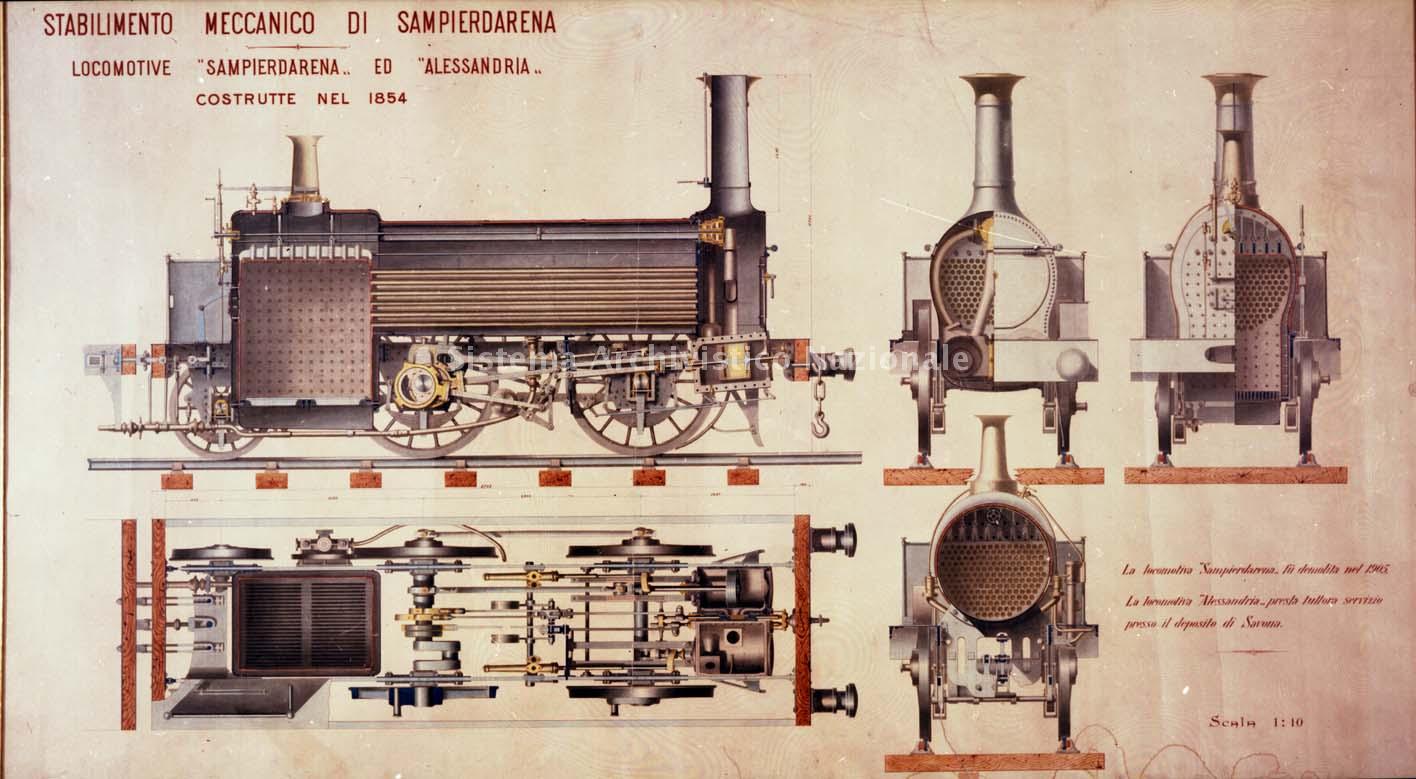
**Luca Urzì - Bachelor Thesis 2021**

***Leaving the South behind***

**The origins of the Italian South – North divergence in the mechanic industry**

**Pietrarsa vs Ansaldo: Piedmontese continuity in the political economy of the first Italian post-unitary decades.**



**To what extent were public commissions, banking credit and privatization contracts influenced by the institutional continuity between the Kingdom of Sardinia and the Kingdom of Italy?**

**Abstract**

*The origins of the South – North disparity in Italy are heavily debated. Recent research has attributed the start of this dualistic economy to the Italian industrial take off during the 1880s, after unification. Accordingly, industrial concentration in the North occurred because of the attraction that natural comparative advantages exercised on mobile capitals in that period. This thesis, on the other hand, shows that institutional continuities between the Kingdom of Sardinia and the Italian state in post-unitary decades constituted a fixed resource that attracted mobile capitals such as favourable state involvement, public contracts and greater credit availability towards Northern engineering firms. This qualitative case study has compared privatization contracts, public contracts and credit availability of Pietrarsa (South Italy) and Ansaldo (North Italy), the two biggest firms of post-unitary Italy, using Mill’s method of difference in order to identity the cause that determined Pietrarsa’s failure and Ansaldo’s success. These elements have been tied to the role of three main aspects of political continuity in the Italian state-building process: the extension of Sardinian legislation, continuity of Sardinian nobility and military ranks in the cabinet of the Royal Navy, and the continuation of the pre-unitary relationship between government and the National Bank in the new state.   
 Ultimately, the factor in which institutional continuities played the greatest role was credit availability. The institutional continuity between the Italian state and the Kingdom of Sardinia characterized a fixed capital that manifested itself into significantly greater credit availability for the Ansaldo, a factor which, according to Mill’s framework, was important enough to determine the failure of Pietrarsa and the success of Ansaldo during the first two post-unitary decades. This type of fixed capital, therefore, is likely to have played an important role in the geographical concentration of Italian industries in the North during the first post-unitary decades which needs to be investigated.*

