

Leadership impact on employees decision to quit their job in the automotive industry during the COVID-19 crisis

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ABSTRACT: This research paper is an analysis, based on a survey in the automotive industry during the first year of the Corona crisis in 2020, to prove the hypothesis: Leadership is the main reason why employees in the automotive industry quit their jobs during the Corona crisis. The purpose of the article is, first, a literature review supporting the grounded theory and, second, a detailed SPSS-analysis of a survey about the reasons why employees from the automotive industry left the company during the Corona crisis. The hypothesis is supported – Leadership is the main reason why employees from the automotive industry quit their job during the Corona crisis in 2020. A possible application of the results can be a “crisis fluctuation retention strategy”, based on leadership.

Keywords: COVID-19, Crisis, Leadership, Quit the job, Automotive Industry

I. INTRODUCTION

What are the reasons employees quit their job? This question is of course particularly important for the employee who leaves the company, but it should be just as important for the manager and leader to know these reasons ... which is all the more important in a crisis!

The enormous responsibility of leaders in the Corona crisis brings up another theory, which is the hypothesis for this research paper: “Leadership is the main reason why employees in the automotive industry quit their jobs during the Corona crisis.” The European Automobile Manufacturer Association representing Europe's car, van, truck and bus manufacturers works with a variety of institutional, non-governmental, research and civil society partners as well as with a number of industry associations to ensure the economic environmental and social sustainability of the automobile industry.

An interactive map shows the employment impact of the Corona crisis on the European auto industry with at least 1.4 MIO Europeans working in the automotive manufacturing being affected by factory shutdowns. This is by far the most comprehensive EU-wide statistical overview currently available, combining all known information and available sources applying to those directly employed by car, truck, van, and bus manufacturers [1].

The automotive industry already suffered before the Corona crisis where a trend change was recognized. In 2017 and in 2019 the global motor vehicle sales fell by four percent, representing the second consecutive year of declining demand. With that downward trend and the big impact of the Corona crisis on 1.4 MIO employees in the automotive market only in Europe, there is the need to develop appropriate countermeasures to keep important key players and key talents in the company. Otherwise it will be very difficult or even impossible for automotive companies to come back to pre-crisis levels [2].

II. RELATED LITERATURE AND PRECONDITION

As a basis for this survey, the author proved in a previous research a significant connection between leadership and employee's behavior in the automotive industry in the Corona crisis [3]. That research paper includes an analysis of different behaviors of employees in the automotive industry during the Corona crisis [4] connected to leadership, with the result in Table 1. This overview gives a better understanding of people's behavior and consequences in the Corona crisis (on the left side of Table 1) and the reference to that behaviors with state of the art leadership methods (on the right side of Table 1):

Table 1: Influence of leadership on employee's behavior in the Corona crisis

Employee's behavior	Leadership research paper
Communication	de Vries, Bakker-Pieper and Oostenveld, 2009 [5] Ebner, 2020 [6] Harrison and Mühlberg, 2014 [7]
Social imagination and decision making	de Vries, Bakker-Pieper and Oostenveld, 2009 [5] Drucker, 1967 [8] Ebner, 2020 [6] Harrison and Mühlberg, 2014 [7] Kayode, Mojeed and Fatai, 2014 [9]
Social habits	Grant and Hoffman, 2011 [10] Kotter, 1997 [11]
Adaptation strategy	Blickhan, 2015 [12] Ebner, 2020 [6] Grant and Hoffman, 2011 [10] Kotter, 1997 [11]
Coping strategy	Blickhan, 2015 [12] Ebner, 2020 [6] Fook and Sidhu, 2010 [13]
Virtual work	Ebner, 2020 [6] Thomas, 2014 [14] Harrison and Mühlberg, 2014 [7]
Fairness	Blickhan, 2015 [12] Ebner, 2020 [6] Khaola and Oni, 2020 [15]

Source: authors research [3]

Table 1 shows a clear connection between leadership and employees' behavior in the Corona crisis. With the results from his previous paper in Table 1, the author goes one step further and formulates the hypothesis for this research: Leadership is the main reason why employee's in the automotive industry quit their job during the Corona crisis in 2020.

