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# Danish Innovation Index 2021 Annual Report

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**Consumer-based ranking of the most innovative firms in Denmark**  
Annual Report from Danish Innovation Index

March, 2022

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**DEPARTMENT OF MANAGEMENT**  
AARHUS UNIVERSITY



## Data

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| Summary                 | DII measures consumers' perception of the innovativeness of industries and companies. In 2021, DII included 6 industries, covering approximately 30% of household spending. Each industry was represented by 3-4 companies, and the total number of companies studied in 2021 was 22. More than 1800 consumers evaluated a total of 22 companies, which received an average of 300 responses each (6,986 responses in total). Results indicate that when consumers perceive a company as innovative, they are more likely to find this company more attractive, and in turn are more likely to be loyal towards that company. |
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## Preface

The world's first consumer-based ranking of most innovative firms has come to Denmark.

Established in 2021, Danish Innovation Index (short: DII) takes a methodological approach to rank Danish firms in terms of innovativeness from the perspective of consumers.

The results, including the ranking of the most innovative Danish firms, are published on an annual basis and are announced at the annual Danish Innovation Index conference.

DII is affiliated to the world's first consumer-based ranking of most innovative companies, which started in Norway under the name Norwegian Innovative Index.

DII is supported by the Carlsberg Foundation.

## 1.0 Introduction

### 1.1/ Danish Innovation Index

The DII measures consumers perception of the innovativeness of industries and companies.

Because it is not possible to cover all companies on the Danish market, DII focuses on covering 70-80% of household spending, including both the largest companies in the industries but also smaller upcoming players.

In 2021, the focus of DII was on 6 industries, covering approximately 30% of household spending, with this coverage being increased yearly to reach 70-80% in 2025. Each industry is represented by 3-4 companies, and the total number of companies in 2021 was 22.

The index is measured through a representative survey of consumers in Denmark recruited from a consumer research panel by Userneeds (<https://userneeds.com/da/>).

The sample of Danish consumers is representative based on gender, age and geographical location, and data is collected every quarter. Panel members identify from a list of companies the firms that they have done business with regularly during the last six months.

In 2021, more than 1800 consumers evaluated a total of 22 companies with an average of 300 responses per company (6,986 responses in total).

## 2.0 DII Ranking

The ranking of the most innovative firms of 2021 includes winners in two categories:

- overall innovativeness (Table 3), and
- artificial intelligence (AI) innovativeness (Table 4).

According to this ranking, the Top 10 most innovative firms in Denmark overall are IKEA, Amazon, Nemlig.com, Netflix, Zalando, Jysk, 3, ILVA, Bootz.com and Rema 1000.

The Top 10 most innovative firms in the category of AI innovativeness are Zalando, IKEA, TV2 Play, Bootz.com, Netflix, 3, DHL, HBO Nordic, GLS and Bring.

**Table 3. DII 2021**

|    |               |    |      |
|----|---------------|----|------|
| 1  | IKEA          | 80 | 😊😊😊😊 |
| 2  | Amazon        | 76 | 😊😊😊😊 |
| 3  | Nemlig.com    | 71 | 😊😊😊😊 |
| 4  | Netflix       | 71 | 😊😊😊😊 |
| 5  | Zalando       | 69 | 😊😊😊😊 |
| 6  | Jysk          | 69 | 😊😊😊😊 |
| 7  | 3             | 66 | 😊😊😊😊 |
| 8  | ILVA          | 65 | 😊😊😊😊 |
| 9  | Bootz.com     | 65 | 😊😊😊😊 |
| 10 | Rema 1000     | 65 | 😊😊😊😊 |
| 11 | Bolia         | 63 | 😊😊😊😊 |
| 12 | HBO Nordic    | 63 | 😊😊😊😊 |
| 13 | Super Brugsen | 61 | 😊😊😊😊 |
| 14 | DHL           | 61 | 😊😊😊😊 |
| 15 | Viaplay       | 60 | 😊😊😊😊 |
| 16 | GLS           | 60 | 😊😊😊😊 |
| 17 | Telia         | 60 | 😊😊😊😊 |
| 18 | TV2 Play      | 59 | 😊😊😊😊 |
| 19 | YouSee        | 58 | 😊😊😊😊 |
| 20 | Telenor       | 58 | 😊😊😊😊 |
| 21 | Netto         | 57 | 😊😊😊😊 |
| 22 | Bring         | 56 | 😊😊😊😊 |
| 23 | Postnord      | 49 | 😊😊😊😊 |

