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THE IMPACT OF WORK PROCESS CLARITY AND PROCESS FLEXIBILITY ON EMPLOYEE JOB SATISFACTION AND JOB PERFORMANCE	**DARBO PROCESO AIŠKUMO IR PROCESO LANKSTUMO ĮTAKA DARBUOTOJŲ DARBO PASITENKINIMUI IR DARBO REZULTATAMS**

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INTRODUCTION

Relevance of the topic

Employee job satisfaction and job performance have long been central topics in organizational research due to their critical role in enhancing overall productivity, reducing turnover costs, and fostering a positive workplace environment (Freeman, 1977; Lawler and Porter, 1967; Locke, 1969), it is also important for companies as it affects the end-customer (Lu et al, 2019) and therefore can impact the financial and other results of a company.

On the other hand, we have business processes, which can influence a company's profitability and market competitiveness, among other things (Amponsah-Kwatiah and Asiamah, 2020; Butt, 2020; Liu et al, 2009), but the human-centered impact of business processes, particularly on employee job satisfaction and performance, remains an underexplored area in existing research (Shafagatova et al, 2023), which creates a gap of knowledge for both researchers and organisations. This knowledge gap can influence researchers as relationships are not fully understood and can influence companies and managers by limiting their knowledge on how influential process clarity and flexibility is.

In today's rapidly evolving global environment, shaped by advancements in artificial intelligence, disruptions from pandemics, and shifting geopolitical landscapes, understanding the influence of business processes on employee outcomes has become more critical than ever. Without this knowledge, it would be hard to say how influential process clarity and process flexibility is and how it can influence everyday satisfaction and performance of employees.

While employee job satisfaction, job performance, and business processes are widely recognized as crucial topics for both research and practice, the specific relationships between process flexibility, clarity, and individual-level employee outcomes remain unexplored. Addressing this gap is essential to understanding their potential influence and significance.

Exploration of the topic

Sawyer (1992) was the first researcher who looked at process clarity as a separate construct, but was not able to find a direct relationship to job satisfaction. Subsequent research built on Sawyer's (1992) foundational work, revealing that process clarity can positively influence team performance (Hu and Liden, 2011; Zhang et al, 2022). However, its impact on individual performance and job satisfaction remains largely unexamined. Shafagatova et al (2023) recently found that some process variables can have a positive impact on perceived job satisfaction, but the research had limited variables and was based on binary data and therefore also had significant gaps.

Research novelty

Previous research on this topic does support the fact that work process flexibility and clarity should have a positive impact on employee job satisfaction and performance, but previous research had various differences like looking at team-level variables or limitations like using binary data with limited variables or not finding the relationship at all. This study seeks to generate new insights into the direct relationships between work process clarity, process flexibility, and employee outcomes, addressing existing knowledge gaps by focusing on individual-level analysis.

Research problem

To research the relationship between the two independent variables of work process clarity and process flexibility and two dependent variables of employee job satisfaction and job performance.

Aim of the master thesis

To assess the influence of work process clarity and process flexibility on employee job satisfaction and performance, providing a deeper understanding of these relationships.

Objectives of master thesis

1. To explore and synthesize existing scientific literature on process clarity, process flexibility, job satisfaction, and job performance, providing a structured theoretical foundation for the research.
2. To compare and analyse different measurements of process clarity, process flexibility, job satisfaction and job performance.
3. To analyse the currently available scientific literature about the relationship of work process clarity and flexibility and employee jobs satisfaction and performance and find the gaps of knowledge in past research.
4. To create a research model and methodology which can be used to evaluate the impact of work process clarity and process flexibility on employee job satisfaction and job performance.
5. Assess the relationship between the main concepts of the thesis by conducting quantitative research.

Research methods used

Scientific literature research method:

- Scientific literature was selected based on main keyword search on google scholar and directly on websites of scientific research papers, prioritising literature which was recently published (2019-2024);

- Older literature was reviewed, especially when trying to establish the descriptions of main concepts;
- Research literature was analysed and compared to understand each concept, their different measurements and relationship, insights generated.

Empirical research method: survey, descriptive analysis, regression analysis.

Structure of the thesis

The first section examines the theoretical foundations of business processes, employee job satisfaction, and job performance, emphasizing their measurement and significance. The final subsection discusses and compares scientific research that worked on linking the main constructs and highlights the gap in current research.

Section two presents a research model and method of research based on scientific literature and the identified gaps. Finally, section three includes data analysis and discussion of results. In the end, conclusions, suggestions, and limitations are discussed.

The findings of this thesis were presented at the international scientific conference The Modern Economic, Technological and Societal Trends: New Challenges or Opportunities on November 29, 2024, and the abstract was published in the conference proceedings.

1. CONCEPTUALISATION OF THE RELATIONSHIP BETWEEN PROCESS CLARITY AND FLEXIBILITY AND EMPLOYEE JOB SATISFACTION AND PERFORMANCE

The relevance of processes has seen a lot of attention in past research as processes are everywhere and it affects everyone, even the writing (or reading) of this thesis is a process in itself. On the other hand of the topic, there is employee job satisfaction and job performance, which are also concepts that have been researched by many researchers. Before trying to find the relationship between the concepts, it is necessary to first analyse each concept and look at the research done in the past.

1.1. Processes and their management

In this subchapter, concepts and measurements of process, process flexibility and process clarity will be reviewed, analysed based on previous research literature and the gaps in current research will be established.

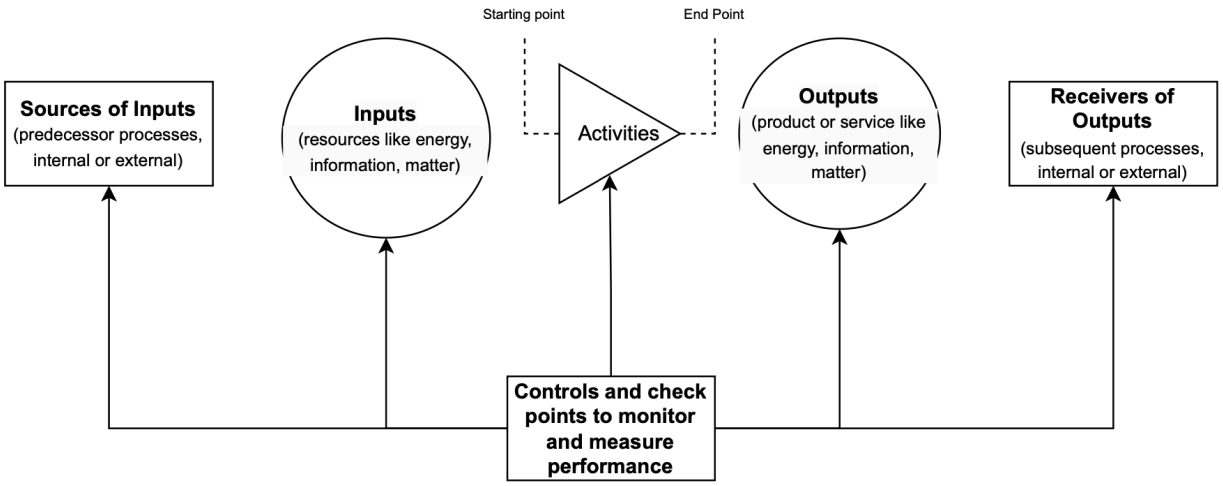
Before analysing process clarity and process flexibility it is first important to understand what is the meaning of a process. Multiple process descriptions can be found in literature:

- Process is a set or combination of activities that have structure, logical order and dependance with the objective to get a result (Aguilar-Savén, 2004).
- The process of learning can be described as taking input (information, video, lecture, text), giving it attention (time, energy), rehearsing, encoding and retrieving it and getting an output (knowledge, new information) (Mayer, 1988)
- Processes are unique and depend on the inputs (resources), sequence of activities carried out, other related processes, execution of the process and the pre-requirements of the process (Luder, Hundt, and Keibel, 2010)

Weske (2012) describes a business process as a set of related actions that when done deliver some sort of product or service (an output) to a customer. Based on Weske (2012) it's also important to understand the business logic and operational activities that can have impact on these processes. The International Organization for Standardization (ISO) also has a similar understanding of processes, as it can be seen in Figure 1.

Figure 1

Process schematic representation in ISO 9001:2015.



Source: Created by the author of this thesis, based on ISO (2015)

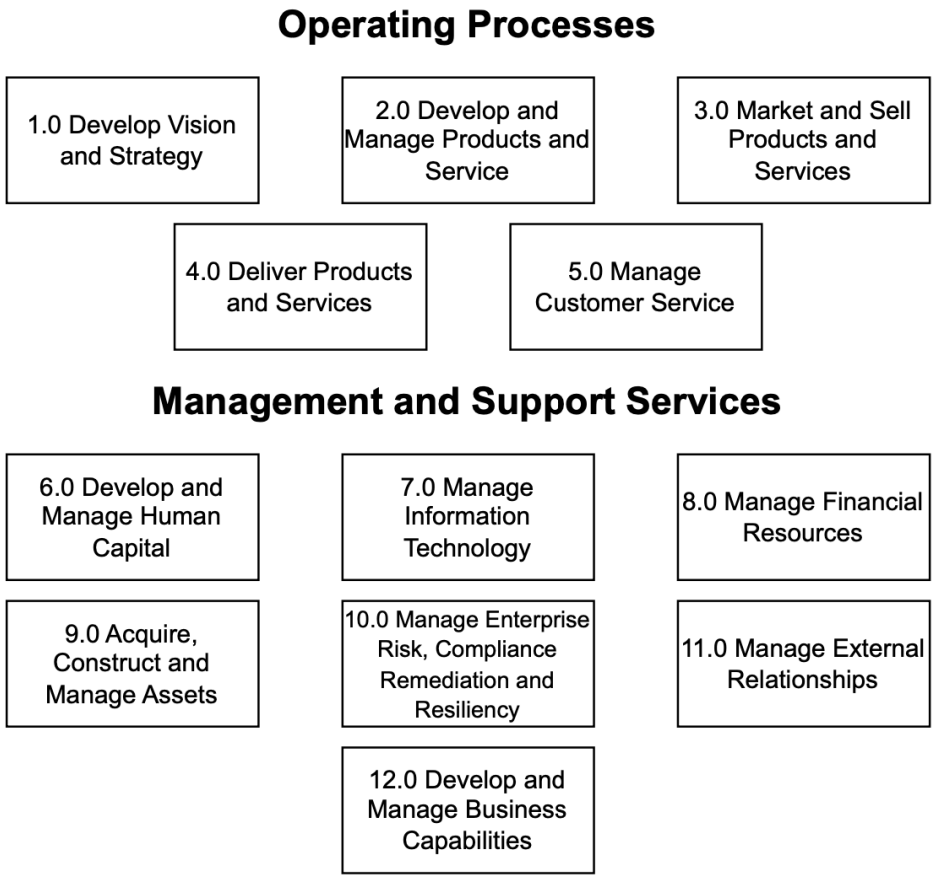
After analysing various scientific literature and ISO standards around processes it can be summarised that business processes are a set of actions that transform inputs into outputs and that these processes are usually pre-defined and have certain expectations, business logic, restrictions and can interact with other processes.

American Productivity and Quality Center (APQC) built a framework, which is a very general business process framework that can be used in organisations of various different sectors and across different levels of maturity in the organisation. APQC framework (APQC 2023) divides all processes into two categories - operating processes and management and support services, which are further divided into twelve different types of organisational processes, as seen in Figure 2.

Similarly, scientific researches also found different ways to classify business processes: de Bruin and Rosemann (2007) classified processes based on their maturity, Richter-von Hagen, Ratz and Povalej (2005) do it based on their structure (structured, semi-structured, unstructured), while Armistead, Pritchard and Machin (1999) and Pushpendra Kumar Singh (2012) did it based on function (support, core and management). Overall, taking into account that researchers classify processes so differently and so do process practitioners, it can be summarised that there are many diverse processes and therefore there is a wide range of classifications.

Figure 2

Classification of processes by American Productivity and Quality Center.



Source: Created by the author of this thesis, based on APQC (2023).

Bokrantz et al (2016) in the analysis of production disturbance processes discussed that it is important to handle and understand such processes in order to ensure resource efficiency, flexibility and the highest possible productivity in the manufacturing industry. Liu et al (2009) has evaluated the significance of business processes in managing not only the business itself, but also to ensure coordination and the flexibility of sharing information between different business partners, which in turn allows both sides to be more competitive in the market. Recent research in Ghana by Amponsah-Kwatiah and Asiamah (2020) found that the working capital management process has a positive effect on return on assets and return on equity (profitability) in manufacturing firms, which also supports the value of managing business processes. Butt (2020) claims that process management of digital transformation is a necessity for the growth and competitiveness of businesses. It is clear that the management of business processes have a significant impact on the success of any company and companies who can manage processes better will be able to achieve better results.

Lean management and agile management practices in combination with traditional management has seen an increase in popularity in recent years as also noted by the increase in research papers on such topics (Lalmi et al, 2022). Therefore, it is important to also explore lean and agile methodologies and what part they play in understanding processes.

According to Prado-Prado et al (2020) lean is a philosophy or a style of management with many different techniques with the the focus being on reducing waste - be it waste in time, waste in resources or other waste. By reducing waste the organisations can improve the quality of their processes and therefore achieve better results (in terms of product quality, profit margins, efficiency). On the other hand, agile is another project management methodology which is under the lean methodology umbrella, but is focused on shorter, incremental changes and delivering results quicker, but with smaller scale, which allows organisations to be more flexible (Wiechmann et al, 2022).

For process management, agile is a much more flexible management technique due to short increments of work and lean is also different compared to traditional process management due to focus on reducing waste. While agile and lean practices are significant for understanding process management in general, neither of these methodologies talk about individual process clarity and process flexibility, therefore they will not be further explored in this thesis.

To summarise, a process is when an input is taken (information, raw material, time, other resource), a certain sequence of actions are done with this input (manufacturing, review, analysis) and an output (new information, product, service) is generated. Processes take time and can be of various significance, difficulty, maturity and function. There is a wide range of processes that each person and business carries out every day (like manufacturing processes or responding to a customer's request). The most important processes are in the workplace, where people (employees) are carrying out value-added processes to create value for businesses and the customers.

1.1.1. The concept of process clarity in past research, its measurement and similar constructs

Sawyer (1992) dissolved a much researched concept - role ambiguity - into two concepts, one of which is process clarity and claimed that process clarity is a measurement that can tell how well does a person understand a process, which he needs to follow in order to reach the goal. The evidence found by Sawyer (1992) was that process clarity and goal clarity are two distinct concepts, which were previously hiding under role ambiguity. In his research, Sawyer (1992) also developed process clarity construct measurements which were later also modified and used by Zhang et al (2022) successfully.

Sawyer (1992) found that autonomy, task feedback, and agent feedback were the antecedents of process clarity. Analysis of scientific literature did not find other measurements or descriptions of process clarity or similar concepts, for example, process ambiguity.

