

ORGANIZATIONAL AGILITY: A CASE STUDY ON A ROMANIAN MANUFACTURING COMPANY

Letiția Carmen LUCESCU^{1*}

¹ Engineering and Management Department, Faculty of Industrial Design and Business Management, "Gheorghe Asachi" Technical University of Iași, 28 blvd. Dimitrie Mangeron, Romania, letitia-carmen.lucescu@academic.tuiasi.ro

* Correspondence: letitia-carmen.lucescu@academic.tuiasi.ro

Abstract: This exploratory study examines whether the organizational context of a manufacturing company contains elements that support agility. It also explores the viability of linking these variables to three important pillars: strategy-people-organizational structure. Technology is crucial in supporting these pillars because it promotes connectivity both internally and externally. Our research addresses the existing conceptual ambiguity surrounding organizational agility, which makes a quantitative approach challenging due to its complexity. We adopt an exploratory approach to investigate, profile, and define the phenomenon of agility in an organizational context, underpinned by various factors. As a result, this study creates a functional connection to the strategy-people-organizational structure framework, with technology as a key enabler. It also contributes to the conceptualization of agility in organizational context and demonstrates its practical relevance.

Keywords: case study, organizational agility, manufacturing, people, strategy, thematic analysis

1 INTRODUCTION AND RESEARCH METHODOLOGY

Contextual volatility forces organizations to recognize vulnerabilities as quickly as possible, to develop a response plan for unexpected and abrupt events, to anticipate them, and to even reach the point of influencing environment in which they operate. As a result of this cause-and-effect relationship, it is argued that organizations must cultivate, maintain, and develop agility in all organizational areas. As attempts to conceptualize agility are numerous and sometimes confusing, the discussion shifts to the ability of organizations to scan, recognize and understand domain and legislative change

signals quickly and to provide timely operational responses through quick strategic decisions (Lucescu & Avasilcăi, 2021). While the literature does not explicitly identify a path for developing organizational agility, we intend to bring a contribution by identifying and researching these key dimensions. As a result, the present research focuses on evaluating this frame of reference and explores research questions related to how strategy, people and their behaviours, and organizational structure interact within an organizational context, facilitated by technology. It also considers the limitations of organizational success processes when seeking answers. The term agile has become so utilized that it is now associated with

any situation that will have to deal with turbulence caused by changes in the business environment that one might believe it is a panacea or a differentiating factor in the industry.

In terms of attention and acceptance, the concept of agility allows for the coexistence of various contextual strata, even if identifying a coherent and comprehensive theory of the meaning and implications of this term proves difficult. It is mentioned in almost every field, but before applying it and examining potential roles and implications, we must first define what agility means in an organizational context. Ambiguity in studies, the use of other words that mean the same thing (Ahlbäck, Fahrback, Murarka, & Sallo, 2017), a list of failed definition attempts, and contradictory voices are just a few of the factors that prevent the adoption and construction of a model based on previous research. The delineation of the meaning originates from the assertion that "Agile is a methodology, agility in organizational contexts is a characteristic" (Denning, 2016).

The current research primarily focuses on organizational agility, defined as the capacity to swiftly adapt to market changes, manage, and sustain a company's global reputation and stability, often while delivering locally relevant services, and constructing integrated customer experience platforms (Sergeev, 2016).

We can already consider agility in an organizational context to be a description of how an organization operates within a mental growth paradigm, a distinct structure, or a behavior that an organization, through its employees, possesses or does not possess (Ibarra & Hansen, 2015).

The definition we propose for agility in an organizational context is *the ability to be proactive, to learn, to understand a volatile and uncertain context, and to quickly reconfigure strategies, processes, and technologies in a fluid environment supported by an innovative, collaborative, resilient, and ego-free team*

committed to the development of organizational competitiveness (Modreanu (Lucescu), 2021).

At this stage, qualitative research is being used to fulfill the objective of exploring, profiling, and defining the phenomenon of organizational agility. The presence of a supportive set of factors facilitates this exploration, aiding in the clarification of understanding, which, in turn, impacts the reconfiguration of paradigms related to organizational agility. These factors play a crucial role in subsequent processes such as scanning, anticipating contextual changes, making decisions, and delivering market responses (S-D-R).

