

Exploring Organizational Citizenship Behaviour Dimensions and Organizational Performance Measurement Systems in Manufacturing Companies of Latvia: a Perspective on Industry 4.0 and 5.0

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Abstract— The European Union (EU) is actively driving industrial transformation through initiatives such as the transition from Industry 4.0 to Industry 5.0, which emphasizes sustainability, human-centricity, and resilience. As an EU member state, Latvia aligns with these developments, leveraging Industry 5.0 to enhance efficiency, quality control, worker safety, and customer experience. While existing research highlights Industry 5.0's positive impact on Organizational Performance (OP), concerns remain regarding its influence on the nature of Organizational Citizenship Behaviour (OCB). OCB, defined as voluntary, value-adding behaviour beyond prescribed tasks, is considered a source of competitive advantage due to its intangible nature. Despite extensive research on OCB's relationship with OP, inconsistencies persist in OP measurement, particularly within Latvian manufacturing companies operating in the Industry 4.0 and 5.0 context. This study aims to identify relevant OP measurement indicators and OCB dimensions specific to Latvian manufacturing companies. The research is particularly relevant given the sector's historical significance in Latvia, its decline following independence in 1991, and its recent resurgence. By focusing on Latvia, the study eliminates cross-cultural variations and provides deeper insights into industry-specific OCB-OP dynamics. A qualitative research approach is employed, using semi-structured interviews with company owners and top managers in Latvia's manufacturing sector. Due to the sensitive nature of the study, face-to-face interviews facilitate richer insights through direct observations and explanations. Thematic content analysis is applied to analyse qualitative data. This research contributes to the existing body of knowledge by bridging the gap in OP measurement and OCB

dimensionality within the evolving Industry 5.0 landscape. The findings offer practical implications for manufacturing companies, policymakers, and researchers, enhancing understanding of how OCB supports OP during the transition to Industry 5.0 principles.

Keywords— *Organizational Citizenship Behaviour Dimensions, Organizational Performance Measurement Systems, Manufacturing Companies in Latvia, Industry 4.0 and 5.0*

I. INTRODUCTION

European Commission considers European industry as a key driver of social and economic transitions [1]. Latvia, as a member state of the European Union, aligns with the EU's initiatives, including the introduction of Industry 5.0 concept by the European Commission in 2021. Thus, Latvian manufacturing companies are operating within the framework of Industry 4.0 while transitioning toward the principles of Industry 5.0: (i) sustainability, (ii) human-centricity and (iii) resilience [2]. According to Wolniak [3] manufacturing companies that adopt Industry 5.0, benefit from improved (i) efficiency, (ii) quality control, (iii) worker safety, (iv) customer experience, etc. A review and analysis of Industry 4.0 and 5.0 show a positive effect of Industry 5.0 on Organizational Performance (OP) in manufacturing companies by addressing the limitations of Industry 4.0 to ensure that technologies serve to enhance human capabilities rather than replace them [4]. However, Industry 5.0 also raises concerns from the employee

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perspective [5] including its impact on the nature of Organizational Citizenship Behaviour (OCB) [6]. Campbell & Wiernik [7] state that OCB encompasses performance behaviour that adds value because it helps support the broader functioning and mission of the organization. Moreover, OCB is outside the prescribed task performance structure in that it is voluntary [7]. From the Resourced-Based View (RBV), OCB is a source of competitive advantage for a company, because OCB is more difficult for competitors to see, it makes OCB less visible than task performance to competitors, and the value created by OCB is more likely to be captured by the employing firm [8]. Meta-analysis also has shown that OCB is positively related to unit and organizational performance [9, 10].

Although existing literature supports the positive relationship between OCB and OP, as well as the positive impact of Industry 4.0 and 5.0 on OP and their influence on OCB, there is inconsistency in measuring OP and no research identifying the relevant dimensions of OCB for Latvian manufacturing companies operating within the context of Industry 4.0 and 5.0. For example, Baumanė-Vītoļiņa et al. [11] measure OP by Organizational Innovativeness and Organizational Competitiveness while Eremina et al. [12] propose the following financial indicators to measure OP: sales growth, EPS growth, ROE, Gross profit/assets, Gross profit/margin, operating profit margin, net profit margin, total shareholders return. Furthermore, no research to date has examined which dimensions of OCB are most relevant for Latvian manufacturing companies during ongoing transition to Industry 5.0. Given the evolving nature of industrial transformation, it is essential to explore how organizations conceptualize and assess OP and how OCB manifests in this specific context. Therefore, this paper aims to explore the practices used by Latvian manufacturing companies to assess OP and identify the key dimensions of OCB that are relevant in the context of industrial transformation.

