Colonial Military Garrisons as Labor-Market Shocks: Quebec City and Boston, 1760–1775

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The military occupation of Boston in 1768 shocked the city's labor market. The soldiers, who were expected to supplement their pay by working for local businesses, constituted an influx equal to 12.5 percent of greater Boston's population. To assess the importance of this shock, we use the case of Quebec City, which experienced the reverse process (i.e., a reduction in the British military presence from close to 18 percent of the region's population to less than 1 percent). We argue that, in Boston, the combination of the large influx of soldiers and a heavy tax on the local population in the form of the billeting system caused an important wage reduction while the lighter billeting system of Quebec City and the winding down of the garrison pushed wages up. We tie these experiences to political developments in the 1770s.

Did labor-market shocks act as a relevant factor in the build-up to the American Revolution? Far too often, historical research into the war's causes overemphasizes the power of rhetoric in galvanizing the population of North America's thirteen British colonies. Rather, rhetoric was merely one part of a much larger and more complex story that latched on (and adapted) to underlying factors. One such factor was the military occupation of Boston. The arrival of a large contingent of soldiers who had to work to supplement their pay represented a major labor supply shock. Adding 12.5 percent to the area's population, this shock outweighs in size those that modern economists have used to assess the effects of a large influx of workers into a market (Card 1990). These soldiers worked largely as unskilled laborers, which meant that the shock heavily affected that segment of the labor market and depressed wages (Lewis 2011). In addition, the army mandated the provision of room and board from the civilian population for soldiers and horses, acting as a tax that minimized the positive countereffect that a population increase might have had

on the demand for labor (Bodvarsson, et al. 2008). These economic effects, often discussed by historians who have studied the colonial economy, fueled resentment among workers.¹

At the same time, another colonial labor market witnessed a reduction in military presence.² Conquered by the British in 1759, the French-populated city of Quebec hosted a military presence that accounted for 18 percent of the region's population and 50 percent of the city's population in 1762. The number of British troops was gradually reduced to the low hundreds by 1775 – at which point the garrison represented less than 4 percent of the city's population (and 1 percent of the regional population). In addition, British soldiers were much less demanding of lodging from the local population, as numerous barracks already existed and compensatory payments were offered to the Quebec City inhabitants. As a port city acting as the trade hub of a largely rural economy, Quebec City bears a strong resemblance to Boston. Unlike Boston, however, it did not join the American Revolution (even though the Americans invaded the colony in 1775).

We analyze these two similar cities to determine the impact of labor-market shocks on the revolution's initiation. We find that the largest visible and measurable effects can be seen in the labor market. The large numbers of soldiers who had to work (and compete with native workers) in their cities of garrison resulted in a greater labor supply. Standard economic theory suggests that such an increase in the supply of workers normally generates a mitigating increase in demand for goods and services because of the greater population, limiting the negative effect on wages. In Boston's case, the billet system (the lodging and feeding burden imposed on the local population at no expense to the army) acted as an in-kind tax on the local population negating any benefits

¹ Gary Nash, in particular, has noted the growing class conflict between laborers and elites within port cities specifically (1979: 339–84). This can also be tied to the growing economic literature linking income shocks to violent outcomes; see notably Anderson et al. (2017: 924–58) and Johnson and Koyama (2014).

² It is worth noting that this is an exception in that other cities like Philadelphia and New York also saw troops being quartered (McCurdy 2019: 84, 115)

from increased demand. We observe that during the years 1760-1775, Boston experienced a general decline in wages. Meanwhile, in Quebec wages increased as the garrison decreased in size. We tie these economic impacts to the actions and reactions of the people who lived the experiences, providing qualitative evidence of the resentment (and resistance) that these economic effects created among the local population.

This paper is organized as follows. The first section explains the relevance of labor-market shocks to violence and political developments in the American colonies; the second documents how military garrisons harmed the labor supply; the third documents how troop billeting systems harmed the demand for labor; and the fourth links those developments to the political events in the different colonies.

Colonial Labor Markets and Revolutionary Narratives

The colonial economies of North America were ruralizing economies: while the population of cities increased, the rural population increased at a faster pace (Geloso 2016, 2019a,b; Lindert and Williamson 2016: 57-58). To be sure, port cities offered higher wages for workers, but there was uncertainty in the ability to gain steady employment—especially for unskilled workers (Nash 1979; Rediker 1987: 6).3 As these cities were more reliant on international trade,4 which varied in volume as a result of wartime shocks and seasonal fluctuations, this uncertainty created "a contentious civic life" (Nash 1979: vii).

Urban unskilled workers featured prominently in the growing tensions between the American colonies and Britain. Several historians of colonial America show that the living standards of the common citizen were intimately linked to violent political events that played

³ See also Rediker (2004, 2007) and Geloso (2019b).

⁴ Much secondary research discusses the incorporation of New England into the Atlantic economy. For a summary, see Newell (2000).

major roles in political and social developments. Jesse Lemisch (1968) was one of the first to explore the role of common citizens in revolutionary actions in the American colonies. Lemisch (1968, 1997) explains how New York sailors were not pawns in a game between colonial elites and the British Empire; rather, sailors became revolutionaries for their own, largely economic, reasons. Sailors were willing to protest and, often, use violence to achieve their goals.⁵ In Pennsylvania, the riots of pilots in charge of guiding incoming ships to port constituted an important development in the formation of revolutionary culture and were intimately linked to the living standards of these workers (Finger 2010). Wayne E. Lee (2001: 2-3) also suggests that violence and riots were normal aspects of revolutionary culture—not just in port cities, but in rural areas as well. Lee argues that backcountry rebellions in opposition to both imperial and colonial policies were quite common in North Carolina. Public violence, largely in the form of property destruction, was commonly used to air political and social grievances (Lee 2001). As such, the living standards of unskilled workers are relevant, especially if those conditions motivated rioting and other forms of violence. Like Lemisch and others, we explore why common citizens participated in revolutionary activities, but unlike many others, we seek more tangible motivations, beyond mere rhetoric, that radicalized wage laborers, including seamen, against the British imperial structure. In the present case, we argue that a positive supply shock (unmitigated by an increase in demand) to colonial Boston's labor market provided such a motivation.

