MANAGING FOOD CRISSES: URBAN RELIEF STOCKS IN PRE-INDUSTRIAL HOLLAND*

I
INTRODUCTION

In the towns and cities of pre-industrial Europe, food crises — periods of food shortages and high food prices — constituted risks not only to the life and health of the less affluent part of the urban population, but also to the social order cherished by urban elites: scarcity easily gave rise to disorder and rioting. One of the ways in which urban authorities could attempt to reduce these risks was the establishment of public grain stocks. Grain was purchased (often at elevated prices and sometimes at considerable distances from home), transported, stored and subsequently distributed among people of little means, either for free or against sub-market prices. The effect was the reinforcement of the ‘food entitlements’ of vulnerable groups.1

Urban relief stocks constituted one element in a wider range of dearth policies which also included various measures aimed at market regulation.2 The establishment of a relief stock, however, differed from these regulatory instruments in that it required substantial investments and organizational efforts. Magistrates, then, had to weigh costs and benefits. This raises the question:

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1 Amartya Sen, Poverty and Famines: An Essay on Entitlements and Deprivation (Oxford, 1981), 1, 45–51.

2 Karl Gunnar Persson, Grain Markets in Europe, 1500–1900: Integration and Deregulation (Cambridge Studies in Modern Economic History, vii, Cambridge, 1999), 72–84; Jessica Dijkman, ‘Coping with Scarcity: A Comparison of Dearth Policies in Three Regions in Northwestern Europe in the Fifteenth and Sixteenth Centuries’, Countries Journal of Social and Economic History, xiv, 3 (2017), 22–9.
what factors affected their decisions? Obviously, the establishment of relief stocks was often a direct reaction to a severe crisis, but stock policies — the decisions by urban authorities to buy grain (and how much) or to refrain from doing so, and the choices they made regarding distribution — were also affected by two interacting long-term developments: commercialization and state formation. This study investigates how these long-run processes affected stock policies in Holland (the western part of the present-day Netherlands) between the sixteenth and the nineteenth centuries.

Commercialization, taking off in the late Middle Ages, has been credited with both positive and negative effects on food supply and food entitlements. On the one hand, at least theoretically, markets could mitigate food crises by evening out local shortages and surpluses, although the ability of pre-industrial markets to do so in practice is an issue of scholarly debate. On the other, commercialization also implied growing market dependence, social polarization and an increased vulnerability to price swings, which in turn gave rise to social unrest. In his seminal article on the ‘moral economy’ in England, Edward Thompson focused on the eighteenth-century transition to a market-dominated economy, which, in his view, clashed with expectations founded in paternalist Elizabethan market regulation. Later research, however, has shown that until the very end of the eighteenth century there was no sharp dichotomy between the moral economy and the market. Market mechanisms, including the fluctuation of prices in response to changes in demand or supply, were generally accepted; regulation was ubiquitous, but it was mainly intended to prevent profiteering by greedy traders at the expense of consumers.

From the perspective of commercialization and its effects on food entitlements, Holland is an interesting case. The advance

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3 For two contrasting opinions, see Cormac Ó Gráda and Jean-Michel Chevet, ‘Famine and Market in Ancien Régime France’, Journal of Economic History, lxxii (2002); and Philip Slavin, ‘Market Failure during the Great Famine in England and Wales (1315–1317)’, Past and Present, no. 222 (Feb. 2014).

4 E. P. Thompson, ‘The Moral Economy of the English Crowd in the Eighteenth Century’, Past and Present, no. 50 (Feb. 1971).

5 James Davis, Medieval Market Morality: Life, Law and Ethics in the English Marketplace, 1200–1500 (Cambridge, 2011), 410–49; John Bohstedt, The Politics of Provisions: Food Riots, Moral Economy and Market Transition in England, c. 1550–1850 (Farnham, 2010), 71–3.
of markets had begun early here: by the end of the Middle Ages a highly urbanized and market-oriented society had come into being. In the early modern era, Holland developed into the commercial leader of the world. One of the pillars of its rise to prominence was the central position of Amsterdam in the Baltic grain trade. Merchants certainly accumulated massive wealth and the urban treasury benefited greatly, but the effects also trickled down the social scale. Wage levels had declined in the first half of the sixteenth century, reaching a low in the third quarter of that century, but rose rapidly after the first years of the Dutch Revolt. In the first half of the seventeenth century they were among the highest in Europe. Food riots were, at least until the end of the seventeenth century, rare occurrences. Although by that time economic stagnation had set in, it was not until the middle of the eighteenth century that real wages began to decline and poverty increased.

At first sight this suggests that in Holland commercialization was a success story that benefited the entitlements of the less affluent part of society. However, recent research has shown that Holland’s central position in the grain trade did not mean that grain prices were low and stable, as was previously believed. Nor, for that matter, were bread prices. From the late sixteenth century onward, towns in the Dutch Republic made use of a sophisticated system of bread price regulation, but although this system largely prevented profiteering by bakers, its aim was not to shelter consumers from the fluctuations of grain prices. In fact, the system facilitated the incorporation of the milling tax — soon to become one of the Republic’s main sources of tax

6 Bas J. P. van Bavel and Jan Luiten van Zanden, ‘The Jump-Start of the Holland Economy during the Late Medieval Crisis, c.1350–c.1500’, Economic History Review, lvii, 3 (2004).
7 Milja van Tielhof, De Hollandse graanhandel, 1470–1570: Koren op de Amsterdamse molen (The Hague, 1995), esp. 129–68.
8 Jan Luiten van Zanden, The Long Road to the Industrial Revolution: The European Economy in a Global Perspective, 1000–1800 (Leiden, 2009), 97.
9 Rudolf Dekker, Holland in beroering: oproeren in de 17de en 18de eeuw (Baarn, 1982), 23–5.
10 Jan de Vries and Ad van der Woude, The First Modern Economy: Success, Failure and Perseverance of the Dutch Economy, 1500–1815 (Cambridge, 1997), 627–32.
11 Daniel R. Curtis and Jessica Dijkman, ‘The Escape from Famine in the Northern Netherlands: A Reconsideration Using the 1690s Harvest Failures and Broader Northwest European Perspective’, The Seventeenth Century, xxxiv, 2 (2019).
revenue — into the bread price, thus substantially raising the cost of this staple food. 12 During food crises other measures were therefore needed to protect the food entitlements of the poor, all of which required interventions in the market. 13 This study of urban stock policies in Holland demonstrates on the one hand the prominence of the market, but on the other hand further qualifies the contrast with the moral economy by showing that these policies — in themselves attempts to restrain the vagaries of the market — increasingly relied on market mechanisms for the acquisition and distribution of relief.

The connection between state formation and food supply has been highlighted by Charles Tilly, who argued that after 1500 the governments of emerging nation states were increasingly involved in matters of food supply because of their responsibility for public order and the provisioning of armies, government officials and market-dependent capital cities. 14 While Tilly envisaged pre-modern state formation as the rise of centrally organized, powerful polities, current views, articulated most clearly for England, emphasize two other elements. The first is the developing notion of reciprocal obligations between authorities and subjects. Good governance complemented control with an obligation to defend the welfare of the people, which came to include protection from starvation. 15 The other element is the diffuse character of early modern state power, which, the argument goes, did not originate from a single source but resided in networks that included local office-holders. In particular, the development of national policies to combat dearth, poverty and disease in Tudor and Stuart England owed much to local initiatives, while the enforcement of these policies continued to rely on local actions. 16

Divided authority and reciprocity were also salient features of society in pre-industrial Holland. Even in the sixteenth century,

12 Jan de Vries, The Price of Bread: Regulating the Market in the Dutch Republic (Cambridge, 2019), 49–65.
13 Ibid., 251–72.
14 Charles Tilly, ‘Food Supply and Public Order in Modern Europe’, in Charles Tilly (ed.), The Formation of National States in Western Europe (Studies in Political Development, viii, Princeton, 1975), 392–6.
15 Bohstedt, Politics of Provisions, 58–65.
16 Michael J. Braddick, State Formation in Early Modern England, c.1550–1700 (Cambridge, 2000), 103–35; Steve Hindle, The State and Social Change in Early Modern England, c.1550–1640 (Basingstoke, 2000), 146–75.
when Holland was under Habsburg rule, its towns enjoyed a substantial degree of autonomy. In the era of the Dutch Republic, they virtually ruled the country, holding all seats but one in the provincial Estates, which in turn dominated national politics. While within the towns authority formally lay with an urban government dominated by a commercial elite, in practice magistrates were receptive to pressure from citizens who were organized in collectives such as guilds and militias, defending middle-class interests.\textsuperscript{17} Even the system of bread price regulation, of crucial importance for both bread price levels and the state’s fiscal health, was not centrally organized but relied on the actions of local officials and local authorities.\textsuperscript{18}

