Hotel Management School Maastricht ZUYD

| **Module 5: Managing the employee journey** |
| **HR analytics workshop weeks 7 and 8 – explaining turnover (exam practice)** |

Context:

You finished your assignment as hospitality consultants for the Myriad Hotel. The parents bequeathed their hotel to Stefan, who is now CEO. They did double the number of rooms (but not staff!), and guest reviews have recovered. Brother Charles was put in charge of all business relations and partnerships, as new Chief of Strategic Relations.

A few years later Stefan calls for your help again. Financially Myriad Hotel is now doing fine, and guest ratings are fairly stable. The number of staff is now at almost 1.500, for a total of 20 different hotel locations worldwide. However, the number of employees quitting their job is on the rise. Both older and younger, junior and senior, operational and managerial colleagues are exiting their jobs at unprecedented levels. Management has no clue what factors are driving this trend, but needs to intervene quickly.

Stefan's two data-savvy CFO assistants have compiled a dataset with information that they feel is relevant to explain what factors could be driving this trend (see Annex 1). You are asked to analyse the data, and present your findings to the board in two weeks.

Management question

How can we best intervene in the trend of employees quitting our company?

Research question(s)

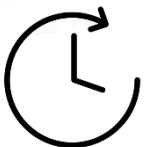*What factors have the strongest relation with employee turnover?*

The senior management at Hotel Myriad conducted a board-level brainstorm session, and the only thing they could agree on is that the factors involved can be categorized in four groups: background characteristics; satisfaction; earnings; and duration (time). On all other items on the agenda they disagreed. The 11 points they were discussing provide a valuable starting point for your sub-questions, and null and alternative hypotheses.

Characteristics:

- *"I think it is a generation Y thing. Employees who are **younger** and **single** are job hopping at the start of their careers, and are therefore leaving us".*
- *"I think it is a question of status: if you are highly **educated**, and have a senior **position** within the firm, you would be a fool to leave our company like that."*
- *"No, no, no. Leaving the company is a highly personal thing. I think **women** are more likely to leave, especially if they live **further from the office**."*
- *"You managers do not get this – you rarely quit yourself. It is the people in **sales** (representatives & executives) that are leaving us for higher wages elsewhere.*

Satisfaction

- *"We have five types of **satisfaction** (see variables). These must obviously all five have a significant relationship with turnover. Happy people are loyal people."*
- *"Nonsense. It is about whether you are valued by your peers and management. Good **performance reviews** are way more important than satisfaction."*

Earnings
- *"Income is the defining factor in personnel loyalty. Especially if people have recently earned a raise. Hence, the percentage **salary hike** is most important."*
- *"Income matters, but whether you earn a decent **monthly salary** is more important to people then whether or not they have received a raise."*
- *"True, but in this clan-company loyalty is valued too much. Only **older people** who work here a **long time** are the ones that earning these attractive higher salaries,*
- *"Income matters, but foremost people need to feel that the firms long-term success is tied to their own. Hence, **stock options** are more important than salary.*

Duration
- *"The longer you **stay with the company**, in your **current role**, even **without promotions** and with your **current manager**, the less likely you are to leave."*

Time:
45 minutes (two classes).

Learning goals:
At the end of this workshop you should be able to:
- Discuss your new hospitality case in detail with your group members.
- Present **your plan** for analysis of the data and presentation of the results.
- Present the first few graphs, tables and test with which you explore the data.

To be studied before the start of the session:
- Look up the meaning of the different variables in the *turnover.sav* file.
- Read the 11 points on what factors cause employees to quit, as discussed above.
- Take a look at the checklist of operations, concepts, graphs and statistical tests.
- Make at least five different graphs exploring possible relationships between variables.

What are you expected to know at the start of the session?
- All information from the other *research skills* meetings.
- Any saved results of your analyses of the Hotel Myriad data.
- The meaning of the different variables in the *turnover.sav* file.
- The checklist of to be used concepts, graphs and statistical tests.

Prepare and bring to the session:
- Your laptop with SPSS installed.
- Your (at least) five graphs made on different variables in the data.
- Your ideas for exploration, visualisation, and analysis of the data.

