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# "THE EVOLUTION OF MANAGEMENT CONTROL SYSTEM IN THE COVID-19 PANDEMIC"


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# INTRODUCTION

The COVID-19 pandemic has had an unprecedented impact on businesses and organisations worldwide, necessitating swift and adaptive responses to the challenges posed by the crisis. In this context, the role of management control becomes crucial in navigating the uncertainties and complexities brought about by the pandemic. The objective of this thesis is to explore the dynamics of management control in the context of the COVID-19 pandemic. Specifically, it aims to analyse how organisations have adjusted their management control systems to address the unique challenges and disruptions caused by the crisis. By examining the practices, strategies, and tools employed by businesses during this period, are provided insights about the effectiveness and limitations of management control in times of crisis. The study will adopt a multidimensional approach, incorporating both theoretical frameworks and empirical evidence. It will draw upon existing literature on management control system while also conducting interviews to capture real-life experiences and perspectives.

The thesis will begin by establishing a theoretical foundation for understanding management control systems and their role in organisational performance. Specifically, in the first chapter is presented the definition of management control system, deepening its main objectives and its different approaches. The most important and crucial subjects who are part of the management control system are introduced, explaining also the most fundamental instruments necessary to the management control system to maintain the control of the organisations and guide it through the different challenges and objectives that a firm may face. In addition, the chapter goes through Malmi and Brown's framework and the different types of control identified by them.

The second chapter delves into the specific challenges brought by the COVID-19 pandemic: through the analysis of important case studies and interviews from the literature, the study will identify the innovative practices and strategies adopted by organisations to maintain control and mitigate the negative impact of the crisis. After presenting the concept of risk and the new emergent risks brought by the pandemic situation, the different reactions of organisations are deepened. For example, according to the paradox theory, organisations in time of crisis could find an opportunity focusing both on short- and long-term objectives. Passetti's study instead shows the reactions of management control system in an Italian food retail cooperative focusing on three types of responses implemented by the management control system of the enterprise: the one for business-operational continuity plan and COVID-19 health and safety, the one for COVID-19 financial control and the one for the local community. Then it will be analysed the remote working and its larger use in the pandemic situation due to the lockdown measures and its impact on management control system with the difficulties to monitor employees. Lastly it is possible to see the role of budgeting in the COVID-19 situation and the consequent employee stress.

In the third and fourth chapter it will be conducted an empirical study taking into consideration three Italian companies active in the food industry, more specifically in the production and commercialization of pasta. With an online interview (Google Forms) is examined how the budgeting, which is an essential management of control mechanism, and its uses are changed in the pandemic period. Specifically, it will be taken into consideration the sales budget and the investment budget.

The findings of this research will contribute to the existing body of knowledge on management control system. They will shed light on the adaptations and transformations necessary for organisations to enhance their resilience in the face of unprecedented disruptions. Ultimately, this study aims to provide valuable insights and recommendations for organisations to effectively manage and control their operations during times of crisis, with a particular focus on the COVID-19 pandemic. By understanding the challenges and opportunities that arise in the context of the pandemic, organisations could better prepare for future crises and develop more robust management control systems that promote sustainable and resilient business practices.

# CHAPTER 1: MANAGEMENT OF CONTROL SYSTEM

## 1.1. Definition of management control system and its purpose

"Business management has always been one and unitary in every moment of the life cycle of the company and it concerns cognitive management (planning of short and long term) and operation management (when daily actions and processes are implemented)" (Paolini, Chiucchi, Gatti, 2015)[1]. "Strategic and operation management are tied by competitive structure and operation structure" (Galeotti, Garzella, 2013)[2].

Competitive structure is about the interaction of the firm with its environment where strategic management could understand the efficacy of the strategy and the efficiency of the relations established with specific subjects. On the other hand, the operative internal structure regards organising the company's business management. Management concerns planning and scheduling. The planning of a firm is not always a functional area of the system, but sometimes it consists only in an informal process made by the responsible subjects.

In the biggest firms that are organizationally advanced - when the managers are different from the entrepreneur – may exist a structured planning system that demonstrates the attention for processes and construct for them support and functional integrated areas for the functioning of ordinary operations.[3] Planning activities are mainly performed by corporate government bodies, indeed it is the cognitive part of corporate management, for this reason planning and scheduling allow for the prospective setting of management over time. Obviously, being management fundamental for the functioning of a company, the consequence of cognitive management is operational management, which includes the set of operations, both managerial and operational, that explain the daily and continuous functioning of the company.

There are two main areas of management:

- **Strategic management**, which includes macro-decisions and actions that mark the company's path in the medium-long term (sometimes even in the short term). It is about taking decisions on the pivotal problems on which the future of the company depends. In strategic management, effectiveness is fundamental, especially the ability to take into account and try to combine the external dynamics of the company with

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[1] Paolini A., Chiucchi M. S., Gatti M., 2015, I sistemi di pianificazione e controllo della gestione. Available at: https://docenti.unimc.it/antonella.paolini/teaching/2021/24596/files/sintesi-ed-integrazione-del-manuale/1.%20bis%20Pianificazione%20e%20controllo%20-cap.%2018.pdf

[2] Galeotti M., Garzella S., Governo strategico dell'azienda, Giappichelli, Torino, 2013, p. 13.

[3] Brusa L., Le aree funzionali dell'azienda: introduzione, in A.A. V.V., Lezioni di Economia aziendale, Giappichelli, Torino, 1996, pp. 48-55.

the internal dynamics, in order to formulate the best hypotheses for the choice of objectives and strategic actions.

- **Current management**, which concerns the micro-decisions and operations carried out thanks to the company organisation, both in its structure and in its operating mechanisms. In current management, efficiency emerges, which consists in the ability to carry out operations in the best possible way. This efficiency may be verified by the mechanisms of operational and management control.

Anthony (1965)[4] asserted that a management control system can be defined as “the process by which managers assume that resources are obtained and used effectively and efficiently in the accomplishment of the organisation’s objectives”.

Management control system is the process by which management ensures that people in the organisation carry out organisational objectives and strategies; and encourages, enables or sometimes forces employees to act in the organisation’s best interests. The process consists of interrelated phases of programming, budgeting, execution, measurement and evaluation of actual performance in order to define and assess organisational objects and targets. A management control system is a coherent set of techniques for gathering and using information in order to:

- make planning and control decisions taken by the different actors of the firms;
- motivate employees behaviours;
- evaluate the performance periodically and as a whole.

A well-designed management control system supports and coordinates the decision-making process and motivates individuals throughout the organisation to act accordingly. The structure of a management control system indicates what the system is, while the process of a management control system indicates what the system does.

The management control system binds the organisation together in a way that enable each part, by exercising the autonomy given to it, to fulfil a purpose that is consistent with and contributes to the fulfilment of the overall purpose of the organisation. Management control system should be closely aligned to an organisation’s strategies and goals and should be designed to fit the organisation’s structure and the decision making responsibility of individual managers. Effective management control system should motivate managers and employees to exert efforts toward attaining organisational goals through a variety of rewards tied to the achievement of those goals.

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[4] Anthony R., 1965, Planning and control systems: a framework for analysis, Division of Research, Graduate School of Business Administration, Harvard University, Boston.

There are some factors which influence management control system:

- **the size and the spread of the enterprise**, indeed the size and spread of a large firm is bound to be different compared with that of a small firm; this would certainly determine the content and nature of the control system for each organisation;
- **the organisational structure**, indeed within an enterprise, the degree of decentralisation and delegation changes from one point of time to another to meet changed environmental challenges and the opportunities that these may present; all these influence management control system practised in the organisation;
- **the types of responsibility centres**. Different control systems are needed for the various responsibility centres or sub systems within an organisation. According to the type of responsibility centre the performance of that centre should be measured in terms of expenses or profitability or return on investment;
- **people and their perceptions**: perceptions of people about the likely effects of the control system on their work life, job satisfaction, job security, promotion and general well-being could differ across organisations. These considerations will significantly influence the nature and content of the management control system needed in the organisation and must be duly considered while designing management control.

From the organisational point of view, management of control functions could be centralised or decentralised. It is decentralised when the activities of an organisation, particularly those regarding planning and decision making, are distributed or delegated away from a central authoritative location or group. For example it happens when there is a delegation of decision making authority to lower levels of the organisation with sufficient material and formal resources to execute that authority. Decentralisation could give different advantages to the firm, in particular it could lead to an improvement of the quality of higher level managers' decision making, an enhancement of lower level management's quality, a growth of economies of scale or economies of specialisation and the consequent management development.

In a decentralised organisation it is possible to observe two types of structure:

- **a functional structure**, where each manager is responsible for a specified function such as production or marketing;
- **a business unit structure**, in which business unit managers are responsible for most of the activities of their own unit, and the business unit functions as a semi-independent part of the company.

The presence of management control in different levels, permit the control of individual managers, the control of the management team the manager is part of, the control of the unit that the management team supervises, the control of all units with management teams and the control of the whole organisation. On the other hand a decentralised organisation may also have some disadvantages. Decentralised managers do not automatically understand the goals and strategies developed by higher level managers, nor how they could contribute to these goals and strategies. They also do not automatically agree with organisational goals and strategies developed by higher level managers and they do not automatically have the resources needed to act with organisational goals and strategies developed by higher level managers.

### 1.1.1. Functions of management control

It is possible to identify two main types of function of management control: the top-down and the bottom-up approach.

In the first case the decision making is done by senior management and communicated to the other levels of the company. In this case the communication process follows a hierarchy. Managers collect information, analyse it and draw useful conclusions. Then they develop processes that are communicated to the team in order to be implemented. In the literature, experts refer to this type of management also using other terms, such as "command and control" or "autocratic leadership". The top-down approach is the most widespread since it eliminates confusion, reduces risk, and keeps initiatives organised across larger teams. However, this approach doesn't work for everyone, as it can limit creativity and slow down problem solving. As a result, it may not be the best choice for teams that need more flexibility and responsiveness. Traditional sectors which usually adopt the top-down style are retail, healthcare and manufacturing.

When a project is approached top-down, senior decision makers start with a generic goal and they work backwards to determine the actions that different groups and individuals will need to take to achieve that goal. The entire project planning process takes place at the management level. Then, once an action plan is created, decision makers communicate it to the rest of the team, so that it is implemented, leaving little room for further changes. The top-down approach creates clear and well-organised processes, reducing any kind of uncertainty. Because all decisions are made in one place and communication is one-way, confusion and misunderstandings are less common than in other management approaches. When problems or inefficiencies occur, the top-down approach makes it easier to trace them back to the

source. By having clearly defined teams with different responsibilities, it's easy to identify and resolve issues quickly and efficiently. Because decisions are made by only one level of management, decisions can be finalised, distributed, and implemented more quickly than decisions that require input from multiple project leaders or stakeholders. The top-down approach is most of the time effective, because it doesn't change from project to project, allowing teams to build a reliable process that becomes even more efficient over time; it is so robust and reliable. Being more rigid and structured, in the case of teams with multiple sub-teams, who have to deal with many parts of the project or any other factors that make difficult to keep processes organised, will benefit from integrating elements of top-down methodology.
The top-down methodology also includes some disadvantages, which must be taken into consideration when discussing how this approach might affect team members and the overall morale. First of all, since the decisions are taken by senior management, a wrong manager can negatively influence the whole organisation and its potential success. Secondly, many process problems are only identifiable at the lowest levels, so project managers who do not seek feedback from team members, before taking decisions, could cause significant problems, delays and losses. Thirdly, the top-down approach offers fewer opportunities for creative collaboration, since all communications are passed from executives to team members with little room for dialogue. Less collaboration between departments could also eliminate fresh perspectives and stifle innovation. The main challenge that the top-down approach faces is the need to proactively work to make non-management team members feel engaged, connected, and respected. When all decisions are taken from the top, the rest of the team may feel useless and undeterred. Although the top-down approach allows the same people who work directly on a project to make decisions, it is a management style that creates distance between the team and the people responsible for the decisions. If executives do not seek input or feedback from the project team at lower levels, this can lead to poorly informed decisions.
Summing up, the top-down function of management control permits to explain organisation's strategies and goals in an operational way to the lower levels; supporting the coordination across the different business function, especially in case of a decentralised system; allowing an efficient allocation of resources and motivating lower-level managers to strive for organisational goals, favouring the development of their personal skills.
The bottom-up approach consists in a team that works together at all levels to determine what steps to take to achieve the overall goals. The bottom-up approach is newer and more flexible than the more formal top-down strategy, which is why it is applied in industries where pattern-breaking and innovation are the priority. Applying a bottom-up approach, goals are

defined company-wide, but key results (KRs) are defined by teams and employees. Daily stand-up meetings are usually organised and engage the entire team to coordinate collaboratively. Leaders collaborate with team members to determine what decisions should be made at each level, enabling better collaboration. The bottom-up management style solves many of the problems that arise with the top-down approach. Because of its fundamental advantages, this approach is particularly suitable for creative teams and industries where collaboration is the key, for example software development and product design. In collaborative environments, people who work directly on projects and oversee their management can discuss decisions that will influence their future activities. Executive leaders work directly with team members to plan a course of actions, which prevents the blind spots that can arise when decisions are made without seeking team opinion.

The bottom-up approach encourages greater involvement from team members, as everyone is given the opportunity to participate in decisions, regardless of experience. This also facilitates the creation of better relationships among colleagues, giving people at all levels an equal opportunity to influence the results of a project. By doing so, this approach increases the likelihood that all members will be involved in the team's success. As said before, in the top-down style there are fewer opportunities for teams to give input or advice. Conversely, collaborative approaches, such as bottom-up, create opportunities to give feedback, brainstorm, and offer constructive criticism that often lead to better systems and outcomes.

The bottom-up approach provides for reporting on goal achievements, and input when these goals are unrealistic; enables the coordination and cooperation with other decentralised units; facilitates higher level managers to benefit from the specialised skills and knowledge of lower level managers; enables lower level managers to acquire the support and resources to execute their responsibility.

Of course, there is a reason for which the bottom-up approach has not been adopted more widely. It has a number of obstacles that make it incompatible with certain types of teams, projects, and industries. Taking a pure bottom-up approach to solving a problem could slow down the process, since it is more difficult to make decisions when more people are involved. While it is important to give team members the opportunity to provide feedback, there are those who may feel uncomfortable doing so, especially when executives are in the same room. Moreover, even if taking decisions about a project internally has many advantages, projects are influenced by general factors, such as goals, budgets, forecasts, and business metrics, that the team isn't always aware of. As a consequence, the bottom-up processes may have blind spots as a result of being unable to obtain executive leaders' insights. To implement a management approach that works, the solution is to invest in people and processes equally.

Nowadays there are not so many organisations that apply a pure top-down or bottom-up approach to management, but it is often preferred an hybrid style, which includes a combination of elements coming from both approaches. The top-down management style has advantages, especially for large teams made up of additional smaller teams or groups acting together in a larger organisational hierarchy. On the other hand the bottom-up style is suggested for smaller teams. The obstacles of a top-down approach can be mitigated or even eliminated entirely if the people who manage the processes are good leaders, in addition to being good executives. Because process-related communications come from the top, in top-down organisations, the risk that individuals and groups feel compartmentalised and isolated is high, for this reason it is fundamental to create opportunities to communicate across departments, teams, management levels, and even geographically distant locations, in order to favour team building in order to create meaningful relationships. Ultimately, effective executives are those who balance the efficiency of the top-down approach with the collaborative and creative benefits that can be gained from the entire team, if bottom-up elements are integrated.

## 1.2. The logic of control and its fundamental phases

In this historic period characterised by uncertainties, it is fundamental for firms to see clearly that the objectives chosen at the beginning of the year are coherent with the firm strategy and performance. It is necessary to implement a system that permits firms to verify if they are respecting their business model or not. Moreover, it is essential for firms to notice as soon as possible the perturbations that could negatively influence their activities, making their previsions wrong.

The concept of control refers to a system in which is possible to identify four fundamental phases:

1. *planning of the results of a series of actions*

Planning of the results consists in defining a pool of performance indicators, assigning to them value-objectives and specific actions that could be implemented to reach them.

Performance indicator used for planning could be the economic value of the firm or one of its determinants. In both cases, the major difficulty is to decide which is the more correct value-objective to reach, and if the firm is able to reach it with the planned actions. If it is fixed as an easy objective, the firm will not use all of its abilities and capacities for economic value creation. If an unattainable objective is fixed, all the planning phases will be made in a wrong way. In this phase it's essential that the firm understands the relation between actions and objectives.

2. *measure of these series of actions' impact*

If it were possible to own a complete, precise and perfect model, it would not be necessary to measure the results because the results will be concise with the forecasts. In reality, dates vary from previsions since some variables can be exogenous or endogenous. In the first case they could not be directly controlled (for example the demand of a product or the price of raw materials), while the second could be directly controlled, but their behaviour could be different from the provisions of the model, which is always a simplification of the reality (for example the presence of inefficiency in the job force, the quantity of input used to realised an output could be different from the provided quantity).

3. *variance analysis between planned results and obtained results*

If the results diverge from previsions, it is necessary to understand the reasons for these gaps. It is possible to distinguish between variations due to external changes that are not under the firm's control and the variations due to the asymmetries between model of control and the effective functioning of the system.

4. *introduction of corrective actions*

The cycle of control is closed by the introduction of corrective actions, on the basis of results obtained by variance analysis. If the difference is caused by endogenous variables, corrective actions must be done in order to change the modalities of functioning of the system. For example in the case of bad performances by the work-force, it will be necessary to introduce a new incentive system and revise the past organisational solutions. If the difference is caused by exogenous variables, it will be necessary to renew objectives with the new scenario and try to improve the knowledge about the external environment and its possible evolution. For example if the price of a product is grown, the firm will need to review its cost-objectives.

After having defined the four fundamental single phases of the control process, below are analysed two different ways in which the different phases could be implemented.

### 1.2.1. Feed-back approach

The more traditional approach is the feed-back approach, in which the four phases present a clearer specification. In particular, at the end of each period, the first phase, the one relative to the definition of a plan for the next period, is implemented. At the end of each month, results are processed and compared with the variance analysis. The time necessary to the elaboration of the dates is between three and fifteen days. On the basis of the variance analysis, the firm will introduce the necessary corrective actions. The four phases follow a sequential implementation. This type of control is used by lots of firms, but it seems to be effective only in steady environments, or in the case in which the time necessary to adapt at the variations to the original plan is lower than the available time.

It is possible to split the time necessary to take corrective actions accordingly to three different effects:

- the distance between the forecast result and effective result;
- the time necessary to elaborate new alternatives;
- the time necessary to implement the new alternatives.

The distance between effective result and forecast result depends essentially on the level of predictability of the environment. The most effective result is different from the forecast result, other things being equal, the most necessary will be the corrective actions, growing up the time to find an alternative and the time to implement it. In case of a moderate demand's variation, it will be simple to introduce the correct incentives: if the demand falls under the normal threshold, it is enough to reduce the number of providers or the level of stocks. If the result obtained differs in an important way from the forecasts, it will be impossible to modify only in small part the operative plans.For example if the demand doubles, for the firm it is necessary to reconfigure all the activities, restarting the cycle on the base of the new available information.

### 1.2.2. Feed-forward approach

In case of an unpredictable environment or a less flexible firm, the feed-back approach can be changed with the feed-forward approach. In this type of approach, the firm tries to anticipate the corrective actions modifying the forecasts of future periods as soon as it collects new information. The feed-forward control requires that the firm, periodically, draws up a budget with the available data and the forecasts of the rest of the period. In some cases, firms could elaborate a contingency plan. It is a less precise and formalised plan with respect to an operative plan, in which firms could forecast an alternative to the most probable scenario. As soon as new elements that could precise the evolution of the contest appear, the old plan is changed with the plan of the alternative scenario. The control based on contingency plan pays less attention to the optimization of the total results, because it is impossible to have a detailed plan for every specific value of the exogenous variables. If, for example, the variable taken into consideration is the demand, the firm could have a contingency plan in case of a higher growth or a drastic reduction of it, and not for every demand level.

## 1.3. Governance and Responsible Subjects

Coopers & Lybrand defined the management control system as "a process, made by board of directors, senior executives and other operators of the firm structure, which goal is provide reasonable security on the realisation of the objectives", especially in the following categories:

- effectiveness and efficiency of operational activities;
- reliability of information and financial statements;
- compliance with law and regulations;
- safeguarding company assets.

Internal Control is a transversal process with a well-defined objective, pursued by a set of actions that affect the entire business activity. Such a process is carried out and involves employees at all hierarchical levels of organisation, however, even if well designed, it does not provide security absolute on the achievement of the pre-established objectives.

For this reason it is essential that there is a structure organised and managed by subjects who have the necessary skills, who know how to deal with unexpected situations quickly and effectively and who are able to define rules and behaviours to refer to.

The management control system must guarantee the company the ability to promptly intervene in such situations, by adopting measures capable of recognizing and exploiting these events. However, the current reference context in which companies operate is determined by difficulty in predicting the phenomena and the rapidity of manifestation of the same. Risk should not be considered exclusively in its negative sense, such as an event that could compromise the survival of the company, but succeed to perceive it also in its positive value. The control thus defined assumes an increasingly dynamic structure, ready to adapt to the situations that may arise for the company to generate economic value.

The construction of an adequate management control system is a complex process consisting of a whole of general principles, which are:

- segregation of duties and responsibilities;
- definition of powers;
- job rotation;
- traceability of operations;
- risk assessment;

- independent verification;
- control system structure.