III. DEVELOPMENT OF THE SURVEY

The aim of this chapter is to provide a detailed overview of the entire research design. The definition and rationale of the process, the description of the object of inquiry and the survey instruments. Operationalization as well as the assessment and analysis procedures are all discussed in greater depth in this section. The theories are "translated" into the questionnaire's questions and response categories to ensure that the written sample also tests what constitutes the investigation's topic.

3.1. Objective of the investigation and hypothesis

This study aims to show the enormous influence of leadership in a crisis and will research the hypothesis: Leadership is the main reason why employees in the automotive industry quit their jobs during the Corona crisis.

The objective of the survey is to find out why employees in the automotive industry quit their job during the Corona crisis, compare the results and declare the hypothesis true or false. Therefore, a quantitative survey was developed with a clear identification of the survey's topic and goal in advance. The subject of the survey was defined as precisely as possible in terms of subject matter, time, and space.

3.2. Definition of the target group in the population

The company where the survey was carried out is one of the top 5 in the automotive supply industry related to worldwide sales [16]. The consultation is done for all employees who quit their job in the first year of the Corona pandemic (time frame from January to December 2020). The department in which the survey was carried out consists of 1,745 employees who are globally positioned in 18 location worldwide and, thus, are representative of the automotive industry.

3.3. Type of consolidation

The way in which employees were asked about the reason for their termination was decisive, since on the one hand it is very personal data and on the other hand the real reasons can be very diverse. For this reason, an online survey was not carried out. A written survey is also problematic due to the return of the completed questionnaires, as this creates effort and expense for the respondent. The solution for this issue was a "personal conversation about leaving the company with the direct superior of the employee who left the company". The supervisor explained the background of the survey and stated the importance of correct feedback. He was

trained before the survey to make clear that the employee understood the question and gave a clear, unambiguous answer.

3.4. Type of question

The survey is designed with precise closed questions of both disjoint (not overlapping) and exhaustive (all-encompassing, i.e. not leaving out any possible answers) nature to have the advantage that it can be unequivocally evaluated using the given answer categories. In addition to the main question, several so-called “information questions” were asked (also as closed questions), to have a better understanding of the respondent employee. With that answer there is additional information like name, gender, in which location the employee was working, the name of the supervisor who conducted the interview and the month of leaving. A detailed overview of the survey design is in the Table 2.

Table 2: Survey development - questionnaire

Question	Answer possibility	Explanation
Name of employee	First name Family name	open question, to answer with full name
Gender of employee	Female Male Inter	closed question, only one answer
Name of the supervisor	First name Family name	open question, to answer with full name
Area of workplace of the employee who leave the company	EU Asia NAFTA	closed question, only one answer
What is the reason For leaving the company	money no personal development management parental/sabbatical personal reason other reason	This is the main question designed as closed question. The supervisor explained the question in detail before with only one answer accepted. The detailed description to each question is below.
Date of leaving	Jan.2020 – Dec.2020	closed question, one answer

Source: author’s survey design

It is essential for the result, that the employee give a clear, unambiguous answer to be able to perform an analysis with reliable and proved data. To make sure of that, the supervisor did the questionnaire together with the employee and explained the question and the answer possibilities before the survey in detail. After this coordination with the employee, the supervisor was responsible to fill the answers into a list, accessible and visible for all supervisors of that department. For validation, the communication manager from that department with 1,740 employees did the final check. Additionally there were sum checks from a software, to make sure the data are reliable e.g. sum (reason to leave) = 1 means that only one reason answered, which is correct and will be accepted by the system. With that triple check (supervisor, communication manager and software support) the reliability and accuracy of the feedback could be secured.