To have a better understanding of how clarity is described by other researchers, similar concepts to process clarity were analysed to see if what Sawyer (1992) described as process clarity can be supported.

Based on Table 1, it can be summarised that clarity of something is achieved when it is clear how things are done and when a person can understand how it works and how to achieve it. In the case of process clarity, one would need to understand how the process works in order to have process clarity.

Table 1

Describing clarity in other concepts

Concepts	Description	References
Role clarity (opposite of role ambiguity)	Feeling of having enough information about the role to fully understand the role.	Lyons, T. F. (1971)
Goal clarity	Goal clarity clarifies and makes it easy to understand what is effective performance.	Latham, G. and Locke, E. (1991)

Source: compiled by the author of this thesis.

The significance of clear goals (goal clarity) has been researched by van der Hoek et al (2016) as having a positive effect on team performance, effectiveness and efficiency. Research by Fürstenberg et al (2021) also found that goal clarity, together with other variables, can predict work engagement directly and via leaders' behaviour.

Analysing the research in role clarity, similar positive effects are also found. According to Orgambidez and Almeida (2020), role clarity, including description of roles and expectations to employees, as a moderator can positively influence employee job satisfaction, when social support from supervisors and co-workers is present. In a similar research Chen et al (2022) found that when an employee's role is clear, the employee is expected to have less risk of burnout and their intrinsic motivation is higher.

Based on previous research both role and goal clarity has clear relevance in the economic environment by influencing employee job satisfaction and engagement at work, which might

also influence job performance. This means companies and employers should be focused on fulfilling this clarity to keep the performance high.

It can be summarised that clarity is reached when a person understands what is expected from him - understanding a goal, having enough information about one's role or having enough information about how to carry out a process. While goal clarity and role clarity has seen a significant amount of research and the significance of these concepts is clear, the concept of process clarity has not received as much research. This research aims to identify if process clarity also has a similar significance to goal and role clarity while influencing employees job satisfaction and job performance.

Role of someone could be described as a high-level purpose, for example - to be a parent. When the role of a parent is looked at from a goals perspective, there could be plenty of goals: to make sure the child is not sick, to ensure education of the child, to ensure a safe environment, to ensure a warm home, etc. When process-level is reached, each goal must be analysed even further by asking questions like "how can this goal be reached"? If the goal "to ensure education of the child" is analysed, the process to achieve this goal could involve many steps, for example: buying and reading children books related to writing, mathematics, history, then homeschooling when the child is older, ensuring the child has enough support before/when going to school, helping with homework, etc. That being said, the author of this thesis claims that process is a unique concept when compared to role or goal clarity.

While role, goal and process can be perceived as similar concepts, it is clear that they are unique and each is more detailed than the previous one. Processes have been researched a lot and have a lot of different measurements and classifications but the lack of research on process clarity is surprising, considering that processes affect every aspect of our lives and clarity on how to achieve a successful process output should be of significant value for companies and researchers alike. This thesis aims to reduce this gap of knowledge around process clarity.

1.1.2. The concept of process flexibility

Process flexibility allows businesses to not only deal, but to strive in times that are uncertain and when operations need variation and evolution. This should be extremely relevant to companies now, when there is a lot of change in technology (artificial intelligence and machine learning), geopolitical uncertainty (tensions in Europe and Gaza Strip) as well as unforeseen events like COVID-19 pandemic.

Different authors in the literature describe process flexibility in different ways. Based on Schonenberg et al. (2008), a process is flexible when it has the ability to change and adapt parts of the process that are affected by foreseen and unforeseen change, while also retaining other

parts of the process that are not implicated by the change. Flexibility can also be described as something that is not too stable, but also not unstable or something that can maintain some stability in the presence of change (Regev and Wegmann, 2005).

Definitions of process flexibility are similar and generally describe the same specifications, but when analysing scientific literature, there are different views on how process flexibility should be classified. Table 2 shows how different authors classify process flexibility.

Based on Table 2, the earliest authors described process flexibility at a very high level, focusing on change and how change happens as if they were trying to understand the change itself. Times have now changed and flexibility and change is inevitable and can be seen in everyday life, therefore more recent authors, when classifying process flexibility, started looking at things like friction and reason for change. It can be summarised that process flexibility classification, just like processes themselves, is very diverse, but a few common topics that process flexibility is usually classified by can be extracted from the literature, that is: (1) reason for flexibility, (2) level or intensity of flexibility, (3) process of flexibility.

Table 2

Classification of process flexibility by different authors

Author	Classification of process flexibility
Kumar and Narasipuram (2006)	**Stimulus** of flexibility, strategies and tactics for achieving flexibility and the **flexibility itself**.
Regev, Soffer and Schmidt (2006)	Flexibility is viewed as the **capability of change**, therefore: abstraction level of change, subject of change and properties of change.
Shaw et al (2006)	**Type** flexibility, **structural** flexibility and **volume** flexibility.
Schonenberg et al. (2008)	Flexibility by **design**, flexibility by **deviation**, flexibility by **underspecification**, flexibility by **change**.
Reichert and Weber (2012)	**Looseness**, **variability**, **adaption** and **evolution**.
Cognini et al (2016)	Classified by **motivation** for flexibility: exceptions, technology evolutions, new working methods, change in the laws, changes in the target goals and cost savings.
Mejri, Ayachi-Ghannouchi and Martinho (2018)	Based on the **number of changes** (for example - insert, delete or move activity within a process) needed to the process to achieve a new process.
Nguyen Hoang et al. (2022)	Based on **friction** of flexibility: push towards and pull against forces.

Source: compiled by the author of this thesis.

Reichert and Weber (2012) analysis of process flexibility in process-aware information systems (PAIS) found that that based on process flexibility adaptation, evolution, looseness, and variability the PAIS and their processes must be configurable, deal with exceptions, allow rapid changes and must also support ongoing changes. What is more, it was highlighted that monitoring, analysing as well as traceability, security, compliance with policies and governance and accountability of processes is also extremely important when process flexibility is enabled (Reichert and Weber, 2012). This is also similar to the three most common topics of process flexibility covered by other authors.

Another research by Nguyen Hoang et al. (2022) used friction (pulling and pushing forces) as a metaphor for process flexibility and found evidence that friction occurs in realising process flexibility and that process stories (in some contexts more and in some contexts less) can reduce this friction through the whole business process management lifecycle, by increasing knowledge about business processes, which in turn allows easier implementation of process flexibility. The findings confirmed that process flexibility is vital in all stages of process management. (Nguyen Hoang et al., 2022).

Other research confirms the findings of Nguyen Hoang et al. (2022) in a sense that before process flexibility can be designed and specified, the need for flexibility (like friction) must first be understood and links between friction and flexibility must be found to ensure process flexibility can be achieved (Kumar and Narasipuram. 2006). Similar findings are also discussed by Regev, Bider and Wegmann (2006) - they viewed business process flexibility in terms of what needs to be unchanged, in that case the importance of first having a process and understanding the requirements also mattered.

Based on Cognini et al (2016) the majority of research around process flexibility between 2000 and 2014 is conducted based on the need created by new working methods, exceptions, change in the law, technology evolution and a few other factors, but none of them mention the implications on job performance or job satisfaction, which is the focus of this research. Similar to process clarity, it is interesting to see that processes (or at least process clarity and process flexibility) have not been linked to employee job satisfaction and job performance.

To summarise, process flexibility is a very broad concept that has different explanations and that can be viewed from many different angles, but they generally focus around the same things, like reason for flexibility, the flexibility itself and the level, friction or intensity of the change. In a constantly changing world, the need for flexibility in processes is coming from never-ending changes in the work environment, exceptions in the previously described processes and constant evolution of laws and technology.

1.1.3. Indicators of process flexibility

Now that process flexibility description has been analysed and understood, it is also important to understand how different researchers propose to measure process flexibility.

Longo and Motta (2006) when presenting a business processes performance model measured process flexibility by simply asking if the *capability to manage anomalies* is present or not present. Meanwhile, while proposing a business performance measurement system, Gaiardelli et al (2007) proposed to measure process flexibility with 5 dimensions, which was much more comprehensive compared to Longo and Motta (2006).

Later, Schonenberg et al (2008) took it a step further and proposed an even more comprehensive taxonomy for process flexibility that included 4 main criteria and their measurements:

1. **Flexibility by design**, when a process is specifically designed to be flexible. The measurements of design include: *parallelism, choice, iteration, interleaving, multiple instances* and *cancellation.*
2. **Flexibility by deviation**, when the process only temporarily drifts from the usual sequence. The measurements of deviation are: *undo, redo, skip, create additional instances, invoke tasks* and *violation of constraints.*
3. **Flexibility by underspecification**, when the designed process is purposefully missing information or steps, because it is known that the information is unknown. The measurements of underspecification are: *Late binding, late modelling, before placeholder execution* and *at placeholder execution*. The "*at placeholder*" measurements can also be static and dynamic.
4. **Flexibility by change**, when unforeseen events appear and the process must be changed permanently. The measurements of change are: *momentary* or *evolutionary*, *entry time* or *on-the-fly* and *forward recovery, backward recovery, proceed* or *transfer.*

Gong and Janssen (2010) proposed a different approach for measuring process flexibility and agility, which included 6 other dimensions. The dimensions proposed by Gong and Janssen (2010) could be measured using various metrics, however, the approach had a lot of limitations as the dimensions were very context-based and each organisation might have different processes and scenarios and therefore different metrics might be needed to measure flexibility.

Looking at the different process flexibility measurements proposed by different authors (Table 3) it can be said that the earliest measurement was very simple - either capability to manage change is there or not, but later authors tried to improve the measurements to be more exact. Some authors tried to create very complex dimensions of process flexibility, but they lack

wide adoption, because there are many different processes and the measuring might be different in different settings. Other measurements like Schonenberg et al's (2008) were more adaptable and allowed measuring of process flexibility in different settings.

Table 3

Different measurements of process flexibility

Author	Proposed measurements of process flexibility
Longo and Motta (2006)	Capability to manage anomalies is present or not present.
Gaiardelli et al (2007)	• Ratio of products cost (variable costs divided by total costs) • Time to complete process • Redesign frequency • Upside source flexibility • Number of products divided by number of services
Schonenberg et al (2008)	• Flexibility by design • Flexibility by deviation • Flexibility by underspecification • Flexibility by change
Gong and Janssen (2010)	• Throughput • Response time • Implementation time • Operational cost • Implementation cost • Quality.

Source: compiled by the author of this thesis.

In conclusion, while process flexibility description is similar in various literature, there is no one way to classify or measure process flexibility, which is mostly because there are so many different processes, which have different characteristics and therefore require different measurements. There are many different classifications of process flexibility and each time it is measured, the measurements have to be chosen based on the exact scenario and process that is being measured.

In subchapter 1.1, research surrounding the concepts of process, process flexibility and process clarity (with a few related concepts) were analysed. It was established that business processes have seen a lot of research due to their value and impact on the performance of organisations. In terms of the two main concepts, process flexibility has seen a lot more research, classifications and measurements and the relevance of process flexibility is clear, while process clarity has very little research and the significance of it is not as clearly researched, which this

thesis aims to achieve. What is more, in the majority of previous research processes are evaluated due to various business needs, but not due to the influence on employee job satisfaction and job performance, which is where this thesis also brings novelty.

1.2. The concept of job satisfaction and job performance

Now that the relevance and descriptions on the process side are established, this subchapter will aim to explore the other major side of this thesis - employee job satisfaction and job performance. In this subchapter, concepts and measurements of employee job satisfaction and job performance will be analysed based on scientific research and gaps in research will be identified to show the novelty of this thesis.

1.2.1. Definition and theories of job satisfaction

The concept of job satisfaction has been researched in many different aspects as it is an important thing in every working person's life. Based on Skalli et al (2008), job satisfaction is a measurement, which can show the worker's usefulness derived from the job. Based on many different researchers, job satisfaction can lead to better work performance, higher presence and less turnover (Freeman, 1977; Lawler and Porter, 1967; Locke, 1969), which in turn can also affect the end-customer of the company (Lu et al, 2019).

Different theories of job satisfaction have already been reviewed and summarised by many researchers, a summary of such theories and different proposed dimensions of satisfaction can be found in Table 4.

The first theories about job satisfaction were more focused on individual needs and if the needs would be fulfilled, the person should also be satisfied. On the other hand, later theories looked at job satisfaction at a more diverse level, showing that there could always be factors that increase or decrease the satisfaction. These theories have similarities, as they touch upon the psychological expectations of the employee, the basic needs or requirements to feel satisfied as well as the expected outcomes or goals to be achieved. It is also clear that job satisfaction is a well researched topic that has many different views that have similarities and differences alike. No one theory is fully correct and can be fully relied on - people are different and these theories can help to define employees satisfaction in an attempt to measure it, but different circumstances can require different approaches when it comes to understanding job satisfaction.

Psychologists and researchers have researched job satisfaction a lot and there is a reason this is such a relevant topic to this day as it affects the businesses and its customers as well. Kessler et al (2020) found that job satisfaction can predict a positive linear change in financial performance of a firm over the course of four years, which means that while immediate effect of

employee's job satisfaction might not be visible, the result over time is positive. Paais and Pattiruhu (2020) found similar results, where if employees are more motivated, they also are more satisfied with their work and are able to perform better, which in turn can influence the results of a company. In another study it was found that understanding employees' satisfaction was important as it had a causal relationship with customer satisfaction (Al Kurbi et al, 2020).

Table 4

Summary of job satisfaction theories

Author and theory	Theory description	Dimensions of satisfaction
Maslow (1943) - theory of needs	People can only be satisfied when our most basic needs are met, but then we will seek to satisfy our higher set of needs to achieve higher satisfaction.	Physiological, security, social, esteem and self actualization.
McGregor (1960) - theory X and Y	Theory X says employees are inherently not motivated and need to be controlled by managers to achieve goals, while theory Y states that employees are self-motivated and can achieve goals themselves.	Attitude, direction, responsibility, motivation and creativity
Adam (1963) - equity theory	There must be a balance between employees' effort (input) and the results (outputs) they receive in return.	Inputs and outputs of work.
Vroom (1964) - expectancy theory	Employees have different goals that drive them to work and believe that doing work will help them achieve these goals.	Expectancy, instrumentality, valence
Herzberg (1968) - two factor theory	There are motivators that increase job satisfaction and hygiene factors that can increase job dis-satisfaction.	Hygiene factors and motivators.
Locke (1968) - goal-setting theory	Employees' conscious ideas (goals) impact the actions (performance) and satisfaction.	Intrinsic rewards and extrinsic rewards.
Deci and Ryan (2000) - self-determination theory	When employees feel all three of the dimensions, they become psychologically healthy and feel motivated.	Autonomy, competence and relatedness

Source: Compiled by the author of the thesis.

