

A Country–Sector Framework for SME Economic Contribution: Evidence from Central and Eastern Europe

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Abstract. *SMEs are often considered the backbone of Europe and their economic contribution is usually assessed in terms of performance measures like employment growth or innovation output. This research builds on a country–sector framework reinterpreting the economic contribution of SMEs as a structural phenomenon, determined by the turnover distribution across industries. The two complementary regression models estimated in this study map ten Central and Eastern European countries for the years 2021–2023, with data obtained from Eurostat Structural Business Statistics. The first model compares production and service sectors, while the second explores structural differences across detailed NACE industries. The findings show both statistically significant and sizeable economic differences in SME turnover among the sectors. SME turnover in the services sector significantly exceeds that in the production sector, with wholesale and retail trade emerging as the largest SME sector in all countries. A few sectors demonstrate persistently low SME turnover shares in the long term, suggesting scope for higher structural participation of SMEs. The results illustrate that SME economic performance is very concentrated in a few sectors and not evenly distributed. The study conceptually shifts the discussion from aggregate SME performance to structural economic composition that provides a sector-sensitive framework for SME policy and regional economic development.*

Keywords: Small and medium-sized enterprises (SMEs); sectoral structure; turnover concentration; Central and Eastern Europe; structural economic analysis; fixed-effects regression; industry heterogeneity.

Introduction

Small and medium-sized enterprises (SMEs) are often been referred to as the backbone of national economies (Savlovski & Robu 2011). Widely-used academic approaches to SMEs have largely framed an SME's contribution through empirical measures of performance, such as employment growth, productivity or innovation output (Lukács 2005), or firm success/survivability. While these metrics are interesting, they hide a structural question: in which sectors do SMEs actually create economic weight? Sectoral composition matters. The sectors that dominate economic activity also influence national growth trajectories. However, that perspective is often missing in academic literature – how SMEs create value across sectors. Research on SMEs is primarily oriented towards a specific sector or general cross-national comparisons and there are few evaluations of turnover concentration across industries within national economies. This article addresses that gap. It asks three research questions:

RQ1: How is SME economic contribution assessed across sectors in existing literature, and what are the gaps that exist regarding structural sectoral analysis?

RQ2: What structural patterns can be revealed in SME turnover shares across sectors within Central and Eastern European countries?

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RQ3: Which sectors are consistently less dominated by SMEs in terms of percentage share of turnover across Central and Eastern European countries?

Two hypotheses are tested empirically that are building on the research questions:

H1: SME turnover differs systematically between production and service sectors, controlling for country and time.

H2: SME turnover shares differ significantly across NACE sectors, with wholesale and retail trade (Sector G) exhibiting the highest average turnover share within countries.

The study estimates two corresponding regression models, a MacroSector comparison and sectoral model at NACE level based on the Eurostat Structural Business Statistics for 10 Central and Eastern European economies over 2021-2023 period. The findings indicate statistically significant differences between production/ service activities and strong concentration of SME turnover in the field of wholesale & retail trade across countries.

The contributions of this paper are twofold. In principle, it walks through a country–sector framework for SME economic contribution analysis that redirects the narrative away from measuring performance to describing structural economic contribution. It achieves this empirically by providing cross-country evidence from Central and Eastern Europe that shows not only uneven distribution of SMEs activity across sectors, but also concentration into a few industries. The structural perspective challenges the intrinsic link between SME expansion and economic development, by focusing on sectoral concentration patterns that characterize national economies.

Literature review

SMEs' economic contribution

Studies that examine SMEs economic contribution often only highlight their predominantly large number or macroeconomic importance (Kersten et al., 2017). Existing (cross-country) comparative research indicates that small and medium-sized enterprises are the majority of all firms, as well as providing large proportions of employment share and value added that is validating their importance in economic policy-making and entrepreneurship research (Schmiemann, 2008). Ayyagari, Beck and Demirgüç-Kunt (2007) build a cross-country database that better allows for comparisons across countries on SME indicators which they conceptualize primarily in terms of aggregate shares in employment and GDP for SMEs using institutional- or business-environment characteristics to account for the observed variation.