Below is the description of each answer possibility to the question: What is the reason for leaving the company? This is the same explanation that the supervisor received to explain it to the employee before the survey:

3.4.1 Money

Money is named very often as the reason why employees leave the company. The supervisor is responsible for making this clear and understandable. If money is given as the reason, the employee leaves the company because he thinks the compensation is not enough.

3.4.2 No personal development

There are many studies which prove the leadership responsibility “personal development of the employee” as the most important motivation factor. Therefore this is why this study places particular emphasis on this question. This answer is not accepted if e.g. the employee does not want to stay in the automotive industry anymore and change to another industry or e.g. the employee is starting an own business – here the answer would be personal reason. This answer needs to be used, if the employee is in general willing to stay in the company, but sees no personal development for his future in this company. The personal development is part of the responsibility of leadership.

3.4.3 Management

This answer is filled in when the working relationship between supervisor and employee is unsatisfactory. It could be because of personal behavior of the supervisor or reason of management strategy and behavior of the company.

3.4.4 Maternity/Parental Sabbatical/Retirement

This answer is very clear and is used when the employee leaves the company for a specific, agreed period of time and then returns – typical examples are parental leave, maternity leave, or a sabbatical. The employee who takes this opportunity will not quit the job, but come back after an agreed period of time.

3.4.5 Personal reason

The “personal reason” for leaving the company could be, if the employee changes the industry (which is one of the reasons that can be confused with “personal development”). Another reason to choose that answer could be if the employee starts his own company or moves to another town with his family. Very often used and common in Asia is the personal reason if the employee moves to his hometown to care for his elderly parents – in general, it is about the fact that the purpose of the employment contract can no longer be achieved in the long term due to his or her personal characteristics and abilities or their lack of existence.

2.3.6 Other reason

“Other reason” can be used for the employees in case they do not want to give the real answer. The manager’s task is to clearly document the reason for the termination and to use “other reason” only in absolutely exceptional cases.

To conclude this chapter a note about the consolidation of the survey is important, because at first glance it does not look to get the real reason why the employee is leaving. That is exactly the background why the manager is responsible for conducting the survey. The supervisor has known the employee for a long time and can. Therefore, also help in determining the reasons or can even guess them already from the employee’s behavior.

3.5. Population and sample

The population includes all persons eligible for the investigation and applies to all potentially investigable units or elements that have a common characteristic (or a common combination of characteristics). When defining the population, it must be decided whether a full or partial survey is to be carried out. In the case of a full survey, all relevant people are interviewed, while in a partial survey, only some of the relevant people are interviewed. The informative value of full surveys is higher because they are described as representative, so the decision of the survey in this publication was made according to a full survey with all 98 people (n=98) who quit their job in a globally acting department with 1,745 employees worldwide. This means 100% of the employees who quit in the specified period January - December 2020 - were asked to tell their reason why they quit to the supervisor, who documented the data together with the employee.

IV. ANALYSIS OF THE SURVEY, DATA HANDLING AND STATISTICS WITH SPSS

The Data is the new raw material of the 21st century. Data are increasingly forming the basis for decisions and options for action at all levels of the automotive industry. Correct handling of this valuable resource is correspondingly important. Only in this way can data serve not only as statistically valid, but also as a good and legal basis for decision-making and action. For all analyses in this chapter are the following basis data valid:

- 1,745 employees working in the analyzed R&D department
- 1,368 males and 377 females
- 18 different locations acting globally divided into 3 economic areas – Asia, EU, NAFTA
- 98 employees quit in the first Corona year 2020 (Jan-Dec 2020)
- 100% of the employees who left, completed the survey
- Only 3 took the answer “other reason” (excuse not to tell the real reason)
- 100% of the data in the survey is valid (supported by supervisors who filled in the data)

This section shows a descriptive analysis to gain a first overview of the data set as well as to describe the central tendency of the samples. In Table 3 all reasons why employees quit their job are listed from the survey with a simple evaluation of frequency and percentage in the corresponding columns.

