Family Businesses and the Factors of Their Growth [1]

Vladimír Benáček [*] **and Eva Michalíková** [**]

Abstract

After an overview of the role of family businesses in present economies, we work out theoretical vantage points for assessing the factors associated with the growth (or decline) of micro and small businesses in European economies. Based on data for 28 countries in 2002-2008 we run a series of econometric tests where we analyse the evolution of shares of businesses up to 50 employees on total employment and on total net production (value added). We regress these two relative indicators on the measure of gross capital returns in analysed businesses per their value added (as a proxy for profitability and investment) and on the relative gap between labour costs (wages) in small and large enterprises (as a proxy for cost advantages in order to gain competitiveness). In addition, we test the impact of GDP per capita on the growth of family businesses and the importance of a set of ten institutional variables that represent government policies relevant for the viability of small entrepreneurship.

Our tests conclude that ten out of 13 determining factors are found statistically significant for the development of family businesses. It is shown not only that the viability of micro businesses depends on different strategies in decision making than in small enterprises, but also that large differences exist between achieving the objectives of employment growth and output growth. The latter is most pronounced in the impacts of government policies. Thus, micro and small businesses apparently require different policies and managerial strategies for sustaining their role as job creators and drivers of GDP growth.

1   Family businesses and small and medium-sized enterprises

The aim of this paper is to shed light on the organisation of production in contemporary capitalism in post-Communist Central Europe within the context of current sweeping economic changes, when, after 2007, the world financial crisis undermined confidence in the economic leadership of large corporations, self-enforcing efficient markets and uninterrupted high growth. Until the 1930s family businesses were the dominant forms of capital ownership in this part of the world. Shaken by the Great Crisis, the rise of Communism, the Second World War, and the post-war waves of nationalisation and government interventions, these businesses in a large part of Central Europe declined in importance as the attention of policy-makers hinged on corporations. An important break occurred in the early 1990s with the fall of the Communist empire, when a general expectation prevailed, and not only in the four countries compared in this study, namely, Poland, the Czech Republic, Slovakia and Hungary (Večerník, 2010), that a new era was

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* SoÚ Academy of Sciences of the Czech Republic; Charles University, Institute of Economic Studies, Prague.

** Brno University of Technology, Faculty of Business and Management; Charles University, FSV-IES Prague.

opening in which there would be a world-wide return to capitalist fundamentals based on competitive markets, limited bureaucratic regulation and an ownership structure where principals dominate agents.

Family-led entrepreneurship was supposed to receive a new boost as pro-market forces triumphed. This was an error in judgment: since the 1990s, incumbent and emerging large-scale capitalism throughout the world has received a special spur from globalisation. Even in the post-Communist countries the corporate sector resisted the onslaught of emerging small business start-ups and even consolidated its standing as the main source of new wealth. Such authentic small-scale family businesses were often squeezed out of the space for rapid development by surviving, former state-owned enterprises (SOEs) that were converted to corporations owned formally by thousands of petty stock-owners and a thin class of insiders with dominant stakes (Benáček, 2006). Taking advantage of privileged access to information, public administration and credits, insiders were able to take control of the assets of SOEs and turn them into huge new 'family businesses', which lacked the typical properties of traditional family firms: evolution through the toil of generations and a strong set of ethical values, which rendered them a distinct identity.

In China, the world's most successful economy in the post-communist era, new capitalism was driven up by the trinity of business start-ups with new private owners, incoming multinationals and communist bureaucracy. In contrast, the post-communist countries in Europe were obsessed with the privatisation of inefficient state monopolies, thus establishing recourse to a new primitive accumulation of capital that did not relinquish the resources of labour and capital so necessary for the rise of small-scale family businesses. The parallel opening-up of globalisation offered new windows of opportunity to large enterprises dominated by managers (i.e. agents). The challenge of globalisation was a feature common to both post-communist and already existent capitalist countries. Then in the late 1990s the floodgates to expansionary monetary policy opened up and government debt grew. Entrepreneurship in the majority of advanced capitalist countries, led by large financial institutions, turned either to assets whose prices could rise in a vicious circle of supply and demand or to an alignment with public administrators where achieving social efficiency was an objective that could be sacrificed.

Both bubbles finally burst, which drove the economies in developed countries into a lasting recession. It ended in another unexpected event: fiscal rescue packages of an unparalleled size, a credit crunch, liquidity trapped in savings, and bureaucratic interventions, which handed over the initiative in entrepreneurship in many large enterprises to governments. Governments became the crucial agents for sustaining aggregate spending, whose support schemes targeted the failing big corporations aligned to political networks and by-passed the family businesses. Rising taxes, as a consequence of the interventions, discriminated against small family businesses and the middle classes (that represented their principals). The natural expansionary growth drive in post-communist small and medium-sized enterprises (SMEs) that was apparent in the 1992-2006 period (Benáček and Zemplinerová, 1995) was also checked by government policies that were biased in favour of large businesses, thus reducing the SMEs' profit rates.

The current problem all advanced economies are faced with is the need to revive core, authentic entrepreneurship in the form of family businesses and to provide incentives for innovative growth and investment in place of government expenditures as the only reliable driver of aggregate demand. In another words, the expectation is that the turnaround in the present recession should come from an increase in domestic aggregate spending and employment in SMEs dominated by family businesses, which in almost every country have been the main sources of employment and job creation, but not the engine of spending dynamics. **The main objective in this chapter is to address the question: which economic**

and institutional factors are associated with the development of family businesses? In order to provide an answer, we analysed data from 2002-2008 in 28 countries in Europe and tested their association with the rise and fall of small businesses. It was our objective that the majority of our instruments (i.e. indicators in the role of model variables) are to be related to decisions internal to firms and to policies in the hands of governments.

2 Economic and institutional factors of small business development

A firm is said to be family-business if a member of one or more families (rather than a state, corporation, or management trust) is its controlling owner, implying a managerial commitment toward the business' overall performance. It includes also the case of ownership by shares when the family controls at least 20% of voting rights and that 20% is the highest percentage compared with other aligned shareholders. The main strength of a family business rests in the combination of unambiguous ownership by a person with a managerial stake, which allows for direct accountability and enforcement of property rights, without recourse to moral hazard and asset stripping. It also results in high wage flexibility and persistent personal commitment to the wellbeing of the firm. A family firm is generally relieved from the risks of relying on agents that are able to dominate over principals (owners). Such a mismanaged 'agency dilemma', backed by asymmetric information, leads to conflicts of interest, uncertainties, moral hazard, rent-seeking, adverse selection, bureaucracy, corruption and suboptimal performance (Eisenhardt, 1989). Other advantages of SMEs are their greater ability to withstand economic shocks (partially due to downward wage flexibility), high investment, reliance on its own savings and net job creation.

Although Blau (1987), in his seminal paper, discovered that since the early 1970s the more than a century-long downward trend in the share of non-agricultural self-employed in the United States had ceased, the majority of economists and business leaders were not persuaded that a turnaround might have occurred. The sweeping waves of world-wide mergers and acquisitions that commenced in the 1980s and accelerated after 1994 strengthened the muscle of oligopolistic capitalism at the expense of 'entrepreneurial' capitalism. It is a paradox that the name of Schumpeter was raised in defence of the looming cult of a firm's size. According to the 'Schumpeterian hypothesis', increasingly concentrated large firms, supported by public bureaucracy, gradually become the dominant engine of innovations and growth. Indeed, there appears a conflict between the 'early' (pro-entrepreneurial) and the 'later' Schumpeter envisaging the demise of entrepreneurs (Schumpeter, 1942, pp. 134-143). In the last 25 years the idea that innovation increases more than proportionately with firm size was supported with such arguments as:

- the crucial importance of economies of scale and scope;
- large fixed (sunk) costs of R&D that could be afforded by large firms only;
- large firms are better endowed for hedging against the risk of R&D uncertainties;
- large firms have better access to both external and internal finance;
- large firms with market power cope more efficiently with both demand and supply, turning this advantage to higher profits and rents that are ploughed back into higher R&D and investment.

