Zombie firms and competition

Francesco Androni, Andrea Ascani, Alberto Marzucchi

Gran Sasso Science Institute, Italy

Extended Abstract prepared for the:

64th ERSA Congress, Panteion University Athens Greece

Zombie firms are companies that should exit the market in presence of well-functioning competition mechanisms, but somehow remain in business. Specifically, their profits cannot cover their operating expenses for multiple consecutive years and therefore zombies typically show solvency problems that are extended in time (Hoshi, 2006). Ultimately, such firms rely on extensive debt, owner's equity or postpone their payments to suppliers to maintain the business alive (Caballero et al., 2008; Tuuli, 2024; Carreira et al., 2022). Negative shocks that have had a worldwide impact in the last 20 years, such as the Great Financial Crisis, the Covid-19 pandemic and the more recent inflationary wave should have cleared up the market from the least productive firms (Kozeniauskas et al., 2022; Caballero and Hammour, 1994). Instead, the diffusion of the phenomenon has increased worldwide, with the shares of zombie firms growing fourfold in advanced economies since the 1990s (Albuquerque and Iyer, 2023; Banerjee and Hofmann, 2022). Not only does the survival of such firms depress aggregate productivity, but it also congests markets and crowds out new business opportunities, by keeping prices high and diverting the flow of capital and employment to more productive firms (Adalet McGowan et al., 2018; Caballero et al., 2008). At the same time, zombie firms may have positive effects on the economy, especially in situations of economic crisis. Maintaining such firms in place - preventing shrinking or exit - during recessions may mitigate the negative effects supply chains' disruption and reductions in local aggregate demand (Schivardi et al., 2021). The literature has extensively focused on the role of zombie firms as a result of the misallocation of credit and high barriers to exit due to weak insolvency regimes. Undercapitalised banks are associated with the evergreening of non-performing loans and constraining healthy firms (Caballero et al., 2008; Schivardi et al., 2021; Andrews and Petroulakis, 2017; Acharya et al., 2019), with low interest rates further increasing the phenomenon (Banerjee and Hofmann, 2018). Insolvency regimes that do not ease the exit of firms further weaken the exit margin (Andrews and Petroulakis, 2017; Andrews et al., 2017).

However, limited attention has been paid to situating the zombie phenomenon within the slowdown of competition forces, that is increasingly appointed as one - if not the most relevant - of the causes of sluggish productivity growth (Goldin et al., 2024; Akcigit and Ates, 2021). Decreased competitive forces, understood as the process of contesting market positions through entry and innovation, which drives market selection and resource reallocation, reduce the pressure on firms to restructure or exit, allowing them to survive longer. The present paper aims at assessing whether the intensity of competition forces is related to the diffusion of zombie firms. By focusing on industrial dynamics, the analysis specifically assesses whether the competitive environment in which firms operate influences zombie formation. More in detail, we focus on the roles of firm entry and innovation in affecting the shares of zombie firms operating within a sector and region. To this aim, we study the Italian economic landscape over the period 2014-2020, using Orbis firm-level financial data and patent data from the OECD Regpat database to construct the dataset. To study the contextual factors in driving the presence of zombie firms, we conduct the analysis at the region-sector level, by aggregating the micro-data.

The Italian context is particularly relevant for several reasons. First, the last 30 years have seen stagnating productivity (Bugamelli et al., 2018) and high levels of resource misallocation between firms (Calligaris et al., 2018), showing an impaired reallocation process. Calligaris et al. (2018) suggest that a large share of firms has neither been able to adapt to a context of quick technological change, nor it did shrink following negative productivity shocks. Second, the industrial structure appears particularly polarised (Bugamelli et al., 2018). A small share of firms showing high performance and efficiency, and innovative potential comparable to European competitors coexists with a large share of micro and small enterprises, that are on average old, with limited innovation and internationalisation, ineffective management practices and with vulnerable financial structure. This majority of firms is indeed possible candidate for the zombie status. Third, the Italian economy is notably characterised by the prevalence of zombie firms, with some of the highest proportions among OECD countries of employment and capital sunk in such firms (Adalet McGowan et al., 2018).

Our results show a relevant effect of competition forces in influencing the diffusion of zombie firms in Italy. A higher intensity of competition is associated with a lower share of zombie firms, suggesting that the existence of zombie firms is related to the ongoing slowdown in competition. This link exhibits a dichotomy, however, depending on whether we consider firm entry or innovation. Firm entry relates to the diffusion of zombie firms in the shorter term, both as shares of firms and as capital and labour sunk in zombie firms. Innovation, instead, is related to zombie diffusion on a longer time span, and mostly affecting the resources sunk in zombie firms.

Our results also point to implications for policy. In particular, the effect of local competition forces in reducing zombie firms, hence leading to more efficient allocation of resources within ecosystems, should be considered vis-à-vis the potential reduction of employment cushioning which is typical of zombie firms.

References

Adalet McGowan, M., Andrews, D., and Millot, V. (2018). The walking dead? zombie firms and productivity performance in OECD countries. Economic Policy, 33(96):685–736.

Akcigit, U. and Ates, S. T. (2021). Ten facts on declining business dynamism and lessons from endogenous growth theory. American Economic Journal: Macroeconomics, 13(1):257–98.

Andrews, D. and Petroulakis, F. (2017). Breaking the shackles: Zombie firms, weak banks and depressed restructuring in Europe. OECD Economics Department Working Papers, 1433.

Andrews, D., McGowan, M. A., and Millot, V. (2017). Confronting the zombies. OECD Economic Policy Papers, 21.

Bugamelli, M., Lotti, F., Amici, M., Ciapanna, E., Colonna, F., D'Amuri, F., Giacomelli, S., Linarello, A., Manaresi, F., Palumbo, G., Scoccianti, F., and Sette, E. (2018). Productivity growth in italy: a tale of a slow-motion change. Questioni di Economia e Finanza (Occasional Papers) 422, Bank of Italy, Economic Research and International Relations Area.

Caballero, R. J. and Hammour, M. L. (1994). The cleansing effect of recessions. The American Economic Review, 84(5):1350–1368.

Caballero, R. J., Hoshi, T., and Kashyap, A. K. (2008). Zombie lending and depressed restructuring in japan. American Economic Review, 98(5):1943–77.

Calligaris, S., Del Gatto, M., Hassan, F., Ottaviano, G. I. P., and Schivardi, F. (2018). The productivity puzzle and misallocation: an Italian perspective. Economic Policy, 33(96):635‑684.

Carreira, C., Teixeira, P., and Nieto-Carrillo, E. (2022). Recovery and exit of zombie firms in Portugal. Small Business Economics, 59(2):491‑519.

Hoshi, T. (2006). Economics of the living dead. The Japanese Economic Review, 57(1):30–49.

Kozeniauskas, N., Moreira, P., and Santos, C. (2022). On the cleansing effect of recessions and government policy: Evidence from Covid-19. European Economic Review, 144:104097.

Schivardi, F., Sette, E., and Tabellini, G. (2021). Credit Misallocation During the European Financial Crisis. The Economic Journal, 132(641):391‑423.

Tuuli, S. (2024). Who funds zombie firms: Banks or non-banks? International Review of Financial Analysis, 95:103420.