

# Bringing War Back In: Victory and State Formation in Latin America

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## Abstract

Scholars have often dismissed the effect of war on state formation in regions like Latin America where mobilization for war is deemed insufficiently intense and international conflict fails to out-select weaker states. Against this conventional wisdom I contend wars can affect state building trajectories in a post-war period through the different state institutions that result from victory and defeat. After reconsidering the role of war outcomes in classical bellicist theory I use difference-in-differences analysis to identify the effect of losing *vis-à-vis* winning a war on levels of state capacity in a panel of Latin America (1860-1913). I then illustrate my causal mechanisms in case studies of the Paraguayan War (1864-1870) and the War of the Pacific (1879-1883) and apply the synthetic control method to these cases. While out-selection of losers obscures the effect of war outcomes in European history, Latin America illuminates their long-term consequences.

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Building on a long intellectual tradition, the premise that “war made the state” (Tilly, 1975, 42) has been largely validated by contemporary research ranging from anthropology to economic theory, explaining the formation of states from prehistory to modern Europe. In regions where inter-state war was less severe the expectations of the bellicist approach are generally met as well (Migdal, 1988, 273), explaining their relatively weaker states. And yet, bellicism continues to be challenged as “inapplicable to non-European contexts” (Hui, 2017, 268).

Featuring prominently in this debate is a recent consensus suggesting that “war did not make states in Latin America” (Soifer, 2015, 202; see also Kurtz, 2013, 6; Saylor, 2014, 52). In a region where international wars were “few” and “limited” (Centeno, 2002, 9), and states financed their activities with foreign loans and customs duties instead of direct taxes (Centeno, 2002, 135-137), scholars find the link between international conflict and state building implausible, concluding that “in trying to understand variation among Latin American states in the nineteenth century the overall absence of war in the region cannot be helpful” (Soifer, 2015, 18).<sup>1</sup>

This conventional wisdom, however, confounds two very different eras in Latin American history. The relative weakness of states today might be related to the comparative absence of war in the twentieth century. Latin American state formation effectively froze in relative terms on the eve of World War I, when European countries started to adopt direct (income) taxes at a higher rate (Mares and Queralt, 2015). Yet,

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<sup>1</sup>The only notable exception is the scholarship of Cameron Thies (2005), who explores the effects not of war, but of international rivalry, in twentieth century Latin America.

state formation was rampant during the late nineteenth century when wars in Latin America were as frequent and as intense as in Europe (Holsti, 1996, 152). Suggestively, national states at the top and at the bottom of the regional ranking of state capacity today seem to be, respectively, the winners and losers of those wars (Mahoney, 2010, 190).

I propose Latin America has been elusive to bellicist approaches due to an under-specification of the mechanisms linking war to state formation. Current understandings of the bellicist approach focus on a *pre-war phase*, posing that states ramp up extraction from society while preparing for war (Thies, 2005, 451) while wars may out-select those who fail to catch up (Spruyt, 2017, 78). These readings of bellicist theory overlook how war *outcomes* determine whether state building institutions remain in place into a *post-war phase*. After the critical event of war, while victory consolidates a self-reinforcing trajectory of state formation, defeat delegitimizes extraction from society and sets losers into a path-dependent process of state weakening. Restated as “victory made the state,” the bellicist approach does fit the Latin American experience with considerable precision.

In the next section I set up my argument and define the causal mechanisms (Spruyt, 2017, 89) and scope conditions (Hui, 2017, 272) of my theory. Because victory could be endogenous to pre-existing levels of state capacity, I deal with this issue in both my theory and research design. Then I proceed to test my argument using a combination of cross-case and within-case analyses (Goertz, 2017). I start by using difference-in-

differences analysis to estimate the effect that losing a war had on long-term levels of state infrastructural capacity – as measured by governmental revenue and railroad mileage – in a panel of Latin America (1860-1913). Then I focus on the two most intense amongst these wars: the Paraguayan War (1864-1870) and the War of the Pacific (1879-1883). The winners – Argentina, Brazil, and Chile – and losers – Paraguay, and Peru – of these wars allow me to qualitatively test my proposed causal mechanisms against alternative explanations. Finally, I use the synthetic control method to estimate the trends Paraguay and Peru would have followed had they not been defeated.

## State Building After War

Prevailing interpretations of bellicist theory suggest that “*preparation for war* has been the great state building activity” (Tilly, 1975, 42). According to this understanding, getting ready for and fighting wars offers “a great stimulus to centralizing state power and building institutional capacity” (Thies, 2005, 451). On the one hand, building capacity is necessary to grant state survival. On the other hand, impending wars offer a unique opportunity for states to twist the arm of groups in society that resist extraction (Mann, 1988, 4).

According to this conventional wisdom, there is no reason why wars should have lingering effects. After war states might slightly diminish their size or maintain their acquired capabilities by virtue of a “ratchet effect” (Desch, 1996, 243). It follows that war *outcomes* are inconsequential. Theorizing how wars might affect victors and losers

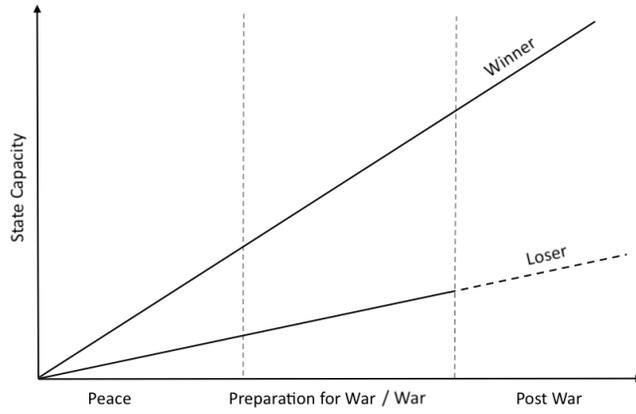
differently into a *post-war phase* is rendered irrelevant.

This disregard for the effects of war outcomes is rather puzzling. Even if war gives states the *motive* and *opportunity* to expand, it seems unlikely that a surviving losing state will retain the same material and immaterial *means* to extract from society a winner would. States can lose people and property after a defeat, which will already hurt extraction levels. But more importantly, key institutions of the state will be challenged, hindering state formation in the long term.

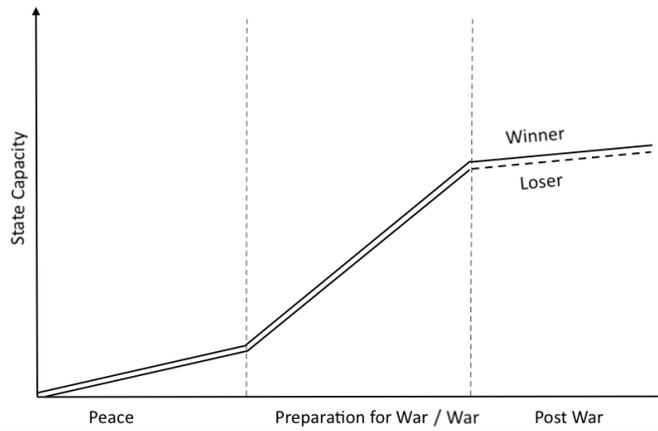
Figure 1 provides a succinct summary of three alternative understandings of bellicism. In all three subfigures the Y-axis represents state capacity levels and the X-axis represents time, which is then divided into three periods of theoretical relevance (peacetime, preparation for war/war, and post-war). After war, losing states are represented with a dashed line conveying the idea of attrition – i.e. that some might be eliminated. According to evolutionary approaches, state formation trends remain largely unaffected by war, a factor that operates primarily through selection (Spruyt, 2017, 78). Alternatively, a pre-war bellicist approach expects that both eventual victors and losers will increase their capacity while preparing for war and then remain at the wartime levels. I argue classical bellicist theory expects the path of winners and losers to considerably diverge after the war outcome is revealed, as depicted in the last subfigure.