The link between job satisfaction and organisational performance was also investigated by Bakotic (2016) - after investigating 40 large or medium size companies it was found that the link between job satisfaction and organisational performance is stronger than the link between organisational performance and job satisfaction. Therefore it can be concluded that when employees are more satisfied, this also reflects on the performance of the company and not the other way around.

Research on dental hygienists by Rėderienė (2022) found that different criteria of job satisfaction might have an impact on the physical and psycho emotional well being, which shows that job satisfaction is not only relevant from the business perspective, but also to keep the employees healthy.

Overall, the importance of employee satisfaction is clear not only from the human perspective of wanting your employees to be more satisfied and healthy, but also from the business perspective - when employees are satisfied with their job, they will generally be able to perform better, which in turn will allow for better business results and more satisfied customers.

Job satisfaction can be described as a psychological state of an employee when their needs are met, which can be influenced by the environment around the job. While job satisfaction has been researched a lot in the past 50 years, it's still an active topic in today's research. Job satisfaction affects employee's performance and the performance then impacts the business performance and even customer's satisfaction. This leads to businesses trying to ensure employees stay satisfied with their work and the various attributes that go under job satisfaction in order to keep them happy and their quality of work high. Similar to research analysis of processes in subsection 1.1 there is a gap that shows lack of research on how process clarity and flexibility impact job satisfaction, which this thesis aims to research.

1.2.2. Job satisfaction measurements

There are many ways to measure job satisfaction, but not all might be reliable. According to a review by van Saane (2003) only a few job satisfaction instruments have a high level of reliability and construct validity, the instrument with the best validity, according to van Saane (2003) included the below sub-scales for job satisfaction:

- Autonomy
- Work content
- Communication
- Financial rewards
- Growth/development
- Promotion

- Co-workers
- Meaningfulness
- Supervision/feedback/recognition
- Workload
- Work demands.

Looking at other scales to measure job satisfaction, one of the most popular is Cammann et al's (1983) 3-item questionnaire, which has been widely adopted. The 3-item Michigan organisational assessment for job satisfaction scale includes 3 items: 'All in all, I am satisfied with my job', 'In general, I don't like my job' (negatively worded) and 'In general, I like working here', measured on a 6-point likert scale. A more recent analysis of this scale, analysing over 80 studies with over 30,000 total participants found evidence that this scale is a reliable and construct-valid measure of job satisfaction and can be used globally (Bowling and Hammond, 2008). Generally, there are several widely used questionnaires similar to Cammann et al's (1983) to measure overall and facet-specific job satisfaction, which can be found in Table 5.

Table 5

Summary of popular job satisfaction questionnaires used in practice

Author	Questionnaire name	Type
Brayfield and Rothe (1951)	Overall job satisfaction scale	Overall job satisfaction measure
Kunin (1955)	Faces Scale	Overall job satisfaction measure
Weiss et al (1967)	Minnesota Satisfaction Questionnaire	Facet-based satisfaction measure
Smith et al (1969)	Job Descriptive Index	Facet-based satisfaction measure
Hackman and Oldham (1975)	Job Diagnostic Survey	Facet-based satisfaction measure
Warr et al (1979)	Global job satisfaction questionnaire	Overall job satisfaction measure
Cammann et al (1983)	Michigan Organisational Assessment Questionnaire	Overall job satisfaction measure
Spector (1985)	Job Satisfaction Survey	Facet-based satisfaction measure
Ironson et al (1989)	Job in General Scale	Overall job satisfaction measure
Judge at al (1994)	Overall job satisfaction scale	Overall job satisfaction measure

Source: Modified, based on Inoyatova, 2021.

There are generally two types of questionnaires - one which focuses on measuring overall job satisfaction, without going into different facets (or sub-scales, or dimensions) of job satisfaction and those who focus on different sub-scales. Depending on the requirements of a questionnaire, if one is trying to understand not just the overall level of job satisfaction but also the individual factors behind it, then facet-based type questionnaires should be chosen.

Even though we have lots of ways to measure employee job satisfaction, never ending differences in our life circumstances and constant changes in people's needs still make it hard to have one best way to measure it. Nanjundeswaraswamy (2019) tried to fix it by developing and validating a job satisfaction scale, which would fit any business sector. Nanjundeswaraswamy (2019) found that the following 18 dimensions of job satisfaction explained 87.04 percent of the total job satisfaction variance: compensation, promotion, leadership style, benefits, welfare facilities, recognition/rewards, relation and cooperation, communication, working condition, training and development, career development opportunities, work life balance, work stress, organisation culture, team work, job clarity, participative management, job security. The 18 dimensions were later further extracted and 8 main components were found to explain 82.35 percent of variance in job satisfaction. Using such in-depth calculation models with lots of different components could be valuable to companies doing internal research on employees to understand which dimensions are lacking or for researchers who want to understand different dimensions of job satisfaction.

Each of these different dimensions and sub-scales by different researchers can be measured using multiple items or single items per facet. According to Lepold et al (2018), both ways generate similar results and are valid and therefore if constraints exist, then a single-item facet can be used, but multiple-items per facet can also bring benefits as it would allow one to have a better understanding of job satisfaction. This is similar to what was found by Dolbier et al (2005), as she claimed that a single item - *Taking everything into consideration, how do you feel about your job as a whole* - can be used to measure overall job satisfaction if constraints exist, but it’s better to use multiple-item measurement if possible as research found it to work well.

To sum it up, job satisfaction can be measured as a global measurement and as a measurement having multiple facets, with each facet also having multiple items, depending on the requirements of research and how much detail about the job satisfaction concept is required. What is more, if certain constraints exist, single-question measurements can also be used as they have been proven to also be valid in research.

1.2.3. The concept of job performance

We already established from previous chapters that employee job satisfaction is influential, but it's also crucial to look at employee job performance and how that also plays a role in this research. Similar to job satisfaction, employee job performance is also a very popular, if not the most popular, topic that has been researched a lot in the past 50 or so years. Each organisation, government, education system or any other non-governmental institution has employees and the performance of each employee matters to achieve greater results, therefore, organisations and researchers around the world try to understand the concept of employee performance to achieve greater organisational results.

Table 6

Definitions of job performance

Author	Definition of job performance
Lawler and Porter (1976)	A function of individual ability, skills and effort in a given situation.
Bernardin and Beatty (1984)	The record of outcomes produced by a specified job function or activity during a specified time period.
Hunter (1986)	The single result of an employee's work.
Campbell (1990)	Behaviours or actions that are relevant to the goals of the organisation.
Borman and Motowidlo (1993)	Three important features are highlighted as follows: ● Work performance should be defined in terms of behaviour rather than results, ● Work performance includes only those behaviours that are relevant to the organisation's goals, ● Work performance is a multidimensional concept.
Bernardin and Russell (1993)	The record of outcomes produced on a specified job function or activity during a specified time period.
Viswesvaran and Ones (2000)	Scalable actions, behaviour and outcomes that employees engage in or bring about that are linked with and contribute to organisational goals.
Griffin et al (2007)	The sum of behaviours of employees.
Stewart and Brown (2009)	The contribution that individuals make to the organisation that employs them.
Loan (2020)	The individual's competence and outcomes at work.

Source: Modified, based on Ramawickrama et al (2017).

In this study, we do not plan to do any innovation in terms of job performance concept and are instead focusing on knowledge that has already been created by other researchers, but applying it to a different scenario - trying to understand job performance relationship with work process clarity and process flexibility. To better understand the concept of job performance, definitions by different researchers have been reviewed in Table 6.

The first few definitions, dating nearly 50 years back, describe job performance as effort, skills and results of an employee's work, but later authors also added additional elements to job performance, for example behaviours. What is more, the latest research added that the results (outcomes) of an employee's work should be linked to organisational goals. Overall, looking at Table 6, it can be summarised that job performance is an employee's outcomes and behaviours at work.

It has already been established that employee job satisfaction at work is crucial for businesses and because employee job performance affects job satisfaction, it has similar implications to businesses - if an employee is expected to perform better, the organisation can then also expect to get better organisational results.

While employee job performance, similar to job satisfaction, has seen a lot of research, there is no scientific literature on how process clarity, flexibility or processes in general can affect an employee's job performance. It is clear that job performance has been and still is a very popular topic of research as businesses try to achieve greater efficiency and profitability with thinner margins. Since processes management is also a relevant topic with a lot of interest from researchers recently, this thesis aims to look at how the constructs work between each other and if there is a relationship between them.

1.2.4. Measuring job performance

Since an employee's job performance is the produced outcomes and behaviours at work, it can be assumed that the calculations of such a concept will be difficult, because there are so many different tasks that each employee does every day and therefore the outcomes might be very different and therefore hard to measure consistently. What is more, the behaviour can be influenced by so many factors and change day by day, therefore, the performance can also change on a daily basis, which further makes the calculation of this concept difficult. Nonetheless, researchers have established many ways to measure employee job performance.

Carlos and Rodrigues (2015) developed and validated a self-reported measure of job performance, which included two dimensions: **task performance** and **contextual performance**. The final job performance scale included further sub-dimensions - job knowledge, organisational skills and efficiency were used to measure **task performance** and persistent effort, cooperation,

organisational conscientiousness and interpersonal and relational skills were used to measure **contextual performance**. In total, the final job performance scale included 29 items to be measured on a 7-point Likert scale.

A more recent research by two professors in Turkey developed and validated a job performance scale with two dimensions, which consisted of 11 items in total. After initial literature review, draft scale development, multiple consultations with other experts in the field and various validity and verifying tests, the below highly reliable scale for measuring job performance was the result of research by Caliskan and Koroglu (2022):

1. **Task Performance** dimension:
    - 1.1. I have the competencies that my job requires.
    - 1.2. I work effectively/efficiently.
    - 1.3. I understand and carry out work-related procedures.
    - 1.4. I work in a planned and organized manner to conclude the task defined to me in full and on time.
    - 1.5. I am eager to acquire new skills related to my job.
2. **Contextual Performance** dimension:
    - 2.1. I take extra care and take extra responsibilities while doing my duty.
    - 2.2. I contribute to the creation of a positive working environment in my institution.
    - 2.3. If I encounter a situation that prevents the task from being done, I try to fix it.
    - 2.4. I help and encourage my friends to complete their work.
    - 2.5. Even if there are criticisms inside or outside the institution, I defend my institution.
    - 2.6. I am proud to be a part of this institution.

While measuring the same two sub-dimensions of employee job performance, the scale developed by Caliskan and Koroglu (2022) was much simpler as it included 11 items, compared to the 29 items scale developed by Carlos and Rodrigues (2015).

Looking at Table 7, which shows 20 different job performance dimensions of older literature summarises that **contextual performance** and **task performance** have been the two most popular dimensions of job performance in the last 40 years, which further confirms that these two dimensions, also used in recent literature, have been used for a long time by multiple researchers and therefore might be the correct dimensions for measuring job performance.

Na-Nan et al (2018) took a different approach, which was based on several previous studies, and instead developed and validated a 13-item questionnaire, which measured these 3

dimensions of employee job performance: **job time**, **job quality** and **job quantity**. While the scale by Na-Nan et al (2018) showed good results, the scale was developed in a single cultural context in Thailand and therefore might not be usable in other contexts.

Table 7

Dimensions of job performance used by previous authors

Dimension of job performance (grouped by times referred)	Times referred by selected authors in literature from 1986 to 2017
Interpersonally oriented, Downtime behaviour, Destructive behaviour, In role work performance, Extra-role behaviour, Generic work behaviour	1
Pro-social behaviour, Job specific task behaviour, Non job specific behaviour, Written and oral communication, Demonstrating effort, Personal discipline, Peer and team performance, Supervision or leadership , Management/ administration	2
Organisation citizenship, Adaptive work behaviour, Counterproductive behaviour	3
Contextual Performance	**5**
Task performance	**6**

Source: Modified, based on Ramawickrama et al (2017).

It is clear that job performance can be measured in different ways and this is likely because there are so many different jobs and professions, which have different measurements. This is also explored by Ramawickrama et al (2017), which found evidence for the customised nature of performance measures. In summary, job performance is usually measured in actions and behaviours, but since jobs have different tasks, work circumstances and employees have different personal traits, the dimensions to measure job performance can also vary.

Looking at a more practical level, companies and managers also use many different ways to use measure their employees job performance:

1. Key performance indicators (KPI's) - these are usually very quantitative indicators that show how many units of a work is done (products produced, clients served, etc.)

2. Goal setting - similar to key performance indicators, managers together with employees might set goals to be achieved during a set period of time, which are then measured and job's performance is calculated. These can be quantitative, similar to the KPI, but can also be qualitative (quality of work) and based on time (tasks done on time), cost effectiveness (best cost between quantitative and qualitative measures), engagement with the team and company goals, complying with company standards, etc.
3. Periodic reviews / feedback - managers and their direct reports might have periodic (monthly, weekly, quarterly, yearly) reviews, where they talk about the job performance of the employee, which is usually based on goals or key performance indicators, or might not have any structure at all and be based on intuition.

Comparing what is used in practice and what is used in research, it can be summarised that generally the same dimensions of job performance are used - the focus is always on tasks (goals, KPIs) and contextual performance (engagement, complying with standards, quality of work).

Employee job performance, similar to employee job satisfaction can be measured in either multiple questions per facet or a single item per facet and generally, research found that both approaches generate good results, which means single-item questions can be used to save costs and be more efficient (Nagy, 2002).

Based on Heilman et al (1992), later used by Sy et al (2006) and later adopted to be used by employees themselves (Loan, 2020), employee job performance can also be measured as an overall measurement without making it multi dimensional and these measurements also were reliable. Loan (2020) used 3 questions rated on Likert's scale for employee's to measure their overall job performance:

- I am very competent
- I get my work done very effectively
- I have performed my work well

Similarly, Williams and Anderson (1991) developed a seven-item scale to measure overall employee job performance without going into different dimensions of job performance, which was later also modified and used by other researchers (Zhang and Bartol, 2010). Recent literature shows that other researchers have also used overall employee job performance measurements, measuring 3 items: overall performance, work efficiency, and work quality (Brake et al, 2020).

Similar to job satisfaction, employee job performance is a very widely explored and researched concept. Measuring employee job performance is very diverse and can be measured using overall job performance measurement or using a multi dimensional approach. What is more, one question per dimension can be used or multiple questions per dimension can be used, similar to job satisfaction. Measurements of job performance might also depend on the context and requirements, for example, team managers might use KPI's and goal setting to measure their teams job performance, while researchers might focus on more complex dimensions and go beyond the tasks and quantity.

1.2.5. Relationship between job satisfaction and job performance

Iaffaldano and Muchinsky (1985) after their meta-analysis of previous research argued that while job satisfaction and job performance might have a slight correlation, these variables are not always related and that generally these conditions of correlation are rare. Iaffaldano and Muchinsky (1985) also raised discussions about the fact that companies often try to increase both of these variables at the same time, due to their importance and that is why they might seem correlated. What is more, the two authors indicated that the two variables would have to be influenced by different factors and it is possible that when using a single influencer, one of the variables increase and the other decrease, further questioning the correlation between two variables.