In this literature, the economic contribution of SMEs is mainly operationalized through performance-based measures. At the macro level, contribution is calculated as employment share in SMEs, value added or number of firms, usually assessed against growth dynamics and macroeconomic conditions (Cicea et al., 2019; Karadag, 2016). The monitoring frameworks at the EU level do indeed follow suit, using SME shares in employment as well as value added for total extraterritorial non-financial business economy. Empirical studies based on firm levels identify profitability, productivity, financial structure and innovation outcomes as main indicators of typical SMEs contribution (Beck et al., 2005; Lukács, 2005; Lucian et al., 2018). Several empirical studies have analyzed the determinants of SME competitiveness and performance by using firm-level evidence from transition economies (Vladimirov, 2016; Dimitrov, Tassev & Nestorov, 2021) that are identifying factors such as: innovation capabilities, strategic factors, or internationalization as key for SMEs development.

These approaches recognize sectoral differences, but mostly treat them as contextual controls rather than analytical objects. Sector is introduced as an explanatory variable for performance, productivity or innovation outcomes (Hall et al., 2009; Levchenko et al., 2021), and

reported descriptively within broader growth-accounting exercises (Armeanu et al., 2015). In other instances, sectoral data functions to explain the performance of SMEs as opposed to looking at where SME economic activity is structurally positioned within national economies.

This performance orientated orientation leads to an important limitation. The structure of SME economic activity across industries has been analysed comparatively in the context of existing research where focus is on outcomes, for example growth, productivity or profitability. In particular, it does not identify what sectors consistently dominate SME turnover and which appear decidedly marginal across geographies. However, if sectoral structure is indeed a determinant of more aggregate economic outcomes (Kaldaru & Paas, 2015), the lack of even a systematic sector-level lens on SME contribution represents an obvious gap in existing literature. To fill this gap, we need to move our analytical lens from performance distribution towards structural allocation. This proposal in response to RQ1 re-conceptualises SMEs multidirectionally economic contribution as a country – sector configuration, with an empirical investigation of how levels and shares of SME turnover are allocated over macro-sectors and NACE industries within national economies.

Sectoral perspectives on SMEs

The sectoral structure has for a long time been acknowledged as one of the main determinants of economic development. The literature on SMEs role for GDP and economic growth has evolved as economies or sectors changed worldwide over time. The earliest research stressed the importance of manufacturing as its main engine for growth in lower income economies, and agriculture and services had different roles depending on level of development. Recent research emphasizes the growing role of services, particularly for advanced and knowledge-based services, as engines of growth and innovation (Pereira et al., 2024).

The nature of services have been re-thought outside the Baumol's cost disease. Emerging evidence suggests that modern and knowledge-intensive services could be a driver of productivity and growth, especially in advanced economies as well as rapidly developing economies (Bacovic et al., 2022). This idea contradicts previous research that more service provision means stagnant or lowering productivity (Di Meglio et al., 2015; Trofimov, 2023). In contrast to the view that sectoral shifts are necessarily growth-declining, recent research emphasizes the quality of those changes and the composition across sectors.

Performance-based indicators largely account for how SME economic contribution is measured, though an alternative body of literature recognizes the unequal distribution of SMEs among sectors and its non-trivial significance and economic consequences. Manufacturing SMEs are more productivity- and export-oriented but also encounter more significant issues with capital intensity, technological upgrading, and global competition (Hall et al., 2009). On the other hand, overall there are more service-sector SMEs and they employ a larger portion of population but most often engage in low-productivity or local embedded activities that lack tangible growth opportunities. These sectoral differences imply that the total economic contribution of SMEs depends not only on firm-level performance but also on how SME activity is distributed across sectors. Also innovation-oriented research strengthens this argument by showing that sectoral context impacts SMEs over their innovative behaviors and performance outcomes (Hall, Lotti & Mairesse, 2009; Armeanu et al., 2015).

