

## MASTER

**The influence of organizational climate on employees' job crafting behaviors, engagement, affective commitment and turnover intention within ASML**

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Department of Industrial Engineering & Innovation Sciences  
Innovation Management  
Human Performance Management Group

In partial fulfillment of the requirements for the degree of:  
Master of Science  
in Innovation Management

The Influence of Organizational Climate on Employees' Job Crafting  
Behaviors, Engagement, Affective Commitment and Turnover Intention  
*within ASML*

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# I Abstract

ASML has introduced new organizational core values to anchor a direction and identity deep into the whole organization, especially given the workforce growth of the last years. These values are seen as the organizational culture as they guide the way of working and act as the basic assumptions about the organization. After the roll-out of the values, ASML is interested in how the values are perceived by the employees and how these values contribute to work-related behaviors and attitudes. Therefore, this research focuses on how ASML's organizational culture is perceived by Customer Support (CS) employees and how this relates to CS employees' job crafting behaviors, engagement, affective commitment, and turnover intention. This study uses a confirmatory sequential design. In the first part, data from questionnaires is used to get an understanding of the relationships between the different study variables. Besides the direct relationships, also mediation analyses are performed to investigate the mediating role of job crafting, engagement and affective commitment between aspects of culture and outcome variables. Secondly, twelve interviews have been conducted to get a better understanding of the practical meaning of the results for the CS department and how the effect of ASML's culture on the outcome variables can be optimized. The quantitative data is analyzed using regression analysis, and the qualitative data is analyzed by coding of the verbatim transcript. The results suggest that some aspects of the perceived organizational culture relate to cognitive- and relational crafting behaviors. Employees' job crafting behaviors positively relate to engagement, which in turn has a positive effect on their affective commitment and has a negative relation with their turnover intention. Cognitive- as well as relational crafting, employee engagement and affective commitment have a, full or partial, mediating role between employees' organizational climate scores and their work-related attitudes. Improvements for ASML are focused on a formalized way of working and a better reflection on work processes. Job crafting is a point of attention for the future to reap the benefits from it as the results show employees' positive attitudes towards job crafting behaviors but less performance of these behaviors.

## II Management Summary

ASML is market leader in the segment of lithography scanners, which is a necessary part of the semiconductor industry. The leading position of the organization has resulted in a workforce growth of around 40% in the last three years. Because of this growth, more explicitness was needed about ASML's why, how and what, especially for new hires. The organization has introduced new culture core values (i.e. Challenge, Collaborate and Care) to ensure every employee knows what ASML stands for. After the introduction of the three C's in the beginning of 2020, ASML wants to investigate how these values are perceived by its employees and how this perception influences work-related behaviors and attitudes. This research therefore focuses on the perception of ASML's organizational culture (i.e. organizational climate) and how this relates to employees' levels of engagement and commitment, and their turnover intention. In addition, the role of job crafting is also researched as it may be influenced by the perception of the organizational culture and a possible contribution to employees' engagement and commitment levels and their turnover intention. To address the topic of interest, the project has been divided into two phases: (1) a quantitative part where the relations between the variables has been researched, including mediation relations, and (2) a qualitative part where focus is on understanding and optimizing the relations found in the first part.

### **Theoretical background**

The literature shows that the perception of the organizational culture influences a variety of important outcomes at individual- and organizational level. On personal level it is found to influence for example employees' job satisfaction and job performance. Organization outcomes as a result of the culture perception are economic (e.g. higher productivity and profitability), technical (e.g. development of new products), commercial (e.g. market share) and social (e.g. effects on customers and suppliers). Literature also shows the importance of engaged and committed employees given their willingness to go the extra mile and drive to commit towards the organization. Employees' turnover intention is also of great interest for companies as it is associated with high costs and the loss of knowledge. The role of job crafting on these variables is found to be important, as allowing employees to craft their job results in positive individual- (e.g. job satisfaction and wellbeing) and organizational outcomes (e.g. customer loyalty and innovativeness). Considering the influence of the perception of the organizational culture on these work related behaviors and attitudes, the model depicted in Figure I is researched.

### **Methodology and results**

This study uses a confirmatory sequential design as first quantitative data is collected followed by a qualitative part. The quantitative data is collected by using a questionnaire, based on validated scales from literature. Using IBM SPSS 25, the quantitative data is analyzed to explore the different relationships between the variables and possible mediations. Additionally, twelve interviews are conducted with employees to verify the quantitative analyses and to understand the practical meaning of the results for ASML. This data is analyzed by coding of the verbatim transcript using QDA Miner Lite v2.0.7. Figure I shows the relations found.

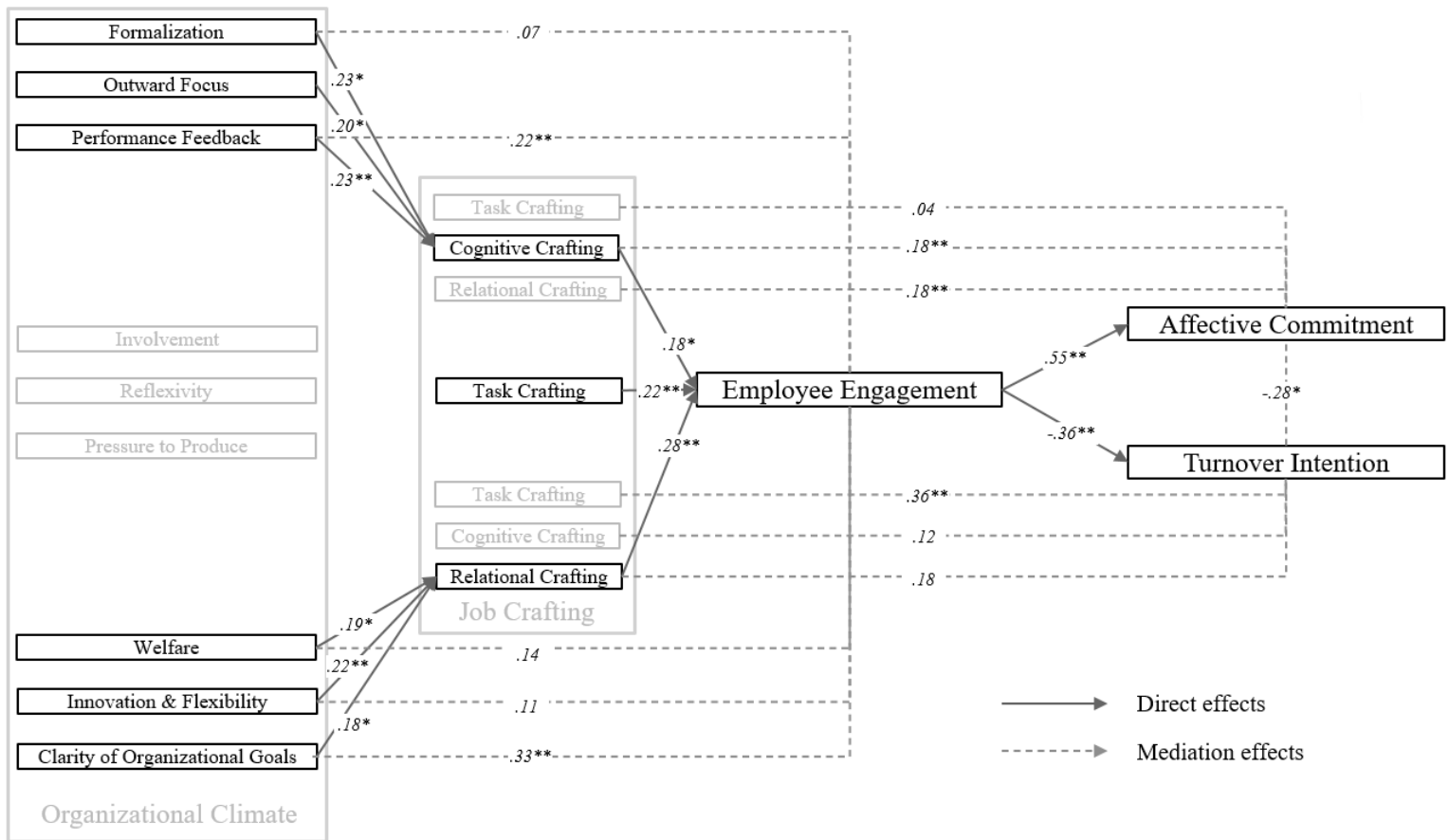


Figure 1: Findings quantitative research

The results show a direct relationship between (i) a formal way of working, (ii) focus on customers' needs and the marketplace and (iii) performance feedback and cognitive crafting. Employees' perception on (i) welfare, (ii) innovation and flexibility and (iii) clarity of organizational goals are related to relational crafting. All job crafting dimensions are directly related to employees' engagement levels. Additionally, some organizational climate dimensions and employees' engagement levels are indirectly related through the mediating effects of cognitive- and relational crafting. Engagement has a direct positive relation with affective commitment as well as a direct negative relation with turnover intention. Employee engagement also has a mediating role between cognitive- and relational crafting and the outcome variables affective commitment and turnover intention. Finally, engagement and turnover intention are indirectly related through the mediating effect of affective commitment.

### Conclusion and Recommendations

This study has found that the perception of a formal way of working, perceived focus on customers' and market needs and performance feedback positively influence the performance cognitive crafting behaviors of employees. Employees' perception on welfare, company's innovation and flexibility levels and the clarity of organizational goals positively influence relational crafting behaviors of employees. The performance of all three types of job crafting behaviors positively influence employees' engagement levels.

In turn, higher levels of employees' engagement results in higher affective commitment towards the organization and a lower intention to leave the organization. Cognitive- and relational crafting play a mediating role between some dimensions of organizational climate and employee engagement. Employee engagement, in turn, mediates between all job crafting dimensions and affective commitment. Finally, employees' engagement levels and their intention to leave related to each other, via their affective commitment towards the organization.

From the qualitative part of the research, insights are obtained to get a better and practical understanding of the quantitative data. The interviewees describe ASML's culture as result-oriented and networked, where focus is on the outcome rather than on the process. Additionally, employees are positive about their own engagement- and commitment levels and no concrete new insights have been obtained as to how these levels could be further optimized. The same applies to the extent to which employees would voluntary leave ASML as a result of their perceptions of the organizational culture. Overall, employees have no intention to leave, only the large size of the company and the associated consequences such as feelings of losing one's contribution to the overall functioning might contribute to the choice for another employer (e.g. smaller company).

Final recommendations to ASML are focused on a formalized way of working and the performance of job crafting behaviors. The first recommendation is aimed at a more formalized way of working including the use of existing work policies and procedures. It has become clear that existing processes and policies are hardly used, so that reflection on work processes is barely done. A formal way of working can contribute to, for example, less information being lost, better communication and better reflection being possible, so that processes and policies could be optimized. Another recommendation is on the performance of job crafting behaviors. It can be concluded that job crafting is positively experienced, but also a point of attention for the future to reap more benefits from it. The quantitative results show that job crafting behaviors are hardly performed, while interviewees all indicate to exercise some of the different forms of job crafting. It is therefore recommended to put more attention on the possibilities and opportunities of job crafting within ASML. One way to raise awareness of job crafting is through the implementation of the Personal Crafting Plan (PCP).

# III Preface

Dear reader,

Within your hands is my Master Thesis, which is written as final requirement to graduate from the Master of Innovation Management at the Eindhoven University of Technology (TU/e). With this final master thesis project, my time as student will be closed, and I can look back on a great time at the TU/e.

Looking back on the final period of writing this thesis, there are a number of people I want to thank and I would like to use this opportunity to express my gratitude. First of all, I want to thank my mentor and first supervisor Pascale Le Blanc for her assistance, guidance, advice and feedback. Also, I would like to thank Ad Kleingeld for his help and feedback, especially during the first- and final stages of this project.

Furthermore, a special thanks to my supervisors Nina and Anne within ASM, who helped me throughout my internship and showed me much about ASML, also outside the field of my thesis project. Thanks for your guidance, all the spar sessions and your enthusiasm. I have felt very welcome within the HR CS team!

Finally, I want to thank friends and family for their support. Special thanks to Daan and my parents, whom I can always turn to with personal stories, experiences, successes, but also setbacks. You have helped me through stressful moments, supported me know no matter what and cheered me up when needed.

Thank you for reading,

Nienke

Eindhoven, May 2021



# List of Figures

<b>Figure Number</b>	<b>Title</b>	<b>Page</b>
1.1	ASML's workforce growth last years (ASML, 2020)	1
1.2	Commitment curve for adopting new organizational values	3
3.1	Full research model	17
5.1	Mediation model (Model 4 in PROCESS analysis of Hayes, 2013)	32
5.2	Results simple mediation with (i) formalization, (ii) outward focus and (iii) performance feedback as IV, employee engagement as DV with mediator cognitive crafting	33
5.3	Results simple mediation with (i) welfare, (ii) innovation & flexibility and (iii) clarity of organizational goals as IV, employee engagement as DV with mediator relational crafting	34
5.4	Results simple mediation with (i) task-, (ii) cognitive- and (iii) relational crafting as IV, affective commitment as DV with mediator employee engagement	35
5.5	Results simple mediation with (i) task-, (ii) cognitive- and (iii) relational crafting as IV, turnover intention as DV with mediator employee engagement	36
5.6	Results simple mediation with engagement as IV, turnover intention as DV with affective commitment as mediator	37
7.1	Factors organizational climate (N=12)	42
7.2	Results quantitative research versus qualitative research	43
7.3	Factors job crafting (N=12)	45
7.4	Improvement factors job crafting (N=12)	46
7.5	Factors employee engagement (N=12)	46
7.6	Improvement factors employee engagement (N=12)	47
7.7	Factors affective commitment (N=12)	48
7.8	Improvement factors affective commitment (N=12)	49
7.9	Factors turnover intention (N=12)	49
7.10	Improvement factors turnover intention (N=12)	50

# List of Tables

<b>Table Number</b>	<b>Title</b>	<b>Page</b>
1.1	ASML's organizational values with corresponding to-do behaviors	2
4.1	Demographics of respondents of the survey	18
4.2	Measurement dimensions and items of organizational climate	20
4.3	Measurement dimensions and items of job crafting	20
4.4	Measurement dimensions and items of employee engagement	21
4.5	Measurement items of affective commitment	21
4.6	Measurement items of turnover intention	21
4.7	Transformation of string- to numerical values	22
5.1	Descriptive statistics (Mean, SD, Cronbach's alpha, Inter-item, final number measurement items)	24
5.2	Correlation matrix organizational culture and job crafting	26
5.3	Correlation matrix job crafting and employee engagement	26
5.4	Correlation matrix employee engagement and affective commitment and turnover intention	27
5.5	Results linear regression model 2 organizational climate on job crafting	29
5.6	Results linear regression model 2 job crafting on employee engagement	29
5.7	Results linear regression model 2 employee engagement on affective commitment and turnover intention	30
5.8	Summary accepted and rejected hypotheses direct effects	31
5.9	Results simple mediation model with mediator cognitive crafting	33
5.10	Results simple mediation model with mediator relational crafting	34
5.11	Results simple mediation model with mediator employee engagement	35
5.12	Results simple mediation model with mediator employee engagement	36
5.13	Results simple mediation model with mediator affective commitment	37
5.14	Summary confirmed and rejected hypotheses mediation analysis	38
6.1	Overview questions semi-structured interview	40
6.2	Coding categories per subject	41

# Table of Contents

I Abstract.....	ii
II Management Summary .....	iii
III Preface.....	vi
List of Figures .....	vii
List of Tables .....	viii
CHAPTER 1- INTRODUCTION .....	1
1.1    Problem Statement.....	1
1.2    Report Structure .....	4
CHAPTER 2 - DESCRIPTION OF ORGANIZATION.....	5
2.1    ASML .....	5
2.2    Organizational Chart and Personnel .....	6
2.3    Customer Support .....	6
2.4    Responsibilities of Customer Support.....	7
CHAPTER 3 - THEORETICAL BACKGROUND .....	8
3.1    Organizational Climate .....	8
3.2    Job Crafting.....	9
3.2.1    Organizational Climate and Job Crafting .....	10
3.3    Employee Engagement .....	13
3.3.1    Job Crafting and Employee Engagement.....	14
3.4    Affective Commitment .....	14
3.4.1    Employee Engagement and Affective Commitment .....	15
3.5    Turnover Intention .....	15
3.5.1    Employee Engagement and Turnover Intention .....	16
CHAPTER 4 - METHODOLOGY OF QUANTITATIVE RESEARCH MODEL .....	18
4.1    Participants.....	18
4.2    Procedure .....	19
4.3    Measures .....	19
4.3.1    Organizational Climate .....	19
4.3.2    Job Crafting.....	20

4.3.3	Employee Engagement .....	21
4.3.4	Affective Commitment .....	21
4.3.5	Turnover Intention .....	21
4.3.6	Control Variables .....	21
4.4	Analysis .....	22
CHAPTER 5 - TEST OF RESEARCH MODEL .....		24
5.1	Descriptive Statistics.....	24
5.2	Correlations.....	25
5.2.1	Correlations between Study Variables.....	26
5.2.2	Correlations Control Variables .....	27
5.3	Testing Hypotheses.....	28
5.3.1	Direct Effects .....	28
5.3.2	Mediating Effects.....	32
CHAPTER 6 - METHODOLOGY OF QUALITATIVE RESEARCH MODEL .....		39
6.1	Interview Design.....	39
6.2	Procedure .....	39
6.3	Participants.....	39
6.4	Interview Questions .....	40
6.5	Analysis .....	40
CHAPTER 7 - RESULTS OF QUALITATIVE RESEARCH.....		42
7.1	Organizational Climate .....	42
7.2	Job Crafting.....	44
7.3	Employee Engagement .....	46
7.4	Affective Commitment .....	48
7.5	Turnover Intention .....	49
CHAPTER 8 - DISCUSSION AND CONCLUSION .....		52
8.1	Main Findings .....	52
8.2	Theoretical Implications .....	55
8.3	Practical Implications.....	57
8.4	Limitations and Future Research .....	58
8.5	Conclusion .....	59

REFERENCES .....	60
APPENDICES .....	68
Appendix B - Linking ASML's 3C's to Patterson's (2005) Organizational Climate dimensions.....	68
Appendix A - Organizational Chart .....	69
Appendix B – Linking ASML's 3C's to Patterson's (2005) Organizational Climate dimensions .....	70
Appendix C – Cover letter questionnaire.....	72
Appendix D – Questionnaire in Microsoft Forms .....	73
Appendix E – Complete correlation matrix .....	77
Appendix F – Results multiple regression analyses.....	78
Appendix G – In-depth interview script .....	82
Appendix H – Analysis in-depth interviews .....	84
Appendix I – Description of codes .....	85

# Chapter 1- Introduction

This chapter will explain the issues that ASML is facing with regards to its organizational culture. The problem statement and the research questions arising from the problem statement will be presented, and lastly, the outline of this report will be discussed.

## 1.1 Problem Statement

ASML is a corporate multinational and market leader in the segment of lithography scanners, which is an necessary aspect of the semiconductor industry. The leading position of ASML has resulted in a significant increase in the number of employees within the company (Nolan & Gonzalez, 2020). New employees have been hired to accommodate the success and growth of the company. The high number of new hires in the recent years has led to workforce growth of around 40% in the last years (see Figure 1.1) and more diversity in age and organizational tenure on the work floor. Roughly, a distinction can be made between two types of employees: on the one hand (older) employees who have been employed for a longer time, knowing better what the company stands for, and will have more of ASML's DNA; and on the other hand (younger) employees who are new, hired to accommodate the growth of the company, but are expected to have less knowledge of what ASML exactly stands for and having less of ASML's DNA. ASML's DNA can be described as (1) the drive to innovate, which is the love for technology combined with customer understanding and can-do mentality, (2) a collaborative approach, which means growing and learning together by integrating multiple perspective, and finally, (3) the founder's mentality, which is the passion for results and strong sense of ownership and accountability (ASML, 2020).

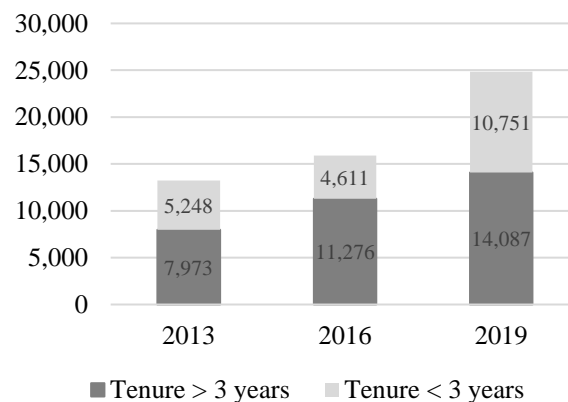


Figure 1.1: ASML's workforce growth last years (ASML, 2020)

To fulfill its mission (i.e. providing patterning solutions to drive the advancement of microchips, and remain market leader), a unified direction and identity needs to be anchored deep into the organization. Because of the growth of the workforce, more explicitness was needed about the why, how and what of the organization (Nolan & Gonzalez, 2020). Therefore, ASML introduced new cultural values ('we Challenge', 'we Collaborate', 'we Care'), in the beginning of 2020. Table 1.1 provides an overview of the three values, their meanings and the to-do behaviors that correspond with and contribute to the expression of the values.

Table 1.1: ASML's organizational values with corresponding to-do behaviors

Values	Meaning	To-do Behaviors
<b>Challenge</b>	Focus on challenging boundaries and status quo, and refining ideas and processes which enable the company to innovate	<ul style="list-style-type: none"> <li>• Ask open-ended questions</li> <li>• Listen and understand before providing solutions</li> <li>• Seek and consider alternative perspectives to create a stronger solution</li> <li>• Can-do mentality to build on ideas and solutions offered by others</li> <li>• Strive for standardization and simplification that adds long-term value</li> </ul>
<b>Collaborate</b>	Focus on the collective potential to create solutions, expanding knowledge, learn from each other and share approaches	<ul style="list-style-type: none"> <li>• Encourage open communication and invite people to contribute</li> <li>• Plan ahead to involve the right people who can add value</li> <li>• Share knowledge and learn from mistakes and successes</li> <li>• Align goals with others to find solutions that benefit the company</li> <li>• Recognize accomplishments and contributions of others</li> </ul>
<b>Care</b>	Focus on acting with integrity and respect. Realization that company's impact extends beyond technology to people, society and planet	<ul style="list-style-type: none"> <li>• Create clarity on roles and expectations</li> <li>• Treat everyone with respect and speak-up when seeing behaviors conflicting with values</li> <li>• Invite and consider all perspectives and viewpoints</li> <li>• Ask and provide constructive feedback</li> </ul>

These values give direction to the way of working within the organization and should contribute to ensuring that every employee knows what drives him/her and what ASML stands for. Management has introduced these company-wide values and is currently in the roll-out phase to create awareness around the values. Figure 1.2 shows the commitment curve with the different phases through which employees go in order to adopt the core values. The next step would be to investigate how these cultural values are perceived by all employees individually and to take the next step to understanding and acceptance (i.e. the Educate and Commit phases).

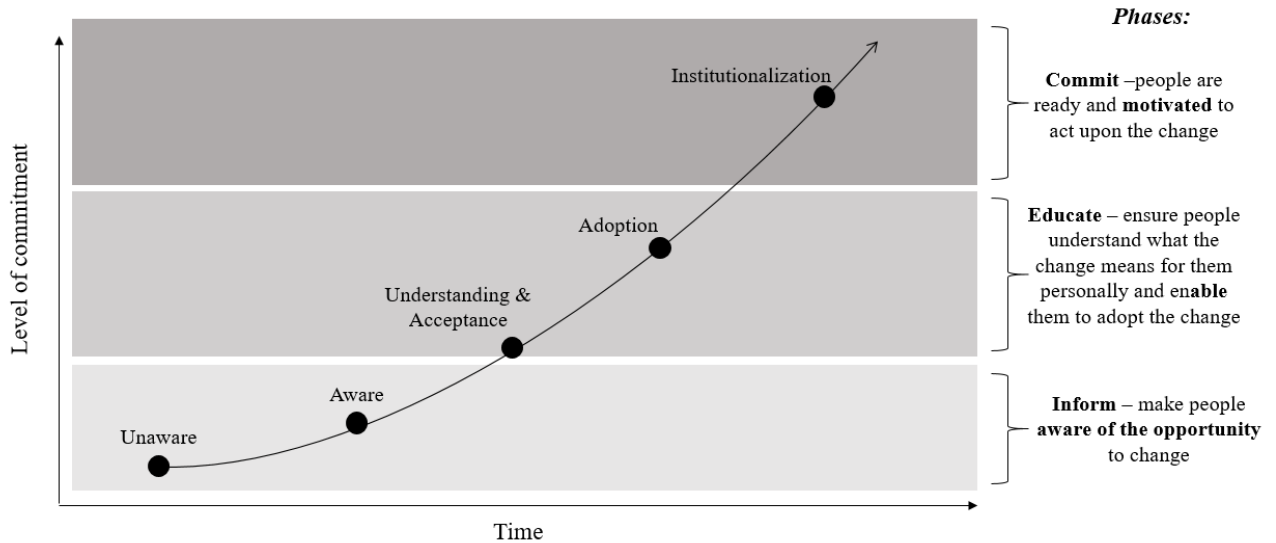


Figure 1.2: Commitment curve for adopting new organizational values

The three cultural values (3 C's) can be seen as organizational culture, as these act as the basic assumptions about the organization and guide life within the organization (Schneider, Ehrhart, & Macey, 2013). According to literature, there are two different constructs in the field of organizational culture: organizational culture and organizational climate. Organizational culture refers to the norms, values, and beliefs within an organization and is top-down driven, starting by the board of the organization (De Witte & van Muijen, 2010). Organizational climate is about the meanings people attach to interrelated experiences they have at work (Schneider, Ehrhart, & Macey, 2013). The perception of ASML's cultural values on an individual level can be interpreted as organizational climate, as the meaning of the values depends on the judgement of the employee, which can vary from person to person. This organizational climate has been found to influence various work outcomes such as job satisfaction, job involvement, and job performance (Baltes, Zhdanova, & Parker, 2009; Baltes, 2001). A positive organizational climate may have different positive work-related outcomes and is therefore essential for growth and success, which is part of ASML's mission.

Within ASML, employee engagement is a recurring topic, as it measures engagement annually with a survey for all its employees (engagement survey 'we@ASML'). According to the company, engaged and fulfilled employees build the future of the organization through their willingness to go the extra mile and demonstrate resilience when faced with challenges. Also findings from the literature support the important role of engaged employees, as it is a main indicator for the organization's effective performance (e.g. Robertson & Cooper, 2010; Harter, Schmidt, & Hayes, 2002; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). ASML is interested in knowing how its cultural values are perceived by their employees and how organizational climate, in turn, influences their engagement levels.