The article is based on semi-structured interviews with owners and top managers of companies that operate within the manufacturing industry in Latvia. Given that OP measurement and OCB dimensions frameworks vary across industries and regions, and that existing literature does not provide a standardized models for this specific context, a qualitative approach is applied for answering the RQs, because it allows for an in-depth exploration of what quantitative methods may overlook.

This research contributes to the body of existing knowledge in this field because the Manufacturing industry is the most important sector of the EU economy – it drives its growth and propels its technological and innovation development [13]. Moreover, to analyse the manufacturing industry within one country would be useful to avoid possible cross-cultural differences. Latvia as a context for the research was chosen because in this post-soviet country, manufacturing was strong during the Soviet period and it faced a sharp drop after the proclamation of independence in 1991 [14]. During the last decade Latvian manufacturing increased again with a new force in terms of value-added

% of GDP (Appendix A). Moreover, the choice of the manufacturing industry in Latvia is justified by the fact that one of the authors of this research has more than 5 years of work experience in this industry and Holstein & Gubrium [15] consider that “the interviewer’s background knowledge can sometimes be an invaluable resource for assisting respondents to explore and describe their circumstances, actions, and feelings”.

The research consists of three parts. The first part gives a brief overview of the literature and methodologies used for this work. The second is a research part which provides content analysis and discussion of its results. The third part gives implications and conclusions.

II. MATERIALS AND METHODS

A. Literature review

a) Organizational Performance.

When stakeholders of an organization analyse, argue, or make decisions, they rely on qualitative and/or quantitative data, either at a point in time or dynamically, this may involve comparisons with other organizations or may be conducted independently. Utilizing these data to align operations with strategy enables organizations to achieve long-term success ensuring that all dimensions contribute to organizational strategy [16]. The concept of measuring effectiveness which is grounded in organizational strategy is Organizational Performance (OP) [17], this concept has many definitions (see Table 1) and is considered to be a subjective phenomenon [18].

Al-Matari, Al-Swidi & Hanim [19] argue that OP represents the fundamental aspect of strategic management. Furthermore, Lebas [20] states that performance measurement and performance management are closely intertwined and cannot be seen as separate constructs because what is to be measured explains the context of performance. Waggoner, Neely, and Kennerley [21] support this statement and argue

TABLE 1 DEFINITIONS OF ORGANIZATIONAL PERFORMANCE

| Definition | Source |
|---|--------|
| "Performance is a notion polarized on the announced result, but it also conveys a value judgment on the result finally obtained (positive or negative) and the process which made it possible to achieve it" | [22] |
| "Performance is a relative concept defined in terms of some referent employing a complex set of time-based and causality-based indicators bearing on future realizations. Performance is about the capability of generating future results" | [23] |
| "Performance, therefore, can be defined as the evaluation of the constituents that try to assess the capability and ability of a company in achieving the constituents' aspiration levels using efficiency, effectiveness, or social referent criteria" | [24] |
| performance consists in "achieving the goals that were given to you in convergence of enterprise orientations" | [25] |
| organizational performance is the organizations' ability to attain its goals by using resources in an efficient and effective manner. | [26] |

that performance measurement systems should not only be carefully designed and implemented, but also evolve over time in response to four main influencing forces: internal and external influences, process and transformational issues. In their work Richard et al. [27] described the following types of OP measurement: (i) objective (accounting, financial market, mixed accounting/financial market and survival measures) and (ii) subjective (fully subjective self-report, quasi-objective report which assess objective measures through self-report), and concluded that existing empirical research shows a high correlation among all measures.

Thus, OP as a concept struggle with both clarity of definition and standardization of measurement [28] and thanks to its multidimensional nature it cannot be characterized with one operational measure [27]. According to Carton and Hofer [29, p. 25] ‘‘It is clear from the prior empirical studies that there has been no consistency in the measures used to represent the construct of overall organizational performance in strategic management and entrepreneurship research’’. Due to fast-changing technologies and a competitive environment, manufacturing companies need to understand performance measures [30]. In this paper, the authors address the challenges associated with measuring OP in Latvian manufacturing companies within the context of Industry 4.0 and 5.0. and the first Research Question (RQ) is: What metrics for OP are currently used in Latvian manufacturing companies?

b) Organizational Citizenship Behaviour.

