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MANAGING COMPLEXITY IN SMES

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Abstract

Purpose. *The paper analyzes complexity as a critical factor for the survival and development of SMEs, proposing the adoption of management control systems — within the legal framework of «adequate organizational arrangements» — as a lever to mitigate and manage it proportionally to the nature and size of the enterprise.*
Design/methodology/approach. *The study employs a systemic conceptual framework: it clarifies the construct of complexity (both technical and mental), identifies its causes and evolution, and maps its links with the organization and the environment. It then translates these principles into an operational path for SMEs: an initial check-up of existing tools, a gradual and combined selection of control levers, and the application of the proportionality principle.*
Findings. *The study shows that adopting management control systems proportional to the size and nature of SMEs enables timelier detection of economic and financial imbalances, improves the quality of managerial decisions, and reduces the risk of business crisis. The analysis also indicates that a systemic, graduated approach to control levers facilitates practical implementation, minimizes organizational costs, and strengthens business continuity, employment, and protection of invested capital.*
Practical and Social implications. *For SMEs, adopting «adequate arrangements» means making the detection of economic and financial imbalances more timely, improving decision quality, and reducing the risk of crisis, with positive effects on business continuity, employment, and the preservation of invested capital. Success also requires cultural and leadership interventions to overcome organizational resistance and skill gaps, all in line with the availability of financial resources.*
Originality of the study. *The paper integrates the regulatory framework on «adequate arrangements» with a systemic and operational managerial perspective, offering SMEs a flexible, scalable, and realistically implementable behavioral model. Its originality lies in demonstrating how knowledge, rationality, and flexibility can be translated into a proportionate management control design capable of transforming apparent complexity into actuality.*

1. Introduction

This contribution stems from a prolonged observation of business dynamics and from the conviction – matured in the field – that one of the main obstacles to development, and at times to the very survival of organizations, lies in complexity: a viscous phenomenon that stretches decision-making steps, blurs priorities, weakens the perception of cause–effect relationships, and ultimately disorients entrepreneurs and managers across sectors and sizes. In light of this evidence, we deem it necessary for scholars to analyze the phenomenon, isolate its variables, and propose actions capable of clarifying its dynamics, laying the groundwork for sustainable solutions. The inquiry is all the more relevant the more it is connected to the systemic nature of the firm and its operational essence, a theme not yet fully internalized by economic actors, resulting in a cultural lag that adversely affects development prospects and even the continuity of business entities.

Once the notion of complexity is defined, it must be situated within the context of small and medium-sized enterprises, where resource scarcity – particularly of intellectual capital – makes it more difficult to introduce the set of methods, data, and capabilities that explain processes, reduce informational opacity, and realign management with a competitive environment that the firm, in most cases, cannot shape but only interpret. Hence, the need for adequate and proportionate solutions, consistent with organizational variables and with economic constraints typical of smaller scales, such as to maximize effectiveness without generating coordination costs that exceed the benefits.

Translated into operational terms, the issue leads to the adoption of a management control system that today finds a concrete legal reference in the «adequate arrangements» introduced in 2003 for joint-stock companies and extended to all companies by the Business Crisis and Insolvency Code (Legislative Decree No. 14/2019). Implementing this system raises not only economic problems – owing to the investments required in organization, technologies, and training – but also organizational, technical and, above all, psychological issues, as it entails a paradigm shift that touches habits, roles, and responsibilities, leading us to consider that we are faced with a veritable "cultural revolution" (Manca, 2025). Hence the need for a gradual path, grounded in the «principle of proportionality» which the legal framework allows without prescribing precise criteria, and within which the management sciences can offer a decisive contribution by correlating, case by case, control tools to the specific circumstances.

It must also be said that the technologies used to support decision-making processes are increasingly sophisticated, to the point of replacing human beings in various domains, something that is already happening

and will occur even more with artificial intelligence. Consequently, the adoption of control systems will become progressively easier and the tools themselves increasingly intelligible; moreover, data processing times have already declined markedly compared with the past, as has the time needed to handle ever larger volumes of data. What will not change, however, is the need for someone (certainly not a machine) to understand the meaning of the information that emerges from management control and to be able to use it to feed decision-making processes; therefore, the problem will arise of sourcing the skills suited to performing this task, an objective that appears anything but simple in smaller enterprises.