ASML is operating in an increasingly complex, rapidly changing and innovative environment to ensure they build today what their customers need tomorrow (Nolan & Gonzalez, 2020). This type of environment is benefited from employees who can deal with these changes and preferably take advantage of these changes. One possible way to cope with these changes is by job crafting. Job crafting is a bottom-up approach whereby employees alter the boundaries of their jobs as per their interests, tastes, preferences,



experience and qualifications on their own initiative (Siddiqi, 2015). It would be interesting to investigate how employees deal with the complex, changing and innovative environment of ASML by crafting their jobs, what the role of the perceived culture is on these behaviors and how this, in turn, relates to their engagement.

Based on the above-mentioned information, the main aim of the master thesis graduation project is to perform a study in the area of organizational climate, job crafting and employee engagement. It will comprise a combination of both quantitative and qualitative research, in which the quantitative part is focused on investigating (i) the relationship between organizational climate, job crafting, employee engagement, and the outcomes affective commitment and turnover intention, and (ii) the possible mediating role of job crafting, engagement and commitment in these relationships. This results in the following research questions:

- (i) *What are the relationships between organizational climate, job crafting, employee engagement, affective commitment and turnover intention in a high-tech company?*
- (ii) *To what extent do employee job crafting behaviors, employee engagement and affective commitment have a mediating role in the relationships under study?*

The second part of this project is qualitative in nature. First, (iii) the significant relationships of quantitative part are studied in more depth and in addition, (iv) it is investigated in what ways the effect of ASML's culture on employee engagement, commitment and turnover intention could be optimized. This results in the following research questions:

- (iii) *What do the results, found in the quantitative part, mean in practical terms for ASML's employees?*
- (iv) *In what ways can the effect of ASML's culture on employee engagement, commitment and turnover intention be optimized?*

## 1.2 Report Structure

In the upcoming chapter, Chapter 2, a description of the organization where this research was conducted is given. In Chapter 3, an extensive literature review is given, providing more background on research topics as organizational climate, job crafting, engagement, commitment and turnover intention. The Chapters 4, 5, 6 and 7 are centered around the research questions as described above. In Chapter 4, the methodology of the quantitative part is described. The results on how organizational climate may affect job crafting, and outcome variables as engagement, commitment and turnover intention are described in detail in Chapter 5. Then, in Chapter 6 and 7, focus is on the qualitative part of the study, where the significant relations of the first part are explored in further detail and ways are searched to optimize the effect of the culture on the outcome variables. The methodology of this part is described in Chapter 6 and Chapter 7 provides the results of the qualitative part. Finally, in Chapter 8, a discussion of the results of the research questions is given, including theoretical and practical relevance, recommendations and limitations. This chapter also includes the conclusion where the most important results are summarized.

# Chapter 2 - Description of Organization

This master thesis research project is conducted at the Customer Support department of ASML. In this chapter the description of the organization, the department and its segments will be given. Also, a short description of the main responsibilities of a Customer Support employee will be provided. Further on, the mission, vision and strategy of the organization will be presented.

## 2.1 ASML

ASML is world leader in the manufacturing of advanced lithography systems for the semiconductor industry. The company brings together high-tech hardware and advanced software to control the chip manufacturing process. ASML designs, develops and integrates advanced systems used by customers to create chips that power a wide range of electronic, communications and information technology products. All of world's top chipmakers (e.g. Intel, Samsung and tsmc) use ASML's systems which are consistently evolving to produce smaller, faster and more energy-efficient chips. The company provides customers with leading-edge technology that is production-ready as soon as possible. The technology is supported by process solutions, enabling customers to gain and sustain a competitive edge in the market.

ASML employs ~28,000 people worldwide and its corporate headquarter is located Veldhoven, the Netherlands. Manufacturing sites and research and development facilities are in the United States (Connecticut, California), Taiwan, and the Netherlands. Technology development centers and training facilities are in Japan, Korea, the Netherlands, Taiwan and the United States. Overall, ASML has more than 80 locations in 16 countries.

The vision of ASML is on enabling groundbreaking technology to solve some of humanity's toughest challenges (ASML, 2020). The general mission is that, together with its partners, ASML provides leading patterning solutions that drive the advancement of microchips (ASML, 2020). The chosen strategy for this purpose is through its four pillars of business:

- Holistic lithography extension: strengthen the leadership position in in-device metrology and enabling high-order overlay correction. Secure a winning position in pattern fidelity control and combine this with computational lithography;
- Deep ultraviolet (DUV) competitiveness: continue innovation leadership, driving the deep ultraviolet (DUV) systems to the highest level of performance by expanding the installed base and through continuous improvement and operational excellence;
- Extreme ultraviolet (EUV) industrialization: secure high-volume manufacturing and improve cost effectiveness for customers by enhancing the value of the extreme ultraviolet (EUV) technology for future nodes;
- High-NA: developing and enabling next-generation EUV systems that increases from 0.33 NA to 0.55 (i.e. High-NA). ASML scheduled to launch in 2024.

## 2.2 Organizational Chart and Personnel

ASML strives to provide the best products and services in the above-mentioned areas. That is why the company constantly develops and improves its products and services. To be able to organize the work in the best way, the organization is divided into business units, according to the kinds of tasks and responsibilities of the units. The graphical representation and the full organizational chart of ASML can be found in Appendix A. The global Customer Support department is highlighted in red in this chart. The explanation behind the green and yellow buckets will be given in paragraph 2.3 and 2.4.

## 2.3 Customer Support

Customer Support (CS) is vital to the success of ASML as it enables customers to be successful with their products and services. The department employs around 5,000 people in multiple sites across the world. The three regional hubs of their Global Support Center are located in Europe (Veldhoven, the Netherlands), Asia (Linkou, Taiwan) and North America (Chandler, United States). They are assisted by the central Customer Support office in Veldhoven, which is specialized in logistics, engineering (i.e. solutions and training) and application support (i.e. analyzing and optimizing customer processes). Within the global CS department, a distinction can be made between nine segments based on geographics. Appendix A shows the different departments of the CS department, where the four segments located in Veldhoven are highlighted in green. As this study focuses on these four segments, a short description of these segments is given below. A more detailed description of the responsibilities and activities of a CS department is given in paragraph 2.4.

- CS EUV: employees working in the CS EUV segment enable ASML's customers in their daily operations of the extreme ultraviolet (EUV) line of the lithography scanners. These employees define and drive the EUV performance, drive deliverables to enable targets and are accountable for identifying and aligning best practices in the field of EUV;
- CS DUV: employees working within the CS DUV segment enable ASML's customers in their daily operations of the deep ultraviolet (DUV) line of the lithography scanners. These employees define and drive the DUV performance, drive deliverables to enable targets and are accountable for identifying and aligning best practices in the field of DUV;
- CS Apps: employees working in the CS Apps segment proactively provide ASML's customers customized application solutions of their EUV and DUV scanners. They are responsible for critical issues in the field of EUV and DUV in order to sustain the products;
- CS Central Services: employees working within the CS Central Services segment are responsible for the operational excellence across all nine CS segments globally. They organize and facilitate training and knowledge exchange, competency development, provide the business architecture and execute the CS infrastructure baseline.

## 2.4 Responsibilities of Customer Support

The CS infrastructure is aimed at helping others within ASML to solve problems. Once the machines are placed in the field (i.e. have been delivered to the customer), they are the responsibility of the CS department. The focus of CS is on delivery of optimal service. The provision of services is based on issues and requests from internal and external customers. Internal customers are those who are working for ASML locally (i.e. working in a local office outside Veldhoven, highlighted in yellow in Appendix A), and external customers are the real customers who bought machines from ASML (i.e. tsmc, Intel and Samsung). Besides addressing concrete issues and problems, CS is also proactive in improving processes and the work structures of the whole CS infrastructure. Key activities of a CS engineer are focused on continuous improvements which result in contributing to the optimization of products, materials and (work)processes. Key responsibilities and activities of an CS engineer are the following:

- Problem analysis and approach: when customers face problems or issues, these issues will be sent to the CS department, locally or central in Veldhoven. Engineers will gather all relevant information for the problem, available means will be analyzed, after which decisions will be made on an initial approach to solve the problem. After the initial approach, an assessment of new information will be made, and the (final) approach will be adapted if this is necessary to solve the problem. All information and instruction will sent back to the customer;
- Problem handovers and routing: CS is a huge department (~ 5000 employees in total, ~1000 located in Veldhoven) with many different experts in many different fields, so issues and problems can be passed on to experts who have the relevant knowledge/information. When the problem cannot be solved and other knowledge is needed, the problem is handed over to other departments within CS who have the needed expertise and could solve the problem with their knowledge. The problem should be documented and all data relevant for problem resolution should be packaged;
- Repairs: CS engineers also performs physical work on the machines, done by technicians, who are an expertise group within CS. Advise is given to customer's technical personnel about how to deal with problems. Also, repairs are executed together with customer technical staff. Knowledge is shared about tools and replaced parts, and on how to use manuals and guidance, and improve settings;
- Work procedures/way of working: work procedures are also part of issues and problems that are presented to the CS department. So, the procedure is planned, arrangement of all (possible) parts, tools, equipment and information/knowledge needs to be available at start of the procedure, then the procedure will be executed, and finally necessary decisions/adaptations will be made to realize optimal results.

# Chapter 3 - Theoretical Background

In this chapter the main research areas of interest will be delineated. First, organizational climate will be explained, followed by job crafting and employee engagement, and organizational commitment and turnover intention as potential consequences.

## 3.1 Organizational Climate

Organizational culture and climate have often been used interchangeably in the literature, leading to confusion. Although conceptually related, these are distinct concepts: organizational culture refers to the norms, values, and beliefs within an organization; however, its intangibility makes it difficult to measure. Organizational climate reflects the employees' perception of the organizational culture (MacDavitt, Chou, & Stone, 2007). Organizational climate has been a topic of considerable research over the last 30 years, although there remains some lack of consensus on the precise specification of the construct. Organizational climate is generally defined as shared psychological meanings. Specifically, it is seen as the overall meaning derived from the individual perceptions of the work environment (i.e. the typical way people in an organization ascribe meaning to the organization) (James, et al., 2008). It can be understood as a factor linking the context of an organization with the behavior of its members, and trying to understand how employees experience their organization (Patterson, et al., 2005). Organizational climate, therefore, is thought to exercise a strong impact on individual motivation to achieve work outcomes. According to different researchers, organizational climate may have different effects on work related outcomes. Research has showed that climate perceptions of individuals are associated with a variety of important outcomes at the individual-, group-, and organizational level (Patterson, et al., 2005). On a personal level, organizational climate influences job satisfaction (e.g. Schyns, Veldhoven, & Wood, 2009; James, et al., 2008; Parker, et al., 2003) and job performance (e.g. Pritchard & Karasick, 1973; Brown & Leigh, 1996; Selamat, Samsu, & Kamalu, 2013). According to Parker and colleagues (2003), individuals' perceptions of the work environment have a significant relationship with individuals' work-attitudes and motivation. Perceptions of a motivating and involving climate relate to job involvement, which relates to work performance via higher efforts of individuals (Brown & Leigh, 1996). Positive organizational outcomes as a result of the culture perception are economic (i.e. higher productivity and profitability), technical (i.e. development of new products), commercial (i.e. market share) and social (i.e. effects on customers and suppliers) (Patterson, Warr, & West, 2004). MacDavitt and colleagues (2007) investigated the relationship between organizational climate and employee outcomes, and found that the perception of the culture influenced employees' turnover intention, job satisfaction and burnout or stress levels (MacDavitt, Chou, & Stone, 2007). Organizational climate has also been found to influence knowledge and skills by increasing participation in activities, such as training, due to perceptions of safe environments (Neal, Griffin, & Hart, 2000). Research of Day and Bedeian (1991) showed that employees performed better in organizational climates they are perceived as structured (i.e. unambiguous) and supportive of risks (Day & Bedeian, 1991).

In recent years, there have been various conceptualizations of climate dimensions that in turn resulted in different measures and measurement tools. For this project, the dimensions described by Patterson and colleagues (2005) will be used, as these are applicable across a range of work settings, and are useful for targeting all employee levels (i.e. non-managerial as well as managerial employees). The measurement tool

is underpinned by the Competing Values framework by Quinn & Rohrbaugh (1981). This framework is widely known and used in the field of organizational culture. It distinguishes four types of culture: (1) clan culture, characterized by shared values, common goals, and atmosphere of collectivity, (2) adhocracy culture, focuses on flexibility and readiness, (3) market culture, focuses on environment outside organization, planning and goal setting, and finally (4) hierarchy culture, with a strong focus on information management and communication. The Competing Values framework is a good basis of measuring organizational climate as it aids inclusiveness (i.e. dimensions cover all four culture types) and ensures that the dimensions tap the core values of an organization. In addition, the model represents broad managerial ideologies (e.g. Beyer, 1981; Zammuto, Gifford, & Goodman, 2000, p. 264) that have been emerged over time (Patterson, et al., 2005).

### 3.2 Job Crafting

For a long time, employees have been seen as passive performers of their assigned job tasks, but more and more scholars argue the importance of personal influences on the employee's job (Tims & Bakker, 2010). Jobs are made up of a set of task elements that are grouped together under a specific job title and designed to be performed by a single individual. Changing the boundaries and conditions of prescribed job tasks, job relations and the meaning of the job can be defined as job crafting (Wrzesniewski & Dutton, 2001). It is about the proactive changes in the job design that are not specifically arranged and negotiated with the organization or supervisor (Tims & Bakker, 2010). Although it may seem that job crafting is a one-time effort, it is actually a continuous process that is likely to be affected by various elements, both from within the organization as well as from the individual employee. It is an improvised, creative process of individuals who adapt their jobs in ways that create a viable definition of the work they do and who they are at work. It can be seen as a self-initiated change in behavior that employees engage in with the aim to align their jobs with their own preferences, motives, and passions. Several desirable organizational outcomes occur from employees performing job crafting behaviors as it results in for example job satisfaction (Warr & Inceoglu, 2012), employee initiative and persistence (Crant, 1995), and employee proactivity (Lyons, 2008). On individual level, different studies found that performing job crafting behaviors resulted in higher feelings of engagement by employees (e.g. Tims, Bakker, & Derks, 2015; Tims, Bakker, & Derks, 2012; Petrou, Demerouti, Peeters, Schaufeli, & Hetland, 2012; Berg, Wrzesniewski, & Dutton, 2010b; Rudolph, Katz, Lavigne, & Zacher, 2017). Tims, Bakker & Derks (2015) found that employees with decision latitude in how and when to work, who can use various skills, and can count on colleagues and others, are most likely to experience a positive fulfilling state of mind that is characterized by higher levels of engagement (Tims, Bakker, & Derks, 2015). Also, a work environment characterized by sufficient job resources and challenging job demands, but without hindering job demands, is expected to contribute to employees feeling more engaged with their job tasks (Tims & Bakker, 2010). This is based on the idea that job resources are instrumental in achieving work goals and enable employees to learn new things, to personally grow, and to develop themselves. The same authors found that employees who reported that they crafted their job resources and challenging job demands were rated by their colleagues as more engaged than employees who did not craft their job resources and challenging job demands (Tims, Bakker, & Derks, 2012).

In the literature, two perspectives can be found with respect to the dimensions of job crafting. As already shortly mentioned above, Wrzesniewski & Dutton (2001) distinguish three forms of job crafting: (1), changing task boundaries which refers to changing the number, scope and/or type of job tasks (i.e. task

crafting), (2) changing relational boundaries, which refers to the quality and amount of interaction with others encountered in the job (i.e. relational crafting), and (3) changing cognitive boundaries, which refers to the way an employee changes their perception about the job to attach more meaning to the work.

Tims, Bakker & Derks (2012) distinguish three conceptually different dimensions, which are based on the job demands–resources (JD-R) model of Demerouti and colleagues (2001). First, increasing job resources, second, increasing challenging job demands, and third, decreasing hindering job demands. The model of Demerouti and colleagues (2001) is based on characteristics of the work environments and distinguishes between two general categories: job demands and job resources (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Job demands refer to physical, psychological, social, or organizational aspects of the job that require physical and/or psychological (cognitive and emotional) effort or skills and are therefore associated with certain physiological and/or psychological costs. Job resources, on the other hand, refer to aspects of the job that are functional in achieving work goals, reduce job demands and the associated physiological and psychological cost, and stimulate personal growth, learning, and development (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001).

The two perspectives can be compared. The task crafting dimension of Wrzesniewski includes an increase or a decrease in the amount of job tasks, which is the same as the increase in job demands of the JD-R model. It also includes doing other tasks than prescribed, which may entail seeking for challenging job demands. The dimension relational crafting of Wrzesniewski, includes changing the amount or quality of interactions with other employees which may entail increasing resources. The difference in these two perspectives is that Wrzesniewski includes a cognitive change which is not included in the JD-R model. Cognitive crafting enables employees to re-evaluate how their work influences them personally by changing the way they think about it (Geldenhuis, Bakker, & Demerouti, 2021). It is viewed as important component of job crafting as it can serve as a proactive strategy for achieving fit with the work environment and guides how individuals engage in changing one's work (Lu, Wang, Lu, Du, & Bakker, 2014; Niessen, Weseler, & Kostova, 2016). This project will follow the conceptualization of Wrzesniewski and Dutton (2001) as it includes the cognitive aspect of job crafting and forms the basis for the majority of qualitative studies on job crafting and therefore fits the qualitative second part of the project (e.g. Lazazzara, Tims, & Gennaro, 2020; Berg, Grant, & Johnson, 2010; Berg, Wrzesniewski, & Dutton, 2010b). In addition, more recent insights from studies build on the conceptualization of Wrzesniewski and Dutton (2001) (e.g. Berg, Wrzesniewski, & Dutton, 2010b; Lu, Wang, Lu, Du, & Bakker, 2014; Niessen, Weseler, & Kostova, 2016).

### 3.2.1 Organizational Climate and Job Crafting

The dimensions for measuring organizational climate, according to Patterson and colleagues (2005), used for this project will be described and explained below. For this project, not all dimensions will be used, as not all dimensions are in line with the cultural values of ASML, and therefore not of interest of this study. The explanation underlying the selection of dimensions can be found in Appendix B. Below the hypothesized relations between ASML's organizational climate dimensions and job crafting are elaborated. It is assumed that the organizational climate dimensions influence task- cognitive and relational crafting all in the same way (i.e. positive or negative) and will therefore be referred to be as job crafting overall (i.e. task-, cognitive and relational crafting).

**Involvement**

High levels of involvement is about employees having considerable influence over decision-making, and also about free sharing of information throughout the organization. Based on findings of Li, Jin & Chen (2018), high-involvement work environments help employees more to draw from their personality to craft their job tasks, relations and cognitions (Li, Jin, & Chen, 2018). When employees can make their own decisions and share information across the organization, job crafting could be stimulated. Therefore it is hypothesized that:

*Hypothesis 1.a: Involvement is positively related to job crafting.*

**Welfare**

Welfare can be described as the extent to which the organization values and cares about its employees. Employees, in turn, could perceive this as organizational support. Individuals engage in job crafting to create a better fit between their job and their preferences, skills, and abilities (Tims & Bakker, 2010). By performing job crafting behaviors, employees align their job with their personal preferences, which may result in higher levels of well-being. Organizations that care about employees' well-being could give their employees space to align their individual preferences with the job through job crafting. Therefore it is hypothesized that:

*Hypothesis 1.b: Welfare of employees is positively related to job crafting.*

**Formalization**

Formalization of processes can be described as the concern with formal rules and procedures within the organization and can take place at different levels. Job- or role formalization acts to specify roles and procedures that employees must follow within the organization and thus, guide and constrain actions (Hempel, Zhang, & Han, 2012). Formalized processes exert control over job duties and activities of employees, and thereby reduce the possibility of employees to craft their job. Therefore it is hypothesized that:

*Hypothesis 1.c: Formalization of processes is negatively related to job crafting.*

**Innovation & Flexibility**

Innovation can be described as the extent of encouragement and support for new ideas and innovative approaches, whereas flexibility can be described as an orientation toward change. According to the research of Meyers (2020), organizations that are focused on innovation are focused on and value creativity and flexibility. An innovative culture has a flexible structure with an external focus on adapting and growing with the market (Meyers, 2020). It would make sense that these type of organizations benefit from employees who adapt to the changing, innovative and flexible work environment, and is therefore ideal for performing job crafting behaviors. Therefore it is hypothesized that:

*Hypothesis 1.d: Innovation and flexibility is positively related to job crafting.*

**Outward Focus**

Outward focus can be described as the extent to which the organization is responsive to the needs of the customer and the marketplace in general. Organizations that have an outward focus need employees who are proactive and who are adaptable and innovative in order to respond to customer and market needs (Singh



& Singh, 2016). These organizations benefit from employees who can adapt to changing circumstances in their environment due to changing needs from customers or the market. The diverse and changing customer- and market needs result in jobs becoming more flexible and unstructured where crafting the job contributes to meeting customer- and market needs (Chen, Yen, & Tsai, 2014). Therefore, it is hypothesized that:

*Hypothesis 1.e: Outward focus is positively related to job crafting.*

### **Reflexivity**

Reflexivity can be described as the concern with reviewing and reflecting upon objectives, strategies, and work processes, in order to adapt to the wider environment. Reflexivity refers to critical reflection, by which individuals learn from experiences. To redesign their job, it is necessary for employees to reflect on activities and practices. Reflective activities by individuals, such as reviewing and re-assessing work processes, could be understood as effective means for redesigning jobs (Matsuo, 2019). Therefore it is hypothesized that:

*Hypothesis 1.f: Reflexivity is positively related to job crafting.*

### **Clarity of Organizational Goals**

Clarity about organizational goals for employees is about clearly defining the goals of the organization. Clarity of organizational goals results also in clarity of work-related goals of the individual employee (Anderson & Stritch, 2015). Employees who redesign their jobs and work environment through job crafting are seeking to acquire job resources that may help them better achieve their work goals (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Therefore, it is hypothesized that:

*Hypothesis 1.g: Clarity of organizational goals is positively related to job crafting.*

### **Performance Feedback**

Feedback on performance of employees is about the measurement of and feedback on job performance. Feedback refers to which job activities result in employees obtaining direct and clear information about their performance and effectiveness. The results of Kanten (2014) showed that feedback positively effects the job crafting behavior of employees as by getting feedback, employees know how to make adjustments (Kanten, 2014). Therefore it is hypothesized that:

*Hypothesis 1.h: Feedback is positively related to job crafting.*

### **Pressure to Produce**

The pressure to produce is about the feelings employees experience to meet organizational- and individual targets. The research of Berg, Dutton & Wrzesniewski (2013) showed that pressures to produce and pursue goals make it more difficult for employees to recognize opportunities to craft their jobs (Berg, Dutton, & Wrzesniewski, 2013). Therefore it is hypothesized that:

*Hypothesis 1.i: High pressure to produce is negatively related to job crafting.*

### 3.3 Employee Engagement

Organizations benefit from employees who are engaged in their work. In the recent years, practitioners and academics agreed on the positive consequences of employee engagement. There is a connection between employee engagement and business results (Harter, Schmidt, & Hayes, 2002). Engagement is associated with positive organizational outcomes, like higher levels of profit, overall revenue generation and growth (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Other studies found a positive relation between employee engagement and customer loyalty and satisfaction (Heintzman & Marson, 2005; Markos & Sridevi, 2010). As employee engagement is an individual-level construct, it also impacts individual-level outcomes (Kalur, Gatenby, Rees, Soane, & Truss, 2008). Compared to less engaged employees, engaged employees report the highest levels of job performance and also receive the highest performance ratings from their supervisors (Tims, Bakker, & Derks, 2015). Researchers have found that the presence of high level of employee engagement enhance individual outcomes, like job performance, task performance, organizational citizenship behavior, higher level of productivity and levels of psychological climate (Wollard & Shuck, 2011). Many descriptions and definitions of employee engagement have been provided in the literature. Kahn (1990) described employee engagement as “the harnessing of organization members’ selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances” (Kahn, 1990). Another definition refers to employee engagement as a positive and satisfying state of mind, related to work that is not directed towards any particular event, object or person (Bakker, Schaufeli, Leiter, & Taris, 2008). According to Schaufeli and colleagues (2006), engagement is defined as “a positive, fulfilling work-related state of mind that is characterized by vigor, dedication, and absorption” (Schaufeli, Bakker, & Salanova, 2006). For this project, the definition provided by Schaufeli and colleagues (2006) will be used as it is in line with the measurement tool that will be used for measuring employee engagement. According to this definition, engagement consist of three elements (Schaufeli, Bakker, & Salanova, 2006):

- Vigor can be described as high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence, even in the face of difficulties.
- Dedication can be described as strong involvement in one's work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge.
- Absorption can be described as being fully concentrated and happily engrossed in one's work, whereby time passes quickly, and one has difficulties with detaching oneself from work

According to Wollard & Shuck (2011), two important consequences of employee engagement are organizational commitment and turnover intention. Organizational commitment can be seen as an important element for improving performance of organizations as employees’ productivity is related to their motivation levels and level of commitment (Altindis, 2011). Paragraph 3.4 discusses the different forms of organizational commitment and how employee engagement influences organizational commitment. Voluntary turnover of employees is also of great interest of companies as it can have serious negative consequences. Turnover intention can be described as the intention of an employee to terminate one's employment at a particular company (Meng & Han, 2014). Paragraph 3.5 discusses the consequences of turnover intention in more detail as well as how employee engagement can influence employee turnover intention.