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⁵ Gilje (1996) also has offered a broader study of rioting in United States history. His book offers an overview of how riots are ingrained in the social and political character and history of the United States from its inception to its modern iteration.

⁶ Following Gilje's model, Tager (2001) explores the role of riots in the history Boston specifically. He shows how every century of Boston's history was full of riots. Unfortunately, Tager completely ignores the riots and social violence of the 1760s and 1770s that essentially sparked open war between the colonies and Britain. Though he makes it clear that rioting and violence were essential characteristics of Boston throughout the colonial period, he skips over the British occupation of Boston and the subsequent violence.

Following the end of the Seven Years' War in 1763, Britain attempted to bolster its loosely enforced mercantilist policies, such as the series of Navigation Acts formally on the books since the 17th century. Boston merchants reacted strongly to these changes and openly rebelled against the enforcement of old laws and passage of new ones, such as the Sugar Act of 1764 (Greene 1986, 1994, 2000). Though troops had been stationed in and around Boston for decades before 1768, the British greatly increased the city's garrison to confront the defiant merchants and to enforce the imperial government's new taxes. The new garrison represented 12.5 percent of the local population. The soldiers were also asked to seek complementary work in their off time to supplement their pay (Archer 2010: 105). Simultaneously, the local military installations were not sufficient to house the new garrison and the local population was asked to house soldiers and officers at no charge to the military forces being housed (Archer 2010: 107-10). It must be understood that the quartering of troops implied the provision of room and board as civilian households were also expected to feed troops. 8 Translated in economic terms, one can imagine an increase in labor supply leading to a decline in wage rates. Normally, a labor supply increase caused by a population increase also generates an increase in demand (e.g., the new inhabitants demand services like housing), which mitigates the adverse effect on wages. However, the provision of room and board for soldiers that the local population had to provide created the equivalent of a tax on demand. Local households could not charge as much as they wanted for the extra services they had to provide. This "tax" limited the mitigating effects of demand increases.

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⁷ It was up to the colonial legislatures and local governments to compensate households and innholders for housing, beverages, meals, utensils, candles, firewood, and horse feed (see more below).

⁸ As we point out below, when complaints were made regarding the burden of quartering, households included the cost of firewood (a relatively dear resource especially in urban markets like Boston). The Quartering Act of 1765 also required the provision of bedding, candles, salt, vinegar and a daily ratio of beer, cider or rum (House of Commons 1765: Article V). This also applied to innholders (House of Commons 1765: Article VI).

For this reason, the influx of soldiers would have affected the living standards of Boston's lower classes. In turn, this could have contributed to revolutionary politics.

To properly assess this insight, Quebec City offers an interesting counterfactual. While the Boston garrison grew between 1768-1775, the garrison in the newly conquered city of Quebec was gradually reduced. The city and the surrounding regions had experienced a significant influx of British military forces immediately following the capture of Canada from France in 1759–60. In terms of magnitudes, the shock to Quebec City was even larger. Even after Canada was formally ceded to Britain from France in 1763, the British military maintained a presence to fully integrate the region into the British Empire. Initially, the garrison was equal to 50 percent of the city's population and 18 percent of the regional population. However, the garrison was rapidly reduced to a small number, and the billeting system provided compensation to property owners; soldiers also tended to reside in local installations rather than in Canadians' homes. As such, we should expect the opposite of what happened in Boston.

Labor Markets and Colonial Military Garrisons

British troops entered Boston in 1768, immediately adding 2,000 individuals to the town. The city's population increased by 12.5 percent essentially overnight (Archer 2010: xvi). By 1774, over 5,000 soldiers and sailors resided in Boston. More importantly, these troops represented half of the adult male population and a larger portion of the unskilled labor market. A 1765 census shows that Boston's population held steady at 15,520, including slaves, women, and children. Of that number, 2,041 were white males over 16 years of age. The transient male population fluctuated with the seasons, but historian Richard Archer suggests that no more than 500 were present at any moment. Because some were occasional members of the free labor market, roughly 811 were

⁹ Under normal conditions, the local population fluctuated on a seasonal basis, and there is no evidence that the military halted movement from the city to the interior, especially during harvest and planting seasons. However, there is no

considered African-American or from mixed racial backgrounds. In effect, Boston had approximately 4,000 working-age males during the 1760s (Archer 2010: xvi; Erlanger 1976: 10). In a 1771 tax valuation list, 2,275 males were recorded as capable of owning property or working. Using net real estate worth as an indicator, 764 males were at least occasional members of the working class and labor market (Pruitt 1978: 2–46). Though the troop estimates are conservative, merely adding 500 soldiers to the unskilled labor market would have affected wages. The proportion of 12.5 percent mentioned earlier may be moderately smaller given that we have to include neighboring populations that were in close relation with the urban labor market. In any case, this population increase was substantial. 11

When considering the impact on Boston's population, it may seem unbelievable. Nevertheless, the massive influx of soldiers to 1775 remain large even if one compares it to the population of the entire colony of Massachusetts: by 1774, there were 5,000 soldiers and about 225,000 inhabitants in the colonies (depending on the sources) which means that the garrison represented 2.2 percent of the entire colony's population or roughly 1 soldier per 50 inhabitants. The numbers above are also quite conservative as they do not include the crews aboard the warships in Boston Harbor, nor do they include the women, children, and other military followers that would generally accompany armies (Archer, 2010: xvi). With the arrival of British troops and military ships, the port became less attractive for the lucrative smuggling market that was prevalent

evidence that the occupation increased movement into the rural regions of Massachusetts. It is extremely likely that many wealthier citizens of Boston moved their families to farms outside the city. Thanks to the closure of Boston Harbor after 1773, fewer sailors stayed in the city during long stopovers in the port (Dickerson, 1936).

¹⁰ Other sources have also attempted to determine the number of workers in Boston during the same period. Erlanger (1976: 10) claims that roughly 39 percent of Boston's population could be considered poor or wage laborers. Main (1965: 37, 73) agrees and bases his findings on real estate values as well. Vickers (1994: 194n) uses a mathematical model to find that roughly 40 percent of the population can be deemed to be males aged 15–45, those most likely to belong to the working population. Our estimates appear slightly more conservative, allowing room for error. Still, these figures are relatively close in terms of numerical figures, and they lend further evidence that Boston maintained a much larger working-class population than did most parts of colonial America.

