Responsibility Recruiting in Insurance Sales
A Hard Facts Measurement Approach

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Abstract
Recruiting processes imply a considerable potential for waste of resources, both in general and in the insurance sales area focused here. A comprehensible measure for sustainability in sales was identified and information offers of large German insurers on job offers in the field of sales force were analysed. While the recruitment of lateral entrants has no measurable influence on sustainable sales, clear correlations between the information offered for future salespeople and sustainable results were found. In addition, a clear negative correlation between multi-level marketing and sustainable insurance sales was found.

Keywords: salesforce; recruiting; occupational change; lateral entry

Introduction
In accordance with Bundestag (2017), the topic of CSR basically reports on the following subjects:
- Environmental issues (consumption of resources, emissions, environmental protection);
- Employee issues (diversity, safety at work);
- Social issues (support for the local community);
- Respect for human rights;
- Combating corruption and bribery.

To date, CSR has only been associated with the topic of “recruiting” in such a way that future employees can, in the ideal case, inform themselves about the company's sustainable behaviour towards current employees. This paper makes it clear, however, that the recruiting process as such can and should be designed to be sustainable.

Sustainability in recruiting in general
According to a recent survey of 1004 employees, 19% are acutely looking for a job with better pay and 9% are looking for a job with a better work-life balance (ManpowerGroup Deutschland, 2019). But which company actually gives this information in a job advertisement or a career homepage? To anticipate the result: Not a single one of the 30 companies surveyed has mentioned a specific salary. The lack of this single piece of information alone must lead to thousands of false expectations.
By definition, excessive use of resources is not sustainable. In recruiting, the following resources are consumed by both the recruiter and the applicant:

- **Time**: (application, preparation, interview, follow-up);
- **Money**: (photo, coffee, suitable clothing);
- **Fuels on the way to interviews**.

According to the current statistics of the German Federal Labour Office, there are nearly 800,000 open vacancies registered (BA, 2019). According to the German Institute for Employment Research, the reporting rate in the second quarter of 2019 was 49.6% (IAB, 2019). This results in a number of vacancies in the order of 1.4 million.

A poor recruitment process regularly leads to more interviews than absolutely necessary. But what happens on the resources side if there is only ONE redundant one-hour interview per open position? Here is my calculation of 1.4 million unnecessary interviews:

- With an average of 10km of journey per route and economical 5 litres of petrol per 100 km, this results in a consumption of 1.4 million litres of petrol, obtained from approx. 2.5 million litres of crude oil corresponding to 16,000 barrels. This would emit 3,318 tonnes of CO2 and cause fuel costs of €1.8 million.
- **An applicant needs at least 2 hours including arrival and departure plus interview preparation. The interviewer will as well need minimum 1 hour. This leads to 4.2 million hours, corresponding to 175,000 days, 478 years. A total of at least 6 human lives can be said to have been wasted.**
- **With a professional interviewer, the company has a considerably low expenditure of time**, since preparation and follow-up are minimal and no travel time is booked if the interview takes place on the premises of the company. In fact, interviews rarely take place in pairs, but I would like to calculate a minimum. Companies therefore pay at least 1.4 million hours or 175,000 working days of 8 hours or 795 workplaces of 220 days per year, which is too much.

The apparent triviality in the relationship between recruiting and sustainability can clearly be denied in view of these figures. Especially against the background that these figures have to be multiplied by a high factor in real practice.

**Transparency in the recruiting process**

Unlike in a private relationship, however, in a professional context one does not allow oneself months or years to commit oneself firmly to each other, but decides this after a discussion depending on the market situation. The probationary period begins only after the conclusion of a contract. Good expectation management is therefore important in this context from the outset.

