REGIONAL DIETARY RISK BURDEN IN EUROPE (1990–2023): IMPLICATIONS FOR WORKFORCE HEALTH AND ORGANIZATIONAL SUSTAINABILITY

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Abstract

Dietary behavior is a major determinant of the health of the European population and, indirectly, of workforce performance. The burden of disease attributable to dietary risks influences the incidence of chronic diseases, functional capacity, and the sustainability of economic systems. The study analyses the longitudinal evolution of the burden of dietary risks in Europe between 1990 and 2023 and investigates the existence of persistent regional differences. The data were obtained from the Global Burden of Disease (IHME) database and include 42 European countries, grouped into six regions. A linear mixed-effects model with random country-level intercepts and a first-order autoregressive (AR(1)) structure was used to capture temporal variations and regional differences. The results show a significant decrease in the burden of dietary risks during the period analyzed ($p < 0.001$), indicating a gradual improvement in the European nutritional profile. However, regional differences remain significant ($p = 0.008$), and the time–region interaction confirms the existence of divergent trajectories ($p < 0.001$). The high autoregressive coefficient ($\rho = 0.974$) reflects strong structural inertia, suggesting that changes in nutrition are slow and dependent on previous levels. The conclusions indicate that, although Europe is making progress in reducing dietary risks, regional disparities persist with implications for workforce health and organizational sustainability. The results argue for the need to implement regionally differentiated public policies and to integrate strategies for promoting healthy eating into management practices.

***Keywords**: dietary risk burden, public health, regional disparities, workforce health, organizational sustainability, employee health*

***JEL:** I12, I18, J24, R11, O52*

1. Introduction

Over the last three decades, dietary habits have become one of the most important and changeable determinants of the health status of the European population. The nutritional transition characteristic of this period—marked by increased consumption of ultra-processed foods, high salt and sugar intake, and insufficient consumption of fruits, vegetables, and fiber—has contributed significantly to the transformation of Europe's epidemiological profile. Dietary risks are now deeply embedded in the burden of noncommunicable diseases, particularly cardiovascular disease, diabetes and certain cancers, influencing not only mortality but also morbidity and long-term functional capacity.

Although the implications of these risks for public health are well documented, their longitudinal dynamics and regional differences within Europe have been less analyzed from an integrated perspective. Europe is not a homogeneous space in terms of dietary habits, socio-economic development, or health system performance. In this context, the burden associated with dietary risks may reflect deeper structural disparities that go beyond individual behaviors and are embedded in distinct cultural, economic, and institutional frameworks. Analyzing the evolution of these risks over time and identifying differentiated regional trajectories are essential for informing public health policies adapted to specific contexts.

However, the consequences of dietary risks are not limited to traditional health indicators. Chronic conditions associated with an unbalanced diet affect work capacity, energy levels, individual resilience, and active participation in the labor market. Organizations operate within these demographic and epidemiological realities, and their performance is indirectly influenced by the quality of available human capital. In this sense, the burden of dietary risks can be understood

not only as a public health issue, but also as a structural determinant of organizational health and long-term economic performance sustainability.

In this study, the "burden of dietary risks" is defined as the proportion of the total burden of disease attributable to nutritional risk factors, according to the Global Burden of Disease (GBD) methodology. The concept integrates both mortality - expressed in years of life lost due to premature death (Years of Life Lost, YLL) - and morbidity - expressed in years lived with disability (Years Lived with Disability, YLD) - reflecting the cumulative impact of inadequate nutrition on population health. Dietary risks include insufficient consumption of healthy foods such as whole grains, fruits, and legumes, as well as excessive intake of sodium and other components associated with chronic diseases. Therefore, the concept does not refer exclusively to diet-related deaths, but captures the broader effects on physical functioning, work capacity, and quality of life, providing a comprehensive measure of the impact of nutrition on public health.

Based on these considerations, the present study analyses the long-term evolution of the burden of dietary risks in Europe between 1990 and 2023 and investigates the existence of persistent regional differences. Using a linear mixed-effects model, which allows for the simultaneous capture of variations over time and across countries, the research provides an integrated longitudinal perspective on how dietary dynamics shape the health structure of the European population and its implications for the organizational environment.