Table 3: Reason employee quit the job during the Corona crisis

Reason for leave	Frequency	Percent	Cumulative
Parental/Sabbatical leave	29	29,6	29,6
Money	25	25,5	55,1
No personal development	20	20,4	75,5
Personal reason	13	13,3	88,8
Management	8	8,2	96,9
Other reason	3	3,1	100,0

Source: author's analysis (calculated by SPSS)

The output with frequency and percentage is arranged in ascending order, to see at first glance the top three reasons “why employees in the automotive industry quit their job during the Corona pandemic:

In the company where the survey was done, it is the strategy of the management to follow the research of Drucker [8], that the development of the employee is in the responsibility of leadership. Every leader is in charge of a development plan for his employees and review in a personal face to face appraisal 3 times a year – the employee starting appraisal, the mid-year review and at the closing appraisal. The feedback as well as the result needs to be documented with the help of a software tool.

In an interview the head of the department of the survey confirmed the importance of leadership to focus on the development of the employee, even more in a crisis. For this reason, the author summarizes “personal development” and “management” under the term “leadership” and repeated the analysis with the updated data.

In order to underpin the company's strategy, a chapter of Drucker's "The Effective Executive" [8] is referenced in the following paragraph. He dedicated a chapter about the most important question every leader should ask himself: What can I contribute? One of the 4 essential contributions of successful human relations in leadership is “deployment of others”. The executive who focuses on contribution also stimulates others to develop themselves, whether they are subordinates, colleagues, or superiors. He sets standards which are not personal but grounded in the requirements of the task. We know ... people in general and knowledge workers in particular, grow according to the demands they make on themselves [8].

Below is the updated Table 4 and the resulting new order of the top three reasons why employees from the automotive industry quit their jobs in the Corona crisis.

Table 4: Leadership is a significant reason why employees quit the job

Reason for leave	Frequency	Percent	Cumulative
Parental/Sabbatical leave	29	29,6	29,6
Leadership	28	28,6	58,2
Money	25	25,5	83,7
personal	13	13,3	96,9
Other reason	3	3,1	100

Source: author's analysis (calculated by SPSS)

The output with frequency and percentage is arranged in ascending order to visualize the top three reasons “why employees in the automotive industry quit their job during the Corona pandemic:

Parental/Sabbatical leave 30 %
 Leadership 29 %
 Money 26 %

Remark: Only these top three reasons correspond to 85 % of the employees who quit.

With the side condition that parental leave and sabbatical are not genuine leaves (as employees will return after the agreed period of time) the hypothesis is supported: Leadership is the main reason why employees in the automotive industry quit their job in the Corona crisis.

V. ADDITIONAL ANALYSIS

During this research of more than 1.5 years with planning the survey and data handling, there are also other interesting statistics which are not a main part of this research paper. With regard to science and the

compulsory research activity in a certain area, the existing data are additionally evaluated in this work apart from the hypothesis.

5.1 The impact of gender on the decision to quit

To see the influence of the gender a descriptive analysis with crosstabs in SPSS with the reason to quit, compared to gender was done in this section. In Table 5 all reasons why employees quit the job from the survey are listed with an evaluation of frequency in the corresponding columns, listed with the area's female and male and a total sum on the right side of the table.

Table 5: The impact of gender for the decision to quit

GENDER	money	leadership	personal	parental/ sabbatical	other reason	total
female	8	2	3	21	1	35
male	17	26	10	8	2	63

Source: author's analysis (calculated by SPSS)

For a better visualization, a crosstab bar chart with the "reason to quit" vs. "gender" on the horizontal axis and the "employee" count with the frequency on the vertical axis is displayed below.