Combating poverty and dearth was entirely a local responsibility. In the late sixteenth and early seventeenth centuries, medieval poor relief experienced a drastic transformation: in all towns, co-ordinated systems of poor relief supervised by the urban authorities emerged. Funded largely by revenues from landed property, capital assets and charitable donations, but stable and reliable nonetheless, poor relief systems provided a safety net for those who could not cope by themselves.\textsuperscript{19} Fixed budgets, however, restricted the capacity of these systems to respond efficiently to demand peaks during subsistence crises.\textsuperscript{20}

Around or shortly after 1800, social spending as a share of GDP declined in many parts of Europe. The new kingdom of the Netherlands was no exception.\textsuperscript{21} Part of the explanation lies

\textsuperscript{17} Maarten Prak, 	extit{Citizens without Nations: Urban Citizenship in Europe and the World, c.1000–1789} (Cambridge, 2018), 191–5.
\textsuperscript{18} De Vries, 	extit{Price of Bread}, 272–5.
\textsuperscript{19} Elise van Nederveen Meerkerk and Daniëlle Teeuwen, ‘The Stability of Voluntarism: Financing Social Care in Early Modern Dutch Towns Compared with the English Poor Law, c.1600–1800’, 	extit{European Review of Economic History}, xviii, 1 (2014); Maarten Prak, ‘The Carrot and the Stick: Social Control and Poor Relief in the Dutch Republic, Sixteenth to Eighteenth Centuries’, in Heinz Schilling and Lars Behrisch (eds.), 	extit{Institutionen, Instrumente und Akteure sozialer Kontrolle und Disziplinierung im frühneuzeitlichen Europa} (Frankfurt am Main, 1999).
\textsuperscript{20} Jessica Dijkman, ‘Feeding the Hungry: Poor Relief and Famine in Northwestern Europe, 1500–1700’, in Jessica Dijkman and Bas van Leeuwen (eds.), 	extit{An Economic History of Famine Resilience} (London, 2020).
\textsuperscript{21} Bas van Bavel and Auke Rijpma, ‘How Important Were Formalized Charity and Social Spending before the Rise of the Welfare State? A Long-Run Analysis of Selected Western European Cases, 1400–1850’, 	extit{Economic History Review}, lxix, 1 (2016); Peter H. Lindert, 	extit{Growing Public: Social Spending and Economic Growth Since the Eighteenth Century}, 2 vols. (Cambridge, 2004), i, The Story, 45–8.
in the acute financial problems experienced by poor relief organizations and urban governments: economic decline followed by the hardship of the years of revolution and warfare had depleted their resources.\(^{22}\) However, the fact that recovery did not take place before the late nineteenth century indicates the importance of long-term developments. As elsewhere in Europe, the emergence of Enlightenment and liberalist ideologies prioritized the availability of a submissive labour force over notions of reciprocity and caring for the poor.\(^{23}\) Bas van Bavel and Auke Rijpma have argued that another factor, related to political change, also contributed: local relief systems were weakened while a centralized system had not yet developed.\(^{24}\) This study supports this finding by showing that investments in public grain stocks in Holland contracted in the early nineteenth century. Yet it also demonstrates that in keeping with the strong tradition of decentralized rule, stock policies continued to be shaped by local interests, capacities and institutions throughout the period under examination, even after the transition in the early nineteenth century to a centralized monarchy.

The investigation presented here combines a long-term perspective with a comparison between towns, based on detailed archival research. In Holland the practice of establishing stocks during food crises was long-lasting. The first references to public grain purchases, made by the authorities in Rotterdam and Gouda, date from the famine of 1437–9, which struck large parts of Europe.\(^{25}\) We will see that towns in Holland continued to make purchases of grain (and later also of potatoes) for relief

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\(^{22}\) Simon Schama, ‘Municipal Government and the Burden of the Poor in South Holland during the Napoleonic Wars’, in A. C. Duke and C. A. Tamse (eds.), War and Society: Papers Delivered to the Sixth Anglo-Dutch Historical Conference (Britain and the Netherlands, vi, The Hague, 1977).

\(^{23}\) Ole Peter Grell and Andrew Cunningham, ‘Health Care and Poor Relief in 18th and 19th Century Northern Europe’, in Ole Peter Grell, Andrew Cunningham and Robert Jütte (eds.), Health Care and Poor Relief in 18th and 19th Century Northern Europe (Burlington, Vt., 2002); Mitchell Dean, The Constitution of Poverty; Toward a Genealogy of Liberal Governance (London, 1991), 156–72.

\(^{24}\) Van Bavel and Rijpma, ‘How Important Were Formalized Charity and Social Spending before the Rise of the Welfare State?’, 181–2.

\(^{25}\) Jessica Dijkman, Shaping Medieval Markets: The Organisation of Commodity Markets in Holland, c.1200 –c.1450 (Global Economic History Series, viii, Leiden, 2011), 298. For the European context, see Christian Jörg, Teure, Hunger, grosses Sterben: Hungersnöte und Versorgungskrisen in den Städten des Reiches während des 15. Jahrhunderts (Monographien zur Geschichte des Mittelalters, iv, Stuttgart, 2006).
purposes during periods of severe dearth throughout the pre-
industrial era. There were, however, significant differences in
volumes purchased and distributed and also in methods of
acquisition and distribution, both over time and between
towns. These differences will be explained here by investigating
the impact of four concrete factors related to the long-term
developments of commercialization and state formation:
Holland’s central position in the European grain trade; the
development of living standards at the bottom of the social
scale; the functioning of poor relief; and the decentralized
governance system.

In order to be able to assess the influence of these four factors
on stock policies, three episodes of serious dearth are discussed
that together span the early modern era but that took place in
very different economic and political contexts: the crises of
1556–7, 1698–1700, and 1816–17. The first of the three
episodes was probably accompanied by significant hunger-
induced mortality; the second and third seem to have had a
relatively modest impact on mortality rates.26 For the same
reason, three towns with different characteristics are examined:
Amsterdam, Holland’s major trade port and, at least until the
late seventeenth century, the centre of the international
European grain trade; Leiden, an industrial town with a
substantial textile industry; and Delft, a smaller regional market
centre with a mixed economy. Each of the three crises is
discussed in a separate section. Each section begins with a
description of the nature and severity of the crisis under
examination and then discusses first the establishment of relief
stocks and subsequently the use of these stocks to distribute aid.
Conclusions follow.

II
THE CRISIS OF 1556–7: COPING WITH DEARTH AND POVERTY

In Holland the crisis of the years 1556 and 1557 was, to all
appearances, the most serious food crisis of the sixteenth century.
The timing could hardly have been worse. Living standards had
been declining for several decades; as a result, many people were

26 Daniel Curtis et al., ‘Low Countries’, in Guido Alfani and Cormac Ó Gráda
(eds.), *Famine in European History* (Cambridge, 2017), 127–9; Curtis and
Dijkman, ‘Escape from Famine in the Northern Netherlands’.
living dangerously close to the edge. In addition, as a consequence of Habsburg expansionist policies, the region had been engaged in a series of wars. Early in 1556, the Estates of Holland, pressured by the king, had consented to an extra subsidy of three hundred thousand guilders to cover war expenses, the first half of which was to be paid in May 1557.27 Many towns in Holland were therefore already facing financial problems when, in the autumn of 1556, the prices of rye, the main bread grain, surged.