More specifically, the segregation of duties is a key element in management sustainable risk and internal controls for a company, as it avoids an excessive centralization of powers and responsibilities in a single person who may have potential conflict of interest. The corporate management in the enterprise as well as coordinating, managing and guiding a group of people, makes decisions that are satisfactory for the achievement of settled goals. The job rotation is a corporate strategy, which provides the ability to periodically move employees, allowing them to get to know the various stages of the production process and any problems that may arise. Having correct and complete documentation of the activities carried out in the organisation permits the traceability of operations, allowing to know who made a certain decision. It is essential that the organisation must be able to manage the complexity, which surrounds it, through a risk-based culture oriented towards the achievement of targets. The independence of control is necessary to maintain stability in the organisation and to be able to judge in compliance with the principle of objectivity. Lastly, with regard to the structure of the management control system, most of the companies comply with the provisions dictated by the Corporate Governance Code; each company prepares its own resources to build a system capable of delivering timely and complete information, with adequate flexibility to deal with internal and external changes.

The task of top management and control players is to identify the areas of contact between the various systems, to set up an integrated internal control system capable of generating synergies between the different components. Directors and managers are responsible for setting the goals and objectives of the organisation, establishing the most reasonable procedures and policies to achieve them.

The complex nature of the business implies that it is the responsibility of management to identify and transmit the appropriate ethical values to the entire organisational structure. The corporate governance's design outlines a set of rules, policies and procedures, as well as organisational structures, by which companies are governed , managed and directed.

In the doctrine it is possible to read different formulations of corporate governance definition. The OECD[5] reports: "Corporate governance is the system through which companies are subsidiaries", while in the Financial Times can be found: "Corporate governance is the relationship between a company and its shareholders, or its community". The World Bank

[5] Organisation for Economic Co-operation and Development

asserts: “Corporate governance consists in promoting reliability, transparency and corporate responsibility”.

Inside a company the responsibility for the Internal Control System lies within the steering bodies administrative, namely the Board of Directors and the Senior Management; while the Internal Auditing guarantees the assessment between the controls carried out and foreseen, formally called Conformity review, and the evaluation of the effectiveness, efficiency and cost effectiveness, namely Adequacy review.

Below it is provided an extended analysis of the main subjects involved in the management control system:

- *Board of Directors and CEO*

The management control system is used by higher directors for strategic decisions, generally it is the competence of the Board of Directors. They decide the strategy and verify the system functionality and adequacy, in a way in which the firm could notice and resolve the main risks. In some cases, it is useful that the Board of Directors gives to the CEO the responsibility for the adequacy of the information produced by the system with respect to the management information needs, referring particularly to risks, KPI and the structure of the reporting system.

The CEO has to grant the diffusion of the information inside of the firm, to obtain an alignment of the organisation with the strategic actions decided by the management, and outside of the firm too, to give complete and clear financial information to shareholders, market and authority.

- *Board of Statutory Auditors*

The aim of the Board of Statutory Auditors is to verify if the system’s functions are suitable for the diverse firm’s dimensions and its needs. For this reason the Board of Statutory Auditors is the recipient of the firm’s reporting produced by the management control system. It also has responsibilities for the analysis relative to the operation of the system.

- *Internal Control Committee*

The Internal Control Committee is a sort of assistant of the Board of Directors. If the Board of Directors has the last responsibility of the management control system, it is the Internal Control Committee that provides to verify the activities of the management and the activities of internal audit asked to the people who work in the internal control. In particular their role is about checking the adequacy and the effective functioning of the system and the individuation of the main risks of the firm. The Internal Control Committee represents the joint through which the problems detected could be managed and brought to the attention of the Board of Directors, which could continue to monitor and arrange quickly corrective actions, if needed.

- *Operations manager*

The Operations manager normally coincides with the Financial Director or the Managing Director. His main activities are formalisation, administration and periodic check of the system. The operation manager has also to grant the correctness and reliability of the information produced by the system and the functioning of instruments of planning and control used.

- *Reporting managers*

They are subjects who have the responsibility of a single report produced by the Management Control System. Normally they are department heads, whose role is to transmit reports to the Operations manager, who provides to collect, integrate, verify the management's information needs and distribute them.

## 1.4. Management control system mechanisms

Horngren et al. (2005) identify many techniques implemented by management control systems in order to motivate employees and evaluate a firm's performance. These are:

- *Activity-based costing*

Activity-based costing is a particular type of cost accounting methodology. It is composed of two elements: cost measures and performance measures. The objective of activity-based costing is to measure the cost and performance of activities, resources and costs[6]. The logic is that activities consume resources to create an output, and expenses have to be separated and matched to the level of activity that consumes the resources. The framework of activity-based costing is divided into three basic steps:

-defining activities that support output;

-defining links between activities and outputs ;

-developing the cost of activities.

These three steps could be used to implement the system. Cost pools are the locations where costs are consolidated according to cost accounting terminology. Each unit of service becomes a cost pool if the unit of service is the focus of management's cost accumulation. According to Cooper and Kaplan, activity-based costing involves a two-step process for costing. Cost pools are created in the first stage by allocating support resource charges to the

[6] Baker, J., 1998, Activity-based costing and activity-based management for health care, Aspen Publisher, Gaithersburg, Maryland

appropriate resources. The cost pools are assigned to specific goods or services in the second stage. The usage of each good or service affects how the costs are distributed. It is important to remember the principle of activity-based costing: products consume activities and activities consume resources.[7]

- *Balance scorecard*

A set of metrics that enables a comprehensive, integrated perspective of business performance was first introduced by Robert S. Kaplan and David P. Norton (1992)[8]. They called it the balanced scorecard. The goal of the scorecard was originally to "complement traditional financial indicators with criteria that judged performance from three additional perspectives—those of customers, internal business processes, and learning and growth". It was further developed as a strategic management system connecting long-term strategy to short-term goals by user organisations by 1996. Many commercial organisations concluded that focusing on a singular measure of performance (such return on investment or increased profit) was insufficient, which led to the development of the balanced scorecard methodology. Too frequently, poor strategic choices were taken in an effort to boost profits at the expense of other corporate objectives. According to the balanced scorecard approach, financial performance should not be the primary objective but rather the inevitable result of balancing other crucial objectives. These additional organisational objectives work together to promote the outstanding overall organisational performance. The effectiveness of the organisation will suffer if one aim is out of harmony with the other goals. The balanced scorecard approach places a strong emphasis on clearly stating strategic aims that complement objectives. Measurement systems are also created to offer the data required to determine whether goals are being met or when performance is unbalanced or negatively impacted. The balance scorecard of Kaplan and Norton looks at a company from four perspective:
-financial: how do we look to shareholders?
-internal business process: what must we excel at?
-innovation and learning: can we continue to improve and create value?
-customer: how do customers see us?
The balanced scorecard offers a more thorough assessment of current performance by looking at the organisation from all the four viewpoints above.

- *Benchmarking*

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[7] Turney, P.B., Stratton, A:J: 1992, "Using ABC to support continuous improvement"
[8] Kaplan, R., and D. Norton. 1996. Using the Balanced Scorecard as a Strategic Management System. Harvard Business Review (January–February): 75–85

Benchmarking can be defined as: "A continuous analysis of strategies, functions, processes, products or services, performances, etc. compared within or between best-in-class organisations by obtaining information through appropriate data collection method, with the intention of assessing an organisation's current standards and thereby carry out self-improvement by implementing changes to scale or exceed those standards[9]" (Anand, 2008). According to Elmuti and Kathawala (1997)[10], the benchmarking process should offer the fundamental framework for action with the flexibility to be modified to fit specific demands. The organisation should select a simple, straightforward model that emphasises logical planning and organisation and establishes a framework for behaviour and results. The goal of the benchmarking process models is to outline the procedures that must be taken when conducting benchmarking.

- *Budgeting*

Budgeting, or master budget, is part of the management control process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of the organisation's objectives. The master budget is basically the management's strategic plan for the future of the company in the long term as long as current year forecasting.

Even if there are different type of budgets and specific terminology differ from company to company, it is possible to identify three categories:

-capital budgets: these budgets portray the corporation's planned and approved capital expenditures for periods from one to ten years;

-financial budgets: these budgets project cash flow statements, balance sheets, and statements of sources and uses of funds;

-operational budgets: these budgets consist of projected income statements and a series of supporting statements like production budget, sales budget, general and administrative expenses budget.

Budget could also be top-down, bottom-up or iterative. A top-down budgeting is faster than the other two and managers are in control over output. On the other hand it may be less realistic and it could cause a low commitment in the organisation. Bottom-up budgeting has a higher commitment in the organisation and it is probably more realistic, but it may include buffers and managers that have no control over the output. The iterative budgeting combines

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[9] Anand, G., Kodali, R., 2008, Benchmarking the benchmarking models, Benchmarking: an international journey, Volume 15 Issue 3

[10] Elmuti, D. and Kathawala, Y. (1997), "An overview of the benchmarking process: a tool for continuous improvement and competitive advantage", Benchmarking for Quality Management & Technology, Vol. 4 No. 4, pp. 229-43.

the strengths of both methods but requires a lot of time and revisions, which could undermine commitment.

- *Just in time (JIT)*

Implementing the now-famous Japanese management technology known as "just-in-time" is one strategy that businesses have been using to increase production and efficiency. Using JIT production means having the right products in the right quantities and of the right quality available when you need them. The basic tenets of JIT are to produce to client demand, with flawless quality, and with no extra lead periods; to reduce waste; to maximise the productivity of a firm's workforce; and to continuously seek to improve every face of the manufacturing operation[11]. JIT is a collection of management technologies that, when used globally, have a significant number of cultural considerations ingrained in their design, raising concerns that they may not adapt well to the North American manufacturing environment. The JIT manufacturing system is a pull system, which implies that regardless of the degree of demand, the production system reacts to consumer demand. In contrast, the classic North American push method establishes production schedules before a precise understanding of demand. JIT manufacturing employs production techniques that place an emphasis on lowering inventories of raw materials, work in progress and finished goods. A typical JIT plant has many clearly visible signs displayed for employees, it is highly clean, and it has work areas that are very well organised.

- *Kaizen*

Imai (1986)[12] was the first to define kaizen as “the kaizen business strategy involves everyone in an organisation working together to make improvements without large capital investment”. In a more recent interview in 2007[13] he defines kaizen as “continuous improvement every day and every moment by everyone in the company no matter what post they happen to occupy. It ranges from small, incremental improvements to radical innovation”. Second his studies, it is possible to distinguish three forms of kaizen:

-kaizen management

-group kaizen

-individual kaizen

[11] Brox, J.A., Fader, C., 1997 Assessing the impact of JIT using economic theory, Department of Economics, University of Waterloo, Journal of Operations Management pp. 371-388

[12] Imai, M. (1986), Kaizen – The Key to Japan’s Competitive Success, Random House, New York, NY

[13] Imai, M. (2007), “Mejorar la calidad es la mejor forma de reducir los costes”, Interview in the Business Newspaper La Gaceta, December 19, Barcelona, p. 36

The first of these, kaizen management, is the most crucial since it incorporates all company employees into its organisational strategy (policy and objectives). Group Kaizen focuses on problem-solving and improvement teams or quality circles. Individual Kaizen focuses on bottom-up organisational design. Imai (1986) suggests a concept for implementing kaizen: Senior management is still in charge of innovation and improvement, while intermediate managers and employees are in charge of maintaining work standards and seeing that little improvements are made.

- *Program management techniques*

Programme Management is defined as ”the integration and management of a group of related projects with the intent of achieving benefits that would not be realised if they were managed independently”[14].Programs are designed to add value by enhancing the administration of individual projects. Therefore, while they have advantages due to better project management, they do not, by themselves, accomplish specific project goals. The primary objectives of program management can be divided into two categories:
-efficiency and effectiveness goals: aspects of management that a skilled project manager should take care of, even when related projects are carried out independently of one another. Taking an integrated approach to these specific components of management is thought to be the best way to achieve a general increase in management efficiency and effectiveness;
-business focus goals: the external synchronisation of projects with the needs, objectives, motivations, and culture of the larger organisation. These objectives relate to establishing a suitable course for both the individual constituent projects within a program and the program as a whole.

- *Target costing*

One of the most significant places where marketing and accounting overlap is with target costing. To put it briefly, marketing and design processes use target costing to determine a product's desirable characteristics and anticipated selling price. The target cost system regulates operations using a target, or a permitted cost depending on the market, which must be realised for the company to be profitable. Setting a selling price for the new product based on market research is the first step in the target costing process. The target cost is calculated by deducting the desired (target) profit from the goal selling price. This goal is most likely lower than the firm's existing manufacturing cost. Then, teams from various departments do functional cost analysis to try and meet the goal cost. The business must determine whether to

[14] Lycett M., Rassau A., Danson J., 2004, Program management: a critical review, International Journal of Project Management, pp. 289-299

launch the new product if the current cost estimate is on target. Functional cost analysis is used to make adjustments and create a new cost estimate if the existing cost estimate exceeds the target[15].

- *Total quality management (TQM)*

The objective of TQM, an integrated strategy made up of concepts and practices, is to raise the calibre of an organisation's products and services by consistently exceeding customers' expectations in the most cost-effective methods. TQM prioritises raising customer satisfaction[16]. Due to severe global rivalry, rising consumer awareness of quality, quick technological transfer, and the drive for world-class status, knowledge of TQM has dramatically expanded over the past few decades and reached its peak to become a well-established subject of research. Many businesses are adopting the TQM strategy and quality initiatives in response to these difficulties and to help the organisations achieve greater quality levels in order to gain a sustainable competitive advantage and improve corporate performance (Talib et al., 2017)[17] SCM focuses on managing the acquisition of the material/service inputs as well as the coordination and design of the processes required to produce products on schedule (no delays), reproducibly, and in a satisfactory state (quality assurance) (Forker et al., 1997)[18].

In addition to the aforementioned, TQM is a comprehensive system approach that integrates all personnel from top to bottom and works horizontally across departments and functions. It also extends backwards and forwards to cover the supply chain and customer chain. SCM views the interaction between the buyer and supplier vertically, emphasising the effectiveness of both upstream and downstream companies (Kanji and Wong, 1999)[19]. In order to serve their customers, businesses must directly or indirectly manage both upstream and downstream entities.

[15] Gagne, M.L., Discenza R. 1995, Target costing, Journal of Business & Industrial marketing, Volume 10 Issue 1

[16] Gunasekaran, A. and McGaughey, R.E. (2003), “TQM in supply chain management”, The TQM Magazine, Vol. 15 No. 6, pp. 361-3.

[17] Talib, F., Rahman, Z., Qureshi, M.N., 2010, The relationship between total quality management and quality performance in the service industry: a theoretical model, International Journal of Business Management and Social Sciences, pp. 113-128

[18] Forker, L.B., Mendez, D. and Hershauer, J.C. (1997), “Total quality management in supply chain: what is its impact on performance?”, International Journal of Production Research, Vol. 35 No. 6, pp. 1681-701.

[19] Kanji, G.K. and Wong, A. (1999), “Business excellence model for supply chain management”, Total Quality Management, Vol. 10 No. 8, pp. 1147-68

## 1.5. Types of management control systems and organisational ambidexterity

“Rapid technology advancements and political change are impossible to forecast for the majority of modern enterprises” (Coeckelbergh 2012; Grant 2015)[20]. As a result, businesses must adapt to new developments while carefully managing their resources. Simons (2010)[21] contends that organisations must exploit their current resources to be able to generate revenues and earnings and explore new opportunities and resources, create innovations, and adapt to arising changes in line with the fundamental principles of the resource-based view[22].

O’Reilly and Tushman (2013)[23] defines organisational ambidexterity as a term used in the literature to describe the simultaneous pursuit and the balancing of exploitation and exploration. As clarified by Raisch and Birkinshaw (2008)[24], exploitation refers to the selection, application, and improvement of resources with an emphasis on efficiency, whereas exploration refers to the search, variety, and finding of new resources and experimentation with them. The usage of management control systems can be crucial to creating and maintaining a proper balance between exploitation and exploration.[25]

Gschwantner and Hiebl in their paper ‘Management control systems and organisational ambidexterity’ (2016)[26] piece together the most important literature on MCS. According to Malmi and Brown (2008)[27], management control systems have an impact on managers' and employees' behaviour. Similar to this is what Strauß and Zecher (2013) contend saying that management control systems can be used to tackle strategic concerns like balancing exploratory and exploitative operations[28]. As a result, management control systems can encourage both exploitative and experimental behaviour among employees. Management

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[20] Coeckelbergh, M. (2012).Moral responsibility, technology, and experiences of the tragic: From Kierkegaard to offshore engineering. Science and Engineering Ethics, 18(1), 35–48.

[21] Simons R. (2010). Accountability and control as catalysts for strategic exploration and exploitation: Field study results. Working Paper.

[22] Barney, J. B., Ketchen, D. J., & Wright, M. (2011). The future of resource-based theory: Revitalization or decline? Journal of Management, 37(5), 1299–1315.

[23] O’Reilly, C. A., & Tushman, M. L. (2013). Organizational ambidexterity. Past, present and future. Academy of Management Perspectives, 27(4), 324–338.

[24] Raisch, S., Birkinshaw, J., Probst, G., & Tushman, M. L. (2009). Organizational ambidexterity: Balancing exploitation and exploration for a sustained performance. Organization Science, 20(4), 685–695.

[25] McCarthy, I. P., & Gordon, B. R. (2011). Achieving contextual ambidexterity in R&D organizations: A management control system approach. R&D Management, 41(3), 240–258

[26] Gschwantner, S., Hiebl, M.R.W. Management control systems and organizational ambidexterity. J Manag Control 27, 371–404 (2016). https://doi.org/10.1007/s00187-016-0236-3

[27] Malmi, T., & Brown, D. A. (2008). Management control systems as a package: Opportunities, challenges and research directions. Management Accounting Research, 19(4), 287–300.

[28] Strauß, E., & Zecher, C. (2013). Management control systems: A review. Journal of Management Control, 23(4), 233–268.

control systems can be used to promote the investigation of possible resources and new prospects, despite the fact that they are typically thought of as tools for the exploitation of already-existing resources. Malmi and Brown view management control systems as a collection of different systems. To influence people's behaviour in a way that ensures alignment with the organisation's strategy and the fulfilment of its goals, the authors take into account planning, cybernetic, reward and compensation, administrative, and cultural controls. Alternative frameworks mentioned by Gschwantner and Hiebl include those proposed by Tessier and Otley (2012)[29], Ouchi's (1979, 1980)[30] framework of market, bureaucracy, and clan controls, and Simons's (1995) framework of levers of control[31].

However, they considered the framework developed by Malmi and Brown the more appropriate for classifying different management control systems since it allows for the most accurate assignment of research to different types of control among those that are now available, resulting more specific than the competing frameworks mentioned above. Below it is the framework proposed by Malmi and Brown, with a focus on the five types of MCSs[32] identified by them. The next few paragraphs focus on how the five different MCS types affect an organisation's capacity to develop organisational ambidexterity. The first form of management control system is cultural control, followed by planning control, cybernetic control, cybernetic reward and compensation control, and administrative control.

Fig 1. Management control systems package

<table>
<tr><th colspan="7">Cultural Controls</th></tr>
<tr><td colspan="2">Clans</td><td colspan="3">Values</td><td colspan="2">Symbols</td></tr>
<tr><th colspan="2">Planning</th><th colspan="4">Cybernetic Controls</th><th rowspan="2">Reward and Compensation</th></tr>
<tr><td>Long range planning</td><td>Action planning</td><td>Budgets</td><td>Financial Measurement Systems</td><td>Non Financial Measurement Systems</td><td>Hybrid Measurement Systems</td></tr>
<tr><th colspan="7">Administrative Controls</th></tr>
<tr><td colspan="2">Governance Structure</td><td colspan="3">Organisation Structure</td><td colspan="2">Policies and Procedures</td></tr>
</table>

Source: T. Malmi, D.A. Brown / Management Accounting Research 19 (2008) 287–300.

[29] Tessier, S., & Otley, D. (2012). A conceptual development of Simons' Levers of Control framework, Management Accounting Research, 23(3), 171–185.
[30] Ouchi,W. G. (1980).Markets, bureaucracies, and clans. Administrative Science Quarterly, 25(1), 129–141.
[31] Simons, R. (1995). Levers of control. Boston: Harvard Business School Press.
[32] Management control systems.

### 1.5.1. Cultural control

According to Malmi and Brown, cultural control could be considered a control system since it regulates behaviour, it can be used to favour the culture of collaboration and communication in addition to transmit ideals. Cultural control encourages and counteracts exploitation and exploration in an organisation (Kang and Snell 2009[33]; Mundy 2010[34]; McCarthy and Gordon 2011[35]; Ylinen and Gullkvist 2014[36]). As asserted by Mundy (2010), cultural constraints are crucial for both change and maintaining attention on an organisation's goals, by promoting open channels of communication and free flow of information, and by giving businesses and their employees the required flexibility to respond proactively to changes.