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**Introduction**

**The Southern Question and its relevance**

Today, Italy presents itself in the international scene with four major unanswered questions: a low efficiency of its institutions, a disproportionate amount of tax evasion, the presence of criminal organizations and the great divergence between South and North.[[1]](#footnote-1) Indeed, the last words of Salvadori’s preface in *History of Italy*, published in 2018, show how the Southern Question is still one of the most relevant issues in Italian politics, also relating to Italy’s relationship with the European Union. The divergence between South and North has been traditionally characterized by the Southern inability to develop itself economically, institutionally and socially at the same pace of Northern Italy.[[2]](#footnote-2) This current state of affairs fuelled numerous polemics and conflicts within the political arena which essentially rely on the common popular narrative of a South made of poverty, economic underdevelopment, clientelism, patriarchy and the endemic presence of organized crime.[[3]](#footnote-3) While there is some degree of truth in these allegations, the main discourse would have them be generated by intrinsic qualities of Southern people, such as passion, pride and rebellion, which allegedly made them historically unable to take collective action in order to form a liberal-capitalist society.[[4]](#footnote-4) Historians have approached the issue in a more scientific manner and different conclusions were reached on the basis of a variety of growth models. At the heart of the debate is the role that the government might have played in the uneven South – North development. Because of post-unitary free trade, and the overall industrial backwardness, the few industrial concentrations Italy had depended exclusively on public contracts and the state.[[5]](#footnote-5) Real industrialization started with the 1880s protectionist regime and state support.[[6]](#footnote-6) Based on Rostow’s classical growth stages model, Rosario Romeo had claimed that Italian government favoured industrial growth overall, but its policies had different effects in different regions, sacrificing the South, unable to develop industrially under unfavourable economic policies and treated as a colonial market for finished goods.[[7]](#footnote-7) This view was utterly rejected by Luciano Cafagna, who mentioned how it was natural resources which determined industrial concentration in the North, as well as an agrarian accumulation that lasted over a century which now had matured into the industrial take off.[[8]](#footnote-8) In short, the gap was already pre-determined and the two halves of the country developed in a completely separated environment.[[9]](#footnote-9) Both of these approaches are based on the stages of growth model, which implies a phase of accumulation before industrial take off.[[10]](#footnote-10)  
 The development of the cliometric school in the 1960s determined a sudden revision of statistical information concerning industrial production from the 1860s onwards, of which Stefano Fenoaltea has been the pioneer.[[11]](#footnote-11) A new model was developed, which substitutes the stages of growth stages with business cycles.[[12]](#footnote-12) For investment industries, instead of an accumulation phase, the take-off was tied exclusively to cyclical peaks of its demand.[[13]](#footnote-13) On this premise, Fenoaltea detached himself from Cafagna’s deterministic approach, making a distinction between fixed and mobile resources, arguing that the former (such as natural resources and technology) attracted the latter (financial and social capital) after Unification because of specific technologies that drove the first Italian industrialization, favouring concentration in the North-West.[[14]](#footnote-14) This process occurred during the 1880s, when industries started to concentrate in the so-called “industrial triangle” of Turin, Genoa and Milan, and South Italy stayed behind.[[15]](#footnote-15)   
 In the research spurt of the last decades, an aspect that received scarce attention up to this day is how the institutional continuity between the Kingdom of Sardinia, the driving force in the Unification process, and the Italian state have influenced the post-unitary industrial concentration. The expansion of engineering firms was tied to internal demand according to Fenoaltea’s model; in post-unitary Italy such industries had only one client, the state.[[16]](#footnote-16) Piedmontese institutional continuity manifested itself into the extension of Sardinian legislation to the peninsula, the influence of its nobility and military ranks in post-unitary cabinets, and the privileged relationship between the National Bank of Sardinia and the state.[[17]](#footnote-17) This legislative continuity renewed old ties between pre-unitary Northern engineering firms and the state, while continuities in state cabinets directed the distribution of public contracts, especially relating to the Navy; preliminary research mentioned how the assignation of public contracts might have played a role in determining the Italian industrial geography.[[18]](#footnote-18) Finally, the dominant position of the National Bank of Sardinia had implications in the availability of credit.[[19]](#footnote-19) Thus, this case study will compare the distribution of public contracts, credit availability and the involvement of the state between the two biggest mechanic firms in post-unitary Italy: Pietrarsa, near Naples, in the South and Ansaldo, near Genoa, in the North. The aim of the research is to offer a preliminary qualitative analysis in what might have been the role of the Italian state in the development of the two most prominent Italian mechanic factories. In short, to what extent were public commissions, banking credit and privatization contracts influenced by the institutional continuity between the Kingdom of Sardinia and the Kingdom of Italy?   
 The factories of Pietrarsa and Ansaldo have similar histories. Both were built in their respective pre-unitary kingdoms during the 1840s and were the two biggest factories inherited by the new state: industrial reports of 1864 describe them as the only engineering establishments of a proper industrial entity, while in 1870-1874 another industrial enquiry compares their productivity of naval machines in equal terms.[[20]](#footnote-20) Both underwent a privatization process with state involvement and relied subsequently almost exclusively on state commissions mainly concentrating on railroads material and naval machines.[[21]](#footnote-21) Both factories spent their first post-unitary decades in precarious financial conditions, which resulted in a compulsive use of credit.[[22]](#footnote-22) One difference: the factory of Pietrarsa was declared bankrupt in 1878, while the Ansaldo would survive this phase and take the lead in the Italian industrialization process.[[23]](#footnote-23)  
 Because of both factories’ dependency on the three elements mentioned above (state involvement, public contracts and credit) a comparison is likely to yield useful insights into the reason of their different outcomes. For that, John Stuart Mill’s method of difference will be used. Then, since in this comparative analysis the state plays a central role, the second point of this thesis will be to determine to what extent those political economic dynamics were determined by the institutional continuity between the Kingdom of Sardinia and the Kingdom of Italy.[[24]](#footnote-24) Despite coming to different conclusions, this thesis will use Fenoaltea’s cyclical interpretation of Italian economic history as well as his model of fixed and mobile resources regarding the South – North divergence. The first is directly linked to the role of the state, since cyclical peaks that characterized Italian industrial output reflected the unstableness of the demand in the post-unitary period and not the missing prerequisites for industrialization.[[25]](#footnote-25) The role of the state was inextricably linked with the development of the mechanic industry, which brings us to the second point: fixed and mobile resources. The three elements of the comparative analysis mentioned above will classify as mobile resources, and this thesis will make the point the institutional continuity with the Kingdom of Sardinia was part of the fixed capitals that attracted them. This thesis is meant to enlarge Fenoaltea’s model by including institutional continuity with pre-unitary Piedmont in the category of fixed capital to show how it might have attracted a higher degree of public contracts, credits and favourable privatization terms.   
  
**Methodology**

**John Stuart Mill’s method of difference**

Pietrarsa and Ansaldo had three main characteristics in common: the assistance of the state in the creation of the private enterprise, the dependency on state commissions and an excessive reliance on credit. The similarities of the histories of both establishments make the method of difference of John Stuart Mill a perfect framework to isolate the possible cause of failure and success of the two mechanic “giants”. This method has been theorized in order to ascertain the cause of a particular phenomenon in an instance in which it occurs, and an instance in which it does not occur, where the two instances present the same set of circumstances save one; that specific instance will be the cause or an indispensable part of the cause.[[26]](#footnote-26)   
 The investigated phenomenon is the failure of the enterprise: it occurs in Pietrarsa’s case and does not occur in the Ansaldo. In their mirror-like history, the different circumstance in both instances relies in different concentrations of public contracts and credit terms, as well as slight difference in their privatization contracts. Those three elements were chosen for the comparison since they are the elements on which the survival or failure of the company rested on: privatization contracts defined the state involvement they received, crucial at this stage for engineering firms; public contracts characterized demand, which was the driving force for the engineering sector in the cyclical model; the use of credit is considered generally one of the preconditions for entrepreneurship, even more so in the precarious development of both factories in post-unitary decades. For methodological purposes, entrepreneurial abilities have been omitted, since it is ascertained how during this period both companies were not generating profit and relying excessively on credit.[[27]](#footnote-27) Therefore, the different concentrations of the three elements will be compared and tied to the specific circumstances of the failure of Pietrarsa.

**Fenoaltea’s fixed and mobile resources and the use of primary sources**

Fenoaltea’s distinction between fixed and mobile resources will be used as a framework to compare the concentration of these three elements in both factories by investigating their link with the political continuity with the Kingdom of Sardinia: privatization conditions, public contracts and credit will be treated as mobile resources, while political continuity as fixed resources. In Fenoaltea’s model, fixed capitals attracted mobile capitals in post-unification Italy, determining its industrial geography. The originality of this thesis consists in considering political continuity as a fixed capital, which attracted mobile resources such as favorable privatization contracts, public contracts and credit. In order to do that, the link between the concentration of those elements and political continuity will be investigated through primary sources.  
 Privatization contracts, public contracts and credit are subjects already treated by secondary literature, which will be used in the comparative analysis. Primary sources will be mainly used in order to ascertain the possible motives of different concentrations of mobile capitals mentioned above. Industrial inquiries made in 1864 and 1870-1874 are invaluable sources to determine the conditions of both factories at that time; they are especially important when it comes to public contracts, since they witness the respective capacity of both firms to produce railways material and naval machines at convenient prices, attributing any unbalance in their assignation to social rather than technical reasons. At the same time, they were made by industrials in order to increase state assistance towards national manufactures; this makes those enquiries particularly keen on emphasizing the merits of national industries. Concerning credit, its comparison will rely on secondary literature as well, since available primary sources have already been abundantly examined in that regard.   
 In conclusion, this thesis will perform a comparison of privatization contracts, public contracts and credit between the two firms to assess their cause of failure or success based on Mill’s method of difference. Then, their possible ties with political continuities with pre-unitary Piedmont will be investigated on the basis of primary sources and secondary literature.

**CHAPTER ONE - Framing the case study**

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**Was there a pre-determined South – North gap?**

**How can Fenoaltea’s model be applied in this comparative case study?**

**Chapter outline**

1. **The South – North Divergence at the time of Unification**
2. **Post-Unification engineering industry: leaving the South behind**
3. **Applying Fenoaltea’s model: political continuity as fixed capital**

**The South – North divergence at the time of Unification**

**Pre-unitary economic structures: a matter of different politics**

South Italy had a protected economy up until 1861, due to the self-sufficiency policies of the Bourbon dynasty.[[28]](#footnote-28) Agriculture was dominated by big landowners, and public spending was kept at a minimum by the Bourbons, resulting in the pre-unitary kingdom with lowest public debt on the one hand, but with a lack of education and infrastructures on the other.[[29]](#footnote-29) The protectionist regime, however, granted the kingdom a technological supremacy in the engineering sector in the whole peninsula.[[30]](#footnote-30) Northern Italy, on the other hand, had already been accustomed to more advanced pre-capitalist agrarian activities.[[31]](#footnote-31) Piedmont, the driving force of liberal Italy, had adopted free trade from 1851.[[32]](#footnote-32) At the same time, intense public works had been undertaken, encompassing irrigation, infrastructures and railways.[[33]](#footnote-33) On the basis of this qualitative analysis scholars have long assumed that the South – North gap that became apparent in post-unitary decades was simply the result of this pre-existing divergence. When it comes to industrial output, however, the new index of Fenoaltea brings to the table surprising statistics that challenge this age old view.