The more honest and transparent the application and mutual introduction phase, the lower the fluctuation rate will probably be during the probationary period. On the part of the employer, there is danger that he will make a vacancy more attractive than it is to recruit workers who, if realistically presented, could choose a better option. If, in addition, appropriate exit barriers are created in order to achieve a locked-in effect, a position will be filled in the short or medium term, but in the long term the employee will be dissatisfied with the job and will even lose it once...
productivity is higher. The employer's sustainable and responsible conduct is therefore to be found through absolute transparency in the task, guidelines and remuneration. The fact that a recruiter is usually the professional in the field of job interviews also obliges him to answer unsolicited questions about the unpleasant aspects of the job, which the applicant usually does not ask due to a lack of routine.

A long-term contact person is perceived positively by the customer, especially in insurance sales (Hofmann, 2014) and contributes positively to the overall company brand. Customers are also more loyal and willing to pay a higher price for a product if they know that the employees will be treated fairly (Brodie et al., 2009).

This implies the opposite effect when an employee leaves the company. Fluctuation results in customers having to reveal their finances to another unknown person, which is perceived as unpleasant. Basically, it can be assumed that every factor that increases the probability of fluctuation leads to a decrease in customer satisfaction and loyalty.

In this context, the fact examined in this paper that most German insurance companies employ lateral entrants in sales, i.e. people who previously had a very different profession and are accordingly weak in terms of their expertise, must also be addressed in any case.

In principle, lateral entrants have a higher probability of fluctuation than long-term employees (Griffeth et al., 2000). If these people from outside the industry are additionally given a too blurred picture of the profession before being hired, there is a high probability that they will either be less successful or less satisfied with the working conditions than expected (Borghans and Golsteyn, 2006; Meglino and DeNisi, 1987). Both in turn lead to increased fluctuation.

**Measurement of CSR in Insurance Sales**

Compared to other industries, besides the mobility of the salespeople, insurance sales is not really energy-intensive. Even the statistics from the Federal Environment Agency show only manufacturing and manufacturing industries as the main consuming industries of coal, gas and electricity (Destatis, 2019). So if it is not energy consumption, what measure of CSR and sustainability can be applied to insurance sales?

As a first approach, I have devoted myself to the CSR reports of insurance companies. The content of these reports must be at least the following:

Legal basis: §289c (CSR-Richtlinie-Umsetzungsgesetz) (Bundestag, 2017) “at least the following aspects”:

- Environmental concerns, for example:
  - Emissions;
  - Water consumption;
  - Air pollution;
  - Use of renewable and non-renewable energies;
  - Protection of biological diversity;

- Employee issues:
  - Gender equality;
  - Working conditions;
  - Respect for workers' rights;
- Social concerns:
  - Dialogue on regional level;
  - Ensuring the protection and development of local communities;
- Respect for human rights:
  - Avoidance of human rights violations;
- Combating corruption and bribery:
  - Instruments to combat corruption and bribery;

Current studies (cf. on this Zielke et al., 2019; Bertelsmann Stiftung, 2012; Hobelsberger et al., 2019) define further sub-items under the above aspects and ultimately count the number of criteria fulfilled. The results are rankings of sustainability reports that evaluate the communication skills of a company's marketing department rather than sustainable behaviour in normal operations. Since the reporting requirement is not very concrete, the CSR reports are currently not meaningful, let alone comparable. Either they consist only of the contents prescribed by law (in case of doubt they are even more comparable) or marketing brochures with a volume of more than 100 pages are published. One approach could of course be to count the number of social projects, number of pages of CSR report, categories of CSR report or saving of resources. In the area of recruiting, the number of words in relation to employees could even be measured in relation to the rest.

In my opinion, these figures are more or less arbitrary. When it comes to the sale of insurance policies, it is about good advice when concluding a contract and regular support and, if necessary, adapting the contract to new life circumstances during the term. If the first condition is not fulfilled, i.e. if a product has been sold that is not optimal for the customer or has not been understood by the customer, the customer will revoke the contract within a short period of time. If the support and possible adjustment should fail to take place, the contract may become suboptimal for the customer during the term and the probability of a termination or premium exemption increases considerably (Pourrahidi et al., 2014) and (Gründl et al., 2001).

The only variable that is the result of sustainable sales in insurance sales is the cancellation rate.