¹¹ By comparison, the most often used example in labor economics of a labor market shock is that of the Mariel boatlift into Miami in the 1970s—a shock that amounted to 7 percent of the labor force (Card 1990: 245).

throughout the entire 18th century. Furthermore, the port was officially closed after the infamous Boston Tea Party in 1773, further affecting the local economy.

These troops threatened to become another source of competition for jobs. As historian Dirk Hoerder (1976: 254) makes clear, "the soldiers in their off-hours provided a formidable pool of labor, willing to work at low wages." Because military pay was low and often delayed, troops took side jobs to supplement their income at reduced wages (Carter 1931: 290–91). Therefore, British troops generated downward pressure on the wages of common laborers. Contemporary sources confirm the use of soldiers as common laborers. One woman reported that a soldier "who had frequently been employed by her" was not willing to shed blood over the Boston Massacre unless Bostonians had fired back at the soldiers (Bowdoin et al. 1967: 220). The adjective "frequently" implies that soldiers were seen as consistent and affordable labor when they were not on duty. Interestingly, there is little discussion of the use of soldiers as day laborers among Boston merchants; it appears to have been so prevalent that few noted the practice. Nevertheless, Samuel Adams decried the employment of soldiers since they were symbols and tools of an overreaching parliament attempting to subdue Boston (Cushing 1968, 1: 446). 12

The downward effect on wages was noted by many. In his study of the urban workers and sailors, Nash provides data from Boston-owned ships suggesting that their wages fell rapidly. ¹³ In 1768, mariners earned an average of £1.8 per month, and in 1772, they earned just £1.2 per month (see figure 1), a 33 percent drop (Nash 1979: 393–94, 414). ¹⁴ Given that seamen tended to be

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¹² There is some question as to who would employ said troops among the town's elites who, on the surface, appeared united. When the revolution began, roughly 42 percent of merchants in Boston (those most likely to employ wage laborers) joined the rebellion, and 39 percent allied with the British or remained neutral. Thus, it appears that there would have been numerous individuals and companies willing to employ soldiers. See Tyler (1986: 242).

¹³ Nash argued that commodity prices (as the colony was a small open economy, it was a price taker) determined the wages that mariners earned. According to his data, Atlantic World wheat prices correlate well with Boston sailors' wages for nearly the entire 18th century. But for the period of 1768–1774, this is not the case.

¹⁴ We also have observations of lower wages for other types of laborers during this period, but those observations are much fewer than those of seamen.

unskilled workers, it can be posited that everyday workers faced similar issues during the same period.

However, the effect on prices is more ambiguous and probably minimal and it depends on the type of goods being considered. According to monthly wheat price data provided by Cole (1938) for New York, Boston and Philadelphia, the occupation appears to have had little impact on prices. 15 As can be seen in figure 2, prices in all three cities evolved more or less in line with each other suggesting a certain level of market integration. Had the British garrison caused a permanent shock on food prices, Boston should stand out from the pack. Because the colonies were well-integrated, the greater demand in Boston simply created arbitrage opportunities for merchants in other cities. Relative to the more or less integrated colonial grain market, the influx of troops into Boston had a limited effect on food prices. An additional way to substantiate the claim of a limited role of food price changes is to use the first and second real wages series depicted in figure 1. Those series were deflated using the price indexes for Boston constructed by Crandall (1934) and rural Massachusetts constructed by Rothenberg (1979). These two indexes are based only on prices for food items. Using the two food price indices constructed by Smith (1990: 232) for Philadelphia, we can imagine how wages in Boston would have evolved if prices had followed the same trend as in Philadelphia. We find that the average annual real wage change between 1768 and 1771 is between -8.5% and -9.7% if we use the Philadelphia food price indexes as opposed to -8.6% and -8.3% with Crandall's and Rothenberg's price indexes. 16 Given that food items

¹⁵ In fact, prices for wheat seem to be converging during the period. In 1760, the coefficient of variation (standard deviation divided by mean which provides a commonly-used measure of market integration) between the three cities stood at roughly 15%. By 1772, it had fallen to 5% (that trend was partly reversed by 1775 when the coefficient reincreased to roughly 10%).

¹⁶ Another way to verify this assertion thus is to use the wheat price data that underlie figure 2. If Boston had experienced the same price changes as those observed in New York and Philadelphia, it would have had nearly the same rate: -10% per annum with the Boston wheat price and -11% with the average price of Philadelphia and New York.

represented 55.8% of the average household budget (Smith 1990: 107), the combination of these elements reinforce our belief that food prices played a limited role in reducing real wages. ¹⁷

However, if price increases were to play a role, it would have been through the prices of goods and services that were not traded between the different colonies. This would have included firewood and housing services which were less commonly traded between the colonies. Unfortunately, the real wage series I and II in figure 1 rely only on food prices so that we are missing the potential effects of the occupation on the prices of goods that were probably the most affected. All others goods (e.g. clothing, fuel, rent) are not included. More importantly, there are limited price data for clothing, firewood and rent for New England during the period. ¹⁸ This is problematic as the categories of fuel and rent represented 26.6% of a laborer's family budget. ¹⁹

One solution to this issue is to use the indexed cost of the "subsistence basket" for Boston built by Allen et al. (2012: Appendix). That basket includes numerous additional food items not captured by other indexes as well numerous non-food items such as candles and cloth. Allen et al. also provided some interpolated estimates of firewood prices and increased the total cost of their basket by 5% to account for the cost of housing. ²⁰ This is imperfect but it is more complete. As can be seen in real wage series III in figure 1, there was an even steeper fall in real wages from 1768 to 1771 with a milder recovery to 1774 that failed to recover lost grounds.

Another solution is to compile new data for rents and firewood from primary sources to augment the existing food price indexes used above. We were able to gather wood prices for 1769-

¹⁸ Weeden (1891: Appendix A) is the primary source of use for price information during the era and he has prices for food items mostly and large gaps for the few price quotations for non-food items.