Thus it was generally believed that even though SME businesses could provide the majority of jobs, their role in the progress of economies was just of subsidiary importance. For long, there dominated a presumption that employment in very small businesses is negatively related to the GDP per capita, causing a bias toward larger enterprises (Lucas, 1978; Acs et al., 1994). We think that this assumption should be re-considered. In contrast, these hypotheses, however logical they may look, are not consistent with empirical observations. Actually, it is a not too surprising paradox that the very arguments cited above

were used by central planners whose bias towards centralisation and monopolisation and opposition to entrepreneurship were paramount. At the same time, observing this in hindsight, policies motivated by such objectives were among the primary causes of the demise of communism and its central command system. In none of the 33 post-communist countries were popular voices heard, not even from the local communist parties, calling for a return to this aspect of the previous system of socio-political governance.

An influential paper by Acs and Audretsch (1988) reached the conclusion that innovations were negatively related to concentration and that innovations increased with R&D expenditures at a less than proportional rate. Their evidence raised the issue that the whole debate over which firm size was more conducive to innovation was pointless and that both types of industrial organisation had a place in bringing innovation and efficiency into harmony, even though some different industrial characteristics were biased either to large or to small innovators. Symeonidis (1996) concluded his extensive survey of empirical literature over the alleged advantages of large over small firms with the finding that 'literature survey suggests that there seems to be little empirical support for the view that large firm size or high concentration are factors generally conducive to a higher level of innovative activity' (p. 33). The outbreak of the world financial and economic crisis in 2007 brought a new wave of attention to the facts refuting the validity of the Schumpeterian demise of small entrepreneurship.

Here we have touched on the crucial paradox in the current crisis in globalised capitalism, which is best explained by pointing to the conditions placed on entrepreneurship as postulated by Leibenstein (1995). According to him, an entrepreneur is an agent endowed with capital and organisational, innovative and managerial skills that allow him 'to make up for market deficiencies'. Thus, it is not the 'invisible hands' of markets that finally decide about economic reality, but the decisions of the very visible entrepreneurs who must bring market information to life by overcoming the uncertainties and deficiencies in real economies. The more deficient the markets are, the more important the role of entrepreneurs is. Similarly, as the transition in post-communist economies could not be effective without establishing new entrepreneurship, the present recession must be solved by entrepreneurial techniques based on market incentives crowding out bureaucratic decisions. The world financial crisis must be viewed primarily as the crisis of entrepreneurship, so then the remedies for re-adjustment must be sought among the causes and not the effects of recession. The breeding ground of new entrepreneurship rests in the SMEs, and our search for factors underpinning their development goes even further: to the facts about the development of small family businesses rather than medium-sized or large enterprises.

Since this study is based on a unique empirical evidence on enterprises of the non-financial sectors provided by European Commission, we had to adjust to their structure of businesses. The classification used and some basic facts about the indicators and countries in this analysis are described in Table 1.

Table 1: Classification and economic weight of enterprises in the compared countries of EU-27 in 2008 (the non-financial sector only)

Category of enterprises	Countries	Number of firms	Employ-ment (mil.)	Shares on total employ-ment in the non-financial sector	Net output (mil. EUR)	Shares on total net output in the non-financial sector
Micro 1 ...< 10 empl.	EU-27	19,058 mil.	39,63 mil.	29,7%	1 316 318	21,0%
	Czech Rep.	856 261	1 077 519	29,1%	16 702	18,8%
	Hungary	503 171	881 142	35,4%	8 545	17,5%
	Poland	1 502 959	3 295 674	38,6%	28 648	18,3%
	Slovakia	42 230	150 746	14,8%	3 507	13,3%
	Austria	261 259	648 079	25,2%	28 486	18,7%
	Germany	1 520 873	4 288 700	19,3%	191 950	15,5%
Small 10 ...< 50 empl.	EU-27	1,424 mil.	27,65 mil.	20,7%	1 182 663	18,8%
	Czech Rep.	35 285	693 604	18,7%	14 129	15,9%
	Hungary	25 122	479 676	19,3%	7 885	16,2%
	Poland	44 500	988 919	11,6%	18 426	11,8%
	Slovakia	10 577	179 482	17,6%	3 968	15,0%
	Austria	31 389	594 568	23,2%	29 983	19,7%
	Germany	257 525	4 843 235	21,8%	222 179	18,0%
Medium 50 ...< 250 empl.	EU-27	0,226 mil.	22,66 mil.	17,0%	1 127 422	17,9%
	Czech Rep.	7 212	733 587	19,8%	17 760	20,0%
	Hungary	4 125	406 302	16,3%	8 858	18,2%
	Poland	15 185	1 595 013	18,7%	33 682	21,6%
	Slovakia	2 178	234 273	23,0%	4 791	18,1%
	Austria	4 848	483 839	18,8%	32 512	21,3%
	Germany	42 777	4 288 582	19,3%	238 833	19,3%
Large 250 and more empl.	EU-27	0,043 mil.	43,41 mil.	32,6%	2 656 257	42,3%
	Czech Rep.	1 513	1 199 348	32,4%	40 112	45,2%
	Hungary	822	719 477	28,9%	23 456	48,1%
	Poland	3 105	2 654 220	31,1%	75 426	48,3%
	Slovakia	527	453 723	44,6%	14 137	53,5%
	Austria	1 017	840 483	32,7%	61 496	40,3%
	Germany	8 840	8 762 628	39,5%	584 225	47,2%

Sources: SBA (2010).

Since the above statistics cover the non-financial private sector only, it is necessary to note that we are only able to analyse a part of the total economy in certain countries. For example, our employment figures represent 61% of all employment in the EU-27, while in individual countries of Central Europe the respective shares are: Czech Republic 74.1%, Hungary 64.1%, Poland 54.0%, Slovakia 41.8%, Austria 62.8% and Germany 57.1%. In net output our statistics cover 49.8% of the GDP.

Even though family businesses, as defined above, are present in enterprises of every size,[2] by far the largest number of them are micro and small enterprises. These two categories cover 98.7% of all EU enterprises. Approximately 50% of micro-enterprises in the EU are formed by self-employed, even though, as Torrini (2005), Schaper *et al.* (2009) and Večerník (2010) observed, there are substantial and persistent differences in the share of total employment they account for across countries. Thus, only a negligible number of family business entrepreneurs rank in the categories of medium-sized and large firms. Therefore, **in the rest of this study we shall use micro and small enterprises as a proxy category for family businesses**. This means that we will distinguish between two types of family enterprises: those ranging in size from self-employed individuals to enterprises with 10 employees (i.e. micro enterprises), and enterprises with 10 to 50 employees (i.e. small enterprises). Enterprises of that size can also be taken as targets for the policies supporting family businesses.[3]

Our objectives in this research will have to be closely linked to examining how small businesses could contribute to Europe's economic revival and what factors determined their development in the recent past. The macroeconomic conditions for fast growth are associated with two strategies: external and internal. The former rests in the expansion of the internationally traded sector and the latter in the expansion of the local non-traded sector. Export-led growth is the most typical and the most successful type of development. It has built-in incentives for gains in efficiency from externalities of the market system, competition, the division of labour and scale economies. The external growth strategy was the main engine of prosperity in the post-war democratic Europe and Japan. Later this strategy was adopted in such successful countries like the NICs of South-East Asia, Ireland and post-communist China, and in nearly all other transition countries.