2. Literature review

The evolution of dietary risks in Europe must be understood within a broader framework, in which public health, labor market dynamics, socio-economic vulnerabilities, and organizational culture constantly interact. Far from being merely an epidemiological indicator, the burden of dietary risks reflects structural tensions in society, from economic inequalities and poverty to demographic shifts and lifestyle changes.

The public health literature clearly shows that unhealthy eating habits are a major determinant of cardiovascular disease and other chronic diseases. In 2019, approximately 1.55 million deaths in the European Region, according to the WHO, were attributed to nutrition-related cardiovascular diseases, representing 16.4% of all deaths and 36.7% of all deaths from cardiovascular diseases (Pörschmann et al., 2024). The main risk factors include low consumption of whole grains and vegetables, as well as excessive sodium intake, factors that directly contribute to the incidence of ischemic heart disease. These data confirm that diet is not a marginal variable, but a central determinant of the health of the working population.

However, the impact of inadequate nutrition goes beyond mortality. Insufficient consumption of fruits and vegetables accounts for 4.4% of the total disease burden in Europe, while overweight and obesity account for 7.8% (Pomerleau et al., 2003). Over the last four decades, the prevalence of obesity has tripled in several European countries, affecting over 50% of the population in certain contexts (Grosso & Cesare, 2021). These developments inevitably have an impact on the labor market, on the functional capacity of employees, and on the costs sustained by organizations.

From an organizational sustainability perspective, unhealthy diets generate indirect costs through absenteeism, presenteeism (the situation where an employee is physically present at work but is functioning below their optimal performance level due to health problems, fatigue, stress, or other difficulties), and decreased productivity (Robertson et al., 2004). Employee health thus becomes a strategic component of organizational performance. In this regard, recent literature emphasizes the need for sustainable food systems capable of providing adequate nutrition to maintain human capital (Rippin et al., 2020). Systemic vulnerabilities—whether economic, political, or generated by global crises—can amplify dietary risks and, implicitly, the burden of chronic diseases.

This structural dimension is also supported by research on institutional and economic influences on poverty in Europe, which shows that structural inequalities affect access to essential resources,

including quality food (Jula et al., 2024). Poverty and food insecurity are determining factors in unbalanced eating patterns, and their consequences are subsequently reflected in the health of the working population and in economic performance.

Furthermore, population mobility and labor market integration dynamics can influence eating behaviors and access to health services. Studies on the integration of refugees into the labor market highlight multiple vulnerabilities—economic, social, and health—that can influence lifestyle and, implicitly, nutritional status (Teodorescu et al., 2024). In a European context characterized by migration and cultural diversity, public health and organizational policies must take these realities into account.

The link between nutrition, functional capacity, and performance is also supported by clinical research showing correlations between nutritional status, muscle strength, frailty, and cognitive performance, especially in the elderly population (Vancea Nemirschi et al., 2024). Although these studies focus on geriatric rehabilitation, their implications are also relevant for the active workforce, especially in the context of an aging European population. Medical recovery and functional capacity improvement strategies directly contribute to maintaining labor market participation and increasing quality of life (Vancea et al., 2024; Vancea, Aivaz & Spiru, 2024).

Physical activity also has positive effects on health and quality of life (Tomescu et al., 2024), suggesting that lifestyle interventions should be approached in an integrated manner: nutrition, exercise, recovery, and psychosocial support. For organizations, this means that wellness and health promotion programs are not just secondary benefits, but strategic investments in performance.

The value and cultural dimension of managerial decisions cannot be ignored. Research on the influence of religion on management and organizational decisions shows that personal and cultural values shape the orientation towards social responsibility, equity, and sustainability (Aivaz & Petre, 2024; Petre & Aivaz, 2025). Similarly, religiosity and education can influence how managers approach organizational health policies and responsibility for employee well-being (Petre, 2025). In this context, promoting a healthy dietary style in organizations can be interpreted not only as an economic measure, but also as an expression of a coherent set of values.

The experience of the COVID-19 pandemic has demonstrated how fragile educational and medical infrastructure can be in the face of global crises (Aivaz & Teodorescu, 2022). Systemic disruptions can affect both eating behaviors and access to medical services, amplifying existing inequalities. Consequently, strengthening organizational resilience and public health systems becomes essential for maintaining long-term economic performance.