In addition to firm-level evidence, region- and macroeconomics-based research has shown that sectoral structure is strongly related to the level of income or development stage, highlighting that 'what an economy produces' is as important as how efficiently it is produced (Kaldaru & Paas, 2015). Cross-regional comparisons highlight diverging structural trajectories: rapid

industrialization and service upgrade in parts of East Asia, noteworthy underindustrialisation across a number of African economies as well as impacts of growing service sector inside South Asia (Harvie & Lee, 2002). The share and productivity level of the service sector are higher in developed economies than developing ones that remain relatively more reliant on agriculture or traditional manufacturing (Bhattacharya, 2021). Sectoral composition has also been related to income differences, as well as convergence processes in Central and Eastern Europe (Kaldaru & Paas, 2015).

Especially in comparative multi-country settings, however, such insights rarely translate into deeper explorations of the structure of SMEs' sectoral footprint within national economies. In the SME literature, sector generally appears in empirical models as a categorical control variable intended to capture performance effects rather than describe the economy (not specifically indicating where economic activity happens). In the case of sectoral data, for example, SME shares in gross value added by industry: this tends to be reported and then used either descriptively or as inputs into production-function or growth-accounting models, rather than being seen as part of the comparative analysis. (Armeanu et al., 2015; Cicea et al., 2019).

Consequently, a conceptual chasm continues to exist between the recognition of sectoral heterogeneity and its operationalization as an essential dimension in specifying the economic contribution of SMEs. Current research often investigates whether SMEs within some industries are more productive or innovative, but does not identify which sectors comprise most of the SME economic activity and whether these patterns persist internationally across countries or over time. None has such a structural baseline, making it difficult to contextualise performance-based findings or assess the broader economic role of SMEs within national production systems.

This article extends the sectoral findings of existing literature but departs from its prevailing treatment of sector as a moderating explanatory factor. It elaborates on SME turnover distribution by macro-sectors and detailed NACE industries, treating sectoral structure as an outcome in itself. This allows structural heterogeneity to be studied in a systematic manner and is an important connection between research on performance at the firm-level with discussions of economic structure and development at the macro level.

Methodology

Data and sample

This study is using open-access data from the Eurostat Structural Business Statistics (SBS) database. The SBS data set contains harmonized firm-level aggregates across EU member states, disaggregated by enterprise size class and NACE Rev. 2 activity classification. This empirical sample consisted of 10 CEE countries (Bulgaria, Czechia, Estonia, Greece Croatia Hungary Poland Romania Slovenia/Slovak.) These countries share similar institutional history as either post-transition or East European economies; yet vary in sectoral economic structure.

The definition of SMEs is as per the classification by European Commission which defines SME's (less than 250 employees). The analysis utilizes aggregated indicators at the SME level, rather than microdata on individual firms. The time-frame covered is 2021–2023 based on data availability across countries and sectors being consistent at the point of extraction. Despite the presence of 2024 data in the SBS database, these were left out so as to maintain harmonisation and avoid imbalance due to incomplete reporting.

Two structured datasets were constructed:

1. A country–year–MacroSector dataset for estimating differences between production and service activities that represent Model 1 of the study.

2. A country–year–NACE dataset measuring SME turnover shares across 11 NACE sectors: C, F, G, H, I, J, K, L, M, N, R – that represent Model 2 of the study.

The resulting panel is structured but not fully balanced in the strict econometric sense, as sectoral aggregation reduces the number of observations per country-year to fixed structural units rather than firm-level counts.

Variables and model specification

The study employs two regression models to test structural differences in the economic contribution of SMEs across sectors in ten Central and Eastern European (CEE) countries, namely: BG, CZ, EE 1 EL; HR; HU PL RO SI SK.