Take the scholarship of Max Weber as an example. The forefather of bellicist theory, saw the origins of the state “where a territorial association is attacked by an external enemy in its traditional domain, and arms are taken up by the members in the manner

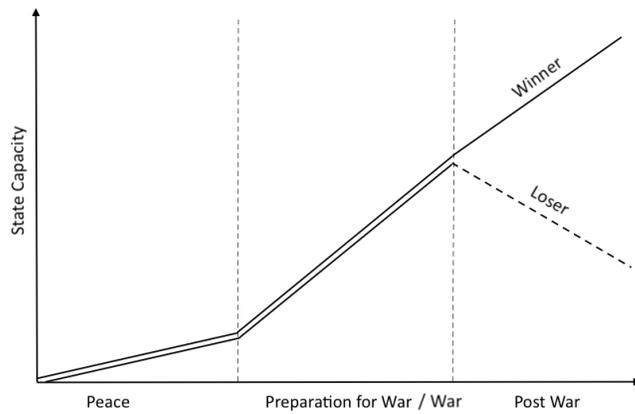
Figure 1: Three Alternative Understandings of Bellicist Theory



(a) Selection/Evolutionary Approach



(b) Pre-War Bellicist Approach



(c) Classical Bellicist Approach

of a home guard.” In such conditions, he theorized, “increasing rational precautions against such eventualities might engender a political organization regarded as enjoying particular legitimacy” (Weber, 1978, 905). Initially, the type of domestic violence legitimized would have been related to the very purpose of war-fighting and “directed against members of the fraternity who have acted treasonably or who have harmed it by disobedience or cowardice,” but it is fundamentally *after war* that “through the cultivation of military prowess and war as a vocation such structure develops into a coercive apparatus able to lay effective and comprehensive claims to obedience” (Weber, 1978, 906).

For Weber state formation consolidates in a post-war phase, when “this *ad hoc* consociation develops into a permanent structure” (Weber, 1978, 905). According to Ertman (2017, 56), Otto Hintze and the early Charles Tilly also emphasized the importance of this post-war phase by pointing to the importance of the “organizational residues” of war – i.e. the bureaucracies and armies which need to consolidate after it. War outcomes are essential to the consolidation of the state because only after victory “its members may pretend to a special prestige” (Weber, 1978, 910). In the classical bellicist story, war outcomes are not the out-selection mechanisms that current evolutionary accounts of bellicist theory suggest. Quite on the contrary, the war outcome is potentially state-boosting for victors and can affect losers that survive.

Importantly, classical bellicist theory saw the victories that conferred legitimacy upon the state as exogenous. Weber, for example, reasoned the psychological mecha-

nisms that could justify the conferral of power upon life and death on the state should be akin to those activated in the “kinship group in the fulfillment of the obligation of blood vengeance” and noted “this connection is weak, on the other hand, with regard to organizational action of a military type, directed against an external enemy...” (Weber, 1978, 905). This differentiates classical bellicist theory from some *Realpolitik* approaches that see war as a strategy state elites can pursue for the purpose of self-aggrandizement (Sambanis et al., 2015). In classical bellicism, war is based on “sentiments of prestige” and features “irrational elements” (Weber, 1978, 911).<sup>2</sup>

## Mechanisms and Observational Expectations

Nineteenth-century Latin America provides an ideal testing ground for classical bellicist theory, for wars were frequent in that era and yet, unlike in Europe, losers always survived (Kurtz, 2013, 32; Saylor, 2014, 200). However, the general theory is still too abstract to capture the particularities of national-state formation in nineteenth century Latin America (Oszlak, 1981, 4). Developing historically situated mechanisms is imperative, for the actors, processes, and even the definition of concepts like war and state capacity depend very much of historical and geographic context.

The literature on Latin America is a case in point. The idea that “there have been very few international wars” (Centeno, 2002, 9) in Latin America and that these were “limited” (Centeno, 2002, 20), for example, relies on an ahistorical definition of war

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<sup>2</sup>Knowledgeable reviews of rationalist explanations for war have also come to the conclusion that “... a better understanding of what the assumption of rationality really implies may actually raise our estimate of the importance of particular irrational [...] factors.” (Fearon, 1995, 409).

akin to the “total wars” of the twentieth century. From 1820 to 1914 Latin American states fought roughly as many wars as Europeans did (8 versus 11)<sup>3</sup>, which lasted more on average (25 months versus 6 months) and were more deadly (killing .29 per cent of the population versus 1.23 per cent). Even the Crimean War (1853-1856), with its 264,200 battle deaths was outmatched by the 310,000 of the Paraguayan War (1864-1870), a much larger relative toll considering the smaller population of the countries involved and the technologies of warfare at disposal (Sarkees and Wayman, 2010).

Similarly, downplaying Latin American state capacity in the nineteenth century because state revenue relied on indirect taxation and debt (Centeno, 2002, 135-137) seems unfair when great powers like the United Kingdom and France had higher debts (Coatsworth and Williamson, 2002, 50) and a similar tax structure (Marichal, 2006, 450). Extraction in the year 1900, as measured by revenue per capita, was higher in Chile and Uruguay than it was anywhere in Europe (Banks and Wilson, 2005). Since the income tax became widely used only after World War I (Mares and Queralt, 2015), a definition of state capacity that focuses on direct taxation would be ahistorical for the era that concerns us.

In the same way treatment and outcome ought to be historically contextualized, so should be actors and processes. In nineteenth century Latin America two segments of the state elite were usually determinant for state formation dynamics: core and

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<sup>3</sup>I use data from (Sarkees and Wayman, 2010) who define international war as any military confrontation between two sovereign entities that produces at least 1,000 battle deaths in a one-year period. If we consider the greater number of contiguous dyads that Europe had by the year 1850 (259) compared to Latin America (47), warfare in the latter region is rendered much more frequent in relative terms.

peripheral elites. By core elites I understand those in favor of a process of state strengthening and centralization. These were primarily – but not necessarily – urban elites closely connected to the national government and bureaucracy in the capital cities. Conversely, peripheral elites were closer to local or parochial interests, usually based in the countryside or secondary cities where *caudillos* or warlords, the church, and landed elites preserved autonomous orders. Wary they would lose autonomy and privileges, peripheral elites always struck a bargain with core elites, which determined the pace of state formation.

These equilibria were often interrupted by civil war and renegotiations, but domestic strife rarely affected the balance between core and peripheral elites in important ways. International wars against an external, common enemy, more than any other factor, opened a window of opportunity for core elites to extract more revenue, strengthen the national army, and expand the scope and geographical reach of the state. But this process also led to polarization and even the defection of radical elements within the peripheral elites, hopeful that a defeat in the international front would topple the wartime coalition. Thus, wars were effectively like a coin-toss and their definition – e.g. after major battles – immediately had the effect of altering the balance between core and peripheral elites.

When losing states survived, as they generally did in Latin America, defeat shattered the wartime coalition and brought the minority of radical peripheral elites who opposed the war to power. In accordance with the victors or the war, this faction

usually dismantled the remainders of state capacity that were not destroyed in the very process of fighting the war. Most importantly, however, these peripheral elites would make sure to lock-in these policies in the long term to secure the autonomy of their feuds against core elites. Defeat, therefore, resulted in the institutionalization of a state-weakening trajectory via the depletion of the armed forces and state bureaucracy, and the formation of a party system that excluded core elites and instead pitched segments of the peripheral elite against each other.

Conversely, victory strengthened the core elite and its coalition. In the short term the spoils of victory would certainly have boosted state building, but institutions, again, explain the consolidation of this upward trajectory in the long-term. Facing the possibility of being casted as traitors to the nation, important segments of the peripheral elites bandwagoned and supported the continuity of state building policies. This resulted in a reconfiguration of the party system so that all relevant parties became largely supportive of state building. New cleavages would arise – some of them leading to virulent conflict – but the main discussion would now revolve around the basic rules to gain access to this strong central state. In other words, the discussion will not be about the *state* but the *regime*. The armed forces – a corporation with vested interests in the state and strongly legitimized by victory – would play a praetorian role as guarantor of the new order, courted by all parties due to their pivotal role in any dispute (López-Alves, 2000).