Organizational Citizenship Behaviour (OCB) is a concept that describes such types of employee behaviours which are not included in a job description and are not rewarded directly but positively influence the effectiveness of the organization [31]. OCB is a multi-dimensional concept and, for example, Podsakoff et al. [32] used in their study the following dimensions: (i) Altruism – helping other employees in their tasks or solving their problems; (ii) Conscientiousness – doing beyond minimum job requirements regarding to attendance and breaks; (iii) Sportsmanship – tolerating difficult circumstances without complaining; (iv) Courtesy - being considerate or polite with co-workers to prevent problems; (v) Civic Virtue – concerning about a company and participating/involving themselves in a life of a company. However, existing literature provides evidence that the dimensions of OCB are not consistent due to their contextual dependence: for example, they can vary by country [33] or by industry [34]. Thus, this paper aims to contribute to the existing body of knowledge by identifying the dimensions of OCB applicable to Latvian manufacturing companies from the perspective of Industry 4.0 and 5.0 and second Research Question (RQ) is: What types of Organizational Citizenship Behaviours are currently recognized in Latvian manufacturing companies?

B. Methodology

Following Kaplan & Norton [35] this research uses a qualitative approach to identify context-specific metrics for OP and dimensions of OCB.

Townsend, Loudoun and Lewin [36] state that qualitative research methods are now common in social sciences and particularly research on relations at work, including HRM. Qualitative research for this article is made in accordance to the model, proposed by Myers [37]: philosophical assumption, research method, data collection techniques, data analysis approach, written record

The first three steps of this model are presented in the current subchapter as related to methodology. The fourth step is both in this subchapter (how the authors organize data) and the next chapter Results and Discussion (how the authors interpret and report data). The fifth step is the article itself because Myers [37] states that the last step of a qualitative research project is to write it up.

a) *Philosophical assumption.*

Saunders et al. [38] states that the research philosophy plays a critical role in shaping the entire research design. For this article, the philosophical assumption is rooted in interpretivism, which aligns with qualitative research methods. Interpretivism assumes that reality is socially constructed and subjective, and it emphasizes understanding the meanings and experiences of individuals within a particular context.

Based on the technology-driven Industry 4.0, value-driven principles of Industry 5.0 and literature review it can be assumed that in manufacturing companies of Latvia, (1) OP measurement should demonstrate value-driven indicators and (2) OCB should include dimensions that align with technological advancements.

b) *Research method*

The research aims to identify currently used measurements for OP and the perception of the dimensions for OCB within Latvian manufacturing companies. To reach this aim authors use qualitative research because ‘‘this type of research evaluates opinions, views, and characteristics’’ [39, p. 33].

c) *Data collection techniques*

Because of the fact that this paper investigates data based on emotions, experiences and feelings it is preferable to use interviews rather than questionnaires [40]. To answer the RQs, semi-structured interviews are used because (i) the sequence of questions may vary, (ii) the questions are in general form and (iii) this type of interview allows asking more questions about what can be seen as significant replies [41]. Moreover, Denscombe [40] states that through the fact that answers of semi-structured interviews are open-ended, an interviewee is more emphasized on elaborating points of interest.

For semi-structured interviews, the most common are one-to-one interviews [40]. Firstly, they are relatively easy

to arrange. Secondly, the interviewee is the only source through which opinions and views are expressed. The third advantage is that such interviews are easy to control. Providing face-to-face interviews would also add relevance to the research through observations and asking for explanations behind the answers. At the beginning, the authors wanted to use purposive sampling to sample respondents to ensure that they are relevant to the RQs. However, this approach was met with unpredictable problems because no one agreed to be interviewed. When it became clear that it was impossible to maintain this approach the authors began to search the experts through acquaintances using “snowball sampling” [41]. The main advantages of this selection are the willingness and openness of participants during the interview process. As a result, the authors arranged 9 interviews with owners and top managers of Latvian manufacturing companies (Appendix B). The selection of these experts was based on specific inclusion criteria: (i) Industry Experience, (ii) Position and (iii) Knowledge of Industry 4.0 and 5.0. The participants in interview were required to have substantial experience within the manufacturing industry, as this would ensure their deep understanding of OP and OCB. Specifically, they must have had at least 5 years of experience in the sector. Experts were selected based on their roles within the companies - only owners (or co-owners) and top managers were included, as their strategic decision-making authority and oversight of company operations made them suitable to provide insights into OP and OCB. To ensure the accordance to third criteria they were selected based on their familiarity with the ongoing technological advancements and transformations related to Industry 4.0 and 5.0.

The experts were proposed to conduct interviews in Latvian, English or Russian. Three experts chose English and six Russian. The experts present in the Latvian manufacturing industry 8 manufacturing companies. They are: by gender – 8 males, 1 female; by work experience in manufacturing – 8 more than 10 years, 1 more than 5 years; by position - 4 owners (co-owners) and 5 top managers.