The internal growth strategy, bearing signs of autarchy, was the crackerjack of the Communist economies, where high taxation and intensive government spending concentrated on local industries catering to local markets. After at least 40 years of existence, the long-run economic performance of planned economies deemed them to have been a failure in all the countries that after 1989 embarked on a systemic transition. The internal strategy of development under central command brought them neither growth nor prosperity, even though its main success was in securing extremely high employment rates. Growth driven by fiscal and monetary injections (both associated with governments and their bias towards supporting the internationally non-tradable sector) was also important in capitalist countries, especially in the periods of recession. Such policies do not offer incentives for securing high innovation and private investments. Thus, we consider the export-led type of growth superior to the growth strategy that relies on the expansion of the non-traded sector. The example of the export success of Germany and China reveals that this strategy does not have to be associated with small countries only that cannot function without high external openness.

With respect to how the two mentioned strategies relate to private businesses, export-led growth is the driver of expansion in large (especially multinational) enterprises, because they are significantly more export-oriented than SMEs. For example, Eurobarometer (2009, p.

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[2] It should be mentioned that Wal-Mart, as the world's largest enterprise, can also be classified as a family business. There are other such 'family' giants as Ford, Samsung, Fiat, PSA (Peugeot and Citroën) and IKEA. The difference between them and the corporate sector is barely noticeable. All of them rely on corporate managerial techniques and their similarities to small-scale family businesses are not essential.

[3] The Small Business Act (SBA) for Europe was initiated by the European Commission and launched in 2008 with the aim of establishing a comprehensive SME policy framework in 27 EU member states in order to promote employment and economic growth in Europe. The SBA´s principles have been implemented in all 27 EU states through over 500 policy measures. The most important among them are instruments related to SME access to finance, development of skills, innovation and entrepreneurship, internationalisation, efficient administration, and state aid (see European Commission, 2010).

15) reports that only 8% of all SMEs were (in 2009) engaged in exports and their income from exports made up less than 5% of their turnover. On the other hand, the majority of large enterprises were engaged in exports and their income formed 20% of the turnover. Generally speaking, SMEs can be important subcontractors for exports, but their role in direct exports is subsidiary. In contrast, SMEs are at the core of domestic aggregate demand in the non-traded sectors that generate most of the GDP.

Breaking away from the present sluggish aggregate demand and credit crunch in nearly all European countries depends on finding a self-sustained replacement for the present reliance on government fiscal and monetary injections in private resources and intermediation. The reliance on corporations and their exports, shielded by the Schumpeterian hypothesis, is an important but not a sufficient strategy. It is necessary to find a new class of innovatory agents, close to economic grassroots, whose activities would be conducive to a break-through.

A successful model of development leading out of recession can be thus outlined as follows: internationally open large enterprises, which are also the bearers of domestic comparative advantages, provide domestic economies with their primary impetus for strong growth via a revival in international trading. As a secondary repercussion, their outsourcing and consumer spending is then transformed by means of a multiplier into the performance of non-traded sectors, which are represented mainly by SMEs. In order to adjust to rising aggregate demand, all enterprises have to invest – that initiates a tertiary boost to growth. Thus, the success in development is characterised by an interaction of large and small businesses, all of which play a specific role in the process. In all of them the decisive engine is entrepreneurs that are able to make up for both the emerging market and government failures.

The world economic crisis slashed the EU exports of goods and services from previous annual growth rates close to 6% to a mere 1.6% in 2008 and a decline of -14% in 2009 (Eurostat, 2010). This severely damaged the trust in the growth leadership of large businesses. Government deficit spending compensated partially for the missing exports, but there was no other segment of the economy available to fill the looming gap in both aggregate demand and efficiency. With the exception of Poland, nowhere was the private sector able to act as an agent of sustained growth. Nevertheless, SMEs have saved many European economies from drastic falls in employment.

The expected mild economic recovery of GDP growth of 1.6% in EU-27 in 2011 driven by exports requires that a complementary resource be started up to substitute for the fading and inefficient government deficit spending. We predict such a resource to be the revival of authentic entrepreneurship that used to be represented by family businesses. That revival should actually be traced back to 1948-1965, when internally driven development was still dominant and had not yet been crowded out by globalised businesses.

The question of SME-led growth leads back to the issue of determining the factors and policies conducive to the SME enhancement. Of course, it is possible to use questionnaires and ask entrepreneurs in SMEs about their opinion. Standard answers that could be expected included such proposals as the call for wider government support to facilitate easy access to credits, higher public spending on non-tradables (such as infrastructure, education or healthcare), or the build-up of new regulatory watchdogs. However, relying on an even larger role for public administration and spending in economic development sends out false signals and leads to a confused ranking of priorities.

An alternative approach to declared preferences is to look at revealed preferences – i.e. to analyse which factors helped SMEs in micro and small categories in the past achieve growth. We will measure the growth of micro and small enterprises by their employment figures and their share of total employment or, alternatively, by their net output relative to

total net production (i.e. to the contribution of family businesses to the GDP). In our view, the expanding SMEs will have to take over some of the resources relinquished by large businesses that were not able to use them efficiently. In our present situation of slow growth in large firms, it is not enough for SMEs to merely keep up with their growth. Private spending in SMEs will have to substitute also for the public spending that is not sustainable. Its un-sustainability is not only due to growing public and international debt but also due to the spreading inefficiency of public spending, bureaucracy and insider trading. This is a strategic mission of revitalised entrepreneurship that proved its strength at two critical moments in the past: when it lifted democratic Europe out of the post-war misery (e.g. as did Erdhard's famous reform of 1948) and when it helped transform the sinking post-communist economies into prosperous EU states.

3 The factors favourable or adverse to small business development

Blau (1987) found in his empirical study that the self-employed, numerically the largest group among family businesses, grew in importance since the 1970s. The start of a lasting upswing in their employment rates was ushered in by changes in technology, the expansion of industry into services, rising tax rates and hikes in social-security retirement schemes. Later research into small business development concentrated mainly on the differences in the self-employment rates among countries or regions. It drew on cross-sectional techniques of estimation that help explain the differences in employment accrued in time as a result of local specificities, such as different structures in national factor requirements (and endowments), GDP per capita and a series of country-specific institutional factors. For example, Torrini (2005) estimated that the intensity of self-employment depends inversely on the local capital/labour ratio and public sector size. The positive factors were: the tax and social security wedge, the income per capita, unemployment rate, product market regulation, labour market protection, low fiscal discipline and perceived corruption.

Small business (SB) development looks then to be the result of market distortion and like the second-best solution to problems of inefficient public administration, becoming a haven for entrepreneurs with tainted managerial capacities. Explaining SB as the outcome of a suboptimal market structure does not in our view seem persuasive, even though the cited factors might play a role. We tried to test a hypothesis that the development of SB could have deeper microeconomic foundations. We traced them to wage and profit structures, and to the competition with large enterprises, which pressed 'fringe competitors' to respond with strategies idiosyncratic to smallness that allowed them to gain more than enough to withstand the competitive race.