In conclusion, given that this research seeks to investigate the internal context entailing the dynamic interaction of the three organizational pillars, strategy-people-structure (S-P-S), and its impact on organizational agility, enhanced by the succession of S-D-R processes, particularly concerning the relevant aspects of the external context for the organization under study, we have opted for an exploratory and qualitative research methodology. This choice facilitates a holistic, systemic analysis of descriptive data and narratives, while keeping the organizational context in mind. The organizational agility conceptual model presents in a tetra dimensional plan both the four concrete analyzing elements on which the case study of a manufacturing will be based, as well as the general research questions- who? how? when? where? and why? As a result, the emphasis will be placed primarily on the company's internal production context.

The research aims to assess the capacity of these factor categories to foster the development of organizational agility and to explore the potential for distinguishing the S-P-S pillars in a practical scenario of a Romanian Manufacturing Company (RMC). Technology supports the S-P-S pillars and ensures interconnection both internally and externally.

Regarding the external context, an examination was conducted to determine the

presence of established formal or informal practices within the organization for scanning and monitoring external contextual elements across different dimensions of relevance to the organization. These dimensions encompass legislative, economic, healthcare, social aspects, among others. Additionally, the research identifies which specific external contextual factors hold significance at the current stage in the life of the manufacturing. In essence, this is the guiding principles within the scope of this research.

Regarding the researcher's role, there is a significant concern that maintaining impartiality during interactions with the sources under investigation and throughout the on-site research may be challenging. The greater the distance from one's own prejudices, the more likely it is that the researcher will be persuaded to investigate the phenomenon. This ability to comprehend and remain open to both the distant and close aspects of a subject is regarded as a paradigm in behavioral science, as noted by ethno psychiatrist Georges Devereux (cited in Fisher, 2007). Devereux draws a parallel with Niels Bohr's experience of examining an object using a cane. When tightly held in hand, the cane may not convey much information about the object being

analyzed. However, with a lighter touch one can perceive intricacies, contours, and the connections it holds with the surroundings. This nuanced approach, along with a reflective attitude that allows for revisiting and reevaluating the interpretation of information and contextual constraints, constitutes significant determinants in qualitative research (Avasilcăi, S., Huțu, A.C., 2012, p.17). The research process is influenced by initial hypotheses and how the research is envisioned (Bryman, 2012, p 49). The issue stems from the need to understand how these pillars and analysis elements manifest themselves in the practices of a manufacturing organization, and which of these categories of factors will contribute the most to the development of organizational agility.

The aim of this research is not to find discrepancies in existing theories, but rather to broaden perspectives and approaches to organizational agility. It involves exploring a conceptual framework and initiating a new dimension of research that holds significant relevance for Romanian organizations. These organizations are operating in an uncertain environment where agility, expressed through innovation, autonomy and resilience is crucial for their survival.

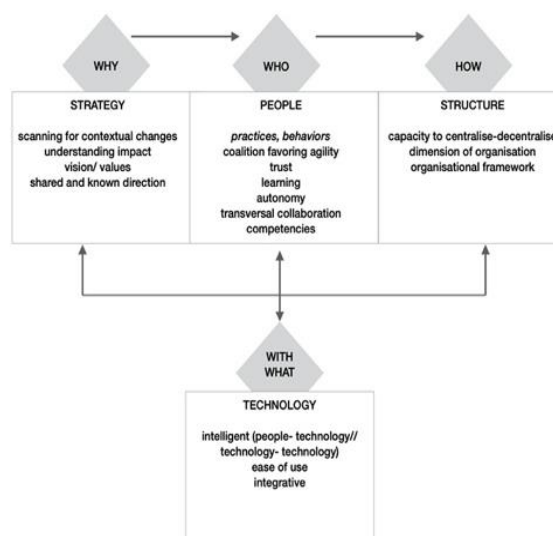


Figure 1. Organizational pillars and elements that support agility.

For each investigated S-P-S pillar and each of the defining elements, a series of three to five open-ended questions with the qualifiers "why", "who", and "how" have been assigned. For situations with no clear answers questions of support were added. Some questions were more detailed, while others were more specific, with clear directions, to investigate participants' perceptions and experiences in relation to the items under investigation, as well as the significance to which they ascribe events, practices, and organizational behaviors. The most important questions involve identifying a specific element without equivocation (for example, "*How many decision levels (...)?*") and are part of a group of questions encompassing a single research area.

The goal of this process is to understand the phenomenon that exists in the manufacturing organization based on the provided responses.