¹⁷ All the data we use is available in our online data supplement available at: https://tinyurl.com/wh7lf5t

¹⁹ This is probably a mild overestimation according to Smith's numbers as his budget excluded tradable goods such as soap, starch and candles (1990: 107). The inclusion of these goods would reduce the proportion above to lower values.

²⁰ There was "considerable interpolation" for firewood prices (Allen et al. 2012: Appendix p.22) which affects our period of interest.

1775 from the account books of the Boston Overseers of the Poor, a publicly funded institution which assisted poor, unemployed, elderly, and widowed individuals throughout the Boston area. As part of their efforts, they purchased firewood for individuals under their care. Most of these prices were clustered in colder months and provided prices by the foot. ²¹ We were able to collect 358 price quotations for firewood during that period which we combined with the prices available for 1765 which were used by Allen et al. (2012). We were unable to find clothing prices and so we used the price of clothing goods in Philadelphia compiled by Smith (1990).²² For rents, we used the decadal property values in Boston compiled by Warden (1976: 591). These components were then added to the Boston price series developed by Crandall (1934) to create a broader cost of living index. The result can be seen in real wage series IV in figure 1 below. It also shows a steeper decline to 1771 and a milder recovery. It is worth pointing that this depiction is still quite imperfect as a result of the way Warden's rent data is organized. He points out that the "annual average" value of "property transfers" are taken at "ten-year intervals beginning in 1693" (Warden 1976: 591) which means that the property values (which he argues proxy rents) are for 1763 and 1773 rather than true decadal averages. Thus, it is likely that real wage series IV misses a lot of information. Further improvements could further accentuate the decline in real wages observed below. Nevertheless, it seems that the bulk of the decline in real wages stemmed from the nominal wage rates falling.

[figure 1 about here]

[figure 2 about here]

[table 1 about here]

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²¹ All the new price data we use is also available in our online data supplement available at: https://tinyurl.com/wh7lf5t ²² In their work, Allen et al. (2012) used British cloth prices because they assumed that they were traded between the colonies and that their prices would converge. The same assumption is used here but Smith's clothing prices are richer in terms of the number of observations and apply directly to the United States.

The Boston experience contrasts with that of Quebec City. When the British captured the city in 1759, they brought in a sizable garrison to wrest control of the colony from the French. Even after the formal cession of New France to Britain in 1763, the garrison remained large (see table 1). Like in Boston, the initial garrison held skills that competed with the city's unskilled labor force. For example, the 58th regiment, which occupied the city in 1759, consisted of 35 percent husbandmen and laborers, 17 percent weavers, and 7 percent shoemakers and cordwainers. The rest represented more skilled trades (Ostola 2007: 56). However, the British progressively reduced the size of the garrison from a peak of over 7,000 British soldiers in 1759 to a low of 200 soldiers by 1775 (see table 1). This reduction occurred at a time when Quebec City's population did not exceed 10,000. In relative terms, the garrison of 1762 was equal to 51 percent of the population of the city and 18 percent of the population of the broader Quebec area (Hare et al. 1987: 324; Vallières et al. 2008: 569). By 1770, these ratios had fallen to 21 percent and 7 percent, and by 1775 to 4 percent and 1 percent. And it is worth pointing out that the vast majority of the troops in Canada were garrisoned in Quebec City. The Montreal garrison was even smaller: by 1775, it counted only 150 soldiers (Viau 2008: 238).

Recently published wage data shows the effects of the withdrawal of troops on the unskilled labor market. As figure 3 shows, from 1760 through 1775, real wages increased dramatically in the Quebec area (Geloso 2016; 2019a; 2019b). While the data are imperfect, they indicate easing pressures on the labor market as the Quebec economy recovered from the conquest.²³

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²³ There are some swings in wages that appear to go in the same directions as swings in the size of the military occupation force. These seem to be concentrated around 1765 and 1775. The first of these episodes coincides with an episode of monetary policy turmoil. During that period, there were important negotiations between France and England regarding the redemption of the large quantities of paper money that the French government had issued in the waning days of its rule over Quebec. It ended in a deep monetary contraction that most Quebec historians believe precipitated a recession in 1765 (c.f. Ouellet 1966). Falling wages in 1775 are easy to explain as it is associated with the American invasion of Quebec.

Quartering as a Tax

The role of quartering soldiers is crucial to our narrative, as it affects the demand side of the labor market. Readers must bear two things in mind. First, quartering refers both to the provision of lodging and meals as the Quartering Act of 1765 made it clear that candles, firewood, bedding, meals, beverages, salt and utensils had to be provided to the quartered troops. More importantly, it applied to public buildings rather than only private homes. These public buildings included inns, livery stables, alehouses, victualling houses which had to provide the same goods and services to troops. Secondly, the Quartering Act did not mean that the British Army could occupy housing without compensation (McCurdy 2019: 99-101). However, compensation would not be financed from army appropriations granted by Parliament. Rather, the colonial legislatures were to cover such compensation. This meant that the legislatures had to raise taxes. This is the reason why quartering was presented as a tax by colonists then and historians now (McCurdy 2019: 100). In 1768–1775, the governments of Boston and Massachusetts generally refused to cover the cost or to open public buildings to British soldiers and sailors (McCurdy 2019; Gage et al: 6-11). Because of this resistance from the legislatures, the burden of quartering fell directly on those who had to provide services to the army.

Normally, influxes of labor into a market lead to a shift in the labor supplied, which depresses wages. This is the effect described above. However, the presence of more individuals also increases demand for housing, local services, and for workers to produce them. This increase moves the labor demand curve at the same time as the supply curve, creating a limited effect on wages. However, the requirement to house and feed troops for free imposed a substantial in-kind tax. This tax partially muted the usual countereffect of increased demand. The large influx of

workers combined with the quartering of troops at no expense to the army generated public discontent.