**Industrial output**

Traditional scholars, relying mainly on qualitative sources, have always taken the natural poverty of the South for granted; new data sets, on the other hand, seem to gradually shatter that view. In light of this debate, was there a real divergence at the time of unification? And, when exactly did the divergence happen?  
 When it comes to assessing a divergence in terms of regional output at the time of Unification, the new industrial index of Fenoaltea show that Italy in 1871 presented a West – East gap, rather than a South – North one.[[34]](#footnote-34) Such an output distribution reflects Ricardo’s growth model of a traditional *Ancién Regime* economy, in which manufacturing centers are concentrated around the old capitals.[[35]](#footnote-35) In its benchmark progressions, then, the data reveals that a real divergence started to take place during the 1880s, when the rise of the Industrial Triangle of Milan, Turin and Genoa, became apparent.[[36]](#footnote-36) The gap would become obvious in the 1911 benchmark.[[37]](#footnote-37) This means, Fenoaltea concludes, that the divergence between the Industrial Triangle and the *Mezzogiorno* occurred due to specific post-unitary economic circumstances rather than a deterministic amplification of an already present gap.[[38]](#footnote-38)   
 These estimates were obtained from new indexes of national industrial production that emerged within the most recent efforts of the cliometric school.[[39]](#footnote-39) New research in the field started from the 1960s and culminated in Fenoaltea’s new index of 2001; such new data sets are a product of modern economic theory and statistical methods applied to economic history.[[40]](#footnote-40) The most recent indexes of national industrial production have permitted the first calculation of direct estimates of regional industrial production from 1871 to 1911, considering for the first time labor productivity as well.[[41]](#footnote-41) The West – East divide of new data shatters age old view of a pre-existing South - North divergence entrenched in the past.

**Post-unification engineering industry: leaving the South behind**

At the time of unification Italy presented an overall underdeveloped industrial structure, accounting only for 20% of the Italian gross domestic product and employing 18% of the country’s labor in an economy still dominated by agriculture.[[42]](#footnote-42) The engineering sector depended entirely on state support at this stage. The Piedmontese extension of free trade caused in South Italy a reorganization of engineering firms, which restructured and merged to compete in the new market; the SNIM, Guppy and Pattison are an example of that.[[43]](#footnote-43) However, Northern firms at that stage were emerging with within a closer relationship with the Italian state.[[44]](#footnote-44)  
 During the 1880s, the Italian political class shifted its economic policy in favor of a protectionist economy, adopting tariff barriers to protect specific industrial sectors, such as steel making, and increased subsidies to local firms through state commissions. [[45]](#footnote-45)[[46]](#footnote-46) It is during this period that the Industrial Triangle of Milan, Turin and Genoa emerged, doubling its average growth rate, resulting in the Italian “industrial take off”.[[47]](#footnote-47) In that process, however, South Italian engineering firms got left behind.[[48]](#footnote-48) This thesis is concerned with the two post-unitary decades anticipating the industrial take-off. In those circumstances a question rises naturally. Why concentrate on the mechanic industries in such a period, when they played such a marginal role in the Italian economy?   
 This question can be answered firstly by mentioning the relevance of the mechanic industry at large in this preliminary stage, as well as the case-specific situation of the two factories. First, the engineering industry, despite its initial narrowness, would soon prove to be one of the most dynamic sectors in the Italian economy in the 1880s.[[49]](#footnote-49) This stage, despite unstable growth, would be important to maintain continuity between post-unification engineering factories and the subsequent intensification of heavy industry. Witness to that is the fact that Ansaldo became one of the pioneering factories in Italian industrial development.[[50]](#footnote-50) Given the isolated number of mechanic establishments in 1861, amounting to five, their continuity between that preliminary phase and the industrial take off in the 1880s would have been relevant in determining the country’s industrial geography. The SNIM went bankrupt in 1878, missing the opportunity to “take-off” with the rest of the country.[[51]](#footnote-51)  
 For these motives, this thesis aims to investigate which factors were responsible for the survival of the Ansaldo industry over Pietrarsa in the post-unification decades using this qualitative comparative case study. Fenoaltea explained the Northern industrial concentration in terms of attraction of mobile capitals by natural resources.[[52]](#footnote-52) Further investigation into economic dynamics within this comparative case study, however, will show that the success or failure of such firms had a direct correlation with Piedmontese institutional continuities within the new state.

**Applying Fenoaltea’s model: political continuity as fixed capital**

In the never-ending debate surrounding pre-unitary conditions, Fenoaltea’s new statistics offered a breath of fresh air, moving away from deterministic assumptions that had previously dominated the debate. In this section a brief highlights of the most important growth models of the South – North divergence will be discussed briefly, to then explain why the model proposed by Fenoaltea is the best for this case study.  
 The progress of industrialized nations, as well as those for which it had yet to come, has been mainly theorized according to the stages of growth model of Walt Rostow, in which the stage of pre-requisites for growth is characterized by a necessary accumulation to make an industrial take off possible; this has been a key element in models developed to explain the South – North differential.[[53]](#footnote-53) Gerschenkron, however, developed an alternative model for countries developing despite missing pre-requisites, such as Japan, Germany, Sweden and Italy.[[54]](#footnote-54) In those cases central authorities would play a leading role, and the accumulation phase would be substituted with innovative solutions.[[55]](#footnote-55) Gerschenkron has been very critical with the role of the Italian state; relating to the South – North question, he sees the Italian state as actually having limited the gap, in the worst possible way, by limiting the growth of Northern industries.[[56]](#footnote-56)  
 Rosario Romeo held a completely different view. Using the stages of growth theory, he argued that before industrializing, Italy went through a phase of agrarian accumulation during the 1860s and 1870s that would end in the 1880s, period in which the accumulated capital would shift from agriculture towards industry.[[57]](#footnote-57) In his theory, the state was successful in fostering industrial growth; in doing so, however, South Italy was sacrificed since the new protectionist regime drastically harmed its main dynamic export-oriented sector, that of specialized agriculture.[[58]](#footnote-58) In short, Romeo argues that South Italy was treated as a colonial market for Northern manufactured goods.[[59]](#footnote-59)  
 Evolving forward from Romeo’s position is the model of Luciano Cafagna, who radically rejected any political economic reason that might have shifted the balance in favor of Northern Italy.[[60]](#footnote-60) Cafagna sees the industrial concentration in North Italy as a natural development derived from its geographical advantage, as well as an agrarian accumulation that had lasted over a century that had now reached full maturity.[[61]](#footnote-61) He uses the stages of growth model as well, but in a significantly increased deterministic way, tracing the roots of the increased South – North divergence to the initial gap itself, arguing that the two macro-regions developed in respective autonomous environments.[[62]](#footnote-62)  
 The three mentioned authors, however, relied on a traditional set of statistics concerning industrial output that became outdated as of very recently, thanks to the work of Fenoaltea and a new generation of scholars of the cliometric school emerging in the 1960s.[[63]](#footnote-63) The new indexes of industrial production were obtained through the application of modern economic theories and new statistical methods to economic history, which led to the revision of the previous Istat-Vitali index of production.[[64]](#footnote-64) The error in the previous set of statistics relied in the 1880s underestimation of agrarian output, a reported significant decrease which coincided with the European agrarian crisis.[[65]](#footnote-65) Such an error was due to a historical deficient data gathering process in the 1880s, in which the sudden surge at the turn of the century was simply due to a later interpolation of more comprehensive data that occurred in that period.[[66]](#footnote-66)   
 The revised series maintains a relatively linear growth of consumer goods, mainly characterized by food, while presenting cyclical peaks concerning investment industries, meaning sectors of durable goods of which engineering industries are part of.[[67]](#footnote-67) On basis of the distinction between the linear growth of consumer goods and the cyclical peaks of investment production, Fenoaltea rejects the agrarian accumulation theory, arguing that increase and decline in investment industries depended on the instability of demand, which rose and declined following business cycles.[[68]](#footnote-68)   
 Fenoaltea’s model moves away from determinism and formulates a cyclical model of growth, in which peaks of investment industries are generated by the cycle of their demand.[[69]](#footnote-69) Thus, the state, being the exclusive upholder of engineering demand, becomes the factor that directs the development of mechanic industry. At the same time, the pre-determined industrial supremacy of North Italy based on a previous agrarian accumulation is eliminated. How to explain then the industrialization gap according to this model?   
 Fenoaltea explains how natural resources in the North – West such as waterfalls and a greater social capital played a role in the industrialization of that region.[[70]](#footnote-70) His model, however, is not deterministic. Not all resources share the same level of mobility: relatively immobile resources such as geographical advantages attract in those that are highly mobile during a specific point in time, such as capitals, investments and labor.[[71]](#footnote-71) Therefore, this model explains the gap attributing its causes to their historical present.[[72]](#footnote-72) In short, the sudden development of the Industrial Triangle that started from the 1880s is explained by the sudden attraction that fixed capitals (resources) exercised on mobile capitals during that time, thanks to the specific technology that was driving Italian industrialization which favored water power.[[73]](#footnote-73) However, if Fenoaltea’s model still attributes the attraction of key mobile capitals to natural advantages of the North – West, how can it be linked to this comparative case study?  
 In the comparative analysis between the Southern Pietrarsa and the Northern Ansaldo, credit availability, public contracts and favorable privatization contracts will be defined as mobile capitals. Their different concentration in both factories will be compared, but instead of focusing on the pull that natural regional advantages exercised on them, they will be linked to the institutional continuity with Piedmont. This thesis aims to enlarge the scope of existing research by including the political aspect, focusing on a new type of immobile capital: the institutional continuity between the Italian state and the Kingdom of Sardinia.   
 Institutional continuity will be defined mainly in three features: the extension of Piedmontese legislation in the unification process, the continuity of Piedmontese nobility and military ranks in the nomination of Navy ministers and the expansion of the National Bank of Sardinian States, which continued a post-unification privileged relationship with the state that started in 1849 with Cavour.[[74]](#footnote-74) Those aspects will be linked in turn to privatization contracts, public contracts and credit availability. In conclusion, credit, public contracts, state-enterprise contracts will be defined as mobile capitals, while Piedmontese institutional continuity as a form of fixed capital which attracted a higher concentration of the former.