2 CASE STUDY: ROMANIAN MANUFACTURING COMPANY

In defining a case study, Yin states (2018) that the purpose of a case study is to shed light on a decision or set of decisions: what was decided, how it was implemented, and the outcome, which includes decisions, processes, and events. The conclusion is that a case study is an empirical method that invests in the replication of a current phenomenon in its natural context.

A case study methodology enables the researcher to address research inquiries to real-life cases in Romania. The upcoming section reveals contemporary scenarios where businesses in Romania navigate uncertainty and turbulent situations. For instance, an exploration into the reasons behind their decision to revamp product portfolios, relying on detailed descriptions and explanations provided by study participants based on their personal experiences. Part of a larger study, the case study of a Romanian manufacturing company

helps to understand how certain contextual conditions can be used to define, implement, and cultivate organisational agility in order to improve competitiveness. In choosing the manufacturing company, the researcher considered the level of access that could be obtained for the collection of high-quality primary data and the invitation of a sufficient number of participants capable of answering research questions. Recognizing that the process of selecting people is not perfect (Krueger, R.A., Casey, M., A., 2005), we have kept in mind that the quality of the contributions made by participants allows us to form relevant conclusions about the conditions and validity of the research. To ensure confidentiality, this case study will be known as Romanian Manufacturing Company (RMC).

2.1 RMC profiling elements

Founded in 1953 in a city in Romania, the company operates in the automotive and equipment construction sectors. Since 2000, it has been under the control of a multinational conglomerate. The mandates of this conglomerate have stated that, of the \$250 million in investments promised, more than \$170 million has already been invested to grow the domestic brand's sales. When the company was acquired, it was facing bankruptcy, with yearly losses amounting to \$20 million and debts of \$60 million. Within the Romanian factory, which serves as the leader in the production of transmission components for both the group and the flagship entity, there are about 1200 employees. The company has expanded its operations to include manufacturing facilities in Germany, Hungary, Turkey, and India, and it now exports to over 50 countries, with subsidiaries in Italy, Belgium, France, Spain, the United States, Brazil, Egypt, Taiwan, Singapore, and the United Arab Emirates. On the industrial platform, one can find a wide range of tools, including both state-of-the-art ones and those dating back to

the 1950s, which is when the company was established.

2.1.1 Historical context

Nine years after joining the multinational group, the company records its first year of losses due to the global economic downturn that has affected customers of original equipment manufacturers. A phase of internal restructuring, resource reallocation, and the transfer of production to overseas facilities is initiated. During this period, the workplace is marked by an atmosphere of distrust, apprehension, and unease. Moreover, the rate of growth in investment volume is falling short of the initially projected pace. Two years following the crisis, RMC successfully enhances its profitability by reducing production costs through acquisition of modern tools and equipment. Simultaneously, it retains its established market position and ventures into new markets. In 2016, RMC had to discontinue its on-demand product sales due to its unsustainable revenue. Representatives of various companies attribute this downturn to the entry of a manufacturer into several markets, including Romania, where they were selling counterfeit goods labeled as RMC, at a significant lower price than genuine products. This situation led to substantial losses and as a result, more than 300 employees had to be let go. Over the past years, RMC has embarked on a series of structural transformations, channeling investments into equipment and technological advancement. These endeavors have resulted in the attainment of certifications and the establishment of an Integrated Management System, including Quality, Environment, Health, and Workplace Safety. Furthermore, RMC has implemented programs funded by PHARE.

2.1.2 Values

Among the principles proclaimed by RMC, four of them stand out: the power of

competence, of attitude, information, and economics. All of these are oriented toward respect for customers and satisfying their needs by ensuring product quality. In addition to a standard list of items and components, RMC provides a diverse selection of non-standard items tailored to meet its customers' specific requirements. Aside from quality certifications, RMC has initiated a program to protect original components and has introduced a feature on its website for reporting counterfeit products. With the mission of minimizing negative environmental impact, the environmental management system is certified in accordance with ISO 14001:2004 standards and is applied throughout the manufacturing process, from documentation to development, production, installation, maintenance, and waste management.

The safety management system ensures employee training and fosters a secure work environment, certified in accordance with OHSAS 18001 standards. RMC maintains a zero accidents diary as part of their safety commitment.