### 3.3.1 Job Crafting and Employee Engagement

As already described in paragraph 3.2, changing the boundaries and conditions of prescribed job tasks, job relations and the meaning of the job can be defined as job crafting (Wrzesniewski & Dutton, 2001). Employees can introduce new approaches that better fit their skills to improve their work, minimize unenjoyable tasks, or add preferred tasks (i.e. task crafting). These changes can satisfy employees' core needs (Kim, Im, Qu, & NamKoong, 2018). According to the research of Vogel, Rodell & Lynch (2016), changes to the job can enhance meaning that employees obtain from their job, or it provides them with more autonomy in their job. According to Tims, Bakker and Derks (2014) employees' level of work engagement results of task crafting as employees are allowed to shape job requirements and job resources in line with own interests and preferences (Tims, Bakker, & Derks, 2014). Different studies have found that relational crafting has a positive impact on work engagement (e.g. Kim & Lee, 2016; Nguyen, Nguyen, Ngo, & Nguyen, 2019; Asuka, Akihito, Kotaro, Katsuyuki, & Norito, 2016). Crafting the social environment (i.e. relational crafting) can provide employees with more supportive and rewarding interactions and also higher-quality group dynamics (Vogel, Rodell, & Lynch, 2016). High-quality work relations should provide employees with a sense of safety and belonging, which foster engagement (Berg, Grant, & Johnson, 2010). Asuka and colleagues (2016) found that relational crafting has a positive effect on work engagement as it can be an opportunity to create new work relations and encourage employees finding workplace passion (Asuka, Akihito, Kotaro, Katsuyuki, & Norito, 2016). Cognitive crafting involves changing the perception of the job in a way that will enhance the meaning of the work. This is related to employee's effort to interpret and perceive the job as a whole (Wrzesniewski, LoBuglio, Dutton, & Berg, 2013). Reframing the job as significant and meaningful, or redefining the purpose (Wrzesniewski & Dutton, 2001) can be related to personal resources, as optimism and self-efficacy (Bakker, 2011), which could, in turn, contribute to engagement. Different other studies also found a positive relation between cognitive crafting and engagement (e.g. Nguyen, Nguyen, Ngo, & Nguyen, 2019; Kim & Lee, 2016; Imamura, et al., 2015). Based on the above mentioned research findings, both task-, cognitive- and relational crafting positively influence employee engagement. Therefore, it is hypothesized that:

*Hypothesis 2: Task- (a), cognitive- (b), and relational crafting (c) positively related to employee engagement*

### 3.4 Affective Commitment

Many studies have paid attention to organizational commitment because of the potential benefits for the organization and individuals (Dey, Kumar, & Kumar, 2014). Organizational commitment describes employees' identification with the organizational values and goals. Committed employees are marked as productive members of the organization and by their loyalty towards the organization (Porter, Steers, Mowday, & Boulian, 1974). Ensuring high employee commitment can be an important element to improve performance of organizations as high levels of commitment related to higher motivation what results in productivity (Altindis, 2011). According to Biswas & Bhatnagar (2013), engaged employees feel an intrinsic obligation to be social and emotionally attached to the source of engagement, which is work and the employing organization. Thus, employees who perceive themselves to be engaged, add a lot of personal meaning to their affiliation with their job and the organization (Biswas & Bhatnagar, 2013). Results show that employees with higher organizational commitment engage in organizational citizenship behavior, which in turn, results in better performance and higher work motivation that is beneficial to the organization (Altindis, 2011). Vigor is one of the elements of work engagement that implies high levels of energy and

mental resilience while working (Schaufeli, Bakker, & Salanova, 2006). There is also a determined investment in the actual work, together with high levels of persistence even when faced with difficulties (Shekari, 2015). These feelings could contribute to higher feelings of commitment to the organization.

Allen & Meyer (1990) are the founders of the three-component model in which they distinguish three dimensions of organizational commitment: affective commitment, normative commitment and continuance commitment. Affective commitment to the organization is due to some emotional identification with the organization, normative commitment is the feeling of obligation of the employee towards the organization based on perceived attachment to the organizational goals, and finally, continuance commitment is the extent to which an employee feels committed to stay at the organization due to own economics (Singh & Gupta, 2015; Allen & Meyer, 1990). ASML is most interested in the real connection and affection of the individual with the organization, and normative and continuance commitment relate more to forced feelings, for example guilt (normative commitment) or lack of work alternatives (continuance commitment). Affective commitment is more strongly correlated with consequences such as turnover and performance, and therefore, more strongly influences work behaviors than the other forms of commitment (Mercurio, 2015). Affective commitment may be considered as core essence of organizational commitment and seen as an important consequence of engagement (Mercurio, 2015). Therefore, it is decided to only investigate the role of affective commitment in this project.

### 3.4.1 Employee Engagement and Affective Commitment

According to Wollard & Shuck (2011), one of the most important consequences of employee engagement is organizational commitment. Affective commitment is seen as the emotional attachment to an organization as manifested by an employee's identification with, and involvement in, the organization. Different studies have found a positive relation between employees' engagement levels and their affective commitment towards the organization (e.g. Maslach, Schaufeli, & Leiter, 2001; Gokul, Sridevi, & Srinivasan, 2012; Albrecht & Andretta, 2011; Hallberg & Schaufeli, 2006). Saks (2006) found that employees with high levels of engagement would be more attached to the job (Saks, 2006). When performing job duties, people who are dedicated to their work (i.e. who experience high levels of work engagement) will bring a strong emotional commitment to the organization's development opportunities and resources (Hakanen, Bakker, & Schaufeli, 2006). Research showed that employees who are engaged, develop affective attachment to the organization as a whole, and subsequently may feel committed to their supervisor, and workgroup or team (Vandenberghe, Bentein, & Stinglhamber, 2004). Based on above mentioned information, it is hypothesized that:

*Hypothesis 3: Employee engagement is positively related to affective commitment*

### 3.5 Turnover Intention

The problem of voluntary employee turnover is important for companies and organizations to understand. The prerequisite to leave one's job or organization is the intention to leave that can be referred as turnover intention (Belete, 2018). It is widely known that the decision of an employee to leave an organization is associated with high costs, like replacements costs and the loss of firm-specific human capital. Based on Kaya and Abdioglu (2010), the turnover of employees means a waste of investment in selection and training of personnel. It also adversely affects motivation of existing employees as turnover increases the workload

and contributes to planning difficulties (Kaya & Abdioglu, 2010). Beside these organizational aspects, voluntary turnover of an employee is detrimental to team interaction processes (Regts & Molleman, 2013). It is therefore important to understand the reasons behind voluntary turnover and what social variables can affect turnover intention, and ultimately turnover. Turnover intention can be subject to a number of influences, including work context, but also individual level factors, according to Dane and Brummel (2013). They stated that a dynamic work environment and employees' workplace mindfulness related negatively to their turnover intention (Dane & Brummel, 2013).

### 3.5.1 Employee Engagement and Turnover Intention

The turnover intention is one of the most important consequences of employees' engagement levels according to Wollard and Shuck (2011). Different studies showed that employee engagement negatively influenced employees' turnover intention (e.g. Dane & Brummel, 2013; Schaufeli & Bakker, 2004; Bakker, 2011; Halbesleben & Wheeler, 2008). They suggested that engaged employees are highly invested in and identified with their work, and are therefore not thinking about leaving their job or organization. The research of Mueller and Price (1990) showed that job satisfaction and commitment are both highly negatively associated with turnover intentions. Researchers have connected work engagement to work related outcomes, including turnover intention (Christian, Garza, & Slaughter, 2011). Stolarski and colleagues (2020) found that vigor (i.e. element of engagement) is related to openness and agreeableness and also depicts the energetic and emotional readiness to invest in one's assets. Engaged employees feel strong and vigorous at work, enthusiastic and optimistic about the work they do and are very often immersed in that work (Stolarski, Pruszczak, & Waleriańczyk, 2020). The study of De Lange, De Witte and Notelaers (2008) found that low work engagement predicted actual transfers of employees to another company (De Lange, De Witte, & Notelaers, 2008). Therefore, it is hypothesized that:

*Hypothesis 4: Employee engagement is negatively related to turnover intention*

All hypotheses described above refer to direct effect relationships. However, from the full research model (see Figure 3.1), hypotheses regarding mediation effects can be formulated as well. It is expected that there is a possibility that some of the investigated effects proceed via intermediate construct (i.e. mediation). Job crafting, engagement and affective commitment could have a partial mediating role in the relationships under study, and by testing this mediation it can be shown that a significant part proceeds through this mediation. Therefore it is hypothesized that:

*Hypothesis 5: Job crafting mediates the relationship between organizational climate and employee engagement*

*Hypothesis 6: Employee engagement mediates the relationship between job crafting and affective commitment*

*Hypothesis 7: Employee engagement mediates the relationship between job crafting and turnover intention*

*Hypothesis 8: Affective commitment mediates the relationship between employee engagement and turnover intention*

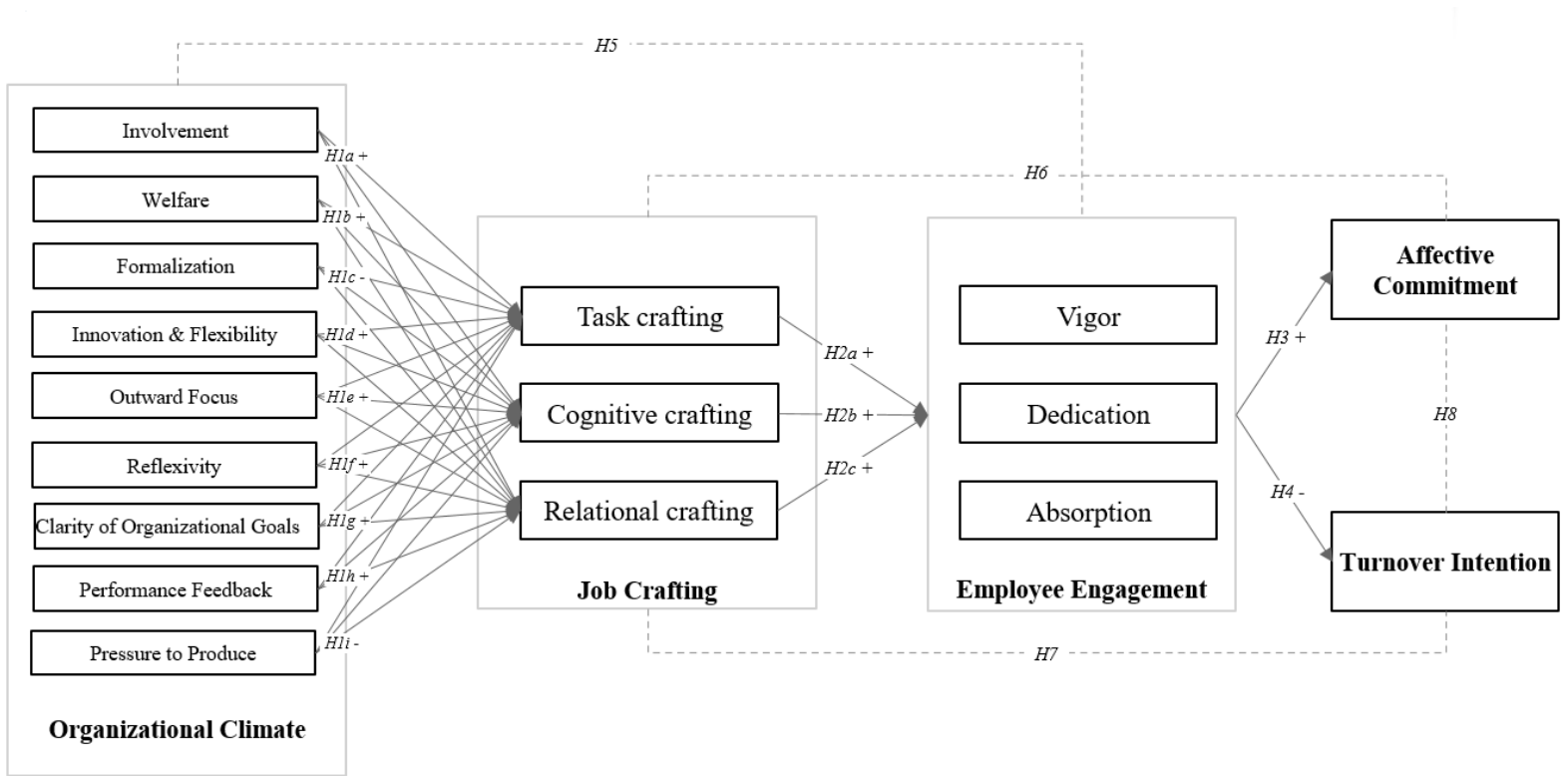


Figure 3.1: Full research model

# Chapter 4 - Methodology of Quantitative Research Model

In this chapter, the research method for the quantitative part will be explained. First, the participants and the procedure by which they were recruited will be described. Second, the measurement tools used in this study will be discussed, and lastly, the method on analyzing the data to test the hypotheses will be explained.

## 4.1 Participants

Participants of this study are employees from the Customer Support department of ASML. The employees are working within the four main segments of the department; CS EUV, CS DUV, CS Apps and CS Central Services. In total 282 employees were contacted, 80 of the EUV segment, 57 of the DUV segment, 67 of the Apps segment and 78 of Central Services segment. 124 employees were willing to fill in and completed the questionnaire, this is an overall response rate of 44%. Table 4.1 shows the demographics of the respondents.

*Table 4.1: Demographics of respondents of the survey*

<i>Variable</i>	<i>Value</i>	<i>Frequency</i>	<i>Percentage (%)</i>
<b>Gender</b>	Man	96	77
	Women	27	22
	Non binary	-	-
	Prefer not to say	1	1
<b>Age</b>	≤ 30	31	25
	31 – 40	39	31
	41 – 50	28	23
	51 – 60	21	17
	≥ 61	5	4
<b>Level of Education</b>	High school degree	2	2
	Practical degree	7	6
	Bachelor degree	43	35
	Master degree	60	48
	PhD	12	10
<b>Work experience</b>	0 < 2	11	9
	2 < 5	19	15
	5 < 10	24	19
	10 < 15	18	15
	≥ 15	52	42
<b>Organizational tenure</b>	0 < 2	19	15
	2 < 5	35	28
	5 < 10	29	23
	10 < 15	15	12
	≥ 15	26	21
<b>Segment</b>	EUV	26	21
	DUV	28	23
	Apps	35	28
	Central Services	35	28
<b>Working hours</b>	Up to 24 hours	2	2
	Between 24 and 38 hours	23	18
	Fulltime	99	80
<b>Direct reports</b>	Yes	52	42
	No	72	58

## 4.2 Procedure

An online questionnaire was set up using Microsoft Forms that was sent to all employees of the selected CS teams directly. The link to the questionnaire was sent to the employees via email with an accompanying letter about the aim of the research. The accompanying letter can be found in Appendix C and the questionnaire in Microsoft Forms format in Appendix D. Prior to sending out the questionnaire, the questionnaire was reviewed by a small sample of CS employees to ensure there were no unclarities. Also, all team leads of the selected teams were informed via their HR responsible one week in advance that the survey was going to be sent out to them and their teams. They were asked for their willingness to co-operate and to inform their teams. In the message to the team leads as well as in the survey itself, it was noted that that anonymity and confidentiality would be ensured. No names or email addresses were asked or saved within the survey and data was not traceable to individuals. The survey required a maximum of 10 minutes to be completed. After completing the questionnaire, participants received a 'Thank You' message where everyone was thanked for their participation, privacy was highlighted again and personal information of the researcher was given in case participants would have questions or comments. Two reminders were sent; the first reminder was sent out one week after the questionnaire had gone live and the second one a few days before the end date of the questionnaire.

## 4.3 Measures

This part describes the measurement instruments used in the questionnaire. All measurement tools have been proven to be valid and reliable in previous studies. However, some of these measurement tools have been shortened for the current study to limit the length of the questionnaire and increase the response rate. Some items have been rewritten so that they became more specific for the organization. The items marked with an asterisk (\*) are negatively stated questions and needed to be reversed before calculating the scale-score.

### 4.3.1 Organizational Climate

To measure organizational climate, a subset of the Organizational Climate Measure of Patterson and colleagues (2005) was used. The original questionnaire consist of 17 dimensions and 82 items of which only relevant scales and items were used in this study. The relevance of the dimensions depended on whether the dimension was in line with ASML's cultural values (see Appendix B for extended explanation), and only the items with highest factor loadings were included based on Patterson's (2005) findings. For this project the following dimensions are used: involvement (3 items), welfare (3 items), formalization (3 items), innovation and flexibility (3 items), outward focus (3 items), reflexivity (3 items), clarity of organizational goals (3 items), performance feedback (3 items) and pressure to produce (3 items). The items were rated on a 5-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). An overview of the dimensions with corresponding items can be found in Table 4.2. The explanation of the (x) sign will be explained in detail in paragraph 5.1.



Table 4.2: Measurement dimensions and items of organizational climate

<b>Involvement</b>	Changes within ASML are made by talking to the people involved Employees have a say in decisions which affect their work There are often breakdowns in communication within ASML* (x)
<b>Welfare</b>	ASML tries to look after its employees ASML cares about its employees ASML tries to be fair in its actions towards employees
<b>Formalization</b>	It is considered important within ASML to follow the rules Employees can ignore formal procedures and rules if it helps to get the job done* It is not necessary to follow procedures to the letter within ASML*
<b>Innovation &amp; Flexibility</b>	New ideas are readily accepted within ASML ASML is quick to respond when changes need to be made Employees are searching for new ways of looking at problems (x)
<b>Outward Focus</b>	ASML is quite inward looking; it does not concern itself with what is happening in the market place* (x) Customer needs are considered top priority within ASML ASML is fast to respond to the needs of the customer
<b>Reflexivity</b>	The methods used by ASML to get the job done are often discussed (x) There are regular discussions whether people within ASML are working effectively together Within ASML, time is taken to review organizational objectives
<b>Clarity of Organizational Goals</b>	Employees have a good understanding of ASML's business priorities Employees are aware of the long-term plans and direction of ASML There is a strong sense of where ASML is going
<b>Performance Feedback</b>	Employees do have an idea how well they are doing their job In general, it is hard for employees to get an impression of the quality of their performance* The way employees do their job is often assessed (x)
<b>Pressure to Produce</b>	In general, employees' workloads are particularly demanding Management requires employees to work hard The pace of work within ASML is pretty relaxed*

### 4.3.2 Job Crafting

To measure employees' job crafting behaviors, the Job Crafting Questionnaire of Slemp & Vella-Brodrick (2013) was used. This measurement tool is based on the dimensions of Wrzesniewski & Dutton (2001).

Job crafting was assessed with three dimensions in this project: task crafting (3 items), cognitive crafting (3 items), and relational crafting (3 items). The original questionnaire consists of 15 items, but only a subset of items with highest factor loadings were used. The original measurement tool uses a 6-point Likert scale, but for this project the items were rated on a 5-point scale ranging from 1 (Never) to 5 (Always). Table 4.3 shows the items used per job crafting dimension.

Table 4.3: Measurement dimensions and items of job crafting

<b>Task Crafting</b>	I introduce new approaches to improve my work I change the scope or types of tasks that I complete at work I introduce new work tasks that I think better suit my skills or interests
<b>Cognitive Crafting</b>	I think about how my job gives my life purpose I remind myself of the importance of my work for the broader society I think about the ways in which my work positively impacts my life

<b>Relational Crafting</b>	I make an effort to get to know people well at work I organize or attend work related social functions I organize special events in the workplace (e.g., celebrating a co-worker's birthday)
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### 4.3.3 Employee Engagement

To assess the level of engagement of employees, the Utrecht Work Engagement Scale (UWES) model was used. The ultrashort version of the UWES model consists of 3 items; vigor (1 item), dedication (1 item) and absorption (1 item), rated on a 6-point Likert scale ranging from 0 (Never) to 6 (Always) (Schaufeli, Shimazu, Hakanen, Salanova, & De Witte, 2019). For this project the items were rated on a 5-point scale ranging from 1 (Never) to 5 (Always). Table 4.4 shows the dimensions with corresponding measurement item.

*Table 4.4: Measurement dimensions and items of employee engagement*

<b>Vigor</b>	At my work, I feel energetic
<b>Dedication</b>	I am enthusiastic about my job
<b>Absorption</b>	I am fully focused when I am working

### 4.3.4 Affective Commitment

To measure employees' level of affective commitment to the organization, the Organizational Commitment Scale of Allen and Meyer (1990) was used. Originally affective commitment is measured with 5 items. For this project, a subset of 3 items with highest factor loadings according to Vandenberghe and colleagues (2004) was used to measure affective commitment. These items were rated on a 5-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). The items used to measure affective commitment can be found in Table 4.5.

*Table 4.5: Measurement items of affective commitment*

<b>Affective Commitment</b>	ASML has a great personal meaning for me I really feel a sense of belonging to ASML I am proud to be part of ASML
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### 4.3.5 Turnover Intention

To assess the turnover intention of employees, the Turnover Intention Scale of Meyer, Allen & Smith (1993) was used. The scale has 3 items rated on a 5-point scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). Table 4.6 shows the items used to measure turnover intention.

*Table 4.6: Measurement items of turnover intention*

<b>Turnover Intention</b>	I frequently think about leaving ASML I would consider leaving my job within the next year It is likely that I will look for a job in another organization
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### 4.3.6 Control Variables

The control variables that were included were gender, age, educational degree, years of work experience, organizational tenure, part-time or fulltime employment, in which segment employees work, and whether

or not a respondent has a leadership function (i.e. has direct reports). Gender could play a role as women are in minority within CS, and this may influence their perception of the organizational culture (Kamur, Jauhari, Ladha, & Shekhar, 2018). Age, years of work experience and organizational tenure were included to get an understanding of the influence of the measured variables on (younger) new hires and (older) longer employed employees. Based on Becker (1975), it could be argued that older and longer employed employees may have greater accumulated job- and general knowledge, and thus are in a better position to craft their jobs. It is possible that employees who work fulltime have more availability of time compared to part-time employees, and thus have a higher probability of finding possibilities to craft their jobs (Wille, 2017). Employees with a higher educational degree may have functions in which their tasks are less formalized, thus there is more room for job crafting. They may also have better knowledge to craft their jobs (Becker, 1975). A leadership function may be influencing the perception of the organizational climate and the degree of job crafting, as tasks in leadership positions may be less formalized and leaders have more autonomy (Roczniewska & Puchalska-Kamińska, 2017).

#### 4.4 Analysis

First, the data was checked for missing values (incomplete questionnaires). In the questionnaire software, only submitted questionnaires were visible for the researcher. Since it was required to fill in all questions and the researcher had only access to submitted questionnaire, there was no missing data to check. Second, all items were transformed from string to numerical values based on the following scheme (see Table 4.7).

*Table 4.7: Transformation of string- to numerical values*

<i>Original Value</i>	<i>New Value</i>	<i>Original Value</i>	<i>New Value</i>
Strongly disagree	1	Never	1
Disagree	2	Sometimes	2
Neutral	3	Regularly	3
Agree	4	Often	4
Strongly agree	5	Always	5

Third, all items marked with an asterisk (\*) were negatively stated questions (see Table 4.2) and were reversed before calculating the scale-score. This was done by subtracting the initial value of the item of 6 (i.e. 6 – initial value).

Fourth, the descriptive statistics were calculated: mean, standard deviation (SD) and Cronbach's alpha ( $\alpha$ ). In studies where these separate questionnaires are used, the internal consistency of Cronbach's alpha of  $>0.60$  (Hair, Black, Babin, Anderson, & Tathan, 1998) were mostly met (see Table 5.1). The internal consistency for this study was tested with Cronbach's alpha as well due to shortened versions of questionnaires as described in paragraph 4.3 of this chapter. For some dimensions of organizational climate, a Cronbach's alpha score of  $>0.60$  was not met, so the inter-item test was used to check internal consistency. Finally, the correlations between all study variables were computed, including the control variables. Only meaningful control variables (i.e. significantly correlated) were used to test the hypotheses. To analyze the questionnaire results, IBM SPSS Statistics 25 (IBM, 2017) was used. The direct effects (H1 – H4) were tested with hierarchical multiple linear regression and PROCESS macro developed by Hayes (2013) was used for testing the mediation (H5 – H8). Simple mediation is tested using Model 4 of the PROCESS macro

(see paragraph 5.3.2 for extensive explanation). This model is based on the Ordinary Least Squares (OLS) regression (Hayes, 2013).

Before running the multiple regression analyses, the data was checked for normality, linearity, independence of the error term and homoskedasticity (Hair, Black, Babin, & Anderson, 2014). According to the Central Limit Theorem, which implies that whenever the sample is larger than 30, the means approximately follows a normal distribution (Kwak & Kim, 2017), the assumption of normality will be met with a sample size of 124 in this study. Also, graphical representations in the form of histograms and QQ-plots showed that the assumption of normality was met. Linearity was tested through an ANOVA analysis (i.e. Deviation from Linearity) where the level of significance needs to be  $> 0.05$  to conclude that there is a linear relationship (Lui, Chow, & Hsieh, 2009). All relations were non-significant, so there was no evidence that the relationships under study were non-linear. The assumption of independence of the error term, whether errors associated with one observation are not associated with errors of any other observation, was tested by the Durbin-Watson (DW) statistic. A value close to two indicates that residuals are independent (Vinod, 2007). All values were between 1.7 and 2.0, so the assumption of independence of the error term was met. The final assumption of homoskedasticity was tested by the Breusch-Pagan (BP) test (Halunga, Orme, & Yamagata, 2017). When the test is significant, this indicates heteroskedasticity and thus heteroskedasticity-consistent standard errors were reported. Additionally, multicollinearity was checked using the Variance Inflation Factor (VIF-scores). Based on Kim (2019), VIF-scores below 5 do not indicate problems, so this final assumption was also met.

## Chapter 5 - Test of Research Model

This chapter will describe the results of the data analysis for the quantitative part of the study. Successively, (1) the internal consistency as well as descriptive statistics for the study variables; (2) the results of regression analyses to test the direct effects hypotheses H1 to H4; and (3) the tests of the mediation hypotheses H5 to H8, using the PROCESS macro test (Hayes, Montoya, & Rockwood, 2017) are presented.

### 5.1 Descriptive Statistics

An overview of the descriptive statistics can be found in Table 5.1. This table shows the mean (M), standard deviation (SD), Cronbach's alpha ( $\alpha$ ) or Inter-item correlation and the (final) number of measurement items of the different variables that were included in the questionnaire. Cronbach's alpha is a measure of the internal consistency of a construct. Alpha scores of 0.60 and higher are considered acceptable for exploratory studies (Hair, Black, Babin, Anderson, & Tathan, 1998). For the organizational climate dimensions involvement, innovation & flexibility, outward focus, reflexivity and performance feedback, the alpha scores were below 0.60. Therefore, the inter-item correlation between two best fitting items for each of these dimensions was calculated. Inter-item correlations between 0.15 and 0.50 are desirable according to the research of Clark and Watson (1995). The deleted items of the dimensions are indicated with (x) in Table 4.2.