Two significant researches can be mentioned on cultural controls and the way in which it affects performance. The first is the study of Ylinen and Gullkvist (2014), the second is the one of Bedford (2015). According to Ylinen and Gullkvist, cultural restrictions enhance innovativeness and, as a result, performance, which benefits exploratory innovation projects. Cultural restrictions can encourage the development of ideas. In contrast to exploratory innovation projects, where the effect is mediated by idea generation, they also find that cultural controls can positively affect the performance of exploitative innovation projects. The difference is that this effect affects performance directly rather than indirectly (as in the case of exploratory innovation projects).

Malmi and Brown identify two different types of cultural control, also studied by McCarthy and Gordon (2011), these are:

1) **value control**

McCarthy and Gordon (2011) asserted that to communicate its vision and its values, the firm uses company reports, mission statements, website pages, the recruitment process and employee training. For example, as a result of their interviews, they found that the design of buildings and the artwork on the walls should encourage employees to explore new options, and may thus serve as symbol-based controls.

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[33] Kang, S. C., & Snell, S. A. (2009). Intellectual capital architectures and ambidextrous learning: A framework for human resource management. Journal of Management Studies, 46(1), 65–92

[34] Mundy, J. (2010). Creating dynamic tensions through a balanced use of management control systems. Accounting, Organizations and Society, 35(5), 499–523

[35] McCarthy, I. P., & Gordon, B. R. (2011). Achieving contextual ambidexterity in R&D organizations: A management control system approach. R&D Management, 41(3), 240–258.

[36] Ylinen, M., & Gullkvist, B. (2014). The effects of organic and mechanistic control in exploratory and exploitative innovations. Management Accounting Research, 25(1), 93–112.

2) **clan control**

According to McCarthy and Gordon, values and vision are used to build organisation coherence. If it is possible to mix cultural control, used to inspire employees to explore and enable feed-forward control, with the other management controls. In this way it is possible to achieve organisational ambidexterity.

Another interesting research that demonstrates the importance of cultural control in achieving organisational ambidexterity is the one made by Selcer and Decker (2012)[37]. In their case study, top managers, paying less attention to patterns of communication and existing behaviour and practices, were not able to reach organisational ambidexterity because it was not identified with the unwritten norms and meanings constructed by employees.

## 1.5.2 Planning control

By establishing norms and objectives, planning control guides behaviours and efforts. The planning process makes it possible to coordinate objectives across the organisation and guarantees alignment between operations and the organisation's strategy. Malmi and Brown (2008) suggest a distinction between short-term and long-term planning. They contend that although long-range planning has a strategic focus and considers actions and goals in the medium to long term, action planning has a tactical focus and concerns activities and goals within the next 12 months. Planning control contributes to the achievement of organisational ambidexterity because it could be able to foster and balance exploitation and exploration. "Planning control could be used with cultural control" (McCarthy and Gordon 2011), supporting exploration by facilitating the skill of employees to recognize and adapt to changes. Planning control can be also used to communicate strategic goals to employees, and these goals may work as a roadmap for action planning, which helps the organisation to stay focused on its overarching goals and, in turn, makes exploitation easier.

Following Mundy (2010) opinion, a problem could arise when planning control, which allows too much interactive process, could cause continuous changes, destabilising the organisation. In this case he suggested as a solution a combination of planning control with cybernetic control. On one hand planning controls allow designing mechanisms that permit interactive procedures and encourage exploration, on the other hand, in order to ensure sufficient exploitation, cybernetic controls provide measures and control on the achievement of intended goals. Additionally, his research shows that using planning controls and cybernetic controls

[37] Selcer, A., & Decker, P. (2012). The structuration of ambidexterity: An urge for caution in organisational design. International Journal of Organisational Innovation, 5(1), 65–96.

together has a favourable impact on business performance. However, he also discovers that ambidextrous firms perform poorly when planning controls and cybernetic controls are out of balance.

### 1.5.3. Cybernetic control

"Cybernetic control manages direct behaviour by establishing goals, tracking activity, and establishing responsibility for results" (Malmi and Brown 2008). Budgets, financial measurements, non-financial measures, and combinations of financial and non-financial measures are all considered basic cybernetic systems. Cybernetic controls can be used to make the organisation's objectives and performance clear, increasing employee engagement and directing their efforts toward the intended results (Jorgensen and Messner 2009)[38].

Authors, like Bedford, show that cybernetic control is principally used to guarantee exploitation. The effect of cybernetic control is positive, especially in exploitative innovation firms, and it could balance exploration and exploitation by facilitating exploration when utilised in an enabling manner. On the one hand it gives users explicit goals to attain, which encourages exploitation, on the other it leaves leeway for experimentation and supports the development of organisational ambidexterity by not outlining exactly how the goals are to be met. McCarthy and Gordon (2011) argue that exploitation can be supported by combining administrative and cybernetic controls to restrict staff activity and assess performance.

The interplay between interactive planning activities and cybernetic controls, also according to Bedford (2015) and Simons (1995) arguments, can create a dynamic tension that supports organisations to face opposing forces, such as the simultaneous pursuit of exploration, exploitation, and the achievement of organisational ambidexterity. Cybernetic controls must be handled carefully if organisational ambidexterity is to be maintained. The balance between exploration and exploitation might be jeopardised by placing too much emphasis on cybernetic controls, which can also stifle innovation.

Grafton et al. (2010)[39] suggest that to achieve organisational ambidexterity, it is necessary to find a balance in the employment of performance measures. They contend that assessments should include more decision-facilitating strategies and that they might be an effective control tool to influence employee behaviour. The authors go on saying that this can help an

[38] Jørgensen, B., & Messner, M. (2009). Management control in new product development: The dynamics of managing flexibility and efficiency. Journal of Management Accounting Research, 21, 99–124.

[39] Grafton, J., Lillis, A. M., & Widener, S. K. (2010). The role of performance measurement and evaluation in building organisational capabilities and performance. Accounting, Organizations and Society, 35(7), 689–706

organisation, offering to higher-level managers the power to control employee behaviour so that they concentrate on the long-term repercussions of their decisions.
All of these observations point to the possibility that the application of cybernetic controls may aid in the development of organisational ambidexterity by affecting the equilibrium between exploitative and exploratory forces. The use of both the feedforward and feedback cybernetic controls gives an organisation direction and helps it to strike a balance between exploration and exploitation.

### 1.5.4. Reward and compensation control

Reward and compensation controls can be defined as a system that works to ensure alignment between the organisation's aims and those of the workforce by inspiring them, for example, through bonus payments. Also for reward and compensation control there are several important studies that can be mentioned.
McCarthy and Gordon (2011) recommend that feedback from cybernetic controllers is used to reinforce the behaviour and the expectations of employers, which is meant to inspire them and coordinate their efforts with the purpose of the organisation. This is done in order to enforce compliance, address deviations, and exploitation. Kang and Snell (2009) discover that reward and behaviour-based rewards are used by compensating controls that strive for "error avoidance" exploitation by ensuring that workers are protected from it through behaviour appraisal systems and are acting in accordance with the plan and as predicted. However, Kang and Snell (2009) contend that by implementing a "error embracing" control system and developmental performance appraisal, reward and compensation mechanisms can also foster exploration.
According to Medcof and Song (2013)[40]exploitative human resource's configurations have a more formalised linkage between performance and compensation than exploratory human resource designs. They also proposed that less formalisation encourages greater improvisation in circumstances that are exploratory. However, they also discover that in this situation, less formalisation still has negative effects on "process transparency, developmental feedback, performance-compensation connection strength, and training available". They contend that human resource systems can be highly structured in exploitative environments with predictable work. Formalised systems are less useful in more dynamic environments, such

[40] Medcof, J. T., & Song, L. J. (2013). Exploration, exploitation and human resource management practices in cooperative and entrepreneurial HR configurations. The International Journal of Human Resource Management, 24(15), 2911–2926

exploratory human resource arrangements, so modifications are required. They clarify that incentive and compensation controls should be adjusted to the situation and the intended outcome, weighing the advantages and disadvantages of such restrictions.

It is evident the influence of reward and compensation control on the balance of exploration and exploitation and the achievement of organisational ambidexterity. This type of control should be used carefully, since it is not always in line with the organisational objectives and it could have a negative impact on the accomplishment of organisational ambidexterity.

### 1.5.5. Administrative control

Malmi and Brown (2008) defines administrative control as something that can influence employee behaviour, the monitoring and assignment of duties and, the management of processes. They distinguish between organisational structure, governance structure and procedures and policies. Also this type of control could influence the achievement of organisational ambidexterity. Administrative controls, according to McCarthy and Gordon (2011) and Bedford (2015), offer mechanisms that confine and influence employees' conduct by restricting activities and search spaces and by offering standardised communication channels, encouraging exploitation. According to Bedford's (2015) research, exploitative innovation enterprises do their best when they place a strong emphasis on administrative controls. However, he notes that administrative constraints can also aid with exploration because the structure offered can provide staff members the freedom to explore and encourage innovation activities, making them more efficient, favouring the exploitation of emerging opportunities.

In order to attain organisational ambidexterity, Selcer and Decker (2012) outline an organisation that applies the loose-tight principle, which combines severe regulations with considerable autonomy and creativity. They contend that the company allows autonomy while also using central controls to monitor important operations, leading to managed chaos.

Tight administrative controls, according to Ylinen and Gullkvist (2014), can improve the performance of innovation projects when they interact with lax cultural controls. Indeed they discover that the simultaneous application of diametrically opposed rules might have a complementing effect and improve the efficiency of creative projects. Administrative controls bring to innovation initiatives more stability and direction, and when combined with cultural controls, they improve outcomes and increase corporate ambidexterity.

Contrary to the point of view of the major part of the authors that argues that the routines provide stability and are somewhat resistant to change, Feldman and Pentland (2003)[41] contend that organisational routines can enable or even drive change. They assert that selection and retention processes in routines are affected by employees' subjective perceptions, which results in variation and promotes change. Jorgensen and Messner (2009) discover that by establishing a clear procedure for new product creation, structures can promote organisational ambidexterity. In order to maintain a given level of efficiency while allowing for flexibility in between, such a process may benefit from predetermined milestones. A formal structure makes workers think about their actions and goals and stops them from straying too far from their intended course. According to Ahrens and Chapman (2004)[42], the effective use of administrative controls depends on communicating a positive attitude to employees and encouraging them to cooperate with the controls and use them to their advantage.

Summing up, administrative measures can enhance both exploitation and exploration because they both require a fundamental framework. Exploitation can be supported by rigid structures that offer standardised procedures, restrict employee behaviour, and increase predictability, whereas exploration can be supported by structures that concentrate on the pursuit and realisation of opportunities while still allowing for flexibility.

[41] Feldman, M. S., & Pentland, B. T. (2003). Reconceptualizing organisational routines as a source of flexibility and change. Administrative Science Quarterly, 48(1), 94–118.

[42] Ahrens, T., & Chapman, C. S. (2004). Accounting for flexibility and efficiency: A field study of management control systems in a restaurant chain. Contemporary Accounting Research, 21(2), 271–301

# CHAPTER 2: RISK AND MANAGEMENT CONTROL SYSTEM IN COVID-19 PANDEMIC

## 2.1. Definition of risk

In the company, the concept of risk can be attributed to any event capable of producing a positive or negative economic result. The main feature that characterises the event is its uncertain manifestation. This peculiarity has led organisations to constantly develop functions aimed at identify, evaluate, manage and control all possible identifiable events such as source of risk whether they are: internal or external, financial or equity, operational or regulatory. All these activities mean performing Risk Management.

An important concept is the difference between risk and uncertainty. The risk is focused on the aleatory of the event, so on the unpredictability of the risked event. Uncertainty is based on the lack of information. Knowledge and information could modify the perception of the expected value of the risk: this is the function of risk management. The economist Frank Hyneman Knight (1921) is the one who firstly make this kind of difference between risk and uncertainty[43]. According to Knight we can talk of risk only when it is possible to objectively calculate the probability of the future event.

The latest events of our world show how the current scenario is constantly changing towards a dynamic reality, in fact information passes rapidly from being effective to obsolete and it is the task of companies for their survival to develop strategies to deal with risk situations at any time, for example risk pandemic. No operator had ever considered it could happen, but it shows the fragility of organisations corporate, leading to reflections on strategic impacts and operations of the Risk Management function to implement prevention measures and risk management.

Furthermore, business risk today is closely linked to the changing relationships between the company and the environment in which it operates. The "external" environment is constantly evolving, it offers companies the possibility of expansion and of development and is at the same time the cause of risk conditions.

Looking at the literature, it is possible to distinguish between five types of risk:

-**external risks**: geo-political changes, entry of new competitors, development of new technologies, promulgation of new laws;

[43] Knight F., 1921, Risk uncertainty and profit

-**internal risks**: information and security risks, factors that could compromise customer loyalty or the company's business and its product;
-**financial risks**: liquidity, credit, portfolio concentration due to default diversification, lack of insurance coverage, market risk;
-**strategic risks**: planning and competitive position, allocation of development resources, business model and organisational structure;
-**operational risks**: outdated systems, data profiling inefficient customers, performance problems in the commercial network.

To the risks above, which are the most common ones, it is possible to add other kinds of risk, such as pandemic risk or risk related to climate change and environmental sustainability.

For a long time, risk management concerned, almost exclusively, the banking and insurance sector with particular attention paid to the management of financial and market risks. In fact, risk management originates precisely in the early 1950s from the world of Anglo-Saxon finance, based on the theories of the US economist Harry Markowitz. Later. During time risk management has become not only a tool for measuring external corporate risks, but rather as a valid support to the analysis and evaluation of the internal organisational structure and of the working process.

The management of risk is related to all firm's functions. Enterprise Risk Management has the task of evaluating and improving corporate risk management through an integrated model that includes all business risks. ERM includes the set of rules, controls and any other procedure that contributes to keeping the organisation oriented towards the pursuit of business goals, to safeguard assets and ensure operating continuity. An effective implementation of risk management activities begins from the identification of the central processes that could be affected by the effects of harmful events.

Briefly, the process of management of risk:
-contributes to defining risk measurement methodologies;
-identifies the operational limits of each existing structure;
-detects anomalies in the system and validates internal information flows;
-prepares reporting to the Board of Directors, to the Top Management and the heads of the operating structures regarding the evolution of risks and the violation of the established operating limits;
-verifies the consistency of risk measurement models with the functioning of the enterprise.

The continuous evolution of the economic-financial context has posed the attention of risk management on new essential aspects, which are: strategy, performance, value creation, etc.

Therefore, the integration and interactivity of risk management becomes fundamental, shifting the emphasis away from the mere risk reduction or potential management threats, to pursue opportunities aimed at protecting and creating value for the organisation. To take more informed and structured decisions, risk management must be an integral part in decision making and strategic planning (Attisano, 2019)[44].

### 2.1.1. Management of risk

Risk management is a process aimed at the complete and integrated management of risks, through systematic activities such as identification, measurement, evaluation and risk treatment. The rapid evolution of markets and their dynamic competitive environment imposes on management the need to make strategic decisions in a short time, trying to achieve an optimal balance between risks and opportunities. However, considering the complexity of the risks to spot emerging threats and potential opportunities, a culture needs to be developed and disseminated aware of the risk.

The function of risk management is to protect and enhance the value of a company for the benefit of its stakeholders, pursuing objectives through a methodological approach that allows for a coherent and controlled development of each future business, improved decision making, planning and creation of priorities through a structured understanding of the activity itself. Good corporate governance is linked to the concepts of efficiency and profitability and involves the socio-economic interest of a plurality of subjects for which it assumes greater relevance the judgement on the quality of the organisation's internal control, from alongside that on the economic-financial performance. In addition, the integration of management of risk into the culture of the organisation must be a constant, gradual and proactive process involving the corporate strategy.

Culture conditions the way in which the organisation lives and applies risk management, in terms of risk identification, assessment, type of risks accepted, way in which are managed, and responses provided to risky events.

Therefore, companies need to understand the overall level of risk inherent in their processes and activities. This involves acknowledging and prioritising the most significant risks, identifying the critical issues, recognizing the weaknesses of the controls, arriving at the

[44] Attisano, F. D., 2019, Il rischio come opportunità per gestire l’incertezza, Risk and Compliance Italia

implementation of an effective Risk Management process[45]. Although the structure of the risk management process remains unchanged (risk identification, risk analysis, risk evaluation and risk treatment), the interactivity and the integration of them in the various levels of the organisation are fundamental for reducing risk and managing potential threats. Risk management starts with the Board, as one of the key responsibilities is that of contributing to and overseeing the development and execution of the strategies and business objectives of the organisation, in relation to risks (risk oversight). The relationship between risk and strategy is necessary for all organisations who want to grow in the long run, in fact, regardless of the character's distinctiveness, each of these should have adequate internal expertise that deals with risks and integrated control systems in all possible facets. The new management models of risk are oriented towards the Board: in order to make more informed decisions and structured, Risk Management becomes an integral part of the decision-making process.

However, for the purposes of proper and effective risk management, it is necessary to maintain a unified and global vision, and not think of risk management as a process a compartmentalised, where you only care about your own area responsibility, in fact, even at operational levels there may be risk factors which have a negative impact on reputation and competitiveness of the organisation. Whoever manages the risk must be able to define a common and shared language, to identify all those mitigation tools designed to reduce the volatility of expected results and to increase sustainability in the medium term and long term.

In order to protect and create value in an ever-changing external environment, risk management is the fundamental process to manage uncertainty, to be ready in case of changes, seizing opportunities aimed at improving the organisation. In a constantly evolving market and environmental context, organisations must manage their businesses in consideration of new risk factors that drive the risk management process to safeguard and create value for the enterprise. To turn threats into opportunities an organisation must know, manage and have a deep understanding of the risks to which it is potentially exposed, identify the scope and link the risk management plan to the strategy. Organisations should consider risk management as a value creation activity, which should not eliminate or reduce risk and its impact, but exploit it to generate competitive advantage.

The evolution of business models leads companies to be more resilient and therefore able to anticipate and adapt to changes. In our era, entities are facing new risky events that are

[45] ANRA, 2020, Perchè fare risk management?, available at: https://anra.it/c_id/1866#:~:text=A%20dimostrazione%20di%20quanto%20il,finanziaria%20e%20patrimoniale%20dell'impresa

difficult to predict, measure and analyse related to the external environment, among them it is possible to identify:

-hacking and other computer threats;

-weather events such as hurricanes and earthquakes;

-the sudden disruption of supply chains resulting from the closure of production lines due to pandemics (such as in the case of COVID-19);

-technological evolution.

Given the increasing levels of uncertainty and the increasing complexity of the change, organisations need to strengthen their resilience and develop a more dynamic, agile and at the same time more in-depth risk management to deal with such particular social scenarios. In Italy there is not a single law or code in force that governs the management of risk but there are numerous rules that regulate it. The provisions of the law on the current business management tend to establish and confirm the ethical value of the company and in its relationship with all stakeholders. In recent years, organisations have faced different challenges in trying to implement the Enterprise Risk Management Framework:

-*integration*, an enterprise-wide perimeter and often lacked integration with strategy definition processes;

-*implementation*, the level of implementation has never occurred at a strategic level and positioning itself on individual processes has caused a loss of interest of the Boards;

-*engagement*, ERM implementation programs as an initiative of assurance, rather than as a method to better manage the business, have proved equally unsuccessful in the attempt to involve the management corporate.

### 2.1.2. Risk Culture and Risk Accountability

The financial crises of recent years and COVID-19 have highlighted the need for organisations to invest in proactive risk management models. Risk management is a fundamental process for governance, as the ability to succeed in transforming risk into opportunity ensures organisational improvement. In the current dynamic and complex context, companies develop innovative approaches that allow you to analyse the signals of change and their impact on business. COVID-19 has accelerated a transformation process already started by a few years in the world scene. The need to integrate good management of risk in strategic planning, requires an adequate risk culture spread across the organisation. A responsible risk culture is the sum of multiple components and their own interactions, such as organisational culture, behaviour, personal ethics, individual and organisational risk appetite.

To detect the effective risk cultures of the organisation and direct it towards the desired values, it is necessary to start an adequate assessment and maturation program, supported by methodologies and tools which, while inspired by industry best practices, take into consideration unique characteristics of the company. An adequate culture is also necessary for consistently measuring the risk appetite of the company, since not having awareness of the risks that can cause damage to the organisation is the risk more serious for top management.
The evolution of the current scenario has led organisations to adopt models of risk management that are future-oriented and capable of protecting the interests of stakeholders. Culture affects the way the organisation lives and applies the Risk Management, in fact, effective risk management helps to optimise performance. Despite the risk culture assessment being one of the priorities of the authorities European and national supervisory authorities, the drafting of a Code of Conduct or a Code ethics does not ensure that integrity, transparency and accountability are incorporated within the organisation. The culture of risk should not be perceived as a regulatory requirement to be respected; in fact it is an increasingly integrated component in the strategic planning process. In today's ever-changing environment, it is necessary to convey and consolidate a responsible risk culture at the various organisational levels in order to be able to create value. The role of top management is fundamental to building a system set of moral principles, ethical values, human conduct and attitudes towards pursuing business objectives. The organisation must be aware of its current risk culture and of the evolution it may have in future.
Defining and sharing a responsible and adequate risk culture is a prerequisite for top management. Getting to know the vision and mission is an essential element in an organisation to achieve efficient and effective results. The change can produce different effects within the company if the levels of organisational structures do not have a uniform culture of risk and future. The definition of strategic objectives must take into account future scenarios that can generate positive and negative impacts on the determined risk appetite and risk tolerance from the company.
The evolution of risk culture and risk accountability due to COVID-19, has highlighted how governance and culture are composed of multiple factors (internal and external), which influence and dominate the entire company. It is possible to observe the importance of culture in governance from the new 2017 ERM framework. The framework elevates culture to the first principle along with governance, since it represents the basic elements for an effective integrated process capable of defining mission, vision and core values. In any organisation, a culture effectively is a necessary resource to support, protect and enhance a growth company

and to pursue the objectives set in an eco-sustainable way. The pandemic crisis shows how cultural transformation is happening in consideration of four aspects:

1) knowledge and understanding: every individual needs to know and understand how one's risk behaviour relates to overall performance of the organisation;
2) credibility and commitment, everyone must believe and be committed to carrying out effective risk management capable of creating added value;
3) scenario and skills: it is necessary to understand the context caused from COVID-19 for the recruitment of appropriate skills;
4) action and responsibility: taking decisive and timely action requires that people develop an appropriate risk culture to act on conformity of the planned strategy.