Before interviews, the experts were introduced to the meaning of (1) OP and subjectivism of its measuring and (2) OCB and its contextual dimensionality. This introduction ensured that all respondents had the same understanding of the concepts. Interviews were based on the question guide (Appendix C). According to Corbin and Strauss [42] guiding questions usually are open-ended at the beginning and then they tend to become more focused. Thus, the questions that give further information would be concentrated on specific concepts regarding different measures of OP and dimensions of OCB. Interviews and data collection were provided until no new conceptual insights were generated and repeated evidence was contributed for the categories.

d) *Data analysis approach*

For this qualitative research, the authors use the content analysis method. Znanz and Wildemuth [43, p. 1] state that “qualitative content analysis emphasizes an integrated

view of speech/texts and their specific contexts”. Moreover, it “goes beyond counting words” while allowing “to understand social reality in a subjective but scientific manner” [43]. Zhang and Wildermuth [43, p. 2] argue that “qualitative content analysis involves a process during which raw data is condensed into categories based on valid inference and interpretation”. The content analysis is inductive and that’s why before the process of coding it is useful to determine theoretical frameworks that would be used during analysis. The main purpose of this research is to identify measurements for OP and dimensions for OCB within Latvian manufacturing companies. That’s why it is logical after organizing data to distinguish from all factors named by experts only those indicators which are measuring performance in their organizations and only those types of out-of-role employee behaviours which positively influence organizational performance.

Before discussing of results, the authors checked the validity of the received data. Thomas [44] insists that one of the ways to assess the trustworthiness of findings is to compare with findings from previous research. For this purpose, the author would add categories that can be obtained from the interviews but are not directly related to the RQs:

- Linking technology transformation to Organizational Performance,
- Linking Organizational Citizenship Behaviours to Organizational Performance.

The authors chose these factors because there is consistency in previous findings which are related to them.

Schilling [45] argues that first of all the researcher has to decide whether to transcribe all interviews or only its main questions. To add value to the research the authors decided to make whole transcriptions using the WORD transcribe function which allows to receive text information based on audio recordings. All transcripts are written in Russian and English in MS Word format because all interviews were provided in Russian or English. As for one of the authors Russian is the native language, this would ensure that the author won’t lose any important points due to translation from Russian into English [42].

“The codes are assigned to a text part of any size, as long as they represent a single theme or issue of relevance to the research question” [43]. MS Word tool – “Review” was used to help during the process of coding. It allows writing the codes as comments in the Margins of the document. The codes based on transcripts in Russian were translated and written in English. After all 9 transcripts were coded; the next step was copying all codes with corresponding parts of interviews into 9 separate MS Excel files. Then, to combine all codes they were pasted into a new file. As a result, the authors got one spreadsheet which contains 9 columns with codes (one per each interview).

To make the next step authors needed to group received codes into subcategories. For this purpose, all cells which contain codes were coloured in accordance to relative subcategories. In the final document, the authors linked the

categories with subcategories and subcategories with codes. The next part of this step of qualitative content analysis – the interpretation and reporting of the findings, - is described in the fourth chapter of this paper.

III. RESULTS AND DISCUSSION

In this chapter, the organized data was analysed through theoretical frameworks. These frameworks helped the authors to structure data in accordance to defined Categories:

(1) Linking technology transformation to Organizational Performance, (2) Linking Organizational Citizenship Behaviours to Organizational Performance, (3) Organizational Performance Measurement (4) Organizational Citizenship Behaviour Dimensions.

The first two categories were used to assess the trustworthiness of this qualitative content analysis, third and fourth categories are directly related to the RQs. The third and fourth categories were developed based on the RQs, ensuring that the analysis remained focused on identifying relevant OP measurement approaches and OCB dimensions within Latvian manufacturing companies during Industry 4.0 and 5.0. Due to the fact that the authors knew that the majority of interviews would be held in Russian, additional research was done to find the correct Russian interpretation of the terms “Organizational Performance” and “Organizational Citizenship Behaviour” and as a result, the authors while interviewing Russian speakers, used terms “Эффективность организации” и “Гражданское поведение в организации”.

A. Linking technology transformation to Organizational Performance

During interviews, all experts showed examples that link technology transformation to OP which strongly supports the existing literature [46]. For example, E7 said that digital transformation, though resisted initially, is expected to improve efficiency and organizational adaptability and E5 mentioned that thanks to new technologies company performs better and can control processes to cut costs and ensure quality of production.

