Comment on "On the identification of zombie firms" by Luca Mingarelli, Jonas Wendelborn, and Tamarah Shakir

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The research presented by Luca Mingarelli, Jonas Wendelborn, and Tamarah Shakir delves into the pertinent issue of identifying zombie firms, shedding light on the challenges and intricacies involved in this task. Their study addresses important questions and the empirical example used – credit allocation during the COVID-19 pandemic – substantiates its relevance and timeliness. In this commentary, I critically assess the strengths and limitations of the proposed fuzzy zombie identification methodology, which quantifies the extent of firms' zombieness.

The authors aptly highlight the issue that even widely employed zombie definitions identify different subsets of the economy as zombies. In response to this challenge, they introduce a fuzzy zombie identification methodology as an innovative solution. This methodology offers at least two vital benefits over the traditional approach. Firstly, it enhances the consistency across different definitions, thereby facilitating better comparison and generalization of results. Secondly, by assigning a degree of zombieness to a given firm, it enables a more nuanced tracking of the firm's financial evolution over time. Collectively, these aspects represent a notable improvement over binary zombie identification methodologies.

However, the present study can be criticized from three angles. One of the reasons the term "zombie firm" gained widespread recognition is its parsimony. It does not necessitate an economics degree to grasp that firms receiving subsidized credit and having an interest coverage ratio below unity are in a precarious financial situation. Introducing a fuzzy zombie classification may indeed provide a wealth of information about the firms under scrutiny, but this comes at a cost. The concept may become less accessible to a broader audience due to its heightened methodological complexity, which could potentially dilute its effectiveness as a policy tool.

The authors also highlight the arbitrary nature of the cut-off points in binary zombie definitions, exemplified by the question of why ten-year-old firms

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are classified as zombies while their nine-year-old counterparts are excluded (ADALET MCGOWAN et al., 2018). While researchers have put substantial effort into substantiating their zombie definitions, they remain vulnerable to criticism. Yet, the same criticism can be applied to fuzzy zombie definitions. The authors do not offer guidance on how to establish upper and lower thresholds when implementing a fuzzy zombie definition.

Furthermore, the authors aim to reiterate the distinction between the "zombie" concept and vulnerable firms. The problem with their solution, a fuzzy zombie identification methodology, is that it is very similar to, but has no advantages over, established models of financial distress, for example, bankruptcy prediction models such as Altman's Z-score. This raises the question of why, in the context of firms' access to loan guarantees during the COVID-19 crisis, the analysis could not have been conducted using a bankruptcy prediction model. These models have been around for decades and reliably enable researchers to assess the level of firms' financial distress and to compare it to other firms. If a sophisticated methodology is required to estimate a firm's degree of viability, it prompts the question of why not revert to a financial distress model that has a proven track record.

References

ADALET MCGOWAN, MÜGE, DAN ANDREWS, and VALENTINE MILLOT (2018), The walking dead? Zombie firms and productivity performance in OECD countries, *Economic Policy* 33 (96), pp. 685–736.