The following theoretical considerations will be used as guidelines for our empirical tests applied to data for 28 European countries extracted from the so-called Small Business Act Factsheets (see SBA, 2010). Of course, abstract theoretical procedures have to be operationalised and thus adjusted to available data. General benchmarks for the analysis of efficiency are derived from production functions with labour and capital serving as factors. By using the cost-benefit analysis we then consider their Pareto-efficient outcomes subject to various scopes of activities and alternative factor allocations.

The objective function of entrepreneurs is profit maximisation. Even though SBA Factsheets provide neither information about the stocks of capital used in small businesses, nor their profits, we can estimate the latter in gross outlines by using information about total sales (S) and material inputs (M), the difference between them being the net income of enterprises (Y), which also represents their value added (i.e. their contribution to the GDP). By deducting total labour compensation (i.e. the labour costs W) from Y we get gross capital returns (R) – i.e. the approximation of gross profits. Even though entrepreneurs maximise net

profits for making their decisions about production, the maximisation of R is still a plausible criterion because it represents a social efficiency of capital allocated among businesses of various scales.

We can set a hypothesis that the growth of SB in a country, measured either by their employment (L_{SB}) or value added (Y_{SB}), will depend on the intensity of their gross capital returns R_{SB} per given scope of activities represented by their value added (Y_{SB}): $L_{SB\,t+1} = \Phi_1\,(R_{SB\,t}\,/\,Y_{SB\,t}\,)$ or alternatively, $Y_{SB\,t+1} = \Phi_2\,(R_{SB\,t}\,/\,Y_{SB\,t}\,)$. Therefore, we could raise the hypothesis that countries with higher $R_{SB}\,/\,Y_{SB}$ could also see the stronger development of SMEs. Figure 1 depicts such a situation: the net incomes of a firm (Y) and gross labour costs (W) depend on the labour employed (L) and its marginal productivity. The size of the firm depends on the gross capital return $R = Y - W$. If the space for R increases (shown as a shift of total net output upwards to Q_1' as a result of innovation or lower transaction costs), the allocation of labour will move from L_1 to L_2. That will also expand the firm in terms of net output from Q_1 to Q_2 and a shift in income from value added from Y_1 to Y_2, resulting in an increase of labour income W and a raise in the wage rate from w_1 to w_2. Or, alternatively, high R/Y in a given business opens a window of opportunity for the entry of a new small business start-up with employment in L_3. There are also additional advantages to high R_{SB}/Y_{SB} (earned often in form of externalities): better access to investment funds, credit, human capital and R&D, which all imply stronger future growth.
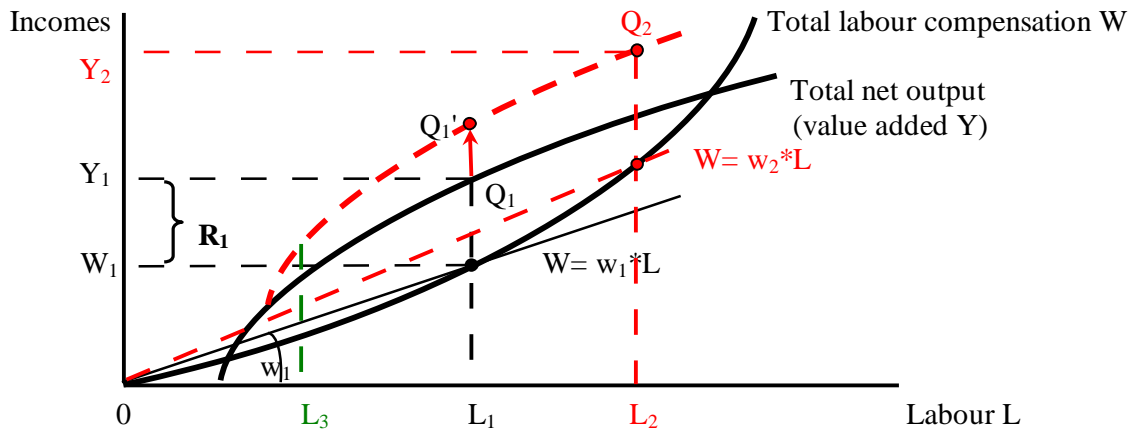

Figure 1: The scope of incomes and employment in a firm constrained by the gross capital return R.

However, SME development is not autonomous within the SME category because what also matters is an SME's relative performance vis-à-vis large businesses (LB). We should therefore consider that small enterprises compete with large ones for limited nationally available economic resources. Assuming the prices of products and capital are exogenously given, the competition lies in costs and relative productivities. As for cost efficiency, the key factor rests in labour and wages.

This issue is described in Figure 2, where a small and a large firm are competing in the same commodity market. The isoquants describe unit-value net output (e.g. Y = € 1 thousand). We can observe two characteristic 'imperfections' of the factor market: access to capital is more expensive for small firms (as the capital rental rate $r_{SB} > r_{LB}$) to which SB responds by 'wage dumping', i.e. by compensating for it with lower wages $w_{SB} < w_{LB}$ (often to its family members), creating so a "wage gap". Only then isocost lines C_{LB} and C_{SB} offer both firms an identical profit rate. In addition, we can see that LB and SB differ in their

micro-technologies, as their unit-value production isoquants are not identical – SBs are biased towards labour-intensive techniques. These are the stylised facts derived from our data.
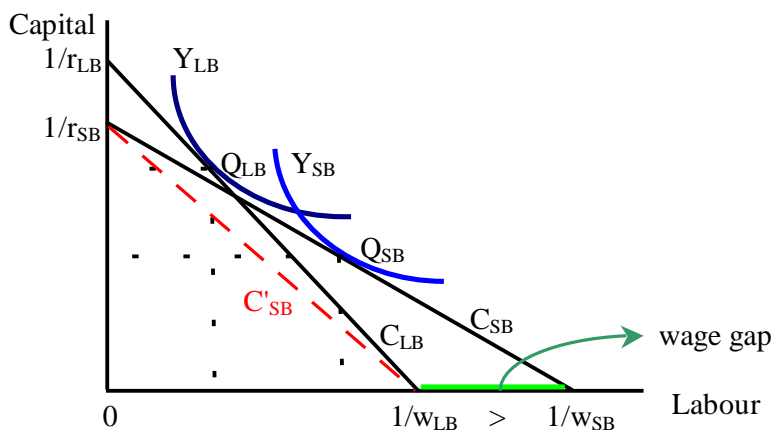

Figure 2: The competition between small and large businesses for resources on the grounds of cost-efficiency

The cost competition between SB and LB will depend on how well SBs are able to depress wages and create a wage gap in order to gain a cost advantage (and hence also higher sales) once the prices of products are given. We will operationalise this condition by testing whether (lower) wages per worker in SBs related to (higher) wages per worker in LBs are associated with higher growth in SBs. We thus raise the hypothesis that both L_{SB} and Y_{SB} are a negative function of relative wage rates $(W_{SB}/L_{SB}) / (W_{LB}/L_{LB})$. The strategy of wage dumping could be risky because it may drive the efficient hired non-family workers out of the SB and thus raise a constraint on its long-term development (presuming that family members in small businesses are not responsive to this kind of discrimination). The sign of the coefficient of relative wages can be therefore uncertain.

The third hypothesis about the determining factors of growth in SMEs that we will test concerns the degree of general economic development represented by GDP per capita. We could then verify whether rising prosperity is a factor that enhances or retards the development of SMEs.