Despite progress in reducing dietary-related cardiovascular mortality, the rate of improvement has slowed, and unhealthful dietary trends persist in many European regions (Riccardi et al., 2020). This stagnation highlights the need for more robust, integrated, and coherent interventions that combine public policy, organizational interventions, and cultural change.

Overall, the literature shows that dietary risks are not just an epidemiological indicator but a structural determinant of workforce performance and organizational sustainability. Dietary behaviour shapes individual health, which in turn influences productivity and organisational stability, while institutional policies and managerial values can accelerate or slow down the transition to a healthy and sustainable dietary model. Thus, longitudinal analysis of the burden of dietary risks in Europe becomes an essential tool for informing public health strategies and managerial policies geared toward organizational health.

3. Research methodology

This study adopts a comparative longitudinal design, aiming to analyze the regional dynamics of dietary risk burden in Europe between 1990 and 2023. The methodological approach is quantitative, based on multilevel statistical modeling, appropriate to the hierarchical structure of the data and necessary for the simultaneous examination of variations over time and differences between states and regions.

The data used come from the *Global Burden of Disease (GBD)* database, developed by the *Institute for Health Metrics and Evaluation (IHME)*. The indicator analyzed is the proportion of the total burden of disease attributable to dietary risks, expressed as a share of total DALYs.

This aggregate indicator reflects the cumulative impact of the main nutritional risk factors, including:

- insufficient consumption of whole grains, legumes, and fruits,
- excessive sodium intake,
- and other dietary components associated with noncommunicable diseases.

The indicator integrates both mortality (Years of Life Lost – YLL) and morbidity (Years Lived with Disability – YLD) components, providing a comprehensive measure of the impact of nutrition on population health.

The sample includes 42 European countries, grouped into six geographical regions: Northern, Western, Southern, Central, Eastern, and Balkan. The period analyzed covers 34 years (1990–2023), resulting in a balanced panel of 1,428 observations (42 × 34). The unit of analysis is the country–year observation.

The Northern region included Denmark, Finland, Iceland, Norway, and Sweden. The Western region included Germany, Austria, Belgium, France, the Netherlands, Luxembourg, Ireland, the United Kingdom, and Switzerland. The Southern region included Italy, Spain, Portugal, Greece, Cyprus, and Malta. The central region was represented by Poland, the Czech Republic, Slovakia, Hungary, and Slovenia. The eastern region included Romania, Bulgaria, Estonia, Latvia, Lithuania, Ukraine, Belarus, and the Republic of Moldova. The Balkan region included Serbia, Croatia, Bosnia and Herzegovina, Montenegro, North Macedonia, and Albania. In addition, Turkey, the Russian Federation, and Georgia were included, which, within the classification used, were assigned to the eastern region to ensure geographical and analytical consistency.

The variables used are:

· The dependent variable is Y_{it} – the proportion of the burden of dietary risks in the total burden of disease *(val).*

· The time variable is *year_c* – the year centered relative to 1990 (year − 1990), used to facilitate the interpretation of the intercept and to reduce potential collinearity issues.

· The region variable is introduced as a fixed effect to capture structural differences between geographical groups.

A time × region interaction was also included to test the hypothesis of distinct regional trajectories in the evolution of dietary risk burden.

Given the hierarchical nature of the data (repeated observations over time within countries), a *linear mixed effects model* was used.

The general specification of the model is:

$$Y_{\{it\}} = \beta_0 + \beta_1 Year_{\{it\}} + \beta_2 Region_i + \beta_3 \left(Year_{\{it\}} \times Region_i\right) + u_i + \varepsilon_{\{it\}} \qquad (1)$$

where: *i* represents the country, *t* the year of observation, captures the variation specific to each country, and $\varepsilon_{\{it\}}$represents the residual error.

To model the dependence between successive observations over time within the same country, a first-order autoregressive (AR(1)) structure was introduced.

This specification is justified by the persistent nature of public health indicators, which tend to show a strong correlation between consecutive values over time, reflecting the inertia and gradual evolution of epidemiological phenomena.

The random intercept allows for the capture of unobserved structural differences between countries, i.e., different initial levels of dietary risk burden that are not fully explained by regional affiliation.

The model parameters were estimated using the Restricted Maximum Likelihood (REML) method, which is suitable for mixed-effects models and longitudinal data sets.
The analysis pursued three main objectives:

1. Identifying the existence of a general trend in the burden of dietary risks at European level;
2. Testing structural differences between regions;
3. Assessing the existence of distinct regional trajectories by examining the significance of the time × region interaction.