In view of the current scenario, equipping yourself with a strong and aware risk culture is a necessary process in the governance and risk management system to better adapt to the changing external environment and face the crisis with responsibility. The alignment of the vision and mission with the strategy for creating and protecting value requires a flexible and appropriate risk culture.

## 2.2. Emergent risks in the evolution of Risk Management

The crisis generated by the COVID-19 has caused all the organisation's major changes in its human capital. All leaders have searched to gain greater control over the most critical risks they could influence the main activities. Constant verification for the achievement of objectives, strategies and performance of the organisation, is a necessary activity for identifying the impact that events may have on the achievement of success sustainably. Over the past two decades many organisations have adopted ERM for introducing an approach to risk that can influence strategic success (Beasley, 2020)[46]. In addition to vision, principles and performance, ERM also considers ESG (Environmental Social Governance) risks. Through the ERM process integrated into strategic choices, organisations and companies are able to improve their non-financial performance (brand reputation). The evolution of the economic and competitive context today requires us to exploit all the company resources and knowledge to make more informed decisions, considering the risks and the risks in the short, medium and long term objectives opportunity. Technological innovation, geopolitical uncertainty, Brexit, hacking, terrorism, natural disasters, are factors that increase the uncertainty and complexity of the risks that each organisation has to face in the COVID-19 era. Coronavirus is not

[46] Beasley, M., 2020, How to Leverage ERM Principles to Better Respond to COVID-19-Related Risks, NC State Poole College of Management, Enterprise Risk Management Initiative

considered the main risk, but that phenomenon which aggravates the already existing risks, forcing organisations to deal with them through new and new approaches management models. In the rankings of the main perceived risks, data and cyber security are the main risks in 2019, 2020 and 2021. The cybersecurity related to computer security, initially perceived as reputational and financial issues with possible effects on continuity company, has also taken on a compliance characteristic over time such as response of organisations to the adaptation of the GDPR (General Data Protection Regulation, a European Union regulation on the subject of treatment of personal data and privacy). Planning and development of IT infrastructures not integrated in the governance model represents for organisations the main difficulty for its risk mitigation. However, the emergency COVID has pushed the environmental problem into the background in governments, in organisations and citizens focused on the pandemic situation. Climate change is a real and extremely close risk, which cannot be further ignored. The real impacts of climate change are rapidly emerging in the economic scenario. From a strategic point of view, the companies are forced to plan for the future in relation to climate change. The high management is aware that credibility on ESG issues is a factor which favours stakeholder investments.

Despite the pandemic risks having quickly climbed the threat rankings perceived globally, it is particularly complex to face, mitigate and govern types of risk whose origin and dynamics are totally exogenous to the organisation. In the short term, risk management looks across a constantly revised mapping of exposure and impacts on production, human capital security and business continuity. Despite all have been looking for solutions that can minimise the damages deriving from the pandemic, the protection of people in the most effective and possible way represents a common goal pursued by all organisations (Beasley, 2020)[47]. Planning and adapting the strategy periodically, allows organisations to create value from ever-evolving opportunities. The integration of the best framework for optimising strategies/performance within companies requires:

- evidence of the correlation between risk and return;
- risk management and culture as a strategic tool;
- aggregation of individual risks;
- focus on governance and the evolution of risks.

In the ERM framework to achieve optimal performance it is necessary that the integration of risk into the strategic planning process aligns with the vision and the corporate mission. The

[47] Beasley, M., 2020, How to Leverage ERM Principles to Better Respond to COVID-19-Related Risks, NC State Poole College of Management, Enterprise Risk Management Initiative

evolution of risk and the consequent responses organisational structures, give rise to key differentiating opportunities and capabilities for the organisation[48]. ESG risks lead stakeholders to focus their attention on long-term sustainable performance. In this increasingly volatile and complex context, to broaden the vision and the own freedom of action, the risk managers, through the adoption of processes and procedures, must direct top management towards sustainable business models aimed at safeguarding CSR (Corporate Social Responsibility).

### 2.2.1. Integration between MCS and ERM

Companies are exposed to a profile of unforeseen risks and uncertainty in financial markets, as evidenced by the subprime mortgage scandal in 2006, the global financial crisis in 2008, and the COVID-19 in recent years. Regulatory bodies have implemented corporate risk management in several nations as a result of the rise in risk frequency and its detrimental effects on business performance globally (Shin, Park, 2017)[49]. In Germany, for example, the Federal Ministry of Justice mandates risk management systems based on the corporate control and transparency law passed in 1998, and businesses are required to submit monthly reports to regulatory agencies about their risk management activities. Also, since 2009, credit rating organisations like S&P and Fitch have taken into account whether a firm has implemented a risk management strategy for corporate ratings. As a result, management controls' function within an organisation is evolving from ex-post detection of non-compliance to proactive risk management and increased company value. The current tendency is to act as an inside consultant who recognizes risk and detrimental concerns that could obstruct goal-achieving and enhances risk management (Flesher, Zarzeski, 2002)[50]. Implementing the following three core risk management goals is referred to the integration of risk management: changing operations, employing targeted financial instruments, and modifying capital structure (Meulbroek, 2002)[51].

The authors studied a case in which a company has integrated ERM with management control system in order to increase a firm's value by monitoring its subsidiaries. As said before, ERM

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[48] Committee of Sponsoring Organizations of the Treadway Commission (2017) Enterprise Risk Management-Integrating with Strategy and Performance, www.CoSO.org

[49] Shin, I., Park, S., 2017, Integration of enterprise risk management and management control system, Investment Management and Financial Innovations, Volume 14, Issue 1

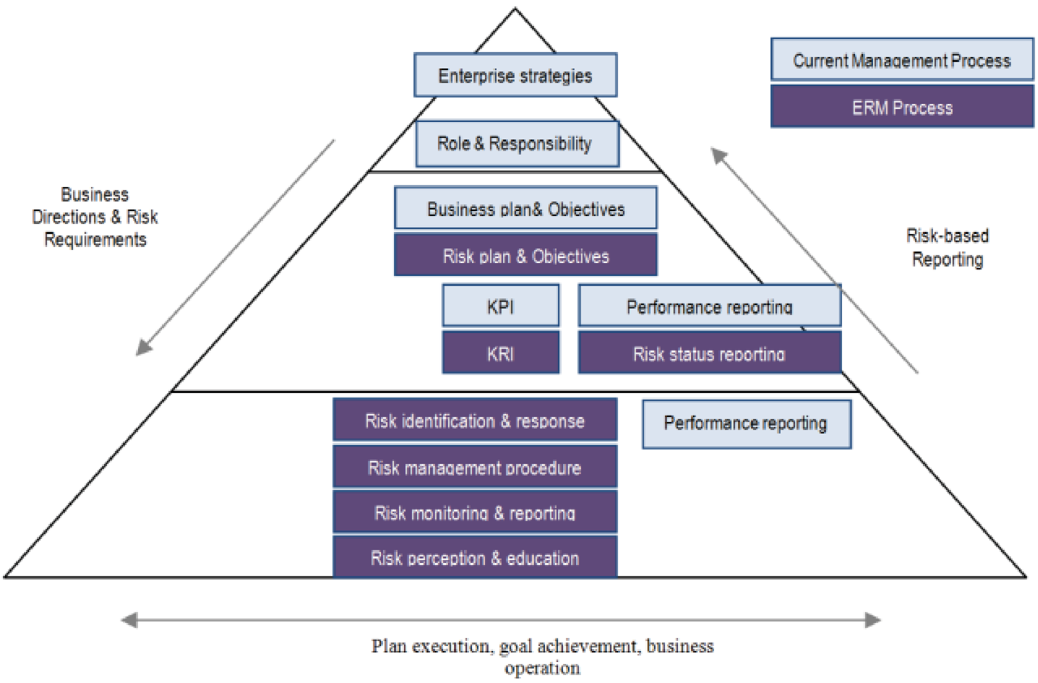
[50] Flesher, D. L., Zarzeski, M. T. ,2002, The roots of operational (value-for-money) auditing in English Speaking nations. Accounting and business research, pp. 93-104

[51] Meulbroek, L. K., 2002, A senior manager's guide to integrated risk management, Journal of Applied Corporate Finance, pp. 56-70

is typically a process, effected by an entity's board of directors, management, and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives. ERM can be seen as a component of the infrastructure for management control to fulfil organisational objectives. ERM must be implemented with careful consideration of risk policy, management process, role and responsibility clarification, support system, and risk culture in order to function effectively as management control infrastructure. To implement ERM successfully as a management control system architecture, there are five essential phases. Management should first assess each subsidiary's ERM requirements. In order to identify ERM-related concerns, it is important to analyse the present risk management practices. The second phase is to identify/assess every possible risk posed by subsidiaries and then decide which risks should be managed with priority at the corporate level. The third step is for management to implement remedial measures to enhance risk management. Studying the sources and impacts of each priority risk, choosing KPI based on their significance, and quantifying the likelihoods are required for this result. Implementing a risk management system is the fourth phase. This ensures that the risk management system will make use of the risk profile and KRI list, which have been finished from the preceding processes, and will make clear each team's official position and responsibility in the ERM process. The following step involves monitoring the ERM system's efficacy after it has been put into place as a management control system in step 4. In conclusion, steps 1 through 3 are set up to identify risks at a priority level and KRI at a lower level, and steps 4 and 5 are utilised to implement the management control system based on the risks and KRI subtracted from steps 1 through 3. ERM was introduced in the case study firm by fusing the risk management system with the already-existing management control system. This helps in locating and assessing the risk that underlies the current management techniques. In order to maximise firm value by keeping an eye on its subsidiaries, ERM is adopted and integrated with the management control system.

ERM integration level with management control system could be measured in five different ways: through strategy/policy, process, organization, techniques, and culture. Businesses in level 1 (see the figure below) lack a systematic approach to risk management, including a risk management process, policy, definition of roles and duties, and methodological standards. Comparatively speaking, level 5 businesses have a culture of ERM that satisfies the necessary standards for risk management. It's interesting to note that because risk management is integrated into employees' daily responsibilities, there is less reliance on the risk management team.

Fig 4. Integration of Enterprise Risk Management and Management Control System




| | No risk management system Level 1 | Individual risk management system Level 2 | Systematic risk management Level 3 | Integrated risk management system Level 4 | Established ERM culture Level 5 |
|---|---|---|---|---|---|
| Strategy/policy | -No risk management strategy<br>-Risk management decisions are made ex-post | -Strategies exist for financial risk or influential risk<br>-Respond to previously experienced risk | -Management of various risks including financial, operational, strategic risks<br>-Little integration with business plans | -Risk management and business plans are integrated<br>-Risk management is integrated with performance management, investment decision making | -Enterprise-level and portfolio-level risk management<br>-Achieves an appropriate risk level |
| Process | -No official risk management process | -Individual risk management processes exist, but lack consistency | -Identification and monitoring processes exist, but evaluation process is not integrated<br>-Individual risk management | -Standardized risk management process (risk identification-evaluate-respond-monitor) | -Coordinated risk process and components of risk management (strategy, organization, methods, culture) |
| Organization | -No official risk management team | -Business units are responsible for their own risk management<br>-High reliance upon external/internal auditors | -Role and responsibilities at enterprise level are defined<br>-Risk management knowledge and skills are concentrated in specific departments | -Inidividual units are responsible for their own risk management, which contributes to continuous risk management cycle | -Less dependence on risk management team<br>-Risk management is blended in ordinary business tasks |
| Methodologies | -Depends on experience and instinct<br>-No techniques or standards | -Traditional management information system<br>-Most risk management is based on manuals | -Limited risk monitoring and reporting system<br>-Basic tools are used to quantify risk | -Up-to-date central database<br>-Effective early warning system<br>-Integrated system which can be utilized at business unit-level | -Integration among the components of risk management, integration with other business systems |
| Culture | -No understanding on risk management | -Most employees are aware of importance and need of risk management | -Top executives support risk management<br>-Perception of risk management is consistent throughout the organization | -Concepts & methodologies of risk management are understood and applied at each business unit-level | -It becomes organizational culture since all members consider risk in their decision making or task execution |

Source: Shin, I., Park, S., 2017, Integration of enterprise risk management and management control system

## 2.3. The COVID-19 crisis

A crisis is described in literature as an event that is distinctive, unexpected, and out of the ordinary that threatens the objectives of complex systems, such as organizations or communities, and needs modifications to the system (Seeger et al., 1998)[52]. Example of crisis are the COVID-19 pandemic or the earthquake in Japan in 2011 that are natural disasters or the 1933 Banking Crisis and the subprime mortgage crisis in 2007 that are economic shocks. From an organisation's point of view, the occurrence and the related crises result in a risky and unstable scenario that is marked by a high degree of ambiguity. In particular, organisations frequently underinvest in preventative measures for a specific crisis and, as a result, lack a clear plan for how to deal with a given crisis and how to communicate with its stakeholders in times of a crisis. This is due to the low probability of many crisis-triggering events.

The COVID-19 pandemic is a worldwide disaster that has many serious ramifications for businesses, primarily in terms of their financial access and company operations, but also in terms of how the tax system is implemented. In addition to having a negative impact on health, social segregation laws and nationwide lockdowns have created an unstable economic climate that has led to government stimulus programs, budget shortfalls at financial institutions, temporary firm closures, and remote employment (Chen et al., 2020)[53]. The Covid-19 pandemic significantly disrupts businesses' production, logistics, and the entire supply chain (Czura et al., 2022)[54], standard key performance indicators become ineffective motivators, and employees are required to work from home, raising questions about transparency. These are just a few of the potentially most severe economic effects.

Concerning resource shortage, crises are characterised by organisations not having enough money or manpower to address the challenges. Since the COVID-19 pandemic has caused an economic crisis, this is undeniably the fact. Governments all throughout the world have, to varying degrees, limited public movement and, in some cases, closed down companies deemed unnecessary. These public health initiatives to stop the spread of COVID-19 have had profound impacts on the economy, resulting in previously unheard-of rises in unemployment, a drop in consumer confidence, a loss in demand, and a disruption of supply chains. The COVID-19 pandemic has caused a significant drop in revenue, which has left many

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[52] Seeger, M. W., Sellnow, T. L., Ulmer, R. R. ,1998, Communication, Organization, and Crisis, Annals of the International Communication Association, pp. 231-276.

[53] Chen, S., Igan, D. O., Pierri, N., Presbitero, A. F., Soledad, M., & Peria, M. (2020). Tracking the economic impact of COVID-19 and mitigation policies in Europe and the United States. IMF Working Papers, 2020

[54] Czura, K., Englmaier, F., Ho, H., & Spantig, L. ,2022, Microfinance loan officers before and during Covid-19: Evidence from India. World development

organisations with a shortage of resources. Conflicting goals become more difficult for organisations to achieve as a result of the diminishing availability of organisational resources. COVID-19 has significantly altered how business is performed in terms of transformation. Businesses that have been able to keep running have had to make significant adjustments to their operating models, such as embracing the idea of remote work, switching to online distribution, altering work schedules and factory layouts. Change provokes friction between current customs and new prospects since it requires constructing a future that is distinct from the present. Organisational actors must balance competing demands for maximising present competencies and seeing opportunities in the future. The short-term concentration of the management control system literature on organisational responses to crises hinders an organisational focus on the long term. They draw attention to the crucial role accounting plays in top managers' emphasis on spending cuts and strict budgetary constraints due to its short-term investor focus. As lower-level managers become aware of the threat that these changes pose to the organisation's long-term existence, this short-term focus exacerbates internal tensions and conflicts inside the organisation. [55]Muller (1985) emphasizes how managers are prone to adopt a "firefighting mentality" under pressure, focusing on rapid activities to produce immediate outcomes. Due to this narrow concentration on the short-term, without taking strategic or long-term effects into account, such an approach often fails. A unified idea that takes into account the overall organisational strategy, long-term difficulties, as well as the current situation is necessary for the successful navigation of a crisis.

### 2.3.1. The paradox theory: MCS' opportunities

Organisations are threatened by crises, but they can also present windows of opportunity (Keonig et al., 2020)[56]. Crisis situations present an opportunity to break with established practices. They provide an opportunity to think and work laterally as well as to dismantle the company's entrenched silos. As a result, paradoxically, a crisis may present an opportunity to improve or grow an organisation's operations, leaving them in a stronger position than they were before the crisis (Brockner and James, 2008)[57]. According to the emerging literature in this field, it appears that organisations that have taken advantage of opportunities have encouraged organisational learning and a diversity of viewpoints during the crisis. In other

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[55] Muller, R., 1985, Corporate crisis management, Long Range Planning, Vol. 18, No. 5, pp. 38-48.
[56] Keonig et al., 2020, A blessing and a curse: how CEOs' trait empathy affects their management of organisational crises, Academy of Management Review, Vol. 45 No. 1, pp. 130-153.
[57] Brockner, J., James, E. H., 2008, Towards and understanding of when executives see crisis as an opportunity, Journal of Applied Behavioral Science, Vol. 44, No. 1, pp. 94-115.

words, while they dealt with the crisis's immediate threat, they also managed the changes needed to look for opportunities.

A dynamic equilibrium model of paradox, created by Smith and Lewis (2011)[58], emphasizes the persistence of opposing forces and the deliberate, cyclical reactions that promote long-term sustainability. The dynamic model created by Smith and Lewis (2011) assumes constant changes across conflicting paradoxical demands as opposed to a static equilibrium model, which assumes a stable resting state in which the system will automatically react to regain balance in response to any episodic event that creates an imbalance. The maintenance of equilibrium depends on how well organisations adjust to these changes. As a result, this theory is appropriate for the investigation of MCS adjustments made in response to shifts in organisational equilibrium brought about by occasions like the COVID-19 crisis. Responses to paradoxical tensions can lead to either vicious or virtuous cycles, according to this dynamic equilibrium model. When employees inside a company react adversely or defensively to competing requests, vicious cycles could result because they choose between the demands rather than responding to both simultaneously. As a result, rather than resolving the tensions already present, the demands continue to conflict with one another. On the other side, when organisational employees accept the paradox and recast the issue as a both/and decision, that is, simultaneously addressing both opposing requests, a virtuous cycle happens.

Kober and Thambar (2021)[59] emphasize how MCS can be utilised to manage operational and long-term goals simultaneously in order to navigate a crisis. Additionally, it emphasizes how MCS can be used in times of need to spot and seize opportunities. They studied “The One Box” (TBO), an Australian food assistance organisation that sends recipients a weekly package of fresh produce it has purchased. The boxes are delivered by TOB to community centres and schools, which subsequently give them to the recipients. Major disruptions brought on by the COVID-19 crisis put TOB's operations and funding at danger. Both TOB's operational model and financial security were impacted by the COVID-19 problem. Due to a 75% revenue loss, its main donor, TFB (The Fruit Box), had to rethink its financial support for TOB. However, the ensuing recession significantly increased the need for food assistance. As a result, TOB had to balance the competing demands for food aid and declining revenue to support operations. To get its boxes to schools and community centres in the past, TOB mostly used TFB's logistical network. Given the decline in revenue, TFB drastically cut back

[58] Smith, W. K., Lewis, M. W., 2011, Toward a theory of paradox: a dynamic equilibrium model of organising, Academy of Management Review, Vol. 36, No. 2, pp. 381-403.

[59] Kober, R., Thambar, P. J., 2021, Paradoxical tensions of the COVID-19 pandemic: a paradox theory on the role of management control systems in helping organisations survive crises

on delivery trips and was no longer able to support TOB's logistical infrastructure for free. The transition of schools to remote learning also resulted in an increase in logistical complexity. The TOB distribution mechanism was disrupted since prior to this, parents picked up their boxes from the school. Similar logistical challenges were encountered with community centres since they faced a sharp decline in the number of volunteers available, forcing several of them to temporarily close. Due to these circumstances, TOB was compelled to halt operations in March 2020 for a duration of three weeks. The organisation has to face the problem of plurality (According to Denis et al. (2012)[60], plurality refers to a diversity of opposing viewpoints and/or goals within a setting of diffuse authority. It causes organisational players to feel tugged in different directions). An increase in the level of plurality was caused because organisational actors may decide differently when faced with a crisis if there is no overarching idea.