Model 1 – MacroSector Structural Difference (H1)

Model 1 tests whether SME turnover differs between production and service sectors within countries over time. Turnover is in levels (million EUR) as reported by Eurostat (indicator: NETTUR_MEUR), which means the model can pick up structural differences through economic scale and also country fixed effects absorb national size effect. Table 1 shows the Model 1 variables.

Table 1. Variables: Model 1 (MacroSector)

Variable	Type	Definition	Coding / Reference
SME Turnover	Dependent	Total SME turnover million EUR at country, MacroSector, year level	Continuous
MacroSector	Independent	Broad sector classification	1 = Production; 0 = Services
Y_2022	Control	Year dummy	1 = 2022; ref: 2021
Y_2023	Control	Year dummy	1 = 2023; ref: 2021
BG, CZ, EE, EL, HU, PL, RO, SI, SK	Controls	Country fixed effects	HR (Croatia) = reference

Source: Authors' own research.

Model specification:

$$SME\ Turnover = b_0 + b_1 MacroSector + b_2 Y_2022 + b_3 Y_2023 + Country_dummies + error$$

H0(1): $b_1 = 0$ (no difference between production and services)

H1: SME turnover differs systematically between production and service sectors.

Model 2 – NACE-Level Structural Concentration (H2)

The second model evaluates whether SME turnover shares differ systematically across detailed industries that are defined by the NACE sector. The dependent variable is SME Turnover Share, which is defined as the proportion of total SME turnover within a country-year accounted for by a given NACE sector.

Model specification:

$$SME\ Turnover\ Share = a_0 + Sector_dummies + error$$

Where:

- Sector_dummies represent all NACE sector dummy variables.
- SPSS automatically excludes one sector to use as the reference category.
- The constant (a_0) refers to the average turnover share of the reference sector.

- The coefficient of each sector measures the difference in turnover share that is relative to that reference sector.

This specification of the equation represents structural composition (rather than magnitude of performance), which is a primary variable for identifying sectoral dominance. This normalization ensures that sectoral shares add up to 1 in every country-year. Table 2 shows the Model 2 variables.

Table 2. Variables: Model 2 (NACE-Level)

Variable	Type	Definition	Coding / Reference
SME Turnover Share	Dependent	Sector SME turnover divided by total SME turnover within country-year	Continuous (0–1)
Sector dummies	Independent	NACE sector dummy variables (C, F, G, H, I, J, K, L, M, N, R)	Sector x = 1 if observation belongs to sector x; 0 otherwise

Source: Authors' own research.

H0(2): All sectors coefficients are jointly equal to zero. There are no structural differences in SME turnover shares across industries.

H2: Turnover shares of SMEs differ significantly across NACE sectors, with wholesale and retail trade (G) representing the dominant sector within countries.

Additionally, the study also includes into the analysis the following data: SME employment by size class; SME firm productivity (turnover per enterprise); Sectoral employment shares. These variables are used descriptively (but are not included in the regression models) to clarify the role of different sectors across countries and depict possible trends in sectoral distribution of SMEs.

Limitations

The study empirical analysis is based on aggregated Structural Business Statistics, instead of firm-level microdata. Specifically, the results reveal structural sectoral patterns at a country level but fail to account for intra-sector heterogeneity or firm-level dynamics.

Turnover serves as the principal metric for capturing economic impact. Although turnover is a good proxy for market activity and competitiveness within the sector, it does not measure value added directly nor productivity or profit. Interpretation of findings concerns structural economic weight, not efficiency or welfare.

The time range (2021–2023) represents the period of recovery from post-pandemic times. While this may involve short-run shifts, the structural patterns of sectoral dominance across countries indicate that they are not entirely due to cyclical factors.

Last, but not the least, this sample has only Central and Eastern European economies. Although this increases institutional comparability, extrapolation beyond the regional context remains an empirical issue.