Model adequacy was assessed using informational criteria (AIC, BIC, and -2 Restricted Log Likelihood), and parameter significance was analyzed using t-tests and 95% confidence intervals.
The use of a multilevel model is justified by the hierarchical structure of the data and the need to avoid underestimating standard errors in simple regressions applied to panel data. The introduction of the AR(1) structure allows for realistic modeling of temporal dependence, given the slow and persistent nature of changes in public health.

Although the model does not include additional explanatory variables of an economic or institutional nature, the design adopted allows for a robust assessment of the structural dynamics of dietary risks and provides a solid basis for interpreting the implications for workforce health and organizational sustainability.

4. Results

The final data set included 1,428 valid observations, corresponding to a panel of 42 European countries analyzed over the period 1990–2023. The distribution of observations by region is presented in Table 1.

Table 1. Distribution of observations by region

Region	Frequency	Percent (%)	Valid percent (%)	Cumulativ percent (%)
Nordic	170	11.9	11.9	11.9
Western	306	21.4	21.4	33.3
Southern	306	21.4	21.4	54.8
Central	170	11.9	11.9	66.7
Eastern	272	19.0	19.0	85.7
Balkans	204	14.3	14.3	100.0
Total	**1428**	**100.0**	**100.0**	

The distribution is relatively balanced across regions, with higher shares for Western and Southern Europe (21.4% each), followed by Eastern Europe (19.0%). The Northern and Central regions have identical shares (11.9%), and the Balkan region accounts for 14.3% of the total observations. This structure supports robust comparisons between regions and reduces the risk of distortions caused by major sample imbalances.

The coding used for the regional variable is presented in *Table 2*.

Table 2. Coding of the "region" variable

Valoare	Regiune
1	Nordic
2	Western
3	Southern
4	Central
5	Eastern
6	Balkans

This numerical coding was used in the mixed-effects model estimation to capture regional differences and their interaction with the time variable. The model structure (fixed effects, random effects, and repeated effects) is presented in *Table 3.*

Table 3. Model size

		Number of Levels	Covariance Structure	Number of Parameters	Subject Variables	Number of Subjects
Fixed Effects	Intercept	1		1		
	year_c	1		1		
	region	1		1		
	year_c * region	1		1		
Random Effects	Intercept[b]	1	Variance Components	1	location_name	
Repeated Effects	year	34	First-Order Autoregressive	2	location_name	42
Total		39		7		
a. Dependent Variable: val.						
b. As of version 11.5, the syntax rules for the RANDOM subcommand have changed. Your command syntax may yield results that differ from those produced by prior versions. If you are using version 11 syntax, please consult the current syntax reference guide for more information.						

The model included fixed effects for time (year_c), region, and the interaction between time and region, a random intercept at the country level, and a first-order autoregressive (AR(1)) structure for repeated observations over time. The introduction of the AR(1) structure is justified by the temporal dependence between the annual values of the indicator within the same country: levels in one year are strongly influenced by levels in the previous year, reflecting the gradual evolution of public health phenomena. The random intercept captures unobserved structural differences between countries (different initial levels), which are not fully explained by regional affiliation.

The informational criteria for the estimation are presented in *Table 4.*

Table 4. Criterii informaționale

-2 Restricted Log Likelihood	-12018.44807473
Akaike's Information Criterion (AIC)	-12012.44807473
Hurvich and Tsai's Criterion (AICC)	-12012.43117332
Bozdogan's Criterion (CAIC)	-11993.66439945
Schwarz's Bayesian Criterion (BIC)	-11996.66439945
The information criteria are displayed in smaller-is-better form.	
a. Dependent Variable: val.	

In mixed-effects model analysis, lower values of informational criteria indicate a better fit of the model. The consistency of these values suggests that the adopted specification adequately describes the structure of the longitudinal data.

The estimates of fixed effects are presented in Table 5.

Table 5 Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	.069	.008	52.470	9.033	<.001	.054	.085
year_c	-.001	.000	38.977	-8.160	<.001	-.002	-.001
region	.006	.002	52.470	2.774	.008	.002	.010
year_c * region	.000	4.573E-5	38.977	4.784	<.001	.000	.000
a. Dependent Variable: val.							