**CHAPTER TWO  
Comparing the privatization contracts**

**The comparative histories of Pietrarsa and Ansaldo during the first pre-unitary and post-unitary decades.**

**How did institutional continuities influence the respective privatization contracts of Pietrarsa and Ansaldo?  
  
Chapter outline**

1. **Brief history of Pietrarsa**
2. **Brief history of Ansaldo**
3. **The privatization contract of Pietrarsa**
4. **The privatization contract of Ansaldo**
5. **Final confrontation and link to institutional continuities**

**Brief history of Pietrarsa**

The mechanic establishment of Pietrarsa was built in 1843 by the Bourbons of Naples in order to free the dynasty from British industrial and military dependence.[[75]](#footnote-75) It included ironworks, foundries and mechanic workshops in order to produce naval machines, locomotives and railways, wrought iron for military and civil use, and pyrotechnical productions.[[76]](#footnote-76) Operating within a protectionist regime, the industry operated with modest positive economic results, especially in the mechanic sector, notwithstanding losses from ironworks and administration related inefficiencies. [[77]](#footnote-77) It relied on state commissions and initial importation of foreign technology as well as techniques from abroad.[[78]](#footnote-78)  
 After Italy was unified the factory would remain three years under provisional state administration until 1863.[[79]](#footnote-79) Finally, in 1863 it was rented to a businessman named Bozza; the enterprise, however, failed shortly after however.[[80]](#footnote-80) In 1864, a market reorganization of Southern firms led to the formation of the National Society of Southern Industries (Società nazionale delle industrie meridionali, SNIM), which incorporated Pietrarsa.[[81]](#footnote-81) The initiative was taken by an entrepreneur named Macry.[[82]](#footnote-82) The foundation of the SNIM will be the starting point of the comparative case study with the Ansaldo. The privatization contract conceded the factory for rent with a rate that would increase every 5 years, starting from 45.000 lire and ending with 70.000 lire.[[83]](#footnote-83) In the conditions of the contract, the society was accountable for maintenance costs.[[84]](#footnote-84)   
 Commissions played a very important, if not the main, role and are the second main point of this analysis. The period from 1864 to 1868 would be marked by a crisis due to the lack of public contracts. Even though in 1865 the society was granted commissions of 10 million lire by the society of Southern Railway, the second war of independence, the abolition of the gold standard in 1866, which raised the price of materials, and the financial crisis of the time made the contract not profitable.[[85]](#footnote-85) In 1869, the crisis was over and the society would perform works for the value of 3 million lire.[[86]](#footnote-86) Between 1869 and 1873 works would be yearly above 4 million lire to peak in 1873-1874 reaching 6 million.[[87]](#footnote-87) However, a budget cuts from the state in the 1870s generated a crisis in the whole engineering sector, and Pietrarsa would fail in 1878.[[88]](#footnote-88) During these 14 years, the SNIM performed works for the total amount of approximately 42 million lire: 9 for the Royal Navy, 7 for the war ministry, 16 for railways construction and 10 for privates.[[89]](#footnote-89) Despite that, constant indebtedness seemed to be a constant, as for the mechanic industry in general at the time, and thus comes the third major relevant point of its history: the compulsive use of credit.[[90]](#footnote-90)  
 The decision to file for bankruptcy in 1878 was forced by a particular chain of events. A shareholder named Fiocca had engaged himself in the construction of a hotel and emitted bills for the value of 72.000 lire endorsed by Macry, the main shareholder of the SNIM, however, the debt could not be repaid and Fiocca committed suicide; as a result every creditor of Macry and the company requested the repayment of every debt at the same time.[[91]](#footnote-91) In particular, the Bank of Naples was forced to proceed by legal means.[[92]](#footnote-92)

**Brief history of the Gio. Ansaldo & Co.**

The mechanic industrial establishment of Ansaldo was initially built in 1847 in Sampierdarena, near Genova, in the Kingdom of Sardinia.[[93]](#footnote-93) The initiative was born as a semi-private enterprise with state involvement, in which two entrepreneurs, Taylor and Prandi, received a loan of 500.000 lire from the ministry of commerce without interests to set up an establishment in order to receive state commissions for the railways constructions that were to take place.[[94]](#footnote-94) The contract had specific provisions, and more loans were bestowed upon the enterprise due to its lack of capitals.[[95]](#footnote-95) This initial attempt, however, failed in 1852, and the plant was sold back to the state.[[96]](#footnote-96)   
 In 1853, Carlo Bombrini, Raffaele Rubattino, and Giovanni Penco, three prominent names of the Piedmontese finance, formed a commercial partnership and took possession of the plant inheriting its debts as well.[[97]](#footnote-97) The engineer Giovanni Ansaldo would be chosen as director.[[98]](#footnote-98) The new society was formed with a capital of 1.200.000 lire, of which 810.000 were constituted by the value of the plant itself, handed over as a loan to be repaid without interests.[[99]](#footnote-99) The conditions of the contract with the state remained the same as with Taylor & Prandi, and constitute the first point of analysis.  
 Such conditions were: a 10% discount on state commissions; a mortgage placed on the plant by the state; direct government intervention for the purchase of land, buildings and machines, with payments made directly by its treasury; public supervision in building constructions; 3 out 4 workers would need to be natives; obligation to perform any public commission; profit of the partners could not exceed 18%, to which the 10% discount from public contracts would weight in.[[100]](#footnote-100) Here again, without the state as the main client, the enterprise would not have survived this stage, hence public contracts being the second point of the analysis.[[101]](#footnote-101)   
 From 1853 to 1858 state commissions were merely sufficient and were granted by Cavour’s influence.[[102]](#footnote-102) 20 locomotives were produced as well as other railway materials, the drilling machine for the Frejus tunnel and various works for privates.[[103]](#footnote-103) The enterprise risked its failure in those years and Carlo Bombrini used his role as president of the National Bank to ensure its survival.[[104]](#footnote-104) In 1859, the Second War of Independence granted a new flow of state commissions.[[105]](#footnote-105) Rifled cannons were commissioned, arms and ammunitions, and two gunboat ships in 1860.[[106]](#footnote-106) Thanks to military productions between 1858 and 1863, the Ansaldo would close its financial books with an active balance.[[107]](#footnote-107) From that point onwards, however, continuous losses ensued.[[108]](#footnote-108) Railways productions had slowed down, completely stopping in 1865, to resume only in 1879.[[109]](#footnote-109) Despite that, in 1884 the factory would have produced 68 locomotives.[[110]](#footnote-110) Through-out these two decades, the Ansaldo received commissions from the navy in different concentrations, rising slightly from the 1870s onwards, due to the keener attitude of the Royal Navy towards Italian industries.[[111]](#footnote-111) Overall, from 1854 to 1882 the Gio. Ansaldo & co. performed works for circa 45 million lire with a yearly average of 5 million.[[112]](#footnote-112) Of those, 14 million were commissioned by the railways, 17 million for the Royal Navy, and 3 million for shipbuilding, while the rest for privates.[[113]](#footnote-113)