Even before British troops arrived, both the Massachusetts governor and General Thomas Gage attempted to find housing for the incoming military forces. The Quartering Act of 1765 mandated that American colonies provide barracks for soldiers, whether in public buildings or private homes. The mandate supposedly guaranteed monetary recompense from the British Crown, but in practice, most generals and British officials considered the housing of soldiers to be a public duty of the colonial governments and citizens. According to Governor Francis Bernard, the Quartering Act required that British officials go through local and colonial governments to get permission to house troops in various buildings. Boston had a manufactory house for poor families and individuals who worked to help cover the public assistance they received (Gage et al. 1769: 3-6).²⁴ Both Gage and Bernard sought to billet the soldiers arriving with Gage in the manufactory house, but Boston's town council and selectmen refused their repeated requests. Even the colonial legislature declined to help find housing for the soldiers, citing that Castle William (on one of the many harbor islands surrounding Boston Harbor) should be filled before soldiers were housed in the city proper (Gage et al. 1769: 3-11). But Gage could only house his Irish regiment in the castle's barracks, forcing an additional regiment to camp in tents. As Gage expected to bring more troops into the city, he decided to push for housing in the public houses, such as the manufactory house. Eventually, Gage and Bernard settled on renting housing until barracks could be built, the cost of which would be billed to the colonial government (Gage et al. 1769: 33–43). Eventually, Gage was forced to embrace the full measure of the Quartering Act by forcing homeowners and

²⁴ This reference is to a copy of a letter written by Bernard to the Lord of Hillsborough in England lamenting the continued resistance of the local governments to provide the permission required to quarter soldiers.

business owners to accept officers first, and later enlisted men, into their homes and buildings and provide them with meals, beverages, fuel and feed for their horse²⁵

Finding housing for soldiers, whose numbers only increased until 1775, had direct and indirect economic effects on Boston. The immediate effects were sizable. First, the increased demand for housing pushed up renting costs, which harmed transient common laborers. Adding just a single regiment to the already strained housing market crippled the ability of transient workers to find housing at the worst possible time. As Boston's population varied seasonally, winter tended to bring more sailors and transient workers into the city as work was more scarce on the ocean and in the countryside. The situation only worsened as the years wore on. Gage inhibited access to Boston's port and ultimately closed it to commerce altogether in early 1774 following the Boston Tea Party in December 1773. In addition, Gage's soldiers attempted to take the manufactory house in defiance of Boston's town council shortly after landing in October 1768. Colonists and occupants of the manufactory house, most of whom were poor and had no homes of their own, barricaded the building and withstood a small siege, forcing Gage to look elsewhere. Indirectly, Bostonians were on the hook for not only the cost of renting housing for the soldiers occupying their town, but also for the expenses of building and maintaining the barracks which provided some of the troop housing capacity. Thus, Bostonians literally paid for the privilege of hosting a military occupation.²⁶

²⁵ For much more on the billeting situation in Boston, see Archer (2010: 108–15).

²⁶ It is worth pointing that some scholars have debated the empirical importance of such requisitions *for private homes* (c.f. McCurdy 2019 for a recent exposition). Those who question the importance of quartering draw a clear distinction between private homes and public buildings arguing that quartering took place most heavily in the latter type of lodgings. For our purposes, this distinction is irrelevant. Indeed, our argument is that quartering mandated the use, free of charge, of certain buildings and services. This is a tax whichever way one wants to look at it. In fact, the scholars who question the extent to which private homes were requisitioned make it clear that they believe quartering to be a tax. As the army placed the onus of supporting these troops on colonial governments, the expense was ultimately funded by colonists themselves through a higher tax burden. This was, as we point out above, something that colonial governments refused to do arguing that the army itself had to pay rather than the colonists via taxation.

Rarely can we quantify the financial impact of quartering on the local population due to the disruption of the Revolutionary War that began in 1775, but we do have one example of the financial cost to the city's citizens. James Dalton, a wealthy merchant living in Boston, submitted an account of his property losses to the city government. Dalton's home was used as quarters, and much of its wood and woodwork were used for firewood by British troops in residence from 1775 through 1776. In total, Dalton claimed slightly more than £203 in damages and rent; included in that figure was roughly £100 of wood removed from the property's fences and buildings for firewood. As is apparent from his submission of this account to Boston's government, the British military forces failed to pay Dalton for either the damages or rent listed. Whether the local government reimbursed Dalton is unclear (but unlikely considering the war that continued for another eight years). Regardless, this account shows that the costs (both monetary and opportunity) were substantial (Dalton Family Papers, 1667–1907).

Unlike the citizens of Boston, the inhabitants of Quebec City (and the countryside) were accustomed to quartering troops in their residences under French rule, as French forces frequently utilized the homes of local citizens while in town (Proulx 1991: 30-31; Coutu 2010: 32). In the first few years of British rule (before the Quartering Act of 1765), the era known as the *régime militaire* (the military regime referring to the period between 1760 and 1763 when the French had capitulated in Quebec without formally ceding the colony), Britain continued the French practice of housing soldiers in citizens' homes (Trudel 1999). However, some compensation was offered (Trudel 1999: 383) and housing as well as warehouses were rented (Rioux 1996: 18-19, 33).²⁷ While they were expected, like the inhabitants of Boston, to provide meals, firewood, beverages

²⁷ This differs heavily from the American colonies where it was expected that the colonial legislatures would use their own revenues to compensate individuals who quartered troops. In Quebec, the army paid directly for the use until the end of the *régime militaire*. This is in large part because Quebec had no colonial legislature on which, like in the American colonies, the expenses of the army could be delegated until 1791.

and horse feed to quartered troops, the inhabitants of Quebec were partly compensated for being asked to do so. Using the main primary source available regarding the administration of troop housing, the journal of governor James Murray, Frederik Coutu (2010: 32-44) found that the British did compensate the inhabitants for the housing and firewood that the regime requested. There was some heavy-handedness on the part of the British, but this was a noted departure (and improvement) from French rule.²⁸ The fact that *some* compensation was offered differs from the case of Boston. In addition, Coutu notes that British soldiers in Québec City were responsible for their own rations when they resided in civilian lodgings (2010: 35). This is why McCurdy (2019: 107) argues that this approach to billeting troops "set Québec ... apart from the thirteen American colonies".