From a methodological point of view, finally, it is important to note that this paper remains – actually – on a conceptual and theoretical level, since the normative references are recent and it is not yet possible to have sufficient data to carry out an empirical investigation.

2. Illustration of the Concept of Complexity

To understand the concept of complexity, it is helpful to start from the term's etymology, deriving from complexus, the past participle of the Latin verb complectior («to entwine together»), which evokes the union of multiplicities. This root points to a cohesive plurality, and indeed, according to the Treccani Encyclopedia, complexity represents a «qualitative characteristic of a system». In more detail, it is the manner of being or appearing that makes the orientation toward, or understanding of, a phenomenon difficult, primarily due to depth, meticulousness, arrangement, or a necessarily intricate unfolding, though at times also to disorder. Moreover, it is helpful to distinguish between «complex» and «complicated»: the latter indicates what is confused or difficult to interpret, whereas complexity implies a set of elements coordinated with one another and oriented toward common objectives (Cravera, 2021, p. 20).

The parts of a complex system display i) interconnections, that is, causal ties that produce relations of cause and effect (Snowden & Boone, 2007); ii) a certain numerosity and heterogeneity, which increase the difficulty of understanding and managing the whole; iii) variability, typical of nonlinear systems, which renders their evolutions unpredictable. Within this framework, there coexist a tendency toward disorder, connected to the improper handling of variables; a technical-operational content, due to the plurality of elements; and an intertwining of internal and external relations that characterises every system. Complexity can be distinguished into a "technical" component, linked to objective elements, and a "mental" one, generated by subjective perceptions (Johnson-Laird, 1988). It follows that complexity is not only an intrinsic property but also the outcome of the

observer's perspective (Comuzzi, 2024, p. 16). The two components interact in determining the system's behaviour and its intelligibility: the more subjectivity prevails, the greater the disorder and, with it, the difficulty of management. It is therefore indispensable to identify interpretive tools capable of reducing apparent complexity and bringing it back to an effective complexity, a more controllable form. Understanding the causes of complexity is the first step toward reversing its trajectory (Simon, 1962; Geraldi et al., 2011): acting on the symptoms while neglecting the roots of the problem inevitably leads to the recurrence of the same conditions.

The study of complexity has been undertaken in multiple fields of knowledge: in physics, in relation to the predictability of systems; in philosophy and the human sciences, with attention to cognitive and ethical aspects; in sociology, with reference to interactions among individuals and groups; in computer science, for the computational dimension; in biology, for the internal relations of living systems; in psychology, for cognitive and emotional processes; and in economics, for organisational and decision-making implications. In business economics, in particular, the topic became central as early as the last century, and more recently it has focused on analysing the link between complexity and the systemic character of the firm (De Toni & De Zan, 2015; D'Amato & Tosca, 2016; Morin, 2017).

A common element across these approaches is the relationship with System Thinking, which regards complexity as a constitutive property of the system (Senge, 1990; Flood & Romm, 1996; Midgley, 2002; Meadows, 2019). This perspective aims to integrate people, goals, processes, and performance; to manage uncertainties, risks, and opportunities; and to relate the system to the environment in which it operates. It enables: i) the subdivision of the system into interdependent but analysable subsets; ii) the interpretation of relations and consequences, including unpredictable ones; iii) the coordination of the actions of individual elements through regulatory instruments; iv) the consideration of the cascading effects of every intervention; v) the recognition of the constant influence of the external environment. This vision makes it possible to address organisational complexity and to transform it from an obstacle into a resource, rendering it manageable through knowledge, coherence, and systemic vision.