The following hypotheses result from the preceding paragraphs:

$H_1$: Companies that employ lateral entrants are less sustainable due to the increased probability of fluctuation.

$H_2$: Companies that provide more specific information about a lateral entry are more sustainable than companies that provide less information.

$H_3$: Companies with a MLM-salesforce are less sustainable due to a large number of sideline workers who only work for a short time.

MATERIAL AND METHODS

Data
Cancellation rates of life insurance companies are provided yearly by the Federal Supervisory Office for Financial Services (BaFin - Bundesanstalt für Finanzdienstleistungsaufsicht). The primary insurance statistics (2018) were used as database. (BaFin, 2019)
Data are available on 87 insurance companies, whereby Protektor LV AG is a protection fund and must therefore be excluded. One company had a portfolio of €0 at the end of the financial year and was not taken into account, either. The analyses only included insurance companies which recorded positive new sales in 2019, i.e. whose products are still actively sold. Accordingly, 4 companies were excluded.

6 companies recorded a new premium income of less than €10 million. This is not based on real new sales, but on dynamic increases. These companies were not included in the calculations, either. Since sustainability in sales is to be analysed, direct insurers were not taken into account, as there is usually little or no demand actively stimulated by a salesperson. Several companies of the same group were combined and an arithmetic mean of the cancellation rates in relation to the insurance portfolio at the end of the financial year was computed. This results in a number of 32 insurance companies surveyed.

**Self collected data**
The legal form of the parent company of the corporation has been identified. A distinction is made here between stock corporations, mutual companies and public companies.

Furthermore, the job advertisements and career homepages of the insurance groups with an exclusive salesforce and under the supervision of BaFin were examined. These platforms were examined for the mention of certain information for entering sales, such as
- Application for lateral entry possible
- Location-specific tender
- Explicitly success-oriented payment
- Employed or self-employed
- Various dummies on activity and access requirements

ARAG was excluded from the analysis because this Group no longer has its own life insurance company.

Concrete information on working time should also be included in the study as an exogenous variable, but was not found in any of the enterprises analysed.

In cases where the career homepage and the job advertisement were contradictory, I took the information from the job advertisement because it can be assumed that a candidate would rather apply for a specific job than for a general job advertisement (Feldman and Klaas, 2002).

As the dependent variable (cancellation rate) is interval scaled, simple or multiple OLS-regression is feasible.

**RESULTS AND DISCUSSION**

The hypotheses are expected to be confirmed due to the logical derivation. I attach particular importance to a precise testing of the underlying assumptions.

The variables used are abbreviated as follows:
- Cancellation rate 2018 = CR2018;
- Lateral entry possible (Dummy) = LATERAL;
- Sum of information provided = SUMINFO;
- Multi-Level-Marketing (Dummy) = MLM.

OLS-regressions and tests are carried out using STATA 13.

The first hypothesis deals with differences in the duration of customer relations between companies that accept unskilled workers and those who do not.

\[ H_1: \text{Companies that employ lateral entrants are less sustainable due to the increased probability of fluctuation.} \]

The corresponding regression equation for this is as follows:

\[ CR2018 = \beta_0 + \beta_1 \text{LATERAL} + u \]  

\textit{Figure 1} shows the result of the simple OLS.

\textbf{Figure 1}

\textbf{OLS results LATERAL-CR2018}

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>Number of obs = 31</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F( 1, 29) = 0.65</td>
<td>Prob &gt; F = 0.4260</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td>2.77889376</td>
<td>1</td>
<td>2.77889376</td>
<td></td>
</tr>
<tr>
<td>Residual</td>
<td>123.61788</td>
<td>29</td>
<td>4.26268553</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>126.396774</td>
<td>30</td>
<td>4.21322581</td>
<td></td>
</tr>
</tbody>
</table>

| CR2018     | Coef.   | Std. Err. | t     | P>|t| | [95% Conf. Interval] |
|------------|---------|-----------|-------|------|----------------------|
| _cons      | 3.3375  | 0.729496  | 4.57  | 0.000 | 1.844572 4.830428    |
| LATERAL    | 0.684239 | 0.847449  | 0.81  | 0.426 | -1.048989 2.417467   |

It is obvious that this hypothesis cannot be supported due to the lack of significance of the exogenous variable. Nevertheless, the result is interesting: Both the p-value and especially the confidence interval, which is ambiguous even from the sign, practically reject a correlation between the acceptance of lateral entrants and the cancellation rate. This can be used as valuable information for recruiting decisions of a company.