More importantly, not *all* troops were quartered in civilian housing and that demand fell gradually as the garrison itself fell in size. Quebec City had since 1748 a large set of barracks in which a sizable share of the local troops could be quartered (Proulx 1979; 1991). When Britain conquered the city, the barracks could house some 500 soldiers (Rioux 1996: 18). This was sufficient to house a fifth of the troops in the city during the *régime militaire* and more than two-fifths of the troops in the city between 1764 and 1775 (see table 1).²⁹ They also repurposed the estate of the Jesuit congregation in the upper portion of Quebec City, which they had expelled, to serve as a barrack in the city largely because it could serve to house a large number of troops – as high as 1,000 (Ostola 2007: 87-89). The repurposing of the Jesuits estates in the city, which seems

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²⁸ Most of the heavy-handedness was observed with regards to firewood. Murray ended up requesting more than 11,000 cords of firewood and offered payment only after delivery through local captains. We do not know if this was because the price offered was close to the market price or if it was the modalities of payment that caused problems, but we know that the requests went unfulfilled for many months which caused great frustration to governor Murray (Couture 2010: 35-44). By contrast, the French exacted heavier burdens with lesser compensations.

²⁹ They were also well located in the city. In contrast, the barracks in Boston were not conveniently located to keep the peace and could only house 1,000 men (*The London Magazine*, 1768: 689) which represents less than a fifth of garrison that Boston had by 1774.

to have occurred after the *régime militaire*, meant that the British could house the average garrison from 1764 to 1775 without resorting to billeting. In other cities, such as Trois-Rivières,³⁰ instructions were given in 1765 to expand housing space for soldiers by converting the house of the former French governor into a barrack (Library and Archives Canada, Microfilm reel A-611: 184). Thus, the Quebec example suggests two important things. The first is that the garrison's size fell over time, which limited the supply effect. The second is that the implicit tax that is the quartering of troops was lighter than it was in the American colonies (and also constituted a reduction relative to the era of French rule) and grew lighter over time as the garrison fell in size.

Over time, the British also started to adapt their exactions from the conquered population on the basis of their ability to provide with minimal burden (Coutu 2012: 103). This system minimized the effects of the British garrison which, like the Boston garrison, was working in the city at the same time (Rioux 1996: 31). While the burden was lighter than in Boston, it did act as a tax that imposed an extra cost on the local population. Had there been market-level compensation, the reduction of the garrison would have also entailed a falling demand for local services, thus minimizing the effect on wages. However, because it was lighter than in Boston, the garrison's reduction helped wages more than falling demand harmed them. In such a situation, one can expect wages to increase overall, as observed earlier.

Fueling Revolutionary Sentiments

Though wages are one indicator, the qualitative evidence provided by individuals and institutions in Boston indicates that the labor market experienced a major shock. As occupation continued, the number of individuals labeled "poor" increased and began to strain the city's traditional methods of poor relief. The cost of poor relief continued to increase at a steady rate

³⁰ The smallest of three main cities in Quebec.

throughout the period, exacerbating conditions in the town and leaving many without assistance (Archer 2010: 8). When occupation intensified and the naval blockade tightened following the Boston Port Act in 1774, which effectively closed the port to all trade, merchant John Rowe decried the "distressed situation of this poor town" and the many workers without jobs (Cunningham 1969 [1903]: 275).

By 1770, John Adams was convinced that the "Iron Rod of Power [will] be stretched out vs. the poor people in [the city]" (Butterfield 1961: 364–65). Unemployment threatened the public coffers. The almshouse, Boston's poor relief center, increased its spending from £2,400 in 1768 to over £3,330 in 1770 – a 39 percent increase in just two years. The town's selectmen voted to raise a tax of £4,000 "for the relief of the poor." Enacting such a significant tax increase (by a normally conservative government) highlights the growing political pressure from civilians to help take care of those unemployed due to the overwhelming situation in Boston. By 1774, Boston was still spending over £3,300 each year on poor relief. Coupled with declining tax revenues, the city was stretching public funds to their limit. Boston therefore increased taxes on its richer citizens. This would have further compounded the adverse effects of the influx of troops and their quartering as a tax. Additionally, the public granary was failing to supply the town as it had before occupation. The monetary value of the town's grain for emergencies and poor relief in 1762 stood at a little over £486. By 1774, the granary's stock amounted to roughly £150, barely enough to maintain an emergency supply (Boston Records Commissioners 1887: 25–26, 161, 170). The town's normal capacity to care for the poor and disabled was hindered.

This combination of lower wages and strained poor relief efforts fueled rebellious activities. Violence and rioting were deemed justified when used in moderation and for good cause. For a variety of reasons, workers had few options for making their demands and opinions known.

Thus, rioting became a tool for voicing their objections. In Massachusetts, demonstrating crowds frequently rallied around or marched to liberty trees or poles to protest perceived inequities or injustices. According to British officials, part of the impetus for occupation had much to do with the liberty tree riots that accompanied the Stamp Act's 1765 passage. Mock funerals and hangings of effigies were quite common, and occasionally, they resulted in actual violence and the destruction of private or public property depending on the situation (Young 2006: 327–29). But for unskilled laborers, these events were the best opportunity for affecting change in their social and political environment.

John Rowe wrote of two congregations of people on back-to-back nights in 1774 who were upset about the blockade. He explained that they intended to find a certain official who was blamed for a variety of crimes against the people. More importantly, he explained that it was a large group of people that included merchants, middle-class citizens, common laborers and seamen. He claimed that over 1,200 people – nearly 10 percent of Boston's civilian population – attended the nights' events. Common laborers represented a sizable share of the protesters. On the second night or demonstrations, the crowd was ready to tar and feather public officials. They were looking for a particular person of public infamy, but "could not find him, [which was] very lucky for him" (Cunningham 1969 [1903]: 261.) Some historians argue that the merchants and elites maintained control of the populace and their riots in every major demonstration. While sometimes that was true, laborers and less wealthy citizens participated out of their own free will (Brown 1973: 81–120).