3. Complexity in the Context of Small and Medium-Sized Enterprises

Suppose it is true – as it is – that complexity has a systemic connotation. In that case, it can be regarded as a typical corporate property, intertwined with other characteristics to which the literature refers (Zanda, 1984, p. 218 ff.). We believe, however, that this very quality, more than many others, makes it possible to read the firm in its essential features and, consequent-

ly, to govern it with appropriate tools (a circumstance less common than it ought to be). A holistic view applies to any corporate organism, since the "classic" scheme of its functioning – acquisition of production factors, their combination, and external transfer of the result – recurs in every reality, regardless of size, sector, nature of the economic entity, legal form, and other particularities. This does not imply, however, that complexity manifests itself with identical connotations: it varies markedly with the nature and size of the enterprise, two concepts on which it is worth dwelling.

By the «nature» of the enterprise we mean the set of its intrinsic characteristics: the legal form (e.g., corporate type), the sector to which it belongs (more or less specialised and technologically advanced), the chosen production model (make-to-forecast or make-to-order), the type of clientele (individuals, businesses, public entities), the dynamism of the environment (capable of influencing many variables and complexity itself), any seasonality (tourism being the prime example), geographic scope (often correlated with size), membership in a group (with the resulting operational constraints), the business model (deriving from competitive choices), and the breadth of the product range (with effects on organisation). In short, a set of characteristics—non-exhaustive and indeed amenable to integration—that confers on the firm a degree of originality such that it is different from all others, even when they may at first sight appear similar (Coda, 1988, p. 72 ff.; Mollona, 2008).

As for «size», one may refer to the parameters adopted in the European Union – turnover, number of employees, and total assets – or consider additional measures, such as the level of fixed costs, the amount of equity, or certain "margins" derived from the reclassified income statement (value added, EBITDA, Economic Value Added, and others). It should be noted, however, that such magnitudes, though apparently objective because quantitative, do not always correspond to equivalent conditions of complexity (Gorzeń-Mitka, 2015): one encounters SMEs with considerable managerial difficulties and, at times (more rarely), large enterprises in conditions that are relatively easier than those of smaller firms. This is why, although more discretionary, reference to the nature of the activity often appears better suited to capturing an enterprise's level of complexity, while remembering that this is a relative and partly debatable concept.

Suppose we view the foregoing in light of the components of complexity recalled in the previous paragraph. In that case, we can say that size acts as a generally objective element from which a "technical" complexity descends, due to the increase in the number and magnitude of variables at play; the nature of the activity, by contrast, gathers distinctly subjective elements, such that the "human" characteristics of the firm are reflected therein, to the point of making perceptible the imprint of the entrepreneur and, in extreme cases, an almost total identification. This leads, on the one

hand, to the – if you will, paradoxical – effect whereby complexity seems to increase as size decreases, but only because many firms in that range are little inclined to systemic thinking, poorly endowed with competencies (also due to a lack of resources to acquire them), and afflicted by behavioral problems: in essence, whereas in large companies a proper approach to entrepreneurial activity tends to reduce complexity, in smaller ones the lack of such an approach amplifies it. On the other hand, this assigns to complexity the rank of a veritable «factor of crisis» (Guatri, 1986, p. 14 ff.; 1995, p. 44 ff.): that is, an element potentially capable – with a probability that varies from case to case – of damaging the corporate whole to the point of leading it to a pathological state, an eventuality that materialises when complexity degenerates into chaos and management (or the economic actor directly) can no longer keep it under control.

Ultimately, we witness a contrast between an "objective complexity", which has its roots in the environment external to the firm (hardly modifiable) or arises internally through the action of variables that are not governable, often traceable to the stakeholder area; and a "subjective complexity", which springs mainly from elements internal to the corporate system and therefore falls within the manager's sphere of influence, centering on the stewardship of the organisational body. In this perspective, the firm's organisational aspect becomes crucial, encompassing not only the ways in which human resources are "deployed", but also – and perhaps above all – their behavioural profile, relational dynamics, competencies, and their very essence as "human". Human capital, in fact, has always been and continues to be (despite the advent of artificial intelligence) the production factor underpinning a firm's ability to achieve or fail to achieve its objectives. It is no accident that the «organisational arrangement» has been the object of scientific and regulatory attention well before the explicit provision of art. 2086 of the Italian Civil Code: its central role was perceived from many angles to the point of meriting the legislator's interest.

