

Lifestyle-related health risks as an emerging labour market challenge affecting firm productivity and competitiveness

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1. Introduction and relevance to the special session

In the EU, around 90% of deaths are caused by non-communicable diseases (NCDs) such as cardiovascular diseases, cancer, diabetes, and chronic respiratory conditions (WHO, 2021). These are strongly linked to unhealthy lifestyle factors – smoking, poor diet, physical inactivity, harmful alcohol use, and sleep disorders – and their rising prevalence places a significant burden on individuals, healthcare systems, and economies.

Across the EU, obesity, cardiovascular disease (CVD), and cancer outcomes show marked regional disparities. About 50% of adults are overweight or obese, with lower obesity rates in Southern and Western Europe (~7.5–8.8%) and much higher levels in Central and Eastern Europe (around or above 20%) (Stival et al., 2022; Marques et al., 2018; Gallus et al., 2015). Although CVD mortality has declined overall in the EU, a widening East–West gap persists: rates and disability-adjusted life years remain three to four times higher in middle-income Eastern European countries than in high-income Western ones (Cherla et al., 2024; Timmis et al., 2022; Hartley et al., 2016). Cancer outcomes show similar divides: Eastern and Central Europe have higher mortality – especially for lung, colorectal, and several urologic cancers – while Western and Northern Europe report higher incidence but better survival (Elmadani et al., 2025; Santucci et al., 2025; Negoita et al., 2023). In Hungary, for example, cancer mortality substantially exceeds the EU average, and projections estimate a 2.5-year reduction in life expectancy from cancer between 2023 and 2050 (OECD/EC, 2025).

These health risks create labour market challenges through absenteeism, presenteeism, reduced work ability, and early retirement. In ageing European societies with declining fertility and shrinking working-age populations, the health of the labour force is a key strategic resource. The health dimension of local human capital directly influences productivity, innovation, and competitiveness. For SMEs, which often operate with limited slack resources and depend heavily on their local workforce, health-related productivity losses can pose a disproportionate burden.

This perspective links the research to the S50 special session on “Entrepreneurial SMEs and territorial contexts”. Firms, and especially SMEs, are strongly embedded in local labour markets and depend on the availability and quality of regional human capital. In regions facing outmigration and limited labour reserves, workforce health is a key strategic asset. If lifestyle-related health risks reduce employee well-being and performance, they can weaken firm-level competitiveness, innovation, and growth. Aggregated across firms, these effects influence regional productivity, resilience, and development paths. Despite entrepreneurship research’s focus on ecosystems, institutions, and human capital, lifestyle-related health risks remain largely overlooked as determinants of local labour quality and territorial development.

Against this background, this study addresses a critical gap at the intersection of entrepreneurship research, labour economics and public health by examining how employees’ lifestyle-related health risks affect employees’ well-being, firm productivity and performance.

2. Research gaps and objectives

The research aims to comprehensively analyse the links between lifestyle-related health risks, employee well-being, and firm performance. While the individual consequences of unhealthy lifestyles are well documented, three major gaps remain in the entrepreneurship literature:

a. Lack of a comprehensive approach

Most studies examine specific health risks in isolation and focus primarily on individual outcomes or healthcare expenditures. Less attention has been paid to how concrete lifestyle-related health risks translate into measurable firm-level financial outcomes. This research therefore asks:

- *How do specific lifestyle-related health risks (e.g. diabetes, cardiovascular diseases, obesity, cancer) correlate with firm financial performance indicators such as productivity, profitability, ROI, profit, and revenue?*

b. Limited understanding of mediating and moderating factors

Although empirical studies confirm a relationship between unhealthy lifestyle and reduced work performance, less attention has been paid to the individual, socio-cultural and contextual determinants shaping these outcomes. The second set of research questions addresses:

