedication to serving the state if we surmise that Dallolio was fully aware of the bureaucratic paralysis caused by disagreement between the Minister [Domenico Grandi \(1849-1937\)](#) and the Chief of Staff of the Army, General [Luigi Cadorna \(1850-1928\)](#), who generated the military policy of the Kingdom of Italy, over how to proceed with arming the country. This stalemate came at a time when clear choices as to on which side to stand and how to prepare for war – a war which, it was understood, would not last long – would instead have been

necessary.

On October 20, 1914, Dallolio presented a budget involving an expense of over 150 million liras but was forced to reduce this figure immediately afterwards to 90 million in order to remain within the parameters of the financial allocation. By mid-February 1915, the Artillery and Corps of Engineers Department had placed orders for 147 million liras, of which 58 million were ammunition and artillery. In addition, 6 million liras of war material was purchased, intended to be intangible reserves. These were significant amounts, but proved negligible compared to the figures reached later. In other words, this volume of production was more in line with the demands of a ruling administration in peacetime than a country preparing to mobilize for war, as had been explicitly and forcefully requested by General Luigi Cadorna in a letter dated February 26, 1915 to the Ministry of War.

In fact, entry into the war took place without organizational provisions for mobilisation, to such a degree that that on June 13 General Cadorna set a letter to the Prime Minister explicitly expressing this opinion. In addition to rejecting the political accusation that the Ministry posed excessive financial requests, which Cadorna judged on the contrary to be "minimal," the Commander-in-Chief emphasized the insufficiency of medium-calibre artillery and artillery ammunition for combat in a war whose length and cost no one had foreseen. Cadorna clearly indicated the "political" way to get out of this very difficult situation would be the creation, on the model of what had been done in the other belligerent countries, of a "special organism governed by people with an agile and ready mind, of indomitable energy that has broad adherence and extensive contacts with the national and international industrial world."^[8] In another letter to letter to Prime Minister Salandra, Cadorna openly requested that a very highly-placed political figure should take over the direction of a ministry set up for the purpose.

On June 26, 1915, Decree 993 was issued, which can be considered the base on which *Mobilizzazione Industriale* was founded: through it, the government was given ample powers of intervention in the field of war production with respect to both labour and entrepreneurs. Militarisation was envisaged for the former, while sanctions would apply to the latter in the event of non-compliance with government requests. Subsequently, on 9 July, a Supreme Committee for the supply of weapons and ammunition was established along with an Under-Secretariat for Weapons and Ammunition headed by Dallolio within the Ministry of War.

The government's measures confirmed all the new Under-Secretary's doubts as to the awareness, at the highest levels of the state, of the actualities of what would be the first industrial war. The low political profile adopted by the executive in addressing the decisive question of industrial mobilisation reinforced this impression. As historian Luigi Tomassini points out:

Salandra's political decision to place a military technician (who, among other things, had given an assurance of knowing how to drastically reduce his programmes based on the budget needs proposed by the government) at the head of a simple Under-Secretariat [appeared] to be the most convenient choice [to Salandra] in the more or less latent contrast between political and military power that characterized the period of his ministry.^[9]

Having confirmed in September that his Under-Secretariat would fulfil the requirements for supplies of ammunition and aeronautical materials for both the army and the navy, Dallolio threw himself headlong into the work of giving the new organizational body, in line with his convictions and his vocation, a character "that diverged from the military model to move closer to the industrial one," as he declared at a meeting of the metallurgical industrialists in December 1915.^[10]

Between June and August 1915, at the height of the clash between the Commander-in-Chief, who threatened to suspend operations due to lack of supplies, and the Prime Minister Salandra, who had rejected the idea of a strong political leader for *Mobilizzazione Industriale*, Dallolio drew up and presented several project proposals. Although they denoted a willingness to take progressively into account what the experience of the war was highlighting, i.e. "the need for broader and less technical solutions,"^[11] these plans clearly indicated the will of the new Under-Secretary to hold firm to some of his deep-rooted convictions. Namely, he accepted that the mobilization had to rely on large industry as well as military establishments and reaffirmed the usefulness of the contributions of small and medium-sized enterprises. For big industry everything had to remain within parameters already outlined in a July report – which was, in fact, very vague – however, small manufacturers and suppliers were less heavily regulated. Capitalizing on this opportunity, Dallolio proposed an agile and decentralised structure which could organize and put into effect the "very active and precious competition" of small businesses, based on the country's economic geography.^[12] Whereas previously, a series of military and civil group leaders had been envisioned to coordinate the production of various factories that were territorially close and connected by shareholdings, now a decentralized structure of nine Regional Committees was proposed. These were to be led by the presidents of the chambers of commerce and tasked with

“merging and coordinating the various groups and various initiatives” implicit in the aim of mobilization, as well as organizing a consortium of industries in their district which wished to produce munitions.^[13] The most difficult negotiations with large industries and large suppliers were reserved for the Under-Secretariat.