These considerations find confirmation in an analysis we have recently conducted (Manca, 2025, p. 253 ff.), in which – without any claim to exhaustiveness – numerous traits of not big enterprises were highlighted, grouped into four broad categories and, within each, distinguished into positive and negative aspects. The categories encompass characteristics of a structural nature, referring to long-term (or strategic) settings pertaining to the combination of the most relevant resources; dimensional nature, linked to variables typical of the specific size and reflected in equity, investments, headcount, and turnover; informational nature, correlated with the production and transmission of information and, more generally, with the creation and diffusion of knowledge (Audretsch & Belitski, 2021); and behavioral nature, connected to psychological, emotional, relational, and conduct-related aspects that induce – sometimes unwittingly – certain ac-

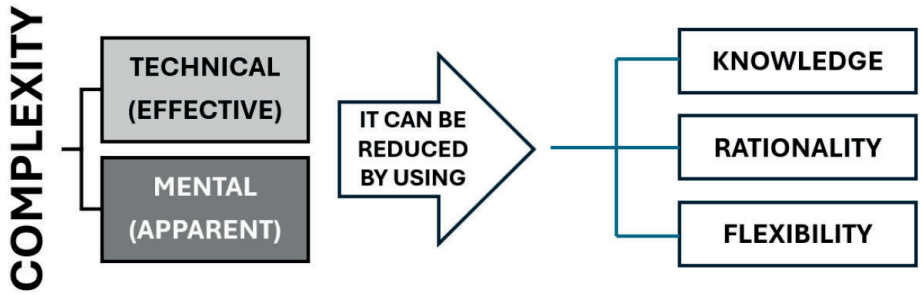
tions not always rational or defensible. It is precisely this latter category that proves the most crowded, underscoring the breadth and heterogeneity of the human conduct dimension, which often ends up increasing the physiological complexity of the corporate organism (Cravera, 2021, p. 82 f.). It follows that the solution, with measured optimism, inevitably involves a change in mindset: first, acquiring the proper awareness of what a firm is, and then deciding to treat it according to its peculiar needs.

Finally, these reflections make it possible, on the one hand, to delineate the contours of the phenomenon by framing its various components, and on the other, to identify its causes and trace its evolutionary path; as well as to make explicit the relationships among the constituent variables and clarify how interactions are configured. Nevertheless, the analysis remains incomplete unless the possible future developments of this systemic aggregate are explored: it is necessary to study, on the one hand, how it relates to the environment in which it arises and, on the other, in which directions it may evolve in the short and medium term, to identify what interventions are feasible to mitigate its undesirable effects. The firm is, in fact, a goal-directed system; thus, the ability to foresee its evolution underpins the possibility of steering its course, which – in the case examined – coincides with value creation, the prerequisite for maintaining a condition of economic viability and for safeguarding the investment made by the entrepreneur, whether individual or collective (Rappaport, 1999; Porter & Kramer, 2011).

4. Factors for Reducing Complexity

The analysis of complexity – properly broken down into its components, the factors that feed it, its ties to context, and the dynamics by which it evolves over time – is indispensable not only for understanding the object of inquiry but, above all, for approaching it lucidly and mitigating its effects, since complexity, by definition, cannot be eliminated (Holland, 2006). It is therefore advisable to begin with three complementary and interwoven levers: knowledge, which can bring to light what is opaque; rationality, which orders, selects, and structures; and flexibility, which enables adapting responses to partially unpredictable situations (the relationship between these factors and complexity is illustrated in Fig. 1).

Fig.1. The components of complexity and the reduction factors



Knowledge reduces the "technical" share of complexity through competencies that untie operational knots and, above all, allows us to measure with greater precision magnitudes and phenomena which, if left in the shadow cone of the unknown, appear boundless and generate fear or impotence (Davenport & Prusak, 1998); hence a non-negligible psychological effect, because the sense of insurmountability diminishes and the conditions for more lucid and proportionate decisions are strengthened. In order for knowledge not to degenerate into a chaotic accumulation of data, an information system is required: material, immaterial, and human resources dedicated to collecting data, transforming them into useful information, and delivering them to those who truly need them, balancing reliability and timeliness, synthesis and completeness, and choosing effective communication channels without needlessly increasing operating costs.