By the middle of the sixteenth century, Amsterdam’s pivotal position in the Baltic grain trade was well established. This in itself, however, turned out to be insufficient to ward off problems. In much of north-western Europe, the harvest of 1556 had been meagre owing to an extremely dry summer. The eastern Baltic was also affected: rye prices in Riga more than doubled.28 In Holland, panic struck in the autumn, when the shipping season came to an end: stocks looked insufficient to feed the population until the arrival of new supplies the following spring. In the first months of 1557, fears turned into reality. Towns and villages all over Holland reported shortages. The only place where reserves were still to be found was Amsterdam. Although the urban authorities imposed restrictions on the movement of grain out of town, stocks dwindled rapidly. Only after the first grain shipments from Danzig arrived in Amsterdam in early June did the situation gradually return to normal. In the autumn of 1557 the crisis was over.29

The severity of the crisis deserves a closer look. Based on the fragmentary available data, Figure 1 shows the movement of rye prices in Amsterdam during the crisis and compares them with prices in Cologne and Paris.30 Prices in Amsterdam at the height of the crisis more than doubled, whereas in the other two cities

27 Astrid Friis, ‘The Two Crises in the Netherlands in 1557’, Scandinavian Economic History Review, i, 2 (1953), 196–9.
28 Johannes Renner, Livonian History, 1556–1561, trans. Jerry C. Smith, William Urban and J. Ward Jones (Lewiston, NY, 1997), 19. I am grateful to Marten Seppel for pointing out this source to me.
29 Friis, ‘Two Crises in the Netherlands’, 209.
30 Ibid., 218–19; Erfgoed Leiden, Archief van het Heilige Geest- of arme Wees- en Kinderhuis, 0519–1599 (prices in April or May 1556 and Oct. 1556) and 1600 (prices in Nov. or Dec. 1557); Dietrich Ebeling and Franz Irsigler (eds.), Getreideumsatz, Getreide- und Brotpreise in Köln 1368–1797, 2 vols. (Mitteilungen aus dem Stadarchiv von Köln, lxv, Cologne, 1976), i, 452; Micheline Baulant and Jean Meuvret, Prix des céréales extraits de la mercuriale de Paris (1520–1698), 2 vols. (Monnaie, prix, conjuncture, vi, Paris, 1960–2), i, 46–8.
they did not display the same high peaks. More than in Cologne or Paris, Amsterdam prices were affected by price movements in the Baltic region: in the sixteenth century a certain level of market integration between the Low Countries and the Baltic region had been reached, even though it was as yet incomplete.31

Some chance references in the sources offer insight into the suffering caused by the crisis. In March 1557 the poor in Delft were reported to be eating the refuse of the local breweries, normally used to feed pigs.32 Two months later thousands of hungry men and women flocked to the gate of the nearby abbey of Leeuwenhorst to partake in the distribution of bread at Pentecost.33 Urban governments were spurred into action. Their responses included the establishment of public grain stocks and the distribution of relief. Since for Delft information is scarce, the analysis of these reactions is largely based on events in Leiden and Amsterdam.

31 Richard Unger, ‘Integration of Baltic and Low Countries Grain Markets, 1400–1800’, in W. J. Wieringa et al. (eds.), The Interactions of Amsterdam and Antwerp with the Baltic Region, 1400–1800 (Leiden, 1983), 8–9.
32 W. S. Unger, De levensmiddelenvoorziening der Hollandsche steden in de middel-eeuwen (Amsterdam, 1916), 73.
33 Maria Hüffer, De adellijke vrouwenabdij van Rijnsburg, 1133–1574 (Nijmegen, 1923), 236.
Public grain stocks

In November 1556, when it became clear that shortages were bound to arise, a delegate of the Court of Holland, the main advisory body of the Habsburg government and the highest court of law in the region, visited the towns of Holland to ask them to take stock of the grain reserves present. This was a novel development, for although the towns had probably initiated grain surveys individually before this, no attempt had been made at co-ordinated action. For northern Holland, the report of the results has been preserved. In some towns the situation was alarming: in Haarlem, for example, only 180 lasts were found, which according to the urban authorities were sufficient for just one month. Judging from the records of the Amsterdam council, central government twice repeated its request to make an inventory, in January and in April 1557. Amsterdam complied on both occasions.

The next step was the purchase of grain by the urban authorities, either from local traders or from grain merchants in Amsterdam. Again, this was not unprecedented: urban grain purchases were in themselves not new. Now, however, the central authorities chose not to rely on urban initiative alone but instead pursued a policy of actively ordering towns to buy grain. In February 1557, for instance, the burgomasters of Leiden were visited by a representative from the Court of Holland for this purpose. Yet Leiden could hardly be accused of negligence, as the town had already made substantial grain purchases. Around 16 lasts of rye had been bought in the early autumn of 1556, after a cry for help from one of the local poor relief organizations to the council. Another 40 lasts were purchased in November, this time on the initiative of the burgomasters. After the Court of Holland first requested the towns to buy grain in December 1556, Leiden bought at least another 30 lasts. Finally, when in April 1557 there was still ‘no

34 Remi van Schaik, ‘Prijs- en levensmiddelenpolitiek in de noordelijke Nederlanden van de 14e tot de 17e eeuw: bronnen en problemen’, Tijdschrift voor Geschiedenis, xci (1978), 223.
35 Dirck Graswinckel, Placcaetboeck op ’t stuck van de lijftocht (Leiden, 1651), 46–53. A last equals about 3,010 litres.
36 P. H. J. van der Laan and R. Bessem (eds.), Resoluties van de vroedschap van Amsterdam, 1551–1565 (Hilversum, 2008), 122–3, 132.
37 Erfgoed Leiden, Archief der Secretarie van de Stad Leiden I (hereafter EL SA-I), 0501-385, fos. 58v–59v.
hope of grain from the east coming in’, the council decided to buy another 20 lasts, which, it was hoped, would suffice until the end of May. Total purchases amounted to at least 106 lasts or 29 litres per capita. Financing these purchases had not been easy. The urban authorities had started by ordering collections to be held in the town and taking out private loans in the names of the burgomasters, reallocating the revenues of the excises on beer and wine to cover the costs. When this turned out to be insufficient, well-to-do burghers were pressured into making donations, bonds were sold, and some of the more affluent religious poor-relief institutions were requested to contribute. Grain purchases in Amsterdam were much more substantial than in Leiden. Amsterdam started buying grain in November 1556 and continued to make regular purchases up until July 1557. In total, the city bought 506 lasts of rye, or around 51 litres per capita. Funding was apparently no problem: the rye was paid for in cash by the urban treasury. In view of the fact that both towns had made the first purchases early on in the crisis and continued to buy as the need arose, it is doubtful that the admonitions of the Court of Holland were really necessary.

Notably, urban grain purchases were made on the open market and against market prices. This was made possible by two factors. The first was the presence of substantial commercial reserves in Amsterdam; in this sense the international grain trade clearly mattered. The second factor was the fact that while the Amsterdam authorities restricted the movement of grain out of town, they usually allowed the towns and villages in Holland to buy limited amounts of grain in the city — although they were not as accommodating towards towns in other provinces. It has been suggested that the Amsterdam authorities themselves did not pay the full price, buying instead at an official, relatively low

38 Based on a population of 11,000: Dirk Jaap Noordam, ‘Leiden in Last: De financiële positie van de Leidenaren aan het einde van de Middeleeuwen’, Jaarboek der sociale en economische geschiedenis van Leiden en omstreken, xiii (2001), 18.
39 EL SA-I, 0501-385, fos. 48r, 55r, 57r, 62r, 65r (quote: fo. 62r); Christina Ligtenberg, De armezorg te Leiden tot het einde van de XVIe eeuw (The Hague, 1908), 226, 297–8.
40 Friis, ‘Two Crises in the Netherlands’, 218–19. Per capita figure based on a population of c.30,000: Piet Lourens and Jan Lucassen, Inwonertallen van Nederlandse steden, c.1300–1800 (Amsterdam, 1997), 56.
41 James D. Tracy, ‘Habsburg Grain Policy and Amsterdam Politics: The Career of Sheriff Willem Dirkszoon Baerdes, 1542–1566’, The Sixteenth Century Journal, xiv, 3 (1983), 311–12; Friis, ‘Two Crises in the Netherlands’, 205–9.
However, although the fixing of grain prices by the central government had been discussed, the Amsterdam council had firmly spoken out against it on the grounds that fixed prices ‘would cause imports to come to a halt’.\footnote{Van der Laan and Bessem, *Resoluties van de vroedschap van Amsterdam*, 120.} Admittedly, Leiden, when consulted on the issue, was more hesitant;\footnote{EL SA-I, 0501-385, fos. 55r–56r.} but since there is no evidence that an official price was actually introduced, it is safe to assume that regular market prices were paid.

**Distribution of relief**

A substantial part of the population, including many people who in normal years were able to fend for themselves, was at risk of going hungry when prices rose. To make sure their needs were addressed, public grain stocks could be employed in two ways. The first made use of the existing arrangements for outdoor poor relief (relief to people living at home), which was provided by multiple civic and religious institutions; at this point in time, co-ordination between them was largely absent. In times of dearth, pressure on the institutions was bound to rise. Thus, it was vital to ensure that they did not run out of grain. This sometimes required a joint effort by urban authorities and relief institutions, as the case of Leiden shows. In this town, with its large population of poor industrial workers, the main providers of outdoor relief were the civic overseers of the poor in the three parishes. In the late summer of 1556, the overseers of St. Peter’s, the largest of the three parishes, informed the Leiden council that in view of the high prices and the fact that they were already in debt, they could not afford to buy grain for the poor. This more or less forced the urban government to make the first of the series of grain purchases outlined earlier.