In the very few days that elapsed between the date of Dallolio’s proposal and the definitive approval of the principles of the *Mobilitazione Industriale* regulations, the project envisioned by the Under-Secretary underwent profound transformations. While Dallolio had reserved a significant role for military establishments in the war effort, the approved regulations emphasized the priority of private industry. The Regional Committees were reduced from nine to seven, chaired by the military and were conceptualized as decentralized structures of the state apparatus consisting of two civilian members, two industrialists, and two workers with an advisory vote. It was clear that the emphasis of mobilisation had shifted to the problem of the labour market and the control of the working masses, on whom the productive effort would fall and about whose loyalty the ruling classes had strong doubts.

Meanwhile, in June 1915, the Milanese Union of Trade Unions produced a petition calling for wage reform and an expansion of union influence in the wartime economy. A revolutionary syndicalist organization of recent interventionist conversion, the Milanese Union of Trade Unions was still highly influential if not hegemonic among the industrial proletariat of Milan, an urban centre whose importance for the mobilization of the productive apparatus was decisive. Sensing that they had the upper hand, as employers – notably Ernesto Breda (1852-1918), an influential Milanese industrialist and the owner of the homonymous industry – began to complain about the scarcity of skilled workers, the Union sought to secure legislative changes in the labour market.^[14]

The text of the petition demanded not only a generalized salary recovery which would have affected the entire Milanese metallurgy, but also aimed at establishing direct control of the placement of workers by the trade union. This request was justified by the fact that large companies, not only in Lombardy, tried to attract the most qualified workers with promises of higher wages. Joining the war had not erased the memory of the recent great metal workers’ strikes and the syndicalist determination of the trade union movements, namely that of 1913 in Milan directed by Unione Sindacale Milanese. If the problem of finding labour had been allowed to gain urgency for companies, it would have likely led to an artificial increase in wages and conflict. The response of the Milanese industrialists and political authorities came swiftly: they nipped all trade unionist ambitions in the bud by threatening the arrest and forced domicile of their most capable and popular leader, Decio Bacchi (1876-1935), then Secretary of the Milanese Union of Labour Organisations. This was perhaps the signal that the cornerstone of the nascent industrial mobilization effort would be the forceful cooling of the labour market and the disciplinary control of the workforce.^[15]

The *Mobilitazione Industriale* that emerged in August 1915 was, therefore, not the one imagined by Dallolio, and the approved regulation highlighted above all the Under Secretary’s political weakness. In fact, the administrative bureaucratic system of the State conferred wide-ranging powers on the military to manage and control the working class in a country where its representatives had lined up against the war and in conditions of transformation within the labour market. These problems were only implied, not explicitly addressed, in the original proposals outlined by the Under-Secretariat.^[16]

Alfredo Dallolio: from “minor figure” to “forger of victory”

The main functions of the *Mobilitazione Industriale* regulations were mediating relations between industrialists and workers and delineating guidelines for personnel. In addition to the militarization of employees, already stipulated by the Decree of 26 June, a freeze was placed on all contracts until up to three months after the end of the war. Dismissals were banned at the same time, resulting, given the conditions of the labour market, in a neutralization of the aforementioned pressures driving wage increases. Furthermore, those parts of previous legislation that in any way limited the absolute autonomy and freedom of industrial enterprises were explicitly abandoned.

The initial tool for controlling the labour employed in so-called “auxiliary” factories, overseen by the military, was that of the “temporary exemption” from military service. This institution exemplified the urgency of keeping even minimally skilled labour employed at the factories, while allowing, since it constituted a special military position, greater control of this sector of the workforce. The demand for skilled labour was particularly strong at a time when companies were prioritizing an expansion of quantitative output rather than rationalisation of production. For this reason, as early as the end of 1915, further measures were

taken to expand the workforce on the home front. This included the recall of army corps of soldiers who had, in peacetime, worked in industries now engaged in wartime production and had skillsets useful to the economic effort. Towards the end of 1916 military workers comprised over 40% of the exempted labour (compared to about 18% in the spring of the same year and 22% at the end of 1918).^[17] The complete militarisation of the workforce that many in leadership had hoped for was not achieved, but there was nevertheless a considerable expansion of government influence through the establishment of the new figure of commanded military workers.