MCS kept the short- and long-term goals in mind within TOB during the crisis. After the three-week stoppage, TOB resumed operations gradually and strengthened its emphasis on performance reporting. Organisational members closely monitored non-financial performance parameters to determine how quickly TOB would be able to return to its prior delivery level, and reporting frequency was increased from every two weeks to weekly. Budgets and cash flow forecasts were crucial to operations as TOB's financial fragility rose, particularly when, at one point, the cash flow budget showed that TOB had just enough reserves for another three months of operations. Cross-functional planning sessions have become essential. The focus of regular meetings between managers and cost-cutting experts was on the short-term financial ramifications of decisions. In order to help with delivery and lessen the increased food insecurity brought on by the COVID-19 recession, it was decided to contact a larger organisation that had just acquired government support. The long term was also a focus of budgeting and forecasting, though. Forecasts for the upcoming year showed the importance of diversifying TOB's funding sources beyond TFB. It was acknowledged that TFB might not be able to fund TOB at the same levels as before given that its 2021 income could fall below those prior to COVID-19. As a result, MCS paid more attention to scanning the outside world, which helped them find charitable foundations that were prepared to sponsor TOB. Thus, the long-term existence of TOB was guaranteed.

To conclude, due to the COVID-19 crises' increased financial fragility, TOB broadened the scope of their MCS to search for alternate sources of finance in the outside world. Due to

[60] Denis, J. L., Langley, A., Sergi, V., 2012, Leadership in the plural, Academy of Management Annals, Vol. 6, No. 1, pp. 211-283.

higher levels of funding from philanthropic organizations and major corporations, TOB was able to partner with new schools, reach more families, and deliver more boxes each week than it had before the COVID-19 crisis. This allowed it to expand its reach and reach more families. This case study demonstrates how a crisis forced organisational members to reconsider their assumptions about financing sources, leading to the discovery of other sources of income that gave TOB the chance to extend its operations. It's unlikely that this mentality change would have happened without the COVID-19 catastrophe.

Organisational learning and the diversity of viewpoints have both been found to have an impact on whether an organisation sees a crisis as an opportunity (Bundy et al., 2017)[61]. Crises are more likely to be viewed as opportunities in organisations that support organisational learning, as well as in those looking for opposing viewpoints and actively participating in spirited conversations. The usage of cross-functional meetings was heavily emphasized by TOB's MCS, which supported knowledge sharing and development by fostering a diversity of viewpoints. All senior and middle-level managers attended weekly planning meetings instead of every two weeks, and weekly grant and marketing meetings were also instituted. Since meetings increased to at least three times per week during the crisis from once every two weeks prior, managers had more opportunities to discuss and debate issues. The TOB's MCS, as mentioned before, concurrently prioritised operational/short-term and strategic/long-term goals. This dual focus was made possible by meetings where operational/short-term and strategic/long-term issues were discussed. The notion to expand operations was born during these ongoing talks and disagreements, and it solidified because of increasing scanning of the outside environment.

By making these MCS adjustments, TOB was able to re-establish balance, go through a virtuous cycle in which both short-term/operational and long-term/strategic goals were achieved at once, and take advantage of opportunities.

### 2.3.2. The role of MCS in the COVID-19 pandemic

The global COVID-19 outbreak, anyway, presents a rare chance to examine how organisations have mobilised management control in the face of a systemic disaster. Comparatively speaking, the COVID-19 pandemic's economic and social effects have been and will continue to be wider (as more States and business sectors are directly affected), more profound (the estimated magnitude of the economic and social impacts is dramatically larger),

[61] Bundy, J., Pfarrer, M. D., Short, C. E., Coombs, W. T., 2017, Crises and crisis management: integration, interpretation, and research development, Journal of Management, Vol. 43, No. 6, pp. 1661-1692.

and both short-term and long-term oriented, leading to inequalities (Passetti et al., 2021)[62]. Passetti's study examines the role that management control plays in an Italian food retail cooperative's response to the COVID-19 epidemic during the lockdown period. Internationally, the food retail sector was one of the few to stay open throughout the lockdown because it supplied vital items. A unique and dramatic social and economic event can be studied through the examination of the lockdown period, which also offers insights into how accounting, organisational, and social factors interact. Organisations were pushed by the COVID-19 pandemic to swiftly adapt to the new conditions, investigating immediate solutions and modifying their objectives, decisions, activities, and communications. Yet, managers might not have had the necessary experience to handle a pandemic, leading to doubt regarding the procedures to be followed and the goals to be met. By organising suitable organisational responses to the crisis and helping managers in making quick decisions, management control could help with a quick adjustment to new conditions.

The frequency of financial, humanitarian, industrial, and natural disasters has increased, underscoring the necessity of deepening our awareness of the potential roles that accounting and management control might play in such situations. When there is a macro-financial crisis, some tools are used more frequently or in different ways (such as variance analysis or a budget for planning and resource allocation), while other tools are used less frequently or remain the same as they were before the crisis (Pavlatos and Kostakis, 2015)[63].

To analyse the subject, Passetti et al. (2021) use Merchant and Van der Stede's (2012) object-of-control approach[64]. This framework, which takes into account four different kinds of management controls — action, results, personnel, and cultural — enables a thorough understanding of the management controls that an organisation could implement in response to the COVID-19 crisis to support organisational adaptation and pandemic effects mitigation.

The evidence eventually has been clustered into the three types of responses implemented by the enterprise:

1) **Management control for business-operational continuity plan and COVID-19 health and safety**

The food retail business started developing and implementing a systematic reaction as soon as the national emergency began, and they regularly updated it in accordance with Italian

[62] Passetti et al., 2021, Coping with the COVID-19 pandemic: the technical, moral and facilitating role of management control, Accounting, Auditing and Accountability Journal, Vol. 34, No. 6, pp. 1430-1444

[63] Pavlatos, O. and Kostakis, H., 2015, Management accounting practices before and during economic crisis: evidence from Greece, Advances in Accounting, Vol. 31 No. 1, pp. 150-164

[64] Merchant, K.A., Van der Stede, W.A. 2012, Management Control Systems: Performance Measurement, Evaluation and Incentives, Pearson Education, London

Government regulations as well as their own internal and unique organisational decisions. The company's managers quickly put new action measures into place, including COVID-19 related occupational health and safety (OH&S) procedures, protective barriers, and a new mobile app for booking consumers into shops. The goal was to halt the spread of the infection and safeguard employees, clients, and suppliers. The management staff swiftly adopted remote working. The use of physical barriers, behavioural restraints, and new standard operating procedures permitted an initial organisational response that prevented the virus from spreading throughout the organisation.

The strictness and mechanism of the action controls was important to ensure that they were consistently followed by every employee to stop the spread of the virus. The new OH&S policies were subsequently made available to various stakeholder groups on the outside. The action controls enabled stakeholder management and understanding of virus mitigation measures by coordinating internal OH&S decisions with suppliers' safety requirements. The organisation's initial response was completed using existing control mechanisms along with the design and implementation of new training and communication initiatives, demonstrating the applicability of personnel controls. To speed up information transfer and execution at the shop level, the company used ad hoc innovative solutions. The updated OH&S processes were made known to the entire staff, which increased the efficiency of the action controls. A crucial organic process in determining organisational resilience was the cultural controls articulated in terms of social values and beliefs. According to some managers, these controls have a significant impact on expressing ideals, inspiring workers, and providing the firm with direction. The organisational fundamental principles were outlined by the cultural controls, which made it possible for action controls, such new OH&S processes, to work quickly. The management of the organisation persisted in emphasising social values and ideas as the pandemic got worse. The activation of the management control mechanisms made the requirement for safety visible to suppliers, customers, and employees. This mobilisation promoted both individual and group accountability, which served as reinforcing and facilitating interdependent mechanisms.

**2) Management control for CODIV-19 financial control**

The management control mechanisms also made it possible to track and evaluate the financial effects of the CODIV-19 lockout. Compared to the standard method by which the organisation conducts its business analysis, the lockdown-related economic scenario and its intricate future developments increased the outcomes controls' significance on a daily basis. To comprehend the financial impacts of the lockdown and the altered consumption patterns, cost data and commercial indicators started to be tracked more promptly. Some managers emphasised the value of a relatively brief period of analysis to comprehend the effects of the lockdown. The expenses associated with the pandemic were also calculated using ad-hoc analysis. The company started keeping track of and allocating COVID-19 costs, such as those associated with sanitation, safety masks, and increased shop entrance security, to a particular accounting item. The latter was developed to precisely track several pandemic's economic repercussions. The monitoring of such expenditures fostered extensive internal coordination since it involved the entire organisation and drove the shared objective of safety and virus containment. Given the approaching summer and the quantity of tourists who would typically visit the retail establishments, the emergency management further elevated the significance of the scenario analysis. Because of the high infection level at the local, national, and international levels, the scenario analysis became very unstable and difficult. So, it became impossible to make realistic plans for the future months, taking into account the requirement to give safety issues top priority.

Furthermore, during the lockdown, the revenue budget was continuously set aside and reconstructed with an increasing "informational intensity" around important economic metrics to analyse the departure from the original budget and determine the economic repercussions of the pandemic. The revenue budget and associated assessments were unable to accurately depict all of the COVID-19's financial ramifications since a number of economic variables became less predictable as a result of the high level of market and societal uncertainty. The requirement for accurate cost management monitoring was one of the effects of excessive uncertainty. The financial control was concentrated on the control mechanisms already in use, such as cost centres, consolidation analyses, and variable-costs analysis. The economic effects of the lockdown were twofold. Customers made less purchases, especially in the early stages of the shutdown. The lockdown also made it possible to reduce variable costs because stores were closed on weekends. Yet, when compared to the same months in 2019, the value of each receipt rose significantly (68% on average) in March and April 2020. It was discovered that management accounting operated in continuous time and that the financial information flows assumed an ever-higher salience in managing finances as a result of the expanded use of the financial outcomes controls with ad-hoc investigations. In addition, due to the severity of the crisis and the complexity of the issue, health and viral risk containment concerns took precedence, highlighting the need to strike a balance between the moral and practical facets of accounting. The investigation demonstrated the value of medium scenario studies in addition to short-term financial data. The forecasting analysis developed into a key tool. Due to the need to map and comprehend the economic repercussions of the crisis, extra assessments that would not have been done in a no-pandemic situation were conducted, increasing the level of financial analyses. During the lockdown, some control mechanisms (such as the scenario analysis and revenue budget) were adjusted or used more frequently, but others related to the organisation's finances remained the same.

**3) Management control for the local community**

The third and most crucial part of pandemic emergency management was giving attention to the requirements of the local population. To support the local community's efforts to aid the population groups most impacted by the pandemic and reduce the impacts of the inequities brought on by the COVID-19 pandemic, management control mechanisms were mobilized. Several solidarity efforts were put into action as a result of the co-operative's principles serving as a crucial cultural control mechanism, for example additional discount on local government-issued coupons for the most desperate circumstances. In addition to working with the existing network of neighbourhood associations, new connections were made to support vulnerable populations and address the rise in service requests. The projects' internal visibility was increased by the financial and non-financial measures. The culture controls and the results controls interacted in a way that highlighted the successes of the implemented socially responsible activities and displayed quantitative data. The cooperative and the network of associations' mutual trust and sense of responsibility were strengthened by the financial resources allocated to the local associations. This reduced the pandemic's negative social repercussions, at least temporarily, which may have led to a rise in social inequality. Also, the action controls added official operational processes to the collaboration and engagement activities, reinforcing the importance of solidarity actions. The use of management control mechanisms enabled an engagement act amongst the enterprise, not-for-profit organisations, and people in need. The control mechanisms internalised stakeholders' requests, guiding the organisation towards managing those requests. These mechanisms favoured actions to create better conditions for the local community and concurrently reduce the inequalities triggered by the COVID-19 emergency. Management control systems made the enterprise's obligations to others and the creation of fresh ideas evident, helping to shape cooperation. The requirements of the nearby community were made visible through the implementation of the action and results controls with an external focus.

To conclude, it is possible to observe that a quick response to the situation was made possible by both mechanistic and organic regulatory systems. At the organisational level, management control supported the redefining of various operational procedures within the stores and monitored the financial and pandemic-related results while providing visibility to the OH&S objectives. The social implications included working directly with local governments and no-profit organisations to carry out a number of initiatives for the neighbourhood. The externally focused management control methods functioned naturally, fostering communication, trust, and chances to reduce the pandemic's inequities. The action controls allowed for extreme OH&S measures and strong operational coordination to reduce viral spread. The cultural restrictions made safety a top concern for workers, clients, suppliers, and extraordinary acts of cooperation that benefited the neighbourhood. The analysis processes prompted by the cultural and action controls early in the lockdown prevented organisational tensions regarding the most important emergency pandemic issues that needed to be handled. The results controls kept track of the financial, health, and solidarity issues associated to COVID-19 and provided data that could be used to track organisational performance and social outcomes. The financial outcomes were contrasted with prior financial targets and aspirations. The personnel controls were less active because most of them didn't directly respond to the COVID-19 situation. It could be seen a useful use of management control, demonstrating that external control mechanisms are used to address the multifaceted character of the pandemic problem (to lessen the detrimental societal effects of the epidemic for social goals). As individual managers and specialised teams employed both already-existing controls and freshly designed and installed controls to deal with unforeseen situations, the controls evolved quickly. Combining the various management control techniques has created enabling and reinforcing effects that have made it possible to successfully address the pandemic's numerous issues. Yet, there was no room for a comprehensive design of the entire control system because the many control mechanisms were employed and developed by various organisational units to quickly address various needs. Together, this demonstrates how management control made it possible to both deal with a crisis as it developed and look ahead to lay the groundwork for a more resilient organisation. In contrast to earlier literature, the present study demonstrates that the moral and technical aspects of management control supported one another rather than being at odds with one another. The moral component emphasised how pertinent and appropriate it was to address the demands of the actors brought on by the pandemic. The technical component concentrated on the implementation of operational issues and the financial analyses. The results indicate that applying various management control methods in various ways aids in external pandemic crisis management comprehensively and effectively, indicating that management control does not only support internal managerial aspects but also the analysis of stakeholders' needs. For these reasons, businesses should create and implement a complete management control system to prepare for any other (pandemic or not) disasters.

## 2.4. Remote working in the COVID-19 pandemic

Although remote work is not new, never before were so many companies simultaneously required to let their staff work from home as they were in 2020, when the COVID-19 issue broke out on a global scale. This has important ramifications for businesses, including how they may use managerial control, or "affect employees' conduct in desired ways," to accomplish their objectives (Merchant and van der Stede, 2007)[65]. The crisis encouraged the development of new technology to work, coordinate, and communicate, affording managers innovative control alternatives. WFH (working from home) presents significant management control issues for enterprises. In instance, WFH probably lessens the ability of MCs to influence workers to take behaviours that are consistent with organisational goals. For instance, WFH conditions make it harder to observe employee behaviour and restrict the use of direct monitoring.

To achieve fit and improved performance, organisations use their management controls to make sure that employees' actions and decisions are aligned with the organisation's aims and objectives. While some forms of management control, including casual lunch gatherings, face-to-face meetings, and direct observations, were no longer available, they were replaced by newer technologies.

The use of accounting and management control instruments may shift as a result of crises, according to prior research that both argued and demonstrated this. For instance, Johansson and Siverbo (2014)[66] discovered that companies might respond to budget instability by utilising tighter budget control. The authors claimed in their studies that the likelihood of hitting budget goals rose because of this functional reaction. The COVID-19 issue is distinct from earlier crises, despite certain similarities. For management control, the primary distinction is that this time most businesses are required to close their offices, as highlighted by Parker, this had been a crucial control mechanism (Parker, 2020)[67]. Working from home could have both positive and negative effects. It enables businesses to cut absenteeism (De

[65] Merchant, K.A. and van der Stede, W.A., 2007, Management Control Systems, Pearson Education Limited, Edinburgh Gate

[66] Johansson, T., Siverbo, S., 2014, The appropriateness of tight budget control in public sector organisations facing budget turbulence, Management Accounting Research, Vol. 25 No. 4, pp. 271-283.

[67] Parker, L.D., 2020, The COVID-19 office in transition: cost, efficiency and the social responsibility business case, Accounting, Auditing and Accountability Journal, Vol. 33 No. 8, pp. 1943-1967.

Menezes and Kelliher, 2011)[68], recruit a bigger and more diversified labour pool, and lower real estate expenditures. According to Martin and MacDonnell (2012)[69], WFH is linked to improved organisational performance, organisational commitment, and work satisfaction. Contrarily, the provision of an effective work environment and compliance issues relating to data protection provide challenges for WFH (McKinsey 2020)[70]; additionally, WFH raises legal issues such as income taxation, the registration of hours worked, and insurances in case of work accidents.

WFH combines work and personal life for employees, which may lead to mental health issues including stress. The physical distance between the workplace, the boss (lack of observability), and the co-workers at WFH could encourage individuals to become more isolated in their careers. This not only affected the organisational level, but also the level of the person. The quarantine (requiring workers to work from home) imposed by many governments may have had substantial negative psychological impacts, including stress, panic, and bewilderment, according to research from a wide range of disciplines. However, it has been claimed that working remotely might lead to unfavourable employee reactions, such as over-commitment and self-exploitation, because employees seek to appear "visible" to their managers by, for example, putting in excessive hours.

### 2.4.1. Remote working and its impact on MCS

There are two studies related to the role and the impact of management control and its effect on employees: the one of Delfino and van der Kolk (2021), and the one of Flassak et al. (2022)[71].

Delfino and van der Kolk investigate this matter by conducting a field investigation in Italy, the first nation in Europe to be badly affected by the COVID-19 situation (Delfino and van der Kolk, 2021)[72]. Professional service firms (PSFs) were likely to be impacted by a quick move to remote working because past study recognized this as vital to delivering high-quality work and maintaining control, yet communication with co-workers and clients was severely limited. This research contributes in two ways. They begin by looking at how management

[68] De Menezes, L. M., Kelliher, C., 2011, Flexible working and performance: a systematic review of the evidence for a business case., International Journal Management Review, pp.452–474

[69] Martin, B. H., MacDonnell, R., 2012, Is telework effective for organisations?: A meta-analysis of empirical research on perceptions of telework and organizational outcomes. Management Reserve Review, pp.602–616

[70] McKinsey, 2020 A dual cybersecurity mindset for the next normal, McKinsey Insights

[71] Flassak et al., 2022, Working from home and management controls, Journal of Business Economics

[72] Delfino, F., van der Kolk, B., 2021, Remote working, management control changes and employee responses during the COVID-19 crisis, Accounting, Auditing and Accountability Journal, Vol. 34, No. 6, pp. 1376-1387.

control has altered in PSFs as a result of the abrupt switch to remote working. They build on earlier studies on the connection between crisis management and control and demonstrate how businesses changed in response to management control, such as by increasing the number of calls and online meetings and using online tools to track employees' productivity. Second, they respond to calls for research into how people react to control changes at the organisational level by concentrating on behavioural and motivational factors. Delfino and van der Kolk chose to research PSFs because it is crucial for these businesses to transmit information among teams and with clients in order to produce high-quality work and maintain control. They foresaw observing changes in the usage of management control given how limited the opportunities for knowledge sharing and communication were under the forced quarantine.

On the other hand, the study made by Flassak et al. (2022) is a survey among employees without supervisory function in a big service firm. They look into how businesses modify their MCs in response to the Covid-19 outbreak and the resulting shift toward WFH. Their aims are to examine and provide evidence about the correlation between action controls and remote working and the consequent association of employee outcomes and remote working.

Delfino and Van der Kolk begin by outlining the major tasks performed by PSFs and the manner in which management control was conducted prior to the COVID-19 crisis, while they recognize that there might be regional variations and exceptions. Junior PSF personnel, or those without leadership responsibilities, often work in teams with other consultants to provide services and advice to clients. Depending on the scale of the project, teams frequently consist of one senior manager or partner and multiple consultants, analysts, and interns. Apprentices, analysts, and consultants' primary responsibilities are client-focused and non-repetitive, and their primary "product" or "service" is typically a document (such as a Microsoft PowerPoint presentation) that contains the primary findings and recommendations. Since knowledge and skills are crucial for ensuring the delivery of high-quality work, PSFs frequently place a lot of emphasis on personnel controls such as the selection of individuals with the right profile, training and skills. This generally also suggests that there used to be some autonomy granted to workers. PSFs frequently have to defend their working hours, and they utilise action controls to make sure that deadlines and hours are maintained (Alvesson and Karreman, 2004)[73]. The manager, who also gives the team direct input, frequently bears the final responsibility for the work performed. A top manager said it was crucial for him to

[73] Alvesson, M., Karreman, D. ,2004, Interfaces of control. Technocratic and socio-ideological control in a global management consultancy firm, Accounting, Organizations and Society, Vol. 29 Nos 3–4, pp. 423-444

always watch the team in play. Before the COVID-19 crisis, individual or group face-to-face meetings were frequently used to deliver feedback on completed assignments. Italy began to lock down from its northern region on March 8 after the COVID-19 virus danger became apparent, and two days later it became the first nation to go into complete national lockdown. Employees who performed "non-essential work" were no longer permitted to visit the office or the offices of their clients, forcing PSFs to restructure their working practices. First, the usage of various action controls increased dramatically, primarily to replace those forms of management control that were no longer feasible, such as casual and official face-to-face contact. The majority of interviewees admitted to participate in a lot of video calls and emphasised that a large portion of these extra sessions were unproductive and easily avoidable. Some of these calls, according to the less experienced staff, were made to keep an eye on them. Companies collaborated online using a variety of software applications. Microsoft Teams, which allows senior managers to know which employees are online or offline, is used by all businesses. When workers are online, their managers can video call them, and the majority of these calls entailed our respondents turning on their webcam. As a result of the numerous daily video calls that several interviewees experienced, they felt constantly monitored. To make up for the lower effectiveness of online meetings, the number of sessions required to grow. When it comes to the same management control element, managerial purpose and subordinate perception could differ by setting up such online sessions, managers may be trying to help their staff. Yet, junior staff members might view such calls differently (as controlling or constraining). Some interviewees reported that managers began to monitor their actions more frequently. In other words, some managers admitted that they didn't trust his employees, which made him check up on them several times a day. They made an effort to guarantee the production of high-calibre work in this way. As a crisis arises, managers employ more restrictive management control system. This effect was probably increased by remote working's lack of physical proximity.