Table 5.1: Descriptive statistics (Mean, SD, Cronbach's alpha, Inter-item, final number measurement items)

<i>Variable</i>	<i>Dimension</i>	<i>Mean</i>	<i>SD</i>	<i><math>\alpha</math></i>	<i>Inter-item correlation</i>	<i>Final number measurement items</i>
<b>Organizational Climate</b>						
	Involvement	3.07	0.66	<del>0.45</del>	0.41	2
	Welfare	3.94	0.73	0.87		3
	Formalization	3.33	0.82	0.69		3
	Innovation and Flexibility	3.45	0.61	<del>0.48</del>	0.37	2
	Outward Focus	3.74	0.65	<del>0.51</del>	0.50	2
	Reflexivity	3.28	0.64	<del>0.48</del>	0.25	2
	Clarity of Organizational Goals	3.71	0.56	0.65		3
	Performance Feedback	3.17	0.60	<del>0.48</del>	0.48	2
	Pressure to Produce	3.51	0.68	0.71		3
<b>Job Crafting</b>						
	Task crafting	3.10	0.73	0.72		3
	Cognitive crafting	2.99	0.86	0.78		3
	Relational crafting	3.02	0.80	0.71		3
<b>Employee Engagement</b>						
	Vigor	3.60	0.68	0.72		
	Dedication	3.38	0.84			1
	Dedication	3.73	0.88			1
	Absorption	3.69	0.83			1
<b>Affective Commitment</b>						
		3.92	0.69	0.84		3
<b>Turnover Intention</b>						
		2.03	0.86	0.81		3

Of all dimensions of organizational climate, welfare seemed on average most prominent ( $M = 3.94$ ,  $SD = 0.73$ ). On the other hand, involvement scored below all other dimensions with a mean score of 3.07 (out of 5.00) and standard deviation of 0.66. Participants had, on average, a neutral opinion about the dimensions of job crafting, as all three mean scores are around the midpoint of the scale. Of all engagement dimensions, dedication had the highest mean ( $M = 3.73$ ,  $SD = 0.88$ ) and vigor had the lowest mean ( $M = 3.38$ ,  $SD = 0.84$ ). Affective commitment had the highest mean score compared to all other variables ( $M = 3.92$ ,  $SD = 0.69$ ). The mean score of turnover intention was relatively low compared to all other variables ( $M = 2.03$ ,  $SD = 0.86$ ).

The Standard Deviation tells the researcher how spread out the responses are (i.e. low SD means tall narrow shaped histogram and high SD means wide shaped histogram). Based on the results of Table 5.1, all standard deviations are below one, meaning that all the values tend to be less one point away from the mean scores.

## 5.2 Correlations

In this section, first, the correlations between the variables under study are presented, and second, the correlations of the study variables with potential control variables are discussed.

Pearson's correlation ( $r$ ) gives an indication of the linear relations between two metric variables (Sari et al, 2017). The values vary from -1, when there is a perfect negative linear relation, to +1, when there is a perfect positive linear relation. According to Cohen's (1988) conventions, effects sizes can be interpreted as small, moderate and large. A correlation coefficient of .10 is thought to represent a weak or small association, a correlation coefficient of .30 is considered as a moderate correlation, and a correlation of .50 or larger represent a strong or large correlation (Cohen, 1988).

### 5.2.1 Correlations between Study Variables

#### Organizational Culture and Job Crafting

Table 5.2 presents the correlations between the dimensions of organizational climate and the job crafting dimensions. The complete correlation matrix can be found in Appendix E.

Table 5.2: Correlation matrix organizational culture and job crafting

	1	2	3	4	5	6	7	8	9	10	11	12
<b>1. Involvement</b>	(.41)											
<b>2. Welfare</b>	.54**	(.87)										
<b>3. Formalization</b>	.08	.13	(.69)									
<b>4. Innovation &amp; Flexibility</b>	.36**	.27**	-.14	(.37)								
<b>5. Outward Focus</b>	.25**	.23**	-.01	.45**	(.50)							
<b>6. Reflexivity</b>	.34**	.42**	.14	.15	.32**	(.25)						
<b>7. Clarity of Organizational Goals</b>	.39**	.45**	.10	.31**	.25**	.38**	(.65)					
<b>8. Performance Feedback</b>	.26**	.34**	.20*	.04	.24**	.35**	.44**	(.48)				
<b>9. Pressure to Produce</b>	-.17	-.36**	-.10	.06	.04	-.14	-.21*	-.26**	(.71)			
<b>10. Task Crafting</b>	.10	.00	-.02	.03	.03	.09	.04	.11	.08	(.72)		
<b>11. Cognitive Crafting</b>	.17	.17	.23*	.12	.15	.17	.15	.23*	-.09	.35**	(.78)	
<b>12. Relational Crafting</b>	.14	.22*	.10	.23*	.06	.10	.26**	.14	-.10	.40**	.46**	(.71)

Significance \*\* p < .01 level, \* p < .05 level (2-tailed)

The dimensions formalization ( $r = .23$ ,  $p < .05$ ) and performance feedback ( $r = .23$ ,  $p < .05$ ) were significantly and positively correlated with cognitive crafting. This means that higher scores on these dimensions of organizational climate are associated with more cognitive crafting. The organizational climate dimensions welfare ( $r = .22$ ,  $p < .05$ ), innovation & flexibility ( $r = .23$ ,  $p < .05$ ) and clarity of organizational goals ( $r = .26$ ,  $p < .01$ ) correlated significantly and positively with relational crafting. This means that higher scores on these dimensions of organizational climate are related to more relational crafting. None of the dimensions of organizational climate significantly correlated with task crafting. So, overall, there are relatively few significant correlations between the dimensions of organizational climate and employee job crafting behaviors (5 of 27).

#### Job Crafting and Employee Engagement

Table 5.3 presents the correlations between the dimensions of job crafting and employee engagement. The complete correlation matrix can be found in Appendix E.

Table 5.3: Correlation matrix job crafting and employee engagement

	1	2	3	4
<b>1. Task Crafting</b>	(.72)			
<b>2. Cognitive Crafting</b>	.35**	(.78)		
<b>3. Relational Crafting</b>	.40**	.46**	(.71)	
<b>4. Employee Engagement</b>	.31**	.37**	.36**	(.72)

Significance \*\* p < .01 level, \* p < .05 level (2-tailed)

Task crafting ( $r = .31, p < .01$ ), cognitive crafting ( $r = .37, p < .01$ ) and relational crafting ( $r = .36, p < .01$ ) were significantly positively correlated with employee engagement, meaning that an increase in each of these crafting behaviors is related to higher employee engagement levels.

### Employee Engagement and Affective Commitment and Turnover Intention

Table 5.4 represents the correlations between employee engagement, affective commitment and the turnover intention. In Appendix E, the complete correlation matrix can be found.

Table 5.4: Correlation matrix employee engagement and affective commitment and turnover intention

	1	2	3
<b>1. Employee Engagement</b>	(.72)		
<b>2. Affective Commitment</b>	.53**	(.84)	
<b>3. Turnover Intention</b>	-.35**	-.37**	(.81)

Significance \*\*  $p < .01$  level, \*  $p < .05$  level (2-tailed)

As presented in the above table, employees engagement levels are significantly and positively correlated with their affective commitment levels ( $r = .53, p < .01$ ) and significantly and negatively correlated with their turnover intention ( $r = -.35, p < .01$ ). This means that higher levels of employee engagement are related to higher levels of affective commitment and a lower turnover intention. Turnover intention and affective commitment were significantly and negatively correlated with each other ( $r = -.37, p < .01$ ).

### 5.2.2 Correlations Control Variables

Control variables are variables whose effect may influence the relationships of the variables under study, and therefore, in the analyses these variables need to be controlled for. Correlations between possible control variables and the study variables were inspected. To check for multicollinearity, the variance inflation factor (VIF-scores) were checked on forehand. VIF-scores for each independent variable should not be greater than 5 to be harmful (Kim, 2019). All scores were below 5, and therefore multicollinearity was not a problem. Appendix E shows the complete correlation matrix including control variables.

As can be found in Appendix E, the control variables age, employees educational degree, years of work experience, organizational tenure, working part-time or fulltime and having a leadership position correlated all to one or more (dimensions) of the study variables. Of these control variables, age, educational degree, work experience and organizational tenure correlated each to multiple (dimensions of the) study variables. Age, for example, significantly and negatively correlated with the organizational climate dimension clarity of organizational goals ( $r = -.21, p < .05$ ). Years of work experience and organizational tenure correlated both significantly and negatively with the organizational climate dimension involvement (respectively  $r = -.20, p < .05$  and  $r = -.23, p < .05$ ). Age, employees educational degree, work experience and organizational tenure were all significantly and negatively correlated with one or more of the job crafting dimensions.

These relations can be substantiated with findings from previous studies. According to Bipp (2010), younger employees showed more job crafting behaviors compared to older employees due to changes in motives and interests over the lifespan that influence preferences. Younger employees stress the importance of intrinsic motivation more and fulfill this motivation by performing job crafting (Bipp, 2010). According to different previous studies, employees with a higher educational degree were more inclined to perform



job crafting behaviors (e.g. Wrzesniewski & Dutton, 2001; Plomp, et al., 2016). Higher educated employees possess better career competencies (i.e. reflective-, communicative-, and behavioral career competencies) that are useful in performing job crafting behaviors (Plomp, et al., 2016). Based on Fried and colleagues, employees within the early stages of their careers (i.e. less work experience) performed more job crafting through increasing challenging job demands (Fried, Grant, Levi, Hadani, & Slowik, 2007). Finally, employees' job crafting behaviors depended on one's period of employment with the organization (i.e. organizational tenure). Employees with a longer organizational tenure crafted their jobs less frequently by increased structural and social resources (Roczniewska & Puchalska-Kamińska, 2017). Based on the significant correlations found and above mentioned, in the next section the variables age, educational degree, years of work experience and organizational tenure will be included in the analyses as control variables.

### 5.3 Testing Hypotheses

This section describes the tests of the hypotheses regarding the proposed relationships under study. Testing the hypotheses can be classified into two categories: first, testing the direct effects (H1 – H4), and second, testing the indirect effects or mediation effects that are derived from the direct effects (H5 – H8). The mediating variables are job crafting, employee engagement and affective commitment.

#### 5.3.1 Direct Effects

Hypotheses 1 to 4 concern direct relationships in the research model. These hypotheses are tested with multiple hierarchical linear regression, in which in model 1 only the four control variables are included, and in model 2 the specific independent variables are added. As described in paragraph 5.2.2, the control variables are age, educational degree, years of work experience and organizational tenure. The direction and loading to the dependent variable can be seen by looking at the standardized coefficients. The standardized coefficients ( $\beta$ ) compare the strength of the effect of each individual independent variable to the dependent variable. The higher this absolute value, the stronger the effect. The model fit is measured with the  $R^2$  of the model, which gives insights into the proportion of variance in the dependent variable that is accounted for by the statistical model. The  $R^2$  is recommended to be equal or greater than .10 in order for the variance explained to be adequate (Moksony, 1999). The ANOVA analysis provides the F-ratio that tests the overall model fit and must be significant ( $p < .05$ ). Below the results of the direct effects hypotheses can be found.

#### **Organizational Climate on Job Crafting**

Table 5.5 shows the model 2 results of the hierarchical linear regressions analyses between the dimensions of organizational climate and the dimensions of job crafting. A complete overview of the results of the hierarchical multiple regressions analyses between the dimensions of organizational climate and job crafting can be found in Appendix F. From the tables in Appendix F, it can be concluded that, overall, age is the only control variable that still shows significant relationships after the dimensions of job crafting are entered in model 2 of the respective regression analyses, with regression weights varying from -.34 to -.40.

Table 5.5: Results linear regression model 2 organizational climate on job crafting

	Task Crafting			Cognitive Crafting			Relational Crafting		
	$\beta$	F-value	$\Delta R^2$	$\beta$	F-value	$\Delta R^2$	$\beta$	F-value	$\Delta R^2$
<b>Involvement</b>	.06	2.29	.003	.14	2.34*	.02	.08	5.78**	.01
<b>Welfare</b>	-.04	2.25	.002	.13	2.32*	.02	.19*	6.87**	.04
<b>Formalization</b>	-.02	2.21	.00	.23*	3.33**	.05	.13	6.11**	.02
<b>Innovation &amp; Flexibility</b>	.03	2.23	.001	.12	2.24	.01	.22**	7.39**	.05
<b>Outward Focus</b>	.07	2.35*	.01	.20*	2.95*	.04	.11	5.98**	.01
<b>Reflexivity</b>	.09	2.43*	.01	.16	2.58*	.03	.11	5.98**	.01
<b>Clarity of Organizational Goals</b>	-.03	2.22	.001	.10	2.13	.01	.18*	6.75**	.03
<b>Performance Feedback</b>	.11	2.53*	.01	.23**	3.35**	.05	.15	6.39**	.02
<b>Pressure to Produce</b>	.11	2.52*	.01	-.07	1.98	.01	-.06	5.68**	.003

Significance \*\* p < .01 level, \* p < .05 level (2-tailed)

Based on the results of Table 5.5, the dimensions formalization ( $\beta = .23$ ,  $p < .05$ ), outward focus ( $\beta = .20$ ,  $p < .05$ ) and performance feedback ( $\beta = .23$ ,  $P < .01$ ) were significantly and positively related with cognitive crafting. Welfare ( $\beta = .19$ ,  $p < .05$ ), innovation & flexibility ( $\beta = .22$ ,  $p < .01$ ) and clarity of organizational goals ( $\beta = .18$ ,  $p < .05$ ) were significantly and positively related with relational crafting. None of the dimensions of organizational climate related significantly to task crafting. Therefore, respectively hypotheses H1b, H1c, H1d, H1e, H1g and H1h are partially supported as the organizational climate dimensions related to one of the job crafting dimensions.

### Job Crafting on Employee Engagement

Table 5.6 shows the model 2 results of the hierarchical linear regression analysis of the dimensions of job crafting predicting employee engagement. A complete overview of the results of the hierarchical multiple regression analysis of the dimensions of job crafting on employee engagement can be found in Appendix F. From this table, it can be concluded that, overall, none of the control variables shows a significant relationship with employee engagement after the crafting dimensions have been entered in model 2 of the regression analysis.

Table 5.6: Results linear regression model 2 job crafting on employee engagement

	Employee Engagement		
	$\beta$	F-value	$\Delta R^2$
<b>Task Crafting</b>	.18*	5.16**	.23
<b>Cognitive Crafting</b>	.22*		
<b>Relational Crafting</b>	.28**		

Significance \*\* p < .01 level, \* p < .05 level (2-tailed)

The results of the hierarchical regression analyses supported hypothesis 2, as all three job crafting showed a significant positive relationship with employee engagement levels.

### Employee Engagement on Affective Commitment and Turnover Intention

Table 5.7 shows the results of the hierarchical linear regression analysis between employee engagement and affective commitment, and between employee engagement and turnover intention. A complete overview of the results of the hierarchical multiple regressions analyses between employee engagement and affective commitment and employee engagement and turnover intention can be found in Appendix F.

Table 5.7: Results linear regression model 2 employee engagement on affective commitment and turnover intention

	Affective Commitment			Turnover Intention		
	$\beta$	F-value	$\Delta R^2$	$\beta$	F-value	$\Delta R^2$
<b>Employee Engagement</b>	.55**	11.67**	.29	-.36**	5.04**	.13

Significance \*\* p < .01 level, \* p < .05 level (2-tailed)

The results showed that employee engagement is significantly and positively related to affective commitment to the organization ( $\beta = .55$ ,  $p < .01$ ). Therefore, hypothesis 3 is supported. Age was the only control variable showing a significant negative relationship ( $\beta = -.33$ ,  $p < .05$ ) with affective commitment.

Table 5.7 also showed that employee engagement is significantly and negatively related to employee turnover intention ( $\beta = -.36$ ,  $p < .01$ ). Therefore, hypothesis 4 is supported. However, none of the control variables shows a significant relationship with turnover intention.

### Summary

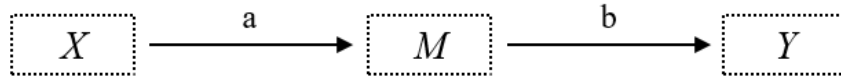
Now that the direct effects have been analyzed, it is visible that some dimensions of organizational climate and some job crafting dimensions are significantly related to each other. All three job crafting dimensions are significantly positively related to employee engagement levels, and engagement, in turn, related significantly to outcome variables affective commitment (positive) and turnover intention (negative). The number of significant relations is rather small, as most of the hypotheses regarding the relationships between the organizational climate dimensions and job crafting dimensions are rejected. Only some hypotheses concerning the relations between organizational climate dimensions and cognitive- and relational crafting have been accepted as visualized in Table 5.8. Most of the rejected hypotheses concern the organizational climate dimensions involvement, reflexivity and pressure to produce, which all showed non-significant relations with all of the job crafting dimensions. The job crafting dimensions task crafting showed non-significant relations with all of the organizational climate dimensions. Now that the relations between organizational climate, job crafting and the outcome variables are tested, it brings up the next question: whether cognitive- and relational crafting, engagement and affective commitment play a mediating role in the relationships between the variables under study. The next section will focus on these mediation effects.

Table 5.8: Summary accepted and rejected hypotheses direct effects

<b>Hypotheses</b>		<b>Result</b>
H1.a	Involvement positive related to task crafting	Rejected
	Involvement positive related to cognitive crafting	Rejected
	Involvement positive related to relational crafting	Rejected
H1.b	Welfare of employees positive related to task crafting	Rejected
	Welfare of employees positive related to cognitive crafting	Rejected
	Welfare of employees positive related to relational crafting	Accepted
H1.c	Formalization of processes negative related to task crafting	Rejected
	Formalization of processes negative related to cognitive crafting	Rejected
	Formalization of processes negative related to relational crafting	Rejected
H1.d	Innovation & flexibility positive related to task crafting	Rejected
	Innovation & flexibility positive related to cognitive crafting	Rejected
	Innovation & flexibility positive related to relational crafting	Accepted
H1.e	Outward focus positive related to task crafting	Rejected
	Outward focus positive related to cognitive crafting	Accepted
	Outward focus positive related to relational crafting	Rejected
H1.f	Reflexivity positive related to task crafting	Rejected
	Reflexivity positive related to cognitive crafting	Rejected
	Reflexivity positive related to relational crafting	Rejected
H1.g	Clarity of organizational goals positive related to task crafting	Rejected
	Clarity of organizational goals positive related to cognitive crafting	Rejected
	Clarity of organizational goals positive related to relational crafting	Accepted
H1.h	Performance feedback positive related to task crafting	Rejected
	Performance feedback positive related to cognitive crafting	Accepted
	Performance feedback positive related to relational crafting	Rejected
H1.i	High pressure to produce negative related to task crafting	Rejected
	High pressure to produce negative related to cognitive crafting	Rejected
	High pressure to produce negative related to relational crafting	Rejected
H2	Task crafting positive related to employee engagement	Accepted
	Cognitive crafting positive related to employee engagement	Accepted
	Relational crafting positive related to employee engagement	Accepted
H3	Employee engagement positive related to affective commitment	Accepted
H4	Employee engagement negative related to turnover intention	Accepted

### 5.3.2 Mediating Effects

Mediation is a hypothesized causal chain in which one variable explains the relationship (fully or partial) between two other variables. The intervening variable in the middle,  $M$ , is called the mediator. It mediates the relationship between  $X$  and  $Y$ . Mediation can be graphically depicted in the following way:



Paths  $a$  and  $b$  are called the direct effects. The mediational effect, in which  $X$  leads to  $Y$  through  $M$ , is called the indirect effect. The indirect effect represents the proportion of the relationship between  $X$  and  $Y$  that is mediated by  $M$ .

#### PROCESS macro

To test the mediation effects, Model 4 of PROCESS macro analyses of Hayes (2013) were used (see Figure 5.1). PROCESS macro is an Ordinary Least Square (OLS) and logistic regression path analysis modeling tool and used in social, business and health sciences (Hayes, 2013). For the mediation, PROCESS is an useful method as it provides output directly that otherwise requires a combination of parameter estimates across two or more equations in the model (Hayes, Montoya, & Rockwood, 2017). As can be seen in Figure 5.1, this model involves three paths. Path  $a$  represents the assumption that the independent variable (IV) is antecedent to the mediating variable ( $M$ ). Path  $b$  represents the assumption that  $M$  is antecedent to the dependent variable (DV). The indirect effect of the IV on the DV is calculated as the product of paths  $a$  and  $b$ . Finally, path  $c'$  shows the direct effect of the IV on the DV, after controlling for the proposed mediation. A distinction can be made between full- and partial mediation. Partial mediation means that the independent variable has both a direct (path  $c'$ ) and an indirect effect (path  $a \times b$ ) on the dependent variable. Full mediation means that the independent variable only indirectly affects the dependent variable (path  $a \times b$ ).

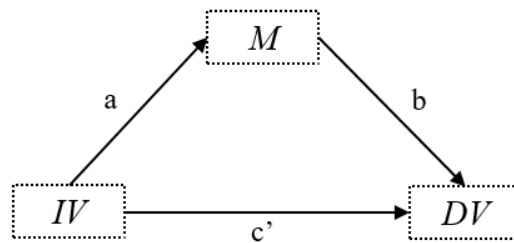


Figure 5.1: Mediation model (Model 4 in PROCESS analysis of Hayes, 2013)

To test the indirect effects of this project, the 95% bootstrap confidence interval, with 5000 bootstrap samples was used. The indirect effect was tested using non-parametric bootstrapping, meaning that the coefficient of the indirect effect is significant when it falls between the lower and upper bootstrap interval without crossing zero. The bootstrap confidence interval (i.e. 95% LB and UB) tells that if both the upper and lower bootstrap interval are positive or negative (i.e. interval does not cross zero), it is significant. When the direct effect of the mediation analyses was non-significant, the mediation effect of the indirect effect (i.e. the proportion of the effect that is mediated) was also calculated and is shown in the tables below. This effect was calculated by dividing the indirect effect by the total effect. To claim complete or full mediation, the mediation effect (%) must be at least 80% (Kenny & Judd, 2014).

### Mediator Job Crafting

Based on the results of the regression analyses (see paragraph 5.3.1), mediation analyses were performed for the significant paths between the organizational climate dimensions and employee engagement, with job crafting dimensions cognitive- and relational crafting as mediators.

Table 5.9 and Figure 5.2 show the results of the mediation analyses with the three dimensions of organizational climate as independent variables, employee engagement as dependent variable and cognitive crafting as mediator.

Table 5.9: Results simple mediation model with mediator cognitive crafting

IV	IV predicting M Path a			M predicting DV Path b			Direct effect Path c'			Indirect effect IV on DV			Total effect			% mediation effect
	B	S.E.	$\rho$	B	S.E.	$\rho$	B	S.E.	$\rho$	B	95% LB	95% UB	B	S.E.	$\rho$	
<b>Formalization</b>	.24	.09	< .05	.28	.07	< .01	.07	.07	.36	.07	.01	.14	.13	.07	.26	50%
<b>Outward Focus</b>	.17	.10	.10	.28	.07	< .01	.12	.08	.12	.05	-.01	.12	.16	.08	< .05	-
<b>Performance Feedback</b>	.28	.11	< .05	.25	.07	< .01	.22	.08	< .01	.07	.02	.14	.29	.08	< .01	-

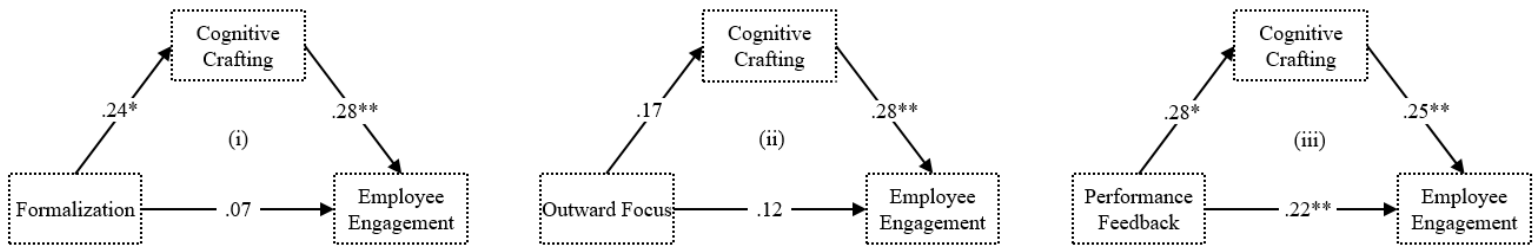


Figure 5.2: Results simple mediation with (i) formalization, (ii) outward focus and (iii) performance feedback as IV, employee engagement as DV with mediator cognitive crafting

Based on the results in Table 5.9, the dimension formalization had a significant and positive effect on employee engagement via cognitive crafting ( $B = .07$ , 95% CI [.01, .14]). The direct effect between formalization and employee engagement was not significant ( $B = .07$ ,  $p = .36$ ), the indirect effect was significant, and the calculated mediation effect yielded 50%, which indicated partial mediation (i.e. full by  $> 80\%$ ). The relationship between outward focus and employee engagement was not mediated by cognitive crafting, as both the path between outward focus and cognitive crafting (i.e. path a), the direct effect (i.e. path c') and indirect effect were not significant. Performance feedback had a significant and positive effect on employee engagement via cognitive crafting ( $B = .07$ , 95% CI [.02, .14]). Both the direct effect between performance feedback and employee engagement ( $B = .22$ ,  $p < .01$ ), as well as the indirect effect were significant, which indicated partial mediation.

Table 5.10 and Figure 5.3 show the results of the mediation analyses with the three dimensions of organizational climate as independent variables, employee engagement as dependent variable and relational crafting as a mediator.