This story builds strongly upon a recent consensus which situates Latin American

state formation squarely in the nineteenth century, puts the emphasis on critical junctures and path-dependence, and uniformly assigns a central role to elite preferences in determining long-term outcomes (Kurtz, 2013, 20; Saylor, 2014, 12; Soifer, 2015, 15; see also Garfias, 2018). Yet, by introducing the structural element of war, it better explains why elites converge on state building in certain countries and moments, and not in others. So far, this literature either leaves elite decisions unexplained (Soifer, 2015)<sup>4</sup> or introduces time-invariant characteristics – such as the system of labor (Kurtz, 2013, 36) – and country-invariant factors – such as commodity booms (Saylor, 2014, 52) – that, as my empirics will show, fail to account for much variation.

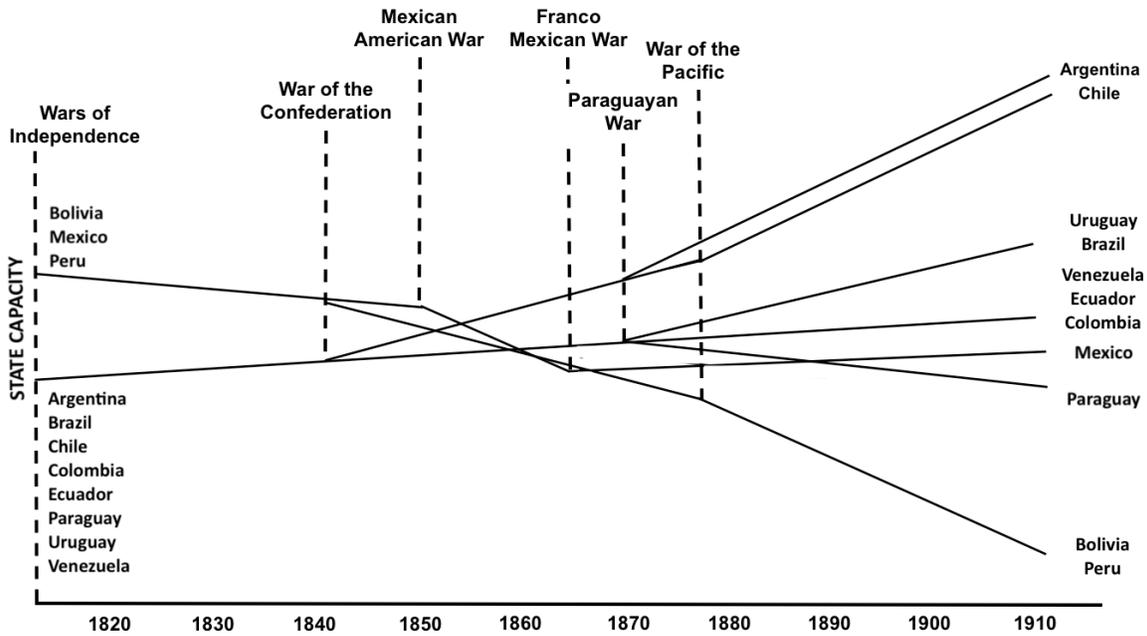
Figure 2 provides a summary of my expectations in a broader comparative setting and throughout the nineteenth century. In this illustrative example I attribute an arbitrary effect to the occurrence of victory or defeat, respectively, in some severe nineteenth century wars<sup>5</sup> that occurred in South America and Mexico (Sarkees and Wayman, 2010). I locate colonial centers – i.e. Bolivia, Mexico, and Peru (Mahoney, 2010, 51) as departing from a baseline of higher state capacity and being negatively affected by the independence wars. Conversely, I locate colonial peripheries – winners of the independence wars – in an ascending trajectory that departs from a lower baseline. Then countries are affected individually by victory and defeat after major wars. The ranking c. 1900 on the right-hand side of the graph, as well as the trajectories

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<sup>4</sup>Soifer (2015, 68–82) identifies the strategic decision of central elites to deploy government officials to the peripheries as a cause of state formation, but fails to provide an explanation for such decision. Kurtz (2013, 29) makes the point that this choice must be epiphenomenal, and Saylor (2014, 21) concurs that implanting state officials at the local level should be regarded as a consequence, not a cause of state capacity.

<sup>5</sup>Those that produced more than 5,000 battle deaths.

Figure 2: Outcomes, Paths, and the Hierarchy of State Capacity



Note: This illustration excludes Central American states and only includes wars that rendered more than 5,000 casualties.

leading to them, match the interpretation of previous scholars with striking precision (Mahoney, 2010, 5; Kurtz, 2013, 11-16; Soifer, 2015, 13). This already demonstrates the plausibility of the “victory made the state” hypothesis in Latin America.

In the following sections I aim to identify the effect of defeat on state infrastructural capacity. I focus on the effect of defeat, not victory, because I expect victory to only consolidate trends already at place during a pre-war phase (see Figure 1).

## Statistical Analyses

I use a dataset of Latin American countries spanning from 1860 to 1913 for my statistical analyses. Following Correlates of War data (Sarkees and Wayman, 2010), I

Table 1: Winners and Losers in Latin American Wars 1860-1913

| War                  | End  | Winners                          | Losers             |
|----------------------|------|----------------------------------|--------------------|
| Colombo-Ecuadoran    | 1863 | Colombia                         | Ecuador            |
| Restoration War      | 1865 | Dominican Republic               | Haiti              |
| Franco-Mexican       | 1867 | Mexico                           | France             |
| Paraguayan War       | 1870 | Argentina, Brazil, Uruguay       | Paraguay           |
| War of the Pacific   | 1883 | Chile                            | Bolivia, Peru      |
| War of Reunification | 1885 | Costa Rica/El Salvador/Nicaragua | Guatemala/Honduras |

Note: France is included in the table but not considered in the analysis.

Sources: ([Sarkees and Wayman, 2010](#))

consider the winners and losers in [Table 1](#) for the purpose of coding the outcome of international wars.<sup>6</sup> Available lists of inter-state wars vary slightly ([Centeno, 2002](#), 44; [López-Alves, 2000](#)), but this one seems to better satisfy the classic definition of international war as a military confrontation between two sovereign states that produces at least 1,000 battle deaths in a one-year period. Without considering countries that achieve independence during the period – i.e. Cuba (1898) and Panama (1903) – the list leaves only one out of eighteen countries in the region untreated by war during this period: Venezuela. There is of course great variation in intensity among these wars, but they all exceed the 1,000 battle deaths and thus were important conflagrations at the time.<sup>7</sup>

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<sup>6</sup>Bellicist theory traditionally focuses on international wars for it is in these wars that the survival of the state is at stake – thus justifying extraction from and mobilization of societal groups in a pre-war phase. This international focus is even more reasonable when one is focusing on war outcomes.

<sup>7</sup>One example of a minor war is the Ecuadorian-Colombian War of 1863, an episode that was overshadowed by more prominent civil wars in nineteenth century Colombia. The conflict ensued on November 22, when the Ecuadoran general Juan José Flores and his forces (6,000 men) headed to the Cauca Valley to confront the Colombian army of Tomás Mosquera (3,700 men). The war was decided after a single battle, the Battle of Cuaspud of December 6, 1863, which according to Ecuadoran historiography and [Sarkees and Wayman \(2010\)](#) rendered more than 1,000 battle deaths. This and other minor conflicts in my list are also considered to be wars by [Centeno \(2002, 44\)](#).

To identify the effect of war outcomes on the infrastructural capacity of the state (Mann, 1988), I focus on state spatial and social control (Soifer and Vom Hau, 2008).

First, I focus on the state's capability to effectively connect its territory and population (O'Donnell, 1993; Herbst, 2014). In my case I use railroad mileage as an indicator of such capacity (Banks and Wilson, 2005). This technology is widely attributed a central role in expanding the national state in the late nineteenth century (Paredes, 2013). Railroads proxy territorial control in many ways. To give concessions to foreign capitals or state owned companies, states needed to effectively control those territories, and as railway companies extended their reach, telegraphs lines, post offices, police stations, and many other proxies of state presence were deployed along the way. The train also facilitated the deployment of bureaucrats and troops to the peripheries, resulted in the creation of state agencies, and expanded the reach of the press and education (Callen, 2016).