The fact that new online platforms enable much closer employee surveillance than in the past is a new aspect of the current situation. For instance, anytime staff members change their status, supervisors could be notified via Microsoft Teams (from offline to online). Some interviewees mentioned that they would get a call from their supervisor right away whenever their status changed, which they found to be controlling.

The second change relates to the modified job design, job-related requirements, and managers' expectations for workers' work in relation to personnel controls and outcomes controls. The forced quarantine caused the lines between work and personal life to become hazier, which had a variety of effects on personnel. For instance, interviewees said that "calling it a day" is now more difficult and felt that they should constantly be available. Several supervisors called staff late at night or imposed deadlines very early, knowing that consultants have nowhere to go (as they are required to stay at home). As a result, the quarantine scenario appeared to increase supervisors' expectations for the amount of work and availability of subordinate employees (personnel controls). Together with the managers, the customers appeared to raise their expectations as well throughout the quarantine time. In other words, an anxious client's increasing pressure on management eventually affected the managers' subordinates. Also, interviewees felt that given the clients' growing economic insecurity, more emphasis was placed on the PSFs' services. As a result, managers may have implemented more stringent action controls (calls, meetings, and checks) because they felt under pressure to deliver what their clients wanted.

A third problem has to do with a shift in cultural control. Their interview findings indicate that employees' perceptions of the organisational hierarchy were altered by the lack of face-to-face interaction. Some of the interviewees experienced strong social ties to their superior. Several respondents, on the other hand, felt more hierarchical distance from their supervisors, in part due to changes in how they communicated. These many remote work effects on hierarchy may be related to the employee-manager relationship (during, but also before the crisis). Employees with weaker bonds with their bosses interacted with them less frequently, which appeared to heighten the sense of hierarchy. In contrast, greater social relationships and more regular encounters seemed to flatten the perceived hierarchy as a result of remote working since staff members felt more empowered and welcomed in higher-level meetings.

The control modifications resulted in a variety of individual-level reactions. There are some exceptions, but most of the interviewees said they felt freer than they did before the lockdown. This seems pertinent given that one of the three fundamental requirements of employees is autonomy, which has the potential to increase employees' intrinsic motivation. The interviewees' experiences at work suggest that external pressure is still very much a factor. Those in junior positions described feeling under pressure to "always be accessible for their boss" and to put in long hours and deliver quality work. They are also scared for their jobs due to the economic crisis and the poor job market. This behaviour, which is brought on by pressure and driven by a desire to make a good impression on superiors, is consistent with what Hafermalz (2020)[74] called voluntarily visualising activities. Hafermalz contends that

[74] Hafermalz, E., 2020, Out of the Panopticon and into Exile: visibility and control in distributed new culture organisations, Organization Studies

distant workers take measures to "make themselves visible in the perceived centre of organisational life in an effort to interact with others and gain recognition" out of fear of potential exile and invisibility. This goes much beyond the metaphor since it emphasises voluntary conduct while simultaneously explaining the controlling part of monitoring. In addition, the increased fear of losing their jobs brought on by the economic downturn may have increased employee visibility practices and decreased the degree to which they were voluntary. Moreover, this behaviour has a strong connection to SDT's (self-determination theory) requirement for relatedness: the absence of "regular" face-to-face meetings and informal get-togethers during the quarantine left staff reporting a feeling of disconnection and atomization. Since those with more years of experience had previously forged more deep bonds and social ties with their co-workers, this appeared to have an especially negative effect on less experienced workers. Interviewees claimed that there were more feedback moments even though Delfino and van der Kolk did not find any direct effects of management control adjustments on employees' demand for competence. Only if the input is favourable will these moments of feedback have the capacity to address the desire for competence and, eventually, intrinsic motivation (Ryan and Deci, 2000)[75].

Employees revealed that they employed some "tactics" to preserve a positive reputation in response to the enhanced action control used by various managers. Such conscious and opportunistic reputation management seems a response to the more constraining types of control employed due to the new working conditions. Some workers also mentioned that they avoided taking lunch or coffee breaks from work out of concern for their supervisors, who would contact or check on them and discover that they forgot their computer. The impacts of the workers' elevated stress levels don't end here. One interviewee revealed that the strain of working remotely had a significant negative influence on her mental health, while other interviewees said they actively started looking for other jobs, which shows that the employees were not highly motivated. According to the gathered data, team members of managers who give their workers more autonomy and use less rigid methods of management control appear to be more motivated.

Similar evidence was found by Flassak et al. (2022), indeed in their study they confirmed a growth in the WFH and difficulties of observabilities of employees' actions. Under WFH conditions, socialisation processes are less common, which may increase social isolation and lower corporate identity and employee motivation. Then, they offer proof of improved action

[75] Ryan, R.M., Deci, E.L., 2000, Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being, American Psychologist, Vol. 55 No. 1, pp. 68-78.

controls and the related costs and benefits of itself. The benefit has to do with the reduced control issues. The expense is related to administrative resources (such as the wages of managers or staff who implement action controls) and the investments made to set up monitoring equipment. They focused on three different types of action controls: standardisation, planning participation and pre-action reviews. According to Daft and Macintosh (1984)[76], standardisation refers to policies and processes that define the ways in which work tasks are carried out. Because personnel may adhere to rules and adopt established procedures, standardisation tackles a lack of direction as well as individual constraints. Employee involvement in strategic planning procedures and activity predetermination are referred to as planning participation. Employee involvement in the planning process attempts to establish goal congruence since employees will be familiar with the organisation's objectives, allowing employees to concentrate on organisational goals. Participation in planning so gives employees direction and addresses issues with motivation. Pre-action reviews allow supervisors to assess the action plans of their staff members and either approve or disapprove specific actions or request modifications and re-adjustments. Pre-action reviews provide direction and address personal constraints by limiting or guiding suggested activities.

As main result they find an increase of 22 working hours per week from home; for this reason, employees behaviour is less visible, communication with supervisors and co-workers is more difficult, social events that foster organizational identification are less prominent, and employees' intrinsic motivation to work in the organisation's best interest is diminished. They also observe a decrease in the use of informal communication to communicate across the hierarchy and the decline of social events and programs. Connected with these results it is possible to observe stronger action controls. As a subordinate's career increases at the company, supervisors increasingly rely on planning participation while decreasing their reliance on pre-action evaluations. When employees work from home more frequently and their tasks are easier to observe or when there is a large exchange in information between top management and subordinates, the supervisor depends less heavily on action controls. Their findings suggest that the most important reason for a strengthen action controls is the lack of observability. One solution, as explained by Delfino and van der Kolk, was monitoring employees towards online meeting (Zoom or Teams). The results indicate that WFH brought on by the pandemic increased the amount of time workers spend in meetings, thus reducing

[76] Daft, R. L., Macintosh, N. B., 1984, The nature and use of formal control systems for management control and strategy implementation, Journal Management, pp. 43–66.

the amount of time they have left to work each day and enhanced their ability to concentrate on their task. Employees that work from home specifically have more standardised processes and participate more actively in strategic planning processes.

## 2.5. The role of budgeting and employee stress during pandemic

As seen before, lots of management control practices changed during the COVID-19 pandemic since firms tried to manage risk and uncertainty. This change, as the new practises such as working from home, stressed employees. According to Bedford, Speklè and Widener (2022)[77] there is another reason linked with stress, indeed they found a positive correlation between tightening of budget controls and employees' emotional exhaustion followed to an increase perspectives of role conflict and ambiguity. Chronic physical and emotional weariness from high work demands and ongoing stress is known as emotional exhaustion. It has been linked to poor work attitudes and performance (Cropanzano and Mitchell, 2005)[78]. As during COVID-19, increasing budget limits is a common crisis response for businesses. The authors describe tighter budget restrictions as an increase in focus on meeting stricter budget goals. Under typical operating conditions, the prudent application of tight budget control may be linked to beneficial outcomes like improved goal clarity, a stronger sense of direction, and an increased likelihood that employees' actions are consistent with organizational goals (Marginson and Ogden, 2005)[79]. However, when businesses suddenly tighten budget controls in response to a crisis, these controls frequently diverge from long-term strategic goals. Consequently, it is anticipated that employees will experience increased emotional exhaustion as a result of perceived role ambiguity or role conflict, which makes them feel uncertain about what they are supposed to do. The extent to which managers think that budgets were enabling and the degree to which they developed trust in senior management in the period leading up to the crisis, however, determine how well they are able to deal with the unexpected change.

According to Bundy, Pfarrer, Short, and Coombs (2017)[80], crises are characterised by a significant threat to an organisation's objective achievement, a high level of uncertainty and

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[77] Bedford, D. S., Speklè, R. F., Widener, S. K., 2022, Budgeting and employee stress in time of crisis: evidence from the COVID-19 pandemic, Accounting, Organisations and Society.

[78] Cropanzano, R., Mitchell M. S., 2005, Social exchange theory: an interdisciplinary review, Journal of Management, Volume 31, Issue 6.

[79] Marginson D., Ogden S., 2005, Coping with ambiguity through the budget: the positive effects of budgetary targets on managers' budgeting behaviours, Accounting, Organisations and Society, Volume 5, Issue 5, pp. 435-456.

[80] Bundy, J., Pfarrer, M. D., Coombs, T. W., 2017, Crisis and crisis management: integration, interpretation and research development, Journal of Management, Volume 43, Issue 6.

ambiguity, a lack of controllability, and a short window of opportunity for response. Organizational decision-makers are unable to properly consider practical alternatives because they must move swiftly to reduce the possible consequences of a crisis. While longer-term, more fundamental changes to strategy and structure may take place, crisis-related responses in the short term are typically rigid and risk-averse. To ensure that there is a coordinated effort to handle the threat, short-term actions are implemented as tools for more centralized decision-making and greater control. Tightening available budgets and stepping up efforts to ensure accountability are typical responses, while Czarniawska-Joerges (1988)[81] contends that tightening control is the "almost reflexive response of management to a decline situation." Therefore, it is expected that businesses will tighten budget control in response to the COVID-19 pandemic, depending on the severity and direction of the perceived impact. The emphasis on reaching stricter budget goals must increase as budget management is tightened. A stronger budget culture results from senior management placing more importance on sticking to the budget, being less tolerant of departures from budget goals, and increasing the frequency of diagnostic budget-related interactions with junior managers (Van der Stede, 2001)[82].

Marginson and Ogden (2005) make the case and discover that managers who are faced with expectations that are uncertain may choose tight budgets because they provide a source of structure and predictability. On the other hand, there are also negative effects, as tension related to job, manipulation of performances and excessive short-term behaviour. However, Bedford's study looks at how budget constraints change as a quick, ad hoc response to a pressing threat posed by a global crisis. In most cases, the degree of budget constraint may be anticipated to be in line with: (i) the total management control package of which it is a part, (ii) the goals the organization is attempting to achieve, and (iii) the environments in which the organization operates. Furthermore, one would anticipate that the budgets themselves would be in line with the organization's objectives. However, if budget restraint changes as part of an almost instinctive response to a crisis, this logic may not always hold true. The conventional practice, however, is to initially ignore strategic objectives. In fact, it has been observed that companies tend to refocus on their initial goals when faced with external threats, rather than admitting that conditions may have changed, and those goals may no longer be feasible

[81] Czarniawska-Joerges, B., Dynamics of organisational control: the case of Berol Kemi AB, 1988, Accounting, Organisations and Society, Volume 13, issue 4, pp. 415-430.
[82] Van der Stede, W., Measuring tight budgetary control, 2001, Management Accounting Research, Volume 12, Issue 1, pp. 119-137.

(Hopwood, 2009)[83]. As a result, budgets and strategies diverge since the budget is now a demand imposed on the subordinate rather than the short-term financial translation of a long-term goal. Additionally, stricter budget controls make it harder to accomplish the BU's local objectives, increasing the number of demands placed on the subordinate. When dealing with increased work demands over time, people experience psychological and physical costs that deplete their energy, leading to emotional exhaustion. Role ambiguity and role conflict are the two main elements of role stress, which is the sensation of not being able to live up to one's expectations in a given role. Role conflict refers to a perceived discrepancy in role expectations and happens when fulfilling one requirement makes it harder to fulfil another. When other role demands are present that are viewed as being incompatible—for example, being inventive while also pursuing stringent budget goals—emphasising budget goal attainment will raise perceived role conflict (Marginson and Bui, 2009)[84].

The ambiguity surrounding budget holders' roles is also exacerbated by the misalignment between short-term budget limits and strategic ambitions. Role ambiguity refers to the discrepancy between the knowledge that is currently available, and the information needed to carry out a role effectively, which leaves employees uncertain about their responsibilities. A budget holder faces a great deal of uncertainty when the budget is suddenly tightened because they must examine how actions will affect the accomplishment of both short- and long-term strategic goals in addition to how they will solve the organization's immediate financial difficulties. When faced with major threats, organizational decision-making tends to become more centralized, and budget restraints are likely to be imposed top-down with little input from deputies. Due to the restricted information flow, subordinates are unable to obtain instructions on how to balance inescapable trade-offs and gain clarification on their role expectations and obligations (Parker and Kyj, 2006)[85]. As a result, employees forced to deal with budget cuts brought on by a crisis experience higher uncertainty about how to carry out different roles and obligations.

Budgets can be tight but also enabling at the same time. While enabling budgetary control refers to how subordinate managers view budgets as a tool to support their work, budget tightness refers to the attention that senior management pays to the achievement of more stringent budget targets. In addition to this conceptual distinction, the two parts of budgetary

[83] Hopwood, A. G., 2009, The economic crisis and accounting: implications for the research community, Accounting, Organisations and Society, Volume 34, Issue 6-7, pp. 797-802.
[84] Marginson, D., Bui, B., 2009, Examining the human cost of multiple role expectations, Behavioral Research in Accounting, American Accounting Association
[85] Parker, R. J., Kyj, L., 2006, Vertical information sharing in the budgeting process, Accounting, Organisations and Society, Volume 31, Issue 1, pp. 27-45.

control differ from one another in terms of their malleability. Tight budgets are a real choice factor that can be easily changed in the near term, for example, in reaction to a serious emergency. However, creating a budgetary system that is enabling requires a lot of time. In addition, before budgetary control can be truly successful, it must become ingrained in the informal structure of the company due to the experiences and views of the subordinates who work with these budgets. Enabling budget control can be considered as a choice variable even while businesses can consciously work to improve the enabling quality of their control systems, but it is only truly a choice over the long run. It works well as a contextual component in the near term.

For two key reasons, it is possible to anticipate that budgets seen as enabling will lessen the impact of limited budgets on role pressures and, eventually, emotional tiredness. First, employees who see the budget as a tool for enabling are more likely to believe they have greater autonomy and the capacity to meet the heightened demands of their roles that emerge from crisis-driven budget cuts. Budgets with an enabling design are transparent about how expenses are created, what kind of behaviour they exhibit in response to changes in activity, and they enable the customization of budget information to local conditions (Ahrens and Chapman, 2010)[86]. People have more opportunity to learn how to handle increased job demands brought on by fewer budgets as a result. As a result, the impact of budget constraints on role conflict is at least somewhat reduced. Additionally, enabling budgets link local actions to the issues faced by other divisions and the entire organization, enabling better task prioritization and coordination to achieve budget goals. This enhanced informative position helps to lessen the impact of budget tightness of role ambiguity by reducing the uncertainty around how tighter budget targets are to be attained. In conclusion, since enabling budgets are intended to help people respond to unforeseen events in a structured but flexible way, they improve people's ability to recognize appropriate courses of action, boost their confidence in their ability to select one over another, and imply a green light to do so. As a result, it is possible to foresee that enabling budgets will raise people's perception of discretion over other options and provide them access to more psychological resources, decreasing the tendency for budget tightening to create role ambiguity and role conflict.

The way the budget is created affects how people attribute the increased workload brought on by tighter budgets. According to Crawford et al. (2010) , initial assessments of job demand have an impact on people's cognition and coping skills. When taken in isolation, budget

[86] Ahrens, T., Chapman, C. S., 2010, Accounting for flexibility and efficiency: a field study of management control systems in a restaurant chain, Contemporary Accounting Research, Volume 21, Issue 2, pp. 271-301.

tightening brought on by crises are likely to be perceived as impeding or limiting the ability to achieve goals, leading to more role conflict, role ambiguity, and emotional tiredness. Increased job demands are, however, more likely to be seen as a challenge than a barrier in the context of an enabling budget. An enabling budget is intended to be a tool that facilitates flexible adjustment and active problem-solving, providing people a sense of control over their capacity to respond to the demands of their jobs. Therefore, since people who perceive the budget as enabling are better able to cope with the increased challenge of tighter budgets, the impact of budget constraint on role ambiguity and conflict, and consequently emotional exhaustion, should be lessened.

Trust, or a person's readiness to tolerate vulnerability to the acts of another party based on favourable expectations about their qualities, is a key concept for understanding role stress and job results. Earlier research has focused on demonstrating the direct effects on outcomes like organisational commitment, psychological safety, job satisfaction, and performance and views trust in superiors as an inherently positive trait (Ning and Hoon, 2012)[87]. According to some data, trust in superiors also directly lowers role ambiguity and conflict. However, research in organisational psychology suggests that many of the significant effects of trust act by influencing the direction or strength of the relationship between a behavioural cue and the resulting behaviour rather than acting as direct determinants of behaviour (Dirks and Ferrin, 2001)[88]. Additionally, according to recent research, trust can have a negative side because its effects aren't always favourable for one or more of the parties involved. A sequence of advantageous social interactions based on the reciprocity norm, whereby favourable treatment in the present results in an obligation in the future, are at least partially responsible for the development of trust in one's superiors. While trust may also erode over time, subordinates may forgive early actions that they feel go against their expectations (Jones and George, 1998)[89]. As a result, how subordinates react to greater role demands will depend on how much faith they have in their superiors. People are more likely to pay attention to and put more effort into reaching expected performance outcomes when requests originate from trusted superiors than when the assignment is imposed by less trustworthy people. When someone they trust makes a request, they may feel more constrained in how they can respond to it and under more strong pressure to comply. As a result, people with high levels of trust in their

[87] Ning Li, A., Hoon Tan, H., 2012, What happens when you trust your supervisor? Mediators of individual performance in trust relationship, Journal of Organisational Behaviour, Volume 34, issue 3, pp. 407-425.
[88] Dirks, K. T., Ferrin, D. L., 2002, The role of trust in organisational settings, Organisational Science, pp. 450-467.
[89] Jones, G. R., George, J. M., 1998, The experience and evolution of trust: implications for cooperation and teamwork, Academy of Management review, pp. 531-546.

superiors are more likely to feel under pressure to comply with requests, even if doing so has a detrimental impact on their cognition and affect. The COVID-19 pandemic is anticipated to worsen emotional tiredness among BU managers by amplifying the detrimental effects of crisis-caused budgetary tightening on role pressures. These increased responsibilities for role performance are taken into account in regard to the subordinate's current responsibilities when tighter budgets are enforced. When subordinates have a high level of trust in their superiors, they will feel the pressure to fulfil both current and former responsibilities more strongly. This is especially true for BU managers, who frequently have a strong allegiance to their home team. However, these sets of obligations are likely to conflict because senior management is now less tolerant of budget variances. Therefore, the impact of budget constraints on role conflict will be amplified by trust. It is also expected that the relationship between financial constraints and role ambiguity will be moderated by trust in top management. As we previously noted, the rapid tightening of budgets leaves budget holders with a great deal of ambiguity about how these new expectations will be met. When these demands come from a reliable source, the uncertainty brought on by budget cuts will be more intensely felt since employees will feel more pressure to meet their local job obligations while also feeling under pressure to avoid disappointing their top supervisors.

Given these premises, Bedford et al. (2022) used data from 83 business unit managers in the Netherlands and results show that businesses tighten budget limits in response to pandemic's growing negative effects. They choose Netherlands for some reasons. During the early stages of the Covid-19 epidemic, the Dutch economy significantly shrank: GDP fell by 8.5% in the second quarter of 2020 compared to the first and by 9.3% from the second quarter of the previous year. From March 15 until June 1, 2020, all restaurants, hotels, entertainment venues, and cultural institutions were required to close. After that, there were limited hours, which necessitated major changes to the facilities that were in use to establish safe working conditions. Apart from healthcare, workers were generally advised to work from home, necessitating significant changes to the way businesses were run.