What are you going to do in this workshop?
- Further explore the variables in the dataset, and discuss their relevance.
- Discuss what concepts, graphs, and analyses to use to check which statements.
- Draft an action plan for analysis of the data on attrition in this hotel (incl. H_0 & H_a).
- Start with the agreed upon plan for analysis with your group (graphs, tables, tests).
- Reporting formats: SPSS output (.spv), word files (.doc) or PowerPoint slides (.ppt).

Annex 1: Variables

	Name	Type	Width	Decimals	Label
1	EmployeeCount	Numeric	1	0	Employee count (each row = 1)
2	EmployeeNumber	Numeric	4	0	Unique employee ID
3	Turnover	String	3	0	Job change: Yes | No
4	Turnover_numeric	Numeric	8	2	Turnover numeric
5	Age	Numeric	2	0	Age of the employee in years
6	Gender	String	6	0	Gender of the employee
7	MaritalStatus	String	8	0	Relationship status
8	DistanceFromHome	Numeric	2	0	Distance from home to office in miles
9	Department	String	26	0	Work department: Sales, Rooms or F&B
10	Education	Numeric	1	0	Level of education (1 = low; 4 - high)
11	EducationField	String	40	0	Field of education
12	JobLevel	Numeric	1	0	Level of job position (1 = low; 5 = high)
13	JobRole	Numeric	1	0	Description of job title
14	JobInvolvement_survey	Numeric	1	0	Level of job involvement (1 = low; 4 = high)
15	JobSatisfaction_survey	Numeric	1	0	Level of job satisfaction (1 = low; 4 = high)
16	EnvironmentSatisfaction_survey	Numeric	1	0	Satisfaction: work environment (1 = low; 4 = high)
17	RelationshipSatisfaction_survey	Numeric	1	0	Satisfaction: work relations (1 = low; 4 = high)
18	WorkLifeBalance_survey	Numeric	1	0	Satisfaction: work life balance (1 = low; 4 = high)
19	PerformanceRating	Numeric	1	0	Performance in the past year (1 = low; 4 = high)
20	MonthlyIncome	Numeric	5	0	Monthly income received
21	StockOptionLevel	Numeric	1	0	Level of stock options in contract
22	PercentSalaryHike	Numeric	2	0	Percentage salary increase in past year
23	NumCompaniesWorked	Numeric	1	0	Number of companies worked for
24	YearsAtCompany	Numeric	2	0	Years employed by this company
25	YearsInCurrentRole	Numeric	2	0	Year employed in current role
26	YearsSinceLastPromotion	Numeric	2	0	Years since last promotion
27	YearsWithCurrManager	Numeric	2	0	Years with current manager

There are five different groups of variables:

1. **Turnover** (in Dutch: '*personeelsverloop*'): has this person left the company in the past year? Yes | No.
2. **Characteristics:** various background characteristics such as age, gender, job role, department, etc.
3. **Satisfaction**: with various aspects of work. Including the performance review by management.
4. **Income:** various sorts of income (salary, salary increase, stock options) received by each employee.
5. **Duration**: years employed at our firm, in this role, since last promotion and with current manager.

Hints & tips:

1. Carefully read the statements of the board room discussion.
2. Discuss how the items of the checklist apply to what statements.
3. Use the W8 procedure in to check whether you did not forget any steps.
4. Always visualize your data/variables before conducting a statistical test.
5. Always check whether the assumptions are met before conducting a test.

Annex 2: Checklist

Use all these concepts, operations, graphs and tests in your analysis of what factors have a relation with turnover **at least once.** Always visualize your data before conducting a test! Make sure to save your output.

Theory/concepts:
- ✓ Research questions
- ✓ Hypotheses (H_0 & H_a)
- ✓ Type I and type II errors
- ✓ Measures of central tendency (e.g. mean)
- ✓ Measure of variability (e.g. standard deviation)
- ✓ Reliability and validity
- ✓ Significance and alpha

Basic operations
- ✓ Sort
- ✓ Select
- ✓ Recode
- ✓ Calculate

Graphs/visuals:
- ✓ Histogram
- ✓ Bar chart (simple)
- ✓ Bar chart (clustered)
- ✓ Pie chart
- ✓ Error bar plot
- ✓ Scatterplot

Analyses/tests:
- ✓ Frequencies
- ✓ Descriptives
- ✓ Crosstabs
- ✓ Chi-square test
- ✓ T-Test
- ✓ Correlation
- ✓ ANOVA