B. Linking Organizational Citizenship Behaviour to Organizational Performance

All experts said that out-of-role behaviours of employees help to improve OP which aligns with existing knowledge [47]. E7 explained during the interview that self-driven and cooperative behaviours help employees meet individual KPIs, ensuring the organization fulfils its broader performance goals while E1 argued that voluntary behaviours are a critical success factor because they significantly contribute into productivity and problem-solving.

Thanks to the presence of both first categories in the results of the content analysis across all interviews, the authors demonstrated the trustworthiness of their research.

C. Organizational Performance Measurement

The analysis reveals a mix of quantitative (financial and productivity metrics) and qualitative (quality management, efficiency, customer satisfaction, employee-centric, strategic metrics) measurements. These categories form a holistic view of how Latvian manufacturing companies evaluate their performance, addressing both short-term outputs (e.g., profits, project timelines) and long-term outcomes (e.g., customer satisfaction, company reputation). The detailed results are presented in Appendix D.

The transition to Industry 4.0 and 5.0 has brought significant changes to how manufacturing companies measure OP. This study explores the key performance metrics currently used by Latvian manufacturing companies, highlighting how digital transformation and human-centric approaches influence these measurements. Based on interviews with experts, OP metrics can be categorized into financial, quality management, productivity and efficiency, customer-centric, employee-centric and strategic metrics: Financial Metrics (Net sales, gross margin, return on investment (ROI), and EBITDA, revenue generation across different regions and entering new markets, capacity utilization, cost-to-output ratio, and long-term investment planning); Quality management (Product quality and delivery performance); Productivity and Efficiency (Resource utilization and technological integration); Customer-centric (market reach and reputation); Employee-centric (Employee satisfaction, engagement and performance); Strategic (Long-term planning and market adaptation). The results also show the link between Performance Metrics and Industries 4.0 and 5.0 context. Industry 4.0 focuses on digital transformation, automation, and real-time tracking. The adoption of digital tools enhances productivity and efficiency, with key indicators including Technology adoption rate (AI, robotics, IoT, GPS tracking), Real-time monitoring of production processes (QR codes, automated accounting, machine diagnostics), Operational efficiency improvements through digitalization (Cost-to-output ratio, uptime tracking). Industry 5.0 shifts the focus towards a human-centered, resilient and sustainable approach. Metrics reflecting these principles include: Employee satisfaction and engagement (Workplace satisfaction surveys, training effectiveness); Customer trust and satisfaction (Client feedback, compliance with high-quality standards) and Integrating automation (digital tools enhancing employee productivity and efficiency).

D. Organizational Citizenship Behaviour dimensions

While most behaviours align with traditional OCB dimensions, the interviews reveal emerging behaviours unique to Industry 4.0 and 5.0: (i) a stronger emphasis on technological curiosity, digital adaptability, and structured creativity. (ii) shift towards employee well-being, purposeful communication, and sustainability. The detailed results are provided in Appendix E.

Our research aligns with Organ’s OCB dimensions, demonstrating how employees in Latvian manufacturing

companies exhibit various discretionary behaviours that contribute to OP. The findings highlight five key dimensions of OCB and how they manifest in the context of Industry 4.0 and 5.0 transformations: Altruism (Helping others), Conscientiousness (Responsibility & Work Ethic), Civic Virtue (Commitment to Organization), Courtesy (Respect & Collaboration), Sportsmanship (Adaptability & Resilience).

However, our findings suggest that industry transition introduce four new behavioural expectations: Innovation and creativity (employees take the initiative to upskill, explore new technologies, and participate in digital transformation efforts), Adaptability and Proactivity (engagement in new technologies), Reflection and Communication (dedicated time for reflection and clear purposeful interactions), Customer focus (customer orientation).

IV. Conclusions

Latvian manufacturing companies employ a combination of financial and non-financial metrics for OP measurement. While financial KPIs remain critical, technological advancements under Industry 4.0 have led to the technological integration metrics. Simultaneously, the Industry 5.0 human-centric principle emphasizes employee satisfaction. The ability to balance automation with human-centric approaches will define long-term success in the evolving industrial development. Findings regarding types of out-role behaviours indicate that OCB dimensions are expanding in response to Industry 4.0 and 5.0. Employees demonstrate a stronger inclination toward proactiveness and adaptability, innovativeness and creativity, reflection and communication and customer orientation—dimensions not traditionally emphasized in OCB research. Thus, this study proposes an extended OCB model that integrates behaviours influencing organizational performance in manufacturing environments within Industry 4.0 and 5.0.

For future research empirical testing of the results would strengthen the validity of the findings and contribute to the academic and practical understanding of OP measurements and OCB in Industry 4.0 and 5.0 within Latvian manufacturing companies. Such validation would contribute to a more standardized understanding of OP and OCB in Industry 4.0 and 5.0, supporting both academic research and practical implementation in manufacturing firms.