The authors' findings demonstrate how a budget crunch brought on by a crisis affects an organization's employees by raising role stressors including conflict and ambiguity, which contribute to greater emotional tiredness. Emotional tiredness was a costly issue for corporations even before COVID-19 (Seppala and Cameron, 2003)[90]. Importantly, they demonstrate that some of these adverse behavioural effects are mitigated when firms designed

[90] Seppala, E., Cameron, K., 2003, Proof that positive work cultures are more productive, Harvard Business Review, Issue 1, pp. 44-50.

their budgets in an enabling way prior to the crisis and employees perceived them as such, facilitating their capacity to address issues that arise at work. Despite the fact that trust in superiors is typically a good thing in the workplace (Bedford et al. find that trust is negatively associated with role ambiguity), the authors also demonstrate that it has a downside because the more trust BU managers have in their senior management, the worse the impact of budget tightening on role ambiguity and, consequently, their emotional exhaustion. These findings add theoretical depth to the management control literature by elucidating how budgeting procedures change in response to a crisis, introducing a focus that goes beyond role stressors to the impact that management control procedures have on emotional exhaustion, and at the end highlighting the existence of two boundary conditions on these relationships in the form of the enabling use of budget control and trust in senior management.

According to Bedford et al. (2022), employees are likely to respond negatively to tighter budgetary limitations. Firms should think about whether they have a history of employing such budget restrictions in an enabling way and if employees view them as such if the response to a crisis is to increase budget controls. If so, it lowers the cost of budget tightening in terms of the employees' emotional tiredness. However, businesses must be cautious about tightening budget controls if they have a high trust environment because in this situation, doing so exacerbates role stress and emotional exhaustion among employees.

# CHAPTER 3: HOW BUDGETING HAS BEEN INFLUENCED BY COVID-19 PANDEMIC

The thesis aims to explore the impact of the COVID-19 pandemic on budgeting, which is regarded as one of the most crucial and effective mechanisms of management control. Budgeting is a widely adopted tool within the management control system (MCS) and is applicable to various types of companies. It involves the process of planning, resource allocation, and performance evaluation, and has undergone significant changes in response to the new challenges arising from the pandemic. In this study, we specifically focus on two types of budgets: the sales budget and the investment budget. The sales budget pertains to the projection of sales targets and objectives, while the investment budget relates to the allocation of resources for long-term investments. These budgets play a vital role in guiding and supporting decision-making processes within organizations.

To conduct our analysis, a questionnaire will be submitted to a number of Italian companies operating in the food industry, with a specific focus on the production of Italian pasta. These companies have been selected to provide insights into how the pandemic has influenced their budgeting practices and strategies. By examining the effects of the COVID-19 pandemic on budgeting, particularly in relation to sales and investment budgets, this chapter aims to shed light on the adaptations and adjustments made by companies in response to the new business landscape. The findings from this study will contribute to a better understanding of the challenges and opportunities associated with budgeting during times of crisis and uncertainty.

## 3.1. The process of budgeting

The budget has been one of the main programming tools used by companies. In fact, Hansen et al. (2003)[91] defined it as 'the cornerstone of the management control process,' emphasizing its central role in organisational management. It enables the establishment of objectives to be pursued and provides a clear direction to be taken. The budget is essentially an action plan that encompasses all areas of the company, a document that is structured into time intervals, which can be annual or semi-annual, and is primarily expressed in quantitative terms, usually monetary. The data included within it, however, are the result of decisions, reflections, and thoughts that mature over time. Therefore, it is not just the budget itself that is important, but the entire budgeting process, which is a set of activities that lead to its realisation. Its

[91] Hansen, S. C., Otley, D., Van der Stede, W. A., 2003, Practice development in budgeting: an overview and research perspective, Journal of Management Accounting Research.

preparation requires a significant amount of time. It is not enough to consider what has happened in the past assuming that it will repeat in the future, but it is necessary to look at the long-term objectives defined during strategic planning, as the budget enables the implementation of the company's strategy. It is also important to take into account the historical evolution of the company. Furthermore, assumptions must be made about what may happen in the future, both in the internal and external environment. The functions of the budget are multiple. The main function, and the reason why the budget has been developed, is to guide and support the actions of managers. It helps them control costs and cash flow and also has the task of evaluating their actions. Objectives are set within the budget, typically for the short term, which should be ambitious yet attainable and motivating. It is not only the managers who need to be motivated by the budget, but also all individuals involved in the company. This should encourage them to be more committed as they know the objectives they need to achieve. The budget also allows for the coordination of different areas within the company, improving relationships among them. The company should always be seen as a system in which various stakeholders are not solely focused on their own areas of responsibility but coordinate for the pursuit of the company's objectives. Lastly, budgeting is also useful in enabling everyone operating within the company to understand the economic impact of their activities.

First of all, there are operational budgets, which are action plans related to operational management. Among these, we have the sales budget, which is typically the first one to be prepared as it sets the objectives the company wants to achieve in terms of sales, both in terms of quantity and price and sales mix. Then there is the commercial costs budget, which includes costs such as sales force expenses or advertising costs (i.e. the costs the company incurs to bring the product to the customer). Once these budgets have been developed, the production budget can be prepared. The latter is closely linked to the sales budget because what the company needs to produce depends on what it intends or expects to sell. First, the production volume budget is defined, which includes the quantities to be produced in the next period, depending on the planned sales volume and the initial and final inventory levels. Then there is the production costs budget, which summarizes the costs the company needs to incur to acquire the resources required for production. The production budgets also include the raw materials acquisition budget and the personnel acquisition budget. In addition to these, there is the investment budget, which relates to long-term factors necessary for the company's operations. In this case, it is crucial to assess financial feasibility. Another type of budget consists of summary budgets, which include the economic budget, encompassing costs and revenues for the given period, the balance sheet budget, summarizing assets and liabilities, and finally, the financial budget, highlighting the financial consequences of the activities implemented.

### 3.1.1. The sales budget

The sales budget is a financial plan that outlines the projected sales revenue for a specific period, typically within a fiscal year. It is a critical component of the overall budgeting process and serves as a guide for sales teams and management in setting targets and making informed decisions. The sales budget takes into account various factors such as market conditions, historical sales data, industry trends, customer demand, and marketing strategies. It involves estimating the expected sales volume and the corresponding sales revenue based on pricing strategies, product mix, sales channels, and anticipated changes in market share. The sales budget provides several important benefits. It helps the organisation forecast cash flow, determine resource allocation for production and inventory management, evaluate sales team performance, and measure progress against targets. It also serves as a basis for assessing the feasibility and profitability of new products or market expansion initiatives. The sales budget is typically prepared in collaboration with the sales and marketing departments, taking into account input from other relevant stakeholders. It is reviewed and adjusted periodically to reflect changes in market conditions or business strategies. Accurate and realistic sales budgeting is crucial for effective financial planning, resource allocation, and overall organisational performance.

### 3.1.2. The investment budget

The investment budget refers to a financial plan that outlines the allocation of resources for capital expenditures and long-term investments within an organisation. It focuses on strategic initiatives aimed at acquiring or improving assets that will generate future benefits and support the company's growth and development. The investment budget considers various factors such as business goals, market conditions, technological advancements, competitive landscape, and financial feasibility. It involves identifying and evaluating potential investment opportunities, estimating the costs involved, and assessing the expected returns or benefits over the investment's lifespan. The investment budget typically includes capital expenditures for acquiring new equipment, machinery, technology, facilities, or properties. It may also encompass investments in research and development, expansion projects, mergers and acquisitions, and other strategic initiatives aimed at enhancing the company's capabilities, market position, or competitiveness. The investment budgeting process involves careful analysis, financial modelling, and decision-making to ensure that resources are allocated efficiently and effectively. It requires collaboration between various departments, such as finance, operations, and strategic planning, to align investment decisions with overall business objectives. The investment budget serves several purposes. It helps prioritise investment opportunities, assess their financial viability, allocate funds appropriately, and monitor the performance of investment projects. It also provides a framework for evaluating the return on investment (ROI) and managing risks associated with capital expenditures. By having a well-defined investment budget, organisations can make informed decisions about resource allocation, enhance long-term planning, and optimise their capital investment strategies to support sustainable growth and profitability.

### 3.1.3. Limits of budgeting

The budgeting process has certain limitations that should be taken into consideration:

1. Inflexibility: Budgets are typically prepared based on assumptions and estimates made in advance. However, business conditions can change rapidly, and budgets may become inflexible and unable to adapt to unforeseen circumstances.
2. Time-consuming: Developing a budget requires significant time and effort from managers and employees. This can divert resources away from other important tasks and limit the ability to respond quickly to changes in the business environment.
3. Overemphasis on short-term goals: Budgets often focus on short-term financial targets and may neglect long-term strategic objectives. This can result in decisions that prioritise short-term gains over long-term sustainability and growth.
4. Limited accuracy: Budgets rely on predictions and forecasts, which are inherently uncertain. Actual results may deviate from budgeted figures due to unforeseen events, market fluctuations, or internal factors. This can affect the reliability and accuracy of budgeted information.
5. Behavioural implications: Budgets can create performance pressures and incentives that may lead to dysfunctional behaviours. Managers may engage in budget padding (overestimating expenses or underestimating revenues) to ensure they meet budget targets, which can compromise transparency and integrity.
6. Lack of alignment with changing strategies: Budgets are typically based on historical data and may not adequately incorporate changes in business strategies or market conditions. This can limit their usefulness as a tool for strategic decision-making.

7. Communication and coordination challenges: Budgets need to be effectively communicated and coordinated across different departments and levels of the organisation. Inadequate communication can lead to misunderstandings, conflicts, and a lack of commitment to budgetary targets.

Despite these limitations, budgeting remains a valuable tool for planning, control, and resource allocation in many organizations. However, it is important to be aware of these limitations and supplement the budgeting process with continuous monitoring, flexibility, and strategic alignment to enhance its effectiveness.

## 3.2. Research method

The study is conducted through a qualitative analysis. In May 2022, a series of interviews were carried out using a questionnaire via Google Forms. I personally suggested conducting face-to-face interviews, but the companies preferred the online method. Through Google Forms, respondents were asked to answer ten questions about the structure of their budgeting and its changes during the COVID-19 pandemic (March 2020 - March 2022), with a specific focus on sales budget and investment budget. Three Italian firms operating in the food industry, specifically producing Italian pasta, were selected for the study. The questionnaire is in the native Italian language to ensure clarity and a clear understanding of the topic by all participants. The respondents are individuals responsible for the implementation and revision of sales and investment budgets. The aim of the study is to gain an in-depth understanding of changes in the budgeting structure of companies in the food industry, particularly regarding sales and investment budgets, during the COVID-19 pandemic period. The interviews conducted via the questionnaire aim to gather detailed information about the strategies adopted by the companies to address the effects of the pandemic on their operations and the decisions made regarding financial planning. The selection of specifically Italian companies producing Italian pasta in the food industry is intentional, as it allows for a focused approach on a specific sector and gaining relevant and detailed insights into the challenges and opportunities these companies faced during the pandemic. Through this qualitative interview methodology, the study seeks to provide a comprehensive analysis of budgeting practices in the food industry and gain a better understanding of how companies managed the changes caused by the COVID-19 pandemic in their sales and investment budgets.

### 3.2.1. Questionnaire

Below is presented the questionnaire that has been submitted to three medium-large companies in the pasta industry. The analysis refers to the period from March 2020 to March 2022. Through Google Forms, it was asked to the firms to compile the online questionnaire. The three companies completed the online questionnaire in these dates:

-Company Alpha on the 31st May 2023, and the respondents were a controller and the CEO;

-Company Beta on the 26th May 2023, and the answers were given by the CFO;

-Company Gamma on the 23rd May 2023, and it was completed by the CEO.

Being an online questionnaire it was not possible to register anything.

## Questionario

Il presente questionario mira ad investigare come la pandemia Covid-19, nel periodo Marzo 2020-Marzo 2022, e più in generale, abbia influenzato il processo di redazione del budget. In particolare, vengono analizzati i cambiamenti apportati al budget delle vendite e al budget degli investimenti.

**A. La redazione del budget**

1. Posizione attuale del rispondente:
    - CEO;
    - CFO;
    - Controller;
    - Altro (specificare): ______________

2. La tipologia di budget (es. budget delle vendite, budget degli investimenti, budget costi, budget di produzione, etc.) elaborati ed implementati dalla Società è cambiata in seguito alle nuove esigenze dettate dalla pandemia?
3. Con che frequenza nel periodo Covid-19 (Marzo 2020 - Marzo 2022) avveniva la revisione del budget rispetto al periodo antecedente alla pandemia?

**B. Budget delle vendite**

4. Come è stato impattato il budget delle vendite durante il periodo del COVID-19 e quali sono state le principali sfide incontrate nel pianificarlo durante la pandemia?

5. In che modo la domanda e le tendenze di acquisto dei clienti (ristorazione, supermercati, etc.) sono cambiate durante la pandemia e come ciò ha influenzato il budget delle vendite?

6. Quali misure sono state adottate per mitigare gli effetti negativi (se presenti) sulla previsione delle vendite e per adattare il budget alle nuove condizioni di mercato?

7. È stato necessario ridimensionare o ridefinire gli obiettivi di vendita a causa del COVID-19? In tal caso, come sono stati stabiliti i nuovi obiettivi?

**C. Budget/scelte degli investimenti**

8. Quali sono stati i principali cambiamenti o adeguamenti apportati al budget degli investimenti a seguito dell'impatto del COVID-19 sull'economia e sulle attività aziendali?

9. Quali criteri o parametri sono stati considerati nella revisione o nell'aggiornamento del budget degli investimenti durante la pandemia?

10. Quali sono stati gli impatti a breve e lungo termine del COVID-19 sull'allocazione delle risorse e sugli investimenti dell'azienda?

11. Quali sono state le principali sfide affrontate nel bilanciare le esigenze di investimento a lungo termine con le limitazioni finanziarie e l'incertezza durante il periodo del COVID-19?

# CHAPTER 4: EMPIRICAL EVIDENCE ON BUDGETING DURING COVID-19 IN THE PASTA INDUSTRY

## 4.1. The food sector in the COVID-19 pandemic

The COVID-19 pandemic had a significant impact on the food industry worldwide. Various aspects of the food supply chain, including production, distribution, and consumption, have been affected by the measures taken to control the spread of the virus.

The pandemic led to disruptions in the production and supply of food. Restrictions on movement and social distancing measures resulted in labour shortages, affecting agricultural activities such as harvesting, processing, and packaging. Additionally, closures of restaurants and catering services reduced demand for certain food products, leading to surplus inventories and challenges in redirecting the supply.

As people stocked up on essential items, there was a surge in demand for staple foods like rice, pasta, flour, and canned goods. This demand placed strains on the supply chain initially, leading to temporary shortages and increased prices. However, food production and distribution eventually adapted to meet the increased demand. With lockdowns and social distancing measures in place, there was a notable increase in online grocery shopping and food delivery services. Many consumers shifted to purchasing food and groceries online to minimize physical contact. This shift prompted retailers and restaurants to enhance their e-commerce platforms and adopt contactless delivery methods.

The closure of dine-in services for an extended period heavily impacted the restaurant industry. Many restaurants had to pivot to offering takeout and delivery services to stay afloat. While this helped generate some revenue, it was insufficient to compensate for the lost dine-in business. The industry witnessed closures of several establishments, particularly smaller independent restaurants.

Strict food safety and hygiene measures were implemented to ensure the safety of consumers and workers in the industry. This included enhanced sanitation protocols, employee health screenings, and adjustments to food preparation and handling practices. These measures were crucial in instilling confidence in consumers and maintaining the integrity of the food supply.

The pandemic prompted innovation and adaptation within the food industry. Businesses explored new revenue streams, such as meal kits and virtual cooking classes, to engage customers at home. Many restaurants collaborated with delivery platforms and offered meal packages to maintain revenue and keep their staff employed.

The pandemic highlighted the importance of local and sustainable food systems. Consumers showed increased interest in supporting local farmers and food producers, as well as seeking out healthier and environmentally friendly options. This emphasis on local food systems and sustainability may have long-term implications for the industry.

Overall, the COVID-19 pandemic has presented significant challenges to the food industry, impacting production, distribution, and consumption patterns. However, it has also spurred innovation, adaptation, and a renewed focus on food safety and sustainability. The full extent of the long-term effects on the industry will continue to unfold as the situation evolves.

## 4.2. Pasta's industry in the COVID-19 pandemic

The COVID-19 pandemic has significantly impacted the pasta industry on a global scale. Various aspects of production, distribution, and consumption have been influenced by the challenges posed during these unprecedented times.

One of the major challenges has been disruptions in pasta production. Lockdown measures and social distancing protocols have led to labour shortages and interruptions in the supply chain. Transportation of raw materials and ingredients necessary for pasta production has also been affected due to movement restrictions.

There has been a notable increase in the demand for pasta as consumers stock up on essential food items. Pasta, being a versatile and non-perishable product, has become a popular choice for households during lockdowns. This surge in demand initially caused supply shortages and price increases.

The closure of restaurants and restrictions on dining out have resulted in a shift from foodservice channels to retail sales. Consumers are purchasing pasta from grocery stores and supermarkets to prepare meals at home. This change in consumer behaviour has impacted distribution and packaging strategies for pasta manufacturers.

The rise of online shopping has also influenced the pasta industry. Consumers are increasingly buying pasta online and opting for home delivery. E-commerce platforms and grocery delivery services have experienced a surge in pasta orders. Pasta manufacturers have adapted by strengthening their online presence and collaborating with delivery platforms to meet the increased demand.

Export activities in the pasta industry have faced challenges due to travel restrictions, border closures, and logistical disruptions. These factors have led to delays, increased transportation costs, and difficulties in accessing international markets.

Pasta manufacturers have implemented strict food safety and hygiene measures to ensure the safety of their products. Enhanced sanitation protocols, employee health screenings, and adjustments in production processes have been adopted to maintain consumer confidence in the safety of pasta products.

The pandemic has also driven innovation within the pasta industry. Manufacturers have introduced new pasta varieties, flavours, and packaging options to cater to changing consumer preferences. This includes the development of healthier options, gluten-free alternatives, and ready-to-cook pasta products.

Overall, the COVID-19 pandemic has presented significant challenges for the pasta industry, impacting production, distribution, and consumer behaviour. However, manufacturers have adapted by implementing safety measures, diversifying product offerings, and adjusting distribution channels to meet the evolving demands of consumers during these challenging times.

### 4.2.1. Company Alpha

Company Alpha is an Italian food company that specialises in the production of pasta, with a turnover 250,0 mln. Founded in 1953 in Veneto, Company Alpha has become a well-known and respected brand in the pasta industry. It offers a wide variety of pasta products, including traditional durum wheat pasta, whole wheat pasta, and organic pasta. They use high-quality ingredients and traditional Italian methods to produce their pasta, ensuring a delicious and authentic taste.

The company is dedicated to maintaining the highest standards of quality and food safety. They carefully select the finest durum wheat and utilise state-of-the-art milling techniques to produce semolina, the main ingredient in their pasta. Company Alpha follows rigorous production processes to ensure the consistency and quality of their products. It’s product range includes various shapes and sizes of pasta, such as *spaghetti, penne, fusilli, farfalle*, and many more. In addition to their traditional pasta offerings, Company Alpha also produces specialty pasta products, including gluten-free pasta and pasta made from alternative ingredients like rice or corn. These options cater to individuals with specific dietary needs or preferences. Over the years, Alpha has expanded its distribution network and now exports its products to numerous countries around the world. Their commitment to quality, innovation, and traditional Italian flavours has helped them establish a strong presence in both domestic and international markets (more than the 50% of the production), especially to United States and Middle East.

### 4.2.2. Company Beta

Founded in 1947 in Veneto, with a turnover of 22,3 mln, Company Beta is an Italian company active in the production and commercialisation of Italian pasta. It had been the first company in Italy to grant a certificate of origin to a packet of pasta, and to obtain the "100% Italian durum wheat" and a "km 0" certification. Moreover, they started one of the first production line in Italy of Kamut pasta from organic farming and defined its own unique pasta-making style. They commercialise their products through two different brands, the first of high quality and well known and appreciate by Italian pasta lovers and important chefs, the second line is cost-driven, since it is intended for a wider and price-conscious audience. Today it is considered as one of the most virtuous companies in Italy and it is really appreciated for its Bio Label. The company runs its business through 6 production lines and produces almost 150 tonnes of pasta every day. In the financial year 2021, Company Beta exports the 20% of the production, especially to North European Countries, Canada and Middle East.

### 4.2.3. Company Gamma

Company Gamma is an Italian pasta brand known for its artisanal and high-quality pasta products. Founded in 1967 in Veneto, with a turnover of 16,8 mln, Company Gamma has gained recognition for its unique and innovative approach to pasta production.

One of the standout features of Company Gamma is their wide selection of pasta shapes and flavours. They offer a diverse range of pasta varieties, including traditional durum wheat pasta, whole wheat pasta, and specialty pasta made with ingredients like squid ink, chili, or vegetables. These unique flavours and shapes add a distinctive touch to the dining experience.

Gamma is committed to using high-quality ingredients and traditional methods in their pasta production. They carefully select the finest durum wheat semolina and utilise bronze dies for extrusion. This process helps create a rough texture on the pasta, allowing it to better hold sauce and enhancing the overall taste and texture. The brand also pays attention to sustainability and environmental impact. They prioritise using organic and natural ingredients whenever possible and strive to minimise their carbon footprint throughout the production process. Gamma's products are widely available in both domestic and international markets, and they have gained a reputation for their exceptional quality and unique offerings. Their pasta is appreciated by chefs, pasta enthusiasts, and food lovers who seek a taste of authentic Italian cuisine. Company Gamma exports its products to more than 50 countries around the world, especially to European Countries USA, Brasil, China and Australia. Among its 500 customers can be mentioned Esselunga, Cadoro, Pam, Pac Conad, Auchan, Crai, Coop, Frozzy Group, SAS Group. Bemuke, Metro, Booths, etc. Company Gamma has also opened an e-commerce in its website from which customers can directly acquire products.