Some historians, including Massimo Mazzetti and Vincenzo Gallinari, have argued that Dallolio was a de facto advocate of the Union Sacrée – the truce forged between workers and the government in France during the war which curtailed strikes and public dissidence for the duration of the war. In fact it seems more faithful to the truth, as well as to the character of man and the military, to say that rather than promoting a singular agreement between labour and leadership, Dallolio mitigated conflicts through the adept management of industrial relations and workers' disagreements, hostilities which proved irrepressible after the deceptive truce of the first months of the war. A genuine relationship between *Mobilitazione Industriale* and the workers' representatives became necessary and useful not on the basis of abstract models or previous convictions, but in the cold realities of the war that "the other army" was fighting in the factories. The organization's initial closure towards the trade unions – characterized by the fact that the first trade unionist, Angiolo Cabrini (1869-1937), a strong exponent of reformist socialism, only joined the *Mobilitazione Industriale* Central Committee in 1916 alongside the robust counterweight of the conservative Roberto di Morra di Lavriano (1830-1917), an Italian general and politician – was only swept away by the resumption of the conflict in the workshops.^[18]

In this field, Dallolio turned out to be one of the most significant figures in a ruling class which, activated by the war, "was modernising itself" and, in so doing, managed to implement new and unprecedented solutions aimed at ensuring peace in the factories and the regularity of war production. Instruments such as the Piecework Commission, in which industrialists, the State and workers discussed issues and found solutions to the problems continually raised by the war, allowed the circumvention of formal closure without challenging Mobilisation structures. In addition to the problem of piecework, proposed solutions included the automatic adjustment of wages to the cost of living and an early but effective form of severance pay to compensate workers in the event of stoppages due to a lack of raw materials or electricity.

With the fading of the idea that coercion alone could bring the conflict to an end, *Mobilitazione Industriale* found itself facing, especially in 1917, prolonged and incisive instances of unrest that put a strain on its structures and provoked tensions between industrialists, military personnel and managers, as well as disciplinary surveillance and the political authorities. Nonetheless, *Mobilitazione Industriale* withstood the test thanks to the support of the system of [repression and control](#), which had been made more effective following the strikes and riots in Milan and Turin in August 1917,. Directed by Dallolio, the organization arbitrated conflicts both inside and outside the factory.^[19]

With this pragmatic policy, Dallolio's *Mobilitazione Industriale* did not abandon its general principles, but rather made them adaptable and flexible. This adaptability was what allowed them to organize "the other army" that fed the front with weapons and ammunition. At the end of the war there were 1976 auxiliary factories employing over 900,000 workers including 198,000 women. 35.7% were exempt and under military command; 33% bourgeois workers; 28.6% women and boys; 2.1% prisoners, detainees, refugees; 0.6% workers from the Libyan colony.^[20] Among other victories, *Mobilitazione Industriale* succeeded in making a riotous industrial world accept substantial quotas of [female labour](#), encouraging this through rationalization and the introduction of mixed male and female labour, known as "dilution" measures, in the production process (up to imposing conditions for their employment in 1916 and 1917). Rather than "replacing" the male soldiers who left for war, women should be understood as having entered an expanding economy, in which all categories of labour saw increases in personnel.

Aware of the extremely fruitful results of his interventions, and attentive to what the allied countries planned for the post-war period, Dallolio, along with his authoritative collaborator, the economist Enrico Toniolo, attended the first economic conference in Paris in June 1916. Together, they began to think about the idea of continuing the close collaboration between state and industry and the continuation – in the changed conditions of future peace – of the systems set in place by *Mobilitazione Industriale*. This intuition, that the postwar period could not be faced as a simple return to the past, was not common in the ruling class at the time. Dallolio's actions during this period demonstrate an awareness, albeit not at the level of Walter Rathenau (1867-1922), his counterpart in Germany, of the need to build a vast industrial organization that could withstand future trade wars by overcoming the structural weaknesses of the Italian production system.