Analysing more recent research shows that this relationship of job satisfaction and job performance is still being studied to this day as the relevance of these two concepts remain popular and vital to society. Ertekin and Avunduk (2021) after their research on the sports industry found that there was a positive relationship between sub-dimensions of job satisfaction and job performance and when job satisfaction is higher, the job performance is also higher, supporting the positive relationship between the two variables.

Christen et al (2006) looked at the relationship from a different perspective and found that job performance is the variable that causes a significant positive effect on job satisfaction, which generally raises different approaches to other findings as in this case organisations could focus on improving only job performance of employees and that should in turn positively impact job satisfaction. Meanwhile, Wright et al (2007) concluded that the job performance of an employee was high when that same employee had high job satisfaction, together with high psychological well being.

Conducting a research on teachers, Wolomasi et al (2019) found similar results about the relationship of these two concepts and established that job performance of teachers is positively

predicted by job satisfaction measurement and that the relationship is significant, as 7.1 per cent of job performance is attributed to job satisfaction.

While the findings of researchers are different, it is clear that there is a relationship between the concept of job satisfaction and job performance and this relationship might also impact the results of this study, which will be taken into account during the steps of data analysis.

In this subchapter the concepts of employee job satisfaction and job performance were explored and the way to measure them was discussed. These two concepts have been vital for businesses and different types of researchers for decades and the relevance has not diminished to this day, as shown by the amount of research surrounding these concepts, including this thesis. Generally, both of these concepts have a lot of similarities - they are both very broad and can depend on context and both can be measured using multiple dimensions or using no dimensions at all. What is more, both of them can be measured using a single question or while using multiple questions for each dimension. One thing is clear - employee job satisfaction and job performance are significant not only for businesses and researchers, but also to every working person as they strive to achieve a more calm and positive psychological state of mind.

1.3. The relationship between process clarity and process flexibility and job satisfaction and job performance in past research

Now that both sides of the different concepts and the ways to measure them are analysed and discussed, it is vital to look at past research and if there has been any attempts to find the impact of process clarity and process flexibility on job satisfaction and job performance.

Sawyer (1992) was the first researcher to propose measurements of process clarity and while investigating mental health workers found that process clarity had no direct impact on job satisfaction. On the other hand, Sawyer (1992) did argue that this is likely because these jobs inherently had a high degree of process clarity, which meant that it did not have a high impact and called for additional replications of similar research with a larger sample of professionals who would be in different industries that have a higher degree of uncertainty or at higher levels of operations (managerial level and above).

Zhang et al (2022), using a process clarity measurement adopted from Sawyer (1992) found that process clarity and goal clarity for leaders had a positive relationship on leader work engagement, which further positively influenced team performance. This research found Sawyer's measurements of process clarity and goal clarity to work well and while there were no direct links to individual job satisfaction and job performance, it could be argued that individual

job performance was also positively influenced by process clarity, because the results showed team performance and team performance should be influenced by individual performance.

In another research, while analysing over 570 employees from different teams in several banks Hu and Liden (2011) found that both goal and process clarity at a team-level had positive influence on team performance and organisational citizenship behaviour by increasing team potency. Similar to Zhang et al (2022), this research focused on teams rather than individuals, but still found the positive effects of process clarity.

The research by Zhang et al (2022) focused on a group of managers from 8 different Chinese companies, which partly solves the issue that Sawyer (1992) had. Because these managers likely had jobs with a higher degree of uncertainty, the impact of process clarity on job performance was positive, unlike the effect on job satisfaction in Sawyer's (1992) research. Research by Hu and Liden (2011) also supports the fact that process clarity should have a positive effect on team (and therefore arguably individual) performance, but was based on a single industry (banking) and was focused on small teams of less than 5 people, which could influence the results.

As already established in previous subchapters, the majority of research around process flexibility and processes in general is conducted based on the need created by other needs and does not involve the impact on employee job performance or job satisfaction. A recent study by Shafagatova et al (2023) also identified this same gap in the research and found that some process variables (process design, process outcomes, and values) can have a positive impact on job satisfaction. While the research did not specifically include process flexibility and process clarity concepts and had other limitations, like working with secondary data that was collected in 2015 and some of the questions having only binary responses, the findings are still significant in uncovering additional relationships between processes and job satisfaction.

Based on Table 8, all 4 past researchers had clear differences compared to what this thesis emails to achieve. While the previous researchers support that there should be a positive impact between work process clarity and employee job satisfaction and performance, neither of them found direct impact, since it was based on teams or done in other environments, for example, via leadership performance.

All in all, while process flexibility has seen a lot of research, none of them focus on the relationship with job satisfaction and job performance, meanwhile, process clarity researchers have attempted to find a relationship between these concepts, but either failed or the research had other differences that this thesis aims to fill.

In chapter 1 various scientific literature sources were analysed in order to establish background information for the research. It was established that job satisfaction and job

performance concepts have been important for decades and are very popular to this day, on the other hand, process clarity has seen very little and limited research and process flexibility, while it has been researched, the aims were completely different compared to this thesis.

Table 8

Summary of research on the relationship of processes and job satisfaction and job performance.

Author and year	Main research findings	Main points where the aim of this thesis will be different	How it helps this thesis
Sawyer (1992)	Process clarity had no impact on job satisfaction.	Did not find a relationship, which this thesis aims to find.	Sawyer believed the relationship was not found, because respondents had a high degree of process clarity in their work, therefore, in another situation the relationship should be found.
Hu and Liden (2011)	Process clarity had a positive impact on team performance and organisational citizenship behaviour by increasing team potency.	Research done on a team level and not individual level (like this thesis).	The research found that the relationship exists at a team level, but not at individual level, which this thesis aims to achieve.
Zhang et al (2022)	Process clarity for leaders had a positive relationship on leader work engagement, which positively influenced team performance.	Research done on a team level and not individual level (like this thesis).	The research found that the relationship exists at a team level, but not at individual level and not directly.
Shafagatova et al (2023)	Some process variables can have a positive impact on job satisfaction	The research was based on secondary data, binary responses, and limited variables.	The research findings do support that process variables should have a positive relationship with job satisfaction.

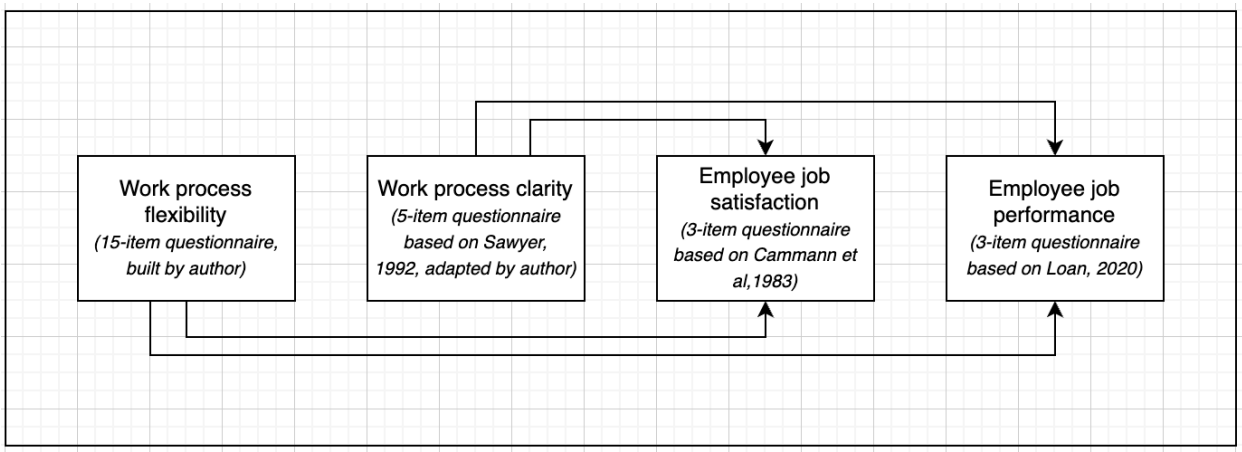
Source: compiled by the author of this thesis.

Overall, there are clear gaps in the current available knowledge based on research - there is no research that would directly confirm the relationship between process clarity and process flexibility and job satisfaction and job performance at an individual employee level. The research carried out in the past had clear differences where the focus was either on team-level performance, the research found no direct impact between the variables and the data had other limitations that would indicate the requirement for further research. This thesis aims to fill these

gaps by researching the relationship between the independent process clarity and process flexibility variables and the two dependent variables - job satisfaction and job performance, as shown in Figure 3.

Figure 3

Conceptual research model with measurement scales.



Source: Created by the author of this thesis.

This ends section one of this thesis that focused on past literature analysis and conceptualisation of concepts. Section two will follow with the focus on building research methodology and section three will be the final section, where research results will be explored.

2. RESEARCH METHODOLOGY FOR MEASURING THE IMPACT OF WORK PROCESS CLARITY AND PROCESS FLEXIBILITY ON EMPLOYEE JOB SATISFACTION AND JOB PERFORMANCE

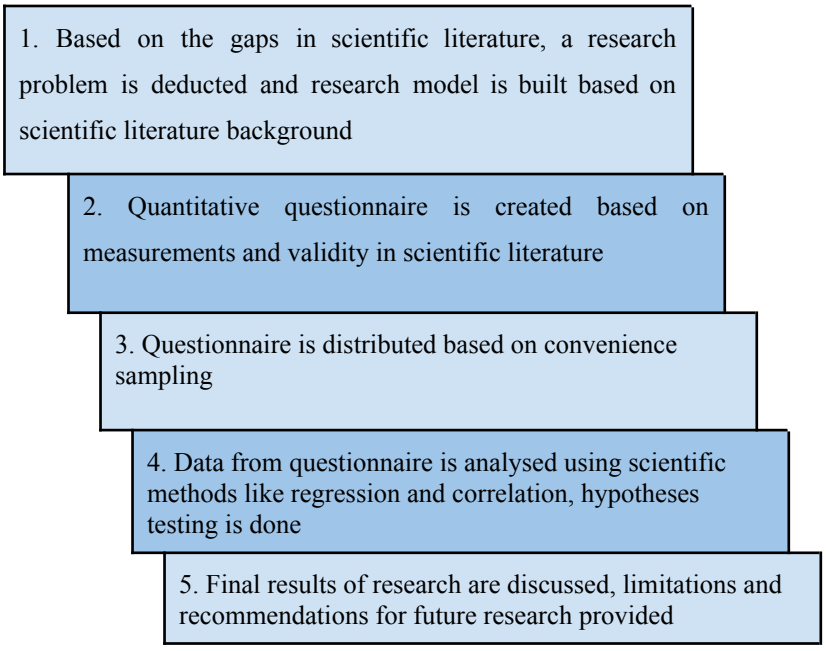
Chapter one analysed and compared how scientific literature defined the concepts of process clarity and process flexibility as well as employee job satisfaction and job performance. Now that different ways to measure these constructs are analysed and gaps in the current knowledge are identified, this chapter will focus on building the empirical research model on how to measure the impact of work process clarity and process flexibility on employee job satisfaction and job performance.

2.1. Research goal, hypotheses and tasks

Research method:

Figure 4

Research method



Source: Created by the author of this thesis.

Research question

What is the impact of work process clarity and process flexibility on employee job satisfaction and job performance?

Research object

The impact of work process clarity and process flexibility on employee job satisfaction and performance

Goal of research

To evaluate the impact of work process clarity and process flexibility on employee job satisfaction and job performance.

Research tasks:

1. Explore the theoretical foundations and existing research to develop a framework for understanding how work process clarity and process flexibility influence employees' experiences and outcomes in the workplace.
2. Investigate how work process clarity and flexibility relate to employee well-being and performance, considering their potential interplay and broader organizational context.
3. Synthesize insights from the analysis to draw meaningful conclusions and propose directions for future research and practical application in organizational settings.

Hypotheses of research:

After analysing scientific research literature, it is presumed that work process flexibility and clarity will have a positive impact on employee job satisfaction and job performance, multiple researchers tried to establish the same or similar hypotheses, but their research had multiple differences that this research aims to resolve (Hu and Liden, 2011; Sawyer, 1992; Shafagatova et al, 2023; Zhang et al, 2022). Using the methodology described in this chapter, the research aims to scientifically test seven hypotheses.

Shafagatova et al (2023) established that process variables can have an impact on employees job satisfaction, based on this, the first two hypotheses are built:

H1: Work process flexibility (X1) has a positive impact on employee job satisfaction (Y1).

H2: Work process flexibility (X1) has a positive impact on employee job performance (Y2).

Based on Sawyer (1992), who researched individual process clarity and job satisfaction, Hu and Liden (2011) and Zhang et al (2022), who researched how process clarity can impact team-level job performance and other researchers who researched similar concepts like goal and role clarity (Hoek et al, 2016; Fürstenberg et al, 2021; Chen et al, 2022) and the relationship with individuals motivation, the following two hypotheses are built:

H3: Work process clarity (X2) has a positive impact on employee job satisfaction (Y1).

H4: Work process clarity (X2) has a positive impact on employee job performance (Y2).

Ertekin and Avunduk (2021) and Wolomasi et al (2019) as well as many previous researchers before them concluded that employee job satisfaction impacts employee job performance, therefore the following hypotheses are included in the research:

H5: Employee job satisfaction (Y1) has a positive impact on employee job performance (Y2).

H6: Employee job satisfaction (Y1) mediates the relationship between work process flexibility (X1) and employee job performance (Y2)

H7: Employee job satisfaction (Y1) mediates the relationship between work process clarity (X2) and employee job performance (Y2)

2.2. Research model and methodology

Based on previous similar scientific research (Hu and Liden, 2011; Sawyer, 1992; Shafagatova et al, 2023; Zhang et al, 2022) the identified research gaps and raised hypotheses a research model (Figure 5) was built.

Figure 5

Research model with measurement scales.

Source: Created by the author of this thesis.

Process clarity will be measured based on the 5-item questionnaire, created by Sawyer (1992) and modified by the author of this thesis to be more easy to understand in the current times. It is currently the only found scientific questionnaire to measure process clarity, but it (with various modifications) has been used in different research successfully and therefore should also be a good way to measure process clarity in this research.

Process flexibility construct questionnaire is created by the author of this thesis based on the taxonomy of Schonenberg et al. (2008) as it's the only taxonomy that was found that can be used in a wide range of processes and backgrounds to measure process flexibility. The statements in the questionnaire are based on 4 subscales of flexibility by **design**, **deviation**, **underspecification** and **change** and will have 15 questions in total, each question representing a different item of the taxonomy, as explained in Table 9 below.

Table 9

Questionnaire statements linked to items based on Schonenberg et al. (2008).