Moreover, the technology embedded in an information system – and in particular artificial intelligence in its most recent forms – can enhance managerial rationality by generating, within short timeframes, large quantities of information, identifying hidden patterns, and suggesting scenarios; however, it does not replace the person, their intuitions, the sensitivity matured through experience, and the responsibility for choices: systemic complexity arises to a large extent from the unpredictability of human conduct, from the interaction among interests, emotions, and contexts, and no machine, programmed by human beings, can claim to govern it entirely at the highest levels. Technology, in short, is a capacity multiplier. However, it remains a tool and as such requires criteria of use, interpretive skills, ethical safeguards, and an organisational framework that channels its power toward ends consistent with strategy.

The second element is rationality, which imposes order and logic to simplify complex phenomena just enough to make them manageable. It avoids confusing comprehensibility with the claim of always solving them and prevents the opposite excess of undue reduction (Pinker, 2021, p. 278). Rationality also means project-mindedness: simulating alternative scenari-

os, planning actions with multiple options, adopting a long-term view, and confronting contextual variables – economic, regulatory, technological, and social – that ignorance or underestimation of causes harm and frustrates objectives, even when these have been formally clarified and shared. Hence, there is a need for ex ante forecasting and assessment tools, metrics that allow comparison of alternatives, checkpoints along the way, and corrective mechanisms to prevent useless persistence in plans that prove inadequate.

The third element is flexibility, understood as the capacity to adapt to different, changing, and partly unpredictable situations (Shimizu & Hitt, 2004). Operationally, it translates into problem solving: knowing how to define the problem starting from symptoms and reading even weak signals; developing realistic alternatives; assessing their consequences by weighing sacrifices and benefits; choosing the best solution given the resources available; implementing it with discipline and measuring the effects (Mayer, 2013; Ackoff, 1974). For this to occur, strategies proportionate to the aim are needed, along with careful management of the relationships among the people and groups initially called to think and then to act, to generate coherent, "tailor-made" solutions. It is often useful to adopt dedicated procedures, such as behavioural models – a systemic set of method-guided actions capable of drawing a recognisable and shareable operational path – without rigidifying the organisation into schemes that, when the context changes, lose relevance (Simon, 1955; Ajzen & Fishbein, 1980). It remains true, however, that the higher and more shifting the complexity, the harder it is to intervene with certain outcomes; moreover, the mental models that provide stability and identity tend to resist, making the internalisation of new interpretive and operational schemes laborious.

In constructing models, one must beware of «simplifying thinking», which demands certainties and linearity in relation to phenomena that cannot be reduced to simple measures (Morin, 2017). After decades in which reductionist approaches have dominated many disciplines – economics included – their limits have emerged clearly, prompting consideration of the non-linearity of relationships within systems and the continual feedback between system and context. Complexity, in essence, is not simplified by decree: tools must be shaped to the problems; the more articulated the problems, the more articulated the governing actions must be, while still maintaining a hierarchy of ends and evaluative criteria that prevent action from becoming scattered (Cravera, 2021). It is therefore necessary to introduce interpretive devices capable of recognising feedback, thresholds, feedback effects, time delays, and emergent phenomena, in order to avoid hasty conclusions based on spurious correlations or on time series that are too short.

There is also a decisive variable: time. It is not enough to identify the solution if it is not implemented promptly, because in the meantime, the phenomenon evolves and the intervention loses effectiveness (Cinquini, 1994). In the governance of complex systems, the time factor must be considered in the duration of events and in the speed with which they manifest, in the delay with which actions produce effects, in the rhythm of the activities that compose them, in the periodicity that enables less disruptive planning, in the forward-looking valuable vision for evaluating ex ante the outcomes of alternatives, and in the variability of effects, sometimes constant, sometimes changing in intensity and amplitude over successive periods. The temporal dimension thus becomes a parameter of design, execution, and control, imposing a discipline of the calendar that reduces frictions, accumulations of delays, and counterproductive oscillations. It suggests the use of intervention windows in which the organisation can obtain the maximum result with the minimum disturbance to the system.