Figure 2 also illustrates the different threats that put small and large businesses at risk. On the one hand, LB open to globalisation (in contrast to SB) are exposed to the risk of the appreciation of local currency, which would shift the isoquant Y_{LB} up and away from the equilibrium allocation in Q_{LB}, making their production non-competitive. On the other hand, small firms oriented towards domestic markets in non-tradables are often pressed to hire new employees at competitive wages paid by LBs, which shifts their unit-value isocost line to C'_{SB}. If they are not able to innovate and shift Y_{SB} downwards (e.g. by charging a higher price for upgraded quality or by increasing productivity), their combined wage and capital costs may bring them to bankruptcy. Small firms are also more pressed by being locked in the sticky demand of their local market and by diseconomies of scale once they attempt to expand into new markets. In addition, both businesses are threatened by bureaucracy, whose regulations can impose additional transaction costs in addition to market costs expended on factors.

The latter argument is often of crucial importance. Running a business always involves some element of natural uncertainty and risk. The environment of high capital mobility, globalisation, financial shakeouts, market imperfections and shortening innovation cycles brings some further risks. Contemporary economics stresses the importance of

institutions, as the policies defining the 'rules of the game', whose intention is to reduce uncertainties and transaction costs in business interaction (Stiglitz, 1998). In addition, there are national policies and regulations motivated by social, political or cultural concerns that may have asymmetric impacts on businesses, resulting in discrimination where the enterprise's small size can become an impediment to its growth. National institutions are important factors that may have both positive and negative repercussions on businesses of different sizes. They can be associated with excessive regulation, barriers to trading freely on markets, volatile currency, high taxes, public spending rigged by corruption, inflexible labour market, and more.

Thus three economic indicators related to internal rates of gross capital returns (R_{SB}/Y_{SB}), relative wage rates (w_{SB}/w_{LB}), and GDP per capita, plus ten institutional indicators are selected as causal factors related to the growth of micro and small businesses.

4   Empirical testing of micro and small enterprises in Europe, 2002–2008

In a cross-country comparative approach, this chapter will attempt to test empirically the extent to which the growth in SMEs in 28 European countries is influenced by mentioned three economic factors and, in addition, by the risks or benefits associated with ten socio-political institutions. **Since our approach is aimed at explaining the microeconomic factors leading to growth**, **instead of analysing behavioural differences across countries associated with firm size, we will work with panel data specified as time series**. That means our estimations will search for common behavioural characteristics of sub-panels of countries and their observations in a sequence of time. The question 'how the small businesses grow' thus requires a different estimation than the question 'what determines the size distribution of firms across countries', which must be estimated by sub-panels of all countries containing observations by individual years, i.e. as cross-sectional data that were used most frequently in the literature on previous research in this area. These alternative specifications test for different hypotheses in their economic contents.

Table 2 contains a list of all the variables we tested for statistical significance as factors relevant for the growth of SMEs – especially micro and small businesses. Our dependent variables are computed from aggregated data of production statistics for four groups of enterprises (see Table 1) in non-financial business sectors.[4] Thus, our study is backed by data covering approximately one-half of the GDP and over 60% of employment in the EU countries in 2008. Our dependent variables represent indicators of the SME weights in the economies of observed countries related to SME employment and net output.

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[4] It should be mentioned that our data cover the non-financial business economy classified by NACE sectors C through J. That means we work with the sectors: C-manufacturing; D-electricity, gas, steam and air conditioning supply; E-water supply; sewerage; waste managment and remediation activities; F-construction; G-wholesale and retail trade, repair of motor vehicles and motorcycles; H-transporting and storage; I-accommodation and food service activities; J-information and communication. The excluded sectors comprise: agriculture, mining, financial and insurance activities, real estate activities, professional, scientific and technical activities, public administration, defence and social security, education, human health and social work activities, arts, entertainment and NGO activities. Altogether in the EU-27 our statistics cover approximately 61% of all employment.

Table 2: The list of variables used in the models (related to countries and years)

Endogenous variables:
a)   [L_SHARES] – Shares of small or micro businesses on total net production;
b)   [VA_SHARES] – Shares of small or micro businesses on total employment.
Source: SBA Factsheets, Eurostat and DG Enterprise and Industry, 2002–2008.

Economic explanatory variables:
1/ [KR/VA] – Gross **capital returns** in analysed businesses **per value added**;
2/ [LC_FB/LB] – Relative rates of **labour costs,** i.e. total labour compensation per worker in FB divided by similar compensation in LB;
Source: own calculation from SBA Factsheets, Eurostat and DG Enterprise and Industry, 2002-2008.
3/ [GDP/PC] – **GDP per capita** in PPP.
Source: The World Bank, external data statistics on GDP.

Institutional explanatory variables:
4/ [REGUL] – Business freedom (regulation) index;
5/ [TRADE] – Trade freedom (trade barriers) index;
6/ [MONET] – Monetary freedom (inflation and price control) index;
7/ [GOVERN] – Freedom from government (public spending) index;
8/ [FISCAL] – Fiscal freedom (taxation) index;
9/ [PROP-R] – Property rights index;
10/ [INVEST] – Investment freedom (capital controls) index;
11/ [FINANC] – Financial freedom (private banking security) index;
12/ [CORRUPT] – Freedom from corruption (perception) index;
13/ [LABOUR] – Labour freedom;
Source: The Heritage Foundation, Database on the Economic Freedoms, 2010.

The central idea behind the choice of institutional variables is that institutions as man-conceived factors can have a two-pronged impact on businesses: as public goods or as public bads. The departure from largely macroeconomic to microeconomic explanatory variables representing incentives or policy instruments recently became a standard tool of econometric analysis (Blau 1987; Robson and Wren 1999; Davis and Henrekson 1999). Our only macroeconomic indicator of GDP per capita is substantiated on theoretical grounds elaborated by Lucas (1978), and followed by Acs et al. (1994) and Torrini (2005). In our case this variable proxies the purchasing power, instead of a supply-side variable representing the capital endowments. That is why we should expect its sign to be positive, in contrast to the theoretical inferences by Lucas (1978) or Acs *et al.* (1994).

On top of this, there can be an asymmetry in the impacts on small and large businesses, resulting in incompatible political lobbyism by their respective agents. Lobbying by large firms tends to be stronger, so many national institutions can be biased against small firms. All our institutional variables are based on their perceived qualities of allowing for market and entrepreneurial freedom. Their index is then a value in percentages in the interval <0, 100> indicating how they are correlated with the given 'freedom'.

Also, the selection of 28 countries of Europe is highly representative, covering nearly all of the EU and potential accession countries (see Table 3). In respective regressions we will quantify how the selected 13 explanatory factors could influence the intensity of involvement of micro and small businesses in total employment and net production, respectively. The estimation will point to potential forces and their effects on augmenting or diminishing the SME roles in European economies. The first two explanatory variables are relevant for

decision-making in enterprises, the third variable points to a general trend in development, and the remaining ten institutional variables are relevant for government policy-making.

Table 3: List of countries used for this study, with categorisation into groups

Groups	Countries
Group 1 (ALL)	Advanced Europe-14 + Emerging Europe-14
Group 2 (Advanced Europe-14)	Austria, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, United Kingdom
Group 3 (Emerging Europe-14)	Albania, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia
Compared 6 countries of Central Europe	Czech Republic, Hungary, Poland, Slovakia, Austria, Germany

Let us now proceed to describing the main variables in our empirical tests. The first dependent (explained) variable is represented by the employment share of micro enterprises (or small enterprises, respectively) in total employment in each of the 28 countries in the analysis. The data are in percentages. In order to compare the economic standing of family businesses in the Czech Republic with a set of other European economies, we selected a sample of five countries that are the closest neighbours to the Czech economy. They are also culturally the closest communities, with a history of institutional links that goes back for centuries. Thus, Czech family businesses (classified in two categories – micro and small) can be compared with two developed economies, Germany and Austria, which also serve as models of European market economies. Then there are three transition countries (also called 'emerging' economies), namely, Poland, Slovakia and Hungary, which shared with the Czech economy the paramount task of building a performing commercial sector out of the abandoned system of central planning.