**Pietrarsa vs Ansaldo: comparison of the privatization contracts**

This section will compare the first point in the historical confrontation of the two mechanic establishment: their privatization process. The contract signed between the company and the state regarding the Ansaldo took place in 1853, 10 years before the society of SNIM was formed; despite that, the two contracts show a number of similarities that make a comparison possible. Both of them went through a privatization process with state involvement and both of them failed in their first attempt to do so. Following Mill’s method, the comparison will be oriented in finding a major difference.  
 The society of Gio. Ansaldo & Co. was created in 1853, and soon took over the factory.[[114]](#footnote-114) Previously, the state had signed a contract with Taylor and Prandi in 1847.[[115]](#footnote-115) After the failure of that enterprise, the same contract would have been signed by the neo-constituted Gio. Ansaldo & co., formed by the president of the National Bank Carlo Bombrini, the ship-owner Raffaele Rubattino, and the financier Giovanni Penco.[[116]](#footnote-116) The contract was characterized by an initial loan of 810.000 lire, under the form of the plant’s real estate value, to be returned with a 10% discount from public commissions.[[117]](#footnote-117) All of the previous clauses issued with Taylor and Prandi were kept.[[118]](#footnote-118) Such clauses involved a mortgage upon the plant and its machinery by the state; the intervention of the state in every purchase of land, buildings and machinery, with their relative payments performed directly by the government; the need of approval from the state regarding building constructions; three quarters of the workers would have to be natives; the treasurer would have to be approved by the state; and finally, the establishment had the obligation of performing every received commission.[[119]](#footnote-119) Because of the legislative continuity with the Kingdom of Piedmont, after Italy’s Unification such contracts became unaltered, making therefore a direct comparison with the privatization process of the SNIM possible.  
 The National Society of the Neapolitan Industry was formed in 1864, with the structural merger of Southern engineering firms.[[120]](#footnote-120) In this case as well, it was the second privatization initiative after the failure of a first one. The establishment of Pietrarsa was given for rent to the neo-constituted society, with the following conditions: rent of 45.000 lire for the first five years, 50.000 for the second five years, 60.000 for the third five years, and 70.000 for the fourth five years; the society would be responsible for maintenance costs, differing in that from the previous contract stipulated with Bozza; the rent allowed for the use of the plant’s machinery and tools, amounting to the value of 829.584,65 lire, and the company committed itself to not let their value diminish as well as making their value rise in time, for which it would receive compensation from the state at the time of restitution; the government would concede to the company the raw materials stored in the warehouses, and its works in progress, which amounted to 498.692, 48 lire and would have to be returned to the state at the end of the contract.[[121]](#footnote-121)   
 It appears that the two companies had a striking amount of similitudes in their privatization processes, as well as some key differences. Both factories experienced a first privatization process which failed shortly after, to then become part of a new society. Also, both companies were created with the prospect of living out of state commissions: the Ansaldo was formed to supply for the needs of the emerging Piedmontese railways, and eventually encompassed also naval machines for the navy in its production; the SNIM was formed in order to become a key supplier of the state for the same reasons. In the post-unitary period, both of them would rely on public contracts, albeit in different concentrations. Some key differences though, would mark their development.  
 First of all, while in the case of the Ansaldo the factory was given to the society in the form of a mortgage, the SNIM had to pay a rising amount of rent, which would amount to 225.000 lire the first five years, 250.000 the second five years, and 300.000 the third five years. This aspect, however, is not directly comparable since the Kingdom of Piedmont in 1853 presented itself in a different situation than when it became the Kingdom of Italy. A more interesting aspect, however, relied in the fact that maintenance costs for the Ansaldo were taken care of by the state, indeed with a heavy involvement in the company’s administration, while the SNIM was held accountable for such expenses.[[122]](#footnote-122) Finally, as shown above, the additional clauses of state’s involvement in the administration of the Ansaldo are not present in the case of the SNIM.   
 Maintenance costs appear to be the most important element in the comparative analysis, since they originated from the institutional continuity with the Kingdom of Piedmont. The adoption of the Piedmontese legislation in the whole nation meant that the Ansaldo contract signed in 1853 remained valid in the post-unification period, therefore saving the Gio. Ansaldo & Co. from the burden of maintenance costs. In conclusion, from the privatization contracts of both companies emerges the advantage of the Ansaldo regarding maintenance costs taken care by the state, which was due to the political continuity between Kingdom of Piedmont and Kingdom of Italy. Political continuity can be defined as the fixed capital that attracted mobile financial resources of maintenance costs, according to Fenoaltea’s model. This difference, among the many similarities, is bound to have had a role in the final outcome of both factories, according to Mill’s framework; however, since the financial situation of the Ansaldo did not appear to be less tragic than Pietrarsa, only a marginal correlation is plausible in the different outcome of the two factories.[[123]](#footnote-123)

**CHAPTER THREE  
The distribution of public contracts**

**The comparative histories of Pietrarsa and Ansaldo during the first pre-unitary and post-unitary decades.**

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**Was the productive capacity of Pietrarsa and Ansaldo on the same level?**

**How did political continuities influence the assignation of public contracts?  
  
Chapter outline**

1. **The role of public contracts and the comparison of productive capacities**
2. **Railways construction, Royal Navy and political continuities**
3. **Public contracts and Pietrarsa’s output**
4. **Public contracts and Ansaldo’s output**
5. **The final confrontation**

**The industrial Enquiries of 1864 and 1870-1874: Assessing productive potential**

**The stunted survival of engineering firms and the industrial enquiries**

As mentioned in the introduction, public contracts were of crucial importance in the post-unitary engineering industry; they were practically the main source of demand for their output, which granted a stunted survival to engineering firms.[[124]](#footnote-124) This aspect is observed by Fenoaltea’s cyclical model of growth, in which industrial output of investment industries, including engineering, was directly correlated to its demand, remaining unstable in post-unitary decades and finally “taking off” during the 1880s, when the state started to entrust its needs to national firms.[[125]](#footnote-125) Before that, industrials from South and North alike were not happy with the low tariff barriers and limited institutional support they received, and soon took action in the development of two important industrial enquiries that analysed in detail the state of Italian industries, coming up with a plan for state support that would foster their growth.[[126]](#footnote-126) Those enquiries are here used to assess the productive capabilities of Pietrarsa and Ansaldo, a preliminary step in their comparison.   
 The primary sources that hold the most value in that regard are the Industrial Enquiry made in 1864 by the engineer Felice Giordano and the subsequent enquiry of the years 1870-1874, encompassing the whole Italian industrial environment, including comments from its most eminent personalities.[[127]](#footnote-127) The industrial report of Felice Giordano emerges in the context of preoccupations of metal-making industrials that were sacrificed by free trade in the immediate post-unification, since the state aimed at a timid engineering development based on the importation of foreign metals.[[128]](#footnote-128) Thus, the report was commissioned in 1861 by the navy, the only official entity sensible to the issues of the metal-making industries, because of military preoccupations concerning national self-sufficiency.[[129]](#footnote-129) The goal of such a document was to sketch a holistic industrial development plan for the Italian metal-making sector in order to supply for the needs of national engineering firms at a time in which the new state was about to expand significantly its railways network and its fleet.[[130]](#footnote-130) This enquiry is the most reliable document up to this point to assess the state of metal-making and engineering industries immediately after 1861.[[131]](#footnote-131)  
 Felice Giordano dedicated one entire chapter to the engineering industry in Italy, with the goal of individuating its most promising feature in his long-term plan. He mentions that there are roughly 70 mechanic factories in Italy, two of which have a real industrial entity: Pietrarsa near Naples and Ansaldo near Genova.[[132]](#footnote-132) Only 10 establishments could employ up to 250 workers, while only Pietrarsa and Ansaldo could employ between 700 and 1000 of them.[[133]](#footnote-133) At the time of the publication, Pietrarsa had already been merged with the “Granili” factory of Macry constituting the SNIM, as reported in the enquiry.[[134]](#footnote-134) Concerning the railways, those two factories and another one in Venetia are mentioned for being capable of repairing and producing locomotives.[[135]](#footnote-135) It is added how both of them offer equal or slightly higher prices than foreign rolling stock.[[136]](#footnote-136) Then, addressing the needs of the navy, he states how Pietrarsa and Ansaldo have produced naval engines of a certain importance; however, at this stage both of them are ill-equipped to produce more powerful engines ranging from 800 to 1000 horsepower.[[137]](#footnote-137) Nevertheless, when sketching the future of the engineering industry, Giordano is clear in portraying the two factories as the only ones capable of supplying the navy with such machines.[[138]](#footnote-138) Therefore, at the time of unification both establishments appear to be considered equal in terms of output for railways material and naval machinery.  
 The next industrial enquiry stemmed from the discontent of Italian industrials because of their limited participation in productions related to the navy and railways.[[139]](#footnote-139) Railways construction and contracts for the navy had relied mainly on foreign industries up to that point, which prompted representatives of industrial interests to perform a comprehensive enquiry assessing the state of Italian industries, in order to overcome prejudices affecting the decision making of the state.[[140]](#footnote-140) In this respect, the chapter concerning shipbuilding is of particular relevance in assessing the productive capacities of Pietrarsa and Ansaldo concerning naval engines. After a brief survey of the national shipyards, the Ansaldo gets mentioned first for having produced naval machines to the navy of 400, 600 and 900 horsepower at a price inferior of 250 lire per horsepower, as well as railway rolling stock and other types of machinery.[[141]](#footnote-141) The next paragraph states that other national factories, of which only Pietrarsa is mentioned by name, have dedicated themselves to the same task with results that were not less satisfactory.[[142]](#footnote-142)   
 The role of those enquiries boost state support in favour of industries, therefore, some degree of bias needs to be taken into account. [[143]](#footnote-143) On the other hand, such a distortion would have expressed itself into an overall excessive optimism for Italian development as a whole, as is mentioned for Giordano’s enquiry, for example.[[144]](#footnote-144) Less of that bias would have affected the technical observations of individual Italian establishments, since the facts mentioned in the 1870-1874 enquiries, regarding the productions of naval engines, correspond to the data relating to the production of the two factories.[[145]](#footnote-145) Therefore, on the basis of the industrial reports of 1864 and 1870-1874 the productive capacities of Pietrarsa and Ansaldo are ascertained to be equal, making a comparison relating the assignation of public contracts possible.