- *Which individual and socio-cultural factors influence lifestyle behaviours that contribute to NCDs and thereby affect employee well-being, performance, and indirectly firm-level outcomes?*
- *Which contextual factors mediate or moderate the relationship between employee lifestyle, individual performance, and firm performance?*

c. Inconclusive evidence on workplace health promotion effectiveness

Although workplace health promotion (WHP) programmes are increasingly popular, evidence on their financial effectiveness is mixed. Many studies are small-scale or non-randomised, making generalisation difficult. The research therefore asks:

- *Do preventive workplace health programmes targeting lifestyle-related health risks increase employee performance and firm-level financial outcomes?*

4. Methods and data

The study uses a mixed-method design combining (1) a systematic literature review (SLR) and (2) an in-depth case study of a Hungarian SME. To address the research questions, the SLR applies structured screening and extraction protocols to synthesise evidence from large international datasets and empirical studies on the link between lifestyle-related health risks and firm-level financial outcomes. To contextualise these findings, an in-depth case study of a Hungarian SME examines the economic implications of lifestyle-related health risks in a firm operating in a region with high NCD prevalence.

This combined approach allows both generalisation and contextual insight, in line with the special session's call for diverse empirical strategies.

5. Preliminary results

The preliminary findings from the systematic reviews reveal consistent and economically significant associations between lifestyle-related health risks and adverse firm-level financial outcomes. Key findings include:

c. Firm-level financial indicators

Although fewer studies directly measure firm-level profitability, available evidence suggests negative associations between poor employee health and corporate profitability, stock returns, total factor productivity, and return on assets (Yano et al., 2022; Choi et al., 2024; Wilkin et al., 2015; Holland et al., 2017). Overall, the systematic syntheses consistently indicate a negative correlation between lifestyle-related health risks and firm financial performance across productivity, cost, and profitability measures (Baid et al., 2021; Dongen et al., 2011; Burton et al., 2021; Støren et al., 2024).

d. Workplace health promotion programmes

Preliminary evidence indicates that comprehensive workplace health promotion programmes – combining behavioural support, organisational changes, and leadership commitment – can reduce absenteeism and improve productivity. However, financial returns are highly context-dependent, varying by sector, firm size, and workforce characteristics. Observational and non-randomised studies often report positive ROI, (Serxner et al., 2012; Mills et al., 2007; Goetzel et al., 2005; Isaac et al., 2004; Edington et al., 2020). In contrast, high-quality RCTs tend to find more modest, null, or even negative

short-term returns, suggesting possible selection bias and limited time horizons in earlier estimates (Jones et al., 2019; Dongen et al., 2011). Stronger financial effects are more likely when programmes target high-risk employees and operate over longer periods, rather than being universally applied in low-risk populations (Edington et al., 2020; Isaac et al., 2004; Schwartz et al., 2014).

The Hungarian SME case study corroborates these findings. Internal data demonstrate that even moderate increases in health-related absence and reduced performance significantly affect firm performance and project delivery timelines. Management interviews reveal that lifestyle-related health risks are rarely considered in strategic planning, despite their observable economic consequences.

6. Conclusions and contribution

The findings indicate that lifestyle-related health risks are measurable and economically significant determinants of firm performance. In ageing European countries with shrinking labour supply, workforce health becomes a strategic territorial asset. SMEs in high-NCD regions may face structurally higher labour costs and lower productivity, limiting growth and resilience.

The study contributes in three ways:

1. *Conceptual:* It integrates public health risks into firm performance, competitiveness and territorial development, framing workforce health as a core dimension of human capital quality.
2. *Empirical:* It systematically evaluates cross-study evidence on the link between lifestyle-related health risks and firm-level financial performance.
3. *Policy:* It shows that improving population health is not only a social goal but also an economic development strategy, especially in demographically challenged regions.

By highlighting workforce health as a territorially embedded driver of firm performance, the study extends entrepreneurial ecosystem research toward the intersection of entrepreneurship, labour markets, and regional resilience.

Keywords: lifestyle-related health risks; firm; productivity; competitiveness; non-communicable diseases (NCDs); workplace health promotion

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