Table 5.10: Results simple mediation model with mediator relational crafting

IV	IV predicting M Path a			M predicting DV Path b			Direct effect Path c'			Indirect effect IV on DV			Total effect			% mediation effect
	B	S.E.	$\rho$	B	S.E.	$\rho$	B	S.E.	$\rho$	B	95% LB	95% UB	B	S.E.	$\rho$	
<b>Welfare</b>	.25	.10	<.05	.28	.07	<.01	.14	.08	.09	.07	.01	.14	.21	.08	<.05	33%
<b>Innovation &amp; Flexibility</b>	.23	.09	<.05	.28	.07	<.01	.11	.07	.13	.07	.01	.14	.18	.08	<.05	36%
<b>Clarity of Organizational Goals</b>	.38	.13	<.01	.25	.07	<.01	.33	.10	<.01	.09	.02	.20	.42	.10	<.01	-

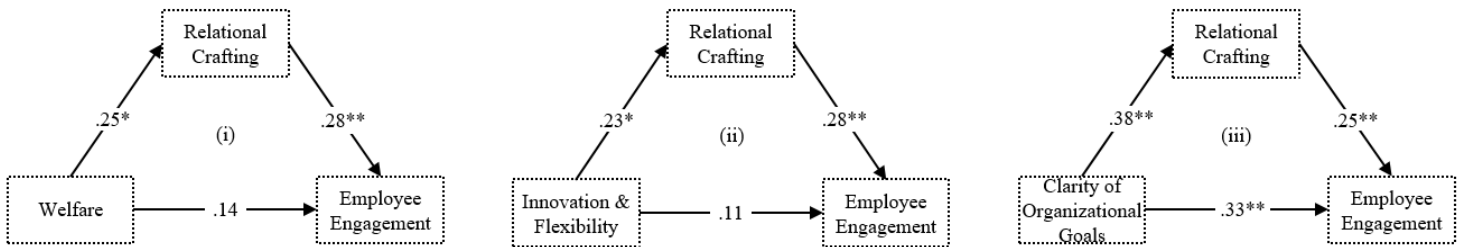


Figure 5.3: Results simple mediation with (i) welfare, (ii) innovation & flexibility and (iii) clarity of organizational goals as IV, employee engagement as DV with mediator relational crafting

Based on the results of Table 5.10, the dimension welfare had a significant and positive effect on employee engagement via relational crafting ( $B = .07$ , 95% CI [.01, .14]). The direct effect between welfare and employee engagement was not significant ( $B = .14$ ,  $p = .09$ ) and the indirect effect was significant. Given a mediation effect of 33%, relational crafting had a partial mediating role (i.e. full by > 80%) between welfare and employee engagement. Innovation and flexibility had a significant and positive effect on employee engagement via relational crafting ( $B = .07$ , 95% CI [.01, .14]). The direct effect between innovation and flexibility and employee engagement was not significant ( $B = .11$ ,  $p = .13$ ) and the indirect effect was significant. The mediation effect was 36%, which indicated partial mediation (i.e. full by > 80%). Finally, clarity of organizational goals had a significant and positive effect on employee engagement via relational crafting ( $B = .09$ , 95% CI [.02, .20]). Both the direct effect ( $B = .33$ ,  $p < .01$ ) and indirect effect were significant, which indicated partial mediation.

### Mediator Employee Engagement

Based on the results of the regression analyses (see paragraph 5.3.1), mediation analyses were performed for all three dimensions of job crafting on both affective commitment and turnover intention, via engagement, as all these paths were significant

Table 5.11 and Figure 5.4 show the results of the mediation analyses with the three dimensions of job crafting as independent variable, affective commitment as dependent variable and employee engagement as mediator.

Table 5.11: Results simple mediation model with mediator employee engagement

IV	IV predicting M Path a			M predicting DV Path b			Direct effect Path c'			Indirect effect IV on DV			Total effect			% mediation effect
	B	S.E.	ρ	B	S.E.	ρ	B	S.E.	ρ	B	95% LB	95% UB	B	S.E.	ρ	
<b>Task Crafting</b>	.29	.08	< .01	.53	.08	< .01	.04	.08	.62	.15	.07	.27	.19	.08	<.05	80%
<b>Cognitive Crafting</b>	.29	.07	<.01	.45	.08	<.01	.18	.06	<.01	.13	.06	.21	.32	.07	<.01	-
<b>Relational Crafting</b>	.31	.07	<.01	.46	.08	<.01	.18	.07	<.01	.14	.06	.25	.33	.07	<.01	-

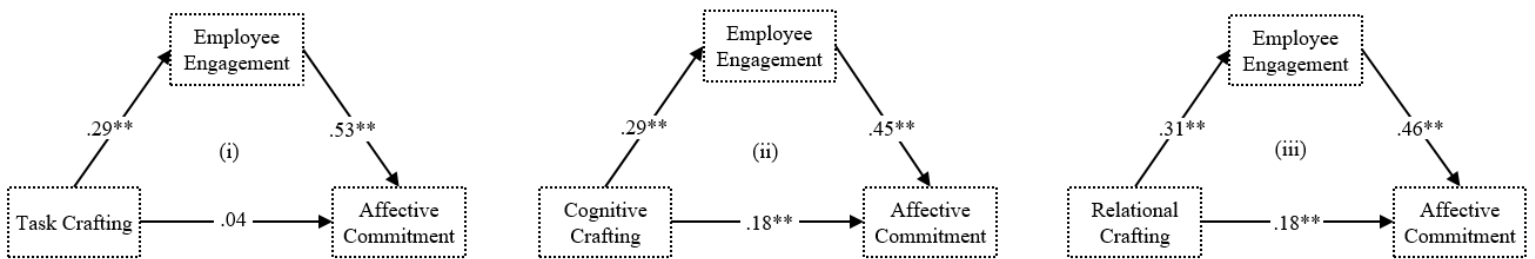


Figure 5.4: Results simple mediation with (i) task-, (ii) cognitive- and (iii) relational crafting as IV, affective commitment as DV with mediator employee engagement

Based on the results of Table 5.11, task crafting had a significant and positive effect on affective commitment via employee engagement (B = .15, 95% CI [.07, .27]). The direct effect between task crafting and affective commitment was not significant (B = .04, p = .62) and the indirect effect was significant. The mediation effect of 80% indicated a full mediation of engagement between task crafting and affective commitment. This means that the performance of task crafting behaviors influence employees' affective commitment towards the organization only through increased levels of engagement. Cognitive crafting had a significant and positive effect on affective commitment via employee engagement (B = .13, 95% CI [.06, 21]). Both the direct (B = .18, p <.01) and indirect effect were significant, indicating partial mediation. Finally, relational crafting had a significant and positive effect on affective commitment via employee engagement (B = .14, 95% CI [.06, 25]). Both the direct effect (B = .18, p <.01) and indirect effect were significant, which indicated partial mediation.



Table 5.12 and Figure 5.5 show the results of the mediation analyses with the three dimensions of job crafting as independent variable, the turnover intention as dependent variable and employee engagement as mediator.

Table 5.12: Results simple mediation model with mediator employee engagement

IV	IV predicting M Path a			M predicting DV Path b			Direct effect Path c'			Indirect effect IV on DV			Total effect			% mediation effect
	B	S.E.	$\rho$	B	S.E.	$\rho$	B	S.E.	$\rho$	B	95% LB	95% UB	B	S.E.	$\rho$	
	<b>Task Crafting</b>	.29	.08	<.01	-.57	.11	<.01	.36	.10	<.01	-.16	-.29	-.07	.20	.11	
<b>Cognitive Crafting</b>	.29	.07	<.01	-.50	.11	<.01	.12	.09	.20	-.15	-.25	-.06	-.03	.09	.75	I.M.
<b>Relational Crafting</b>	.31	.07	<.01	-.52	.11	<.01	.18	.10	.07	-.16	-.29	-.06	.02	.10	.87	I.M.

I.M. = inconsistent mediator (MacKinnon, Fairchild, & Fritz, 2007)

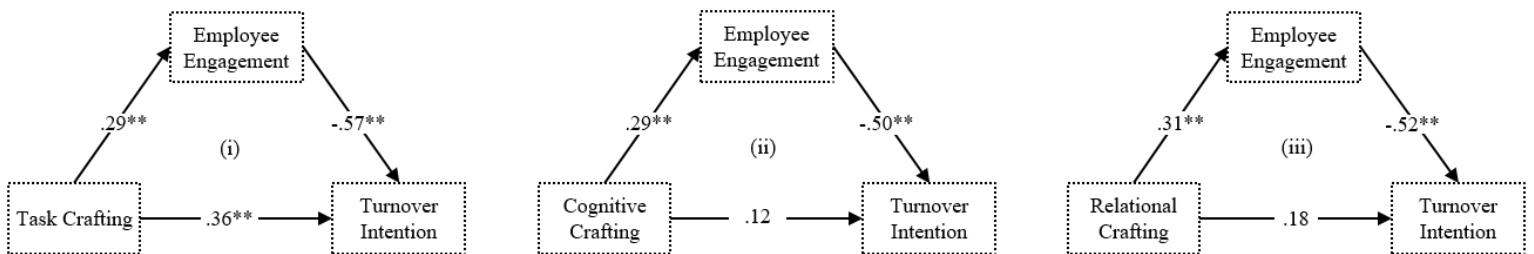


Figure 5.5: Results simple mediation with (i) task-, (ii) cognitive- and (iii) relational crafting as IV, turnover intention as DV with mediator employee engagement

As can be seen in Table 5.12, the mediation effect could not be calculated as there was a positive direct effect and a negative indirect effect (i.e. path *a* positive, path *b* negative). When at least one mediated effect has a different sign than other effects in a model, inconsistent mediation occurs (MacKinnon, Fairchild, & Fritz, 2007). The total effect is very small because the direct effect and indirect effects tend to cancel each other out.

Based on the results of Table 5.12, task crafting had a significant and negative effect on the turnover intention via employee engagement ( $B = -.16$ , 95% CI  $[-.29, -.06]$ ). Both the direct ( $B = .36$ ,  $p < .01$ ) and indirect effect were significant, which indicated partial mediation. Cognitive crafting had a significant and negative effect on employee turnover intention via employees engagement level ( $B = -.15$ , 95% CI  $[-.25, -.06]$ ). The direct effect was not significant ( $B = .12$ ,  $p = .20$ ) and the indirect effect was significant, meaning that the two opposite effects (i.e. positive direct effect and negative indirect effect) counteracted each other, and therefore cancelled each other out. Finally, the effect between relational crafting and the turnover intention via employee engagement was significant and negative ( $B = -.16$ , 95% CI  $[-.29, -.06]$ ). The direct effect was not significant ( $B = .18$ ,  $p = .07$ ) and the indirect effect was significant. The same applied here where the positive direct effect and negative indirect effect cancelled each other out.

### Mediator Affective Commitment

Finally, it was tested whether affective commitment mediates the relationship between employee engagement and turnover intention. Table 5.13 shows the results of the mediation analysis and Figure 5.6 gives a graphical representation of the mediation.

Table 5.13: Results simple mediation model with mediator affective commitment

IV	IV predicting M Path a			M predicting DV Path b			Direct effect Path c'			Indirect effect IV on DV			Total effect			% mediation effect
	B	S.E.	$\rho$	B	S.E.	$\rho$	B	S.E.	$\rho$	B	95% LB	95% UB	B	S.E.	$\rho$	
<b>Engagement</b>	.54	.08	< .01	-.30	.12	< .05	-.28	.12	< .05	-.16	-.32	-.03	-.45	.11	< .01	-

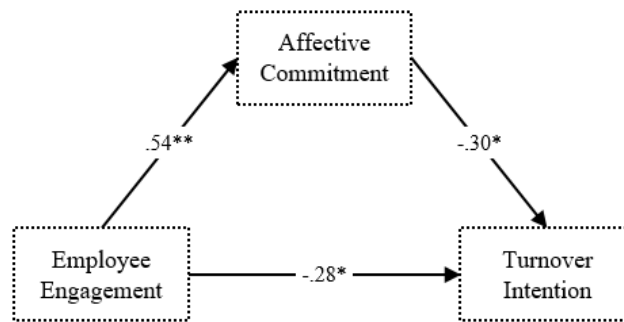


Figure 5.6: Results simple mediation with engagement as IV, turnover intention as DV with affective commitment as mediator

Based on the results in Table 5.13, it can be concluded that the effect of employee engagement on turnover intention via affective commitment was significant and negative ( $B = -.16$ , 95% CI  $[-.32, -.03]$ ). The direct effect ( $B = -.28$ ,  $p < .05$ ) as well as the indirect effect were significant, which indicated partial mediation.

### Summary

Based on these analyses (see Table 5.14), it can be concluded that the variables cognitive- and relational crafting, engagement and affective commitment, could be validated as mediator. Only for one relationship, between the organizational climate dimension outward focus and employee engagement via cognitive crafting, mediation did not occur. Almost all of the significant relations showed a partial mediation, and only engagement had a full mediating role between task crafting and affective commitment. Employee engagement is an inconsistent mediator in the relations between cognitive- and relational crafting and turnover intention, meaning that more cognitive- and relational crafting behaviors results in higher levels of engagement (i.e. positive) and higher levels of engagement results in a lower intention to leave (i.e. negative) which results in an overall negative indirect effect. The total effect of cognitive- and relational crafting is small because the direct and indirect effects cancel each other out.

Table 5.14: Summary confirmed and rejected hypotheses mediation analysis

Hypotheses		Result
H5	Cognitive crafting mediates between formalization and engagement	Partial
	Cognitive crafting mediates between outward focus and engagement	Rejected
	Cognitive crafting mediates between performance feedback and engagement	Partial
	Relational crafting mediates between welfare and engagement	Partial
	Relational crafting mediated between innovation & flexibility and engagement	Partial
	Relational crafting mediates between clarity of goals and engagement	Partial
H6	Employee engagement mediates between task crafting and commitment	Full
	Employee engagement mediates between cognitive crafting and commitment	Partial
	Employee engagement mediates between relational crafting and commitment	Partial
H7	Engagement mediates between task crafting and turnover intention	Partial
	Engagement mediates between cognitive crafting and turnover intention	I.M.
	Engagement mediates between relational crafting and turnover intention	I.M.
H8	Commitment mediates between engagement and turnover intention	Partial

*I.M.* = inconsistent mediator (MacKinnon, Fairchild, & Fritz, 2007)

# Chapter 6 - Methodology of Qualitative Research Model

The main focus of the qualitative part is to (i) explore the significant relationships between study variables that are found in the quantitative part in more detail, and (ii) find ways to optimize the effect of ASML's culture on employee engagement, commitment and retention. To get a more detailed picture of the outcomes of the quantitative part, twelve interviews were conducted to get more in-depth information on the effect of ASML's culture on employee engagement, affective commitment and turnover intention. In this chapter, the interview method and method of data analysis will be described.

## 6.1 Interview Design

The method by which the in-depth information was obtained was by conducting semi-structured interviews. In a semi-structured interview, the researcher sets the outline for the topics covered, but the interviewee's responses determine the way in which the interview is directed. A semi-structured interview is the most commonly used type of interview in qualitative research (Stuckey, 2013). This type was valuable for this project because it allowed the researcher to explore subjective viewpoints, and to gather in-depth accounts of people's experiences (Flick, 2018). Semi-structured interviews can provide reliable and comparable qualitative data according to Stuckey (2013). The interviewer had the opportunity to ask follow-up questions which created openness for new perspectives and recommendations. In Appendix G the script used during the interviews can be found.

## 6.2 Procedure

Twelve employees of the CS department were asked two weeks in advance if they wanted to participate in an interview via a Microsoft Teams meeting as a follow-up on the survey. They were informed about the content of the interview (i.e. their experiences about the organizational culture, policies and procedures and which aspects could be improved in their opinion). All participants agreed on this invitation. The interviews lasted approximately 30 minutes. At the start of the interview, the purpose of the interview was explained, after which the participant was asked if their answers could be recorded, given that confidentiality and anonymity would be ensured. The format of the interview was explained after which the interview started. At the end of the interview, the participant was thanked and asked if there were any questions.

## 6.3 Participants

In total, twelve employees of the CS department were asked to participate in an interview, three employees per segment (i.e. CS EUV, CS DUV, CS Apps, CS Central Services, see paragraph 2.3) The only criterium for the selection of the participants was that employees were employed in the selected teams for the survey.

## 6.4 Interview Questions

In the introductory part of the interview, participants were asked how long they have worked within the CS department and to explain their daily work activities. Based on the results of the survey, the questions asked in the semi-structured interviews can be found in Table 6.1.

*Table 6.1: Overview questions semi-structured interview*

<i>Variable</i>	<i>Questions</i>
Organizational Climate	<ul style="list-style-type: none"> <li>• Overall, how would you describe ASML's culture?; How does the culture influence your day-to-day job?</li> <li>• The dimensions Involvement, Formalization, Reflexivity and Performance Feedback scored low in the survey. Why do these dimensions score so low, do you think?; How can these dimensions be improved?</li> </ul>
Job Crafting	<ul style="list-style-type: none"> <li>• To what extent does the organization stimulate you to perform job crafting behaviors?; Why do you think that?; What do you need to be able to perform job crafting behaviors?</li> </ul>
Employee Engagement	<ul style="list-style-type: none"> <li>• Which aspects of your job/work contribute to your feelings of engagement?; How can your level of engagement be increased?</li> </ul>
Affective Commitment	<ul style="list-style-type: none"> <li>• What contributes to your commitment to ASML?; How can your level of commitment be increased?</li> </ul>
Turnover Intention	<ul style="list-style-type: none"> <li>• Which aspects make you want to keep working at ASML?; Which aspects make you want to work at another company?</li> </ul>

Follow-up questions were prepared in case an additional clarification of the question was required. For instance, when examples were needed to make the statement of the participants clearer.

## 6.5 Analysis

The interviews were transcribed in a way of verbatim transcript, which means that the interviews are fully recorded and are typed out word by word. It is a complete transcript and not a summary of respondent's answers. Based on McLellan, MacQueen and Neidig (2003), this complete registration leads to better interpretation of the interviews. To analyze the interview transcripts, QDA Miner Lite v2.0.7 was used. This is an easy-to-use qualitative analysis software tool and can be used for the analysis of textual data (Chomczynski, 2008). The open questions of the interviews were analyzed using coding. After studying the transcripts, it became clear that several topics were mentioned several times by respondents. These answers were marked per respondent. After all the transcripts were coded, they were assigned to the subjects they related to. The subjects in this project related to the variables under study. The subjects are organizational climate, job crafting, engagement, affective commitment and turnover intention. The coding indicated how often they are mentioned inside the subject. This attempts to provide insights into the most important coding categories per subject. Appendix H shows the coding analysis including the subjects with coding categories and corresponding codes. Table 6.2 shows the codes per subject and Appendix I gives the descriptions of these codes.

Table 6.2: Coding categories per subject

<b>Organizational Climate</b>	<b>Job Crafting</b>	<b>Employee Engagement</b>	<b>Affective Commitment</b>	<b>Turnover Intention</b>
Bottom-up Communicative Consensus-based Networked organization Result oriented Silo thinking Supportive Top-down	Affinity Opportunities Responsibility	Customer contact Personal contact Product affection Support Work atmosphere	Company affection Development and learning opportunities Employment conditions Feelings of pride Job affection	Career opportunities Financial security Multinational Personal growth opportunities

## Chapter 7 - Results of Qualitative Research

In this chapter, the results of the qualitative part will be discussed. First, a short summary will be given of the most mentioned factors that are perceived to have the strongest influence on the study variables. It will also be assessed whether the results of the quantitative part are in line with the findings of the interviews. Finally, recommendations will be given on how ASML could improve employees' work-related attitudes further.

### 7.1 Organizational Climate

Figure 7.1 shows the factors that best describe ASML's organizational culture, according to the respondents. The organizational culture was perceived as networked (83.3%) and result oriented (75%). Respondents described the organization as one that is mainly connected by informal networks rather than formal organizational structures. The ability to get things done depends on personal relationships with colleagues and employee's own network within the organization. Within this networked organization, there is a great willingness to help others and to jointly achieve the best result. Respondents described the organization also as result oriented, where focus is on the outcome rather than on the process. Hereby it was stated that the way of working is focused on solving customer's issues and questions as quickly as possible.

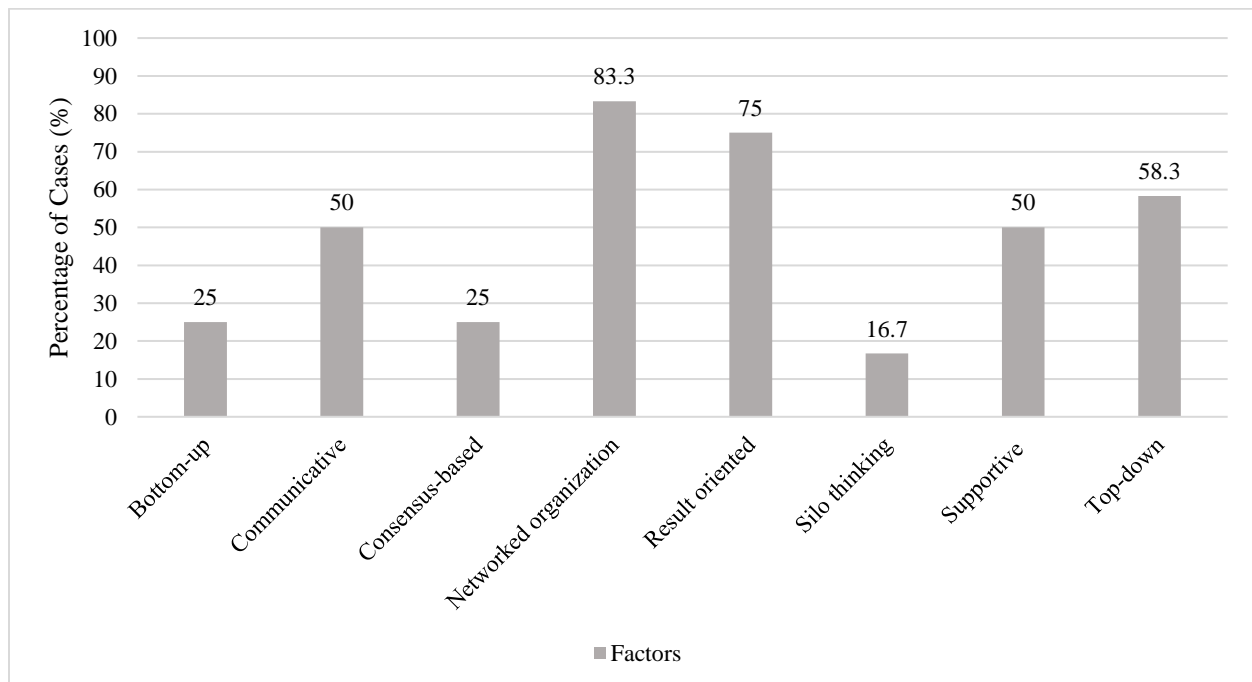


Figure 7.1: Factors organizational climate (N=12)

Focus for the interviews was on the low-scoring dimensions as it was most interesting for ASML to gain insights into why these dimensions scored low and how they could be improved. To get a better understanding of these low scoring dimensions of organizational climate (i.e. involvement, formalization, reflexivity and performance feedback), it was first questioned whether these dimensions sounded familiar to the respondents. Figure 7.2 shows the extent to which respondents could understand the low-scoring dimensions; in this figure ‘agree’ indicates that the score on the topic is in line with how the organizational culture is perceived and ‘disagree’ indicates that the low-score is not recognized by the respondent. The graph shows that the overall results of the quantitative part on organizational climate are in line with how the organizational culture is experienced and perceived.

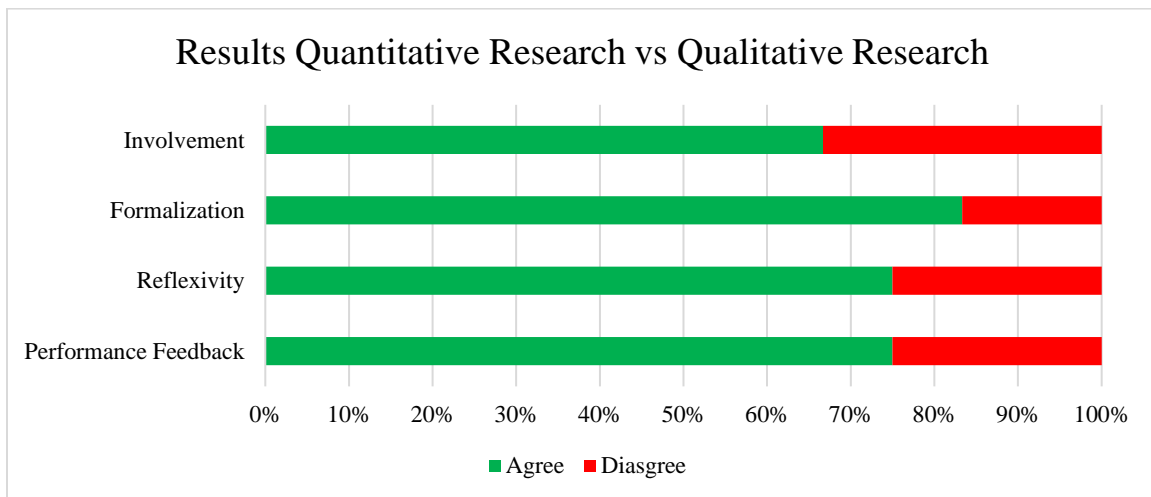


Figure 7.2: Results quantitative research versus qualitative research

### **Involvement**

The low score on involvement, according to the respondents, may be explained by the layered structure of the organization. An image is created in which bottom-up communication and feedback is stimulated, but final decisions are ultimately made top-down. The extent to which one feels involved in making decisions and being able to share information, is experienced as dependent on one's position in the hierarchy and on whether one has a managerial function or not. More insights into how the bottom-up communication is included in the decision-making would contribute to a higher sense of involvement, indicated by the respondents.

### **Formalization**

The explanation behind the low score on this dimension had to do with the perception of a result-oriented drive having the upper hand over following rules and procedures. Within CS, there prevails a to-do mentality that contributes to solving customer problems and issues as quickly as possible and in an informal way. Respondents indicated that it is not considered in advance which existing procedure or policy can be used for solving the problem; the solution is re-invented and worked-out for each specific issue, without taking into account what procedures and policies already may exist. Improvements on this dimension could



include following established and existing procedures and policies that have been documented and proven effective in the past.

### **Reflexivity**

The degree of reflection on organizational objectives, procedures and strategies is related to following rules and procedures (see topic 'Formalization'). Given the low score on the dimension formalization, which indicated that issues or problems are mainly solved in an informal, ad-hoc manner, it may become more difficult to reflect on. It was stated by respondents that reflection, on for example work processes or achieving objectives, was hardly done, since each issue of the customer is treated as isolated or standalone. Because existing policies and procedures are not followed, reflection is experienced as complicated. To solve this, problems have to be solved in a more formal way, after which more time needs to be made available to reflect on the used methods, according the respondents on improving reflexivity.

### **Performance Feedback**

The low score on performance feedback may be explained, according to the respondents, by the low number of structural feedback moments. It was indicated that there are two moments of feedback every year (i.e. mid-year- and end-year review) and that it was experienced as relatively few. In addition, the feedback culture of the organization is experienced as cautious with little focus on providing positive feedback. Feedback is given in a careful and friendly way, while respondents indicated feedback could be given more to the point. The focus is mainly on negative feedback, while sometimes it could be approached from the positive side, according to the respondents.