To confer rationality on management, increase visibility over the future, optimise the use of resources, order activities, and reduce overall risk, it is helpful to adopt management control: an operational system (Airoldi, 1980) that defines objectives (planning), carries out the planned actions (execution), verifies variances and results (control), and uses the information collected to feed subsequent decisions (feedback) (Anthony, 1967). This is not only a matter of charting a common course, but also of evaluating each decision by comparing costs and benefits. This includes qualitative variables that are not monetisable by nature yet are essential for estimating effects on the enterprise as a whole: internal climate, organisational quality, reputation, and consistency with declared values. Since complexity is a multidimensional phenomenon, economic value represents one dimension among others; comparison requires translations into terms of value that allow different perspectives to be combined, with the awareness that the centrality of the human element introduces margins of subjectivity that cannot be eliminated but can be managed through transparent procedures.

For management control to work, it requires traceable metrics, attention thresholds, periodic verification cycles, and a shared language that makes numbers intelligible without reducing reality to mere calculation. It also requires an informational architecture that ensures coherence among data, processes, and responsibilities, so that each actor organises their contribution within a chain that leads from the recorded fact to the decision and from the decision to the action. In designing such an architecture, it is prudent to distinguish between what is indispensable to measure and what is merely interesting. This approach helps avoid redundant indicators, favours readable dashboards, and provides moments of qualitative listening that integrate, without contradicting, quantitative evidence.

On the organisational plane, management control requires a leadership

style capable of building team spirit. In a team-like organisation, the alignment of system elements, in fact, strengthens causal links. It fosters a climate capable of facing ambitious challenges and overcoming difficulties that would otherwise appear insurmountable. Leading means guiding the group in line with the objectives and the characteristics of the people called upon to achieve them: personality, motivations, aptitudes, competencies, and other variables that help in understanding their psychology and behaviour. From this derives a style that valorises human resources while orienting action toward corporate ends, clarifies priorities, eliminates ambiguities, tends to interdependencies, safeguards organisational learning, and promotes accountability, so that the system not only executes but improves while executing. All the more so in contexts where roles and skills are hybridised, leadership must know how to combine direction and listening, a stable framework and operational freedom, incentives to achieve results and recognition of effort.

Effective leadership also knows how to calibrate the degree of process formalisation: too much rigidity stifles initiative and slows the organisation; excessive discretion produces uncontrolled variability and strains coordination. The right balance lies in defining a few straightforward rules, explicit responsibilities, short decision flows, and escalation mechanisms that make it possible to resolve bottlenecks quickly while preserving consistency with objectives. Within this equilibrium between rule and adaptation lies the concrete possibility of reducing the complexity perceived by actors, freeing energy for activities that generate value.

From the above, adopting management control is the privileged path for configuring «adequate arrangements» and reducing complexity, with the awareness that the operations undertaken will affect the quality and magnitude of performance. What remains is to assess which configurations – or, more precisely, which tools – are appropriate for a small or medium-sized enterprise, in light of its size, organisational structure, internal culture, and sector of operation. The next step will involve outlining criteria for selection, conditions of feasibility, and adoption costs to propose a set of proportionate and modular solutions. These solutions should accompany the enterprise on a path of continuous improvement without introducing additional complexity that would, paradoxically, nullify the benefits being pursued.

5. The Usefulness of «Adequate Arrangements» in Managing Complexity

At this stage, it is appropriate to focus on instruments that can concretely assist small and medium-sized enterprises in containing complexity and channeling them into more orderly and conscious management paths, while bearing in mind that the firm is an organism involving people and capital to

be safeguarded. From this perspective, the relatively recent provision contained in the aforementioned Legislative Decree no. 14/2019 is valuable, as it offers both an operational and a regulatory point of reference.