2.1.3 Organizational structure

RMC was established to manufacture both standard and specialized components, leveraging Romanian technology and expertise. It engages in the assembly and homologation of components for commercialization. Oversight of RMC general management is provided by the General Shareholders' Assembly, executive directors, the Lean Production coordinator, department heads, and functional office managers. The organisational structure is delineated according to specific areas of expertise.

2.1.4 Portfolio

RMC portfolio primarily includes the manufacturing of automotive transmission elements and components. The range of

products offered by RMC comprises 6500 types of mechanical transmission elements and components, available in nearly 1600 variations. In addition to these, the company produces forged and moulded parts, as well as electric and thermal energy through its Cogeneration Central Unit, along with other products from automotive industry.

The company has formed alliances in the energy sector to produce components used in wind turbines, maritime, railway and steel industrial applications, among others.

2.1.5 RMC on the market

According to media reports, Romanian-made products rank among the top seven globally recognised brands. RMC's exports accounts for 85 percent of total sales. RMC has earned recognition in its industry through its environmental policies, legislation compliance, defence of intellectual property, and continuous improvement efforts. It has been honoured with the Romanian Quality Award and holds the top position in its industry. Its product portfolio aligns with those of major manufacturers in the USA, Japan, Sweden, and Germany.

Participants in the three focus groups represent all areas of production, departments, and laboratories, as well as various functions such as sales, office managers, environmental experts, human resources, and research directors.

Their tenure ranges from 10 to 30 years.

2.2 *Circumstances of applied research*

In structuring these focus group interviews, I attempted to adhere to the five characteristics identified by Krueger and Casey (2005), which refer to (a) people invited with (b) specific characteristics from a perspective that can (c) provide valuable information, (d) during a guided discussion, and (e) to contribute to understanding of the issues raised.

2.2.1 Data analysis

To ensure a neutral and systematic approach to exploration, thematic analysis (TA) was employed. Theoretically, TA is considered a flexible and accessible method for identifying and analysing recurring themes or patterns of meaning within data (Braun, 2006). Thematic analysis involves examining a dataset - whether it comprises interviews, group discussions, or a series of texts - to discover recurring patterns of significance. A theme captures a significant aspect of the data related to the research question and represents a structured level of response or meaning within the dataset.

Given that the analysis process is non-linear, the entire dataset was revisited multiple times, and the coded data excerpts, along with their interpretation, were considered part of the analysis process. This approach is specific to qualitative research and differs from statistical analysis. An essential step in TA involves selecting relevant sequences from an exploratory perspective. Data were manually coded through repeated readings, with no omissions. Attention was paid to all information, and excerpts were coded as close as possible to their original meanings, facilitating subsequent organisation to identify recurring patterns underlying the themes. Data were collated to ensure the inclusion of all contributions and to facilitate their subsequent organisation and grouping into themes. During the research any other latent themes that have arisen have been considered, acknowledging that this information is an integral part of the epistemological framework that a researcher cannot detach from during the analysis.

RMC case study serves as a practical validation of prior findings from Yusuf, Gunasekaran, and Musa (1999) research, which identified fundamental competencies and characteristics of agile production. These aspects are evident in the following areas:

- competency management: *"We stay updated with industry advancement, homologate parts, and consider new geometries. While there are much larger players, we make an effort to compete. This is how we've endured so far; our business partners have always requested specific types of parts, and we've been able to provide them. That's how we've maintained our brand globally."*
- distributed interactions across multiple organisations, *"We source certain elements from China because it's more cost-effective than processing them locally. Initially, the quality was subpar, but then they became our colleagues, accrediting certain technological processes They gradually improved, and we established a client- supplier relationship, streamlining our production, especially since we had a labor shortage."*
- manufacturing reconfiguration capability: *"We've changed production plans- some lines were outsourced, some were taken over by the group, while we found others at different manufacturers, which was painful for some of us." The plant was designed for mass production, but nowadays we are a producer of small and medium series, so we've redesigned the flow entirely in order to be shorter." "The plant is flexible and slender in this way, the group aligns with its objectives and adapts to the times, as well as to th government policies. In a large group of company with offices in so many countries, a lot of differences occur."*



Figure 2. Manifested organisational agility

3 CONCLUSION

Given that participants were prompted with questions but also encouraged to share their experiences and perceptions, we believe that there is still much more to explore in

understanding what constitutes a company and the measures taken in research strategy, people, and organisational structure. At the same time, we believe that by engaging in dynamic discussions with directors, employees, and regional managers, utilizing secondary research

resources, and conducting participatory observations, we have reached a point of theoretical saturation with the data obtained.