The second way to provide emergency relief involved direct action by the urban authorities themselves: they could offer bread at affordable prices to a larger group than the regular dependents of the poor relief organizations. Leiden probably used the greater part of the grain stocks purchased during the crisis for this purpose. In November 1556, the Leiden council decided to sell rye bread baked from urban grain at reduced prices to ‘the poor

\[\text{Friis, ‘Two Crises in the Netherlands’, 202; Van Tielhof, *Hollandse graanhandel*, 144, 217.}\]
\[\text{Van der Laan and Bessem, *Resoluties van de vroedschap van Amsterdam*, 120.}\]
\[\text{EL SA-I, 0501-385, fos. 55r–56r.}\]
burghers and craftsmen of this town.45 In Amsterdam, all grain purchased by the council was used to subsidize bread prices. It was baked into bread by twenty-four bakers, three in each of the eight quarters of the town, who were paid for their services. The bakers then sold the bread at reduced prices and transferred the revenues to the urban treasury.46 The headmen of the quarters were to see to it that the subsidized bread was sold only to registered low-income households.47 Table 1 shows that although in Leiden poverty was almost certainly greater than in Amsterdam, per capita expenditure was higher in the latter town. This can hardly have been related to differences in demand: Amsterdam could simply afford to be more generous because of the state of its local finances.

Three conclusions can be drawn. First, despite attempts at state intervention, the establishment of public stocks and the provision of relief to the needy relied largely on local initiative and owed but little to the actions of central government. Second, the provisioning of the poor was the joint responsibility of poor relief organizations and urban authorities, although at least in Leiden this co-operation involved some pushing and pulling on both sides. Finally, market transactions played a substantial part. The international grain trade did not keep grain prices stable, but the presence of substantial grain reserves did facilitate the continuation of regular market exchange. Markets were used to build up public grain stocks; and even when it came to the

|                | Leiden | Amsterdam |
|----------------|--------|-----------|
| Net expenditure| c.2,900 guilders | 9,716 guilders |
| Per capita expenditure | 0.26 guilders | 0.32 guilders |

* Sources: Leiden: EL SA-I (see n. 37 above), 0501-385, fo. 67v. Amsterdam: SAA ABS (see n. 46 below), 5014-26, fos. 41r–42v.

45 EL SA-I, 0501-385, fo. 55v.
46 Stadsarchief Amsterdam, Archief van de Burgemeesters, Stadsrekeningen (hereafter SAA ABS), 5014-26, fos. 41r–42v.
47 Van der Laan and Bessem, *Resoluties van de vroedschap van Amsterdam*, 121, 131–2.
distribution of food relief, markets were supplemented (through subsidies) rather than bypassed.

III
THE CRISIS OF 1698–1700: SCARCITY IN THE MIDST OF ABUNDANCE

In all of Europe the 1690s were marked by cold and wet summers, giving rise to harvest failure and dearth. Southern Europe and especially France were mainly affected in the early years of the decade, whereas the north, including the Baltic region, suffered most in the second half. In the Dutch Republic, panic struck in the autumn of 1698 when it became known that Danzig had closed its port for grain exports. What followed looks in many respects like a repetition of the events of 140 years earlier: gradually shortages made themselves felt in many towns and villages, while Amsterdam, beset with requests for grain, saw its reserves diminish with alarming speed. The harvest of 1699 brought only partial relief; it was not until the summer of 1700 that the crisis was truly over.

Price analysis corroborates the severity of the crisis. As in the 1550s, rye prices in Amsterdam more than doubled. Figure 2 plots rye prices at four points in each year between 1696 and 1700 in Amsterdam and compares them with prices in Cologne and Amiens (Picardy). The graph demonstrates that in the late 1690s, prices in the Dutch Republic compared unfavourably with those in the German Rhineland and northern France; it also brings out the long duration of the crisis.

In contrast to the situation in 1556–7, at the end of the seventeenth century Holland was relatively prosperous. While the economy was no longer growing and in many small towns

48 Marcel Lachiver, Les années de misère: La famine au temps du Grand Roi (Paris, 1991), esp. ch. 5; Karen J. Cullen, Famine in Scotland: The ‘Ill Years’ of the 1690s (Edinburgh, 2010), 24–5, 42–4; Mirkka Lappalainen, ‘Death and Disease during the Great Finnish Famine 1695–1697’, Scandinavian Journal of History, xxxix, 4 (2014), 425–47.

49 J. G. van Dillen, ‘Dreigende hongersnood in de Republiek in de laatste jaren der zeventiende eeuw’, in J. G. van Dillen, Mensen en achtergronden: studies uitgegeven ter gelegenheid van de tachtigste jaardag van de schrijver (Groningen, 1964 [1917]), esp. 195, 208–10, 212, 218–19, 222, 225.

50 N. W. Posthumus, Nederlandsche prijsgeschiedenis, 2 vols. (Leiden 1943), i, 575; Ebeling and Irsigler (eds.), Getreideumsatz, Getreide- und Brotpreise in Köln, i, 612, 614; Archives départementales de la Somme, Archive communales d’Amiens antérieures à 1790, Subsistances, HH22.
decline had set in, real wages for unskilled labour were still high and Amsterdam was still a major grain trade centre. Nonetheless the crisis brought hardship. In 1701 Gerrit van Spaan, baker and self-taught historian in Rotterdam, published a volume on famines and other disasters in the history of mankind which was inspired by the events he had witnessed in the previous years. He stated that he had seen people pick up the peels of turnips from the streets and that the ships carrying brewing waste had repeatedly been pillaged at night.51 Distress is also suggested by a case brought before the Leiden court in February 1699. Four young men and women, all textile workers, had stolen some sacks of barley, flour and rice from various shopkeepers in the town and divided the proceeds among them. Sentences in this particular case were remarkably mild: for three of the four individuals no more than one or two weeks’ imprisonment.52 Did the authorities perhaps accept that the offenders had acted

51 Gerrit van Spaan, Gedenkwaardige geschiedenissen, volgens den rang der jaren, van het begin des werelds tot het einde van ’t jaar zeventien-honderd (Rotterdam, 1701), 3 (introduction).
52 Erfgoed Leiden, Schepenbank (Oud Rechterlijk Archief) van Leiden, 0508-3/26, fo. 48r–51r.
out of need, or did they even consider these actions as a form of ‘bargaining by riot’?\textsuperscript{53} Certainly food riots, highly unusual in Holland throughout the seventeenth century, broke out in several towns in the course of the year 1699.\textsuperscript{54} In view of the situation it is hardly surprising that authorities both at the central and at the local level did not trust markets to resolve all problems. Instead, they were triggered into frantic action at the outbreak of the crisis.

\textit{Public grain stocks}

As in the sixteenth century, a first priority was to establish the state of local grain reserves. In the autumn of 1698 both Delft and Leiden initiated grain surveys; there is no sign the central authorities were involved in any way. In Delft the situation was worrying, or at least the burgomasters thought so. In November they concluded that stocks were low and that the town would be in serious trouble if a sudden frost should make the waterways impassable. They ordered the immediate purchase of substantial supplies of wheat and rye in Rotterdam and Amsterdam.\textsuperscript{55} In Leiden the results of the grain survey were not alarming: the town’s hospitals and orphanage had sufficient grain to last the winter, and stocks available with merchants and bakers were, at 1300 lasts, also substantial.\textsuperscript{56} Leiden nevertheless made large grain purchases in the last two months of 1698, and again when in June 1699 reports of shortages elsewhere reached the town. Volumes of grain purchases in Delft and Leiden are shown in \textit{Table 2}. Per capita figures for the crisis of 1556–7 have been added: in Leiden, the only town for which a direct comparison is possible, volumes were of the same order of magnitude.

Timing and circumstances suggest that, at least to some extent, the purchases were made in panic. In the end, in both towns only part of the grain was used for relief purposes. The authorities in Delft resold a substantial proportion of the urban

\textsuperscript{53} The expression is used in relation to food riots by Bohstedt, \textit{Politics of Provisions}, 22 (citing E. J. Hobsbawm, ‘The Machine Breakers’, \textit{Past and Present}, no. 1 (Feb. 1952)).

\textsuperscript{54} Dekker, \textit{Holland in beroering}, 23.

\textsuperscript{55} Archief Delft, Oud Archief Stadsbestuur Delft 1e afdeling, 001-17 vol. 4, fos. 309°–310°.

\textsuperscript{56} Erfgoed Leiden, Archief van de gasthuizen 1311–1873, 0504-221 and 222.
grain as early as May and June 1699, when prices were still very high, to three local grain merchants. In Leiden the urban government was more cautious. Only in January 1700, when prices had fallen significantly, did it decide to sell the remaining stocks to the highest bidder. The reasons for this difference, and the financial consequences for Leiden, will become clear in due course.