**Railways construction, Royal Navy and political continuities**

**Railways construction and the Navy**

In the case of Pietrarsa and Ansaldo, the major source of public contracts came from national railways companies and the Royal Navy.[[146]](#footnote-146) Railways at that time constituted a significant portion of the industrial demand only for modern engineering, acquiring an increasingly larger share in the total output during the 1880s.[[147]](#footnote-147) When it came to the whole engineering sector, however, its portion was much smaller, since the proto-industrial state of the field was mainly occupied in the maintenance of agricultural tools at that time.[[148]](#footnote-148) During the first wave of railways construction, from the 1860s to the 1880s, Italian industries were assigned only a small percentage of related public contracts, since institutions preferred foreign firms.[[149]](#footnote-149) Despite its narrowness in the aggregate sector, public contracts related to the railways are of primary importance for the scope of this analysis, since this thesis focuses on the unstable growth of two modern engineering factories immediately preceding the industrial take-off.  
 Public contracts related to the Navy appear to have been more conspicuous.[[150]](#footnote-150) In this case as well, however, the sector of shipbuilding was affected by the resistance of the Navy in commissioning works to the local industries.[[151]](#footnote-151) Nevertheless, contracts for naval machines and steam boilers were assigned to a small circle of engineering firms such as the SNIM, Ansaldo, Guppy, and others, as well as numerous maintenance works, mainly for defence purposes.[[152]](#footnote-152) In the Italian post-unification climate, the prospect of further war effort in order to annex Venetia and Rome and the Southern Civil War made defence a top priority in the state’s budget.[[153]](#footnote-153) Such contracts are part of the unstable demand that characterizes the precarious growth of the engineering firms in this period. In such a situation it emerges how the relationship between private firms and the navy was essential in granting a sufficient inflow of state commissions that would secure the company a stunted survival.

**Political continuities in the assignation of public contracts**

It has been noted how state commissions disparities between Southern and Northern firms in the long term had been influenced by the fact that the latter found better channels of representation of their interests in political environments.[[154]](#footnote-154) In the railways sector, however, Pietrarsa actually owned the whole national market share, making an investigation of Piedmontese continuities useless.[[155]](#footnote-155) In the Navy, on the other hand, political continuities might offer more useful insights.   
 Before 1861, economic strategy of the Count of Cavour, occupying among others the post of minister of the Navy, was to transform Genoa into an important commercial port and industrial pole.[[156]](#footnote-156) Such an initiative inserted itself in his political design to forge a closer relationship between Genoa and Turin, ancient rivals since the annexation of the former to the Kingdom of Sardinia in 1815, which saw a net increase of shipbuilding activities in the city as well.[[157]](#footnote-157)   
 After his death, the Piedmontese nobility often maintained a continuity of its influence in the new Italian state, ensuring to aristocrats and Sardinian military officers prominent roles in key institutions.[[158]](#footnote-158) This resulted in the nomination of Luigi Menabrea as minister of the Navy; he was already general of the pre-unification Sardinian Navy and was assigned to the post by King Vittorio Emanuele II himself.[[159]](#footnote-159) The new minister continued the project undertook by Cavour, incrementing shipbuilding activities in that region.[[160]](#footnote-160) After Menabrea, 8 out 12 Navy ministers until 1870 originated from the seats of pre-unitary Sardinian parliament or from the ranks of the Sardinian Navy.[[161]](#footnote-161)   
 This continuity might have affected public contract distribution. The privileged relationship of the Ansaldo with the Royal Navy has been ascertained by secondary literature, and the fact that from 1864 to 1869 it would be its top producer seems to confirm it.[[162]](#footnote-162) However, the impossibility to consult directly public contracts of the Navy from the Central Archive of the State makes a direct correlation difficult to prove conclusively.[[163]](#footnote-163) In any case, the aggravation of the Italian budget deficit after the 1866 war against Austria saw a drastic cutback in military expenses that affected the whole sector during the 1870s, regardless of any privileged network.[[164]](#footnote-164)

**Public contracts and Pietrarsa’s output**

From 1864 to 1878 factory of Pietrarsa produced two naval machines of 900 and 950 horsepower and 150 locomotives; numerous reparations were performed for the railways and the Navy.[[165]](#footnote-165) The Granili, the other factory merged with Pietrarsa, produced 1778 wagons and 291 coaches.[[166]](#footnote-166) Given the inability to retrieve every public contract stipulated with the SNIM from the Italian Central Archive, despite the fact that an official request had been performed, it is difficult to ascertain their exact chronological distribution; however, it is possible to ascertain the highlights of industrial production of the factory.  
 In 1865 the SNIM had signed a convention with the Southern Railways, obtaining a public contract for the value of 10 million of lire of locomotives and wagons.[[167]](#footnote-167) That contract, however, would not prove significantly profitable because of the overall crisis that affected the sector.[[168]](#footnote-168) Therefore, despite the conspicuous contract, the society would start its activity with a crisis from 1864 to 1868, caused by the rising cost of materials and the absence of further contracts.[[169]](#footnote-169)   
 In 1869, however, the SNIM performed works for 3 million lire, and during the next five years the value of the received commissions would stay above 4 million.[[170]](#footnote-170) The peak was reached in the financial exercise of 1870-1874, when it amounted to 6 million lire.[[171]](#footnote-171) The public budget crisis of the mid-1870s, however, resulted in the bankruptcy of the society in 1878, caused by the sudden demand of repayment by all of its creditors, to which the Bank of Naples added itself.[[172]](#footnote-172) The crisis started when one of the main shareholders, engaged in the construction of a hotel, had issued bills endorsed by Macry, which, however, he could not honour.[[173]](#footnote-173) This event sparked a rush of creditors to the society, similar to bank run, which found itself in no position to honour the debts it had accumulated up to that point, and was forced to be declared bankrupt, thus terminating its industrial production.[[174]](#footnote-174) Up to that point, the total value of its production was of 42 million lire.[[175]](#footnote-175) Of those, 9 million were for the navy, 7 million for the Ministry of War, 16 for the railways and 10 for privates.[[176]](#footnote-176)

**Public contracts and Ansaldo’s output**

The Gio. Ansaldo e co. from 1861 to 1882 had performed numerous works for the Navy, such as naval engines and a broad range of military commissions, as well as 68 locomotives for the railways.[[177]](#footnote-177) To those are added 20 locomotives of the pre-unitary period, starting from 1853, as well as commissions in occasion of the First Italian War of Independence in 1859 of rifled cannons, grenades and various ammunitions.[[178]](#footnote-178)   
 From the start of the enterprise in 1853, the Ansaldo found itself in economic difficulty because of the scarcity of public contracts.[[179]](#footnote-179) Despite that, 20 locomotives were commissioned till 1858 because of Cavour’s influence.[[180]](#footnote-180) Up until 1859 the factory would undergo a period of crisis, resolved by the sudden inflow of public contracts of the Second War of Independence against Austria, consisting in rifled cannons, arms and ammunitions and two small gunboats.[[181]](#footnote-181) In 1862 a set of armour plates for a frigate were commissioned.[[182]](#footnote-182)  
 Starting from 1861, the Navy would regularly commission the production of steam boilers and naval engines, obtaining some prestigious results; despite that, institutions still relied mostly on foreign industries, which kept the factory in a constant precarious state.[[183]](#footnote-183) The fact that the navy did not rely majorly on national industry was in fact lamented in the industrial enquiry of 1870-1874, which would be the first step in a change of attitude of the Italian political class.[[184]](#footnote-184) As a result ever since 1863 losses started to ensue.[[185]](#footnote-185)  
 At that point production of railways material started to slow down, to stop in 1865; it would resume only in 1879.[[186]](#footnote-186) The total number of locomotives produced to by the Ansaldo, considering the pre-unitary years, amount to 88. Overall, in the period from 1853 to 1882 the factory had produced works for the value of 45-50 million lire, mainly composed of public contracts from the railways companies and the navy.[[187]](#footnote-187) The railways production amounted roughly to 14 million lire, while the navy 17 million, which consisted principally in the production of naval engines and steam boilers.[[188]](#footnote-188)