More common than large mob actions were clashes between workers and troops often for mundane reasons, and troops instigated these clashes as often as the workers. The presence of thousands of soldiers, numerous warships, and their accompanying sailors created ongoing friction between soldiers and Bostonians. Merchants and elites initially attempted to gain favor with the British officers, while average citizens openly fumed about the occupation of their city and homes (Hoerder 1976: 253). A pamphlet on the Boston Massacre contains multiple accounts of soldiers bayoneting, beating, or stabbing individuals prior to the massacre. One account describes a party of soldiers coming through an alley with swords and bayonets swinging wildly, nearly cutting several civilians (Bowdoin et al. 1967: 221-22). On October 29, 1768, just a few days after the initial landing of soldiers, multiple laborers and individuals were imprisoned without warrant, essentially installing martial law. In addition, several were beaten with pistols, some were stabbed with bayonets, and another was struck with a musket. A few days later, another man was knocked down by a soldier with the butt of a musket (Dickerson 1936: 15–17). Most of these incidents are described without mentioning the cause for the soldiers' aggression. There is little doubt that many of these incidents were caused by an American's refusal to answer the sentry's order to stop or show their faces. Though it might seem unreasonable to thrust bayonets at a random person who did not answer calls to halt, it appears that the soldiers felt uncomfortable where they were located and stationed. For example, one man was riding through a checkpoint and decided not to stop when ordered to by a small group of soldiers looking for deserters. He was forced to stop, threatened with multiple bayonets, and detained for a short while (ibid.: 29). Though soldiers constantly harassed individuals, Boston's citizens, especially its workers, frequently refused to heed soldiers' orders.

At times, violence escalated beyond mere skirmishes and altercations; the Boston Massacre in 1770 being the most infamous example. In fact, it is quite telling that the Boston massacre took place when all the real wage series depicted in figure 1 above are at or near their lowest points. As more and more citizens of Boston saw their wages fall, their jobs taken by soldiers, and their homes

occupied, Bostonians were less inclined to accept the dictates of an increasingly violent occupation force. Just three days prior to the Massacre on 2 March 1770, a soldier was walking along a warehouse when a journeyman shouted at him asking if he wanted a job, as many of his comrades did to augment his minimal pay. The journeyman suggested he 'clean my shithouse', and the soldier responded by lunging at the journeyman. Another day laborer - one who frequently had lost jobs to soldiers - managed to pull the soldier down to the ground, and another warehouse worker stole the soldier's sword. The soldier returned with eight or nine of his comrades, with clubs not guns, where they were confronted by a dozen or more warehouse workers ultimately without serious violence (As quoted in Archer: 2010: 182-83).

Events usually resulted in mob violence or threats of crowd action when problems were not resolved, according to local civilians. Bostonians managed to change official policy more than once with the threat of mob violence through newspapers or word of mouth (Dickerson 1936: 18). To gain more support among the working classes, American leaders justified their actions using evidence of soldiers abusing their power. More significantly, John Adams argued that the "insolence of officers and soldiers, and seamen, in the army and navy [are] as mischievous as that of porters, or sailors in the merchant service." He continued, "Are not riots raised and made by armed men, as bad as those by unarmed? Is not an assault upon a civil officer, and a rescue of a prisoner from lawful authority, made by soldiers with swords or bayonets, as bad as if made by tradesmen with staves?" (Wood 2011: 303–05) Adams contended that the individuals in Boston had the right to counter violent enforcement of taxes and policies with violence of their own. The tension came to a boil by 1775, in no small part due to the massive impact felt by the wage laborers, who had much more time and reason to become deeply involved with the independence movement.

Our argument ties itself to the literature on the tax revolt aspect of the American revolution. Most scholars (even those who disagree on the extent of quartering in private homes) argue that quartering was a tax (c.f. Rogers 1970; McCurdy 2019: 99-103). This is why the colonists frequently tied the quartering of troops with other taxes that the British parliament tried to enact (McCurdy 2019: 100; Rabushka 2008: 745). In essence, historians argue that it was part of the wider tax revolt behind the American revolution as colonists were expected to raise taxes to compensate those who quartered troops. The refusal to do so by colonial legislatures such as those of Massachusetts and New York can be well-inscribed within the tax revolt. Our argument augments this narrative by proposing that the tax of quartering was amplified by its effects on wage rates. In essence, those who shouldered the indirect consequences of quartering were more willing to support anti-British activities.

Quebec City stood in stark contrast. Because the French population of Atlantic Canada was deported by the British starting in 1755, the French population of Quebec was fearful of the new invaders (Frégault 1990 [1955]: 335). Aware of this fact, Governor James Murray expended considerable effort to assuage the population (Coutu 2012). He often ignored the complaints of British merchants who clamored for more aggressive action against the conquered population (Lawson 1990). In the context of the public debt of England and the daunting costs of policing such a minor colony populated by Catholic French-speakers, British imperial officials settled on a policy of easing the fearful French-Canadians and co-opting the remaining elites into the apparatus of British rule during the 1760s and 1770s (Geloso 2015: 51–80). In constitutional terms, this policy meant conserving large features of the legal apparatus of French institutions (notably seigneurial tenure and the French civilist legal tradition) and adopting the Quebec Act of 1774 that formalized a toleration of the Catholic faith in Quebec. In practical terms, this policy meant the

implementation of the lighter quartering system described earlier and limiting the size of the garrison.

This system eased tensions between British occupiers and the local population. A survey of the literature regarding the first 15 years of British rule found little evidence of growing discontent (Brunet 1969; Desloges 1982; Lawson 1990; Rioux 1982, 1983). This is not to say that the French inhabitants immediately warmed up to their new masters, but the lack of open hostility, as was observed in Boston, translated to benevolent indifference by the time the Americans invaded in 1775. British attempts to assuage the French-Canadian population were probably helped by the fact that the burden of its military presence was lightened progressively over time.

Conclusions

Occupations are generally costly in economic terms (Vishwasrao et al. 2019). The cost they impose may be a factor in fomenting rebelliousness. In this paper, we have argued that the economic consequences of the military occupation of Boston was an important ingredient in the build-up to the revolution. In Quebec City, where the military occupation was scaled down, the same phenomenon was observed in reverse. Because both cities were militarily occupied at the same time, we argue that they can be instructive as to the amplitude and relevance of the economic shock generated by the occupation. In turn, this can be tied to the rebellious attitudes and behaviors of the population.