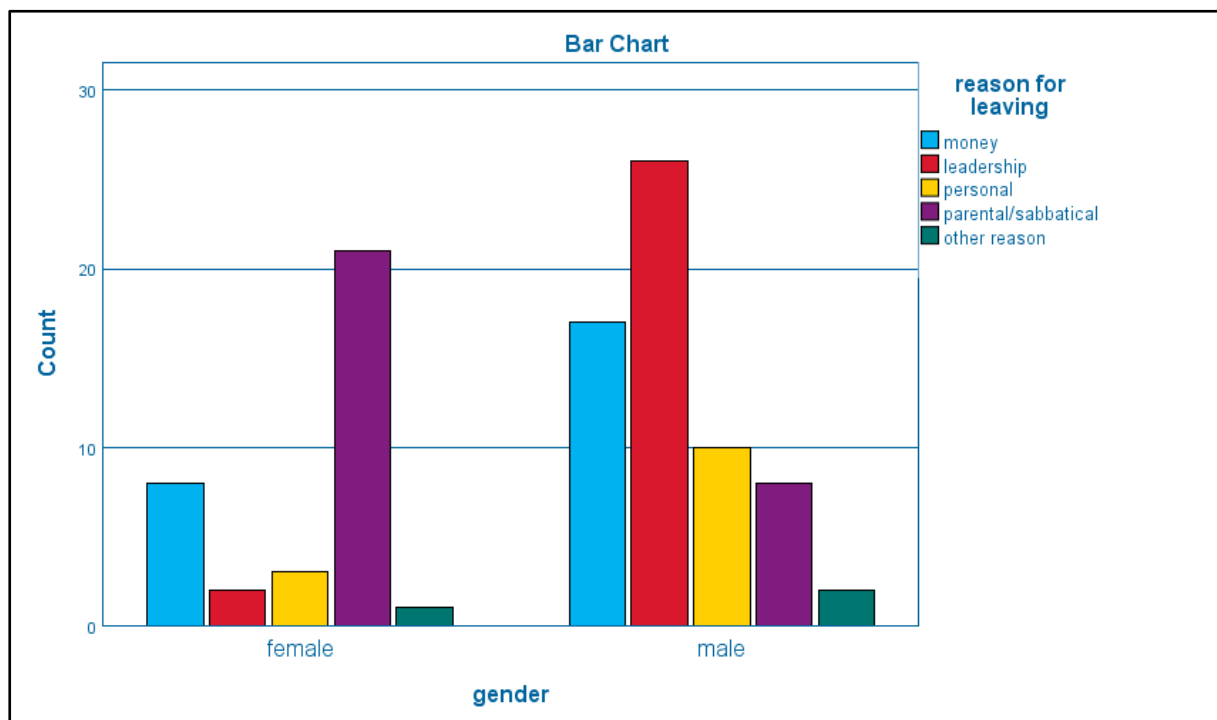


Figure 1: The impact of gender for the decision to quit (author's SPSS analysis)

For this analysis it is important to know that 377 women and 1.368 men work in the department where the survey was done (total 1.740 employees worldwide in that department). The above diagram shows the result of the SPSS analysis in Table 5 that 35 females and 63 males quit the job in 2020, which is a ratio of 36/64. Considering the 377 females and 1.368 males, produces a ratio of 21/79. This means, that in general during the Corona crisis relatively more females left the company than males. The main reason is that:

- females left the company during the Corona crisis in 2020 because of parental leave
- males left the company during the Corona crisis in 2020 because of leadership

The upper limit for the probability of error p-value is set with the standard significance level of $\alpha = 5\%$ (means 95% probability). The result of the statistics calculation from table 5 gives a Pearson Chi-square of 28,030a and $p \leq 0,001$, which is smaller than 1% (99% probability) and indicates that the result is therefore considered to be highly significant.

Summarizing the SPSS results and findings in the chapter "Impact of gender for the decision to quit", an old cliché seems to exist – females leave the company to take care for their children and males leave the

company because of leadership and monetary reason. This analysis results could be the start of another interesting research paper about social behavior to analyze if females and males have the same target – to take care of their family.