In Table 4 we compare the cited shares of employment in given groups of family businesses (FB)[5] in the total employment of six countries. We can see that there are large cross-country differences in those shares. For example, FBs in Hungary employed nearly 55% of all labour in the non-financial business sector, and FBs in Poland employed the next-highest share. Czech and Austrian employment share some similar characteristics, even though it is evident that the Czech micro sector has not matured into transforming itself more intensively into small businesses. The size of FB in Slovakia in 2002 was among the smallest in the whole of Europe, but the small size of FB was offset by its accelerated growth.

Table 4: Dependent variable 1 – Employment share of micro or small enterprises on total employment in percentages

Countries	Employment in micro			Employment in small			Change 2008 - 2002	
	2002	2005	2008	2002	2005	2008	micro	small
Czech Republic	32,4%	31,9%	29,1%	18,1%	18,4%	18,7%	-3,3%	0,6%
Austria	24,4%	25,2%	25,2%	23,7%	23,3%	23,2%	0,9%	-0,6%
Germany	19,0%	18,9%	19,3%	21,5%	22,1%	21,8%	0,3%	0,4%
Poland	40,5%	39,2%	38,6%	12,0%	12,0%	11,6%	-1,9%	-0,4%

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[5] In the rest of this chapter, a 'family business' (with the acronym FB) will refer to an amalgamated set of micro businesses and small businesses.

Slovakia	9,7%	13,0%	14,8%	16,2%	17,5%	17,6%	5,1%	1,4%
Hungary	36,1%	34,6%	35,4%	17,7%	19,2%	19,3%	-0,7%	1,6%
Average share in 28 countries	29,3%			20,9%				
Average annual growth in shares of 14 developed economies in %	0,69			0,60				
Average annual growth in shares of 14 emerging economies in %	0,91			1,53				

Source: own calculation from data in SBA (2010).

The last two rows in Table 4 indicate the growth rates of shares in two groups of European countries. We can see that from 2002 to 2008 the amount of employment in FB rose throughout Europe, which was a spectacular achievement, especially in the emerging (transition) economies. Their strengthening was a follow-up to very intensive inflows of FDI from large (often multinational) investors to these countries, whose enterprises required matching indigenous suppliers and providers of various services, which mushroomed in FB.

Table 5 illustrates the development of FB in six countries measured by the shares of micro and small businesses out of total value added. We can see by comparing this table with Table 4 that the share of FB in value added is everywhere smaller than its share in total employment. The smaller the business, the more labour-intensive its production is and also the lower its net productivity per worker is (when compared with medium or large businesses). We will call the labour bias 'the general characteristics of FBs #1', a feature that is intrinsically associated with the nature and viability strategy of small entrepreneurs. A partial explanation for this phenomenon is that FBs have less favourable access to financial capital which requires them to substitute physical capital with more labour and that decreases their marginal efficiency.

The largest gap between the employment share and the value added share is in Poland and Hungary (more than a 20% difference), while the lowest is in Germany and Slovakia. Czech and Austrian pattern is again revealing a tendency to converge. Czech and German FBs were struck by negative growth in their net output per worker, which, if combined with rising employment, diminished the share of FBs in the total value added.

Table 5: Dependent variable 2 – Value added share of micro and small enterprises on total value added in percentages

Countries	Value added in micro			Value added in small			Growth 2008 - 2002	
	2002	2005	2008	2002	2005	2008	micro	small
Czech Republic	20,0%	20,2%	18,8%	16,8%	17,0%	15,9%	-1,2%	-0,9%
Austria	18,2%	18,6%	18,7%	20,6%	19,9%	19,7%	0,4%	-1,0%
Germany	16,3%	15,4%	15,5%	18,2%	17,9%	18,0%	-0,7%	-0,2%
Poland	15,6%	16,8%	18,3%	11,6%	11,5%	11,8%	2,8%	0,2%
Slovakia	10,2%	10,7%	13,3%	14,2%	15,3%	15,0%	3,1%	0,8%
Hungary	17,4%	15,7%	17,5%	16,3%	16,3%	16,2%	0,1%	-0,1%
Average share in 28 countries	20,9%			18,8%				

Average annual growth in shares of 14 developed economies in %	0,52	1,57
Average annual growth in shares of 14 emerging economies in %	1,00	1,10

Source: own calculation from data in SBA (2010).

We should not be confused by the relatively small growth rates indicated in the last two rows of Table 5. These annual growth rates of FB are related to shares only and not to absolute values of net production. In addition to increasing their share in total net output, the FBs had to increase their production in response to GDP growth, which is shown in Table 6. GDP per capita is our third economic explanatory variable. This variable is crucial for testing the hypothesis of whether rising prosperity is also related to an increase in the importance of FBs in national economies; this will be confirmed by a positive and statistically significant coefficient in regressions.

We can conclude that FBs with a staff of up to 50 workers play a highly important and irreplaceable role in European economies. In 2002-2008 not only did they provide one-half of all jobs in the transition economies, but they were also the net creators of new jobs and main absorbers of unemployment. The 'general characteristics of FBs #2' refer to the FBs' extensive dynamics in employment opportunities, turning FBs into vehicles of net job creation. FBs also account for approximately a third of the GDP in Europe. The crucial role of FBs is in the national provision of jobs, which decreases unemployment and saves public expenditures on unemployment benefits. It is a sort of positive externality that assigns micro and small businesses important features of public goods. Their positive externalities would justify the existence of government policies that enhance the FB entrepreneurship and performance.

Table 6: The GDP per capita in EUR and average GDP annual growth rates in observed countries

Countries	2002	2005	2008	2002-2005	2005-2008
Czech Republic	14413	17098	20239	5,7%	5,6%
Hungary	12591	14183	16127	4,0%	4,3%
Poland	9880	11543	14145	5,2%	6,8%
Slovakia	11074	13544	18125	6,7%	9,7%
Austria	25898	28064	31164	2,7%	3,5%
Germany	23591	26259	28945	3,6%	3,2%

Source: Eurostat, 2010

With regard to the relative importance and growth rates of our remaining two explanatory variables, their characteristics are presented in the next two tables. Table 7 depicts the shares of gross capital returns per value added in two business sectors of six countries for 2002-2008.

Table 7: Gross capital returns in analysed businesses per value added in 2002-2008 in percentages

Countries	K-returns per VA in micro			K-returns per VA in small			Growth 2008 - 2002	
	2002	2005	2008	2002	2005	2008	micro	small
Czech Republic	68,9%	71,3%	74,7%	34,5%	29,9%	30,5%	5,8%	-4,0%
Austria	55,5%	54,5%	46,6%	31,9%	33,6%	40,4%	-8,9%	8,4%
Germany	52,0%	53,7%	55,9%	24,2%	28,0%	32,7%	3,9%	8,5%
Poland	10,5%	53,8%	43,1%	39,9%	61,6%	49,9%	32,6%	10,0%
Slovakia	38,9%	37,0%	44,7%	22,9%	32,9%	32,8%	5,9%	9,9%
Hungary	14,3%	9,3%	37,0%	35,2%	33,4%	24,4%	22,7%	-10,8%
Average gross K-returns in 28 countries	54,9%			39,4%				
Average annual growth in shares of 14 developed economies in %	2,30			2,20				
Average annual growth in shares of 14 emerging economies in %	7,40			0,96				

Source: own calculation from data in SBA (2010).