At the individual level, there are clear manifestations of agility (elementary level). These manifestations encompass adaptability to change, the capacity for rapid learning and adjustment to new context, as well as the proficiency in collaborating effectively with team members to attain shared objectives. These expressions of individual agility align closely within People pillar and are substantiated by robust thematic representation *"Even on our way to the factory—we walk and talk about everything related to the factory, and if there's a problem, we'll figure out how to solve it. We have no idea how many years have passed between us."*

As for the organisational level, the external context's influence intersects with internal challenges in a threatening dynamic. As expressed by one participant, *"We still have a problem- particularly in auxiliary departments throughout the entire factory- we lack qualified personnel. Those who reached retirement age have retired, and there is a scarcity of new recruits. Our biggest challenge is how to manage our current workforce to meet the demands of both the production and maintenance departments, which is an exceedingly difficult task."* The labor force challenges are substantiated by comprehensive global studies, including the 2018 PriceWaterhouseCoopers report, which highlighted talent shortages in Eastern Europe. Recent research continues to reinforce these findings. For instance, on June 23, 2021, the European Centre for the Development of Vocational Training released projections indicating a significant decline in the number of individuals aged 15 to 34 entering the labor market by 2030. This trend is particularly pronounced in Romania's employment landscape, with the productive sector, encompassing areas such as automotive manufacturing, operators, machine operators, and technicians, facing the most acute

employment difficulties. The 2023 edition of the Employment and Social Developments in Europe report aligns with these concerns and offers insights into the persistent labor shortages and skills gaps within the European Union. The report provides insights into particular professions and industries, notably within the manufacturing sector, including construction, healthcare, science, technology. These fields are projected to face persistent labor shortages, a situation that is anticipated to worsen due to factors such as an aging population and the advancement of green and digital technologies.

The current job market reflects the severity of these workforce challenges, with a notable 77% of employers reporting difficulties in filling roles, representing a 17-year high. These findings underscore the critical importance of addressing talent shortages and enhancing workforce development initiatives in response to evolving employment dynamics (PriceWaterhouseCoopers, 2018; European Centre for the Development of Vocational Training, 2021; European Year of Skills; Employment and Social Developments in Europe, 2023).

The city is situated in a region that is somewhat remote from major major transportation networks. *"There are no expressways, no bypass roads, let alone highways, and the airport is far away,"* further complicating investment decisions for the group. Moreover, the measures in place to protect against counterfeits from China differ from those in the European Union.

As a mechanistic organisation with a sizable hierarchical structure, numerous formal rules and procedures, and a precise division of labor, RMC's technological landscape is multifaceted. While it boasts an integrated management system and sections with modern machinery, it also maintains equipment that has been in use for decades: *"For instance, in the machining section, there are both old, well-maintained universal machines, akin to a 1970 Corvette, which*

still provide precision exceeding that of many newer machines. These older machines are quieter and less disruptive, while some sections feature newer equipment with enhancements and numerical control." Resilience is a characteristic feature of a community of individuals who are familiar with one another and aware of the employability opportunities the region offers. This aspect is highlighted in a study by PwC (PwC Global Crisis Centre, 2022), which discussed the value of resilience in the global context during the 2020-2021 health crisis, with 84% of respondents acknowledging its significance. To underscore the notion of agility primarily existing at the individual level rather than the organisational level, the foundational aspect of agility gains further support through the identification of another key theme: prestige. This theme revolves around the effective utilization of professional competencies and organisational strategies that influence the external environment by introducing numerous innovations to the market. Nevertheless, this aspect is jeopardised by the lack of a clearly articulated vision for RMC workforce. The absence of a unified and well defined organisational vision may impede the harmonious alignment of efforts and objectives, potentially hindering the organisation's overall agility.

In conclusion, this study contributes to the conceptualization of agility within a manufacturing organisational context, shedding light on its practical relevance. It delves into the factors that influence the motivations, decisions, and behaviors of participants from the perspective of organisational agility. The research provides insights into understanding the dynamics of a constantly evolving group, offering a view of agility at its elementary level. Additionally, it identifies themes as critical pain points that hinder agility, including the absence of a well-communicated vision, geopolitical instability affecting raw material supply, and the scarcity of new talent. These findings underscore

the importance of addressing these challenges proactively to foster and sustain agility in the manufacturing industry in Romania.

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