From a theoretical perspective, this research contributes to the ongoing discourse on OP measurement by demonstrating how Industry 5.0 extends traditional OP frameworks beyond financial and efficiency indicators. It also expands OCB theory by identifying new dimensions—such as proactivity and adaptability, creativity and innovativeness, reflection and communication and customer orientation—and adding them to traditional OCB dimensions. Thus, this extended model not only provides a pathway for empirical testing but also enhances theoretical discourse by illustrating the context-specific application of OCB.

From a practical perspective, the findings offer insights for companies operating in the manufacturing sector. Understanding the evolving nature of OP measurement could help companies align their measurement systems with reaching strategic goals. Additionally, recognizing the emerging dimensions of OCB allows HR managers to refine employee engagement, training, and leadership development initiatives to foster behaviours that enhance organizational performance and reinforce the need for a strategic alignment between employee citizenship behaviour and organizational goals.

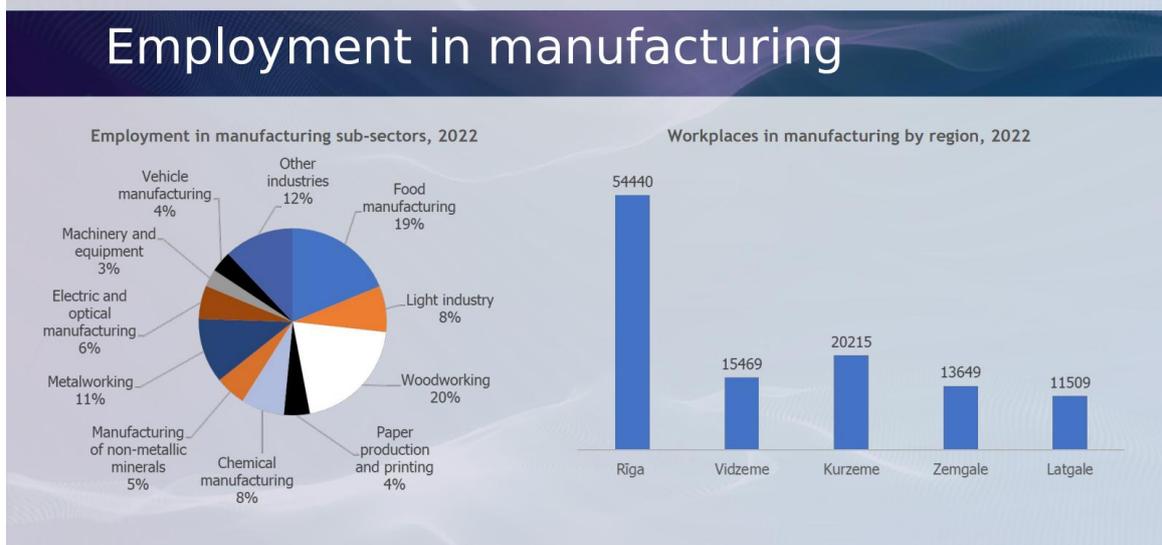
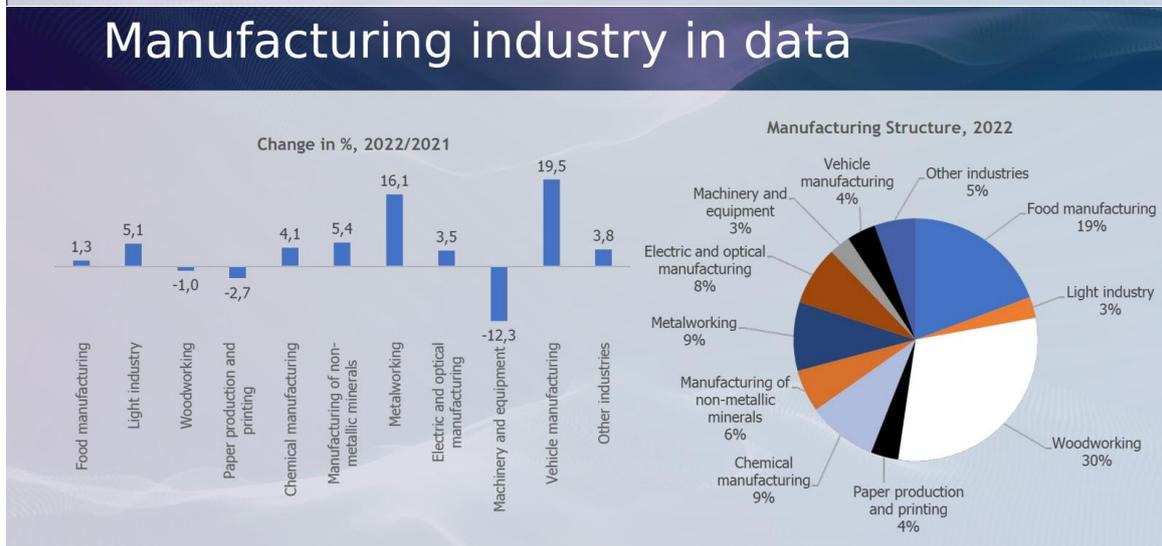
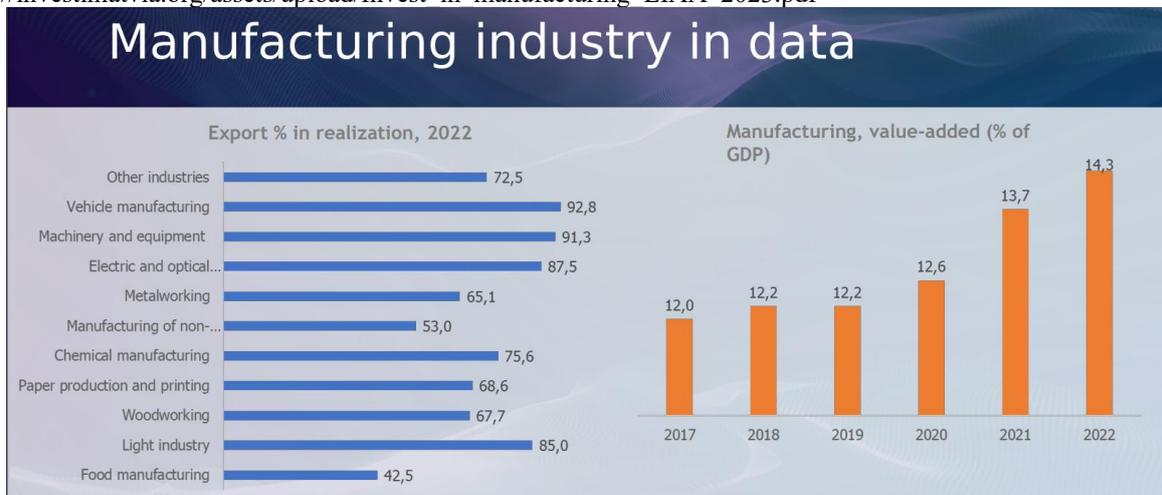
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Appendix A. Based on LIAA investment report