**Pietrarsa versus Ansaldo: the comparison  
Which role did political ties play from 1864 to 1878?**

The comparison in the assignation of public contracts will be made essentially on the grounds of secondary literature, because of the inability to consult archival documents. It will concern the total amounts of public contracts from the railways and the navy, coupled with a few chronological insights of the Ansaldo.  
 Between 1853 and 1883 the Ansaldo performed works that, according to various sources, amounted to a range of 45-50 million lire.[[189]](#footnote-189) Of those, 17 million were commissioned from the navy and 14 million for the railways.[[190]](#footnote-190) Pietrarsa, on the other hand, from 1864 to 1878 performed works of 42 million lire.[[191]](#footnote-191) 9 million were commissioned from the navy and 16 for the railways.[[192]](#footnote-192) Since the secondary literature treating the Ansaldo has considered a longer time-frame than Pietrarsa, some adjustments need to be made for a fair comparison. In total, before the foundation of the SNIM and after its failure until 1882, roughly 10 million lire worth of public contracts were commissioned from the navy to the Ansaldo, which need to be deducted from the total. The result in the period ranging from 1864 to 1878, therefore, sees the Ansaldo performing 7 million worth of works for the navy, while Pietrarsa performed 9. Concerning the railways as well, Pietrarsa surprisingly emerges on top, even in a shorter time-frame than Ansaldo. In fact, the foundation of the SNIM saw its appropriation of the whole national share in railways rolling stock, previously owned by the Ansaldo.[[193]](#footnote-193) Not by accident, the latter’s railways production stopped in 1865, shortly after the SNIM’s entrance in the market, to resume only in 1875.[[194]](#footnote-194)   
 The prevalence of Pietrarsa in both sectors comes at a surprise, given the ascertained tighter political connections of the Ansaldo to the Navy.[[195]](#footnote-195) However, the result was heavily influenced by the budget crisis that affected the Italian government during the 1870s, period in which political ties would have been reduced in their impact.[[196]](#footnote-196) In fact between 1864 and 1869, it was Ansaldo in the lead of national productions related to the Navy, followed by Guppy and Pietrarsa.[[197]](#footnote-197) Between 1868 and 1876, however, public spending for defence purposes went from 30% of the previous period to 19%, which resulted in a great crisis for Pietrarsa and Ansaldo, in which both underwent a net reduction of their workforce, given the overall lack of public contracts.[[198]](#footnote-198)  
 Therefore, while political ties might have favoured the Ansaldo during the years 1864-1869, the subsequent budget crisis of the 1870s caused by the war on Austria in 1866 would have cancelled the effects of such a privileged relationship, affecting the whole engineering sector. In other words, the supposed fixed capital characterized by the political ties between the Ansaldo and the Royal Navy could not exercise its pull on mobile capitals such as public contracts during the 1870s because of cutbacks on public spending caused by external events. Concerning railways, immobile capitals such as political continuities do not appear to have played a role in attracting mobile capitals such as public contracts. Following Mill’s framework, therefore, the cause of failure of Pietrarsa is to be looked for elsewhere. The next chapter will examine the most obvious controversy concerning uneven distribution: credit.

**CHAPTER FOUR  
Credit – The ultimate discriminating factor**



**To what extent did Pietrarsa and Ansaldo differ regarding their availability of credit?**

**To what extent was that difference linked to a Sardinian political continuity?**

**Chapter Outline**

1. **Pietrarsa’s use of credit**
2. **Ansaldo’s use of credit**
3. **The final confrontation**
4. **Institutional continuities and the National Bank**

**Pietrarsa’s use of credit**

From the onset of the company, the experience of the SNIM was characterized by a deficit of capitals which kept its finances in a precarious state.[[199]](#footnote-199) Such a state of affairs resulted in multiple loans from banks, as well as personal loans from Macry, to keep the company afloat.[[200]](#footnote-200) After the first big public contract from the Southern Railways, for the value of 10 million lire, the necessary maintenance works of the establishment in order to perform such works, as well as operating expenses, led to negotiations for a loan of 600.000 with the Credito Italiano (Italian Credit), which, however, did not succeed because of the unfavourable conditions set by the credit institute.[[201]](#footnote-201)   
 In 1866, a loan of the same amount was obtained from the Bank of Naples with an interest rate of 7%.[[202]](#footnote-202) Macry had exposed himself again in the same year, for an unspecified amount, setting an interest rate of 5%.[[203]](#footnote-203) In the same year, Pietrarsa obtained another loan of 1 million lire from the Bank of Naples with the same interest rate; the latter, however, would then be reduced of one point due to the factory’s repayment difficulties.[[204]](#footnote-204) In that same period, given the scarcity of capitals, Macry anticipated another half million to the company between 1866 and 1867.[[205]](#footnote-205) Already from the foundation of the company, its debt amounted to almost 3 million lire.  
 Two years later the SNIM would open two new lines of credit with the Bank of Naples: one for discounts, accounting for a further debt of 1.282.879,59 lire, and the other for financial anticipations.[[206]](#footnote-206) In 1878 the total debt amounted to 4 million lire.[[207]](#footnote-207) Shortly after, the society would be declared bankrupt because of the already mentioned incident of Mr. Fiocca.[[208]](#footnote-208) The businessman was involved on the side in a hotel construction, issuing bills endorsed by Macry worth of 72.000 lire, which, however, he could not honour.[[209]](#footnote-209) The issue resolved itself in a tragedy, with the suicide of Mr. Fiocca; Macry, as his endorser, found himself unable to repay his debts.[[210]](#footnote-210) This event caused a chain reaction from personal creditors of Fiocca and Macry, including the Bank of Naples, which pressured Macry to repay instantly every debt.[[211]](#footnote-211) Having his back against the wall, Macry was forced to file for bankruptcy.[[212]](#footnote-212)

**Ansaldo’s use of credit**

As in the case of Pietrarsa, much of the early history of the Ansaldo would be characterized by constant budget deficit resulting in multiple bank loans.[[213]](#footnote-213) For credit, the Ansaldo enjoyed a privileged relationship with the National Bank of the Italian Kingdom, presided by Carlo Bombrini himself; prior to unification the banking institution was called National Bank of Sardinian States, and was founded in 1848.[[214]](#footnote-214) On top of that, Bombrini was one of the three founders of the Ansaldo in 1853.[[215]](#footnote-215) Unfortunately, the exact chronology of banking loans emitted to the Ansaldo is not treated in the available secondary literature; what is known is the total amount of debts accumulated towards the National Bank, as well as a roughly the timing of those financial interventions when they coincided with particularly difficult situations of the company.   
 The first period of crisis of the Ansaldo went from its creation in 1853 to 1859, period in which public contracts were particularly scarce.[[216]](#footnote-216) In 1858, therefore, a major source of vital injection of capitals came from the discount of foreign bills performed by Bombrini as president of the National Bank: such bills could not have been discounted in foreign countries, given the lack of foreign funds of the Ansaldo, and therefore always required the special powers of the director to perform the operation.[[217]](#footnote-217) Furthermore, the director of the bank after Bombrini’s death would accuse such operations to be performed for fake bills, or bills coming from failed enterprises.[[218]](#footnote-218) Also, any interest to be paid for those titles was not collected.[[219]](#footnote-219) In 1858, the debt of the company amounted to roughly 1 million lire.[[220]](#footnote-220)  
 After the good season following the Second War of Independence in 1859, from 1863 onwards the Ansaldo began to accumulate losses, and in 1872 its debts towards the National Bank amounted to 4 million lire.[[221]](#footnote-221) This financial situation coincides with the budget cuts of the state that occurred during the 1870s, already mentioned in the previous chapter, which saw a drastic decrease in public contracts from the Navy.[[222]](#footnote-222) The decrease of profits from commissions is further confirmed by the proportions to which this debt would amount in the following years: in 1876 it reached 9 million lire.[[223]](#footnote-223)  
 Overall, in 1882 the society owed 7.484.000 million lire to the National Bank, to which 3.471.783 million lire of non-repaid interests must be added, for a total sum that exceeded 11 million.[[224]](#footnote-224) Furthermore, Bombrini himself had anticipated a total of 2.708.000 to the Ansaldo without interests.[[225]](#footnote-225) The disbursement of credit from the National Bank to the Ansaldo stemmed essentially from personal decisions of Bombrini.[[226]](#footnote-226) Therefore, such loans were given without any regular form of guarantee, due to the coincidence of the Administrative Council of the Bank and the company embodied by Bombrini.[[227]](#footnote-227) In short, credit had been given to the Ansaldo until 1882 on a purely clientelist basis.[[228]](#footnote-228)

**The comparison of credit usage between Pietrarsa and Ansaldo**

In one way Pietrarsa and Ansaldo had experienced very similar situations when it came to the circumstances that led to their compulsive use of credit. It cannot be said that either of them had ever enjoyed a stable financial situation up to this point, let alone regular profits, and resort to credit characterized an essential feature of survival at this stage. What differed greatly, however, was the amount of credit that each factory could benefit from. As mentioned above, Pietrarsa had declared bankruptcy with an accumulated debt of 4 million lire, while the Ansaldo could go on to receive credit for 11 million lire worth, because of its privileged relationship with the National Bank. In that regard, the role of Carlo Bombrini as president of the banking institution as well as a major shareholder of the Ansaldo was the element that characterized such a difference.   
 When it comes to credit, therefore, the Ansaldo benefited of an amount three times superior to the accumulated debt of Pietrarsa, considering interests. On the basis of such a major difference, it is safe to say that according to Mill’s method of difference the cause of failure of Pietrarsa and success of the Ansaldo, up to this point in time, can be attributed to the difference difference in the amount of credit that each factory benefitted from, in favour of the Ansaldo. Credit was the discriminating factor that marked the selection of the Ansaldo over Pietrarsa. In light of this conclusion, the next question is how was this clientelist network related to the Italian political continuity with the pre-unitary Kingdom of Sardinia?