## **7.2 Job Crafting**

The results of the qualitative research indicated that respondents had a neutral opinion about the extent to which they engaged in job crafting behaviors, as all mean scores of the job crafting dimensions were around 3 (see paragraph 5.1). These results showed that little job crafting behaviors were performed. The respondents of the interviews had a different view the performance of job crafting behaviors within the organization as all indicated to perform some sort of job crafting behaviors (i.e. task-, cognitive- or relational crafting behaviors). They stated that there is room to restructure one's job to align it with own preferences and that these behaviors are performed frequently at the work floor. The findings of the quantitative and qualitative part are thus not completely in line with each other. As shown in Figure 7.3, affinity (91.7%) and opportunities (100%) are most important for actually engaging in job crafting behaviors.

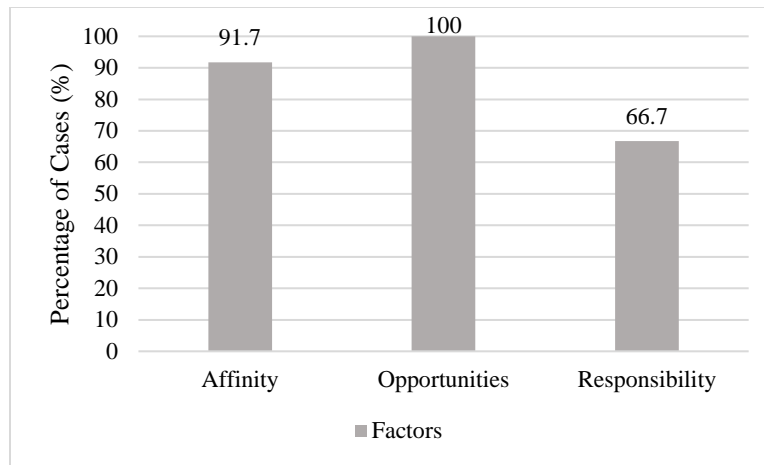


Figure 7.3: Factors job crafting (N=12)

During the interviews, it was mentioned by all respondents that there are a lot of opportunities (100%) to focus on tasks, relations and responsibilities that are in line with personal preferences and interests. Organizational procedures and policies are not perceived in a way that prevent its employees from engaging in these job crafting behaviors. It is also possible to direct yourself, as employee, towards activities with which one has an affinity (91.7%). Examples given by respondents were specializations on a specific topic, combinations of different roles and self-steering teams. The opinions of the respondents were diverging when it came to the responsibility (66.7%) of being able to perform job crafting behaviors. In addition to the fact that all respondents indicated that there are opportunities, some of the respondents indicated that they felt the responsibility to express job crafting. While others indicated that it is also the role of the manager to stimulate job crafting behaviors.

- *“You will of course receive a standard range of duties, so you will be assigned to standard allocations. But what you do with that allocation, is in my opinion, very personal and interpretable.”*
- *“Well, I think we have quite a lot of possibilities to do that within ASML. ... So if you indicate what you like yourself to do, you can always have that conversation with your manager.”*
- *“I think ASML provides enough guidelines to know what to do, but also gives enough room to develop yourself and take tasks you prefer.”*

Figure 7.4 shows the factors that can stimulate employees to perform more job crafting behaviors. It appears that especially a concrete stimulus is needed (66.6%) (e.g. free hours to spent on topics of own interest or mapping out crafting steps). First, employees need to be aware of the opportunities of job crafting, after which they can shape and design work activities as they recognize a fit with personal interest.

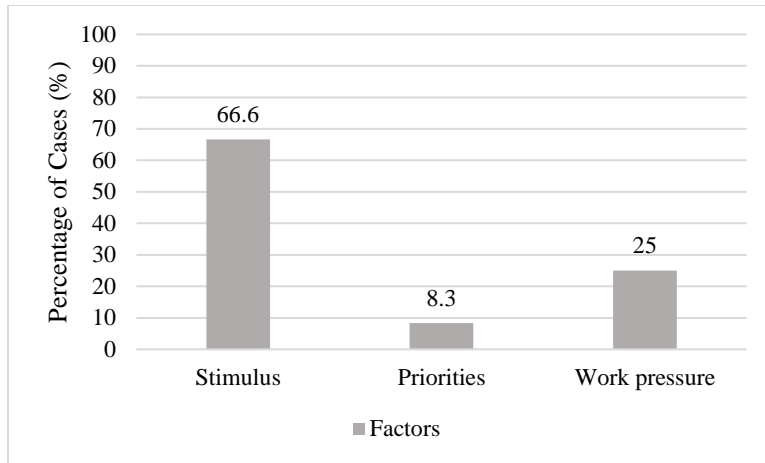


Figure 7.4: Improvement factors job crafting (N=12)

Examples given in the interviews:

- “Very simple to start with, is to give each employee some free time in the Friday afternoon to fill in what s/he likes or would like to develop in.”
- “My advice would be to reserve some time to explore and develop yourself.”
- “I think it is important that managers indicate that this is possible, and thus encourage employees to see what they like and where they would like to work towards.”

The other factors, setting priorities (8.3%) and reduce work pressure (25%), indicated that if there is more free time, there is more space to perform work activities in line with preferences.

### 7.3 Employee Engagement

The results of the quantitative part of this project indicated that employees’ engagement levels are moderately high (M = 3.60, see paragraph 5.1). This is in line with the overall results of the interviews. Figure 7.5 shows the factors that are related to employees’ engagement levels.

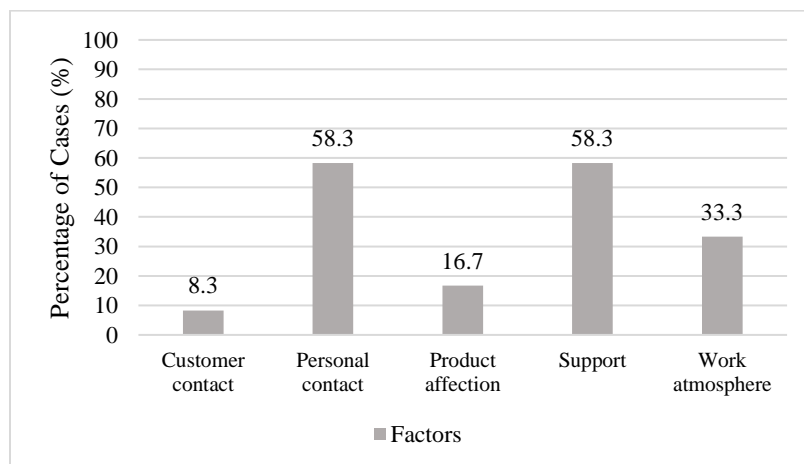


Figure 7.5: Factors employee engagement (N=12)

The figure shows that personal contact (58.3%) and support (58.3%) are the most important topics when it comes to engagement. According to the respondents, personal contact between colleagues, both related to work-topics as well as to non-work related conversations and interests in each-other, contributed to high levels of engagement. Also, the support of colleagues and managers to get things done experienced by respondents contributed to higher feelings of engagement.

- *“When I look at myself and my own role, that is the support I can get and that I can experience the results myself.”*
- *“The open conversation that I can have, so if I run into something, that I can spar about it. That personal contact is really a core piece for me.”*
- *“For me, the team is important and also to have peers where I can learn from and have personal contact with.”*

Figure 7.6 shows the factors that ASML can use to increase levels of engagement. Overall, hardly any aspects were identified that could contribute to a further increase in engagement levels. It was indicated that, for many respondents, the desired level of engagement had been reached. However, according to some respondents, expressing appreciation (25%) could contribute to increasing engagement levels.

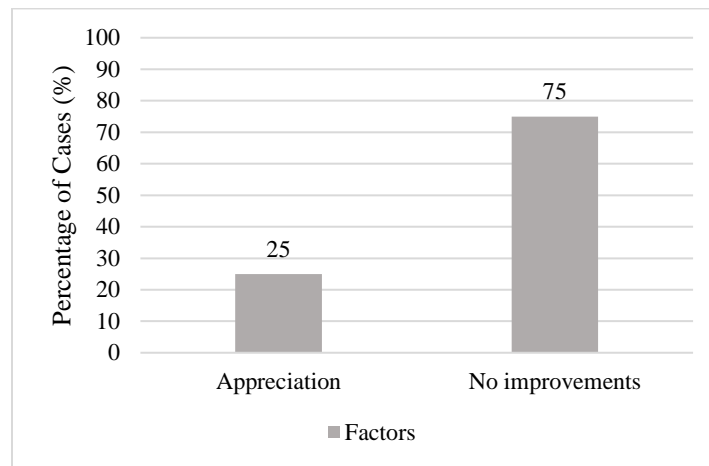


Figure 7.6: Improvement factors employee engagement (N=12)

Specific quotes were:

- *“Give more constructive or positive feedback, or a compliment or something.”*
- *“I find it difficult to say what we should do to increase engagement. We are already around 90% engaged based on we@ASML.”*
- *“I think we are doing pretty well and I could not immediately mention something that if you change that, the engagement level would increase.”*

### 7.4 Affective Commitment

The results of the quantitative part indicated that employees are committed towards ASML as organization ( $M = 3.92$ , see paragraph 5.1). The same picture was provided during the interviews. Figure 7.7 shows the factors that relate to the high levels of commitment.

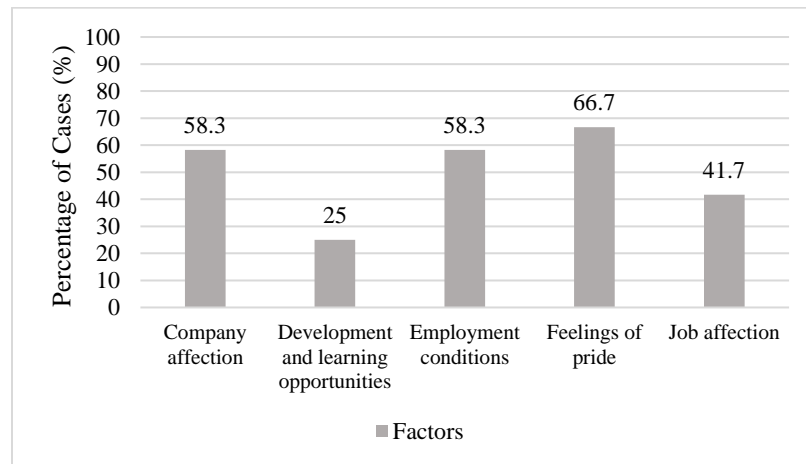


Figure 7.7: Factors affective commitment ( $N=12$ )

Company affection (58.3%), employment conditions (58.3%) and feelings of pride (66.7%) are the most important factors contributing to employee's affective commitment. Company affection relates mainly to the affection respondents had with the organization as whole and the affection with the products and industry in which the organization is located. The favorable (secondary) employment conditions (e.g. payment for overtime and abroad bonuses) contributed significantly to the commitment. In addition, 66.7% stated to experience feelings of pride to work for a Dutch multinational.

- *“I have a very high sense of pride towards the company. I am proud to work for ASML.”*
- *“I think it is a fantastic company anyway and I actually feel a kind of Dutch pride for ASML.”*
- *“That is economic anyway, but in the meantime, I have also built up a relationship with ASML. I think it is a really great company!”*

Figure 7.8 shows the factors that can be used by the organization to improve the employee's level of affective commitment. Overall, 66.4% indicated to have no need for improvements, as levels of commitment are already perceived as sufficient. To improve employees' affective commitment towards the organization, more attention could be given to team-building activities (8.3%), increased voice for employees (16.6 %) and focus on a better work-life balance (8.3%), especially for the working from home policy.

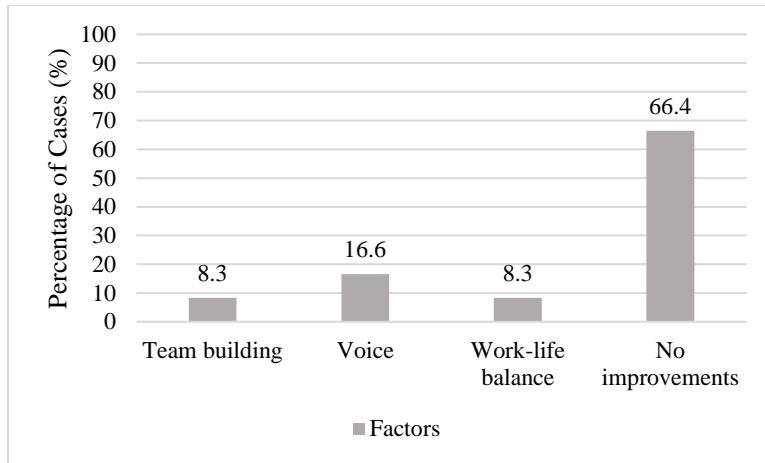


Figure 7.8: Improvement factors affective commitment (N=12)

Examples given in the interviews:

- “My commitment is already in the upper regions. So, I find it difficult to indicate what extra could be possible.”
- “Now and then I miss the voice in vision formation or in setting priorities. I cannot come up with anything else.”
- “No not really, that is a personal aspect.”

### 7.5 Turnover Intention

The voluntary intention to leave the organization is relatively low, according to the survey results. The respondents of the interviews outlined the same and had no intention to leave ASML voluntarily. Figure 7.9 shows the factors contributing to the turnover intention.

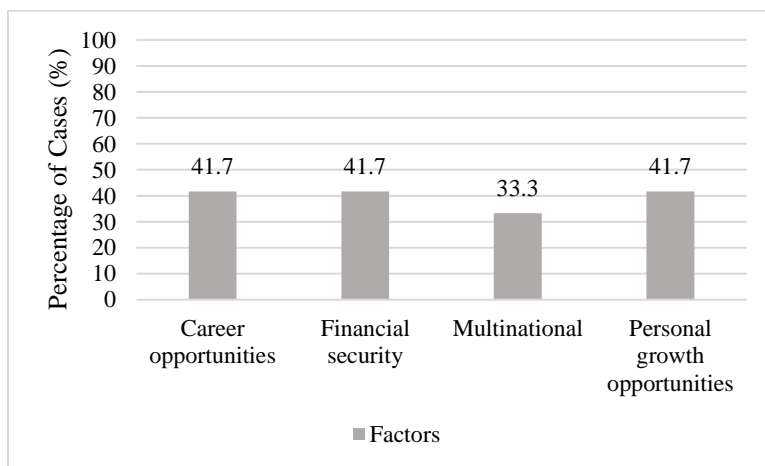


Figure 7.9: Factors turnover intention (N=12)

The factors career opportunities (41.7%), financial security (41.7%) and personal growth opportunities (41.7%) are the most important and prominent topics when it comes to turnover intention. According to respondents, ASML has a lot to offer when it comes to career opportunities. It is possible to switch to various other functions within different segments, both horizontally as well as vertically within the organization (see ‘Personal growth opportunities’). Financial security was about the feeling respondents had about their own financial situation and the stability ASML offers in maintaining this security. Finally, the opportunities to grow on personal level (e.g. personal skill-, leadership or management training opportunities) contributed to employees wanting to continue working at ASML.

- *“There are just so many possibilities and that appeals to me. So if I want to go into a marketing- or accountant role, I have the feeling that eventually all of that is possible.”*
- *“I have always been very supported in my personal growth. I am now in a position that I like and where growth is still possible.”*
- *“There is a lot of choice, there is always something possible in other segments. It is easy within ASML; you keep your security, keep your contract and income, keep your workplace and culture is the same.”*

Figure 7.10 shows the factors that could contribute to voluntary departure. It appears that the company size of ASML (58.3%) contributed the most to the choice for a possible departure.

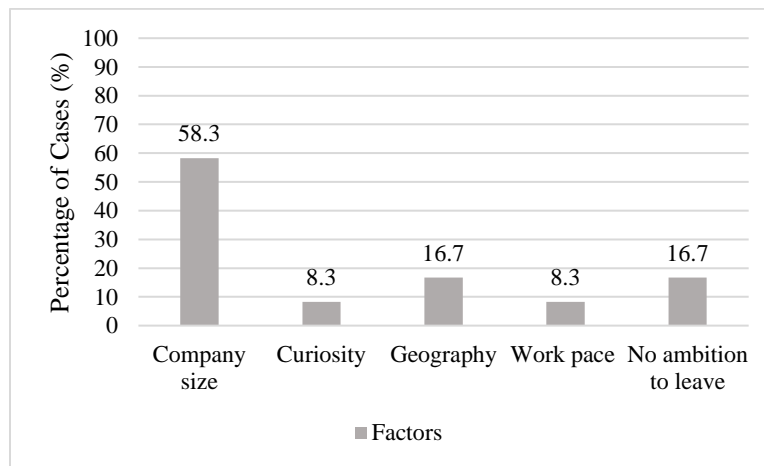


Figure 7.10: Improvement factors turnover intention (N=12)

It was stated that the growth of the organization contributed to feelings of losing one’s contribution to the overall functioning. An individual’s contribution would be more visible in a smaller company. Some respondents found the location of the company (16.7%), along with the hurdles of travel time, a reason to choose an employer closer to home. In addition, the work pace (8.3%) was experienced as high which is why some indicated to prefer a job with a slower pace. Some respondents indicated they had no ambition to leave (16.7%), one of them only wanting to leave out of pure curiosity towards another employer (8.3%).

Specific quotes were:

- *“If you can go to a young and small company where you have a handful of employees and can all make decisions quickly. That could be one reason for me.”*
- *“If I can find exactly the same as ASML in a small company, which may have more a family culture.”*
- *“That has mainly to do with the distance. The distance between my house and ASML is quite long and this travel time just takes a lot of time.”*

### Summary

To conclude, most of the respondents recognized and understood the results of the survey and indicated that these were in line with how they experienced the organization themselves. Only on job crafting, the survey results were not in line with the experiences and view of the respondents; within ASML there are opportunities to exercise job crafting behaviors and employees do perform these behaviors. ASML's organization was mainly described as networked and result-oriented, where there is a great willingness to achieve results together. The extent to which job crafting is done is individual-dependent, but there would be opportunities enough. In general, respondents were positive about their own levels of engagement and commitment and ways to increase these levels have hardly been identified. Furthermore, the turnover intention of employees is low and results showed that only the company size could be a reason to leave. Other reasons to leave depended on the individual circumstances, and not due to characteristics of the organization.



## Chapter 8 - Discussion and Conclusion

In this chapter, first the main findings of the current study are summarized and discussed. Next, theoretical and practical implications of the study are presented, after which some limitations and future research directions are mentioned. Finally, a general conclusion is formulated.

### 8.1 Main Findings

This project was focused on employees' perception of ASML's organizational culture (i.e. the organizational climate) and how this relates to their work-related attitudes. A selection of employees of ASML's CS department participated in a study consisting of a quantitative and a qualitative part. A quantitative survey was followed-up by a series of (qualitative) interviews to get a better understanding of the survey results and to investigate whether and which improvements were possible.

The quantitative survey focused on exploring relationships between dimensions of organizational climate, employee job crafting dimensions, employee engagement, affective commitment and turnover intention. The organizational climate construct was operationalized based on Patterson and colleagues (2005), who distinguished 17 different dimensions. Of these dimensions, only those that could be linked to ASML's core organizational values (i.e. Challenge, Collaborate and Care) were selected to measure organizational climate (i.e. involvement, welfare, formalization, innovation and flexibility, outward focus, reflexivity, clarity of organizational goals, performance feedback and pressure to produce). The construct job crafting was classified into task, cognitive and relational crafting. The work-related outcomes were employees' engagement levels, their affective commitment towards the ASML organization and their turnover intention.

To study *the relationships between organizational climate, job crafting, employee engagement, affective commitment and turnover intention*, data of 124 CS department employees was collected and analyzed. Of the 32 hypotheses, 10 hypotheses were accepted and 22 hypotheses were rejected. The number of significant relations was rather small, as most of the hypotheses regarding the relationships between the organizational climate dimensions and job crafting dimensions were rejected. More specifically, the organizational climate dimensions formalization, outward focus and performance feedback related positively to cognitive crafting (H1). The result on formalization was surprising as it was not in line with findings from literature. According to Hempel, Zhang & Han (2012), formalization of processes related negatively to job crafting as a formalized way of working exercise the control over job duties and activities of employees, and thereby reduces the possibility to perform job crafting behaviors. An explanation for this positive relation could be that (the change to) a formalized way of working (i.e. the obligation to follow rules and procedures) results in employees having another perception of their jobs. By cognitive crafting, employees make changes to their perception about the job to still attach meaning to it, even if the way of working (i.e. in a formalized way) changes. In other words, an increase in formalization does not suit how employees like to do their work (i.e. with few fixed rules and procedures) and by performing cognitive crafting behaviors they will maintain meaningfulness towards their jobs. The result on the outward focus dimension was in line with findings from Singh and Singh (2016), where it was indicated that customer- and market focused organizations create a work environment by which employees craft their jobs as they can adapt to the

changing circumstances. Feedback on performance related positively to cognitive crafting, which corresponded with the results of Kantén (2014) who showed that employees who received feedback, crafted their jobs to make personal adjustments in the right direction based on the given feedback.

Furthermore, the organizational climate dimensions welfare, innovation and flexibility and clarity of organizational goals related positively to relational crafting (H1). The results on the perceived extent to which ASML values and cares about its employees related positively to relational crafting and was in line with findings of Tims & Bakker (2010). Because employees' experience the organization as caring about them, the organization offers room to craft personal relationships as it may be important for employees' well-being. The positive relation between innovation and flexibility and relational crafting found in this study corresponded with Meyers (2020), where results showed that organizations with an innovative and flexible culture offered room to express crafting behaviors in order to stimulate creativity. The positive relation between the clarity of goals and relational crafting was in line with previous studies that showed that employees who craft their jobs were seeking to achieve their work goals (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). None of the climate dimensions related to task crafting (H1).

Contrary to what was expected, no significant relation was found between the organizational climate dimensions involvement, reflexivity and pressure to produce and any of the job crafting dimensions (H1). This is not in line with findings from the literature, where evidence was found that levels of involvement and reflexivity related positively to overall levels of job crafting (Li, Jin, & Chen, 2018; Matsuo, 2019), and high pressures to produce related negatively to overall levels of job crafting (Berg, Dutton, & Wrzesniewski, 2013).

The other hypotheses, regarding the relationships between the dimensions of job crafting and engagement (H2), employee engagement and affective commitment (H3), and engagement and turnover intention (H4), were all accepted. This means that employees who perform job crafting behaviors during their work feel more engaged while performing their jobs, as their work activities are more aligned with their personal needs and interests. In turn, higher levels of engagement result in higher feelings of affective commitment towards the organization as engaged employees add a lot of personal meaning to their connection with their job and the organization. Ultimately, engaged employees may be hesitant to leave as they already have invested a lot in their job and experience high levels of identification with the work they do and the place where they do it. These results are in line with the findings from the literature (e.g. Vogel, Rodell, & Lynch, 2016; Biswas & Bhatnagar, 2013; Altindis, 2011; Mueller & Price, 1990; Dane & Brummel, 2013).

As regards *the hypothesized mediating roles of job crafting, employee engagement and affective commitment in the relationships under study*, 13 mediation effects were found; three with cognitive crafting as mediator, three with relational crafting as mediator, six with engagement as mediator, and finally, one with affective commitment as mediator. Of these effects, one relation was a full mediation effect, nine were partial mediation effects, in two relations the mediator had an inconsistent mediating role, and cognitive crafting had no mediating role between outward focus and engagement. A surprising finding was the full mediation between task crafting and affective commitment, via employee engagement (H6), as the mediation effect was 80% (Kenny & Judd, 2014). This full mediation was noteworthy as different other studies had found a partial mediating effect of employee engagement between crafting behaviors and commitment (e.g. Ogbuanya & Chukwuedo, 2017; Chen, Yen, & Tsai, 2014). Important to mention is that these studies focused on the overall job crafting level, whereas this study found full mediation for task crafting only. This study showed that by aligning work tasks with personal preferences and interests, by

performing task crafting behaviors, it only has a positive influence on personal commitment towards the organization through increased engagement levels. The partial mediating of employee engagement between cognitive- and relational crafting and commitment (H6) was in line with findings from literature (e.g. Ogbuanya & Chukwuedo, 2017; Chen, Yen, & Tsai, 2014).

As this study provided new insights into the relations between organizational climate dimensions and job crafting dimensions, it was remarkable that (i) a perceived formal way of working, (ii) performance feedback, (iii) employees' perceived welfare, (iv) company's perceived focus on innovation and flexibility and (v) employees' perception of the clarity of organizational goals relate to employee's engagement levels via some sort of job crafting behaviors (H5). For all these mediations, a partial mediating effect existed as or the direct- and indirect effects were both significant, or, the mediation effect was < 80% (see paragraph 5.3.1). As already mentioned above, the positive relationship between formalization and cognitive crafting contradicts the findings from Hempel and colleagues (2012). A possible explanation could be that employees change their perception of the job, by performing cognitive crafting behaviors, in order to still attach meaning to it as the way of working is not in line with their preferences (i.e. changes to a way more structured and formalized one). Via the performance of cognitive crafting, employees still can attach meaning to their job, even the way of working had become more formalized, which may result in levels of engagement. The relationship between performance feedback and employees' engagement, via cognitive crafting could be explained by the results of Kanten (2014). These results showed that feedback positively effects the job crafting behaviors of employees as by getting feedback, employees know how to make adjustments. Employees' adjustments in the right direction (i.e. towards a more satisfying outcome) could result in a changing perception of the job (i.e. more positive and meaningful attitude towards the job), which in turn may result in higher engagement levels. The mediating role of relational crafting between welfare and employee engagement could be explained by results of Tims and Bakker (2010). As the organization is perceived as caring about employees' well-being, employees are given the space to craft their personal working relations in order to work together with nice colleagues and to have good partnership. These favorable working relations may result in higher feelings of engagement. The results showed that the relation between innovation and flexibility and employee engagement was mediated by relational crafting. An innovative organization is focused on and value creativity and flexibility. If employees craft their jobs to collaborate with colleagues who may stimulate their creativity and are flexible in working together, this innovative and flexible personal working environment results in higher engagement levels of the employee. The relationship between clarity of organizational goals and engagement via relational crafting was in line with findings of Demerouti and colleagues (2001). When organizational goals are perceived as clear by employees, employees can make their own choices with whom and to what extent to work together with colleagues, to ensure that goals can be achieved. Crafting the working relationships according to personal preferences results, in turn, in higher engagement.

The mediations between task-, cognitive- and relational crafting and turnover intention via engagement (H7) was in line with findings from the literature that indicated that the relation between job crafting and the turnover intention was partially mediated by employee engagement (Zhang & Li, 2020). Finally, the partial mediation between employees' engagement level and the turnover intention via affective commitment (H8) was in line with the findings from Albrecht and Andreetta (2011). Contrary to expectations, no mediating role of cognitive crafting in the relationship between outward focus and employee engagement was found.