[https://investinlatvia.org/assets/upload/Invest in manufacturing LIAA 2023.pdf](https://investinlatvia.org/assets/upload/Invest_in_manufacturing_LIAA_2023.pdf)



Appendix B List of interviewees

| Expert | Name of the company | Position |
|--------|----------------------------|---------------------|
| E1 | TONUS ELAST SIA | Marketing Director |
| E2 | A/S Marupes Metalmeistars | Head of Production |
| E3 | OE Trans line, SIA | Owner |
| E4 | SIA MEDPRO NUTRACEUTICALS | Owner |
| E5 | SIA Groglass | Director |
| E6 | Chemical Technologies, SIA | Director |
| E7 | Frame House group, SIA | Owner |
| E8 | SIA Groglass | Head of Innovations |
| E9 | SIA Roug | Owner |

Appendix C Question guide for interviews

1. In the history there were five Industrial Revolutions (showing picture with their infographic). Now manufacturing companies in Latvia are working in the context of two industrial revolutions: Industry 4.0 and Industry 5.0 What do you think about the influence of these Industries 4.0 and 5.0 on your company?
2. There are surveys which show that Organizational Citizenship Behavior lead to Organizational Performance because it consists of proactive types of employee behaviors which are not included in their job description but influence companies' overall performance (showing picture with their infographic). The example of such behaviors is assisting other employees in their work or helping new employees to understand some nuances about work place. What do you think about such behaviors? What types of such behaviors in your company can you recognize as helpful to the company performance?
3. There are different types of measurement systems which are utilized to assess Organizational Performance (showing picture with their infographic). What measurement do you use in your company?