Questionnaire statement	**Schonenberg et al. (2008) item and subscale**
During processes in my work, I can: Execute a set of tasks in parallel	Parallelism (Design)
During processes in my work, I can: Select tasks which I want to execute	Choice (Design)
During processes in my work, I can: Execute the same task multiple times	Iteration (Design)
During processes in my work, I can: Cancel the task at my own will	Cancellation (Design)
During processes in my work, I can: Undo a task that has been done	Undo (Deviation)
During processes in my work, I can: Redo a task that has been done	Redo (Deviation)
During processes in my work, I can: Skip a task if I choose to do so	Skip (Deviation)
During processes in my work, I can: Create an additional instance of the same task	Create additional instance of task (Deviation)
During processes in my work, I can: Invoke a new task while doing a current one	Invoke (Deviation)
During processes in my work, I can: Make momentary changes to a process that only affect the process a single time	Momentary change (Change)

Continuation of Table 9

During processes in my work, I can: Make long-term changes to a process model, affecting all new instances of the same process	Evolutionary change (Change)
During processes in my work, I can: Make changes to processes only before starting them	Entry time (Change)
During processes in my work, I can: Make changes to processes at any time during process execution	On-the-fly (Change)
During processes in my work, if they purposefully have missing information or undefined tasks, I can choose from a predefined list of things to do when I reach that step	Late binding (Underspecification)
During processes in my work, if they purposefully have missing information or undefined tasks, I can construct a new process when I reach that step	Late modelling (Underspecification)

Source: compiled by the author of this thesis.

From the subscale of **Design**, two items "interleaving" and "multiple instances" were not included in the questionnaire as both of these items seemed very similar to parallelism and were therefore removed to avoid confusion from respondents. For the subscale of **Deviation**, all 5 items proposed by Schonenberg et al. (2008) were included. **Change** subscale proposed by Schonenberg et al. (2008) had 4 more items that defined what to do with running process instances that are impacted by a change, but these items are more related to process management itself (for example, should the changed process be aborted and started from scratch) rather than the process flexibility itself. These 4 items were not included in the questionnaire as the main focus is to measure process flexibility, not how it is later implemented in the process management. Similarly, **Underspecification** also had 4 more items that refer to how the process is managed after late binding or late modelling is selected, but this also referred to process management itself and for measuring flexibility the two main items seemed to be more accurate.

To measure **Job satisfaction,** a 3-item Michigan organisational assessment questionnaire developed by Cammann et al (1983) will be used as it has been concluded after scientific literature review that this scale is reliable and valid for a wide use and should still be a good way to measure job satisfaction (Bowling and Hammond, 2008).

Similarly, **Job performance** will be measured using a 3-item questionnaire based on Loan (2020), who modified Heilman et al's (1992) questionnaire so it can be used by the employees themselves.

As all questions are self-reported by the respondents, they will be measured using a 5-item Likert scale, similarly to previous researchers on similar topics (Loan, 2020; Sawyer, 1992; Zhang et al, 2022).

Scientific literature analysis showed that both job performance and job satisfaction can be measured in multiple dimensions, but because this research is trying to establish a relationship between process concepts and the employee job performance and job satisfaction concepts, overall measurement scales should be sufficient to establish this first relationship. If the hypotheses of this research is confirmed, further research can go deeper into the multiple dimensions of each concept to understand the relationship better.

The research methodology used in this research has a few **limitations**, which is on purpose to allow focus on the core goal, which is to find the relationship between the process and human side of things. The limitations are:

- Job performance is being measured as perceived job performance, therefore outside, more objective factors are not included in the measurement.
- As seen in the literature review, job satisfaction can be influenced by many things, including cultural differences, which this research model does not take into account.
- Both job performance and job satisfaction are being measured with overall measurement scales without going into different dimensions, therefore, if the relationship between main constructs is found, future research should look at different dimensions of these constructs to see what exactly is being influenced.
- Geography and cultural differences are not taken into account.

Demographic questions will also be included in the questionnaire, to gain a clearer understanding of the respondents profiles.

Research instrument. The closed-ended research questionnaire (Annex 1) was used to collect data from respondents. In total, 26 questions were included relating to independent and dependent variables, with additional 7 demographic questions and 1 screening question. The screening question was used to filter the respondents - if the respondent is not employed, they were not allowed to fill further questions as they are related to work and employment, therefore, the respondent must be a person who is currently employed.

Pilot study. Because Section 1 of the questionnaire, related to work process flexibility, was never before used in a research and is newly created by the author of this thesis, a pilot study was organised to check if the questions were effective and made sense to respondents. Two people (one from the academic and one from the professional field) filled the questionnaire and follow-up interviews were conducted. After the discussions, it was clear that some of the

questions related to process flexibility are not as understandable to respondents who do not have the in-depth knowledge of what process flexibility is and some of the questions seemed duplicated. To ensure clarity of the questions relating to work process flexibility it was decided to add additional examples next to questions to make it clearer what each question is asking about (Annex 2). Some of the examples were taken from Schonenberg et al. (2008), while others were created by the author of this thesis.

Questionnaire distribution. The questionnaire was created on "Google Forms" online platform and was distributed between September 24, 2024 and October 24, 2024. The questionnaire was posted on social media channels ("LinkedIn", "Facebook") and various groups linked to scientific research surveys. The questionnaire was also published on www.surveycircle.com to gather additional respondents. All responses were collected in the English language, the participants had no time limit to complete the questionnaire and at the start of the survey the respondents were informed about the purpose, expected duration of the questionnaire and how the data will be used.

2.3. Research sample, data collection and data analysis methods

Research participants

As this research focuses on work processes and how it affects employees, any respondent who was employed while participating in the research, was a valid participant. Convenience sampling was used to reach respondents.

Research size

Given that the research aims to find relationships of the whole population, there are a few different methodologies on how to calculate the sample size.

In terms of sample-to-item ratios, different researchers say that the sample size should be based on a 5-to-1 to 30-to-1 ratio, based on the amount of questions in the questionnaire (Memon et al, 2020). Other researchers suggest a sample size based on independent variables with ratios 5-to-1 to 20-to-1, but this methodology for sample size is rarely used as it often leads to too small sample sizes (Memon et al, 2020).

Based on Krejcie and Morgan (1970), a sample size of 384 should be sufficient for any size population in social and behavioural sciences to achieve a good result. Some online calculators also exist to help calculate sample size based on confidence levels and margin of errors, which give very similar results to Krejcie and Morgan (Memon et al, 2020). There are also many other methods to determine sample size, all of which suggest that a sample size of 200-600 should be enough when there are a lot of questions and the population is big (Memon et al, 2020).

Based on the sample-to-item ratios, with 26 questions in the questionnaire and 20-to-1 ratio, 520 participants should be enough. Meanwhile, based on Krejcie and Morgan (1970), a sample size of 384 should be sufficient. Looking at previous similar research, Sawyer (1992) used 379 participants, Hu and Liden (2011) had 304 and Zhang et al (2022) - 226. Given the various methodologies, the population, the amount of questions used in the questionnaire and participants in previous research, the sample size of 384 to 520 participants should be sufficient for this research.

In total, the survey collected 426 responses. 14 of the respondents responded that they are currently not employed (screening question), therefore such responses were removed from the analysis and the final number of 412 respondents remained for analysis, which, according to the required sample size, is sufficient for this research.

Data analysis methods. IBM SPSS Statistics version 29.0.2.0 (20) and SPSS's Hayes Process (version 4.3.1) macro 1 was used in the analysis. Descriptive analysis, regression analysis, mediation analysis and bootstrap procedure was used.

3. THE IMPACT OF WORK PROCESS CLARITY AND PROCESS FLEXIBILITY ON EMPLOYEE JOB SATISFACTION AND JOB PERFORMANCE RESEARCH ANALYSIS AND RESULTS

Chapter one focused on analysing scientific literature, which helped define the constructs and create research methodology in chapter two. This third and final chapter of the thesis is focused on analysing the results of the 412 respondents in the research survey, discussing the findings, limitations and recommendations for future researchers.

3.1. Overview of the respondents.

Before starting the data analysis, the respondents' demographic characteristics are overviewed. For the education level question, the "other" option was available and some respondents selected that option and provided answers like "PhD" or "Master's degree", such and similar answers were assigned to the applicable groups, where available. Similarly, for the "Your role in your current job" question some respondents chose the "other" option and wrote things like "accountant", "president", "waitress" and such responses were also assigned to the particular group from predefined responses as they all fit into them.

Table 10 below shows detailed demographic characteristics of the conducted research. By gender, 55.55 % of the respondents were female, 41.02 % were male, while the rest preferred not to say or chose the "Other" option. For age distribution, the majority of the respondents (42.96 %) fell in the 20 - 29 year category, while the 30 - 39 year category was second most popular with 33.74 % responses. Only a few respondents were in the age groups 18 - 20 and 60 and above. In terms of education, nearly three quarters (74.03 %) of respondents had a University Degree and only 3 (0.73 %) respondents selected Primary School as their highest education level.

Looking at overall job and current role work experience, the respondents were widely spread between the different groups. In terms of current role level, 54.61 % of the respondents worked in operational roles, while 33.98 % worked in management or C-level, the rest of the respondents being freelancers. For the company size, the majority (40.29 %) of the respondents work in organisations with over 251 employees, second place being medium sized companies (25.24 %), then small companies with 22.57 % of respondents and 11.89 % of respondents worked in very small companies, with up to 10 employees.

Table 10

Demographic characteristics of respondents

Demographic characteristics		Frequency	Percentage
Gender	Female	233	55.55 %
	Male	169	41.02 %
	Other / Prefer not to say	10	2.43 %
Age	18 - 20	10	2.43 %
	20 - 29	177	42.96 %
	30 - 39	139	33.74 %
	40 - 49	55	13.35 %
	50 - 59	26	6.31 %
	60 and above	5	1.21 %
Highest education level	Primary School	3	0.73 %
	Secondary School	65	15.78 %
	Vocational School	39	9.47 %
	University Degree	305	74.03 %
Role in current job	Freelancer	47	11.41 %
	Operational level employee	161	39.08 %
	Senior operational level employee	64	15.53 %
	Middle manager	102	24.76 %
	C-level manager	38	9.22 %
Years of overall work experience	Up to 1 year	15	3.64 %
	1 - 2 years	53	12.86 %
	3 - 5 years	113	27.43 %
	6 - 10 years	98	23.79 %
	11 or more years	133	32.28 %

Continuation of Table 10

Work experience in current role	Up to 6 months	43	10.44 %
	6 - 11 months	36	8.74 %
	1 - 2 years	93	22.57 %
	2 - 5 years	151	36.65 %
	5 and more years	89	21.60 %
Employees in your current organisation	Up to 10	49	11.89 %
	11 - 50	93	22.57 %
	51 - 250	104	25.24 %
	251 and more	166	40.29 %

Source: compiled by the author of this thesis, based on the results of the research.

Overall, the demographics of the respondents in the survey are quite evenly distributed in terms of gender, business size and their work experience. In terms of age, the high majority of the respondents are below 40 years old, but the distribution in age is still quite good. For education level, over 99% of the respondents have finished secondary school or had a higher level of education. For the current role, the majority of the respondents were in operational roles, but also a significant amount (a third) of the respondents were in managerial positions, also showing a healthy distribution between different roles.

3.2. Survey data analysis and research discussion

This subsection will focus on analysing the key results of the research, discuss the findings as well as test the hypotheses raised in Section two.

3.2.1. Data reliability and validity

Before analysing the data of research, it is important to evaluate the internal consistency and reliability of the questions and scales used in the questionnaire, which can be done using Cronbach's Alpha, specifically when using likert-type scale questions, like the one used in this research (Pakalniškienė, 2012). When calculating Cronbach's Alpha, the amount of shared variance (covariance) is compared among the items making up an instrument to the amount of overall variance. If Cronbach's Alpha is below 0.6, the reliability of the questionnaire is poor, anything between 0.6 and 0.7 is acceptable, but generally is still questionable, while Alpha of 0.7

and above is considered good and reliable results. For this research, Cronbach's Alpha of all variables was calculated.

As described in Table 11 below and Annex 3 the Cronbach's Alpha is above 0.7 for all measured variables, which means the questionnaires are reliable and can be used to measure the variables indicated.

Table 11

Reliability of questionnaire variables

Construct	Items in the questionnaire	Cronbach's Alpha coefficient
Work Process Flexibility	15	**0.746**
Work Process Clarity	5	**0.810**
Employee Job Satisfaction	3	**0.906**
Employee Job Performance	3	**0.862**

Source: compiled by the author of this thesis, based on the results of the research.

Another important thing to consider with Cronbach's Alpha is to check if deleting some of the items in the questionnaire might make it more reliable. According to Annex 3, deleting questions related to parallelism (question 2 in questionnaire) and change to process before starting them (question 13 in questionnaire) would increase the work process flexibility questionnaire reliability, but the increase is negligible and therefore all items were kept. For the three other variables, deleting any of the items would have reduced the reliability of the questionnaires, therefore they were also kept as is.

In order for data from the questionnaire to be used for regression and further analysis, the average scores of variables were calculated and 4 new variables were created, compromising of average of all items in each questionnaire:

- **Work Process Flexibility** - consisting of the average of 15 items;
- **Work Process Clarity** - consisting of the average of 5 items;
- **Employee Job Satisfaction** - consisting of the average of 3 items;
- **Employee Job Performance** - consisting of the average of 3 items.

Tests of normality (Kolmogorov-Smirnov and Shapiro-Wilk tests) were carried out on the 4 new variables to check if the data is normally distributed or not. Based on the data in Table 12 and Annex 3, the significance levels below 0.05 (5% confidence level) show that the data in the 4 variables are not normally distributed.

Table 12

Tests of normality for 4 new variables.

Variable	Kolmogorov-Smirnov significance	Shapiro-Wilk significance
Work Process Flexibility	< 0.001	< 0.001
Work Process Clarity	< 0.001	< 0.001
Employee Job Satisfaction	< 0.001	< 0.001
Employee Job Performance	< 0.001	< 0.001

Source: compiled by the author of this thesis, based on the results of the research.

3.2.2. Descriptive statistics and correlation of variables in research

Descriptive statistics of research variables can be found in Annex 4 and Table 13 below, these results were received from SPSS by using *descriptive statistics*. Some interesting highlights from descriptive statistics:

- None of the respondents valued work process clarity as 1 or "strongly disagree", showing that the majority of the respondents value their work processes clarity quite well;
- The mean of work process flexibility is the smallest, compared to other variables;
- The standard deviation and variances of work process flexibility is the smallest, showing that the variable is least varied compared to others;
- Employee job satisfaction has the highest standard deviation and variance, which shows that this variable is the most varied amongst the 4.

Table 13

Descriptive statistics

Variable	Min	Max	Mean	Median	St. Dev.	Variance
Work Process Flexibility	1.27	5.00	3.49	3.53	0.49	0.24
Work Process Clarity	2.00	5.00	4.19	4.20	0.58	0.33
Employee Job Satisfaction	1.00	5.00	4.00	4.00	0.86	0.74
Employee Job Performance	1.00	5.00	4.23	4.00	0.61	0.37

Source: compiled by the author of this thesis, based on the results of the research.