The intercept is estimated at 0.069 ($p < 0.001$), indicating that in the reference year (1990, since year_c is centered on 1990), the average burden of dietary risks in the European sample was approximately 6.9% of the total disease burden.

The coefficient associated with the time variable (year_c = -0.001, $p < 0.001$) is negative and statistically significant, highlighting a systematic decrease in the burden of dietary risks over the period analyzed. Interpreted in units of proportion, this result indicates an average annual reduction of approximately 0.001, equivalent to about 0.1 percentage points per year, suggesting a gradual improvement in the nutritional profile at European level.

The effect of the "region" variable is positive and significant ($\beta = 0.006$, $p = 0.008$), confirming the existence of structural differences between regions in terms of the level of dietary risk burden (at the reference point).

The time × region interaction is also statistically significant ($p < 0.001$), indicating that regions have not evolved uniformly over time. This result confirms the existence of distinct regional trajectories of dietary risk burden and suggests that the rate of reduction differs between regions, which is relevant for the design of differentiated public health policies.

Estimates of covariance parameters are presented in Table 6.

Table 5 Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repeated Measures	AR1 diagonal	.000	.000	1.632	.103	6.497E-5	.001
	AR1 rho	.974	.016	60.668	.000	.914	.992
Intercept [subject = location_name]	Variance	.000	.000	1.567	.117	6.539E-5	.001
a. Dependent Variable: val.							

The autoregressive coefficient AR(1) is very high ($\rho = 0.974$, $p < 0.001$), indicating a strong temporal dependence between successive observations within the same country. This value suggests considerable structural inertia: annual changes in the burden of dietary risks are gradual and strongly influenced by previous levels.

The variance of the random intercept at country level does not reach the threshold of statistical significance ($p = 0.117$). This result suggests that, after including the region and the temporal trend, the residual heterogeneity between countries is relatively low; however, the magnitude of the estimate appears very small in the output (possibly as a rounding effect), which is why the interpretation must be made with caution.

Overall, the results confirm a downward trend in the burden of dietary risks in Europe between 1990 and 2023, alongside the persistence of significant regional differences and divergent trajectories. The very strong temporal dependence highlights the fact that improvements in nutrition and public health tend to require consistent and sustained interventions over the long term. From an organizational perspective, these findings suggest that the improvement in the health environment of the workforce has been gradual but uneven across regions, which may contribute to structural differences in the functional capacity and productivity of employees at the macroeconomic level.

5. Discusion

The results confirm a downward trend in the burden of dietary risks in Europe between 1990 and 2023, while highlighting the persistence of significant regional differences and divergent trajectories. This combination of aggregate progress and regional inequality provides a complex picture of the European nutritional transition and raises relevant questions about the effectiveness and consistency of public health policies implemented at the continental level.

The significant decline in the indicator analyzed is consistent with the literature documenting the reduction in cardiovascular mortality associated with dietary risks in Europe (Pörschmann et al., 2024). Although the model used does not allow for the establishment of direct causal relationships, the downward trend may reflect the cumulative effects of nutritional interventions, food safety regulations, and prevention campaigns carried out in recent decades. However, the moderate pace of reduction and the high value of the autoregressive coefficient ($\rho = 0.974$) indicate pronounced structural inertia. The evolution of dietary risk burden is strongly dependent on previous levels, suggesting that changes in the nutritional profile of the population are gradual and influenced by long-standing economic, cultural, and institutional factors.

The statistical significance of the regional effect and the interaction between time and region confirms that the dynamics of dietary risks are not uniform across Europe. Regions show initial structural differences and follow distinct trajectories of burden reduction. These results are consistent with research on economic and institutional inequalities in Europe, which highlights the role of socioeconomic development, poverty, and institutional capacity in shaping access to healthy food and preventive interventions (Jula et al., 2024). Therefore, the regional disparities identified may reflect not only cultural preferences but also structural differences in the organization of economic and health systems.

The persistence of these differences has direct implications for the health of the workforce. Cardiovascular diseases and other diet-related chronic diseases contribute to reduced functional capacity and increased medical costs (Pörschmann et al., 2024; Robertson et al., 2004). In the context of rising obesity prevalence and the expanding burden of chronic diseases (Grosso & Cesare, 2021), regions with higher levels of dietary risks may experience additional vulnerabilities at the organizational level, manifested in absenteeism, presenteeism, and decreased productivity.

