

Manuscript CP-2024-2 is excellent in terms of scientific contribution, scientific quality and presentation. The discussion and explanations are clear and of high quality, while providing a new, solidly substantiated contribution to the question of the relationship between weather, climate and grain prices (and also to the importance of grain prices as climate proxies). The social, political and economic dimensions of grain price formation are presented in detail. This work absolutely deserves to be published.

RESPONSE: We would like to thank the anonymous referee #3 for evaluation of our paper and raising several critical comments, which we are trying to answer below.

A few minor questions or comments are addressed to the authors, without seeking to embarrass them, insofar as the answers are only accessible if substantial sources are available to contextualise the events, which is not necessarily the case for the small town of Sušice at the time studied.

1/ General questions :

Insofar as the wars affecting the region are clearly indicated (lines 81-100), is it possible to know whether certain poor harvests - or even years with no information concerning Sušice (lines 400-403) - were the result of periods of occupation or troop movements?

RESPONSE: Because in southwestern Bohemia the import of inland grain by coachmen played only a negligible role, grain prices were primarily a result of situation at the local market and the market circuit. The effect of direct military presence in the town or in its immediate proximity on the grain prices could be considered (in the period analysed) particularly in 1742 and less in 1805, but it concerned only short-term military movements or passages. The price development could have been influenced more markedly by winter housing of army in war time (e.g., in Sušice in 1749) or during the long-term placing of troops (in Sušice during 1766–1779), because it increased demand for a few years.

Did troop movements, invasions (lines 460-464) or rumours of invasion cause harvests to be brought forward (or delayed), which could have an impact on the quantity and/or quality of harvests and therefore on price formation, a phenomenon already identified in relation to grape harvests (Labbé, T., Pfister, C., Brönnimann, S., Rousseau, D., Franke, J., and Bois, B.: The longest homogeneous series of grape harvest dates, Beaune 1354-2018, and its significance for the understanding of past and present climate, *Clim. Past*, 15, 1485-1501, <https://doi.org/10.5194/cp-15-1485-2019>, 2019.). Would it be possible, given the current state of the sources, to indicate (perhaps by a simple percentage) the number of harvests affected by this bias? Are these situations linked to high prices?

RESPONSE: The Sušice town was located in an outlying position outside of main land communications. It meant that passages of enemy armies were not comparable with levels achieved on important land communications (roads) in Bohemia going to Prague. The military situation influenced prices rather by supplying foodstuffs to military stores in regional central towns commended by the state. It was a usual practice for the whole time of war conflicts.

Conversely, in the same type of context and insofar as Figure 1 seems to show a town that was at least partly fortified, could the withdrawal of the population to the shelter of the town walls with its grain reserves artificially lower prices?

RESPONSE: The function of Sušice as a citadel was marginal in the period analysed. The last notes about defensive purpose of the town fortification are from 1620 and the Thirty Years War. But also in that time transfer of people into the fortified town was only short-term (hours or a few days), not causing any significant deviations in prices.

In times of peace, in the factors mentioned (lines 45-46) about years of exceptionally large harvests, might these not - counter-intuitively - cause prices to rise because of the extremely large workforce, means of transport and storage facilities that are mobilised during the harvests?

RESPONSE: The grain supplied to the Sušice town market (and generally to other town markets in Bohemia) stem from small producers (i.e., country peasants from their farms), that organised transport of grain on market themselves. Moreover, demand for grain in a given place did not changed importantly (the number of consumers was relatively stable), i.e., prices in case of good harvests decreased and consumer could choose from whom to buy grain.

2/ Specific questions:

Figure 1 could perhaps use a little commentary to go beyond the simple illustration and highlight what it shows in relation to the article: a small town on the banks of the Otava, in a peri-urban landscape of very heavily humanised hills, showing the crops mentioned in the article, with the Bohemian (?) forests remaining only on the summits.

RESPONSE: Accepted and changes as follows: “The town of Sušice on the Otava River from the southeast – drawing by Augustin Maštovský from 1850, based on an earlier sketch by his father, Josef Maštovský, from 1832. Unbuilt area of the town cadastre was used in agriculture for the grain production, which had not more than supplementary economic function for a part of Sušice inhabitants. Non-forested hills in the background indicate problems with wood that had to be transported to the town from the Šumava Mts.”

Similarly, it might be worth highlighting the very good regional/local accounting suggested by Figure 4, with sources that have increasingly standardised administrative and fiscal norms? Could a reference to Figure 4 be placed on lines 148-149 (if that is what well what the figure illustrates)?

RESPONSE: Fig. 4 documents not centrally organised accountancy, but a working evidence originating during sending of official price reports to superior authorities, which had a standardized form, but were preserved only in torso-like form. Because reference to Fig. 4 is already on the beginning of Sect. 2.2, it seems not necessary to repeat it here (without direct relevance to the text).

Sušice was a redistribution market for 91 localities, which probably roughly make up its Hinterland (or even its Umland). Did the trade in grain to neighbouring regions capable of extending their economic and commercial influence to distant producing regions require the local authorities to close borders or introduce temporary legislation banning exports (especially in time of crisis)? (lines 474-480)

RESPONSE: The grain trade with areal or border overlap was minimal in the described region and grain was rather brought from the inland. If there appeared any orders permitting export, it followed from all-country decrees in the periods of wars or in the years of grain failure (e.g., 1771–1772).

One last question: are there any MAM or SON "killing frosts" that have impact on prices?

RESPONSE: You are right, that frosts can have some damaging effects on cereals. But in the analysed region we did not find any such indication in available documentary sources. From this reason we did not reported frosts in the first paragraph of Sect. 5.2 or in detail description of years with extremely high prices in Sect. 4.2.