## 4.3. Budgeting empirical evidence from three pasta companies

The results obtained from the questionnaire show some similarities but also some differences among the three companies under consideration. Regarding Company Alpha, the respondents include a controller with budgeting responsibilities and the CEO. For Company Beta, the respondent is the CFO, who had a supervisory role in the budgeting process, while for Company Gamma, the CEO is the sole respondent to the questionnaire. During the COVID-19 pandemic, the pasta sector was influenced by various factors, as mentioned earlier. Since the beginning of the national emergency, all three companies implemented several measures in compliance with the new regulations set by the Italian government in combination with their internal decisions to implement them. Since the food industry was classified as an essential activity during the pandemic, these pasta companies were able to remain operative, going on running their business. In this crisis situation, the budgeting process played a crucial role in maintaining control over objectives and goals.

Despite the challenges posed by the pandemic, Company Beta and Gamma confirmed that there were no substantial changes in the timing of budgeting revision, which remained quarterly. The CFO of Company Beta says:

*"In spite of the pandemic situation and the need for increased cost control and greater speed in the face of a constantly changing scenario, the budget review has remained quarterly. We have always believed that a three-month period can be sufficient to make forecasts that closely align with reality, and therefore we have not felt the need to revise it on a monthly basis."*

On the same advice is the CEO of Company Gamma:

*"We have always maintained a quarterly budget review, both before and during the pandemic. We knew that in this condition of uncertainty, we didn't have the possibility to achieve a perfect budget, but we consider a three-month period appropriate to obtain a budget that approximates the actual results."*

On the other hand, Company Alpha, as the Controller wrote, monitored its budgeting process every two weeks, in order to face the additional costs due to employees costs in addition to all the protective equipment and disinfection required (i.e. masks, sanitising gel,..). The difference observed among the three companies is also linked to the higher export percentage on turnover and in the number of employees of company Alpha, with respect to the other two companies taken into consideration. For all three companies, budgeting proved to be particularly important during the pandemic as it allowed them to adapt to the changing situation and plan appropriately. This indicates the need of sound financial planning and solid resource management, which helped mitigate the negative effects of the pandemic on business operations. Identifying and managing the available financial resources were crucial to ensuring that the companies could continue to operate efficiently and achieve their objectives despite the instability caused by the pandemic.

For what concerns the second question, about the typologies of budget that could be changed in the period March 2020-March 2022, I obtained two different perspectives. Company Beta's CFO reported that:

*"The types and methodologies of budgeting developed and implemented by the company have not changed."*

Differently Gamma's CEO answered:

*"We have reviewed the sales department, taking into account various potential scenarios, hypotheses, and decisions abandoned or made during the pandemic. The sales department must, especially in a delicate situation like this, have a precise understanding of the economic environment and the market in order to efficiently plan production. It was quite evident that the budgets prepared before the outbreak of the pandemic would be unrealistic, considering the immediate increase in demand."*

In line with the previous one is Company Alpha's CEO answer:

*"It has changed because the pandemic has caused the demand for pasta to be higher. The budget has been adjusted to address the new needs and additional costs brought about by Covid, such as transportation costs. As we sell a lot abroad, there were no return trips, which incurred additional expenses. "*

It is possible to observe that for companies Alpha and Gamma, the sales budget and the cost budget were the most crucial in the considered period. The first because of an increasing necessity to plan in a correct way the production process, due to the rise of pasta demand. The second due to the additional costs, especially for Alpha, due to its export activities and the difficulties faced with shipping and higher transportation costs.

More evidence about single budgets, in particular the sales and investment budget are deepened below.

### 4.3.1. Sales budget empirical evidence

Focusing on the sales budget, it is clear that all the three companies experienced a growth in sales due to the higher demand of pasta from the retail sector, especially supermarkets. It was a crucial challenge for all the three companies to plan an accurate sales budget, which is the fundamental passage to foresee the other types of budget. Company Gamma's CEO wrote:

*"In the process of preparing the sales budget, we have encountered several challenges and difficulties. Where we have struggled the most is undoubtedly in reprogramming productions and managing the supply chain, as we have had to produce a larger quantity of pasta compared to the months before the pandemic."*

Similarly, the CFO of company Beta:

*"Certainly, sales planning has been challenging. We found ourselves in a difficult situation as we cater to two sectors. We experienced a strong positive impact on retail sales with double-digit increases. However, at the same time, we witnessed a drastic reduction in sales in the Ho.re.ca (hotels, restaurants, and cafés) sector due to the lockdown. This is precisely why planning the sales budget has not been easy."*

About the shopping trends, a fundamental role was played by the increasing demand from retail channel. On the other hand, Ho.re.ca reduced drastically, for this reason it was difficult to forecast customers need of pasta's products. This obviously influenced the sales budget. Company's Beta CFO for example confirmed the change in the distribution channel, but also a huge increase in export demand:

*"We witnessed a decrease in demand from the Ho.re.ca sector with the closure of bars and restaurants. On the other hand, we received enormous requests from many customers in the retail sector, to the extent that in the first full year of the pandemic (2020), we recorded record sales. Additionally, our international revenue increased by 30%. Due to these factors, managing the sales budget has been challenging."*

Also Company Gamma reported similar results:

*"From the very beginning, we witnessed a tremendous increase in demand, especially from various supermarket chains. Orders quadrupled, and this, especially in the beginning, made managing the sales budget particularly challenging."*

Company Alpha sales reflect the trend, as confirmed by the controller:

*"Customer buying trends were on a significant rise. We recorded more than double the normal requests, with supermarkets showing greater flexibility in receiving the product as ordered, including accepting low-rotation pasta formats."*

Company Alpha put in evidence that also pasta products which are normally are less required by customers or less appreciate, in the pandemic period were perfect substitute for the most appreciate one (i.e. penne, fusilli, spaghetti,..).

It is possible to observe that Company Beta revised the Ho.re.ca compartment in the sales budget, with lower previsions with respect to 2019 sales value, while it increased the sales budget's prevision for the retail compartment, following the higher demand of customers. The same was done for Company Alpha and Gamma, which foresee higher sales levels in the pandemic period.

For what concern the fifth question, the companies highlighted that during the pandemic period there were no negative effect (except for Ho.re.ca channel, that was compensated by retail one), but in order to meet the huge increase of the demand some important measure has been implemented. Company Beta's CFO explained that the main changes concerned the warehouse:

*"We increased the inventory of packaging materials to meet the high demand and planned dedicated productions for the retail channel, resulting in an increase in warehouse stock."*

Company Gamma decided to face the higher demand level and the limit of production plants by preferring the clients who were already in their portfolio and that could guarantee an immediate and safer form of payments.

On the other hand, Company Alpha confirmed a growth in the warehouse stock, but the CEO underlined that, due to unexpected costs, the marginality reduced.

For what concerns the sales objectives and goals, it is possible to observe that all the organisations did not scale back the sales' goals. On the contrary, it was necessary to revise upward the objectives on the next budgets. CFO of company Beta wrote:

*"We did not deem it necessary to downsize our sales targets and proceeded with our plans, striving to meet as much demand as possible. However, we realised that the increase in retail sales and the decrease in Ho.re.ca sales still led to an increase in the quantity of pasta to be supplied to buyers. Therefore, after a settling period, we revised the total sales figure upward in the budget to be prepared."*

Company Alpha did not set its sales goals in a static way, but they try to be more flexible they can in order to meet the ups and downs of the demand coming from the difference channels:

*"The main goal was to ensure a consistent supply of the product to both the restaurant industry and supermarkets, so there were no static sales targets."*

Company Gamma revised the sales budget upward in the GDO's compartment, saying that sales grew four times:

*“We revised the objectives upward in the retail sector, as we recorded a fourfold increase in the quantity of orders compared to pre-pandemic standards.”*

### 4.3.2. Investment budget empirical evidence

The second part of the questionnaire aims to analyse how the investment budget was influenced by the pandemic and how companies had used this tool in order to manage the uncertainty and risk brought by this unusual situation. From the answers obtained it is possible to observe two different behaviour, since Company Beta and Company Gamma seized the opportunity to invest, while Company Alpha adopted a more conservative approach interrupting the investment activity and adopting temporary solutions. For example Company Alpha’s CEO said:

*“During the COVID period, we had suspended investments, except for routine and extraordinary maintenance as needed. Due to the closure of hotels in the area, we arranged for campers to accommodate external companies.”*

On the contrary, CFO of Company Beta affirmed:

*“We heavily invested in communication and marketing, taking advantage of favourable business conditions following the surge in demand from the retail sector.”*

Given this situation, for all the companies, it was important to control some crucial parameters and KPI. In particular, Company Beta and Gamma paid attention to the business marginality that measure the company ability to generate profit or income relative to its costs and expenses. It assesses the company’s overall financial performance by examining the difference between its revenue and its variable costs, which are the costs directly associated with producing or delivering goods or services. Business marginality is fundamental for businesses as it directly affects their long term sustainability and growth.

Company Alpha instead paid more attention on the raw material costs coverage, as said by the CEO:

*“We aimed to cover all the costs of raw materials, starting from durum wheat and packaging materials, where we experienced significant cost increases.”*

The pandemic impact was both on short- and long-term. After a period of higher sales, the three society registered some different evidences. Company Gamma’s CEO, after the boom of the sales in GDO compartment during the lockdown period, reported:

*“The post-pandemic period has witnessed a decrease in the pasta sector in the retail industry, with a significant reduction in demand. The investments made during the pandemic period, such as the purchase of a new dryer, required reorganising certain parts of the production*

*process to mitigate the impact of declining demand, which has shifted back to focusing on the most common formats."*

Different is the vision of Company Beta, which, as confirmed by the CFO, continued to invest in new machinery also after the end of the pandemic.

For the short-term period, Company Alpha paid attention to the disinfection measures:

*"In the short term, the main concern was to protect employees from infection. Every 15 days, we met with the Rappresentanza Sindacale Unitaria (RSU) to monitor the spread of infection among employees, reviewing internal protocols, and adjusting shift schedules to reduce crowding in the changing rooms in order to comply with all the health regulations mandated by the Government."*

In the long-term Company Alpha reported that:

*"In the long term, it proved necessary to redesign the entire organisational structure of the company to achieve greater flexibility. For example, reallocating certain production resources differently."*

The main challenge in which all the three companies agreed was to find the balance between the long-term investment and the financial uncertainty of the period. To mitigate this situation Company Alpha CEO asserted:

*"Long-term investments that had been suspended resumed at the end of the pandemic. In order to balance the financial uncertainty combined with the COVID-19 situation, we decided to revise the delivery and payment terms with suppliers, thereby extending both the receipt time and the payment deferment."*

Also the CEO of Company Gamma reported a necessity to revise with new terms and timing of delivery and payments with suppliers and GDO customers.

On the other hand, Company Beta's CFO explained:

*"Being fortunate enough to cover two different markets, namely retail and Ho.re.ca, we have always managed to balance revenues and grow. Despite the challenges faced during the COVID-19 pandemic, we did not refrain from making investments and achieving company growth."*

## 4.4. Discussion and conclusion

In this table it is presented a synthesis of the empirical evidence.

| | Budgeting process | Sales budget | Investment budget |
|---|---|---|---|
| Company Alpha | -monitored budgeting process every two weeks in order to face new costs following the new regulations given by the Government;<br>-adjustment to address new needs and additional costs. | -orders doubled with supermarkets showing flexibility in receiving products;<br>-no static sales targets in order to ensure a consistent supply of products. | -conservative approach;<br>-investments suspended except for routine and extraordinary maintenance;<br>-in the short-term their only aim was to cover costs (raw materials, packaging, disinfection costs);<br>-in the long-term it was necessary to redesign the organisational structure reallocating the resources;<br>-resumed the investments suspended at the beginning of the pandemic |
| Company Beta | -maintained the revision of budgeting process every three months;<br>-no changes in the typologies of budget. | -reduction of sales in Ho.re.ca sector;<br>-growth of sales in retail sector;<br>-increase in warehouse stock and packaging materials due to higher sales;<br>-higher estimation of sales in the sales budget. | -proactive approach;<br>-investments in marketing and communication and new machineries;<br>-they didn't stop investments during pandemic |
| Company Gamma | -maintained the revision of budgeting process every three months;<br>-revision of sales | -reprogramming production and foresee the sales was challenging; | -proactive approach;<br>-reorganisation of the production due to new investment ; |

| | | | |
|---|---|---|---|
| | department taking into account different scenarios. | -orders quadrupled;<br>-higher sales objectives. | -they didn't stop investments during pandemic |

The findings of this brief study reveal that the three companies, even if active in the same industry, have had different approaches among many similarities. COVID-19 give them the opportunity to expand the production since the demand from the GDO increase tremendously during the lockdown period, on the other hand the decrease of Ho.re.ca and the end of the pandemic brought them the necessity to be flexible and ready to potential changes in the planning of production and investments. Company Beta was the one that implement a more proactive approach, seizing the opportunity of an higher demand to expand its production of pasta, to create new innovative kind of dough and at the same time continuing to invest in marketing and machinery. On the contrary, Company Alpha has been more cautious. During the pandemic working with other countries become more complicated and many initial uncertainty made difficult to completely understand the situation and identify fast solutions. For this reasons they incur in many costs and timing problem especially in transport and shipment fields, even if the export of their products increase. This problem also reflected in the payment of suppliers, also due to the increasing costs of raw materials. Since their higher number of employees their attention to preventive measures against COVID-19 diffusion was meticulous and impactful especially for disinfection and personal protective equipment. They approach to investments was conservative too, since they stop them until the end of the pandemic.

In the middle, Company Gamma had less difficulties during the pandemic, since the sales to GDO went through a huge rise, and a new machine had been acquired in order to face the incremented amount of orders. Some little problems born at the end of the period taken into consideration, since the end of the pandemic led to a decrease of customers demand and consequently it became necessary to revised the production line and the company organisational chart.

In the budgeting process it is possible to observe the different point of view of the three companies. Company Alpha monitored budgeting process every two weeks in order to face new costs following the pandemic. Company Beta maintained the budgeting revision every three months and they didn't change budgets typologies; on the other hand Company Gamma, despite maintaining budgeting's revision quarterly, took into account different scenarios to foresee the future sales.

If we look at the approach to growth during the pandemic Company Beta took a proactive approach by capitalising on the increased demand for pasta during the lockdown. They expanded production, developed new innovative types of dough, and continued to invest in advertising and machinery. Company Alpha adopted a more cautious approach, facing challenges in the shipping and transportation sector due to the complexities of working with other countries during the pandemic. Despite this, they experienced an increase in exports. They also implemented strict preventive measures against the spread of COVID-19 and halted investments until the end of the pandemic. Company Gamma encountered fewer difficulties during the pandemic due to a significant rise in sales to the GDO. They acquired a new machine to handle the increased number of orders. However, they faced challenges towards the end of the period considered due to a decrease in customer demand, which necessitated a revision of the production line and organisational structure.

For what concerns cost and time management Company Beta and Gamma had no specific mention of cost and time issues. Company Alpha faced cost and timing issues, particularly in the shipping and transportation field, due to the complications arising from the pandemic. This also had an impact on payments to suppliers due to increased raw material costs.

The approach to investments is really different between the three companies. Company Beta continued to invest in both marketing and machinery despite the pandemic, demonstrating a proactive and growth-oriented approach. Company Alpha adopted a conservative approach, suspending investments until the end of the pandemic. Company Gamma moderated its investment, linking it to the demand request.

In summary, Company Beta took a proactive approach to growth and investments, Company Alpha was more cautious, facing challenges in the shipping and transportation sector, while Company Gamma enjoyed an increase in sales but had to make revisions due to decreased demand.

It is important to highlight the limitations of this study, which are:

- the low number of companies taken as sample;
- the perimeter of the geographic area in which the companies are based (limited in Veneto);
- the industry in which they operate, that luckily has been one of the few that benefit from COVID-19 tremendous situation;
- the kind of budgets deepened by this study (sales and investments budget) may give a good picture of the situation both from the operating and financial points of view, but not of the whole budgeting process.

## CONCLUSIONS

In conclusion, this thesis has provided a comprehensive analysis of the management control system in the context of the COVID-19 pandemic. By examining the challenges faced and adaptations implemented by organisations during this unprecedented crisis, the research has shed a light on the intricate dynamics of managing and controlling operations in a highly volatile and uncertain environment. The findings of this study underscore the immense impact of the COVID-19 pandemic on traditional management control practices. Organisations across industries have been forced to face unforeseen disruptions and swiftly adapt their control mechanisms to mitigate risks and ensure business continuity. Remote work arrangements, supply chain interruptions, fluctuating customer demands, and the need for rapid decision-making have all posed substantial challenges that necessitated a reimagining of conventional control mechanisms. Despite these challenges, it became evident that organisations that exhibited resilience and agility were better equipped to navigate the complexities of the pandemic. These organisations demonstrated the ability to respond swiftly to changing circumstances, leveraging technology to facilitate remote collaboration, monitor performance, and collect real-time data for informed decision-making. Furthermore, they prioritised effective communication and coordination across all levels of the organisation, fostering alignment and unity in the face of uncertainty.

The COVID-19 pandemic has accelerated the adoption of digital tools and technologies, allowing organisations to enhance their management control systems. Remote work arrangements have proven successful in maintaining productivity and enabling flexibility, while virtual communication platforms have facilitated effective collaboration and information sharing. Additionally, organisations have leveraged data analytics and automation to gain insights into performance, identify trends, and make data-driven decisions promptly.

However, it is important to note that the pandemic has also exposed vulnerabilities in existing management control systems. The rapid shift to remote work has raised concerns about cybersecurity and data privacy, requiring organisations to strengthen their control measures in these areas. Moreover, the reliance on digital technologies has highlighted the need for continuous monitoring and updating of control systems to ensure their effectiveness in an evolving landscape. Overall, the COVID-19 pandemic has brought about significant changes in the way organisations manage and control their operations. It has emphasized the importance of resilience, agility, and adaptability in navigating unprecedented disruptions. Moving forward, organisations will need to continue innovating their management control systems to effectively respond to future crises and maintain sustainable operations in a rapidly changing world.

The research findings highlight the imperative for organisations to embrace innovative management control practices in the period of the COVID-19 pandemic. The reliance on traditional approaches alone has been rendered inadequate in front of unprecedented volatility. Organisations must now actively embrace digital solutions, harness the power of data analytics, and cultivate agility as fundamental pillars of their management control systems. By doing so, they can proactively manage their operations, anticipate and adapt to future disruptions, and foster sustainable growth in an increasingly unpredictable world.

The COVID-19 pandemic has accelerated the digital transformation of organisations, and this trend is expected to continue. The use of advanced technologies such as artificial intelligence, machine learning, and automation can significantly enhance management control systems. These tools can provide real-time insights into operational performance, automate routine tasks, and enable predictive analytics to identify emerging risks and opportunities. By leveraging digital solutions, organisations can improve their decision-making capabilities and enhance their ability to respond rapidly and effectively to unforeseen events.

In addition to digitalisation, the integration of data analytics into management control systems has become crucial. The vast amount of data generated during the pandemic offers organisations valuable opportunities to gain insights and make informed decisions. By analysing data related to customer behaviour, supply chain disruptions, and financial performance, organisations could identify trends, patterns, and potential areas of improvement. This data-driven approach can help organisations optimise their operations, identify cost-saving measures, and identify new market opportunities.

Furthermore, the research emphasizes the importance of cultivating agility within management control systems. The ability to adapt quickly to changing circumstances and make informed decisions in a volatile environment is fundamental for organisational resilience. It has been the case of Company Beta and, in part of Company Gamma, that thanks to their proactive and positive approach sized the opportunity to expand their businesses, never stopping to invest and reorganising themselves at the end of the pandemic. This requires establishing a culture of continuous learning, promoting collaboration and information sharing across departments, and empowering employees to take ownership of their responsibilities. Agile management control systems enable organisations to adjust their strategies and operational plans in response to evolving conditions, ensuring they remain aligned with their goals and objectives. On the other hand Company Alpha, applied a more conservative and prudential approach, also because of the huge amount of exports order. This put in evidence that even if in the same industry not all companies has the same ability to react fastly to crisis, and a flexible, well arranged and organised MCS can make the difference.

While this study contributes valuable insights into the management control system during the COVID-19 era, it is crucial to acknowledge its limitations. The research focused on a specific time period, and thus its findings may not fully capture the long-term effects and subsequent developments. To build upon this foundation, further research is warranted to explore the sustained impact of the pandemic on management control systems and identify best practices that facilitate post-pandemic resilience, especially in other industries that were negatively impacted. Overall, this thesis enhances our understanding of the challenges and adaptations necessitated in managing organisations during a global crisis like COVID-19. It underscores the indispensability of dynamic and innovative management control systems that effectively support decision-making, performance monitoring, and coordination in times of heightened uncertainty.

The lessons derived from this research could serve as a compass for companies striving to develop resilient control systems capable of withstanding future disruptions, fostering adaptability, and ultimately contributing to their long-term success and sustainability.

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