Second, I focus on the extractive element of state capacity using a measure of national government revenue per capita (Banks and Wilson, 2005) which is intended to grasp the extent to which the state could tax its population. Some have questioned the relevance of this indicator, arguing that revenue in Latin America came mostly from tariffs applied to the foreign sector, which left local elites untouched and did not require huge bureaucracies (Centeno, 2002, 118). Yet, tariffs, emission, and even debt, were ultimately transferred to domestic prices, so these forms of indirect taxation undoubtedly affected the elites. Moreover, preventing smuggling, imposing duties, and

securing seigniorage should be considered impressive feats for nineteenth-century states. For all these reasons, per capita revenue is a fair approximation to economic extraction in the late nineteenth century.<sup>8</sup>

## Identification Strategy

For an initial application of the difference-in-differences analysis, I entertain the possibility that defeat and victory were assigned haphazardly in the six wars I am analyzing. This assumption is in line with the irrational and unpredictable nature of war highlighted by both classical bellicist theory (Weber, 1978, 911) and canonical theories arguing war “is everywhere in contact with chance, and brings about effects that cannot be measured, just because they are largely due to chance” (Clausewitz, 1984, 66).

More importantly, historical evidence underscores the contingency of war outcomes in the cases under my scrutiny. In the initial phases of the War of the Pacific (1879-1884) Chile was outnumbered two to one by the combined land forces of Bolivia and Peru. The Peruvian navy also counted with two ironclads, the *Huascar* and the *Independencia*, which give them considerable advantage against the obsolete Chilean fleet. All of this meant that for Santiago “the immediate outlook did not look promising” (Collier and Sater, 2004, 130). Yet, in a sudden and unexpected turn of events the *Independencia* impacted a reef and had to be scuttled, the *Huascar* was captured by the Chilean navy, and Bolivia withdrew from the alliance without putting much of a

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<sup>8</sup>Other indicators of state capacity for which there seems to be no reliable panel data covering my period of interest are discussed succinctly in my case studies.

fight. As a historian of this war puts it:

“It is a natural tendency, when looking at a war in retrospect, to see the outcome as inevitable (...) [but] a closer look will demonstrate that the two sides were much more evenly matched than the results might indicate and, at a number of junctures during the conflict, the issue was much more of a near run thing than has generally been recognized” (Farcau, 2000, 47).

A similar contingency characterizes the results of the War of the Triple Alliance. After the successful invasion of Mato Grosso, Paraguay had many reasons to expect that the Argentine provincial *caudillos* would grant him pass through their territories and into Uruguay. According to a historian of this other war:

“The marshal’s plan was ambitious but not insane. Its slender logic rested for the most part in the resilience of the Blanco Party in Uruguay and on the putative support of Argentine allies in the intervening territories. Yet, to paraphrase Proudhon, the fecundity of the unexpected far exceeds the statesman’s prudence; when Solano López did eventually drive south, he missed his opportunity by three months. Paysandú had fallen. Flores had assumed the presidency at Montevideo. And, for better or for worse, Urquiza had cast his lot with the national government” (Whigham, 2002, 418).

The assumption that victory depended on contingent events is also supported by

Table 2: Assessing Balance in Covariates for the Pre-Treatment Period

| Covariate            | $\mu$ Winners | $\mu$ Losers | t-value |
|----------------------|---------------|--------------|---------|
| Size of the Military | 141.36        | 159.81       | -0.61   |
| Size of Territory    | 821617        | 718481       | 0.43    |
| Per Capita Expenses  | 800.75        | 682.64       | 1.30    |
| School Enrollment    | .94           | .36          | -0.98   |
| Observations         | 97            | 79           | –       |

the fact that combat protracted for years. Moreover, although victors would develop relatively higher state capacity in the years following the war, this was clearly not the case at the outset or even at the height of hostilities. [Table 2](#) provides systematic evidence showing that winners and losers did not differ importantly in many potential covariates of victory and defeat – e.g. size of the military, size of territory, governmental expenditures, and school enrollment, a proxy for nationalism.

### Difference-in-Differences

To estimate the effects of war outcomes on these two dimensions of state capacity I use a generalized difference-in-differences model. In it, country fixed effects account for permanent characteristics of countries – e.g. territorial size, political institutions, cultural factors – while year fixed effects help control for shared time trends – e.g. international economic context, European immigration waves, etc.

$$Y_{ct} = \lambda_0 + \lambda_D D_{ct} + \lambda_\alpha \alpha_c + \lambda_\delta \delta t + \varepsilon \quad (1)$$

The units of analysis in the model are country-years. The key variable is whether

the country has experienced a defeat in international war in a given year ( $D_{ct}$ ), and the outcome is an indicator of state capacity ( $Y_{ct}$ ). Other parameters for equation (1) include  $\alpha_c$  for country fixed effects, and  $\delta_t$  for year fixed effects. Standard errors are then clustered at the country level. The model offers a good approximation of the effect of exposure to defeat if we assume no time varying confounders affect these countries probability of winning a given war.

If these wars were like a coin toss or the roll of a die, as classical bellicist theory suggests, model (1) would correctly identify the causal effect of defeat on state capacity levels. Yet, despite the theoretical and historical arguments presented, we may consider that certain time-varying characteristics might make countries more likely to win a war. Fixed characteristics already captured by the country fixed effects in model (1), but other potential confounders could be better modeled. Military superiority is perhaps the most intuitive of this factors and the best predictor of war outcomes. The second best seems to be wealth, which provides the basis for military power and the thrust to sustain war efforts in the long-term. A third argument sustains that levels of nationalism might create an advantage, and a fourth popular argument suggests democracies tend to win wars. All these are possible factors selecting countries into treatment and are represented by the term  $X_{ct}$  in equation (2).

$$Y_{ct} = \lambda_0 + \lambda_D D_{ct} + \lambda_\alpha \alpha_c + \lambda_\delta \delta_t + \lambda_X X_{ct} + \varepsilon \quad (2)$$

This new model still assumes that the ignorability condition is met once we control for the observable covariates listed in [Table 3](#). Another key identifying assumption in

Table 3: Variables and Sources

| Variable              | Function  | Indicator                           | Source   |
|-----------------------|-----------|-------------------------------------|----------|
| War Outcome           | Treatment | Adopts a value of 1 after defeat    | S&W 2010 |
| Railroad Mileage      | Outcome   | Miles of public and private line    | B&W 2017 |
| Per Capita Revenue    | Outcome   | National Gov't in Current USD (.01) | B&W 2017 |
| Per Capita Expenses   | Control   | National Gov't in Current USD (.01) | B&W 2017 |
| Exports Per Capita    | Control   | National Gov't in Current USD (.01) | B&W 2017 |
| Size of the Military  | Control   | Military personnel (1000)           | B&W 2017 |
| Effective Legislature | Control   | Four-Point Scale                    | B&W 2017 |
| School Enrollment     | Control   | Primary School Students (.0001)     | B&W 2017 |
| Urbanization          | Control   | Cities over 100,000 (1000)          | B&W 2017 |

Note: B&W stands for [Banks and Wilson 2017](#), S&W stands for [Sarkees and Wayman 2010](#).

difference-in-differences analyses is that state capacity trends would stay constant in the absence of treatment. One common way to test for this is to look at the effects before, during, and after defeat in what some refer to as a modified Granger causality test ([Angrist and Pischke, 2008](#), 171).

Lastly, to further address the endogeneity issue associated with the existence of time varying unobservables, I use a procedure that might help identify a bounded segment in which the “true” effects reside. According to [Angrist and Pischke \(2008, 246\)](#), the lagged dependent variable model in equation (3) might help complement the fixed effects model detailed above by producing a lower bound estimate of our parameter of interest (see, for exmple [Holbein and Hillygus, 2016](#), 369). According to the proponents of this procedure we can be highly confident our “true” parameter resides between these brackets even in presence of unobservable confounders.

$$Y_{ct} = \lambda_0 + \lambda_D D_{ct} + \lambda_Y Y_{c, t-1} + \lambda_X X_{ct} + \varepsilon \quad (3)$$

Equation (3) is similar to equation (2), except that it does away with the two-way fixed effects and includes a lag of our indicator of state capacity.