In Boston, British occupation increased the city's population by 12.5 percent. Because many of these soldiers complemented their pay by working for civilian employers, there was an increase in the city's labor supply. Wages in Boston fell thanks to this influx of soldiers. More importantly, the manner in which these soldiers were quartered limited the usual increase in demand that came with a population increase. As a result, colonial workers in Boston found a

rallying point around which to focus their anger and fears. They viewed the soldiers as a threat to their jobs, to their homes, and to their ability to feed their families, and workers consistently clashed with soldiers to show their discontent. Though only once did the clashes result in significant bloodletting, wage laborers utilized fist fights, shouting matches, simple insubordination, and other minor indiscretions to flaunt their hatred of British soldiers, whom they were much more similar to in social status than colonial workers would ever admit. The negative effects of occupation may have much to do with the willingness of the average wage laborer to join the so-called patriots. At the very least, it helped the latter convince the former to aid in the cause.

In Quebec City, by contrast, the occupation forces represented a much larger share of the local population (50 percent of the city and 18 percent of the region). Yet, as soldiers slowly left the city and surrounding countryside, wages rose. This, in combination with a lighter burden associated with the quartering of troops, assuaged the French-Canadians. This was sufficient to ensure that, when provided the chance in 1775 upon the American invasion of Quebec, the French-Canadians adopted an attitude of benevolent neutrality towards the British. These economic considerations regarding the refusal of the French-Canadians to rebel against the British complemented the other political decisions meant to appease the newly conquered population.

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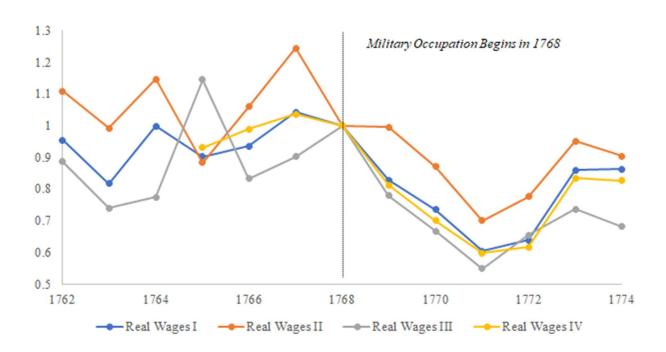
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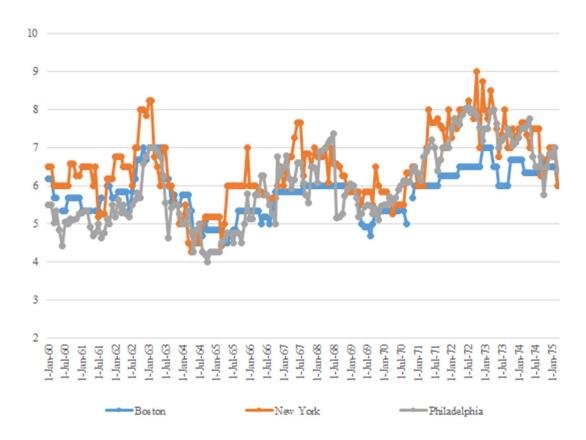
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Figure 1: Real Wages of Boston Seamen, 1762–1774 (indexed to 1768=1)



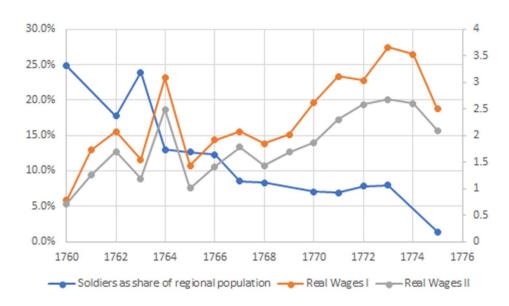
Sources: Wages: Nash (1979: 393–94, 414); deflator for real wages I: Crandall (1934); deflator for real wages II: Rothenberg (1979) - her design with weights for 1800 were used; deflator for real wages III: Allen et al. (2012); deflator for real wages IV; Crandall (1934) for food, Warden (1976: 591) for rents, Smith (1990: 101) for clothing) and Boston Overseers of the Poor Accounts (1769-1774) for firewood. The weights were drawn from Smith (1990: 107). All our data is available here for download: https://tinyurl.com/wh71f5t

Figure 2: Monthly Wheat Prices (Shillings/Bushel) in Boston, New York and Philadelphia, 1760-1775



Sources: Cole (1938). All our data is available here for download: https://tinyurl.com/wh7lf5t

Figure 3: Number of British Soldiers Relative to Regional Population of Quebec City and Real Wages



Sources: soldiers: see table 1; wage rates, nominal and deflator for real wages I: Geloso (2019a). Deflator for real wages II: Geloso (2019b). Similar trends in real wages were obtained using Paquet and Wallot (1998). All our data is available here for download: https://tinyurl.com/wh7lf5t

Table 1: Number of British Soldiers in Quebec City and Regional Population

Year	Soldiers	Regional Population
1760	3100.00	12502
1761		11273
1762	1800.00	10166
1763	2500.00	10452
1764	1400.00	10747
1765	1400.00	11050
1766	1400.00	11362
1767	1000.00	11682
1768	1000.00	12012
1769		12350
1770	900.00	12699
1771	900.00	13057
1772	1050.00	13425
1773	1100.00	13804
1774		14193
1775	200.00	14593

Sources: Soldiers: Vallières et al. (2008: 408); The regional population was estimated based on Hare, Lafrance and Ruddell (1989: 324) who provided estimates of the Quebec City population

for 1755, 1762 and 1784. We interpolated those numbers based on geometric growth rates. To arrive at the regional population, we used the regional population enumerated at the census of 1784 (Vallières et al. 2008: 569) and took its ratio to the population of the city. That ratio was applied to the interpolated city population to create the regional population. This is only an estimate that we use to arrive at an approximate level of troops relative to population in the regional labor market. All our data is available here for download: https://tinyurl.com/wh7lf5t