5.2 The difference of economic areas for the decision to quit

The data was evaluated in a department, acting worldwide in 18 different locations in the economic areas Asia, EU and NAFTA. An evaluation of the existing data with a focus on the influence of the economic areas is. Therefore, obvious and a descriptive analysis with crosstabs in SPSS with the “reason to quit”, compared to the “economic area” was done in this section.

For a better visualization, a crosstab bar chart with the “reason to quit” vs. “economic area” (Asia, EU and NAFTA) on the horizontal axis and the “employee” count on the vertical axis is depicted below.

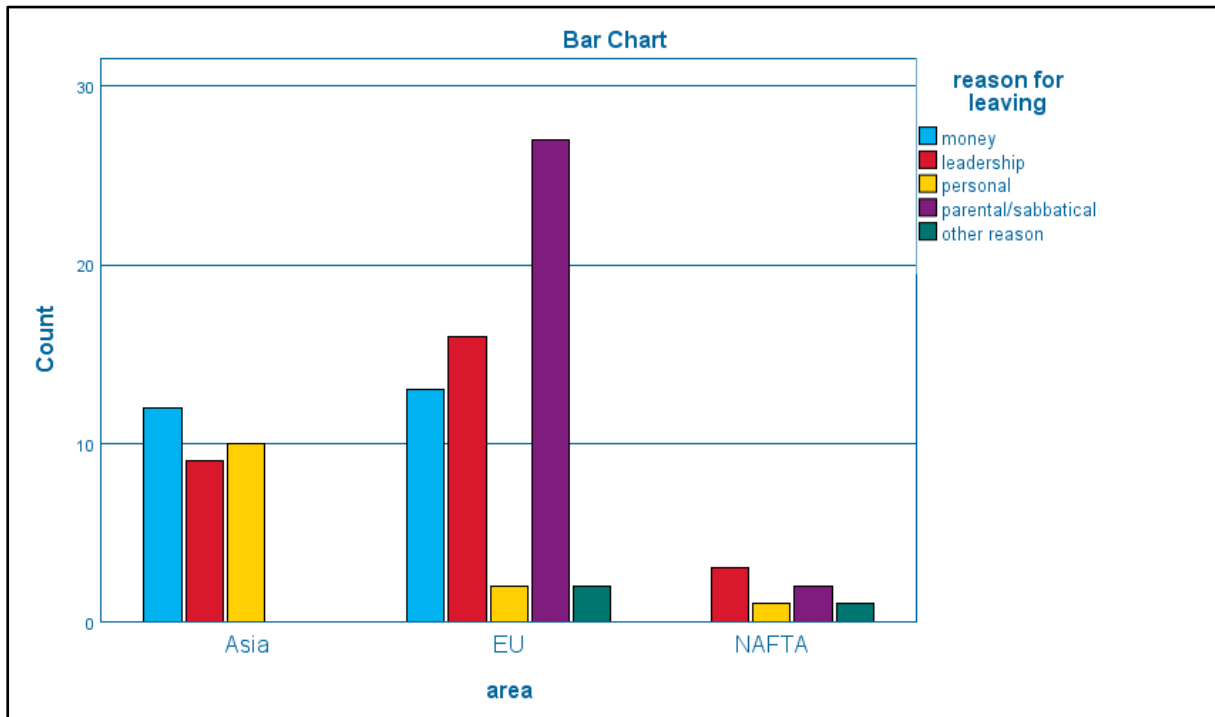


Figure 2: The impact of economic areas for the decision to quit (author’s SPSS analysis)

Below in Table 6 are the reasons why employees quit their job from the survey with an evaluation of frequency in the corresponding columns, listed with the areas Asia, EU and NAFTA, with the sum on the right side.