Results are depicted in [Table 4](#) and are largely as expected. If we believe war outcomes are effectively contingent, loser states are expected to lay 2,000 miles of road less than their counterparts and collect 5 dollars per capita less from their citizens. This effect is still significant, although substantively less important (400 miles and \$.67 per capita) once we include potential confounders. Finally, our lower bound estimate given by a lagged model shows the effects remain robust under the most stringent specification. After defeat, Latin American states lost 20 miles of railway and 30 cents per capita in revenue.<sup>9</sup>

Three leads and lags at the bottom of [Table 4](#) test for secular trends – i.e. the possibility that these states were already in the trajectory of decaying capacity picked by the models. They show that both per capita revenue and railway mileage change trends in the predicted direction after the war. Results in the first and fourth columns provide sufficient evidence that a common trends assumption is met.

## Case Studies

In this section I narrow the focus to the two major wars of the period under my scrutiny. The Paraguayan War (1865-1870) was the greatest war in Latin American

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<sup>9</sup>Importantly, all these results are robust to an alternative specification of railroad mileage as a density measure – i.e. miles of track per square miles of territory. I present the results in raw miles because they are both substantively relevant and more easy to interpret.

Table 4: Summary of Results: Difference-in-Differences and Lagged Models

|                       | Railroads         |                    |                    | <i>ln</i> Revenue |                    |                    |
|-----------------------|-------------------|--------------------|--------------------|-------------------|--------------------|--------------------|
|                       | (1)               | (2)                | (3)                | (1)               | (2)                | (3)                |
| Treatment Effect      | -2024***<br>(205) | -398***<br>(134)   | -20.1***<br>(5.76) | -563***<br>(60.8) | -.156**<br>(15.5)  | -.032***<br>(.011) |
| Per Capita Expenses   | –                 | -.337***<br>(.114) | -.007<br>(.012)    | –                 | .000***<br>(.000)  | .000***<br>(.000)  |
| Exports Per Capita    | –                 | .487***<br>(.107)  | .002<br>(.008)     | –                 | .000**<br>(.000)   | .000*<br>(.000)    |
| Size of the Military  | –                 | 3.75<br>(2.39)     | .098<br>(.143)     | –                 | .000<br>(.001)     | .000<br>(.000)     |
| Effective Legislature | –                 | -454***<br>(130)   | 10.7<br>(6.60)     | –                 | .045<br>(.033)     | .007<br>(.007)     |
| School Enrollment     | –                 | -7.93***<br>(2.63) | .214<br>(.326)     | –                 | -.002***<br>(.000) | -.000**<br>(.000)  |
| Urbanization          | –                 | 8.15***<br>(.334)  | .071<br>(.049)     | –                 | -.000***<br>(.000) | -.000***<br>(.000) |
| Outcome $t_{-1}$      | –                 | –                  | 1.03***<br>(.005)  | –                 | –                  | .875***<br>(.013)  |
| Observations          | 784               | 784                | 768                | 784               | 784                | 768                |
| Country/Year FE       | YES               | YES                | NO                 | YES               | YES                | NO                 |
| Clustered SE          | YES               | YES                | YES                | YES               | YES                | YES                |
| Treatment $t_{-1}$    | -1599***<br>(264) | -377**<br>(172)    | –                  | -409***<br>(118)  | .134<br>(34.6)     | –                  |
| Treatment $t_{-2}$    | -1615***<br>(208) | -365***<br>(131)   | –                  | -395***<br>(80.2) | .127<br>(24.7)     | –                  |
| Treatment $t_{-3}$    | -1647***<br>(199) | -366***<br>(118)   | –                  | -401***<br>(62.7) | .137*<br>(19.8)    | –                  |
| Treatment $t_{+1}$    | -445<br>(241)     | -93.9<br>(186)     | –                  | -177<br>(139)     | -.013<br>(29.5)    | –                  |
| Treatment $t_{+2}$    | -442*<br>(179)    | -119<br>(147)      | –                  | -189<br>(110)     | -.025<br>(23.9)    | –                  |
| Treatment $t_{+3}$    | -427*<br>(167)    | -137<br>(145)      | –                  | -177<br>(100)     | -.022<br>(22.7)    | –                  |

Note: Standard Errors in parenthesis (p <0.05\*, p <0.01\*\*, and p <0.005\*\*\*)

history – and in the world between 1815 and 1914. It confronted Paraguay with Argentina, Brazil, and Uruguay – the Triple Alliance – leaving an estimate of 310,000 battle deaths. The War of the Pacific (1879-1883) pitched Chile against Bolivia and Peru. With some 16,000 battle-related deaths this is the second bloodiest conflict between Latin American states during this period. For the purpose of my analysis I will drop the cases of Bolivia and Uruguay who only fought during the first year of these wars and withdrew with less than 1,000 battle deaths. My focus will be on winners – Argentina, Brazil, and Chile – and losers – Paraguay, and Peru – that confronted a protracted war effort, for these extreme cases should better illustrate my proposed causal mechanisms. Finally, I use the synthetic control method to estimate the trends Paraguay and Peru would have followed if undefeated. Once again, I focus on losers in my statistical analyses, for only defeat is expected to produce a change in the trajectory at place during a pre-war phase (see [Figure 1](#)).

### **The Paraguayan War**

The divergent effects of war outcomes on state trajectories are clear in the history of the River Plate. Right after independence, the Argentine-Brazilian War (1825-1828) strengthened central authorities in both Buenos Aires ([Lynch, 1985](#), 633) and Rio de Janeiro ([Bethell, 1989](#), 66), but the negotiated outcome – i.e. the emergence of Uruguay as a buffer state – was widely seen as a defeat by both sides, leading to the collapse

of the state building projects.<sup>10</sup> Only after a decade, a new process of centralization ensued in Argentina, fueled by the War of the Confederation (1836-1839) and the La Plata War (1839-1852) in which Buenos Aires forces helped Uruguayan rebels put up an eight-year siege of Montevideo (1843-1851). The war contributed greatly to restore the hegemony of Buenos Aires over other provinces and re-centralize power on national authorities.<sup>11</sup> The need to counterbalance Argentina in this period also prompted Brazilian liberals to promote the *maioridade* – coming of age – of the Emperor Pedro II and re-centralize the military.<sup>12</sup> In 1852, Brazilian intervention on the Uruguayan side put an end to war. The core state elites in Rio de Janeiro were strengthened by this victory and rebellions in Brazil were brought to a halt. The defeated Argentina imploded, its capital moved to Paraná, and Buenos Aires effectively seceded from the union for a decade.

While state formation in Argentina and Brazil ebbed and flowed at the rhythm of international victory and defeat, the severely repressive regime of José Gaspar Rodríguez de Francia managed to consolidate a centralist project early on in Paraguayan history. His successor, Carlos Antonio López, strengthened the national state even further by

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<sup>10</sup>In Brazil, Pedro I abdicated the throne, the army was downsized from 30,000 men to just 6,000, and security was decentralized to local National Guards (Sodré, 1979, 130). The reforms ended up producing the bloodiest rebellions in Brazil's history, including a virtual secession of southern states. In Argentina as well, a civil war ensued (1829-1831) and with the victory of the *federales*, the country was divided into a loose confederation.

<sup>11</sup>While Buenos Aires' military expenditures represented 27 per cent of the total budget in 1836, they increased to 49 per cent in 1840, and 71 per cent in 1841, never to fall below 49 per cent for the next decade (Lynch, 1985, 642). Backed by this strong national army, Buenos Aires effectively subdued the provinces.

<sup>12</sup>“The [military] reforms of 1842, 1845, 1847, 1850, all partial, resulted from the River Plate threats that started to grow, once again” (Sodré, 1979, 135).

increasing domestic taxes and tariffs, implementing a stringent system of passport control and border patrolling, and instituting a state-led development plan. By the mid-nineteenth century the Paraguayan state owned 90 per cent of the land and 80 per cent of the domestic and foreign trade, displaying an extended network of public services (Doratioto, 2002, 44). Later on a state foundry was founded in the township of Ybycuí, where the Paraguayans started to produce their own swords, canons, rocket-launchers, industrial machinery, and even the tracks and steam locomotive for a train connecting the foundry with Asunción. This state-led modernization put Paraguay ahead in the technological race, and helped equip its prestigious armed forces, which outnumbered those of its neighbors before the war. Riverine incursions of the Brazilian fleet also prompted Paraguay to mount a shipyard, build steamers and torpedoes, mine the rivers, and erect impressive riverine fortresses. After Carlos Antonio died in 1862, his son, Francisco Solano López, declared war to Brazil trying to prevent a the consolidation of a pro-Brazilian *coup* in Montevideo that would have encircled him. He brought Argentina into the war when passing through its territory in order to reach Uruguay. The strategy proved reckless, although the “extraordinary cohesiveness of Paraguay” was still promising against the “badly divided nations” of Argentina and Brazil (Schweller, 2008, 85-89). Ironically, this cohesiveness and determination deepened the wounds of the Paraguayan defeat. After the war, Paraguay had lost 25 per cent of its population according to conservative estimates (Bethell, 1996, 9), its army was disbanded, its riverine defenses were razed, and foundries and shipyards were dismantled. The Paraguayan manufacturing economy collapsed and a yerba mate

export boom was brought to a sudden end.