The qualitative part of this study focused on *exploring the relationships of organizational climate dimensions on work-related attitudes in more detail and finding ways to optimize the effect of climate dimensions on employee work-related attitudes*. Twelve participants were willing to participate in an in-depth interview to dive into the results of the quantitative part. The four segments of the CS department were equally represented as per segment three employees were interviewed. However, the manager-engineer ratio was not evenly distributed under the respondents, as managers were (slightly) overrepresented. This might have influenced the results of the organizational climate perceptions, as managers may view the culture differently than engineers do due to differences between the two roles in information- and communication streams. Managers indicated during the interviews that they experience high levels of involvement due to the information they receive, while engineers indicated to miss this involvement sometimes due to little information that is (allowed to be) exchanged to them. This finding can be substantiated with results of Gould-Williams (2007) who found that managers' perceptions of organizational climate tends to be more positive than those of non-managers as managers have more influence on, for example work processes (Gould-Williams, 2007). Overall, the results of the quantitative and qualitative part of the study were in line with each other, in particular as regards the four low scoring organizational climate dimensions (i.e. involvement, formalization, reflexivity and performance feedback), and the high levels of employee engagement, affective commitment and turnover intention. Only job crafting was an exception as the results of survey and interviews provided a slightly different picture of the extent to which job crafting behaviors were carried out by CS employees. The results of the quantitative part showed that few job crafting behaviors were performed, in contrast to the opinion of the majority of the interviewees who indicated they did perform job crafting behaviors themselves. The overall insights of the participants on job crafting, engagement, affective commitment and turnover intention were positive, as it was stated that employees experience high feelings of engagement and commitment, and rarely think about leaving ASML. The main reasons for this were the personal contact with colleagues, the supportive work environment, feelings of pride towards ASML, the (secondary) employment conditions and the career- and personal development opportunities within the organization. Beside these positive results, the majority of the respondents felt no need for improving their levels of engagement and commitment. Only the company size contributed to the choice for a possible departure as it was stated that the growth of the organization contributed to feelings of losing one's contribution to the overall functioning.

## 8.2 Theoretical Implications

The current study adds to the literature on antecedents of employee job crafting behavior, and confirms previous findings regarding the consequences of employee job crafting behavior.

The first contribution that this study made to the existing literature is that this study focused on the organizational climate. Most of the studies that have been conducted in this field are focused on organizational culture. Organizational culture refers to all the norms, values and beliefs within an organization, where organizational climate reflects to employee's perception of the organizational culture and is about the shared psychological meanings of the employees (MacDavitt , Chou, & Stone, 2007). According to Svyantek and Bott (2004), organizational climate is behaviorally oriented in that specific climates may be found in the workplace (e.g. a safe-, creative-, or innovative climate). It represents employees' perceptions of policies, practices and procedures that create patterns of interactions and behaviors that support a particular work environment (Svyantek & Bott, 2004). By measuring different

dimensions of organizational climate, insights were obtained into how the organization is experienced instead of how, for example, management wants to propagate the organizational culture. Whereas organizational culture is more a top-down construct, studying organizational climate will create an image of bottom-up employee experiences. This study offered renewed and broader insights into the field of organizational climate as the study focused on the behavioral consequences (e.g. job crafting) that arise from the individual perceptions of the organizational culture. The results of this study contribute to the existing literature given the insights into how the perception of organizational culture influenced specific employee behaviors.

In addition, an important theoretical implication of this study is that this research provides, to my best knowledge, one of the first insights into the interrelationships between organizational climate dimensions and its consequences for employees' attitudes and behaviors. For this study, the dimensions of Patterson and colleagues (2005) were used to map organizational climate. Patterson's dimensions have not been used before to investigate the relationship between organizational climate, job crafting and the outcome variables. The use of Patterson's organizational climate measurement instrument provided renewed and broad insights through the comprehensive and fundamental organizational aspects that could be measured with this instrument. According to previous studies, most organizational climate measures lack theoretical basis (Ashkanasy, Wilderom, & Peterson, 2000), provide little validity information (Patterson, et al., 2005), had little or no confirmatory studies (Rogers, Miles, & Biggs, 1980) or had a small sample size used for development (Patterson, et al., 2005). The OCM provided a validated, theoretically focused (i.e. based on Competing Value model of Quinn & Rohrbaugh, 1983) measure of organizational climate and is applicable in a wide range of settings. By using the climate dimensions of Patterson in this research, relationships could be explored between company (i.e. ASML's) specific climate dimensions and work-related behaviors and attitudes.

Another contribution to the existing literature is that this study links organizational climate dimensions to job crafting. There is little theory and empirical research with regard to the role of organizational features in job crafting processes of employees. The research of Demerouti (2004) showed how some situational predictors (e.g. decision latitude, job autonomy or work pressure) influenced job crafting behaviors, but no studies have been conducted on how structural elements of an organization (i.e. the perception of the organizational culture) contribute to performing job crafting behaviors by employees. By individually testing the relationships between climate dimensions and crafting dimensions, this study provided insights into how structural elements of the organizational culture are perceived and how this subsequently influences the job crafting behaviors of employees. For example and more concretely, the results showed that employees perceived their welfare, the focus of the organization on innovation and flexibility, the clarity of organizational goals and objectives, as structural elements of the organizational culture in such a way that they contributed to expressing job crafting behaviors. These were novel insights that contribute to the existing literature in the field of organizational climate and its consequences on individual job crafting behaviors.

Most research into the perception of the organizational culture and its consequences was focused on health care institutions (e.g. Neal, Griffin, & Hart, 2000; Dawson, Gonzalez-Roma, Davis, & West, 2008; Bahrami, Barati, Ghoroghchian, Montazer-alfaraj, & Ezzatabadi, 2016; Berberoglu, 2018). This is one of the first studies on this topic performed in a high-tech and multinational environment. According to Jakobsen, Worm and Li (2017), the high complex organizational structures, business activities and

changing business conditions that characterize a multinational corporation contribute to different interpretations of the organizational culture and its impact on employees' perceptions (Jakobsen, Worm, & Li, 2017). These characteristics of a multinational corporation also contribute to employees having to collaborate with colleagues who may have other nationalities, different personal norms and values and different perceptions of working together (Kwantes & Boglarsky, 2007). All this may contribute to individuals perceiving the organizational culture differently. By conducting the research within a high-tech and multinational environment, this study contributed to the existing literature by providing new insights into employees' culture perception of multinationals.

Besides new insights, this study confirms that job crafting leads to positive outcomes in terms of employee engagement (e.g. Bakker, 2011; Vogel, Rodell, & Lynch, 2016; Berg, Grant, & Johnson, 2010), organizational commitment (e.g. Biswas & Bhatnagar, 2013; Shekari, 2015; Mercurio, 2014), and the intention to leave (e.g. Christian, Garza, & Slaughter, 2011; Schaufeli & Bakker, 2004; Stolarsk, Pruszczak, & Waleriańczyk, 2020).

Besides the direct effects between the study variables, results of the study confirmed the earlier found (full or partial) mediating role of engagement in the relationship between job crafting and commitment as found in other studies (e.g. Ogbuanya & Chukwuedo, 2017; Baghdadi & Farghaly, 2020; Albrecht & Marty, 2020) as well as the (full or partial) mediating role of affective commitment in the relationship between engagement and the intention to leave (e.g. Galletta & Portoghese, 2011; Juhdi, Pa'wan, & Hamsaram, 2013)

### 8.3 Practical Implications

From the study results, the following practical implications for ASML can be drawn.

This study provides ASML with new insights on how ASML's organizational values (i.e. 3C's), that are introduced as a top-down approach, trickle down into the organization in terms of employees' organizational climate perceptions. The results of this study provide insight into the ways through which the organizational climate dimensions welfare, formalization, innovation & flexibility, clarity of organizational goals and performance feedback relate directly and/or via one of the job crafting dimensions to employees engagement levels, which in turn positively relate to their organizational commitment and negatively to their turnover intention. On welfare, the quantitative results showed a high score. CS employees' perceptions on how ASML as organization cares about them is positive. The dimension formalization will be discussed in more detail in the following paragraph. ASML scored quite good on innovation and flexibility as employees' perceptions on this climate dimension were positive. It is therefore not necessary to make improvements on how new ideas are being accepted in the current culture as well as how changes are being made and implemented as employees' experiences are positive about the way it currently goes. The quantitative results on clarity of organizational goals were quite positive, but some respondents of the interviews indicated unclarities about organizational objectives and goals due to the layered structure of the organization. These ambiguities could be the results of the communication between- and within the different layers of the organization. ASML can improve this dimension in the future by clearer communication between the different layers, and is currently working on this topic of communication. Finally, performance feedback was also one of the low-scoring dimensions in the

quantitative part. ASML could improve this by increasing the number of feedback moments per year and a stronger focus on constructive feedback.

Second, it became clear that there are benefits to be gained and opportunities for improvements in the field of formalization and reflexivity within the CS department. Both as result of the survey as well during the interviews, it became clear that the way of working could be optimized by using existing work procedures and policies more often. It was indicated that employees do not adhere to the prescribed procedures when solving customers issues and problems. The current way of working is focused on solving problem and issues as quickly as possible with focus on the outcome rather than the (existing) procedure. The use of existing policies and procedures could contribute to less information being lost in the process, a clear direction being maintained and less ambiguities arising, which in turn can contribute to a more efficient and faster settlement of issues.

As a third recommendation, ASML could focus more on job crafting. The results of the survey and interviews were not completely in line with each other, but it became clear that respondents of the interviews were positive about opportunities to craft their jobs. For ASML, a bottom-up intervention could be used to stimulate job crafting as it targets individuals to change job characteristics depending on own personal needs and preferences. The Personal Crafting Plan (PCP) developed by Van den Heuvel, Demerouti and Peeters (2012) could be used by ASML to increase awareness among employees regarding ways in which they can adapt their job. This intervention consists of three phases; (1) a job crafting workshop, (2) a weekly crafting logbook, and (3) a reflection meeting. In the job crafting workshop, employees get familiar with the job crafting principles and learn to set a personal crafting plan consisting of actions that participants plan to undertake for a period of 4 weeks. The second phase is focused on reporting the crafting activities of each week in a crafting logbook. During the reflection meeting, with for example a manager, successes, problems and solutions are discussed. Offering this type of intervention could contribute to employees crafting behavior and consequently to them enjoying their work more, experiencing their work as more meaningful and feeling more engaged.

#### 8.4 Limitations and Future Research

Notwithstanding the strengths, this study also has some limitations which are discussed below. Additionally, possible future research topics are discussed.

Within the ASML organization, surveys are regularly sent out among employees to gain new insights and there is a culture where employees are ‘survey-tired’. Prior to launching the survey for this study, it was therefore decided to keep the survey as short as possible to generate a higher response rate. As a result, the research variables are measured with the minimum required number of items and the Organizational Climate Measure (OCM) (Patterson, et al., 2005) is used in a modified and shortened form. These adjustments might have affected the results regarding the relations between organizational climate dimensions and the other study variables. For future research, the original and validated OCM scale could be used.

Next, the COVID-19 situation and intelligent Dutch lockdown resulted in an ASML-wide policy to work from home for all employees. This is considered to have an effect on employee’s personal well-being, motivation, work-life balance and stress-levels. As data was collected in the middle of the lockdown, it is

quite likely that this affected the results of the study. For example, employees miss the personal face-to-face interaction with colleagues, but do not experience financial insecurity. Participants of the survey could have filled-in the survey differently than they would do under the regular working conditions (i.e. working from office).

Third, the results and conclusions of this project may only relate to the specific situation in ASML's Customer Support department. During the project, it became clear that there are major differences between the different departments in terms of work processes and working methods due to the different activities per department. Despite looking at the organization-wide culture, employee perceptions (i.e. climate) could differ per department and therefore create different outcomes. To be able to draw ASML-wide conclusions about how the organizational culture influences work-related attitudes, further research will have to be carried out within several different departments. In a follow-up study, the research model can also be tested in other (technical) companies or industries to test whether conclusions about the relationships between the variables under study can be generalized to other sectors.

Another limitation of this research is the small sample size. With a larger sample size, it would have been possible to test the research model in its entirety (e.g. with structural equation modeling) instead of testing the model in parts (as the multiple mediation analyses increase model complexity and more respondents would be beneficial for the statistical power).

Finally, no conclusions can be drawn regarding causal relationships, as this study had a cross-sectional design. Due to the cross-sectional character of this study, all study variables were assessed at one point in time. In a follow-up study, it is important to measure the predictors and outcomes on different points in time to gain insight into possible cause-and-effect relationships.

## 8.5 Conclusion

Overall, it is concluded that the study partly satisfied the research objectives. The first quantitative part of the study aimed to research the relationships between organizational climate dimensions, job crafting dimensions and the outcome variables engagement, affective commitment and turnover intention. Hypothesized direct relations between the variables are mostly accepted confirm literature. However, the number of significant relations between organizational climate and job crafting was rather small. Furthermore, mediation analyses has been executed to seek out how job crafting dimensions, engagement and commitment affect the relations between organizational climate and work-related attitudes. With this study, a preliminary connection has been made between organizational climate, job crafting and work-related outcomes. As not all results were as expected, and there is still a long way to go to theoretically substantiate the findings between organizational climate and job crafting, further research is recommended. The second qualitative part was focused on the practical understanding of the results of the quantitative part and to search to possible ways to optimize the effect of the organizational culture on work-related attitudes. Overall, the findings showed a positive experience of the organizational culture, as well as positive levels of engagement, affective commitment and turnover intention of ASML's employees. However these positive findings, further research would be advised on the performance of job crafting behaviors within ASML.



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# Appendices

Appendix A - Organizational Chart

Appendix B - Linking ASML's 3C's to Patterson's (2005) Organizational Climate dimensions

Appendix C - Cover letter questionnaire

Appendix D - Questionnaire in Microsoft Forms

Appendix E - Complete correlation matrix

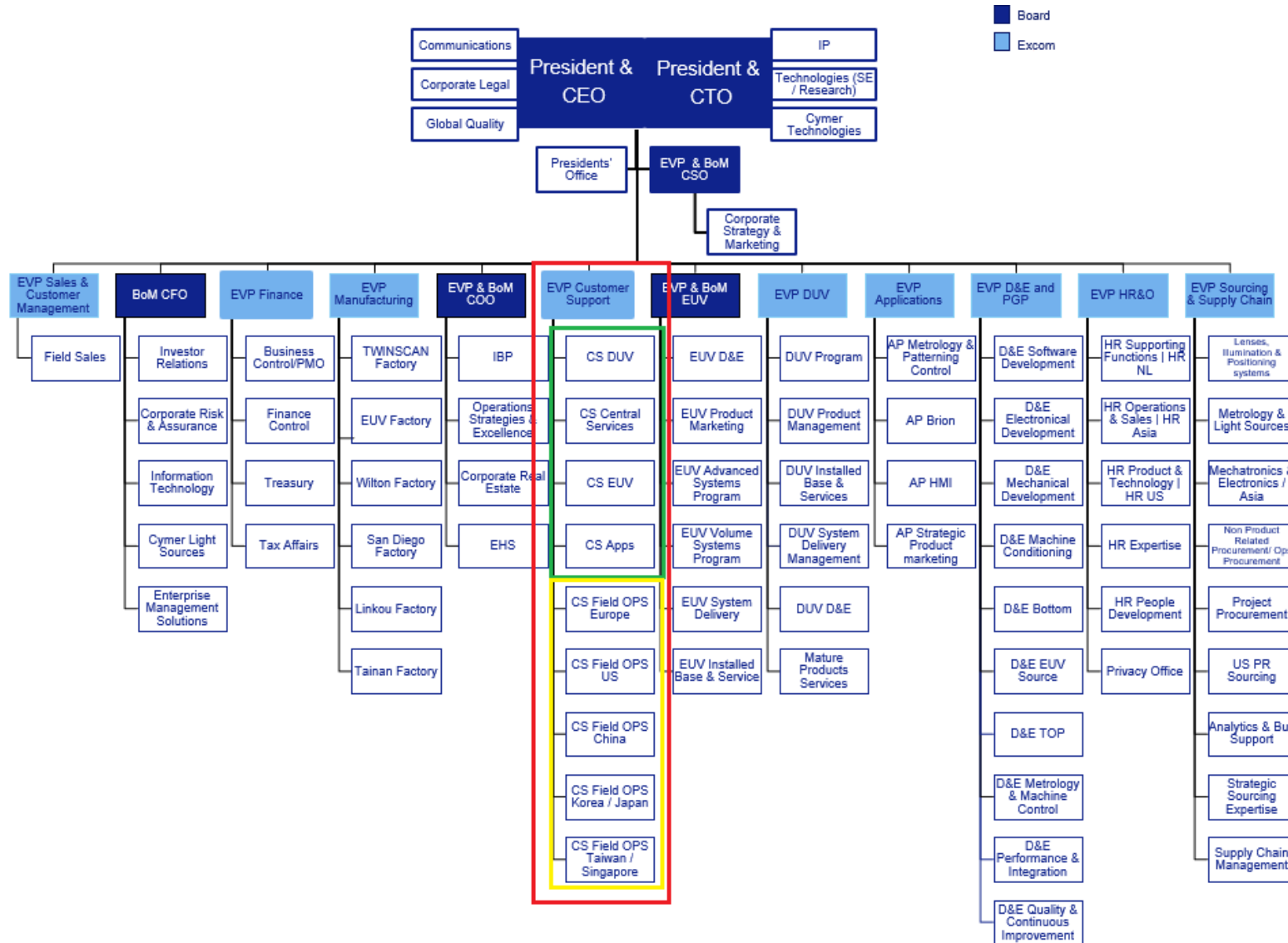
Appendix F - Results multiple regression analyses

Appendix G - In-depth interview script

Appendix H - Analysis in-depth interviews

Appendix I - Description of codes

Appendix A - Organizational Chart



Appendix B – Linking ASML’s 3C’s to Patterson’s (2005) Organizational Climate dimensions

Dimensions with corresponding items	Link with ASML’s values	Challenge, Collaborate or Care?
<b>Autonomy</b> <ul style="list-style-type: none"> <li>• Management let people make their own decisions much of the time</li> <li>• Management trust people to take work-related decisions without getting permission first</li> <li>• People at the top tightly control the work of those below them*</li> <li>• Management keep too tight a reign on the way things are done around here*</li> <li>• It’s important to check things first with the boss before taking a decision*</li> </ul>	No	
<b>Integration</b> <ul style="list-style-type: none"> <li>• People are suspicious of other departments*</li> <li>• There is very little conflict between departments here</li> <li>• People in different departments are prepared to share information</li> <li>• Collaboration between departments is very effective</li> <li>• There is very little respect between some of the departments here*</li> </ul>	No	
<b>Involvement</b> <ul style="list-style-type: none"> <li>• Management involve people when decisions are made that affect them</li> <li>• Changes are made without talking to the people involved in them*</li> <li>• People don’t have any say in decisions which affect their work*</li> <li>• People feel decisions are frequently made over their heads*</li> <li>• Information is widely shared</li> <li>• There are often breakdowns in communication here*</li> </ul>	Yes	Collaborate and Care
<b>Supervisory Support</b> <ul style="list-style-type: none"> <li>• Supervisors here are really good at understanding peoples’ problems</li> <li>• Supervisors show that they have confidence in those they manage</li> <li>• Supervisors here are friendly and easy to approach</li> <li>• Supervisors can be relied upon to give good guidance to people</li> <li>• Supervisors show an understanding of the people who work for them</li> </ul>	No	
<b>Training</b> <ul style="list-style-type: none"> <li>• People are not properly trained when there is a new machine or bit of equipment*</li> <li>• People receive enough training when it comes to using new equipment</li> <li>• The company only gives people the minimum amount of training they need to do their job*</li> <li>• People are strongly encouraged to develop their skills</li> </ul>	No	
<b>Welfare</b> <ul style="list-style-type: none"> <li>• This company pays little attention to the interests of employees*</li> <li>• This company tries to look after its employees</li> <li>• This company cares about its employees</li> <li>• This company tries to be fair in its actions towards employees</li> </ul>	Yes	Care
<b>Formalization</b> <ul style="list-style-type: none"> <li>• It is considered extremely important here to follow the rules</li> <li>• People can ignore formal procedures and rules if it helps get the job done*</li> <li>• Everything has to be done by the book</li> <li>• It’s not necessary to follow procedures to the letter around here*</li> <li>• Nobody gets too upset if people break the rules around here*</li> </ul>	Yes	Challenge
<b>Tradition</b> <ul style="list-style-type: none"> <li>• Senior management like to keep to established, traditional ways of doing things</li> <li>• The way this organization does things has never changed very much</li> <li>• Management are not interested in trying out new ideas</li> <li>• Changes in the way things are done here happen very slowly</li> </ul>	No	
<b>Innovation &amp; Flexibility</b> <ul style="list-style-type: none"> <li>• New ideas are readily accepted here</li> <li>• This company is quick to respond when changes need to be made</li> <li>• Management here are quick to spot the need to do things differently</li> <li>• This organization is very flexible; it can quickly change procedures to meet new conditions and solve problems as they arise</li> </ul>	Yes	Challenge

<ul style="list-style-type: none"> <li>Assistance in developing new ideas is readily available</li> <li>People in this organization are always searching for new ways of looking at problems</li> </ul>		
<b>Outward Focus</b> <ul style="list-style-type: none"> <li>This organization is quite inward looking; it does not concern itself with what is happening in the market place*</li> <li>Ways of improving service to the customer are not given much thought*</li> <li>Customer needs are not considered top priority here*</li> <li>This company is slow to respond to the needs of the customer*</li> <li>This organization is continually looking for new opportunities in the market place</li> </ul>	Yes	Care and Collaborate
<b>Reflexivity</b> <ul style="list-style-type: none"> <li>In this organization, the way people work together is readily changed in order to improve performance</li> <li>The methods used by this organization to get the job done are often discussed</li> <li>There are regular discussions as to whether people in the organization are working effectively together</li> <li>In this organization, objectives are modified in light of changing circumstances</li> <li>In this organization, time is taken to review organizational objectives</li> </ul>	Yes	Collaborate
<b>Clarity of Organizational Goals</b> <ul style="list-style-type: none"> <li>People have a good understanding of what the organization is trying to do</li> <li>The future direction of the company is clearly communicated to everyone</li> <li>People aren't clear about the aims of the company*</li> <li>Everyone who works here is well aware of the long-term plans and direction of this company</li> <li>There is a strong sense of where the company is going</li> </ul>	Yes	Collaborate
<b>Efficiency</b> <ul style="list-style-type: none"> <li>Time and money could be saved if work were better organized*</li> <li>Things could be done much more efficiently, if people stopped to think*</li> <li>Poor scheduling and planning often result in targets not being met*</li> <li>Productivity could be improved if jobs were organized and planned better*</li> </ul>	No	
<b>Effort</b> <ul style="list-style-type: none"> <li>People here always want to perform to the best of their ability</li> <li>People are enthusiastic about their work</li> <li>People here get by with doing as little as possible*</li> <li>People are prepared to make a special effort to do a good job</li> <li>People here don't put more effort into their work than they have to*</li> </ul>	No	
<b>Performance Feedback</b> <ul style="list-style-type: none"> <li>People usually receive feedback on the quality of work they have done</li> <li>People don't have any idea how well they are doing their job*</li> <li>In general, it is hard for someone to measure the quality of their performance*</li> <li>People's performance is measured on a regular basis</li> <li>The way people do their jobs is rarely assessed*</li> </ul>	Yes	Care and Challenge
<b>Pressure to Produce</b> <ul style="list-style-type: none"> <li>People are expected to do too much in a day</li> <li>In general, peoples' workloads are not particularly demanding*</li> <li>Management require people to work extremely hard</li> <li>People here are under pressure to meet targets</li> <li>The pace of work here is pretty relaxed*</li> </ul>	Yes	Care
<b>Quality</b> <ul style="list-style-type: none"> <li>This company is always looking to achieve the highest standards of quality</li> <li>Quality is taken very seriously here</li> <li>People believe the company's success depends on high-quality work</li> <li>This company does not have much of a reputation for top-quality products*</li> </ul>	No	

## Appendix C – Cover letter questionnaire

Dear,

My name is Nienke Brakkee, intern in the HR CS team and I would appreciate your help with my request below!

With the new culture and values launched in ASML, I am conducting research on the current view of culture and values and work related behaviors within CS. In order to obtain relevant data, I would appreciate if you could complete this questionnaire.

Your name/email will not be asked or saved which ensures **complete anonymity**. Data is not traceable to individuals and results will be presented on segment-level.

**Link to questionnaire (only multiple choice questions, ~ 10 min) :** ~ link to Microsoft Forms Questionnaire ~

With my research, I would like to get insights into how the organizational culture contributes to individual work related behaviors and feelings, and what the consequences could be from these behaviors and feelings. This information gives insights on how ASML's organizational culture influences the behaviors of employees, which will help ASML grow and become stronger as an organization!

If you interested in the results, and/or if you are willing to chat about the research more in-depth, I would love to connect!

For questions and/or comments regarding the questionnaire, you can contact me via mail [nienke.brakkee@asml.com](mailto:nienke.brakkee@asml.com)

I appreciate your participation as it provides CS with new insights and helps me with my graduation project.

Thank you!

Nienke

The slide features a blue header with the ASML logo and the title "How are Challenge, Collaborate and Care experienced by You?". The main content is a flow diagram with several elements:

- Top Left:** A photo of Nienke Brakkee with the text "Hi! I'm Nienke, and I am investigating ASML's Organizational Culture!" and "Intern HR CS".
- Top Center:** Text stating "ASML recently introduced **Challenge, Collaborate and Care** to drive growth and continue success in the future" above a blue box with the same text.
- Top Right:** Text asking "But how are these organizational values experienced? Does it affect You and Your Work?" with an icon of a person and a question mark.
- Middle Right:** A cartoon illustration of a meeting with the text "Well, hopefully not in this way!" and "I wonder if we've created a too competitive work climate in the company?".
- Middle Center:** Text stating "From Science we know that organizational culture contributes to many positive outcomes, like **commitment, engagement and work satisfaction**" with icons of a person and a flask.
- Middle Left:** A blue starburst containing the text "Engaged and committed employees are valuable for ASML!".
- Bottom Left:** A blue box with the text "By completing the survey, you provide ASML with insights how organizational culture, work related behaviors, engagement and commitment correlate to each other within ASML...".
- Bottom Center:** Text "...To help ASML grow further in the future and become an even stronger organization! (and help me with my master graduation project! 😊)".
- Bottom Right:** A progress bar with four stages: Awareness, Understanding, Adoption, and Commitment.