**Table 4. DII-AI 2021**

|    |               |    |      |
|----|---------------|----|------|
| 1  | Zalando       | 69 | 😊😊😊😊 |
| 2  | IKEA          | 67 | 😊😊😊😊 |
| 3  | TV2 Play      | 67 | 😊😊😊😊 |
| 4  | Bootz.com     | 66 | 😊😊😊😊 |
| 5  | Netflix       | 66 | 😊😊😊😊 |
| 6  | 3             | 66 | 😊😊😊😊 |
| 7  | DHL           | 66 | 😊😊😊😊 |
| 8  | HBO Nordic    | 65 | 😊😊😊😊 |
| 9  | GLS           | 65 | 😊😊😊😊 |
| 10 | Bring         | 62 | 😊😊😊😊 |
| 11 | Amazon        | 61 | 😊😊😊😊 |
| 12 | Viaplay       | 61 | 😊😊😊😊 |
| 13 | Nemlig.com    | 61 | 😊😊😊😊 |
| 14 | ILVA          | 60 | 😊😊😊😊 |
| 15 | Telia         | 60 | 😊😊😊😊 |
| 16 | Postnord      | 59 | 😊😊😊😊 |
| 17 | Telenor       | 58 | 😊😊😊😊 |
| 18 | Netto         | 58 | 😊😊😊😊 |
| 19 | Rema 1000     | 56 | 😊😊😊😊 |
| 20 | Jysk          | 56 | 😊😊😊😊 |
| 21 | Super Brugsen | 56 | 😊😊😊😊 |
| 22 | YouSee        | 54 | 😊😊😊😊 |
| 23 | Bolia         | -  | -    |

## 3.0 Data Analysis

In this section, we report more details about the data analyses carried out for year 2021.

### 3.1/ Hypotheses

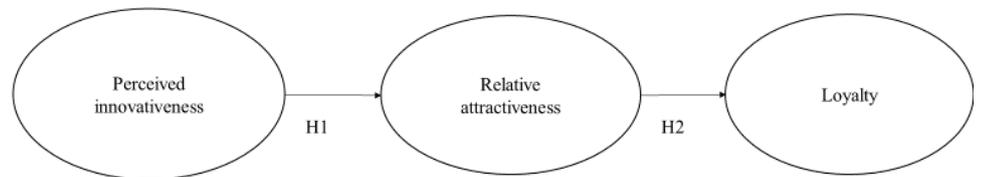
In addition to the ranking, a total of two hypotheses were tested:

*H1: Perceived innovativeness is positively related to relative attractiveness.* and

*H2: Relative attractiveness is positively related to loyalty.*

Figure 1 shows the overall model tested as a structural equation model.

**Figure 1. Hypothesized relationships**



### 3.2/ Measurement model

The measurement model (based on a confirmatory factor analysis) and path model are conducted in Mplus8.7 (Muthén & Muthén, 2021). Measures are based on scales from prior literature (Andreassen & Olsen, 2008; Kunz et al., 2011; Olsen & Johnson, 2003; Zeithaml et al., 1996), and are treated as multi-item constructs, measured on 7-point scales. The measurement model (Table 1) confirms that all factor loadings are acceptable (Hair et al., 2010).

**Table 1. Measurement model with overview of multi-item constructs**

| Constructs and items   | Factor loadings | p-value |
|--|-----------------|---------|
| <b>Perceived innovativeness</b>  |                 |         |
| X changes the markets with its offerings   | .773            | .000    |
| X is a very creative company   | .944            | .000    |
| X is a pioneer in its category   | .936            | .000    |
| X is an innovative company   | .562            | .000    |
| <b>Relative attractiveness</b>   |                 |         |
| Does X have better prices than other similar companies?                                  | .846            | .000    |
| Does X provide products and services of better quality, compared to other companies?     | .865            | .000    |
| Does X have better reputation than other similar companies?                              | .904            | .000    |
| Is X more attractive than other similar companies?                                       | .744            | .000    |
| <b>Customer loyalty</b>  |                 |         |
| How likely or unlikely is it that you will continue being a customer of X?               | .902            | .000    |
| How likely or unlikely is it that you will recommend X to someone who seeks your advice? | .865            | .000    |
| How likely or unlikely is it that you say positive things about X to other people?       | .922            | .000    |

### 3.3/ Path model and hypotheses testing

Based on the results, the suggested relationships are significant, which means that H1 and H2 are supported by the data (Table 2).

**Table 2. Analysis of path model**

| Paths  | Beta-values |
|--|-------------|
| Perceived innovativeness → relative attractiveness | .745***     |
| Relative attractiveness → customer loyalty         | .825***     |

\*\*\* p-value < .0001

Specifically, this means that when consumers perceive a company as innovative, they are more likely to find this company more attractive than other companies. Moreover, when consumers find the company relatively attractive, they are more loyal towards that company.

Figures 2 and 3 show the separate relationships between perceived innovativeness and relative attractiveness of the brand as well as relative attractiveness and loyalty.