Still, the Paraguayan state could have recovered if it was not for the rise of peripheral elites to power. After the war, prominent families divided in *clubes* that “sought the backing of the occupation armies to further their ambitions” (Lewis, 1986, 478). When the victors started to leave in 1876, the president, one ex-president, and a leading candidate for president were murdered. Instead of pursuing their corporate interest by re-instituting state-building, the military sold their services to the higher bidder and oversaw their own dismantlement. The army of 2,500 soldiers was now tiny in comparison to the 70,000 marshaled before the war, but the state had been so radically depleted that the salary of those soldiers consumed one fifth of the national budget. Landed elites fought for the spoils of the state as “the land sale laws of 1883 and 1885 led to a wholesale alienation of the public domain” (Lewis, 1986, 480). Eventually two parties managed to consolidate – *colorados* and *azules* – both of which supported a minimal state policy and fought bitterly for the control over local feuds.<sup>13</sup> With peripheral entrenched in the party system, the Paraguayans would never recover from this dreadful blow.

Looking at individual cases like Paraguay can help address some of the limitations of the regression techniques I use in the previous section. Qualitative researchers are aware that individual losers like Paraguay are very different from other states and thus might require a different set of comparison cases to draw inferences from. Yet,

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<sup>13</sup>One author notes that: “battles between the two parties were often bitter and bloody, for personal and family loyalties were involved in choosing sides. Thus Paraguayans literally wore their politics on their sleeves, flaunting their partisan colors on their ponchos and blouses” (Lewis, 1986, 482).

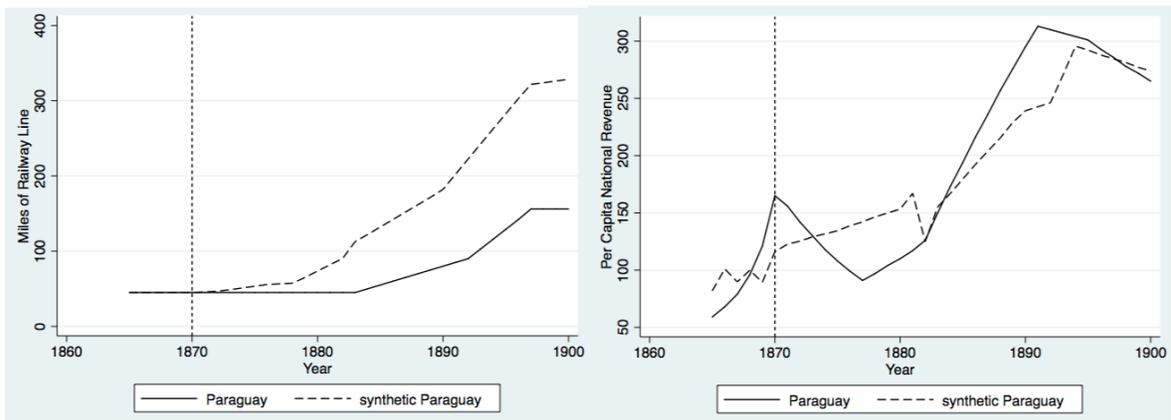
regression extrapolates from all cases without carefully considering these counterfactuals (Kennedy, 2014, 280). To address this problem I use a statistical procedure called synthetic control method (SCM) which consists in constructing an individual case comparison from a donor pool, so that the synthetic or counterfactual case best resembles the treated case – e.g. Paraguay – in theoretically relevant pre-treatment characteristics. SCM uses a panel of other countries – in this case, all other Latin American countries not treated by defeat – and applies weights to extrapolate counterfactual values we can compare to those of the actual case (Abadie et al., 2015, 501). The cross-validation technique used to choose these weights is the following:

$$\sum_{m=1}^k v_m (X_{1m} - X_{0m}W)^2, | \quad (4)$$

Where  $X_1 - X_oW$  measures the difference between the pre-intervention characteristics of the treated unit and a synthetic control, and  $v_m$  is a weight that reflects the relative importance assigned to the m-th variable when we measure the discrepancy between  $X_1 - X_oW$  (Abadie et al., 2015, 497-498). The variables I utilize for  $X_1$  and  $X_o$  are those labeled as controls in Table 3.

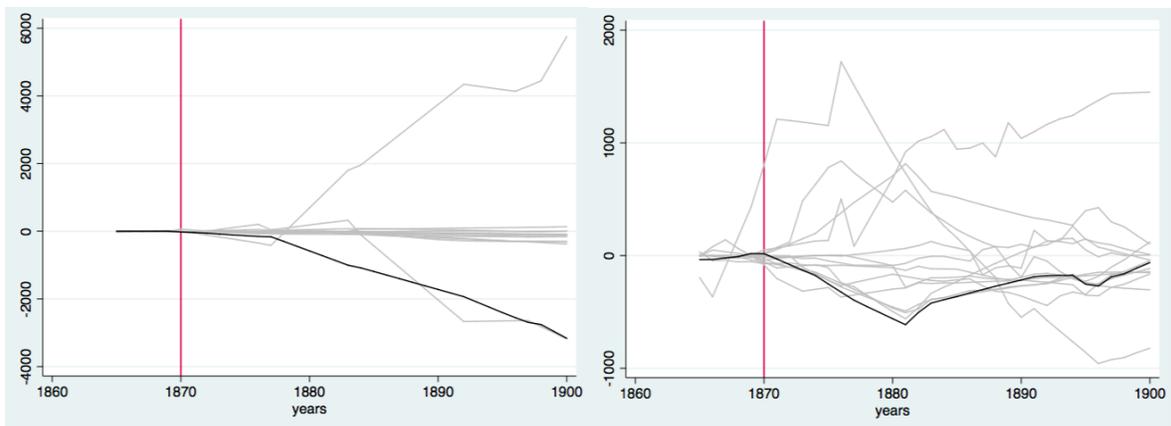
Figure 3 looks at the effect of defeat on railway milage and per capita revenue in Paraguay. In the case of railways the counterfactual closely matches the real case in the pre-war period, convincingly showing that when the country lost the war, its state formation trajectory negatively changed. The analysis of revenues seems less conclusive at first sight but it becomes more so when we consider the placebo tests. There Paraguay is represented by a black line while the placebos are represented in grey,

Figure 3: Post-War Paraguay: Railroad Mileage and Per Capita National Revenue



(a) Paraguay railways

(b) Paraguay revenue



(c) Paraguay railways placebo tests

(d) Paraguay revenue placebo tests

showing that the divergence from the synthetic case is not due to random chance or secular trends affecting most cases. Paraguay extracted significantly less revenue than the average Latin American country during the post-treatment period. Conversely, Argentina and Brazil consolidated their state building trajectories after the war.

In Argentina, the war created a temporal consensus between core and peripheral elites on the necessity of centralizing state capacity, but the extent of these consensus was contingent during the war. After the defeat in the battle of Curupaití of September 22, 1866, for example, a radical peripheral group of *federales* defected to lead a rebellion that require all the energies of the Argentine army to suppress. Yet, the offensive campaigns of 1868 and the definitive victory in Humaitá concur with the final consolidation of the state building project. In the 1868 elections, the core state elite – i.e. former *unitarios* and supporters of President Bartolomé Mitre – agreed with peripheral elites – the *federales* of the provinces and Buenos Aires – to accept the candidacy of the Ambassador to the United States, Domingo Faustino Sarmiento. Unlike most politicians of his time, Sarmiento did not have a clear partisan preference (Campobassi, 1962, 231). His popularity was very much due to his nonalignment and sacrifices for the nation, like having lost his son in the battle of Curupaití.