For Amsterdam, data are not available on either the volume or the costs of urban grain purchases, due to a novel development. While in the sixteenth century the involvement of central authorities in grain stock policies had been restricted to admonitions to the towns to buy grain, at the end of the seventeenth century the Estates of Holland aspired to a more active role: they decided to purchase grain for the entire province. The execution of this decision was placed in the hands of the urban authorities in Amsterdam, who in turn entrusted a few large merchant houses with the commission: the latter, after all, possessed the commercial knowledge and contacts that were required for this operation. Financial means were advanced by the city. In the financial records of the purchases, it is impossible to distinguish between purchases made for the city and those made for the province of Holland as a whole. In the

| TABLE 2 | PUBLIC GRAIN PURCHASES DURING THE CRISIS OF 1698–1700* |
|---------|-------------|-------------|-------------|-------------|
|          | Delft | Leiden | Amsterdam | Province Holland |
| In lasts | 88 | c.466 | 6,002 | |
| In litres per capita | 13 | c.26 | 20 | |
| In litres per capita in 1556–7 | ≥ 29 | 51 | |

* Sources: Delft: Archief Delft, Oud Archief Stadsbestuur Delft 1e afdeling, 001-17 vol. 4, fos. 309v–310v and 678-91 (year 1698) fos. 133v–135r. Leiden: estimate based on expenditure in urban accounts (Erfgoed Leiden, Archief der Secretarie van de stad Leiden II, 0501a-193 fo. 65r, 0501a-7635 fos. 68r–69r, 170r–175r, 0501a-7636 fos. 64v–65v) and rye prices in Amsterdam in Nov. 1698, Jan. 1699 and June 1699 (Posthumus, *Nederlandsche prijsgeschiedenis*, i, 575); Holland: see n. 60 below.
spring of 1699 some six thousand lasts of rye, wheat and some barley were bought, most of it in the Baltic region and some in the Mediterranean (see Table 2). A significant part of this grain, however, was not used for relief. Almost 40 per cent was resold, at a loss, at the end of 1699 or in 1700. At least until 1703 another part was still in Amsterdam, with the city continuing to pay for its storage.

That the acquisition of sizeable quantities of grain abroad and the transport back home succeeded testifies to the commercial know-how of the Amsterdam merchant community: in this sense, Amsterdam’s position as the centre of the international grain trade paid off. Yet it must also be acknowledged that when it came to actual relief, the effects of the operation were limited. Problems arose around the refunding of the expenses advanced by Amsterdam and the distribution of the grain over the towns of Holland; by the time these issues were resolved, the crisis had abated. Upscaling grain purchases to the provincial level had proved one bridge too far.

**Distribution of relief**

At the end of the seventeenth century, stable systems of regular outdoor poor relief functioned in all towns in Holland, supervised by the urban authorities and run, in varying combinations, by civic institutions and the deacons of the Protestant churches. Although since the late sixteenth century per capita expenditure on poor relief had increased significantly, the inelasticity of budgets based on assets and donations caused problems during food crises. Prices rose, while at the same time the number of people in need of support increased. Institutions, however, had to operate within the financial constraints imposed by their revenues. Exceeding them, by borrowing or selling assets, eroded the institutions’ financial stability in the long run.

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60 Stadsarchief Amsterdam, Archief van de Thesaurien Ordinaris, 5039-874.
61 SAA ABS, 5014-128, accounts over 1701 to 1703 (sections various expenses).
62 Van Dillen, ‘Dreigende hongersnood in de Republiek’, 215, 222, 225.
63 Van Bavel and Rijpma, ‘How Important Were Formalized Charity and Social Spending before the Rise of the Welfare State?’, 170–1.
64 Maarten Prak, ‘Goede buren en verre vrienden: De ontwikkeling van onderstand bij armoede in Den Bosch sedert de middeleeuwen’, in Henk Flap and (cont. on p. 19)
How the Leiden overseers of the poor responded to the crisis of 1698–1700 cannot be established: the records have not survived. In Delft and Amsterdam, however, it is clear that poor relief organizations experienced budgetary constraints. In Delft, outdoor relief was provided by a single institution, the Chamber of Charity, in which the deacons of the Dutch Reformed Church and the civic overseers of the poor co-operated.\textsuperscript{65} The Chamber’s extensive archives allow for an exact assessment of the response of the institution to the crisis. The results are presented in Table 3. Although in 1698 and 1699 the Chamber spent in total about 27,400 guilders more than in 1696 and 1697, the number of households receiving relief barely increased and the volume of bread distribution actually declined.

We saw that in Leiden and Amsterdam during the crisis of 1556–7 regular poor relief had been supplemented by subsidized bread prices for a substantial group of people of lesser means, who normally did not need help but were unable to cope with price peaks. Although real wages at the end of the seventeenth century were much higher than they had been in the middle of the sixteenth, this practice was not abandoned. Both in Leiden and in Amsterdam, in 1698 and 1699 bread prices were subsidized for registered recipients. Table 4 shows how much

\begin{table}[ht]
\centering
\begin{tabular}{|l|l|l|}
\hline
Year & Households receiving relief & Relief expenditure in guilders & Loaves of bread distributed \\
\hline
1696 & 1,117 & 51,506 & 204,649 \\
1697 & 1,126 & 61,362 & 205,791 \\
1698 & 1,107 & 71,318 & 185,978 \\
1699 & 1,167 & 68,946 & 199,130 \\
1700 & 1,106 & 53,247 & 194,796 \\
\hline
\end{tabular}
\caption{Response of the Chamber of Charity (Delft) to the Crisis of 1698–1700*}
\end{table}

* Sources: Archief Delft, Archief van de Kamer van Charitate, 447-288, 447-1143 and 447-1144. I am grateful to Daniëlle Teeuwen for allowing me to use the financial data she collected from the archives of the Chamber of Charity.
the two towns spent for this purpose. Per capita expenditure in Leiden was, corrected for inflation, at the same level as in the late sixteenth century; it was now much higher than in Amsterdam, which can be interpreted as a reflection of greater poverty in Leiden.

Distribution of subsidized bread was not limited to Leiden and Amsterdam. Rotterdam, for instance, engaged in this also, based on similar principles of registration of qualified recipients.66 Other towns chose other options. Haarlem, for example, briefly subsidized all rye bread sold by the local bakers by selling them rye at sub-market prices in exchange for their commitment to limit the bread price.67 Delft, however, seems to have refrained from subsidizing bread prices: there is nothing in the urban accounts or in the resolutions of the burgomasters that hints at it. This probably explains the relatively modest scale of urban grain purchases in Delft and the speed with which urban stocks were resold in the spring of 1699. The reasons for Delft not subsidizing bread prices are not immediately evident. Two explanations are possible. A comparison of Delft with Leiden points to the contribution of differences in living standards related to local economic circumstances. While the economies of

|                  | Leiden (population c.53,000) | Amsterdam (population c.230,000) |
|------------------|------------------------------|---------------------------------|
| Net expenditure  | 41,979 guilders               | 106,283 guilders                |
| Per capita       | 0.79 guilders                 | 0.46 guilders                   |
| Per capita in 1556–7 | 0.79 guilders       | 0.97 guilders                   |

* Sources: Leiden: see Table 2; Amsterdam: SAA ABS (see n. 46 above), 5014-128, accounts over 1698 and 1699 (section various expenses). Population: Dirk Jaap Noordam, ‘Demografische ontwikkelingen’, in R. C. J. van Maanen (ed.), Leiden: De geschiedenis van een Hollandse stad, 4 vols. (Leiden, 2002–4), ii, Leiden 1594–1795, ed. S. Groenveld, 44; Lourens and Lucassen, Inwoneratten, (see n. 40 above), 56. Inflation: Robert Allen, Wage and Price History (CPI Amsterdam, corrected for 1556–7), available at <http://gpih.ucdavis.edu>.

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66 H. C. Hazewinkel, ‘Misgewas en duurte’, Rotterdamsch Jaarboekje, x (1942), 173.
67 De Vries, Price of Bread, 269.
both towns experienced serious problems,\textsuperscript{68} Leiden had a much larger population of poor industrial workers: the people who might revolt if no relief was offered. A comparison between Delft and Amsterdam, however, brings out another possible explanation, one already noted for the mid sixteenth century: in Amsterdam the decision to subsidize bread prices was perhaps more easily made because urban finances were not as stretched as in Delft.