Additionally, Spearman's correlation was calculated to check whether the variables of research are related to each other. According to Table 14 and Annex 4, all pairs of variables show significant correlation (significance is <0.001) and the correlation coefficients are positive, which means that as one variable in the pair grows, so does the other one (Pakalniškienė, 2012).

Table 14

Correlation of variables

Variable		Work Process Flexibility	Work Process Clarity	Employee Job Satisfaction	Employee Job Performance
Work Process Flexibility	Correlation Coefficient	-	**0.456**	**0.612**	**0.201**
	Significance	-	<0.001	<0.001	<0.001
Work Process Clarity	Correlation Coefficient	**0.456**	-	**0.423**	**0.274**
	Significance	<0.001	-	<0.001	<0.001
Employee Job Satisfaction	Correlation Coefficient	**0.612**	**0.423**	-	**0.182**
	Significance	<0.001	<0.001	-	<0.001
Employee Job Performance	Correlation Coefficient	**0.201**	**0.274**	**0.182**	-
	Significance	<0.001	<0.001	<0.001	-

Source: compiled by the author of this thesis, based on the results of the research.

3.2.3. Impact of work process flexibility and work process clarity on employee job satisfaction

Usually, ANOVA regression analysis is used with normally distributed data, but in this research due to a big sample size (N=412), the ANOVA regression can be used even though the data is not normally distributed. What is more, bootstrapping resampling method will be used to further ensure confidence of the research results. All results of this section can be further explored in Annex 5.

Looking at the results of Table 15 below it can be seen that the significance of the regression is below 0.05 (<0.001), which means that the regression can be analysed and the F value of 37.05 shows that the model reliably captures the relationship between the predictors and the outcome. Overall, these results show that the regression can be used and the results should be reliable.

Table 15

ANOVA test results, where X - Work Process Clarity + Process Flexibility and Y - Employee Job Satisfaction

Model	Sum of Squares	df	Mean Square	F	Significance
Regression	46.79	2	23.39	**37.05**	**<0.001**
Residual	258.21	409	0.63	-	-
Total	305.00	411	-	-	-

Source: compiled by the author of this thesis, based on the results of the research.

Analysing the model summary in Table 16 below, the adjusted R square value of 0.149 shows that 14.90% of the employee job satisfaction can be explained by process clarity and process flexibility. The value of 1.922 in the Durbin-Watson test shows that there is no autocorrelation between the variables and the residuals are independent. A score between 1,5 and 2,5 is usually acceptable in this test (below 1,5 shows positive autocorrelation and above 2,5 shows negative autocorrelation) and a score of 2 is perfect in the Durbin-Watson test, this research score being close to that.

Table 16

Model summary, where X - Work Process Clarity + Process Flexibility and Y - Employee Job Satisfaction

Model	R	R Square	Adjusted R square	Durbin-Watson
Regression	0.392	0.153	**0.149**	**1.922**

Source: compiled by the author of this thesis, based on the results of the research.

According to the above, we can already state that there is some sort of positive impact on employee job satisfaction based on the independent variables. When independent variables increase, so does employee job satisfaction. According to Annex 5 and Table 17 below, in the standardised model, work process flexibility has a 24,1 % impact and work process clarity has a 27,0 % impact on employee job performance. Both variables impact employee job satisfaction in a similar strength, but the relationship with work process clarity is a little bit higher.

Table 17

Coefficients, where X - Work Process Clarity + Process Flexibility and Y - Employee Job Satisfaction

Model	Unstandardized B	Standardised Coefficients Beta	Significance
Constant	0.838	-	0.024
Work Process Flexibility	0.421	**0.241**	**<0.001**
Work Process Clarity	0.404	**0.270**	**<0.001**

Source: compiled by the author of this thesis, based on the results of the research.

As explained previously in this section, bootstrap procedure is also conducted to ensure that the results are more accurate. With bootstrapping, additional models are generated based on the provided data to calculate alternative scenarios. Usually, bootstrap confirms the results are accurate if there is no 0 in the confidence intervals. According to Annex 5 and Table 18 below, the confidence intervals in the bootstrap procedure are between 0.205 and 0.619 and 0.260 and 0.549 and the significance for both variables are <0.001, showing that the positive relationship between independent and dependent variables is consistent.

Table 18

Bootstrapping procedure, where X - Work Process Clarity + Process Flexibility and Y - Employee Job Satisfaction

Model	Lower confidence interval	Upper confidence interval	Significance
Constant	0.095	1.554	0.033
Work Process Flexibility	**0.205**	**0.619**	<0.001
Work Process Clarity	**0.260**	**0.549**	<0.001

Source: compiled by the author of this thesis, based on the results of the research.

Additionally, a collinearity test was done to identify potential multicollinearity problems in the regression model, which can occur when independent variables are highly correlated with each other. According to Annex 5 and Table 19 below, due to low eigenvalues and high (above 10) condition index, there is a risk of multicollinearity issues in the model, where both work

process flexibility and work process clarity contribute significantly to this issue. On the other hand, the analysis in Annex 5 shows a VIF score of 1.032 and Tolerance values of 0.969 for both work process flexibility and work process clarity, which shows that the multicollinearity should not be an issue and the regression model is stable.

Table 19

Collinearity test, where X - Work Process Clarity + Process Flexibility and Y - Employee Job Satisfaction

Dimensions	Eigenvalue	Condition Index	Work Process Flexibility	Work Process Clarity
1	2.977	1.00	0.00	0.00
2	**0.016**	**13.803**	0.63	0.55
3	**0.007**	**19.950**	0.37	0.45

Source: compiled by the author of this thesis, based on the results of the research.

Overall, we can conclude that in our research work process flexibility and work process clarity does impact employee job satisfaction in a positive way (H1 and H3). Based on research results, the regression equation is:

Y (employee job satisfaction) = 0,838 + 0,421*(work process flexibility) + 0,404*(work process clarity) + e

Looking at the regression equation above, if the work process flexibility (X1) result is 1, then that increases the employee job satisfaction (Y1) by 0,421. For work process clarity, the impact is very similar - when work process clarity (X2) is 1, the employee job satisfaction (Y1) increases by 0,404.

3.2.4. Impact of work process flexibility and work process clarity on employee job performance

Carrying out the same analysis steps as for the previous pair, results of Table 20 below show that the significance is below 0.05 (<0.001), which means that the regression can be analysed and the F value of 67.909 shows that the model reliably captures the relationship between the predictors and the outcome. Overall, these results show that the regression can be used and the results should be reliable.

Table 20

ANOVA test results, where X - Work Process Clarity + Process Flexibility + Employee Job Satisfaction and Y - Employee Job Performance

Model	Sum of Squares	df	Mean Square	F	Significance
Regression	50.542	2	16.85	**67.909**	**<0.001**
Residual	101.220	408	0.248	-	-
Total	151.761	411	-	-	-

Source: compiled by the author of this thesis, based on the results of the research.

Analysing the model summary in Annex 5 and Table 21 below, the adjusted R square value of 0.328 shows that 32.80% of the employee job performance can be explained by process clarity and process flexibility. The value of 1.947 in the Durbin-Watson test confirms that there is no autocorrelation between the variables and the residuals are independent.

Table 21

Model summary, where X - Work Process Clarity + Process Flexibility + Employee Job Satisfaction and Y - Employee Job Performance

Model	R	R Square	Adjusted R square	Durbin-Watson
Regression	0.577	0.333	**0.329**	**1.947**

Source: compiled by the author of this thesis, based on the results of the research.

According to the above, we can already state that there is some sort of positive impact on employee job performance based on the independent variables. When independent variables increase, so does employee job performance. According to Annex 5 and Table 22 below, in the standardised model, work process flexibility has no significant impact on employee job performance (because significance is above 0.05), while work process clarity has a 49.80 % impact on employee job performance and employee job satisfaction has a 15.50% impact on employee job performance.

Table 22

Coefficients, where where X - Work Process Clarity + Process Flexibility + Employee Job Satisfaction and Y - Employee Job Performance

Model	Unstandardized B	Standardised Coefficients Beta	Significance
Constant	1.409	-	<0.001
Work Process Flexibility	0.051	**0.041**	**0.333**
Work Process Clarity	0.527	**0.498**	**<0.001**
Employee Job Satisfaction	0.109	**0.155**	**<0.001**

Source: compiled by the author of this thesis, based on the results of the research.

As with previous regression, a bootstrapping analysis is done to ensure data consistency. According to Annex 5 and Table 23 below, it confirms that work process flexibility does not significantly impact employee job performance as significance is above 0.05 and confidence intervals include a 0. Meanwhile, work process flexibility and employee job satisfaction positively impacts employee job performance and the results of regression are consistent.

Table 23

Bootstrapping procedure, where X - Work Process Clarity + Process Flexibility + Employee Job Satisfaction and Y - Employee Job Performance

Model	Lower confidence interval	Upper confidence interval	Significance
Constant	0.796	1.994	0.001
Work Process Flexibility	**-0.054**	**0.154**	0.370
Work Process Clarity	**0.397**	**0.638**	<0.001
Employee Job Satisfaction	**0.041**	**0.194**	0.006

Source: compiled by the author of this thesis, based on the results of the research.

Additionally, a collinearity test was done to identify potential multicollinearity problems in the regression model, which can occur when independent variables are highly correlated with

each other. According to Annex 5 and Table 24 below, due to low eigenvalues and high (above 10) condition index, there is a risk of multicollinearity issues in the model. On the other hand, the analysis in Annex 5 shows a VIF score of above 1.100 and Tolerance values of 0.847 and above for all independent variables, which shows that the multicollinearity should not be an issue and the regression model is stable.

Table 24

Collinearity test, where where X - Work Process Clarity + Process Flexibility + Employee Job Satisfaction and Y - Employee Job Performance

Dimensions	Eigenvalue	Condition Index	Work Process Flexibility	Work Process Clarity	Employee Job Satisfaction
1	3.949	1.00	0.00	0.00	0.00
2	**0.028**	**11.782**	0.05	0.03	0.99
3	**0.016**	**15.905**	0.58	0.52	0.00
4	**0.007**	**23.049**	0.37	0.45	0.01

Source: compiled by the author of this thesis, based on the results of the research.

Overall, we can conclude that in our research work process flexibility has no significant impact on employee job performance, meanwhile work process clarity and employee job satisfaction does impact employee job performance in a positive way (H2, H4 and H5). Based on research results, the regression equation is:

Y (employee job performance) = 1,409 + 0,527*(work process clarity) + 0,109*(employee job satisfaction) + e

Looking at the regression equation above, if the work process clarity (X2) result is 1, then that increases the employee job performance (Y2) by 0,527, which is a bigger influence compared to the influence in the first regression with employee job satisfaction (Y1). For employee job satisfaction, if the result is 1, that increases the employee job performance (Y2) by 0,109. In this regression, process flexibility (X1) had no significant impact on employee job satisfaction (Y1).

3.2.5. Mediator analysis

Since based on scientific literature analysis, there was a hypothesis that employee job satisfaction might impact employee job performance, it is also imperative to analyse if the employee job satisfaction acts as mediator in our research. For this purpose, Hayes PROCESS

model 4 analysis will be carried out to analyse the mediating effect of employee job satisfaction in the relationship between process clarity and process flexibility and employee job performance.

As it can be seen in Annex 6 and Table 25, employee job satisfaction has a significant impact on employee job performance. What is more, as added by additional data in Table 26, the direct effect of 0.109 and indirect effect 0.1056 are similar in size, suggesting that Employee Job Satisfaction substantially mediates the effect of Process Flexibility on Employee Job Performance.

Table 25

Coefficients, where X - Work Process Flexibility and Y - Employee Job Performance and M = Employee Job Satisfaction

Model	Unstandardized B	Significance
Constant	3.014	<0.001
Work Process Flexibility	**0.109**	**<0.071**
Employee Job Satisfaction	0.209	**<0.001**

Source: compiled by the author of this thesis, based on the results of the research.

Because bootstrapping confidence intervals in indirect effect relationship in Table 26 are between 0.0575 and 0.1624 and don't include zero, the mediating effect of employee job satisfaction is deemed as significant (H6)

Table 26

Indirect effect, where X - Work Process Flexibility and Y - Employee Job Performance and M = Employee Job Satisfaction

	Effect	BootSE	Lower confidence interval	Upper confidence interval
Employee Job Satisfaction	**0.1056**	0.0271	**0.0575**	**0.1624**

Source: compiled by the author of this thesis, based on the results of the research.

As it can be seen in Annex 6 and Table 27 below, when analysing employee job satisfaction relationship with work process clarity, employee job satisfaction also has a significant impact on employee job performance. Data in Table 28 suggests that the direct effect

of 0.531 of work process clarity on employee job performance is much stronger than the indirect path of 0.0545 via mediator effect.

Table 27

Coefficients, where X - Work Process Clarity and Y - Employee Job Performance and M = Employee Job Satisfaction

Model	Unstandardized B	Significance
Constant	1.539	<0.001
Work Process Clarity	**0.531**	**<0.001**
Employee Job Satisfaction	**0.117**	**<0.001**

Source: compiled by the author of this thesis, based on the results of the research.

Because bootstrapping confidence intervals in indirect effect in Table 27 are between 0.0216 and 0.0996 and don't include zero, the mediating effect of employee job satisfaction is deemed as significant (H7). In summary, both of the hypotheses around the mediator's effect were accepted.

Table 28

Indirect effect, where X - Work Process Clarity and Y - Employee Job Performance and M = Employee Job Satisfaction

Model	Effect	BootSE	Lower confidence interval	Upper confidence interval
Employee Job Satisfaction	**0.0545**	0.0203	**0.0216**	**0.0996**

Source: compiled by the author of this thesis, based on the results of the research.

3.2.6. Summary of hypotheses and comparison of results with previous authors

H1 (ACCEPTED): Work process flexibility (X1) has a positive impact on employee job satisfaction (Y1).

H2 (REJECTED): Work process flexibility (X1) has a positive impact on employee job performance (Y2).

Shafagatova et al (2023) recently found that process variables can have an impact on an employees' job satisfaction. According to the completed research and its results, it further supports the findings of Shafagatova et al (2023), because work process flexibility has a

significant impact on employee job satisfaction. This makes sense from a practical perspective as well, because as employees are more autonomous and have the freedom of choice, it improves their satisfaction. On the other hand, work process flexibility had no significant impact on employee job performance, which makes sense, as Shafagatova et al (2023) only found the relationship with job satisfaction, not employee job performance.

According to this research, employees might achieve a high level of performance without having to rely on flexible work processes. Given my personal 10 years of working experience in different companies, with different processes, I believe the findings make sense, as the fact that a process is flexible or not does not directly impact the outcome of a task. The employees can achieve a high level of performance with a process that is not flexible and this research confirmed that. To conclude, while work process flexibility does have an impact on employee's job satisfaction, it does not impact the performance of an employee and their work results.