Sarmiento's inauguration was the first peaceful presidential transition in Argentine history. The *Partido Autonomista Nacional*, which formed during his presidency, would govern uninterruptedly until 1916, preceding over the period of most rapid growth in Argentine history (Rock, 2002). Historians agree that the turning point in Argentine

history coincides with the victory against Paraguay (Halperín, 2005, 31), and the consolidation of the national army played a central role in reproducing the state building trajectory (Lynch, 1985, 656). Only six years after the war the Argentine army under the command of Julio Argentino Roca would occupy Patagonia and defeat Buenos Aires to once and for all federalize the city and abolish provincial militias. “The victory of Roca was that of the central State” (Halperín, 2005, 143). Unlike in Paraguay, where the war brought an end to the yerba-mate boom, Roca’s conquest of Patagonia resulted in a wool boom (cf. Saylor, 2014). Thereafter a new cleavage would define Argentine politics, confronting the *Partido Autonomista Nacional* with the so-called *radicales* who fought for free and fair elections. These parties confronted over the regime that should rule the state, but none questioned centralization.

The war similarly transformed Brazilian politics. Some re-centralization of the judiciary and military had already taken place after the La Plata War, but peripheral elites continued to be strong and counted with the backing of the liberals in Rio de Janeiro (Bethell, 1989, 154). The war altered this balance, compelling the liberal cabinet to concede on more centralization. After the defeat in Curupaití the liberals were forced to offer the general command to the Duke of Caxias, a conservative who presided over a great expansion of the army. The percentage of troops drawn from the National Guards fell notably, from 74 per cent in 1866 to 44 per cent three years later, while some liberals acquiesced, the *liberais históricos* radicalized (Bethell, 1989, 155). As in Argentina, the final blow to the peripheral elites was dealt by the victory in

Humaitá, which led to the collapse of the liberal cabinet and the rise of the conservatives to power.<sup>14</sup> Frustrated and foreseeing a bad result in the 1869 elections, the liberals decided not to participate. When they returned to the polls after the war, they were completely transformed. Almost all of their decentralizing agenda was abandoned and the main focus shifted to a republican agenda that questioned the monarchic regime but broadly aligned with the state building project (Carvalho, 2009, 41). The Viscount of Rio Branco, a conservative elected Prime Minister in 1871, led a *conciliação* cabinet and gathered broad support for state modernization (Bethell, 1989, 158). Furthermore, the consolidation of the armed forces cemented this trajectory. After the Paraguayan War parties competed for the support of war heroes and officers. The so-called “military question” became a central aspect of Brazilian politics, as soldiers began to play a praetorian role, protecting the state against its detractors, and tilting the balance between parties.

### **The War of the Pacific**

The War of the Pacific (1879-1883) – and its less severe predecessor, the War of the Confederation (1836-1839) – help illustrate how two countries similarly endowed with mineral wealth, like Chile and Peru, followed very dissimilar trajectories in the nineteenth century. The puzzle of the Pacific is even more mind-boggling if we consider that “Peru emerged from the wars of independence as potentially the most powerful nation

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<sup>14</sup>“All historians are unanimous in considering this crisis of July 1868 to be the seed of the fall of the Empire, even if it also gave birth to one of the most splendid times in Brazilian history: the conservative decade of 1868-1878, ten years of great progress” (Torres, 1968, 95).

in the Pacific coast of South America” (Farcau, 2000, 13). Victory in the War of the Confederation seems to be directly associated with the consolidation of the *República Conservadora* in Chile, the single most impressive example of political stability in all of Latin America, featuring four uninterrupted ten-year presidential terms, and fifty years of constitutional stability. Conversely, this early war might have triggered an “age of *caudillismo*” in Peru (Pike, 1967, 56). In fact, every Peruvian surrender – to Great Colombia (1829), Spain (1866), and Chile (1839 and 1883) – was followed by a civil war that put an end to an incipient process of state building. The War of the Pacific was arguably the most important of all these struggles, a *coup de grâce* that sent Peru to the bottom of the state capacity ranking in the long term.

Before the War of the Pacific, the Peruvian elite converged on a promising centralization project led by the *Partido Civil*. The *civilistas* intended to end the chaotic succession of military *caudillos* that plagued the country by bringing a civilian to power, and succeeded in electing President Manuel Pardo in 1872. During his four-year term, Pardo enacted a series of reforms that transformed the Peruvian landscape. Confronting prominent local families and strongmen, he consolidated territorial control by organizing the municipalities and election of local authorities (Mc Evoy, 1997, 140). He instituted compulsory education, created a college for the bureaucracy, and established the school of naval officers. To keep rebellious militias in check he created a centralized National Guard and enforced meritocratic rules of promotion (Mc Evoy, 1994, 112). In 1876 Pardo organized the first national census, a feat that epitomizes

his state building efforts ([Contreras and Cueto, 2004](#), 156).

Yet, as everywhere else in Latin America, these state building attempts generated fierce resistance of peripheral elites. The most prominent was that of the rebellious leader Nicolás de Piérola, who rose in arms against the central state three times during those years – in 1872, 1874, and 1877. These revolts, allegedly financed by foreign capitals and landed elites affected by taxes and local elections ([Mc Evoy, 1997](#), 146), only helped embolden the *civilistas* who formed a coalition with the new President, Mariano Prado, to continue their reforms. The new government strongly taxed the booming nitrate industry, which allowed for a surge in state infrastructure but also led to more tension amongst the elites and with foreign powers. Prado was assassinated in November 16, 1878, leading to increasing polarization. The evidence pointed to Piérola, now leader of an ever smaller faction of peripheral elites ([Mc Evoy, 1997](#), 202-205). Chile's declaration of war followed soon afterwards, on April 5, 1879.

The set of events leading to the War of the Pacific starts with a tax imposed by La Paz on a Chilean company exploiting nitrates in Antofagasta, a move that was considered in violation of international law and led Santiago to declare war to both La Paz and Lima, bonded by a defensive alliance. Although outnumbered by the allies both in land and sea, Chile evened the odds by neutralizing the two Peruvian ironclads and taking the province of Tarapacá during the first year of the war. These initial battles had a clear effect in the domestic balance between core and peripheral elites. In Lima, the defeats allowed Piérola to orchestrate a coup d'état and declare himself

Dictator of Peru on December 22, 1879. In the subsequent months Piérola managed to undo a decade of progress. He forged an alliance with the church, traditional militias, and local families across the country, and sold the property of the national railways to Peruvian debt holders abroad (Mc Evoy, 1997, 211). These state weakening policies emboldened the Chilean military, who successfully occupied Lima in 1881, forcing Piérola out of the city. A new government resisted in the highlands until the Chilean terms were finally accepted in the Treaty of Ancón of October 20, 1883.

A established interpretation in the state formation literature suggests the Peruvian defeat was due to the elite's decision to maintain low levels of conscription and taxation during the War of the Pacific (Kurtz, 2013, 76). Yet, as Soifer (2015, 19) has noted, this narrative “struggles to explain the case of prewar Peru” and “mischaracterizes it as one in which state building never emerged rather than its correct classification as a case in which a concerted state-building effort failed.” It is clear that Peru was set on a state building trajectory until late 1879, when drawbacks in the battlefield delegitimized the core state elite, facilitating the rise of Piérola. Defeat, in other terms, induced a halt in the formation of the Peruvian state. After the occupation of Lima, the *civilistas* were accused of leading the country to the abyss and their party virtually dismantled.<sup>15</sup> Modern political parties *tout court* were identified with division and factionalism, and blamed for the disgrace. This cemented *caudillismo* and made it more difficult for modern parties to form in the future (Mc Evoy, 1997, 258).