In the following steps only those companies are considered which actually offer the possibility of lateral entry into sales.

\[ H_2: \text{Companies that provide respectively more specific information about a lateral entry are more sustainable than companies that provide less information.} \]

In order to test this hypothesis, the following important information should actually be taken into account, but was not found in any of the companies’ pages:
- Financial risk in salespeople's compensation system;
- Vacation days;
- Language requirements;
- Requirement of well-ordered financial circumstances;
- Requirement for a flawless certificate of good conduct;
- Requirement of an own car;
- Driving licence requirement.

As the last 5 points in particular are recruitment requirements rather than job descriptions, resources are wasted in the application process in every case, as recruitment cannot be executed if the criteria are not met.

The job advertisements and career homepages of the companies were examined to determine whether information was provided on the following factors:
- Was it already clear in the headline that lateral entry was possible?
- Was a specific place of work mentioned?
- Was a concrete compensation plan mentioned?
- Was an above-average salary prwas success-oriented?
- Has it been mentioned whether it is a job as an employee or self-employed?
- Has it been mentioned that acquiring new customers is part of the profession?
- Has it been mentioned that there is an existing customer-pool to start working?
- Has it been mentioned that official training as an insurance specialist has to be completed?
- Has it been mentioned that this training is free of charge?
- Has it been mentioned that contact with the customer must be actively sought?
- Was there any prospect of flexibility or a good work-life balance?

The resulting dummies with the corresponding information were then summed up to the factor SUMINFO. The OLS regression model is as follows:

\[
CR2018 = \beta_0 + \beta_1 SUMINFO + u
\]

(2)

Results of this regression are shown in Figure 2.

**Figure 2**

**OLS results SUMINFO-CR2018**

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>Number of obs = 23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residual</td>
<td>40.4467109</td>
<td>1</td>
<td>40.4467109</td>
<td>F(  1,    21) = 10.63</td>
</tr>
<tr>
<td>Model</td>
<td>40.4467109</td>
<td>1</td>
<td>40.4467109</td>
<td>Prob &gt; F = 0.0037</td>
</tr>
<tr>
<td>SUMINFO</td>
<td>79.9124195</td>
<td>21</td>
<td>3.80535331</td>
<td>R-squared = 0.3361</td>
</tr>
<tr>
<td>cons</td>
<td>120.35913</td>
<td>22</td>
<td>5.47086957</td>
<td>Adj R-squared = 0.3044</td>
</tr>
</tbody>
</table>

| CR2018     | Coef.  | Std. Err. | t    | P>|t| | 95% Conf. Interval |
|------------|--------|-----------|------|--------|-------------------|
| SUMINFO    | -.7445769 | .2283839  | -3.26 | 0.004 | [-1.219527, -.2696266) |
| cons       | 7.776996 | 1.221559  | 6.37 | 0.000 | 5.236625, 10.31737 |

Obviously there is both a significant and relevant relationship between the amount of information available for the candidate before applying and the cancellation rate. The unambiguous sign of the confidence-interval shows that companies providing a more realistic job preview (RJP) (Meglino and DeNisi, 1987)
have a lower cancellation rate. According to the RJP concept, this may be the phenomenon of a lower turnover rate.