From an organizational perspective, the results highlight that the health of the working population is a structural determinant of economic performance. Organizations operate in regional contexts characterized by different levels of public health, and these differences can indirectly influence competitiveness and economic sustainability. The literature highlights the link between employee health and organizational performance, as well as the importance of integrating wellness programs into management strategies (Robertson et al., 2004).

The regional dynamics of dietary risks must also be interpreted in the context of labor mobility and socio-demographic transformations. Research on refugee integration and transnational mobility indicates that access to the labor market and socio-economic conditions can influence dietary behaviors and lifestyle (Teodorescu et al., 2024). In a Europe characterized by cultural diversity and migration, organizational health policies must adopt inclusive and context-specific approaches.

In addition, the results must be analyzed within the broader framework of dietary sustainability. Economic disruptions and global crises can amplify nutritional vulnerabilities (Rippin et al., 2020),

and the experience of the COVID-19 pandemic has highlighted the fragility of educational and medical infrastructures in the face of systemic shocks (Aivaz & Teodorescu, 2022). In this context, the nutritional health of the population becomes an integral part of organizational resilience and the ability of societies to manage systemic risks.

Validated dietary models, such as the Mediterranean or Nordic diets, have demonstrated potential in reducing the risks of chronic diseases (Renzella et al., 2018). However, the slowdown in progress in recent years (Riccardi et al., 2020) suggests that current policies are not sufficient to ensure regional convergence. There is therefore a need to develop integrated multisectoral strategies that link public health, nutrition education, food system sustainability, and organizational involvement.

Overall, the results highlight that reducing the burden of dietary risks in Europe is a real but uneven process characterized by structural inertia. From a public health perspective, these findings justify regionally differentiated interventions. From a managerial perspective, they indicate that promoting healthy eating and integrating health into organizational strategies are fundamental investments for maintaining long-term economic performance and sustainability.

6. Conclusions and implications for public policy and management

This study analyzed the long-term evolution of the burden of dietary risks in Europe between 1990 and 2023, using a linear mixed-effects model that allowed for the simultaneous capture of temporal and regional variations. The results indicate a general downward trend in the burden of dietary risks, but this evolution is not uniform across regions. Structural differences persist and regional trajectories diverge, suggesting that the process of improving the European nutritional profile remains uneven and characterized by significant structural inertia.

The strong autoregressive nature of the indicator analyzed highlights the fact that changes in nutrition and public health are slow and dependent on previous levels. This finding suggests that one-off or short-term interventions are insufficient to bring about sustainable change. Integrated and coherent strategies are needed, maintained over the long term, combining nutrition education, regulation of food systems, improved equitable access to healthy food, and community interventions adapted to the local context.

From a regional perspective, the results indicate that uniform European policies can produce different effects depending on the economic, cultural, and institutional specificities of each region. Regions with higher levels of dietary risk burden may require more intensive interventions that are better calibrated to local realities. European nutritional convergence is not an automatic process, but one conditioned by institutional capacity, policy coherence, and the stability of the socio-economic framework.

The implications for organizational management are significant. The burden of dietary risks indirectly influences workforce health, functional capacity, and productivity. The regional differences identified suggest that organizations - especially multinationals - operate in distinct epidemiological environments, which can affect performance and employee health-related costs. In this context, promoting healthy eating habits at the organizational level becomes a strategic component of long-term sustainability.

Organizational wellness programs, facilitating access to healthy food options in the workplace, and integrating health into corporate social responsibility strategies can help reduce vulnerabilities associated with dietary risks. Partnerships between the public and private sectors can also accelerate the implementation of effective nutritional interventions tailored to regional specifics.

In a broader context, the results highlight that the health of the working population is a structural determinant of economic performance and organizational sustainability. Investments in nutritional health should not be viewed exclusively as medical prevention measures, but as fundamental strategies for strengthening human capital and economic resilience.

In conclusion, reducing the burden of dietary risks in Europe is an important step forward, but it is not enough to eliminate regional disparities and structural vulnerabilities. Future approaches must be integrated, multisectoral, and focused on both public health and organizational sustainability to support the balanced and sustainable development of the European workforce.

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