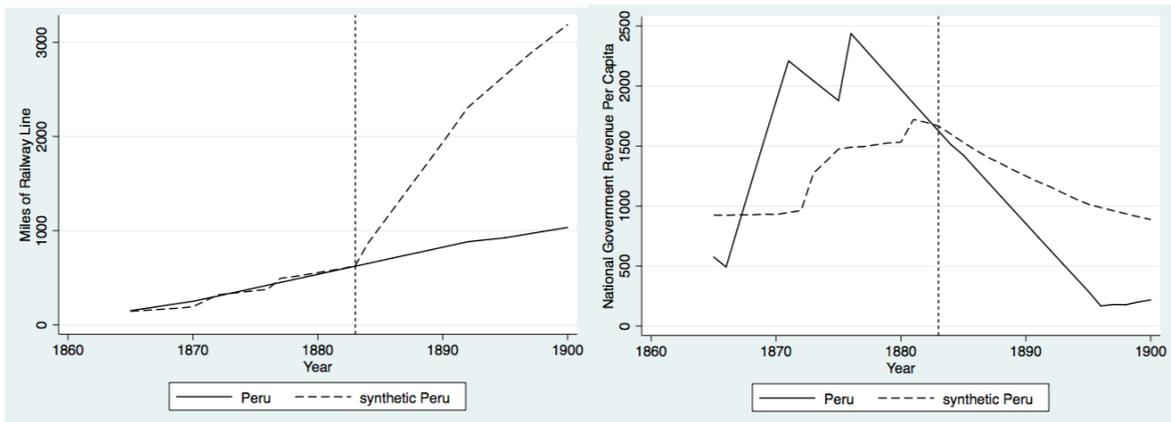
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<sup>15</sup> “The material destruction of the regional focuses loyal to *civilismo* together with the loss of legitimacy of the partisan leaderships in Lima were, perhaps, the hardest blows inflicted to the civic-republican project” (Mc Evoy, 1997, 254).

After the war the leader of the Peruvian resistance, Andrés Avelino Cáceres, was elected president. Backed by a civil-military coalition including military *caudillos* and landowners from the highlands he achieved what is known as a *pax cacerista*. To ensure governability, Cáceres stroke a fiscal decentralization deal with the eighteen departments that composed Peru. Each department would be responsible for collecting its own taxes (Contreras and Cueto, 2004, 176) including a “personal contribution” resembling the old tribute system (Mc Evoy, 1997, 260). The stability of the “Aristocratic Republic” (Basadre Grohmann, 2005) would be based on these principles of extreme decentralization. Instead of state officials, now *gamonales* – large land owners – would be in control of politics at the local level (Paredes, 2013, 217).

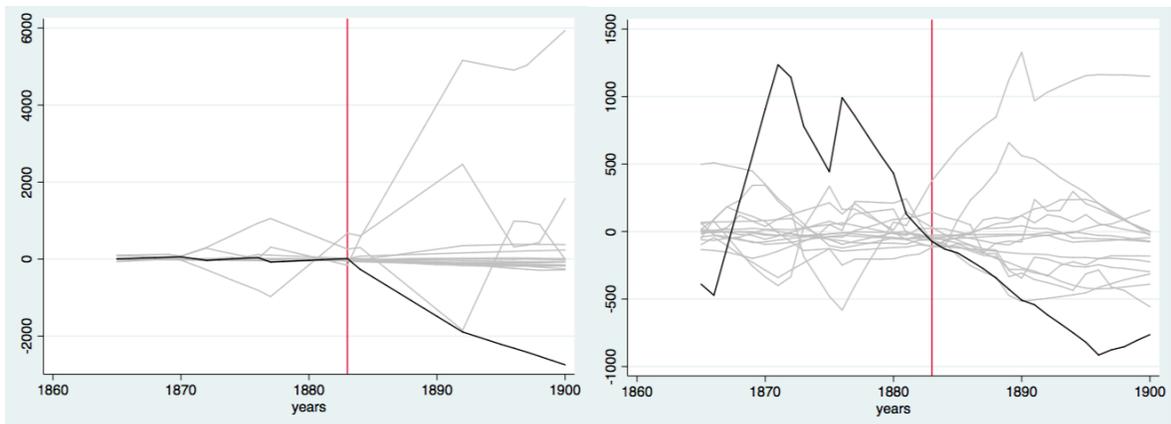
Figure 4 uses SCM (Abadie et al., 2015) to analyze the evolution of Peruvian railways and revenue into this post-war period. The counterfactual for railroad mileage matches the real case very closely in the pre-war period, convincingly showing that an effect takes place right after the defeat. The counterfactual for revenue is harder to read: it apparently fails to match the original case in the pretreatment period, and also fails to produce a clear divergence in 1883. Yet, these two oddities are explained by the history of the case. The sharp decline in revenue many years before the Treaty of Ancón might be due to the impossibility to tax the nitrate industry during the war and the reforms enacted by Piérola. The placebos show Peru was collecting extraordinarily high revenues during the pre-war years – making it impossible for the SCM to produce a matching counterfactual.

Figure 4: Post-War Peru: Railroad Mileage and Per Capita National Revenue



(a) Peru railways

(b) Peru revenue



(c) Peru railways placebo tests

(d) Peru revenue placebo tests

In Chile the war “forced the army into the lives of civilians to an extent not seen before” (Collier and Sater, 2004, 137) and also forced authorities to radically change the fiscal system, introducing an income tax and issuing an enormous amount of domestic debt. The strategy could have led to a financial crisis, but victory increased the trust in the Chilean state, as it now possessed a virtual monopoly to exploit the nitrate boom in the Pacific.<sup>16</sup> Subsequently, Chilean elites turned its seasoned military to conquer lands in Araucania and created the *Empresa de Ferrocarriles del Estado*. Supported by a corps of public engineers the company laid 2,000 miles of railways in six years, connecting all regions of the country.

A transformed armed forces and political parties cemented this trajectory in the long term. The extent to which these institutions had changed is evidenced by the civil war of 1891, where neither President Balmaceda nor his rivals questioned the expansion of the state. The bitter struggle fundamentally revolved around the balance between legislative and executive powers, and was decided by the intervention of the most of the armed forces on the side of the Congress. With the parties struggling over the rules to access and exercise government, the military and bureaucrats were able to run a “quiet revolution,” massively expanding the size of the state in the following decades (Paredes, 2013, 166).

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<sup>16</sup>The reversal of fortunes in the exploitation of the nitrate boom, which passed from Peruvian to Chilean hands, shows that warfare had an impressive impact in how commodity booms affected the process of state building in Latin America (Saylor, 2014). The Paraguayan war also shows that defeat can end booms like that of yerba mate and create new ones, as it happened with the Argentine wool boom.

## Conclusions

Against the established conventional wisdom, I find war had a critical role in the process state formation in nineteenth-century Latin America. While winners capitalized on victory, losers – a specimen that remains unseen in some other regions – were negatively affected by it, and set into a long-term trajectory of state weakening. This suggests that war outcomes and post-war effects should be re-incorporated to the bellicist paradigm if scholars want to paint a fuller picture of how war affects the state. The mechanism by which war determines state capacity levels in a post-war phase seems to involve the consolidation of institutions. The type of armed forces and political parties that consolidate after war seem to critically determine whether state building will be possible or not long after the end of hostilities.

These findings are based on a multi-method approach that far improves the state of the art by combining comparative historical analysis with complementary statistical approaches. Applying a difference-in-differences analysis to a panel of Latin America from 1860 to 1913, I estimated the negative effect of losing a war on per capita governmental revenue and railroad mileage to be substantively important and statistically significant. The finding is robust to very stringent specifications. Then I zoomed in on the two most intense wars amongst Latin American states in the nineteenth century: the Paraguayan War (1864-1870) and the War of the Pacific (1879-1883). These case studies illustrate my mechanisms in all key winners – Argentina, Brazil, and Chile –

and losers – Paraguay, and Peru – of these wars, and also help discard alternative explanations in the literature. Finally, an application of the SCM to the cases of Paraguay and Peru strengthens the inferences of my regression approach.

These findings are in line with the fact that winners of nineteenth century wars are at the top of the hierarchy of state capacity in Latin America until today, while losers continue to be at the bottom. The paucity of state formation during the twentieth century aligns with the bellicist intuition that, without war, little state formation takes place. Future research could replicate the present analyses in other regions and time periods. My findings suggest that once war outcomes are incorporated, researchers should also find a positive effect of winning a war in most regions of the world and well into the twentieth century.

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