Gross capital returns are closely related to profits and profits form the basis for investments into physical capital and R&D. High profits also motivate FB owners to increase the scope of their production. There are three basic strategies for achieving a high share of gross capital returns on the value added:

a) Increasing labour productivity without compensating workers at a proportionally higher wage rate.

b) Decreasing the marginal product of labour by overstaffing, which is reflected in low average wages rates in the enterprise.

c) Hiring and paying labour outside official contracts, which slashes the total labour costs.

Small enterprises are pressed by the very nature of their businesses to exercise all three strategies. Strategy c) implies that micro businesses are liable to under-report real employment and labour levies (income taxes, social security and health insurance), making the labour statistics on FB unreliable. However, even biased statistics retain relevance because they contain information about FBs' strategies for survival. Thus, the last two general features relevant for the competitiveness and development of FB are:

Characteristic #3: lower wages than in the rest of the economy (relying on the fact that labour is not perfectly mobile between small and large businesses).

Characteristic #4: higher gross capital returns per unit of capital than in large businesses. This is partially explained by their constrained access to financial capital that comes with higher transaction costs.

We can see in Table 7 that gross capital returns (i.e. the value added net of all labour costs) are much higher in micro than in small businesses (which still have higher returns than medium and large enterprises). The only exception is Poland, while the highest lead is in the Czech micro businesses. The most surprising thing is that these shares were generally rising throughout 2002-2008, as the prosperity of FB expanded as a whole.

Table 8 concentrates in more detail on the strategy to sustain the gap between the full labour costs per worker in FB relative to the much higher labour costs in large enterprises,

which was captured in our explanatory variable LC_FB/LB$_{it}$. Hence this variable tests the relevance of not only low (reported) wages but also of the gap in wage rates trailing behind larger businesses.

Table 8: Labour costs per worker in micro and small businesses relative to labour costs in large businesses (%), 2002-2008

Countries	L-costs micro / large			L-costs small / large			Growth 2008 - 2002	
	2002	2005	2008	2002	2005	2008	micro	small
Czech Republic	26,3%	24,6%	23,3%	83,4%	87,6%	84,1%	-3,0%	0,7%
Austria	42,2%	43,5%	52,8%	75,0%	73,7%	67,6%	10,6%	-7,4%
Germany	45,5%	43,1%	41,8%	71,3%	66,5%	65,5%	-3,7%	-5,8%
Poland	48,7%	33,5%	34,8%	81,7%	62,3%	65,6%	-14,0%	-16,0%
Slovakia	99,2%	86,2%	84,0%	105,2%	96,8%	97,1%	-15,3%	-8,1%
Hungary	49,1%	50,2%	36,1%	70,8%	68,7%	73,3%	-13,0%	2,4%
Average relative labour costs in 28 countries	45,6%			76,0%				
Average annual growth in shares of 14 developed economies in %	0,18			-0,15				
Average annual growth in shares of 14 emerging economies in %	-0,41			0,40				

Source: own calculation from data in SBA (2010).

Once again we can observe a wide range of cross-country differences, especially in the officially reported labour costs of micro businesses. Unfortunately the differences are so huge that it is likely that national reporters used different methodologies of data collection. There is one vindication for our study in that respect: since our regressions work with time series (and not with cross-sectional data comparing the differences among countries), what matters are the relative annual changes, for which the absolute values of indicators are irrelevant. Compared with the dynamics in gross capital returns (see Table 7), the relative labour costs in the majority of observations in our six countries in Table 8 decreased in time. If we look at the situation in 28 countries in Europe, the national relative labour cost gaps in developed economies retain a high degree of inertia, while in the transition economies these gaps have been widening in micro businesses and narrowing in small businesses. Their strategies for competitiveness were very different.

The next section presents the results of our regression analyses. The tests consist of four models related to micro and small enterprises, as classified in Table 1, whose specifications are as follows:

1] $L\_SHARES\_micro_{it} = a_0 + a_1\ KR/VA\_micro_{it} + a_2\ LC\_micro/large_{it} + a_3\ GDP/PC_{it} + a_x\ (INSTIT\_var_{it}\ x) + \varepsilon_{it}$

2] $L\_SHARES\_small_{it} = b_0 + b_1\ KR/VA\_small_{it} + b_2\ LC\_small/large_{it} + b_3\ GDP/PC_{it} + b_x\ (INSTIT\_var_{it}\ x) + \varepsilon_{it}$

3] $VA\_SHARES\_micro_{it} = c_0 + c_1\ KR/VA\_micro_{it} + c_2\ LC\_micro/large_{it} + c_3\ GDP/PC_{it} + c_x\ (INSTIT\_var_{it}\ x) + \varepsilon_{it}$

4] $VA\_SHARES\_small_{it} = d_0 + d_1\ KR/VA\_small_{it} + d_2\ LC\_small/large_{it} + d_3\ GDP/PC_{it} + d_x\ (INSTIT\_var_{it}\ x) + \varepsilon_{it}$

where a, b, c, d are estimated coefficients, i = 1, 2, ..., 28 are countries,

t = 2002, ..., 2008 are the observed years and ε_{it} are the random terms,

x = {4, 5, ..., 13} indicates the respective number of institutional variable 4 through 13.

To obtain parameters that are not too close to zero we decided to multiply our dependent variables by a coefficient of 1000 (i.e. the shares on the left-hand side are in pro-miles).

Our panel data specification can be estimated with simple fixed or random effects. Estimators with fixed effects, complemented by the Hausman-Taylor instrumental approach, represent a solution for those cases in which unobserved heterogeneity is correlated with regressors. Thus, among all the possibilities we decided to use the specification based on random effects because fixed effects were not supported by the Hausman test.[6]

Table 9: Models of micro and small businesses estimated by random effects

Dependent variables	Model 1] L_SHARES_ $micro_{it}$	Model 2] L_SHARES_ $small_{it}$	Model 3] VA_SHARES_ $micro_{it}$	Model 4] VA_SHARES_ $small_{it}$
Economic				
KR/VA_micro$_{it}$	**-69,04***** (20,3)		**86,73***** (20,0)	
KR/VA_small$_{it}$		**-42,71***** (12,2)		**-9,59**** (3,8)
LC_micro/large$_{it}$	-14,13 (11,0)		**91,60***** (9,7)	
LC_micro/large$_{it}$		**-15,39***** (2,2)		-21,07 (18,9)
GDP/PC$_{it}$	-0,000348 (0,0005)	**0,000851***** (0,0002)	**0,00194***** (0,0005)	0,00030 (0,0003)
Institutional				
REGUL	0,279* (0,14)	0,136* (0,07)		
MONET	**1,071**** (0,35)	**0,486***** (0,17)		
FISCAL	**0,644***** (0,26)	**0,632***** (0,14)		**0,737***** (0,196)
CORRUPT	**0,5313***** (0,19)		0,4556* (0,26)	
FINANC		0,184* (0,10)		**0,339***** (0,13)
INVEST			-0,379* (0,20)	
LABOUR			-0,399* (0,24)	
Number of observ.	196	196	196	196
Number of groups (countries)	28	28	28	28
Adjusted R-sq.	0,634	0,838	0,662	0,774

[6] As an alternative that would allow us to capture not only the short-run but also the long-run effects of explanatory variables, we have also experimented with an estimation using the Mundlak random effects specification. However, because such parallel estimations would unduly complicate and expand the scope of this chapter, we have not included these results in this version of the tests.