At the bottom, it says "If you have any questions and/or comments, don't hesitate to contact me (nienke.brakkee@asml.com)" and "Confidential".

## Appendix D – Questionnaire in Microsoft Forms

### Organizational Culture and the relation with Work Related Behaviors

The questionnaire consists of only multiple choice questions and it will take a maximum of 10 minutes to complete. The questions can be answered on a scale from 1 to 5, where 1 indicates that you ‘strongly disagree’ and 5 means that you ‘strongly agree’ with the statement. The scale can also run from ‘never’ (1) to ‘always’ (5). If your opinion is neutral, choose 3.

In total, this questionnaire consists of 5 pages; the first page contains the general questions and the others relate to ASML’s culture and your work related behaviors and feelings. Your own perception is most important and valuable for this research. Try not to think too long about your answers. It is your opinion, and there is no right or wrong.

Your name/email will not be asked or saved which ensures complete anonymity. Data is not traceable to individuals and results will be presented on segment-level.

#### Page 1/5 General Questions

1. What is your gender?
  - Woman
  - Man
  - Non-binary
  - Prefer not to say
  
2. What is your age?
  - ≤ 30
  - 31 – 40
  - 41 – 50
  - 51 – 60
  - ≥ 61
  
3. What is your highest level of education
  - High school degree
  - Practical degree
  - Bachelor degree
  - Master degree
  - PhD
  
4. How many years of work experience do you have (i.e. total since college)?
  - 0 < 2 years
  - 2 < 5 years
  - 5 < 10 years
  - 10 < 15 years
  - ≥ 15 years

5. For how many years have you been employed by ASML?
  - 0 < 2 years
  - 2 < 5 years
  - 5 < 10 years
  - 10 < 15 years
  - ≥ 15 years
  
6. In which segment do you work?
  - CS DUV
  - CS Central Services
  - CS EUV
  - CS Apps
  
7. Do you work part-time or fulltime?
  - Part-time (up to 24 years)
  - Part-time (between 24 and 38 hours)
  - Fulltime
  
8. Do you have direct reports?
  - Yes
  - No

**Page 2/5**

The following statements are about the organizational wide culture of ASML. It is about your perception of the organizational policies, practices, procedures and subsequent patterns of interactions and behaviors within ASML as a whole. Try to think about the bigger picture of the organization, and not to focus on CS only or your direct environment. Indicate for the following statements to what extent you feel they are applicable within ASML.

9. Please indicate for the following statements to what extent you feel they are applicable within ASML.

	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly agree</b>
ASML is quick to respond when changes need to be made	○	○	○	○	○
It is not necessary to follow procedures to the letter within ASML	○	○	○	○	○
There is a strong sense of where ASML is going	○	○	○	○	○
In general, it is hard for employees to get an impression of the quality of their performance	○	○	○	○	○
Changes within ASML are made by talking to the people involved	○	○	○	○	○
The methods used by ASML to get the job done are often discussed	○	○	○	○	○
ASML is quite inward looking; it does not concern itself with what is happening in the marketplace	○	○	○	○	○
Employees have a say in decisions which affect their work	○	○	○	○	○
Management requires employees to work hard	○	○	○	○	○
It is considered important within ASML to follow the rules	○	○	○	○	○
Employees are aware of the long-term plans and direction of ASML	○	○	○	○	○
ASML tries to look after its employees	○	○	○	○	○
In general, employees' workloads are particularly demanding	○	○	○	○	○

Page 3/5

The following statements are still about the organizational wide culture of ASML. It is about your perception of the organizational policies, practices, procedures and subsequent patterns of interactions and behaviors within ASML as a whole. Try to think about the bigger picture of the organization, and not to focus on CS only or your direct environment. Indicate for the following statements to what extent you feel they are applicable within ASML.

10. Please indicate for the following statements to what extent you feel they are applicable within ASML

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
New ideas are readily accepted within ASML	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employees do have an idea how well they are doing their job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The pace of work within ASML is pretty relaxed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Within ASML, time is taken to review organizational objectives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are often breakdowns in communication within ASML	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASML cares about its employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Customer needs are considered top priority within ASML	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employees can ignore formal procedures and rules if it helps to get the job done	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are regular discussions whether people within ASML are working effectively together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employees are searching for new ways of looking at problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The way employees do their job is often assessed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASML tries to be fair in its actions towards employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employees have a good understanding of ASML's business priorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASML is fast to respond to the needs of the customer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 4/5

The following statements are about your behaviors and feelings towards your job. Indicate for the following statements how often you show these behaviors and feelings. Please be aware the scale runs from 'never' (1) to 'always' (5).

11. Please indicate for the following statements how often you show these behaviors and feelings at your work

	Never	Sometimes	Regularly	Often	Always
I introduce new approaches to improve my work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am fully focused when I am working	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I make an effort to get to know people well at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think about how my job gives my life purpose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I change the scope or types of tasks that I complete at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At my work, I feel energetic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I introduce new work tasks that I think better suit my skills or interests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I organize or attend work related social functions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am enthusiastic about my job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I remind myself of the importance of my work for the broader society	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I organize special events in the workplace (e.g. celebrating a co-worker's birthday)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think about the ways in which my work positively impacts my life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



**Page 5/5**

The following statements are about your feelings towards ASML as organization. Indicate for the following statements to what extent these feelings apply to you. Please be aware the scale runs again from ‘strongly disagree’ (1) to ‘strongly agree’ (5).

12. Please indicate for the following statements to what extent they apply to you

	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly agree</b>
ASML has a great personal meaning for me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is likely that I will look for a job in another organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am proud to be part of ASML	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I frequently think about leaving ASML	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I really feel a sense of belonging to ASML	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would consider leaving my job within the next year	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thank you for completing the questionnaire!

If you interested in the results, or if you are willing to chat about this in more in-depth, I would love to connect!

For questions and/or comments regarding the questionnaire, you can contact me via mail ([nienke.brakkee@asml.com](mailto:nienke.brakkee@asml.com)).

Appendix E – Complete correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1. Gender	1																											
2. Age	-.15	1																										
3. Educational degree	.23*	-.46**	1																									
4. Years of work experience	-.17	.85**	-.48**	1																								
5. Organizational tenure	-.25**	.67**	-.30**	.73**	1																							
6. Segment	.13	.06	.06	.05	-.08	1																						
7. Part-time or fulltime	-.19*	-.19*	.04	-.25**	-.14	-.11	1																					
8. Direct reports	.07	-.11	.09	-.11	.01	-.02	.05	1																				
9. Involvement	-.08	-.16	.03	-.20*	-.23*	.14	-.10	-.02	1																			
10. Welfare	-.11	-.11	-.10	-.10	-.15	.05	-.10	.07	.54**	1																		
11. Formalization	-.08	.03	-.01	-.01	-.14	-.11	.11	.07	.08	.13	1																	
12. Innovation & Flexibility	.06	-.02	-.11	-.04	-.003	.08	-.04	-.03	.36**	.27**	-.14	1																
13. Outward Focus	.08	.12	-.11	.05	.11	.12	-.07	-.09	.25**	.23**	-.01	.45*	1															
14. Reflexivity	.02	-.01	-.11	.05	.01	.13	-.08	.03	.34**	.42**	.14	.15	.32**	1														
15. Clarity of Organizational Goals	.09	-.21*	.02	-.16	-.09	.16	-.03	.05	.39**	.45**	.10	.31**	.25**	.38**	1													
16. Performance Feedback	-.03	.02	-.04	.05	.02	.11	-.06	.01	.26**	.34**	.20*	.04	.24**	.35**	.44**	1												
17. Pressure to Produce	.08	.08	-.03	.15	.15	.09	.04	-.08	-.17	-.36**	-.10	.06	.04	-.14	-.21*	-.26**	1											
18. Organizational Climate	-.01	-.06	-.10	-.05	-.09	.14	-.06	.01	.65**	.67**	.39**	.51**	.56**	.61**	.66**	.54**	-.01	1										
19. Task Crafting	-.14	-.29**	.12	-.23*	-.20*	.01	.18*	-.18*	.10	-.003	-.02	.03	.03	.09	.04	.11	.08	.09	1									
20. Cognitive Crafting	.10	-.24**	.09	-.17	-.21*	-.03	.002	.04	.17	.17	.23*	.12	.15	.17	.15	.23*	-.09	.29**	.35**	1								
21. Relational Crafting	.06	-.43**	.22*	-.39**	-.26**	-.01	.20*	.08	.14	.22*	.10	.23*	.06	.10	.26**	.14	-.10	.25**	.40**	.46**	1							
22. Job Crafting	.02	-.41**	.18*	-.34**	-.29**	-.01	.16	-.02	.18*	.17	.14	.17	.11	.16	.20*	.21*	-.05	.28**	.73**	.80**	.80**	1						
23. Vigor	-.09	-.08	.10	-.05	-.10	-.09	.13	-.01	.12	.16	.09	.13	.09	.09	.33**	.24**	-.03	.26**	.34**	.26**	.32**	.39**	1					
24. Dedication	-.13	-.21*	.04	-.17	-.15	-.09	.14	.08	.23*	.34**	.08	.24**	.11	.25**	.31**	.26**	-.15	.36**	.33**	.36**	.38**	.46**	.64**	1				
25. Absorption	.09	.21*	.00	.15	.07	-.02	-.05	-.03	-.07	.02	.22*	.13	.24**	.06	.19*	.23*	.13	.26**	.06	.26**	.18	.22*	.45**	.31**	1			
26. Employee Engagement	-.05	-.04	.06	-.04	-.08	-.08	.09	.02	.12	.22*	.16	.21*	.18*	.17	.35**	.30**	-.02	.37**	.31**	.37**	.36**	.45**	.87**	.82**	.72**	1		
27. Affective Commitment	-.11	-.05	.03	.04	.08	.01	.12	.09	.29**	.52**	.17	.24**	.24**	.42**	.37**	.42**	-.18*	.54**	.20*	.40**	.38**	.43**	.46**	.60**	.21*	.53**	1	
28. Turnover Intention	.034	-.15	.18	-.14	-.05	.03	.09	-.18**	-.20*	-.37**	-.03	-.07	-.06	-.25**	-.07	-.21*	.23*	-.22*	.17	-.03	.02	.06	-.26**	-.43**	-.15	-.35**	-.37**	1

Significance \*\* p < .01 level, \* p < .05 level (2-tailed)

## Appendix F – Results multiple regression analyses

## ➤ Involvement (IV) – Job crafting dimensions (DV)

	Task Crafting		Cognitive Crafting		Relational Crafting	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>Control Variable</b>						
Age	-.33	-.34*	-.32	-.33	-.37*	-.38*
Educational degree	-.008	-.004	.002	.01	.01	.01
Years of work experience	.07	.08	.21	.23	-.14	-.13
Organizational tenure	-.03	-.02	-.14	-.12	.10	.11
<b>Independent Variable</b>						
Involvement		.06		.14		.08
<b>Model F (4, 119) 5, 118)</b>	2.78*	2.29	2.32	2.34*	7.01**	5.78**
<b>R<sup>2</sup></b>	.09	.09	.07	.09	.19	.20
<b>ΔR<sup>2</sup></b>	.09	.003	.07	.02	.19	.01

Significance \*\* p &lt; .01 level, \* p &lt; .05 level (2-tailed)

## ➤ Welfare (IV) – Job crafting dimensions (DV)

	Task Crafting		Cognitive Crafting		Relational Crafting	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>Control Variable</b>						
Age	-.33	-.34*	-.32	-.31	-.37*	-.34*
Educational degree	-.01	-.02	.002	.03	.01	.04
Years of work experience	.07	.07	.21	.21	-.14	-.15
Organizational tenure	-.03	-.04	-.14	-.13	.20	.12
<b>Independent Variable</b>						
Welfare		-.04		.13		.19*
<b>Model F (4, 119) (5, 118)</b>	2.78*	2.25	2.32	2.32*	7.01**	6.87**
<b>R<sup>2</sup></b>	.09	.09	.07	.09	.19	.23
<b>ΔR<sup>2</sup></b>	.09	.002	.07	.02	.19	.04

Significance \*\* p &lt; .01 level, \* p &lt; .05 level (2-tailed)

## ➤ Formalization (IV) – Job crafting dimensions (DV)

	Task Crafting		Cognitive Crafting		Relational Crafting	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>Control Variable</b>						
Age	-.33	-.33	-.32	-.37*	-.37*	-.39*
Educational degree	-.01	-.01	.002	.001	.01	.01
Years of work experience	.07	.07	.21	.20	-.14	-.15
Organizational tenure	-.03	-.04	-.14	-.08	.10	.13
<b>Independent Variable</b>						
Formalization		-.02		.23*		.13
<b>Model F (4, 119) (5, 118)</b>	2.78*	2.21	2.32	3.33**	7.01**	6.11**
<b>R<sup>2</sup></b>	.09	.09	.07	.12	.19	.21
<b>ΔR<sup>2</sup></b>	.09	.00	.07	.05	.19	.02

Significance \*\* p &lt; .01 level, \* p &lt; .05 level (2-tailed)

➤ **Innovation & Flexibility (IV) – Job crafting dimensions (DV)**

	<b>Task Crafting</b>		<b>Cognitive Crafting</b>		<b>Relational Crafting</b>	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>Control Variable</b>						
Age	-.33	-.33	-.32	-.32	-.37*	-.37*
Educational degree	-.01	-.003	.002	.02	.01	.04
Years of work experience	.07	.08	.21	.23	.07	-.11
Organizational tenure	-.03	-.04	-.14	-.15	-.03	.08
<b>Independent Variable</b>						
Innovation & Flexibility		.03		.12		.22**
<b>Model F (4, 119) (5, 118)</b>	2.78*	2.23	2.32	2.24	7.01**	7.39**
<b>R<sup>2</sup></b>	.09	.09	.07	.09	.19	.24
<b>ΔR<sup>2</sup></b>	.09	.001	.07	.01	.19	.05

Significance \*\* p < .01 level, \* p < .05 level (2-tailed)

➤ **Outward Focus (IV) – Job crafting dimensions (DV)**

	<b>Task Crafting</b>		<b>Cognitive Crafting</b>		<b>Relational Crafting</b>	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>Control Variable</b>						
Age	-.33	-.35*	-.32	-.37*	-.37*	-.40*
Educational degree	-.01	-.001	.002	.02	.01	.02
Years of work experience	.07	.09	.21	.27	-.14	-.11
Organizational tenure	-.03	-.04	-.14	-.17	.20	.08
<b>Independent Variable</b>						
Outward Focus		.07		.20*		.11
<b>Model F (4, 119) (5, 118)</b>	2.78*	2.35*	2.32	2.95*	7.01**	5.98**
<b>R<sup>2</sup></b>	.09	.09	.07	.11	.19	.20
<b>ΔR<sup>2</sup></b>	.09	.01	.07	.04	.19	.01

Significance \*\* p < .01 level, \* p < .05 level (2-tailed)

➤ **Reflexivity (IV) – Job crafting dimensions (DV)**

	<b>Task Crafting</b>		<b>Cognitive Crafting</b>		<b>Relational Crafting</b>	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>Control Variable</b>						
Age	-.33	-.31	-.32	-.29	-.37*	-.35*
Educational degree	-.01	.003	.002	.02	.01	.02
Years of work experience	.07	.06	.21	.18	-.14	-.16
Organizational tenure	-.03	-.03	-.14	-.14	.10	.10
<b>Independent Variable</b>						
Reflexivity		.09		.16		.11
<b>Model F (4, 119) (5, 118)</b>	2.78*	2.43*	2.32	2.58*	7.01**	5.98**
<b>R<sup>2</sup></b>	.09	.09	.07	.20	.19	.20
<b>ΔR<sup>2</sup></b>	.09	.01	.07	.03	.19	.01

Significance \*\* p < .01 level, \* p < .05 level (2-tailed)

➤ **Clarity of Organizational Goals (IV) – Job crafting dimensions (DV)**

	<b>Task Crafting</b>		<b>Cognitive Crafting</b>		<b>Relational Crafting</b>	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>Control Variable</b>						
Age	-.33	-.34*	-.32	-.29	-.37*	-.32*
Educational degree	-.01	-.01	.002	.01	.01	.03
Years of work experience	.07	.07	.21	.21	-.14	-.14
Organizational tenure	-.03	-.03	-.14	-.15	.10	.08
<b>Independent Variable</b>						
Clarity of Organizational Goals		-.03		.10		.18*
<b>Model F (4, 119) (5, 118)</b>	2.78*	2.22	2.32	2.13	7.01**	6.75**
<b>R<sup>2</sup></b>	.09	.09	.07	.08	.19	.22
<b>ΔR<sup>2</sup></b>	.09	.001	.07	.01	.19	.03

Significance \*\* p < .01 level, \* p < .05 level (2-tailed)

➤ **Performance Feedback (IV) – Job crafting dimensions (DV)**

	<b>Task Crafting</b>		<b>Cognitive Crafting</b>		<b>Relational Crafting</b>	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>Control Variable</b>						
Age	-.33	-.32	-.32	-.30	-.37*	-.36*
Educational degree	-.01	-.01	.002	.10	.01	.01
Years of work experience	.07	.06	.21	.18	-.14	-.16
Organizational tenure	-.03	-.03	-.14	-.14	.10	.10
<b>Independent Variable</b>						
Performance Feedback		.11		.23**		.15
<b>Model F (4, 119) (5, 118)</b>	2.78*	2.53*	2.32	3.35**	7.01**	6.39**
<b>R<sup>2</sup></b>	.09	.10	.07	.12	.19	.21
<b>ΔR<sup>2</sup></b>	.09	.01	.07	.05	.19	.02

Significance \*\* p < .01 level, \* p < .05 level (2-tailed)

➤ **Pressure to Produce (IV) – Job crafting dimensions (DV)**

	<b>Task Crafting</b>		<b>Cognitive Crafting</b>		<b>Relational Crafting</b>	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>Control Variable</b>						
Age	-.33	-.31	-.32	-.33	-.37*	-.38*
Educational degree	-.01	-.01	.002	.01	.01	.01
Years of work experience	.07	.04	.21	.23	-.14	-.13
Organizational tenure	-.03	-.04	-.14	-.14	.10	.10
<b>Independent Variable</b>						
Pressure to Produce		.11		-.07		-.06
<b>Model F (4, 119) (5, 118)</b>	2.78*	2.52*	2.32	1.98	7.01**	5.68**
<b>R<sup>2</sup></b>	.09	.10	.07	.08	.19	.19
<b>ΔR<sup>2</sup></b>	.09	.01	.07	.01	.19	.003

Significance \*\* p < .01 level, \* p < .05 level (2-tailed)

➤ **Task Crafting, Cognitive Crafting and Relational Crafting (IV) – Employee Engagement (DV)**

	<b>Employee Engagement</b>	
	Model 1	Model 2
<b>Control Variable</b>		
Age	.02	.25
Educational degree	.06	.06
Years of work experience	.07	.05
Organizational tenure	-.13	-.12
<b>Independent Variable</b>		
Task Crafting		.18*
Cognitive Crafting		.22*
Relational Crafting		.28**
<b>Model F (4, 119) (7, 116)</b>	.31	5.16**
<b>R<sup>2</sup></b>	.01	.24
<b>ΔR<sup>2</sup></b>	-.01	.23

Significance \*\* p < .01 level, \* p < .05 level (2-tailed)

➤ **Employee Engagement (IV) – Affective Commitment (DV)**

	<b>Affective Commitment</b>	
	Model 1	Model 2
<b>Control Variable</b>		
Age	-.32	-.33*
Educational degree	.03	-.01
Years of work experience	.22	.19
Organizational tenure	.14	.21
<b>Independent Variable</b>		
Employee Engagement		.55**
<b>Model F (4, 119) (5, 118)</b>	1.13	11.67**
<b>R<sup>2</sup></b>	.04	.33
<b>ΔR<sup>2</sup></b>	.04	.29

Significance \*\* p < .01 level, \* p < .05 level (2-tailed)

➤ **Employee Engagement (IV) – Turnover Intention (DV)**

	<b>Turnover Intention</b>	
	Model 1	Model 2
<b>Control Variable</b>		
Age	-.09	-.09
Educational degree	.14	.16
Years of work experience	-.09	-.07
Organizational tenure	.12	.08
<b>Independent Variable</b>		
Employee Engagement		-.36**
<b>Model F (4, 119) (5, 118)</b>	1.43	5.04**
<b>R<sup>2</sup></b>	.05	.18
<b>ΔR<sup>2</sup></b>	.05	.13

Significance \*\* p < .01 level, \* p < .05 level (2-tailed)

## Appendix G – In-depth interview script

1) Can you tell me something about your job and your daily activities?

### Organizational Climate

2) What are the first words that come to your mind when you think about ASML's culture? Overall, how would you describe ASML's culture?

*Interviewer note : think about ASML wide procedures and policies*

a. How does the culture influence your day-to-day job?

*Interviewer note: I measured organizational culture with different dimensions, so different dimensions all together form the organizational culture. The results of my survey show that a few dimensions score very low: Involvement, Formalization, Reflexivity and Performance Feedback*

- *Involvement refers to involvement in the decision making and the freedom to share information (Changes within ASML are made by talking to the people involved, Employees have a say in decisions which affect their work, There are often breakdowns in communication within ASML)*
- *Formalization refers to following formal rules and procedures within the organization (It is considered important within ASML to follow the rules, Employees can ignore formal procedures and rules if it helps to get the job done, It's not necessary to follow procedures to the letter within ASML)*
- *Reflexivity refers to reviewing and reflecting on objectives, strategies and work processes. It refers to a critical reflection that employees can learn from experiences (The methods used by ASML to get the job done are often discussed, There are regular discussions whether people within ASML are working effectively together, Within ASML, time is taken to review organizational objectives)*
- *Performance feedback relates to measuring and feeding back work performance (Employees do have an idea how well they are doing their job, In general, it is hard for employees to get an impression of the quality of their performance, The way employees do their job is often assessed)*

3) Why do these dimensions score so low, do you think?

*Interviewer note: ideas why this is the case*

a. How can these dimensions be improved?

### Job Crafting

4) Are there small things/aspects that you do on your own to make your work easier, more fun and more motivating? Can you give some examples?

*Interviewer note: job crafting can be defined as changing or restructuring of the job without being officially recorded. Think about adjusting tasks (steering to more enjoyable tasks instead of unpleasant tasks), crafting of social environment (more collaboration with nice colleagues instead of difficult partnerships) and, finally, adjusting the perception of the work, which changes the meaning of work (cognitive crafting). The results of the survey show that employees exhibit and perform minimal levels of job crafting behaviors, on all three dimensions.*

- 5) To what extent does the organization stimulate you to perform job crafting behaviors? Why do you think that?

*Interviewer note : no possibility to perform these behaviors or is there no need for/interest in from the employees?, image is created that a lot is possible within ASML to create job crafting behaviors*

- a. What do you need to be able to perform job crafting behaviors?

#### Employee Engagement

- 6) Which aspects of your job/work (situations, aspects) contribute to your feelings of engagement?  
a. How can your level of engagement (still) be increased?

#### Commitment

*Interviewer note: the results of the survey showed that employees are quite committed to ASML. I would like to know/investigate what contributes to this commitment. A distinction can be made between affective commitment (personal affection with the company; really wanting to work there), normative commitment (employees feel kind of obligation to continue working; organizational goals) and finally, continuance commitment (own economics are most important)*

- 7) What contributes to your commitment to ASML?  
a. How can your level of commitment (still) be increased?

#### Turnover Intention

*Interviewer note: the results of the survey showed that the relation between commitment and turnover intention is relatively low, meaning that there may be other reasons that contribute to the low turnover intention, besides being committed.*

- 8) Which aspects make you want to keep working at ASML?  
a. Which aspects would make you consider applying for a job at another company?



Appendix H – Analysis in-depth interviews

~ Confidential data ~

Appendix I – Description of codes

<i>Code Name</i>	<i>Description</i>
<b>Affinity</b>	The personal liking for a certain type of task to perform
<b>Appreciation</b>	The recognition of the good qualities of employees' work
<b>Bottom-up</b>	The flow of information and decisions from the lower levels of the organization to the higher
<b>Career opportunities</b>	The possibilities of having multiple careers opportunities within the organization (i.e. horizontal movements)
<b>Communicative</b>	The character of the organization that characterizes the communication within the organization
<b>Company affection</b>	The affection with the company as a whole
<b>Company size</b>	The characteristic of the company of employing many employees
<b>Consensus-based</b>	The decision making approach of reaching an acceptable resolution that can be supported even it is not the favorite of each individual
<b>Curiosity</b>	Inquisitive interest in working by another employer
<b>Customer contact</b>	The direct contact between employees and customers
<b>Development and learning opportunities</b>	The opportunities of trainings and learnings within the organization
<b>Employment conditions</b>	The (secondary) employment conditions
<b>Feelings of pride</b>	The feelings of pride to work for- and be part of the company
<b>Financial security</b>	The peace of mind felt by employees when not being worried about money
<b>Geography</b>	The area where the company operates
<b>Job affection</b>	The affection with one's job and work activities
<b>Multinational</b>	The characteristic of the company of being in multiple countries
<b>Networked organization</b>	The characteristic of the company in which employees are connected together by informal networks rather than a formal organizational structures
<b>Opportunities</b>	The opportunities within one's job to perform job crafting behaviors
<b>Personal contact</b>	The personal contact between employees focused on both related to work-topics as well as to non-work related conversations and interests in each-other
<b>Personal growth opportunities</b>	The opportunities of employees to grow on personal and professional level (i.e. vertical movements)
<b>Priorities</b>	A particular job activity that is regarded as more important than others
<b>Product affection</b>	The affection for the product the company makes
<b>Result oriented</b>	The characteristic of the organization to focus on the outcome rather than the process used to deliver the product or service
<b>Responsibility</b>	The responsibility for enabling job crafting behaviors
<b>Silo thinking</b>	The reluctance of sharing information with employees of different departments or segments in the organization
<b>Stimulus</b>	Thing or event that evokes people to perform job crafting behaviors
<b>Support</b>	The support that employees experience from others to take initiatives and get things done
<b>Supportive</b>	The character of the organization that is characterized by providing support to all employees
<b>Team building</b>	Activities or events designed to increase motivation and promote cooperation with the aim of effective cooperation within a team
<b>Top-down</b>	The flow of information and decisions from higher levels of the organization to the lower
<b>Voice</b>	A particular opinion or attitude expressed by employees
<b>Work atmosphere</b>	The atmosphere perceived in the workplace by employees
<b>Work-life balance</b>	The division between one's time and focus between working and private
<b>Work-pace</b>	The speed at which work happens or is done
<b>Work pressure</b>	The pressure employees experience at work

