

Extended Abstract

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Paper/Poster Title	Consumer Demand for Potatoes in Scotland during COVID-19
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Abstract prepared for presentation at the 97th Annual Conference of the Agricultural Economics Society, The University of Warwick, United Kingdom

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Abstract	<i>200 words max</i>
<p>Potatoes are a beneficial component of a healthy Scottish diet, when cooked healthily without excessive and potentially harmful additives. However, in recent decades fresh potato preparation has declined inside the home alongside an increase in consumption of potato-based convenience foods that may be higher in fat, sugar, and salt additives. Government intervention to date has been ineffective at eliminating the negative impact of this potential market failure. Reduced time allocated by households towards cooking from scratch was identified in the existing literature as a potential causal factor for the decline in fresh potato consumption. The purpose of this paper is to empirically evaluate using quasi-experimental methods whether the advent of COVID-19 marked a deviation from this long-term trend in potato consumption by providing households with an additional time endowment for exclusively domestic tasks, including cooking.</p>	
Keywords	Demand for potatoes, Scotland, cooking, COVID-19
JEL Code	D1 Household Behaviour and Family Economics D12 Consumer Economics: Empirical Analysis
Introduction	<i>100 – 250 words</i>
<p>Potatoes, <i>Solanum Tuberosum</i> L., have been a staple in Scottish cooking since their introduction to the British Isles in the 16th Century. Few of the Scottish population have not eaten potatoes in their lifetime, whether baked, boiled, mashed, roasted, fried or stewed. Stovies, potato scones, neeps and tatties, and rumbledethumps are just a few of the many famous, potato-based dishes from Scotland. Potatoes are a beneficial component of a healthy Scottish diet, when cooked healthily without excessive and potentially harmful additives. However, in recent decades fresh potato preparation has declined inside the home alongside an increase in consumption of potato-based convenience foods that may be higher in fat, sugar, and salt additives. Government intervention to date has been ineffective at eliminating the negative impact of this potential market failure. Reduced time allocated by households towards cooking from scratch was identified in the existing literature as a potential causal factor for the decline in fresh potato consumption. The purpose of this paper is to empirically evaluate whether the advent of COVID-19 marked a deviation from the aforementioned long-term trend in potato consumption by providing households with an additional time endowment for exclusively domestic tasks, including cooking.</p>	
Methodology	<i>100 – 250 words</i>
<p>Panel data was obtained from Kantar Worldpanel Home Scanner for potato purchases at retail in Scotland for 934 households with data covering 2019 to 2021. Purchasing data were aggregated into fresh and processed potato categories. A two-period</p>	

approach was adopted with pre-COVID and post-COVID periods. Three estimation methods were selected: (i) two-period event study to determine the overall impact of COVID-19 on potato demand, (ii) difference-in-differences regression with nonretired households as the treatment group and retired households as the control group, and (iii) first-difference regression with potato consumption as the dependent variable and number of children as the independent variable of interest. Selection of quasi-experimental statistical methods evaluated whether households with varying opportunity costs of time devoted to domestic tasks differentially responded to the unanticipated time endowment exogenously provided by COVID-19 social protection measures implemented by the UK Government in 2020.

Results	100 – 250 words
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Scottish households purchased significantly more fresh (p -value <0.01) and processed (p -value <0.01) potato products at retail in 2020 compared with 2019. Subject to the assumption that households may substitute between fresh and processed potato products to generate equivalent potato-based meals, there was no significant observed impact (p -value >0.10) of a change in processed potato demand on fresh potato consumption. Households purchased more of both forms of potato during 2020. Difference-in-differences estimation provided inconclusive statistical support (p -value >0.10) in the predicted direction that working-age households demonstrated a greater interest, compared with retired counterparts, in cooking fresh potatoes and consuming high-convenience processed potato products in 2020. This result failed to empirically confirm considerable wider qualitative evidence and indicated the nonuniform impact of COVID-19 on households' behavioural responses. Additional children in a household was a strong predictor of greater marginal increase in fresh (p -value <0.01) and processed (p -value <0.01) potatoes purchased during 2020. This supported other reports that parents engaged in cooking more during confinement periods and may have included children in these activities. Children maintained a strong demand for convenience potato-based foods and the closure of schools meant younger people reorientated towards greater at-home consumption of these products in 2020. Inconclusive empirical findings highlighted opportunities for future research.

Discussion and Conclusion	100 – 250 words
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Policy makers intent on improving public health in Scotland should focus household attention towards healthier potato preparation techniques and deter reliance on potato-based convenience snacking. Time constitutes a barrier to fresh potato consumption, particularly for working-age families and those with more children. External support to encourage beneficial inclusion of potato in the Scottish diet may be necessary to ensure that potatoes remain an important contributor to multidimensional food security in Scotland. The free market alone may fail to adequately provide the best health outcomes from potato consumption.