Starting from the opening tenor of the rule, it is necessary to clarify what is meant by «organisational, administrative, and accounting arrangement» and, correspondingly, by «adequacy» in relation to the parameters laid down by the legislature. We have already discussed the second notion, linking it to the theme of complexity; we shall therefore focus on the notion of «arrangement», then articulate it along the three directions indicated by the law and subsequently bring them back to systemic unity.

«Arrangement», in itself, is an abstract concept that refers to the position an object assumes within the context in which it is called to move and, therefore, to the necessary ability to adapt to changes in the surrounding environment, which may be natural, physical, social, or economic. What is relevant here is the economic context in which enterprises operate and which the Italian Civil Code invokes when it requires directors to put in place «an "organisational, administrative, and accounting arrangement»: the firm, a dynamic system par excellence, must adapt to emerging needs and to the internal and external variables that change incessantly. The «arrangement» can thus be defined as the configuration of predominantly immaterial elements, of variable complexity, structured so that they operate at their best within the context of economic activity; it is not only a matter of the objects as such (how many and which), but of their configuration (how they are arranged) according to a method that guides their placement and functioning. Under the law, we may have:

- An «organisational arrangement», namely the disposition assumed by the people who operate within the firm, depending on the roles and tasks assigned to them, their reciprocal relations, and the modalities established for the execution of the operations within their remit. In other words, it is the combination of: i) the subjects who, in various capacities, work for the enterprise; ii) the positions occupied in the corporate hierarchy, regardless of the specific professional profile (Mintzberg, 1983; Galbraith, 1973); iii) the procedures adopted for the performance of tasks; iv) the tools – also immaterial – that facilitate the activities carried out by members of the organisation, i.e., the operating systems.
- An «administrative arrangement», namely the disposition of resources, people, means, and procedures that support decision-making at all levels and in all business processes: from activities overseeing the operating cycle (order management, clientele, collections and payments) to those of a strictly legal nature (taxation, debt collection), from the representation of results (financial statements and accounting situations) to the forecasting and simulation of future conditions (budgets, cost and price calculations).

• An «accounting arrangement», namely the disposition of people, means, and procedures aimed at recording business events – both internal and external – and translating them into information on management performance. This stands in an instrumental position with respect to the «administrative arrangement», which it continuously supplies with accounting data flows destined for various economic–managerial analyses.

The configuration of «arrangements» should follow analyses designed to verify the presence and adequacy of the necessary instruments, taking into account what already exists; but to move from the "static" phase of predominantly theoretical preparation to the "dynamic" phase of the actual functioning of safeguards, it is necessary to measure their «adequacy» with respect to the reference context, which the rule identifies in the «nature and size of the firm» (see, on this point, paragraph 3 above). Added to this is what is established by the second part of Art. 2086 of the Italian Civil Code, which entrusts the arrangements also with the function of «timely detection of the business crisis and the loss of going concern»: it follows that companies are obliged to equip themselves to prevent or, at the very least, to ascertain in time any pathological states. The relevant regulations specify that the «arrangements» must make it possible: (a) to detect any imbalances of a patrimonial or economic–financial nature, relative to the specific characteristics of the firm and the activity carried out; (b) to verify the sustainability of debts and the prospects for going concern at least over the following twelve months. This implies, on the one hand, procedures for controlling and monitoring the firm's values – costs, liquidity, contributions from the various sectors – and, on the other, the capacity, typical of «adequate arrangements», to set management according to a logic consistent with the systemic and investment nature of the firm.

It follows that «adequate arrangements» share the premises of management control: equipping oneself with this instrument means configuring the organisation, administrative activities, and measurement systems – accounting and otherwise – to comply with the law and, above all, to increase, often significantly, the probability of entrepreneurial success (Manca, 2023). Management control, as already noted, is the operating system that confers rationality and order on business activity, without sacrificing the flexibility necessary to achieve satisfactory results and to remunerate invested capital appropriately; it is, in essence, the instrument that makes it possible to counter the complexity inherent in the firm, provided that certain basic conditions are present that enable its actual operational translation; otherwise, it is destined to remain mere theoretical elaboration or a statement of intent.