Results and discussions

This section starts by reporting and discussing descriptive evidence that is based on the structure of SME economic activity in Central and Eastern Europe. It focuses on three complementary dimensions: the internal employment structure of SMEs by firm size, the evolution of SME value added by size and country, and the sectoral allocation of SME turnover across economic activities. The descriptive evidence presented directly addresses and answers to RQ2 and RQ3. Together, the discovered patterns provide context that is used for the subsequent regression analysis and inform

the interpretation of the structural role of SMEs across industries. The regression results for the two models (H1 and H2) are then reported and discussed.

SME employment structure by firm size

SME employment share by firm size across countries is provided in table 3. There is a clear and consistent pattern that emerges: SME employment is highly concentrated in micro and small enterprises. Small-sized firms of up to 9 employees are responsible for between 32% (in Bulgaria) and 52% (in Slovakia) of total SME employment, with the average share across countries at 41%. In each country, around 70% of the SME workforce is employed by firms with up to 49 employees.

Table 3. SME Employment Share by Size

SME Size / Empl. Share	BG	CZ	EE	EL	HR	HU	PL	RO	SI	SK	AVERAGE
0-9	32%	40%	40%	40%	36%	42%	43%	38%	40%	52%	41%
2-9	21%	15%	17%	24%	21%	21%	21%	18%	17%	14%	20%
10-19	11%	9%	10%	11%	11%	10%	9%	10%	10%	7%	10%
20-49	14%	12%	13%	12%	12%	11%	10%	14%	12%	9%	12%
50-249	22%	23%	20%	12%	19%	16%	17%	21%	21%	17%	18%

Source: Author's calculations based on Eurostat Structural Business Statistics (SBS).

Despite being a narrower (but still well-present) portion of employment, medium SMEs (50–249 employees) in different countries represent between 12% (in Greece) and up to 23% (in Czech Republic). The sample average is 18%. The fact that these distributions are highly similar across-countries suggests a shockingly fragmented SME employment structure, which seems to be unaffected by the scale of national economic development. Most importantly, this evidence describes the nature of SME sector and does not indicate industry specialization or classification.

SME turnover by firm size and country

Additional insight to the employment landscape comes from descriptive evidence relating SME turnover, which highlights dynamics of scale and growth. SME value added growth during 2021–2023 was widespread across all countries, suggesting the post-pandemic recovery of SME activity in their economies. It grows on every individual size class, but the level of absolute contribution changes greatly by the firm-size and country.

Although micro and small firms account for a large share of overall SME turnover, medium sized SMEs (50–249 employees) usually produce more value added per employee than smaller size firms. This pattern implies that, among the SME population medium-size firms have an outsized impact as far as building revenues and growing economic activity. When taken in a descriptive capacity, such trends highlight areas within the SME space that may be where growth opportunities reside — and do not imply differences across efficiency or productivity.

Sectoral allocation of SME turnover across NACE activities

The sectoral composition of SME turnover gives a direct indication on the sectors in which SMEs are economically active. SME turnover shares by NACE sector for each country are presented in Table 4. The descriptive distribution offers a first insight by highlighting the overall structural

pattern of sectoral concentration in SME turnovers across CEE countries and constitutes therefore the main response to RQ2.

Table 4. SME Turnover Shares by NACE

Country Net Turnover % by NASCE	C	F	G	H	I	J	K	L	M	N	R
BG	14%	8%	54%	6%	2%	4%	4%	1%	3%	2%	1%
CZ	20%	10%	44%	4%	2%	4%	3%	3%	6%	3%	1%
EE	19%	10%	43%	7%	2%	5%	2%	4%	4%	3%	1%
EL	15%	6%	51%	6%	7%	2%	1%	1%	6%	3%	2%
HR	17%	12%	38%	6%	5%	4%	6%	2%	6%	3%	1%
HU	17%	11%	42%	6%	3%	4%	3%	3%	6%	4%	1%
PL	18%	12%	41%	7%	2%	4%	4%	3%	5%	3%	0%
RO	15%	13%	46%	8%	3%	4%	2%	2%	5%	3%	1%
SI	21%	10%	41%	8%	3%	4%	2%	1%	8%	2%	1%
SK	20%	9%	38%	6%	2%	4%	2%	3%	8%	6%	2%
AVERAGE	18%	10%	44%	6%	3%	4%	3%	3%	6%	3%	1%

Source: Author's calculations based on Eurostat Structural Business Statistics (SBS).