**Political continuities and credit**

The privileged relationship between the National Bank and the state is linked to the faculty of emitting credit by one essential feature: the recurrent practice to abandon the gold standard exclusively for that issuing bank during strategic periods, in order for the state to benefit from massive loans in times of difficulty.[[229]](#footnote-229) This practice had started already in 1848 and would continue in post-unitary Italy, resulting in the active state support of the National Bank of Sardinia, which meanwhile had renamed itself National Bank of the Kingdom of Italy and expanded its state-assisted monopoly through-out the peninsula.[[230]](#footnote-230) This exclusive right given to the National Bank would naturally give the institution the possibility of covering its own credit operations thanks to emission autonomy from the gold standard.[[231]](#footnote-231) In turn, this aspect is linked to this comparative case study because of the modalities through which industries in post-unitary decades were supported by credit institutions.  
 In the aftermath of Unification Italy inherited a primitive credit system consisting in a few major issuing institutions, coupled with a small number of savings and popular banks.[[232]](#footnote-232) The issuing banks, deriving from pre-unitary kingdoms, were the National Bank of Sardinian States, the National Bank of Tuscany, the Credit Bank of Tuscany, the Bank of Naples, the Bank of Sicily and the Bank of Rome.[[233]](#footnote-233) The only institutions that invested in the industrial sector at that time were the National Bank, the other issuing banks on a smaller scale, and the Banca Generale and Credito Mobiliare; the two latter were important branches of the National Bank. [[234]](#footnote-234) From the start, there was an asymmetric dynamic due to the privileged relationship that the National Bank of Sardinian States enjoyed with the Italian government.[[235]](#footnote-235) In that regard, the bank had maintained a continuity of its relationship with the state that had started already with Cavour in pre-unitary Piedmont.[[236]](#footnote-236) In fact, already from 1848 to 1851 the Bank of Genova (future National Bank of Italy) was given the right to abandon the gold standard, in order for the state to profit of a loan of 20 million lire at a low interest rate.[[237]](#footnote-237) The same happened in 1859-1860.[[238]](#footnote-238) Also, in 1853, the Bank was assigned by Cavour the treasury of the state, naturally kept intact after unification due to the legislative continuity, putting the institution in the informal position of a central bank, while de facto continuing to act as a private institution.[[239]](#footnote-239)  
 During the unification of Italy, the National Bank would follow a state supported policy of expansion, which was linked to the political annexation of Piedmont of other pre-unitary states; Cavour and Bombrini were very open in their pursuit to of the monopoly of the faculty of emission by the National Bank already in 1853.[[240]](#footnote-240) Its dominant position, however, did not result only through the opening of new branches. In 1866, the government issued the abolition of the gold standard exclusively for the National Bank, characterizing an asymmetrical relationship with other issuing banks; the National Bank had now the advantage of overissuing, operation in which other banks were restrained from because of convertibility costs.[[241]](#footnote-241) On the one hand, naturally, this manifested into a greater credit emission capacity for the bank, since its possibilities for covering its own operations were illimited thanks to that level of autonomy in the emission of notes.[[242]](#footnote-242) The political decision of this course of action was tied to the government’s need of a new loan with low interest rates; in that regard, the accumulated debt of the state towards the bank amounted to one billion in 1874.[[243]](#footnote-243)  
 On the other hand, the abolition of the gold standard marked the absolute dominion of the National Bank in terms of emission, which in two years had already augmented its circulation from 152 million to 475 million.[[244]](#footnote-244) In an attempt to redress the situation, the government had issued a consortium in 1874 between the major issuing banks in the emission of common notes, not subject to convertibility in gold; however, that law as well sanctioned the net superiority of the bank of Bombrini in terms of money creation.[[245]](#footnote-245) The National Bank had been given a limit of 450 million, compared to the 146 million of the Bank of Naples and the 63 million of the Bank of Tuscany.[[246]](#footnote-246) These measures were taken by the Italian government because of its goal to eventually entrust money emission to a single institution, trying multiple times to unite the major issuing banks after unification.[[247]](#footnote-247) However, such a project was stained by the obvious continuity of the privileged relationship between the National Bank and the state which originated in pre-unitary Piedmont; not surprisingly, therefore, the effort to unite those institutions failed numerous times because of the relentless resistance from the Banks of Tuscany and the Banks of Naples and Sicily, since the terms of such a project were in net favour of the Genoese institution.[[248]](#footnote-248)   
 Therefore, the continuity of the privileged relationship between the National Bank and the state from the post-unitary period characterized an immobile capital that manifested itself in a significant greater availability of credit emission, enjoyed by the Ansaldo on a clientelist basis. In short, following Fenoaltea’s framework, credit as a mobile capital was attracted from the Ansaldo in light of the Piedmontese political continuities that gave the National Bank the possibility of over issuing in light of its exclusivity in the abolition of the gold standard, giving the factory a greater availability of credit which Pietrarsa could not enjoy, since the Bank of Naples was tied to the gold standard until 1874, and after that could over-issue on a much smaller level compared to the National Bank.[[249]](#footnote-249) In conclusion, the major difference that resulted in the failure of Pietrarsa and success of the Ansaldo was tied to the institution continuity between pre-unitary Piedmont and the Italian state.

**Conclusion**

This qualitative case study has compared privatization contracts, public contracts and credit availability of Pietrarsa and Ansaldo using Mill’s method of difference in order to identity the cause that determined Pietrarsa’s failure and Ansaldo’s success. These elements have been tied to the role of three main aspects of political continuity in the Italian state-building process: the extension of Sardinian legislation, continuity of Sardinian nobility and military ranks in the cabinet of the Royal Navy, and the continuation of the pre-unitary relationship between government and the National Bank in the new state.  
 Legislative continuity with Piedmont has determined an advantage of the Ansaldo deriving from pre-unitary relationship with Sardinian institutions: the responsibility of the state in covering the Ansaldo’s maintenance costs. This aspect has most likely played a marginal role, since it did not appear to have significantly advantaged the financial situation of the Ansaldo, which remained tragic like in the case of Pietrarsa. Concerning public contracts, surprisingly, between 1864 and 1878 Piedmontese political continuities have not caused disparities in their assignation; on the contrary, Pietrarsa appeared to have performed slightly more works for the Navy and the railways. Such a result, however, was influenced by the budget crisis that invested the government during the 1870s: between 1865 and 1869 Ansaldo was the privileged factory of the Royal Navy.  
 Ultimately, the factor in which institutional continuities played the greatest role was credit availability. The continuity of the pre-unitary relationship between the National Bank of Sardinian States and the government manifested itself after unification into an asymmetrical system of money issuing; the National Bank benefited from the exclusivity of the golden standard abolition from 1866 to 1874, as well as a comparatively much higher issuing limit after that date until 1882, which led to its conquest of the highest emission power in the state. This led to its capacity to grant credit up to 11 million lire to the Ansaldo without any form of guarantee on a purely clientelist basis, since its director Carlo Bombrini was also coincidentally one of the main shareholders of the factory. Pietrarsa, on the other hand, could benefit of an amount of credit up to 4 million lire from the Bank of Naples and Credito Italiano, before a lack of confidence from its creditors generated by an incident of Fiocca led to a credit run which gave no choice than to file for bankruptcy. This means that the institutional continuity between the Italian state and the Kingdom of Sardinia characterized a fixed capital that manifested itself into significantly greater credit availability for the Ansaldo, a factor which, according to Mill’s framework, was important enough to determine the failure of Pietrarsa and the success of Ansaldo during the first two post-unitary decades, since it was the only major difference in their comparative histories. This type of fixed capital, therefore, is likely to have played a role in the geographical concentration of Italian industries in the North during the first post-unitary decades.  
 This thesis is meant to initiate a new direction of comparative research between Southern and Northern firms in post-unitary Italy to consider how political continuity with Piedmont might have affected credit availability disparities in Italy in light of the privileged relationship between the National Bank and the state. This alternative framework finds its relevance in the heavily debated issue of the Southern Question, in which scholars have focused until now either on geographical and social advantages of Northern Italy, or on the deleterious effects of free trade and tariff barriers on Southern economy. The post-unitary disparities in credit availability, have somehow been neglected, and are bound to yield new and original results that might bring new conclusions to the table concerning the origins of the South – North divergence.

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