H3 (ACCEPTED): Work process clarity (X2) has a positive impact on employee job satisfaction (Y1).

H4 (ACCEPTED): Work process clarity (X2) has a positive impact on employee job performance (Y2).

Hu and Liden (2011) and Zhang et al (2022) already established that work process clarity makes a significant impact on team performance, meanwhile, the current research further builds on top of this knowledge and confirms that work process clarity also has a significant impact on individual employees job performance. Sawyer (1992) research found that work process clarity has no impact on employee job satisfaction, but the current research found opposite results, similar to other concepts like goal and role clarity (Hoek et al, 2016; Fürstenberg et al, 2021; Chen et al, 2022).

H5 (ACCEPTED): Employee job satisfaction (Y1) has a positive impact on employee job performance (Y2).

H6 (ACCEPTED): Employee job satisfaction (Y1) mediates the relationship between work process flexibility (X1) and employee job performance (Y2)

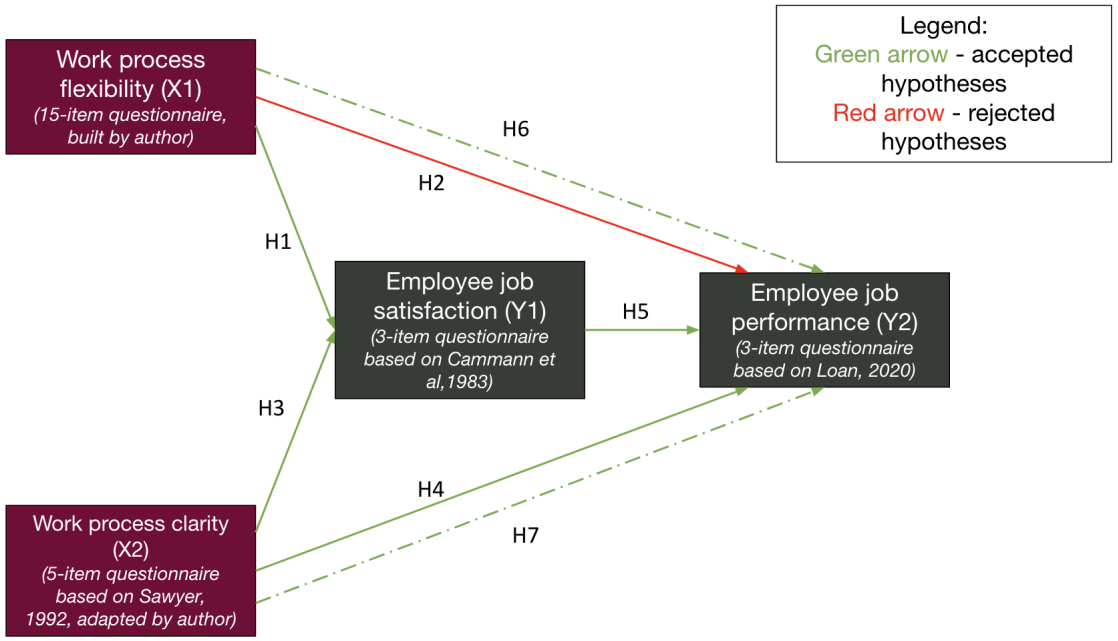
H7 (ACCEPTED): Employee job satisfaction (Y1) mediates the relationship between work process clarity (X2) and employee job performance (Y2)

These three hypotheses were based on the findings of Ertekin and Avunduk (2021) and Wolomasi et al (2019), where they found that employee job satisfaction impacts employee job performance. The current research further supports their findings and confirms that employee job satisfaction has an impact on employee job performance and adds additional scientific knowledge on top, confirming that employee job satisfaction can work as a mediator between

the work process clarity, work process flexibility and employee job performance. Overall, the hypotheses testing results can be summarised in Figure 6 below.

Figure 6

Hypotheses testing results



Source: Created by the author of this thesis, based on research results.

3.2.7. Limitations of research

The research had several limitations that should be taken into account when looking at the findings of the research and when using them for future scientific research.

Firstly, nonprobability convenience sampling was used for the research, which means the findings of the research might not represent the whole population. Of course, a healthy amount of 412 respondents were found, but that still does not mean the results can be applied to the whole population. Future researchers might consider using different sampling techniques.

Secondly, employee job performance and job satisfaction are being measured with overall measurement scales without taking into account the different dimensions, therefore, it's unclear which exact dimensions of these constructs are being impacted by the independent variables. This research focused on building the foundations, that is, looking if there is a relationship between these constructs in general and now that it is confirmed that there is a significant impact between the constructs, future researchers might consider exploring these further to find more insights.

What is more, employee job performance was being measured as a self-reported measurement, therefore could have been subjective. In the future, researchers could try doing longer-term experiments in a specific company, where they could evaluate employee's job performance based on the information collected from their managers and look how the changing work process clarity and process flexibility might impact the job performance over a few separate evaluations. Doing a long-term experiment with the same participants might also show more insights than collecting data at a single point in time.

Lastly, it has been noted in the literature that employee's job satisfaction and job performance are impacted by many different factors, including cultural differences - these, together with geographic locations were not taken into account in this research. Future scientific researchers might consider taking this into account and looking for different findings.

CONCLUSIONS

Conclusions from literature analysis:

1. The review of scientific literature highlights the critical role of business processes in shaping organizational performance. While process flexibility has been extensively studied and its significance well-documented, the concept of process clarity remains under researched. Importantly, much of the existing research on business processes focuses on organizational needs rather than the experiences and outcomes of employees, leaving a gap in understanding their impact on job satisfaction and performance.
2. Job satisfaction and job performance, as explored in the scientific literature, represent fundamental aspects of employee well-being and contribution. These concepts are both multifaceted and context-dependent, offering flexibility in their measurement and interpretation, but also posing challenges for creating universal definitions.
3. Existing scientific research on the topic largely emphasizes team-level performance and organizational perspectives on process clarity, with limited focus on the individual employee experience. Moreover, there is no conclusive evidence linking work process clarity and flexibility directly to employee job satisfaction and performance, underscoring the novelty and importance of addressing this research gap.

Conclusions from empirical research:

4. To address these gaps, this thesis developed a new research model grounded in existing literature, along with hypotheses to examine the interplay between work process clarity, process flexibility, and employee outcomes. The study provides a structured approach to evaluating these relationships, offering a fresh perspective on their significance.
5. A new questionnaire was developed to measure work process flexibility, drawing on established taxonomies from prior research. This tool was tested and found to be both valid and reliable, making it a valuable resource for future studies aiming to assess this concept across different contexts.
6. The findings of this research emphasize that process-related variables, such as clarity and flexibility, hold greater significance than previously assumed. While traditionally viewed through the lens of organizational profitability, this study sheds light on their impact on individual employees, demonstrating their influence on job satisfaction and performance.
7. This research also confirms that job satisfaction plays a crucial role in enhancing job performance and acts as a mediator between work process variables and performance

outcomes. These findings reinforce prior studies while adding new dimensions to the understanding of these relationships.

8. The implications of this research extend to both academic and practical domains. For researchers, the study provides fresh insights into the relationship between processes and employees, which can be used for future exploration of these concepts as further explained in the recommendations section. For practitioners, the findings underline the importance of considering employee-focused outcomes when designing and managing business processes, highlighting the dual benefits for organizational success and employee well-being.

RECOMMENDATIONS

1. This research introduced a new questionnaire to measure work process flexibility. Future researchers are encouraged to enhance the questionnaire by incorporating additional variables to improve its reliability and robustness. Additionally, providing clearer and more relatable examples for respondents could increase their understanding of the variables being assessed, ensuring more accurate responses.
2. Future studies could adopt alternative sampling methodologies to enhance the reliability and generalizability of findings. Conducting longitudinal studies with the same participants may yield deeper insights into how changes in process variables influence employee job satisfaction and performance over time. Future research could incorporate subjective performance evaluations by involving employees' managers, providing a more nuanced perspective on job performance alongside self-reported data.
3. Future researchers could explore potential moderators that might influence the relationships established in this study. Factors such as cultural contexts, respondent demographics (e.g., age, work experience, tenure in current roles), and organizational characteristics (e.g., company size) could provide valuable insights into variations in these relationships.
4. Given that employee job satisfaction and performance are multidimensional constructs, future studies could develop research models to examine how process variables influence specific dimensions of these outcomes, offering a more granular understanding of their effects.
5. This research did not account for geographic or industry-specific differences. Future research could focus on particular sectors, countries, regions or cultures to determine whether findings within these specific contexts align with the broader results of this study.
6. Overall, process variables should be re-evaluated not only for their influence on organizational outcomes but also for their significant impact on employee well-being and performance.

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THE IMPACT OF WORK PROCESS CLARITY AND PROCESS FLEXIBILITY ON EMPLOYEE JOB SATISFACTION AND JOB PERFORMANCE

ĄŽUOLAS ŠOPA

Master thesis

Business process management

Vilnius University, Faculty of Economics and Business Administration

Supervisor – Assoc. Prof. Aurelija Ulbinaitė

Vilnius, 2024

SUMMARY

89 pages, 27 tables, 6 figures, 102 references.

The main purpose of this master thesis is to determine if work process clarity and work process flexibility has an impact on employee job satisfaction and employee job performance. Mediating effect of employee job satisfaction is also explored in the research.

The master thesis consists of three main parts: the analysis of literature, research methodology and its results, conclusions and recommendations.

Literature analysis reviews the development of process concepts and how the four main constructs of work process clarity, work process flexibility, employee job satisfaction and employee job performance developed over the years. In the end of section one, the links between the four constructs and the results of previous scientific research was explored to identify places where the Master thesis can bring novelty.

Following the literature analysis, the author of this thesis carried out a research to find if these four constructs have a significant relationship between them. A quantitative study with 412 employed participants was conducted by collecting data with an online questionnaire. A new questionnaire to measure work process flexibility was created. The results of the research were analysed with SPSS and PROCESS macro by A. Hayes. Cronbach's Alpha coefficient for all constructs was above 0,7 which indicates that the scales used were consistent and reliable. In order to establish a relationship between the work process constructs and the impact on employees satisfaction and performance, ANOVA coefficient was used.

The performed research (N=412) revealed that work process clarity has a significant impact on both employee job satisfaction and employee job performance. Meanwhile, work process

flexibility impacts only employee job satisfaction, but not employee job performance. Employee job satisfaction does play a mediating role in the relationship, but the direct effect of independent variables is stronger than the indirect effect. Bootstrapping and additional data analysis showed regression is consistent and there are no multicollinearity problems in the model.

The conclusions and recommendations summarise the main findings of literature analysis as well as the results of the performed research. The author of this thesis believes that the results of the study could give useful implications for both scientific researchers and practitioners, as the importance of processes at work evolved from impacting only the business to also impacting employees themselves.

DARBO PROCESO AIŠKUMO IR PROCESO LANKSTUMO ĮTAKA DARBUOTOJŲ DARBO PASITENKINIMUI IR DARBO REZULTATAMS

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Verslo procesų valdymas

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Darbo vadovė – Assoc. Prof. Aurelija Ulbinaitė

Vilnius, 2024

SANTRAUKA

89 puslapiai, 27 lentelės, 6 paveikslai, 102 nuorodos.

Pagrindinis šio magistrinio darbo tikslas yra nustatyti ar darbo proceso aiškumas ir darbo proceso lankstumas turi įtakos darbuotojų pasitenkinimui darbu ir darbuotojų darbo rezultatams. Tyrime taip pat nagrinėjamas darbuotojų pasitenkinimo darbu mediacinis poveikis ryšiams.

Magistro darbą sudaro trys pagrindinės dalys: literatūros analizė, tyrimo metodologijos kūrimas, tyrimo rezultatai, išvados ir rekomendacijos ateities tyrimams.

Literatūros analizė pristato procesų supratimo raidą ir tai, kaip bėgant metams vystėsi keturi pagrindiniai darbo proceso aiškumo, darbo proceso lankstumo, darbuotojų pasitenkinimo darbu ir darbuotojų darbo našumo konstruktai. Pirmosios dalies pabaigoje buvo nagrinėjamos sąsajos tarp keturių konstruktų ir ankstesnių mokslinių tyrimų rezultatų, siekiant nustatyti vietas, kur magistro darbas gali suteikti naujumo.

Atlikęs literatūros analizę, autorius atliko tyrimą, siekdamas išsiaiškinti, ar šie keturi konstruktai turi reikšmingą ryšį ir ar nepriklausomi kintamieji įtakoja priklausomus kintamuosius. Renkant duomenis internetiniu klausimynu, atliktas kiekybinis tyrimas, kuriame dalyvavo 412 dirbančių respondentų. Sukurtas naujas klausimynas darbo proceso lankstumui matuoti. Tyrimo rezultatai analizuoti su SPSS programa ir PROCESS A. Hayes makrokomanda. Visų konstruktų Cronbacho alfa koeficientas buvo didesnis nei 0,7, o tai rodo, kad naudojamos skalės buvo nuoseklios ir patikimos. Siekiant nustatyti ryšį tarp darbo proceso kontruktų ir įtakos darbuotojų pasitenkinimui bei rezultatams, buvo naudojamas ANOVA koeficientas.

Atliktas tyrimas (N=412) atskleidė, kad darbo proceso aiškumas turi įtaką tiek darbuotojų pasitenkinimui darbu, tiek darbuotojo darbo rezultatams. Tuo tarpu darbo proceso lankstumas

turi įtakos tik darbuotojo pasitenkinimui darbu, bet ne darbuotojo darbo rezultatams. Darbuotojų pasitenkinimas darbu atlieka mediacinį vaidmenį šiuose ryšiuose, tačiau tiesioginis nepriklausomų kintamųjų poveikis yra stipresnis nei netiesioginis. Bootstrapping ir papildoma duomenų analizė parodė, kad regresija yra nuosekli ir modelyje nėra daugiakolineariškumo problemų.

Išvadose ir rekomendacijose apibendrinamos pagrindinės literatūros analizės išvados bei atlikto tyrimo rezultatai. Autorius mano, kad tyrimo rezultatai yra naudingi tiek akademikams, tiek darbuotojams, nes procesų svarba darbe išaugo nuo įtakos tik verslui iki įtakos patiems darbuotojams.

ANNEXES

Annex 1. Questionnaire

Dear respondent,

My name is Ąžuolas Šopa and I am currently a Business Process Management master's student in Vilnius University Faculty of Economics and Business Administration.

I am conducting a research study aimed at identifying if work process clarity and work process flexibility has an impact on employee job satisfaction and employee job performance.

The data is collected only for research purposes and will be kept confidential. The survey is conducted anonymously.

The questionnaire will take 10-15 minutes to finish - the first two parts will focus on processes at work, the 3rd and 4th part will focus on your perceived job satisfaction and job performance, while the last part will focus on demographics.