Wholesale and retail trade (NACE G) is the largest SME sector in all countries, contributing between 38% (in Croatia & Slovakia) of total SMEs turnover to 54% in Bulgaria with an average across the sample of 44%. Such dominance is both large and shockingly uniform across countries. The observed structural asymmetries are surprisingly constant across countries.

The next largest SME sectors are in manufacturing (NACE C) and construction (NACE F). For SMEs, the share of turnover from manufacturing is 14–21% (average 18%) and construction contributes 6–13% (average 10%). These three sectors (NACE G, C, F) – wholesale and retail trade, manufacturing as well as construction, constitute around 72% of total SME turnover on average that indicates their importance in the overall economic activity dominated by SMEs.

By contrast, there are several sectors that exhibit persistently low SME turnover shares across all countries. These are: arts, entertainment, and recreation (NACE R) that typically account for 0–2% of SME turnover. Other sectors such as accommodation and food services (NACE I), real estate (NACE L), and financial services (NACE K) generally remain below 3–4%. The consistency of these low shares across countries suggests that SMEs play a structurally limited role in these activities where eventually large enterprises or public sector organizations dominate them.

This evidence on sectoral level directly addresses RQ3 by identifying industries that are consistently less SME-dominated across countries such as NACE R as well as NACE I, L and K that are found to remain structurally marginal in terms of turnover share. The patterns show that SME economic activity is even more concentrated in a few sectors, and other industries are probably dominated by big firms or government agencies or public sector alternatives.

The descriptive evidence can be summarized by three structural regularities: (1) micro and small firms dominate SME employment; (2) value added produced by SMEs has risen across countries, with medium-sized firms playing an important role in this increase; and (3) SME turnover is concentrated in a limited number of economic sectors. The regression analysis follows the logic from the discovered patterns. The two regression models add further formal testing in

order to determine whether the differences in sectoral turnover among SMEs and detailed NACE industries persist after controlling for potential country and time effects.

MacroSector Regression Results (Model 1: H1)

Fixed-effects OLS estimates for the comparison of SME turnover between production and service sectors across countries are presented in Table 5.

The results indicate that at 1% significance level, we reject the null hypothesis ($H_0(1)$): no difference between production compared to service sectors.

There is a negative and statistically significant ($B = -19,362.35$; $p < 0.001$) coefficient for **MacroSector**. As MacroSector is coded 1 = Production, and 0 = Services, this results indicates that production sector has on average €19.36 billion less SME turnover than service sector within the same country-year observation when controlling for country and year effects.

Thus, these results provide strong empirical support for H1, and suggest that SME economic activity in Central and Eastern Europe is structurally more concentrated in service sectors than in production-oriented sectors.

Year effects indicate that turnover of SMEs grew significantly in 2023 compared to the base year (2021), matching post-pandemic recovery dynamics. The coefficient for 2022 is positive but not statistically significant, implying that the structural expansion took hold more strongly in 2023.

The model has a very high explanatory power (Adjusted $R^2 = 0.91$) that is predominantly driven by cross-country variation in the economic scale of SMEs captured through country fixed effects. Crucially, the MacroSector coefficient stays significant when also controlling for country fixed-effects that is highlighting that there is a strong structural difference. This is a complementary finding at the macro-sector level to RQ2, as it indicates that SMEs turnover has an industry-specific trend and that it is concentrated in services sectors across CEE countries.