Appendix D Organizational Performance (OP) Measurements

| Category | Subcategory | Measures Identified | Interviews Mentioned |
|-----------------------------|--------------------------------------|---|------------------------|
| Financial Metrics | Profitability | Net sales, gross margin, EBITDA, ROI, profitability, revenue, production volumes. | E1, E2, E3, E5, E8, E9 |
| | Cost Efficiency | Input costs to output results, cost-saving through automation, time and resource optimization. | E5, E6, E7 |
| Quality Management | Product Quality | Compliance with ISO standards, EU Medical Device Regulations, stringent quality checks. | E1, E4, E6 |
| | Customer Satisfaction | Customer feedback, claims, NPS scores, surveys, repeat business. | E1, E3, E8, E9 |
| | Delivery Performance | Timeliness, quality, and accuracy of deliveries. | E8 |
| Productivity and Efficiency | Resource Utilization | Capacity utilization, machine uptime, productivity per hour, time spent on projects, deviations from set resource standards. | E4, E5, E8, E9 |
| | Technological Integration | Use of automation, GPS tracking, automated accounting, QR coding, advanced machinery diagnostics, digital design tools. | E3, E6, E7 |
| | Workflow Optimization | Shift to collaborative workflows, daily and weekly tracking of metrics (plan adherence, time losses, production output). | E5, E6 |
| | Speed and Time Reduction | Time spent on tasks and processes, quick response times, reduction in handling customer requests. | E6, E7 |
| Customer-Centric Metrics | Market Reach and Reputation | Turnover rates, market share, reputation, and customer satisfaction as reflected in external perceptions. | E1, E2, E3 |
| | Customer Trust | Instilling confidence through quality, reliability, and meeting diverse customer demands. | E7, E8, E9 |
| | Marketing Analytics | Tracking customer behavior, engagement, and conversion rates. | E7 |
| Employee-Centric Metrics | Employee Satisfaction and Engagement | Annual surveys, employee turnover rates, workplace satisfaction, employee training and development, feedback loops. | E2, E5, E8 |
| | Employee Performance | Individual KPIs, human-driven productivity metrics (e.g., pieces per man-hour). | E1, E8 |
| Strategic Metrics | Long-Term Planning and Viability | Long-term capacity planning, adaptation to economic fluctuations, balancing flexibility with efficiency, focusing on larger projects with | E4, E7, E9 |
| | Market Adaptation | Readiness to embrace digital realities, managing external market pressures, tracking geopolitical compliance (e.g., sanctions). | E2, E6, E7 |

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Appendix E. Organizational Citizenship Behaviour (OCB) dimensions.

| Category | Subcategory | Measures Identified | Interviews Mentioned |
|------------------------------|-------------------------------------|--|----------------------|
| Innovation and Creativity | Self-Driven and Creative Thinking | Finding innovative solutions, targeting unconventional markets. | E1, E6, E7 |
| | Structured Creativity | Proposing business-relevant creative ideas. | E5, E6 |
| Altruism | Collaboration and Support | Helping colleagues, mentoring newcomers, fostering teamwork. | E1, E2, E3, E6, E7 |
| | Teamwork and Support | Supporting others through acts of kindness beyond formal roles. | E7, E9 |
| | Fostering Positive Work Climate | Resolving conflicts, promoting harmony. | E2, E9 |
| Conscientiousness | Commitment to Procedures | Adhering to ISO standards and organizational processes. | E1, E8 |
| | Reliability and Accountability | Consistently completing tasks accurately and taking ownership of duties. | E8, E9 |
| | Respect for Workplace | Maintaining a clean, professional workspace. | E2, E6 |
| | Persistence and Systematic Work | Maintaining focus and organized efforts, even under challenging conditions. | E8, E9 |
| Adaptability and Proactivity | Adaptability and Change Acceptance | Embracing technological and procedural changes. | E1, E4, E7, E9 |
| | Proactivity and Problem Solving | Solving problems, offering suggestions, and seeking guidance when needed. | E3, E6, E9 |
| | Employee Engagement with Technology | Taking initiative to adopt and implement new tools and processes. | E3, E4, E9 |
| Sportsmanship | Hard Work and Dedication | Voluntary overtime, flexibility, and structured effort. | E2, E4 |
| | Generational Behavioral Differences | Older employees' flexibility vs. younger employees' work-life balance priorities. | E2 |
| Reflection and Communication | Reflective Practices | Dedicated time for reflection (e.g., no-meeting days), flexible work-from-home policies. | E5 |
| | Cultivating Mindful Communication | Ensuring clear and purposeful interactions in meetings and emails. | E5 |
| Civic Virtue | Civic Virtue | Loyalty, pride, and promoting the company externally. | E7, E9 |
| Customer Focus | Customer Orientation | Building strong client relationships through kindness and communication. | E3, E9 |
| Courtesy | Respect and collaboration | Creating a sense of belonging, fostering collaboration and friendship. | E7, E9 |

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