**Figure 2. Relationship between perceived innovativeness and relative attractiveness (based on simple linear regression conducted in SPSS28)**

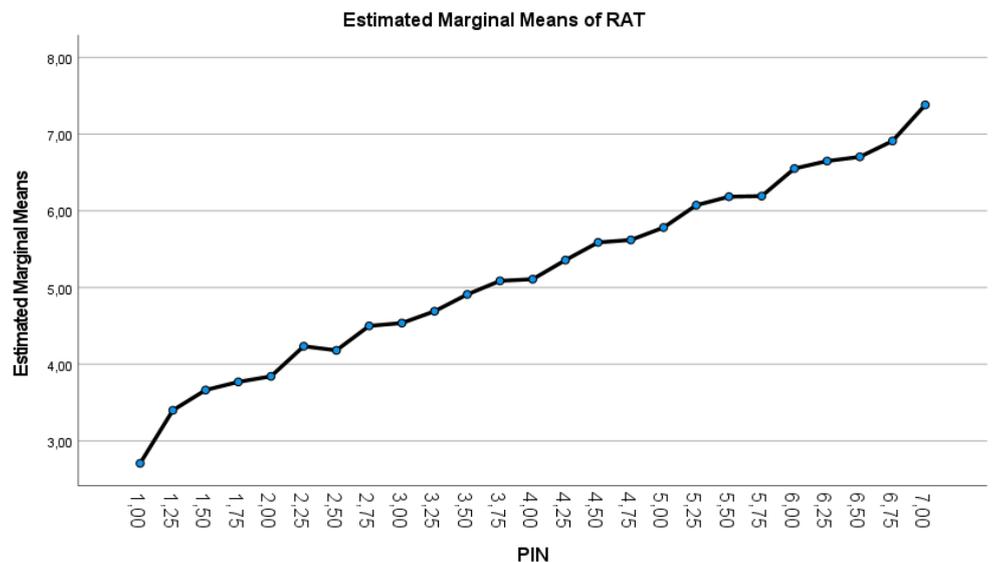
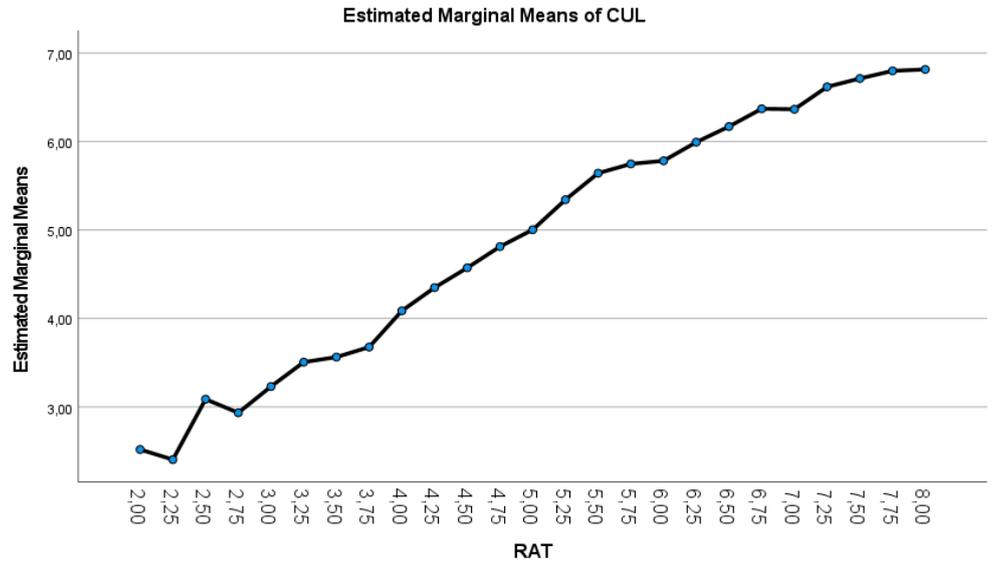


Figure 3. Relationship between relative attractiveness and customer loyalty (based on simple linear regression conducted in SPSS28)



## References

- Andreassen, T. W., & Olsen, L. L. (2008). The Impact of Customers' Perception of Varying Degrees of Customer Service on Commitment and Perceived Relative Attractiveness. *Managing Service Quality, 18*(4), 308-328.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis: A global perspective* (7 ed.). Pearson.
- Kunz, W., Schmitt, B., & Meyer, A. (2011). How Does Perceived Firm Innovativeness Affect the Consumer? *Journal of Business Research, 64*, 816-822.
- Muthén, L. K., & Muthén, B. (2021). Mplus User's Guide: Statistical analysis with latent variables, user's guide.
- Olsen, L. L., & Johnson, M. D. (2003). Service Equity, Satisfaction, and Loyalty: From transaction-specific to cumulative evaluations. *Journal of Service Research, 5*(3), 184-195.
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The Behavioral Consequences of Service Quality. *Journal of Marketing, 60*, 31-46.

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