Table 5. MacroSector Regression Results (Dependent Variable: SME Net Turnover, million EUR)

Variable	Coefficient	(Std. Error)
Production (vs Services)	-19,362.35***	(2,143.88)
Y_2022	3,999.71	(2,625.70)
Y_2023	7,472.86**	(2,625.70)
Observations	54	-
R ²	0.93	-
Adjusted R ²	0.91	-
F-statistic	49.21***	-
Notes: *** $p < 0.01$, ** $p < 0.05$ Country fixed effects include BG, CZ, EE, EL, HU, PL, RO, SI, SK (HR omitted as reference). Base year: 2021.		

Source: Author's own elaboration from SPSS regression output.

NACE-Level Regression Results (Model 2: H2)

Model 2 looks at structural heterogeneity in more disaggregated industry categories. The model examines sectoral differences in SME turnover shares. Because the dependent variable is the share of total SME turnover in each sector for a particular country-year, sector indicators are included as only fixed effects (where Manufacturing, Sector C, is the excluded reference category). The model

specification is highly significant ($F(9, 288) = 667.78, p < 0.001$) and very well-fitted (adj. $R^2 = 0.95$). This regression also addresses the second research question and yields strong evidence confirming that SME shares are systematically and statistically significantly different among each industry sector. Manufacturing accounts for, on average, 29.4% of total SME turnover (as indicated by the constant = 0.29). Relative to Manufacturing, we find significantly higher SME turnover shares for the largest sector, namely Trade (Sector G, + 8.5 percentage points, $p < 0.001$), while all other sectors yield significantly lower SME turnover shares compared to this reference, Manufacturing (with differences in the range of 22 to 28 percentage points, $p < 0.001$). This confirms a strong structural hierarchy: first Trade (G) as the largest SME turnover generator, followed by a relatively high, yet clearly secondary share for Manufacturing (C), then a relatively much smaller share for Construction (F) and, finally, much smaller shares for the rest of the sectors. SME turnover shares for sectors such as Arts and recreation (R), Accommodation (I), Real estate (L), and Financial activities (K) are consistently much lower compared to all other sectors in all countries. These results provide strong support for our descriptive response to the third research question.

To explore further the structural heterogeneity between detailed industries, Model 2 also estimates sectoral differences in SME turnover shares. The model's dependent variable represents the share of total SME turnover in each sector for each country-year. Because shares are constructed within country-year totals, the specification features only the inclusion of sectoral indicators, while Manufacturing (Sector C) serves as the reference category. The results provide strong empirical support for Hypothesis 2, as the null hypothesis of equal shares by sector is rejected, while at the same time significant and economically meaningful differences between SME turnover shares across sectors can be confirmed. Crucially, the pattern found is also consistent with the presented descriptive evidence which confirms that SME economic contribution in CEE is not equally distributed among the sectors, but it is rather concentrated in a few activities, especially trade and manufacturing.

Table 6. NACE-Level Regression Results (Dependent Variable: SME Turnover Share)

Variable	Coefficient	(Std. Error)
Constant (Reference sector)	0.29***	(0.005)
Trade (G)	0.09***	(0.007)
Construction (F)	-0.22***	(0.007)
Transport (H)	-0.24***	(0.007)
Accommodation (I)	-0.27***	(0.007)
Information (J)	-0.25***	(0.007)
Financial (K)	-0.25***	(0.007)
Real estate (L)	-0.28***	(0.007)
Professional (M)	-0.26***	(0.007)
Administrative (N)	-0.27***	(0.007)
Observations: 298 R ² : 0.95 Adjusted R ² : 0.95 F-statistic: 667.78*** Note: One NACE sector omitted as reference.		

Source: Author's own elaboration from SPSS regression output.