The details of the distribution of subsidized bread in Amsterdam deserve some attention, for they signal an increased reliance on the market. In this city the use of public grain stocks seems to have become a last resort. Bakers were now expected to buy grain at market prices but sell their bread at a sub-market price, dictated by the urban authorities, to registered beneficiaries presenting a token that had been issued to them. The bakers were compensated for the price differential afterwards. Urban grain reserves were used to provide the bakers with grain only in extreme situations. This happened in the spring of 1699, when the city repeatedly sold grain from the urban grain stocks to the bakers. Notably, the grain was sold at prices below market levels but most likely still substantially above the average purchase price.\textsuperscript{69}

In summary, government responses during this late seventeenth-century crisis display many similarities to interventions in the middle of the sixteenth century. The towns were still the main initiators of emergency responses to the crisis; upscaling to the provincial level was only partially successful. The abilities of poor relief organizations to provide additional aid were limited by budgetary constraints. In Amsterdam and Leiden, however, just as in 1556–7, a supplement to regular poor relief was called into being: bread subsidies for a larger group of people than those permanently dependent on support.

\textsuperscript{68} Boudien de Vries et al., ‘Het economisch leven: spectacular succes en diep verval’, in R. C. J. van Maanen (ed.), Leiden: de geschiedenis van een Hollandse stad, 4 vols. (Leiden 2002–4), ii, Leiden 1594–1795, ed. S. Groenveld, 92–3; Thera Wijsenbeek-Olthof, Achter de gevels van Delft: bezit en bestaan van rijk en arm in een periode van achteruitgang (1700–1800) (Hilversum, 1987), 61–2, 72–3.

\textsuperscript{69} Jan Wagenaar, Amsterdam, in zyne opkomst, aanwas, geschiedenis, voorregten, koophandel, gebouwen, kerkenstaat, schoolen, schutterye, gilden en regeeringe, 7 vols. (Amsterdam, 1760–67), vi, 235–6. The selling price was 249 goudgulden or 349 guilders per last; the price paid for the Holland grain purchases mentioned above, including added costs for freight and storage, was on average 277 guilders.
The main change from the mid sixteenth century is probably the greater reliance on market mechanisms. Although the international grain trade still did not result in low and stable prices, knowledge of market conditions and trade contacts facilitated purchases abroad at the peak of the crisis. More importantly perhaps, changes in the system of bread subsidies in Amsterdam indicate that even the distribution of relief relied to a significant extent on the market.

IV
THE CRISIS OF 1816–17: THE INAUSPICIOUS START OF A NEW KINGDOM

The food crisis of 1816–17 was directly related to the disastrous harvest of 1816, the ‘year without a summer’, following the eruption of the Tambora volcano (Indonesia) in April 1815. Although much of Europe was affected by the massive release of volcanic dust into the stratosphere, the severity and nature of weather extremes varied. North-western Europe and especially central Europe were badly hit, but in the Baltic region the effects were minor. A century earlier this would have given Holland a good chance to weather the storm, with only minimal damage. In 1816 this was no longer self-evident. In the eighteenth century, Amsterdam’s position in the international grain trade had gradually declined and so had Holland’s extreme dependency on imported bread grains. Besides Baltic rye, Hollander now also consumed wheat and potatoes from the northern and south-western provinces of the Dutch Republic. However, the Fourth Anglo–Dutch War (1780–84), the French occupation and the years of turmoil that followed, and the Continental System imposed in 1806 had wrought havoc upon the economy. At the end of the Napoleonic wars, real wages were only about two-thirds of what they had been fifty years earlier. Amsterdam’s role in the Baltic grain trade had also suffered a severe blow.

70 J. Luterbacher and C. Pfister, ‘The Year Without a Summer’, Nature Geoscience, viii, 4 (2015), 246; John D. Post, The Last Great Subsistence Crisis in the Western World (Baltimore, 1977), 6–24.
71 De Vries and Van der Woude, First Modern Economy, 225–6.
72 Jan Luiten van Zanden and Arthur van Riel, The Strictures of Inheritance: The Dutch Economy in the Nineteenth Century, trans. Ian Cressie (Princeton 2004), 65–73.
73 Milja van Tielhof, The ‘Mother of All Trades’: The Baltic Grain Trade in Amsterdam from the Late 16th to the Early 19th Century (Leiden, 2002), 296.
An analysis of grain prices by John Post suggests that the United Netherlands did not escape the food crisis of 1816–17 lightly, even though the situation was by no means as bad as in southern Germany or Switzerland. Figure 3 plots monthly rye prices on the Amsterdam Exchange in 1816 and 1817, and prices for Frisian potatoes (the cheapest kind of potatoes). Just as in the 1550s and 1690s, rye prices more than doubled. Potato prices increased even more than that. This combination of price surges of two basic foodstuffs, together with the fact that the crisis followed on many years of hardship, obviously aggravated the situation.

Distress in the towns of the Netherlands is also evident in the letters sent by former sea captain Cornelius de Jong to his relatives at the Cape (South Africa). Already in July 1816 the price of potatoes had increased so much that they were sold by the piece. In January 1817, De Jong’s attention was drawn by the large number of miserable — and rather aggressive — beggars in the streets of The Hague. Looking back on the crisis

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**FIGURE 3**
MONTHLY PRICES OF RYE (LEFT AXIS) AND POTATOES (RIGHT AXIS) IN AMSTERDAM, 1816–17 (IN GRAMS OF SILVER PER LITRE)*

* Source: See n. 75 below.

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74 Post, *Last Great Subsistence Crisis*, 37–8.

75 Rye: Stadsarchief Amsterdam, Archief van de Commissarissen tot den graanhandel, 93–3. Potatoes: Posthumus, *Nederlandsche prijsgeschiedenis*, i, 98.
six months later, he concluded that people with small incomes had suffered severe deprivation. He acknowledged that conditions had not been as bad as in Germany or Switzerland, but he also claimed that Leiden had experienced serious problems. Leiden was indeed among the towns where in the early summer of 1817 food riots threatened. People had gathered near two shops where victuals were sold; the authorities sent guards to prevent looting. The streets of Amsterdam, in the meantime, were flooded by destitute German, Swiss, and French migrants seeking passage to America.

Despite the fact that war had interrupted trade for many years, the Amsterdam grain trade quickly responded to the crisis. Amsterdam merchants purchased very large quantities of grain in the Baltic region and in Russia, where harvests had been almost normal. Merchants still had the capital, the ships and, last but not least, the business relations that allowed them temporarily to help the international staple market revive. Most of the grain, however, would arrive only in the spring of 1817. As a consequence, in the autumn of 1816 the authorities began to worry about the possibility of severe grain shortages.

Notably, political structures had changed drastically. In the newly established United Kingdom of the Netherlands, the bottom-up governance structure of the Dutch Republic had not returned: the Constitution of 1815 was based on the concept of a unitary, centralized state and granted considerable powers to the king. Willem I, convinced of the importance of economic modernization, had moreover a personality well suited to hands-on rule. The former province of Holland was divided into two provinces: North Holland and South Holland. The towns retained their representation in the provincial Estates but this no longer gave them the same direct influence on national politics as before: in the new unitary state the only role of the provincial

76 Carla van Baalen and Dick de Mildt (eds.), ‘Wèest wèl met alle menschen’: De ‘Kaapse brieven’ van Cornelius de Jong van Rodenburgh (Hilversum, 2012), 126, 151–2, 169.
77 G. P. M. Pot, Arm Leiden: Levensstandaard, bedeling en bedeelden, 1750–1854 (Hilversum, 1994), 149.
78 Post, Last Great Subsistence Crisis, 98–102.
79 Van Tielhof, ‘Mother of All Trades’, 297; Van Zanden and Van Riel, Strictures of Inheritance, 125–6.
80 The most recent biography is Jeroen Koch, Koning Willem I: 1772–1843 (Amsterdam, 2013).
Estates at the national level was to elect the members of Parliament. Towns had moreover lost a significant part of their earlier autonomy. Urban budgets, for instance, now required advance authorization by the national government. We will see, however, that the towns nevertheless continued to play an important role during the crisis of 1816–17.

**Public grain purchases**

As in the past, a first concern was the state of grain reserves. Much like the Habsburg authorities had done 260 years earlier, the government of the United Netherlands asked the towns to list the grain stocks of merchants and bakers. Acting upon a request from the governor of the newly formed province of South Holland, the authorities in Delft made such an inventory in December 1816. But the involvement of central government did not end there: the most noticeable feature is the purchase of sizeable quantities of wheat and rye abroad. In the literature a positive assessment of this intervention prevails: according to Post, it lowered market prices of cereals and thus prevented disorder and famine. It will be shown, however, that there are grounds for a more critical interpretation.