Thank you very much for your time.

Contact person:

Ąžuolas Šopa, Vilnius University. azuolas.sopa@evaf.vu.lt

1. Are you currently employed?
    a. Yes
    b. No

Work Process Flexibility (section 1)

In this section, please evaluate how much you agree or disagree with the below statements regarding processes at your work. When answering, if you are responsible for multiple processes at your work, think about the overall situation of all processes, taking all processes into account. Where 1 - Strongly disagree, 2 - Disagree, 3 - Neither agree nor disagree, 4 - Agree, 5 - Strongly agree.

In this research, process is understood as any sequence of actions at work, where an input (information, time, any resource) is transformed into another output (service, new information, product).

During processes in my work, I can:		**1**	**2**	**3**	**4**	**5**
2	Execute a set of tasks in parallel					
3	Select tasks which I want to execute					
4	Execute the same task multiple times					
5	Cancel the task at my own will					
6	Undo a task that has been done					
7	Redo a task that has been done					
8	Skip a task if I choose to do so					
9	Create an additional instance of the same task					
10	Invoke a new task while doing a current one					
11	Make momentary changes to a process that only affect the process a single time					
12	Make long-term changes to a process model, affecting all new instances of the same process					
13	Make changes to processes only before starting them					
14	Make changes to processes at any time during process execution					

During processes in my work, if they purposefully have missing information or undefined tasks, I can:		**1**	**2**	**3**	**4**	**5**
15	Choose from a predefined list of things to do when I reach that step					

16	Construct a new process when I reach that step					

Work Process Clarity (section 2)

In this section, please evaluate how much you agree or disagree with the below statements regarding processes at your work. When answering, if you are responsible for multiple processes at your work, think about the overall situation of all processes, taking all processes into account. Where 1 - Strongly disagree, 2 - Disagree, 3 - Neither agree nor disagree, 4 - Agree, 5 - Strongly agree.

In this research, process is understood as any sequence of actions at work, where an input (information, time, any resource) is transformed into another output (service, new information, product).

Work Process Clarity		**1**	**2**	**3**	**4**	**5**
17	I know how to divide my time among the tasks required of my job					
18	I know how to schedule my work day					
19	I know how to determine the appropriate procedures for each work task					
20	The procedures I use to do my job are correct and proper					
21	Considering all my work tasks, I am certain I know the best ways to do these tasks					

Employee Job Satisfaction (section 3)

In this section, please evaluate how much you agree or disagree with the below statements regarding your current job. Where 1 - Strongly disagree, 2 - Disagree, 3 - Neither agree nor disagree, 4 - Agree, 5 - Strongly agree.

Employee job satisfaction		**1**	**2**	**3**	**4**	**5**
22	All in all, I am satisfied with my job					
23	In general, I don't like my job					
24	In general, I like working here					

Employee Job Performance (section 4)

In this section, please evaluate how much you agree or disagree with the below statements regarding your current job. Where 1 - Strongly disagree, 2 - Disagree, 3 - Neither agree nor disagree, 4 - Agree, 5 - Strongly agree.

Employee job performance		**1**	**2**	**3**	**4**	**5**
25	I am very competent at my job					
26	I get my work done very effectively					
27	I have performed my work well					

Demographic questions (section 5)

28. Your age
    a. 18 - 20
    b. 20 - 29
    c. 30 - 39
    d. 40 - 49
    e. 50 - 59
    f. 60 and above
29. How many years of work experience do you have overall?
    a. Up to 1 year
    b. 1 - 3 years
    c. 4 - 6 years
    d. 7 - 9 years
    e. 10 or more years
30. How long do you work in your current position?
    a. Up to 6 months
    b. 6 - 11 months
    c. 1 - 3 years
    d. 4 - 6 years
    e. 6 and more years
31. How many employees does your organisation have?

a. Up to 10
b. 11 - 50
c. 51 - 250
d. 251 and more

32. Your gender
    a. Female
    b. Male
    c. Other
    d. Prefer not to say
33. Your highest education level
    a. Primary school
    b. Secondary school
    c. Vocational school
    d. University degree
    e. Other
34. Your role in your current job
    a. Freelancer
    b. Operational level employee
    c. Senior operational level employee
    d. Middle manager
    e. Top level manager

Annex 2. Scenario examples used in Section 1 of Annex 1

Question (in Annex 1)	Examples used
2	As an employee in customer support, I can talk with the customer on the phone and chat with a different customer at the same time.
3	As an employee in customer support, I can choose which customer enquiries to answer first.
4	When reviewing an insurance claim, I can review documents multiple times to make the final decision.
5	As a chef in a restaurant, I can stop making a specific dish at any time (and, for example, start making something else, abandoning the original).
6	1) As a software developer writing code, I can delete (undo) code that has been written incorrectly. 2) As an employee in customer support, I cannot unsend a message sent to the customer.
7	After registering a patient in a hospital and undertaking some examinations, the registration task can be repeated to adjust outdated or incorrect data.
8	In life threatening situations it should be possible to start surgery immediately, whereas normally the patient's health status is evaluated before commencing surgery.
9	A travel agent making trip arrangements for a group of people has to do the same arrangements if the number of travelling people increase (i.e., a separate reservation has to be done for each person).
10	When reviewing an insurance claim, it is suspected that the information given may be fraudulent. In order to determine how to proceed, the next task to be executed is deferred and a detailed investigation task (which normally occurs later in the process) is invoked.
11	As a hiring specialist during the hiring process, I can create additional interviews for this single candidate if needed (future candidates might not need this additional interview).
12	As a hiring specialist during the hiring process, I can create additional interviews for this single candidate and adjust the hiring process, so all future candidates also have to go through this additional interview.
13	As a hiring specialist during the hiring process, I can only create an additional interview for a candidate if the hiring process hasn't started yet.
14	As a hiring specialist during the hiring process, I can create an additional interview for a candidate any time during the hiring process.
15	As a hiring specialist during the hiring process, after an interview with a candidate I can only reject or continue with the candidate (two predefined actions).
16	As a customer support specialist, if a customer's enquiry requires finding information which is not described anywhere and there is no defined way to get this information, I can construct a new process how to find that information (for example, contacting a co-worker who knows the answer, which is not the usual task in this process).

Work Process Flexibility

Cronbach's Alpha	N of Items
.746	15

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Late_binding_Underspecification	48.8665	50.437	.190	.748
Late_modelling_Underspecification	48.5437	47.431	.477	.721
Parallelism_Design	48.8180	50.831	.132	.756
Choice_Design	48.6456	46.351	.444	.722
Iteration_Design	48.1068	50.013	.315	.736
Cancellation_Design	49.5146	47.170	.366	.730
Undo_Deviation	48.9539	46.798	.397	.727
Redo_Deviation	48.2985	48.648	.420	.727
Skip_Deviation	49.2524	47.333	.348	.732
Create_additional_instance_of_task_Deviation	48.5558	48.982	.357	.732
Invoke_Deviation	48.3981	47.661	.474	.722
Evolutionary_Change_Change	48.7816	46.468	.447	.722
Momentary_Change_Change	48.6165	46.933	.462	.721
Entry_Time_Change	49.6335	52.189	.071	.759
On_The_Fly_Change	48.8883	47.277	.411	.726

Work Process Clarity

Cronbach's Alpha	N of Items
.810	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Divide_My_Time_Among_Tasks	16.6748	5.675	.647	.761
Schedule_my_workday	16.6456	5.884	.526	.794
Appropriate_procedures	16.7549	5.276	.691	.745
Procedures_are_correct_and_proper	16.8519	5.659	.552	.787
I_Know_The_best_way_to_these_tasks	16.9272	5.221	.590	.779

Employee Job Satisfaction

Cronbach's Alpha	N of Items
.908	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Satisfied_With_My_Job	8.0291	3.065	.858	.832
I_Dont_Like_My_Job_REVERSE	7.9587	2.945	.799	.885
I_Like_Working_Here	8.0073	3.307	.796	.885

Employee Job Performance

Cronbach's Alpha	N of Items
.862	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Very_Competent_At_my_Job	8.5121	1.603	.735	.809
Work_Done_Very_Efficiently	8.4903	1.448	.736	.814
I_Have_Performed_My_Work_Well	8.3811	1.687	.753	.797

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Employee_Job_Satisfaction	.231	412	<.001	.873	412	<.001
Employee_Job_Performance	.196	412	<.001	.888	412	<.001
Work_Process_Clarity	.097	412	<.001	.941	412	<.001
Work_Process_Flexibility	.063	412	<.001	.982	412	<.001

Descriptive Statistics

		Employee_Job_Performance	Employee_Job_Satisfaction	Work_Process_Clarity	Work_Process_Flexibility
N	Valid	412	412	412	412
	Missing	0	0	0	0
Mean		4.2306	3.9992	4.1927	3.4851
Median		4.0000	4.0000	4.2000	3.5333
Mode		4.00	4.00	4.00	3.53
Std. Deviation		.60766	.86145	.57511	.49197
Variance		.369	.742	.331	.242
Minimum		1.00	1.00	2.00	1.27
Maximum		5.00	5.00	5.00	5.00

Correlations

			Employee_Job_Performance	Employee_Job_Satisfaction	Work_Process_Clarity	Work_Process_Flexibility
Spearman's rho	Employee_Job_Performance	Correlation Coefficient	1.000	.456**	.612**	.201**
		Sig. (2-tailed)	.	<.001	<.001	<.001
		N	412	412	412	412
	Employee_Job_Satisfaction	Correlation Coefficient	.456**	1.000	.423**	.274**
		Sig. (2-tailed)	<.001	.	<.001	<.001
		N	412	412	412	412
	Work_Process_Clarity	Correlation Coefficient	.612**	.423**	1.000	.182**
		Sig. (2-tailed)	<.001	<.001	.	<.001
		N	412	412	412	412
	Work_Process_Flexibility	Correlation Coefficient	.201**	.274**	.182**	1.000
		Sig. (2-tailed)	<.001	<.001	<.001	.
		N	412	412	412	412

Annex 5. Impact of work process flexibility and work process clarity on employee job satisfaction and employee job performance in SPSS

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.788	2	23.394	37.056	<.001[b]
	Residual	258.212	409	.631		
	Total	305.000	411			

a. Dependent Variable: JobSat

b. Predictors: (Constant), ProcClar, ProcFlex

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin–Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.392[a]	.153	.149	.79456	.153	37.056	2	409	<.001	1.922

a. Predictors: (Constant), ProcClar, ProcFlex

b. Dependent Variable: JobSat

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.838	.369		2.270	.024		
	ProcFlex	.421	.081	.241	5.204	<.001	.969	1.032
	ProcClar	.404	.069	.270	5.832	<.001	.969	1.032

a. Dependent Variable: JobSat

Bootstrap for Coefficients

Model		B	Bootstrap[a]				
			Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval	
						Lower	Upper
1	(Constant)	.838	-.011	.380	.033	.095	1.554
	ProcFlex	.421	-.002	.103	<.001	.205	.619
	ProcClar	.404	.004	.072	<.001	.260	.549

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	ProcFlex	ProcClar
1	1	2.977	1.000	.00	.00	.00
	2	.016	13.803	.00	.63	.55
	3	.007	19.950	1.00	.37	.45

a. Dependent Variable: JobSat

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	50.542	3	16.847	67.909	<.001[b]
	Residual	101.220	408	.248		
	Total	151.761	411			

a. Dependent Variable: JobPerf

b. Predictors: (Constant), JobSat, ProcFlex, ProcClar

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics: R Square Change	F Change	df1	df2	Sig. F Change	Durbin–Watson
1	.577[a]	.333	.328	.49808	.333	67.909	3	408	<.001	1.947

a. Predictors: (Constant), JobSat, ProcFlex, ProcClar

b. Dependent Variable: JobPerf

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	1.409	.233		6.048	<.001		
	ProcFlex	.051	.052	.041	.969	.333	.909	1.100
	ProcClar	.527	.045	.498	11.658	<.001	.894	1.118
	JobSat	.109	.031	.155	3.522	<.001	.847	1.181

a. Dependent Variable: JobPerf

Bootstrap for Coefficients

Model		B	Bootstrap[a] Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval Lower	Upper
1	(Constant)	1.409	-.016	.308	<.001	.796	1.994
	ProcFlex	.051	.003	.055	.370	-.054	.154
	ProcClar	.527	-.002	.063	<.001	.397	.638
	JobSat	.109	.003	.037	.006	.041	.194

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	ProcFlex	ProcClar	JobSat
1	1	3.949	1.000	.00	.00	.00	.00
	2	.028	11.782	.04	.05	.03	.99
	3	.016	15.905	.00	.58	.52	.00
	4	.007	23.049	.96	.37	.45	.01

a. Dependent Variable: JobPerf

Annex 6. Mediator analysis in SPSS

```
**************************************************************************
Model  : 4
    Y  : JobPerf
    X  : ProcFlex
    M  : JobSat

Sample
Size:  412

**************************************************************************
OUTCOME VARIABLE:
 JobSat

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .2881      .0830      .6822    37.1126     1.0000   410.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     2.2410      .2915     7.6892      .0000     1.6681     2.8140
ProcFlex      .5045      .0828     6.0920      .0000      .3417      .6673

**************************************************************************
OUTCOME VARIABLE:
 JobPerf

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .3330      .1109      .3299    25.5027     2.0000   409.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     3.0140      .2168    13.9018      .0000     2.5878     3.4402
ProcFlex      .1089      .0601     1.8109      .0709     -.0093      .2271
JobSat        .2093      .0343     6.0938      .0000      .1418      .2768


***************** DIRECT AND INDIRECT EFFECTS OF X ON Y ****************

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
      .1089      .0601     1.8109      .0709     -.0093      .2271

Indirect effect(s) of X on Y:
           Effect     BootSE   BootLLCI   BootULCI
JobSat      .1056      .0271      .0575      .1624

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000
```

```
Model  : 4
    Y  : JobPerf
    X  : ProcClar
    M  : JobSat

Sample
Size:  412

**************************************************************************
OUTCOME VARIABLE:
 JobSat

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .3120      .0973      .6715    44.2174     1.0000   410.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     2.0397      .2974     6.8579      .0000     1.4550     2.6244
ProcClar      .4674      .0703     6.6496      .0000      .3292      .6055

**************************************************************************
OUTCOME VARIABLE:
 JobPerf

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .5758      .3315      .2481   101.4082     2.0000   409.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     1.5388      .1909     8.0626      .0000     1.1636     1.9140
ProcClar      .5307      .0450    11.8042      .0000      .4423      .6191
JobSat        .1167      .0300     3.8865      .0001      .0577      .1757


****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
      .5307      .0450    11.8042      .0000      .4423      .6191

Indirect effect(s) of X on Y:
           Effect     BootSE   BootLLCI   BootULCI
JobSat      .0545      .0203      .0216      .0996

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000
```