Source: own calculation from data in SBA (2010), Heritage (2010) and Eurostat (2010).
Remarks: The estimation with fixed effects was rejected because the Hausman test pointed to the significance of random effects).
Robust standard errors are in parentheses under estimated coefficients.
*** significant at the level of 1%, ** at the level of 5%, * at the level of 10%.
Constant and specific effects were included in our estimation but they are not reported here.
The VIF (variation inflation factor) excluded the presence of multicollinearity.

Table 9 reports the results of four regressions, which are specified above at the beginning of this section. In each regression we included three economic explanatory variables, KR/VA, LC and the GDP per capita in PPP, plus some relevant institutional explanatory variables. These variables were chosen according the level of significance in individual models. The non-significant institutional variables were dropped from the model.

According to the coefficients of determination, the models fit the data quite well. In all of these four models, the adjusted R-squared is greater than 60%. This is a very satisfactory result for this kind of panel data with a rather short time dimension (2002-2008). This means that in all the models more than 60% of the variability in observations has been explained.

If the standard errors are heteroskedastic and if only the homoskedasticity formula for standard errors is applied, the standard errors may still be biased. Therefore, to control for heteroskedasticity, we estimated the robust standard errors. It is a safer method because if we use heteroskedastic errors and the errors are (at least partially) homoskedastic, it does not evoke an additional bias. The tests of VIF (variation inflation factors) allowed us to reject the hypothesis of the existence of collinearity among out variables (Wooldridge, 2000). We also tested whether the residuals were correlated across entities. Cross-sectional dependence can lead to bias in estimators (also called a contemporaneous correlation). The Pesaran tests of serial correlation rejected the hypothesis that residuals might be correlated. The Wald test suggested that variables in all four regressions were jointly significant.

With regard to the results of our estimation, our first general observation is that only three out of the selected 13 explanatory variables were not statistically significant. All of them belonged to institutional factors: trade liberalisation (FBs are not very pro-export oriented), low government public spending (FBs are not hot candidates for benefiting from government contracts), property rights enforcement (FBs often take advantage of the holes in property rights, their business contracts are based more closely on local networks and personal contacts, and family ownership is not susceptible to rent-seeking from contracted employees).

Next in general importance is the finding that micro and small businesses differ in the strategies they have for making their ventures competitive. This is apparent from the varied significance and even opposing signs of coefficients in the first two economic variables when the columns are compared. The third observation is that the objective functions of employment gains versus net output gains are not symmetric. And the fourth relates to the very high importance of some institutions and national policies.

According to our estimators in Model 1], there is just one dominant economic factor in determining the expansion of employment in micro businesses – the share of gross capital returns on value added that has a negative sign. This implies that job creation in the smallest FBs is conjoined with low pretensions to capital returns. This may be the situation in industries that have low capital requirements or in enterprises where higher wages (at the expense of capital yields) attract workers from other industries. Reversing the argument, low wages and high capital yield requirements are impediments to job creation in FBs. Nonetheless, the crucial conditions for job expansion in micro businesses rest in low and simple taxes, a business environment free from corruption, a prudent monetary policy (that sustains low inflation), and a low level of government regulation. This finding confirms the

claims of some experts that the best way to promote small FBs is by introducing a liberal market environment, as was done in West Germany in 1948 or in Central Europe in 1991.

The similar objective of raising employment in small businesses (with 10-49 employees) is subject to very different policies (see Model 2]). Even though it also requires moderation in capital returns, there is another important complement: a sustained or even widening gap in labour costs relative to large enterprises. This is a knife-edge enterprise strategy for gaining competitiveness that calls for low costs and prudence in expenditures on the one hand, which should not, however, endanger investments and productivity growth on the other hand. Indeed, this may be what drives many small enterprises onto the margins of the shadow economy. This could help explain why the requirement of a low corruption in Model 1] was superseded in Model 2] by demands for easy access to financial intermediation. In addition, rising GDP per capita enhances the employment in small businesses.

The most unexpected finding occurred in Model 3] explaining the mechanism of growth in net production in micro businesses. It points to the existence of a trade-off between employment and output expansion. The latter is underpinned by high gross capital gains per value added (that often cannot be put across without momentarily restraining wages), which should be complemented in the medium-rum with upward wage concessions, thus forming a virtual circle of investments, output growth, high returns, and rising wages. High GDP per capita is a catalyst for such development accompanied by low corruption. Surprisingly, in this model the constraints on free (international) capital movements and on labour market flexibility are compatible with output growth in micro businesses.

Our last model dealing with output growth in small businesses is the least robust with regard to economic determining factors, because it depends only (and rather loosely) on the lower demands for gross capital returns per value added. However, it depends even more on the existence of an environment with liberal fiscal institutions and efficient financial services.

5 Conclusion

In this study, we began by assessing the potential role of family businesses in current capitalism of the post-financial world crisis that forced all European countries to restructure both their internal mechanisms of decision-making, and the organisation of industries and public finance. Based on supply-side microeconomic foundations, we elaborated the theoretical starting points for assessing the factors associated with the growth (or decline) of micro and small businesses in modern economies. We concentrated on the specifics in the management of small businesses that were crucial for their viability.

We distinguished between their four general characteristics related to competitiveness, which should be incorporated in our tests:
1) Family businesses account for a smaller share of total value added in the economy than their respective share of total employment. The smaller the business, the more labour-intensive its production is and the lower its net productivity per worker is (if compared with the medium or large businesses).
2) Family businesses play an irreplaceable role in the provision of employment in national economies. They are also the net creators of new jobs and the main absorbers of unemployment.
3) Family businesses have lower wages (at least lower reported wages) than in the rest of the national economy.
4) Family businesses have higher gross capital returns per unit of capital than do large businesses. Also, their access to financial capital is burdened with higher transaction costs.

Based on data for 28 European countries in 2002-2008, we ran a series of econometric tests in which we analysed how the share of businesses with up to 50 employees in total

employment and in total net production (value added) evolved over time. We regressed these two relative indicators to a measure of gross capital returns in the analysed businesses per their value added (as a proxy for profitability and investment) and to the relative gap between labour costs (wages) in small and large enterprises (as a proxy for cost advantages in order to gain competitiveness). In addition, we tested the role of GDP per capita in the development of family businesses and the significance of ten institutional variables that represent government policies relevant for the viability of small entrepreneurship.

Five of our economic variables were analysed more closely on data for six Central European countries, so that the position in family businesses in the Czech national economy could be compared with Austria, Germany, Poland, Slovakia and Hungary. Our tests concluded that ten out of the 13 determining factors were found to be statistically significant for the development of family businesses. Behavioural differences were revealed in connection with the impacts of the explanatory variables in individual regressions. The size of enterprises was also found to be important enough to modify managerial strategies and decision-making. Thus, micro and small businesses require different policies in order to sustain their viability.

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Remark about data used in this study:
Except for the data freely accessible on-line from the statistics of the World Bank (GDP per capita at PPP http://data.worldbank.org/indicator/NY.GNP.PCAP.PP.CD) and the Heritage Foundation (Indices of Economic Freedom http://www.heritage.org/index/) we worked extensively with the data of Small Business Act Fact Sheets for Europe, supported also by Eurostat reporting. A part of them is a freeware provided by the European Commission (see SBA, 2010). However, our estimations were based on a more detailed database provided by the courtesy of the DG Enterprise and Industry that was already adjusted to its technical requirements. Hereby we acknowledge our thanks for the provision of such data.