Discussion of the results

The empirical findings establish two main points. The first one is that SME turnover in CEE is, on average, concentrated in service activities: even after accounting for the country and year fixed effects, production sectors show a significantly lower SME turnover share than services. Thus, our findings contradict the view that SMEs are the driving force of growth in general without making any further distinction among sectoral activity in the economy. The second observation is that there is sufficient heterogeneity among industries: NACE-level results indicate that the economic contribution of SMEs to sectoral growth remains heavily concentrated in trade, and, to a lesser extent, in manufacturing, and that all other sectors have very low share. The null hypothesis that there is a lack of sectoral differences is confidently rejected. The economic contribution of SMEs is not evenly spread among sectors, but it is rather highly concentrated in a few sectors.

These results have substantive conceptual implications that have to be considered. While much of the discussion on SMEs tends to focus on number of firms, employment shares, or aggregate contribution to GDP, the results of this paper show that such figures may provide limited information on the structural composition of the economy. It is possible that a country exhibits a relatively high SME presence and yet that this share is concentrated in a low-productivity activity. We find that the structural distribution of SMEs across sectors is an important dimension to consider in addition to their size in aggregate, and, in particular, their concentration in trading activities. Trade-based SMEs typically deal with intermediation, distribution and retail functions. Although they are economically significant, they do not exactly spill productivity or technological upgrading nor export capacity like manufacturing and high-value services. As a result, defining the extent of structural transformation by SME-predominance could be analytically wrong.

Those findings by no means diminish the importance of SMEs. However, we should look at them from a more nuanced perspective and consider that they do not provide a homogeneous contribution to growth. Rather, their contribution depends upon the sectoral composition. This means that from a policy perspective, SME support strategies must move past the horizontal dimension and be driven by more sector-sensitive approaches. The support of SME development in technology-intensive or productivity-enhancing sectors leads to structurally different results than those of expanding SMEs in trade-dominated segments. By scope, the country-sector framework elaborated in this study reframes SME analysis from a narrative about number of enterprises toward one that is grounded around structural composition.

Conclusion

The presented country-sector framework analysis reveals key structural features of the SME sector in Central and Eastern Europe. In contrast to prevailing approaches which equate the economic contribution of SMEs with aggregate economic performance, our structural perspective focuses on how the SME activity is distributed across sectors based on turnover shares.

The three key findings of this paper are as follows. First, we found that SME turnover is significantly higher in service sectors than in production sectors, net of country and time effects. Thus, consistent with expectations, the SME activity in the region is predominantly concentrated in the service sectors.

Second, sector turnover shares are significantly different across industries. Across CEE countries, SME turnover is largest in the wholesale and retail sector, followed by strong contributions from the manufacturing sector, whereas the SME turnover share for other sectors, e.g. arts and recreation, real estate, and financial services is rather low. Therefore, there are strong indications that the SME economic contribution in terms of SME turnover is also structurally

concentrated in specific sectors, with wholesale and retail trade and manufacturing as the key sectors.

Third, descriptive evidence shows that employment in SMEs is concentrated mostly in micro and small enterprises, whereas medium-sized companies account for the majority of SME value creation. All in all, these results prove that the economic contribution of SMEs is not uniformly distributed along sectoral and company size dimensions, but rather follows a pattern of structural concentration.

From a conceptual point of view, this study provides original insights by suggesting that the contribution of SMEs to the national economy is a country-sector structural phenomenon. This means that the results do not imply that the effect of increasing the number of SMEs on national-level economic development is automatically balanced along sectoral lines; rather, whether an expansion in SME activity is positively or negatively associated with economic development seems to be highly conditioned by the sectoral composition of economies.

On the policy side, these findings imply that policies aiming to support SME development must not only be mindful of the general economic contribution of SMEs as a group, but also account for the sectoral concentration that underpins their turnover, taking into account the role of large firms and the public sector in sectors that remain non-SME dominant. While based on an aggregated level and a post-pandemic period, the similarity of patterns across countries provides preliminary evidence that sectoral SME structural concentration does not only reflect cyclical dynamics. Further studies could apply this approach to different sets of countries and consider value-added or productivity data to examine in more depth whether SME structural composition influences economic transformation.

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