The suggestion to buy grain was, it seems, made by the governor of the province of North Holland in late October 1816; he may have been put on this track by the burgomasters of Amsterdam, who had just expressed their concerns about the situation to him. The Minister of Internal Affairs conveyed a watered-down version to the king. He proposed commissioning a competent Amsterdam merchant to buy five to six hundred lasts in the Baltic region or in Germany at the still affordable prices of November or December 1816 and have the grains shipped to the Netherlands in the spring, when surely prices would be higher. In that way the operation would virtually pay for itself. Most of the grains were to be sold on the market in Antwerp and Amsterdam, where, it was hoped, they would have

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81 C. W. van der Pot, ‘Gemeentelijke bestuursorganisatie 1815–1819’, Tijdschrift voor Rechtsgeschiedenis, xii, 2 (1933), 245–6; M. J. A. V. Kocken, Van stads- en plattelandsbestuur naar gemeentebestuur: proeve van een geschiedenis van ontstaan en ontwikkeling van het Nederlandse gemeentebestuur tot en met de Gemeentewet van 1851 (The Hague, 1973), 208–13.

82 Archief Delft, Archief Secretarie gemeente Delft (hereafter AD Secretarie), 2-79 (17 Dec. 1816 no. 3).

83 Post, Last Great Subsistence Crisis, 56–7.
a moderating effect on prices. If necessary, a smaller part could be distributed at sub-market prices, particularly in the south, where problems were greater and support for the new government was tenuous.  

These low-key beginnings resulted in a major operation in which King Willem I was personally involved. On his orders two well-known merchant houses were contacted: Rahusen in Amsterdam and Saportas in Antwerp. A ‘secret’ account at the newly founded Dutch National Bank was opened through which both firms received substantial advances, of 5.4 and 1.9 million guilders respectively, to be used to buy grain for the government. The financial reports which the two firms submitted uncover the impressive scale of the purchases: in total about 31,200 lasts of grain were bought, mostly rye, at an average price of 319 guilders per last (including freight, storage and added costs).

Notably, the idea behind the purchases was not the same as in the sixteenth and seventeenth centuries. In keeping with the emergence of liberalist ideologies turning away from the care of the poor, the main aim was to lower market prices, not to provide targeted relief to low-income households. Whether there really was a mitigating effect on market prices is highly doubtful. Rye prices in Amsterdam did decline somewhat in March and April, but at that time only a small part of the grains had arrived. In May and June, just when imports began to swell, prices rose again. Price evidence from other parts of Europe is equally inconclusive. Prices in the German lands, where public grain purchases were also made, followed the same trajectory as in Amsterdam, but in France a similar course of action failed to produce the same results. In short, price developments were probably primarily affected by factors other than public purchases.

84 H. T. Colenbrander (ed.), Gedenkstukken der algemene geschiedenis van Nederland van 1795 tot 1840, 10 vols. (The Hague, 1916), viii, Regering van Willem I: 1815–25, pt. 3, 56–9, 60–1.

85 Nationaal Archief Den Haag, Ministerie van Financiën A, 2.08.01.01 (hereafter NA MinFin), 154-320. This is more than the 6 million mentioned by Post, Last Great Subsistence Crisis, 56–7, who bases this figure on Blok (P. J. Blok, Geschiedenis van het Nederlandsche volk, 4 vols. (Leiden 1912–1915), iv, 248). Blok does not provide a precise reference.

86 NA MinFin, 159-336, 160-337.

87 NA MinFin, 155-322, Staten der aangekomen en verkochte granen.

88 Post, Last Great Subsistence Crisis, 38, 56–60.
In addition to the release of grain on the market, part of the public stock was indeed used to allay problems in the south by making it available at sub-market prices. This, however, happened only in June 1817, when prices reached their peak and the discontent that had been brewing for months in the southern cities erupted in violent riots.⁸⁹ A royal decree of 17 June permitted all southern provinces to buy rye from the government at a fixed price of twelve guilders per hectolitre.⁹⁰ Similar arrangements were probably made for the largest southern towns separately, in order to allow them to keep bread prices at affordable levels.⁹¹ Sales to the southern towns continued at least until September 1817.⁹²

In the northern Netherlands, the sale of public grain at reduced prices was considered only at the very end of June 1817. Here too, disorder may have acted as a catalyst: food riots had broken out in Rotterdam and The Hague and unrest was also brewing in Leiden and Alkmaar.⁹³ Still, the first reference to subsidized grain relates not to these towns but to Amsterdam. A royal decree issued on 27 June 1817 reserved five hundred lasts of rye for the governor of the province of North Holland ‘to be sold at lower prices to those of lesser means in the city of Amsterdam’.⁹⁴ About two weeks later and after some initial hesitation, towns in the provinces South Holland and Overijssel — upon the request of the provincial authorities — were also given the opportunity to buy grain below market prices.⁹⁵ However, it is doubtful that these purchases actually took place: in contrast to subsidized sales to the towns in the south, they do not show up in the statements of the account at the Dutch National Bank.

That the entire operation ended in a large financial loss was therefore not the consequence of heavy subsidizing but of events

⁸⁹ Ibid., 76–7.
⁹⁰ NA MinFin, 154-320 (KB 33).
⁹¹ NA MinFin, 154-320 (notes following KB 33).
⁹² NA MinFin, 154-320 (letters of the king’s secretary of 24 Sept. 1817 and the Minister of Internal Affairs 27 Sept. 1817).
⁹³ Post, Last Great Subsistence Crisis, 77; Pot, Arm Leiden, 150; De Vries, Price of Bread, 261.
⁹⁴ NA MinFin, 154-320 (KB 38).
⁹⁵ NA MinFin, 154-320 (advice of ministers of Internal Affairs and Finance to the king, shortly after 1 July 1817; letter of the Minister of Internal Affairs to South Holland and Overijssel, 5 July 1817; memo of secretary Falck to the Ministers of Internal Affairs and Finance, 7 July 1817).
that closely resemble developments at the end of the seventeenth century: when in the late summer of 1817 the crisis was over and prices had fallen, large stocks of grain were left that were sold off only very gradually. Storage cost money, but worse than that was the fact that sales had to take place at prices far below the purchase price. At the end of 1818 the designated account at the Dutch National Bank showed a deficit of almost 1.7 million guilders. The purchase and transport of so much grain had been achievements in themselves, bearing witness to the resilience of commercial networks even after Amsterdam had lost its central position in the European grain trade. However, actually using the grain stocks thus established to effectively combat the crisis turned out to be much more of a challenge. The fact that much of the grain did not arrive until the late spring or even the summer of 1817, by which time imports by the private sector were already on the rise, obviously played a part. Another element, however, also contributed: the mistaken assumption, based on a reliance on the beneficial effects of market forces characteristic for the era, that bringing more grain to the market would automatically solve all problems.

**Distribution of relief**

The government, admittedly, did take some additional steps that specifically targeted the most vulnerable groups in society. In November the king called upon the municipalities to relieve the needs of the indigent, an exhortation which the provincial governor of South Holland translated into advice to the towns to distribute pea soup to the poor. In addition, the king started an employment scheme — one that suited his own purposes. Through the provincial governors a call was sent out for labourers for the reconstruction of the fortifications at the southern frontier. Still, these measures were of marginal importance. Providing relief to those that needed it most remained first and foremost a responsibility of the towns and the urban poor relief organizations.

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96 NA MinFin, 159-332 and 336 (Amsterdam); 159-323, 160-337 (Antwerp).
97 NA MinFin, 160-338,Extract grootboek Generale Thesaurie 1818, no. 494.
98 AD Secretarie, 2-79 (14 Nov. 1816 no. 1 and 28 Nov. no. 2); Pot, *Arm Leiden*, 85.
99 AD Secretarie, 2-79 (5 Dec. 1816 no. 2); Post, *Last Great Subsistence Crisis*, 61.
The safety net of poor relief in the towns of Holland, however, no longer functioned as smoothly as it had done in the seventeenth century. At the end of the eighteenth and the beginning of the nineteenth century, costs of poor relief had risen dramatically. Relief institutions were forced to economize. Town governments were asked to come to the aid of the institutions, placing a heavy strain on urban finances. The ultimate effect was erosion of urban autonomy. Amsterdam is a good example. Here the town government was pressured by the French authorities to force the urban poor relief institutions to carry out substantial budget cuts in 1811 and 1812. Although reforms were partially reversed afterwards, expenditure on relief did not return to its earlier level. In addition, urban financial agency was curtailed by the need to have budgets approved beforehand by the government. Nevertheless, both poor relief organizations and urban governments in all three towns did respond to the crisis.