Once a control system «adequate» to the specific case has been set up, management can devote itself to developing or adopting a behavioural model: a set of rules and procedures that enable complexity and thus management to

be addressed according to a steady method. However, steady does not mean deterministic or invariable; instead, it guides the logical pathways that lead to a range of solutions among which one can choose the most appropriate. In a context that changes continuously and is highly unpredictable, it would be illusory to rely on static approaches: a dynamic framework is needed, capable of governing uncertainty rather than suffering it. It is not, therefore, a matter of providing pre-packaged solutions or more or less miraculous "recipes", but of placing in the entrepreneur's hands a modus operandi that, like a compass, orients the journey through complexity by combining analytical discernment with prompt decision-making.

The provisions concerning the establishment of «adequate arrangements» and all the operational implications just discussed are – obviously – of general scope, entailing their applicability *erga omnes*; the only (yet far from trivial) problem lies in the fact that the universe of firms is extremely variegated, which may make it quite difficult to comply with the letter of the law. This is because the rule applies to situations that can be very distant from one another and are thus ill-suited to homogeneous treatment. Easing the task, however, is the rule itself, which resorts to a well-known legal construct, namely the «principle of proportionality», according to which the «arrangements» must be appropriate to the nature and size of the company, as previously stated.

For this reason, it becomes quite evident how important it is to find the solution best suited to the individual firm, in relation to the technical, organisational, and financial problems that may arise, and how useful the principle of proportionality can be in this regard. Its application thus appears to be a necessary step in confronting complex phenomena, since the reaction to complexity (and the tools used for the purpose) – as well as complexity itself – changes with the contexts in which it develops, making particularly arduous the task of configuring a management-control system suited to the firm when viewed in dynamic and evolutionary terms.

6. Conclusions

Complexity is a phenomenon that forms part of our daily lives, and firms as social systems cannot be exempt from it. At the same time, the systemic connotation of the phenomenon and of the firm itself allows it to be investigated and addressed using tools that are by now well-known and amply tested across various scientific domains. To proceed, however, it is necessary first to define this phenomenon clearly in its essential features and then to devise the actions deemed appropriate – if not necessary – to oppose it. In particular, rationality (and with it planning), knowledge, and flexibility can be effective factors in reducing complexity, provided that the

causes that generated it and the evolutionary dynamics that might alter it are first identified. A way to counter such a situation is suggested by a legal rule (Article 2086 of the Italian Civil Code, as amended by Legislative Decree No. 14/2019) that provides for the establishment of so-called «adequate arrangements», which, upon closer inspection, rest on the same premises as a management control system; adopting the latter would therefore at once mean complying with the legal requirement.

Granted these premises, difficulties may arise when one seeks to confront complexity in a small or medium-sized enterprise, which exhibits peculiarities that place it in a position of fragility with respect to competencies, investable resources, and the capacity to manage change. Bearing in mind how hard it is even to imagine a cultural transformation of this kind – yet one that now appears unavoidable – for firms of these dimensions, we have briefly dwelt on the technical tools that can be used to equip companies differing in nature and size with a management control system aligned not only with the letter of the law but also to pursue a durable condition of economic viability that allows the investment made in a productive concern to bear fruit. Of considerable help in this endeavour is the principle of proportionality long practised in law, which, when applied to firms, calls precisely for equipping them with tools suited to their particular characteristics, to avoid overburdening them (from every standpoint) while also steering clear of furnishing them with means that may prove insufficient.

The conclusion we have reached is that tailoring tools to specific needs is not particularly difficult, provided one has a clear grasp of the problems to be addressed and the resources (both financial and human) to devote to these activities. What seems far more arduous is endowing the entrepreneur (whether individual or collective) with the culture needed to run a corporate organism, which entails assimilating certain fundamental concepts such as systems thinking, a long-term outlook, and consideration of the surrounding environment. Only with such a change could the mental models now crystallised in the management of small and medium-sized enterprises be altered – models that prevent them from being run as they deserve – thereby projecting these realities toward a future less uncertain because more visible, and toward a complexity that, from «apparent», might be scaled back to become simply «actual».

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