Table 6: The impact of economic areas on the decision to quit

ECONOMIC AREA	money	leadership	personal	parental/sabbatical	other reason	total
ASIA	12	9	10	0	0	31
EU	13	16	2	27	2	60
NAFTA	0	3	1	2	1	7

Source: author’s analysis (calculated by SPSS)

It is noticeable in the right column “total” in Table 5, as well as visible in the Fig. 2, that most employees (about 2/3) quit during the Corona crisis 2020 in the economic area EU. The fewest layoffs in the period of the Corona crisis 2020 were in the NAFTA sector. Going into deeper detail of the data and observing the mathematical limits (maximum and minimum) of the data in Table 6, it is interesting to see some zero, as well some accumulation of the data. The following curious findings are:

- no “parental/sabbatical” leave in the Asian sector, but it is the main reason in EU
- “money” is not the reason to quit the job in the NAFTA sector
- most employees by far quit their job for personal reasons in Asia

In Asia 8 out of 10 employees' feedback was "personal reason" because of family – their family live away from them - taking care of parents, as well as re-unite with family is very common in Asian culture. This was confirmed in an interview with the supervisor, who is located in Singapore and is responsible for the employees in Asia. The upper limit for the probability of error p-value is set with the standard significance level of $\alpha = 5\%$ (95% probability). The result of the statistical calculation from Table 6 above gives a Pearson Chi-square of 35,560a and $p \leq 0,001$, which is smaller than 1% (99% probability) and points out that the result is, therefore, considered to be highly significant.

VI. CONCLUSION

A In the same way the analysis was done, also the conclusion is subdivided into two areas. The first chapter 6.1 is the conclusion regarding the basic analysis to discuss and prove the hypothesis. In the chapter 6.2, the conclusion of the additional analyses, besides the hypothesis with the information about gender (6.2.1) as well from different economic areas (6.2.2) - this data comes with the survey and is "for free". It should not be left unused and will also be discussed in the conclusion, because the result could be the basic for further research.

6.1 Result of the basic analysis and hypothesis check

Under the side condition that the employees who take parental leave or sabbatical will not quit the job but come back after an agreed period of time, the hypothesis is supported: Leadership is the main reason why employees quit their job in the automotive industry in the first year of the Corona crisis in 2020. With that result, this scientific work provides the foundation for developing fluctuation retention methods, based on leadership.

6.2 Result of the additional analysis

Besides the reasons why employees in the automotive industry quit their job during the Corona pandemic two very interesting data groups are also included – "gender" and the "economic areas" Asia, EU and NAFTA.

6.2.1 Impact of gender

Summarizing the SPSS results and findings, an old cliché seems to exist – females leave the company to take care of their children and males leave the company because of leadership and monetary reasons. Interesting research could be going into detail why males appear to be looking for more money – is it also because of family reason to bring home the money for the wife, who is at home, taking care of the children? This would mean at the end that for both, female and male, the reason to quit could be related to family.

6.2.2 Impact of economic area Asia, EU and NAFTA

In the findings from the economic areas for the decision to quit, three interesting conclusions were found:

- no "parental/sabbatical" leave in the Asian sector, but it is the main reason in EU
- "money" is not the reason to quit the job in NAFTA, but often in ASIA and EU
- most employees by far quit their job for personal reasons in Asia

In Asia 8 out of 10 employees' feedback was "personal reason" because of family – their family live away from them - taking care of parents, as well as reuniting with family is very common in Asian culture. On the other hand it seems it is absolutely not common in Asia to take parental/sabbatical leave. It could be interesting to do interviews with employees in that area to talk with them about upbringing of children and taking care of older people in their family.

Absolutely not important in the NAFTA area seems to quit a job because of monetary reasons. The question could be now if the employees in that region earn an appropriate wage – could be another interesting research project.

Besides the main reason of leadership it seems in EU that many employees go on parental/sabbatical leave. The reason behind this could be spending more time with their children or, in case of sabbatical, to improve the work-life balance. The result of the survey could also have something to do with the Corona pandemic and employees are taking the crisis as an occasion for a sabbatical. However, this could be again another reason to go into detail and further research.

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