The End of Mobilitazione Industriale

It was a crisis of supplies and raw materials, as well as manpower, which ultimately caused the failure of the *Mobilitazione Industriale* leadership to continue successfully mediating disputes between capital and labour. The development of war production and its onerous management opened – as mentioned – problems of rationalization and streamlined coordination between the various branches responsible for procuring raw materials. The imperative to continue the conflict under a regime of resource scarcity clashed with the propulsive but disordered character assumed by choice and necessity by the *Mobilitazione Industriale* shaped by Dallolio. Moreover, discontent began to emerge among the organization's various stakeholders, resulting in decisive and precise attacks by some leaders of large industry against the small and medium firms that had proliferated during the first period of the conflict, favoured by the initial *Mobilitazione Industriale* regulations.

Further criticism and controversy was generated by the resolution of Francesco Saverio Nitti (1868-1953), the new Minister of the Treasury in the Government headed by Vittorio Emanuele Orlando (1860-1952), to assume the functions of coordinating economic policy and controlling costs. To this end, the Treasury Minister attempted to exclude Dallolio from the Comitato di guerra (War Committee) and showed unwillingness to sign a decree intended to compensate workers grounded by a lack of raw materials. These measures foreshadowed a drastic downsizing of *Mobilitazione Industriale*. A final nail in the coffin for the organization came in December 1917, in the midst of the serious crisis of raw materials, with an attack launched by the powerful Ligurian industrialist and entrepreneur Erasmus Piaggio (1845-1932) on the *Mobilitazione Industriale* Central Committee. Piaggio forcefully criticized the organization's handling of important issues such as relations with small industries, manpower, and resources.^[21] The structure, which Dallolio had shaped for the functional application of his policy towards the issue of the workers, appeared anachronistic when a close integration between the various apparatuses – of state, industry, municipality, and labor – was imperative.

With the end of the war, the urgent problems that had precipitated the *Mobilitazione Industriale* disappeared. The organization was not able to adapt to the needs of the [post-war economy](#), and Dallolio's dreams of "organized capitalism" were forced to retreat. The real and deep roots of the abandonment of *Mobilitazione Industriale* are to be found in the supply crisis and in the failure of efforts to involve worker members in shaping economic relationships following the war.^[22] Caporetto had only postponed the final showdown. Following a series of scandals involving some officials of the Ministry of Arms and Ammunition, Dallolio resigned.

The interim head of the Ministry of Arms and Ammunition was hired by the Minister of War Vittorio Zupelli who on the following 15 September was replaced by the Hon. Giovanni Villa. The Ministry, having been transformed into a Commissariat entrusted to the Hon. Cesare Nava, ceased to exist on November 24, 1918 and its functions were subsumed by the Ministry of War. A last but not least important consideration: *Mobilitazione Industriale*'s successes were often achieved through coercion, pressure, and repression. Its abandonment, and the intensity of the backlash against it, mark the limits of accepted intervention by a liberal state as well as the problems raised by a conflict that elevated the masses to a leading role in the life of the country.

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Notes

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8. ↑ Tomassini, *Lavoro e guerra* [Work and war], p. 37.
9. ↑ *Ibid.*, pp. 42-43.
10. ↑ Assenza, *Il generale Alfredo Dallolio* [The General Alfredo Dallolio] pp. 184-187.
11. ↑ Tomassini, *Lavoro e guerra* [Work and war], p. 44.
12. ↑ *Ibid.*, pp. 44-48.
13. ↑ Mazzetti, *L'industria italiana nella Grande guerra* [Italian industry and the First World War], pp. 191-192.
14. ↑ Tomassini, *Lavoro e guerra* [Work and war], p. 41.
15. ↑ Di Girolamo, Piero: *Produrre per combattere. Operai e Mobilitazione Industriale a Milano durante la grande guerra 1915-1918* [Producing for combat. The working class and industrial mobilisation in Milan during the Great War 1915-1918], Napoli 2002, pp. 32-42.
16. ↑ Tomassini, *Lavoro e guerra* [Work and war], p. 51.
17. ↑ Mazzetti, *L'industria italiana nella grande guerra* [Italian industry and the First World War], p. 191.
18. ↑ Di Girolamo, *Produrre per combattere* [Producing for combat], pp. 38-47.
19. ↑ Tomassini, *Lavoro e guerra* [Work and war], pp. 117, 119; Di Girolamo, *Produrre per combattere* [Producing for combat] pp. 43-45.
20. ↑ Di Girolamo, *L'Italia nella grande guerra* [Italy and the Great War], p. 320.
21. ↑ Tomassini, *Lavoro e guerra*, p. 16.
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