In Delft and Amsterdam the expenditure of the main poor relief institutions in 1816 and 1817 was 15 to 20 per cent higher than in 1814 and 1815 (Table 5). Again, despite the rise of expenditure, relief volumes and numbers of recipients barely increased; extra expenses covered little more than the raised costs of foodstuffs. Even this much would, at least in Amsterdam, not have been possible if the town government had not granted the institutions substantial additional subsidies above the level they already received in other years. More than ever, the distribution of relief had become a joint effort of poor relief institutions and urban governments. As in the sixteenth century, interdependency was greatest in Leiden. Here the overseers of the poor, who saw to the needs of about 70 per cent of the Leiden poor, responded to the crisis with alacrity, despite their precarious financial situation. As Table 5 demonstrates, in Leiden bread distribution, the number of recipients, and expenditure all rose significantly, much more so

100 Schama, ‘Municipal Government and the Burden of the Poor in South Holland’, 109–15.
101 Ibid., 99–100.
102 Marco H. D. van Leeuwen, Bijstand in Amsterdam, c.1800–1850: Armentzorg als beheersings- en overtovingsstrategie (Zwolle, 1992), 203–5.
103 Stadsarchief Amsterdam, Archief van de secretarie, Afdeling Financië, Rekenkamer en Rentegevende Eigendommen, Precario en Kadaster, 5177-1991, fo. 20 and Appendix XVI; 5177-1992 fo. 21 and Appendix XI.
than in Delft or Amsterdam — no doubt a reflection of the greater extent of poverty. This, however, required substantial financial injections by the urban authorities, who were unable to bear the burden and had to be aided by advances from central government.\footnote{Pot, \textit{Arm Leiden}, 158; P. J. Blok, \textit{Geschiedenis eener Hollandsche stad}, 4 vols. (The Hague, 1910–18), iv, 112.}

In addition to supporting the regular system of poor relief, town governments also initiated actions of their own — this time not only in Leiden and Amsterdam, but also in Delft. In this last town, the urban authorities had recourse to a remedy that we saw employed earlier elsewhere: they offered bread at subsidized prices to people of little means who were not already supported by one of the relief institutions, on presentation of a token issued by the authorities.\footnote{AD Secretarie, 2-79 (14 Nov. 1816 no. 1, 19 Nov. no. 8, 26 Nov. no. 2, 5 Dec. no. 8, 10 Dec. no. 5).} Bread distribution began in the middle of December 1816 and continued until March 1817. The register lists 349 beneficiaries, perhaps 10 per cent of all households in Delft.\footnote{AD Secretarie, 2-6349.} This implied a transgression of the municipal budget,

\begin{table}
\begin{tabular}{cccccc}
Year & Households receiving relief & Relief expenditure in guilders & Loaves of bread distributed \\
& Leiden & Amsterdam & Delft & Leiden & Amsterdam & Delft  \\
1814 & 1,950 & 7,314 & 19,858 & 38,629 & 89,463 & unknown & 104,832 \\
1815 & 2,203 & 7,369 & 19,334 & 38,003 & 96,821 & 57,485 & 121,992 \\
1816 & 2,712 & 7,495 & 20,847 & 50,512 & 103,651 & 59,436 & 151,164 \\
1817 & 3,133 & 7,729 & 23,370 & 77,405 & 109,507 & 59,100 & 213,356 \\
\end{tabular}
\caption{RESPONSES OF THE CHAMBER OF CHARITY (DELF), HUISZITTENUIS (LEIDEN) AND NIEUWEZIJDS EN OUDEZIJDS HUISZITTENUISEN (AMSTERDAM) TO THE CRISIS OF 1816–17*}
* Sources: Delft: Archief Delft, Archief van de Kamer van Charitate, 447-1162 and 237. Loaves distributed cannot be compared directly with figures for 1698–1700, as the bread weight was probably not the same. Leiden: Pot, \textit{Arm Leiden} (see n. 77 above), 333, 336. Only households permanently on relief are included. Amsterdam: Van Leeuwen, \textit{Bijstand in Amsterdam} (see n. 102 above), 307; Stadsarchief Amsterdam, Archief van het Nieuwezijds en het Oudezijds Huiszittenhuis en van de Regenten over de Huiszittende Stadsarmen, 349-735 and 736. Together, the Huiszittenhuizen were the second largest relief institution in Amsterdam. Corresponding data for the largest institution, the deacons of the Dutch Reformed Church, have not been preserved.
\end{table}
for which authorization of the national government was obtained in December 1816.\textsuperscript{107} In Amsterdam and Leiden there is no sign of subsidized bread distributions, but the authorities in both towns bought potatoes and resold them at sub-market prices to the poor. Table 6 shows the expenses incurred for this purpose. For the towns for which a comparison is possible, Leiden and Amsterdam, expenditure on subsidies of foodstuffs, when corrected for inflation, was decidedly lower than in 1698.

It can be concluded that in spite of the drastic restructuring of the political landscape, the burden of combating the consequences of the food crisis was still largely borne at the local level. The benefits of large-scale grain purchases at the national level were, at least for the northern Netherlands, very limited. Distributing relief remained the responsibility of towns and poor relief institutions, which now more than ever had to co-operate, but which were handicapped by reduced financial means and the curtailing of urban autonomy. The role of the market was overrated, both by contemporaries and by historians. While commercial networks were still strong enough to facilitate the purchase of large grain supplies abroad, it was too easily assumed that the crisis could be addressed by simply releasing public stocks onto the market.

\textsuperscript{107} AD Secretarie, 2-79 (2 Dec. 1816 no. 1).
CONCLUSIONS

The aim of this comparison of urban relief stocks as an emergency response to three food crises in pre-industrial Holland has been to trace the development of stock policies over time and to uncover the determinants of this development. Looking first at the impact of each of the factors investigated separately, conclusions regarding the role of living standards remain somewhat ambiguous. Amsterdam, the city for which information for all three crises is available, spent substantially less on emergency aid in the late seventeenth century than in the middle of the sixteenth, suggesting that at least in that city the need for emergency measures was not as great when living standards were high. Still, this clearly did not do away with the need for emergency relief altogether, and the decline of living standards in the early nineteenth century did not imply a return to higher levels of aid — on the contrary.

Holland’s central position in the international grain trade was important, but not because it prevented price peaks and thus removed the need for public intervention. This position did, however, ensure the presence of substantial private stocks that could be drawn upon to establish public ones; moreover, at least in the late seventeenth and early nineteenth centuries, commercial know-how, information and contacts also facilitated the purchase of additional public supplies abroad.

The ability of regular poor relief systems to respond to the three food crises included in this investigation was limited. To the regular dependents of the poor relief organizations, but also to people that could fend for themselves in normal years but could not cope in periods of severe dearth, the additional aid provided by the urban relief stocks must have been vital. This can be taken as a sign that poor relief systems failed, but another interpretation is also possible: the distribution of subsidized bread by the urban authorities in the towns and cities of Holland can be seen as a complementary mechanism that increased the ability of relief efforts as a whole to respond to crisis situations.

Urban wealth clearly mattered: Amsterdam, at least in the sixteenth and seventeenth centuries, had far less trouble making grain purchases than Leiden did. Yet the Leiden experience also suggests that ultimately the impact of a crisis was limited as long
as towns were able to temporarily exceed their regular budgets and raise credit to make grain purchases. This ability, however, was affected by the larger political structure in which they had to operate. Centralization of power in the early nineteenth century reduced local autonomy and thus made it more complicated for local authorities to intervene in a crisis, at a time when their financial position was already tenuous and state capacity was insufficiently developed to take over.

This brings us to two general conclusions that relate to the long-term processes of state formation and commercialization. The first is that urban governments and urban poor-relief organizations, working together, continued to be the main providers of protection from dearth throughout the period under discussion, from the sixteenth until the nineteenth century. This lends support to interpretations of early modern state formation that emphasize the positive effects of divided authority and the importance of local action. In the early nineteenth century, social spending in Holland, as elsewhere in Europe, experienced a low point under the influence of ideological and political change. Diminished investments in urban relief stocks reflect this development. Still, the tradition of decentralized governance ensured that even in the difficult early nineteenth century the safety net, although reduced, did not completely break down. It has to be added that the decentralized state system also had a downside. Because central co-ordination was never strong, attempts to co-ordinate or initiate relief operations at the provincial or national level turned into costly and eventually ineffective actions. Provincial and national stocks were established, but they contributed very little to actual relief.

The second general conclusion relates to the consequences of commercialization. This study supports the findings from recent research that in the early modern period there was no sharp contrast between the moral economy and the market. In fact, emergency measures increasingly made use of market mechanisms, not just for the acquisition of grain stocks but also to provide targeted relief to groups in need (through subsidies). However, in the early nineteenth century the balance tipped towards the market: it was expected that the release of stocks would benefit everybody by lowering market prices. The consequences of what appears to have been a misplaced trust in
the beneficial effects of the price mechanism deserve more attention than can be given to them here, though it should be remembered that, in the end, mortality in Holland in the years 1816 and 1817 was only slightly above normal levels.

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