A glance at the data quickly makes it clear that all companies with the multi-level marketing feature allow lateral entrants. Since structured sales is the sales channel that is most revenue-oriented, the following hypothesis is obvious as a supplement to the previous model:

\( H_3: \text{Companies with a MLM-salesforce are less sustainable due to a large number of sideline workers who only work for a short time.} \)

The model is now as follows:

\[
\text{CR2018} = \beta_0 + \beta_1 \text{SUMINFO} + \beta_2 \text{MLM} + u
\]  

(3)

Results of this regression are shown in Figure 3.

**Figure 3**

**OLS results SUMINFO-MLM-CR2018**

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>Number of obs = 23</th>
<th>F( 2, 20) = 13.45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>69.022842</td>
<td>2</td>
<td>34.511421</td>
<td></td>
<td>0.0002</td>
</tr>
<tr>
<td>Residual</td>
<td>51.3362884</td>
<td>20</td>
<td>2.56681442</td>
<td></td>
<td>0.5735</td>
</tr>
<tr>
<td>Total</td>
<td>120.35913</td>
<td>22</td>
<td>5.47086957</td>
<td></td>
<td>0.5308</td>
</tr>
</tbody>
</table>

| CR2018     | Coef.    | Std. Err. | t     | P>|t|  | [95% Conf. Interval] |
|------------|----------|-----------|-------|------|---------------------|
| SUMINFO    | -0.4938494 | 0.2020631 | -2.44 | 0.024 | -0.9153457 to -0.0723532 |
| MLM        | 3.565429 | 1.068581 | 3.34 | 0.003 | 1.336409 to 5.79445 |
| _cons      | 6.047402 | 1.129266 | 5.36 | 0.000 | 3.691795 to 8.403009 |

These results look very clear at first sight. The variable MLM has a large positive impact on the cancellation rate while reducing the significance-level of the SUMINFO variable up to a nevertheless acceptable value of lower than 5%. Some tests are now being carried out. Figure 4 and Figure 5 show the results of the graphical respectively numerical analysis to test the homoscedasticity requirement. I chose the Breusch-Pagan test instead of the White test because of the limited number of observations and the dummy-variable MLM.

Obviously, the assumption of homoscedasticity is violated. The non-homogeneous variance of the residuals could therefore lead to an overestimation of the model.

**Figure 6** and **Figure 7** show the results of the analysis to test the normal distribution of residuals.

Both the graphical and numerical analyses show a violation of the assumption of normally distributed residuals at a significance level of 5%. I test whether the violations affect the model quality by a robust regression.
**Figure 4**

**Graphical test on homoskedasticity 1st model**

**Figure 5**

**Numerical test on homoskedasticity 1st model**

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of CR2018

\[
\chi^2(1) = 17.91
\]

Prob > \chi^2 = 0.0000

**Figure 6**

**Graphical test on normality 1st model**

Kernel density estimate

Residuals

Kernel = epanechikov, bandwidth = 0.3876
As can be seen from Figure 8, the robust regression results in considerable changes in the significance levels. Although both variables are still significant at the 5% level, the considerable increase in the confidence interval of the variable MLM down to the negative can, however, be classified as intolerable. It must therefore be assumed that the model overestimates the explanatory power of the variables.

This causes me to adapt the model by logarithmizing the dependent variable CR2018:

\[
\log(CR2018) = \beta_0 + \beta_1 \text{SUMINFO} + \beta_2 \text{MLM} + u
\]

Results of this regression are shown in Figure 9.

The significance levels do not differ significantly from those of the original model. The tests are then repeated.

Figure 10 and Figure 11 show the results of the graphical respectively numerical analysis to test the homoscedasticity requirement. The variance of the residuals is graphically much more harmonic and the Breusch-Pagan test gives no reason to reject the null hypothesis. So, the new logarithmic model does not violate the assumption of homoscedasticity.

Figure 12 and Figure 13 show the results of the analysis to test the normal distribution of residuals.
Figure 9

OLS results log-model

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>Number of obs = 23</th>
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<tr>
<td>Model</td>
<td>2.10609472</td>
<td>2</td>
<td>1.05304736</td>
<td>F(2, 20) = 10.97</td>
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<tr>
<td>Residual</td>
<td>1.91938245</td>
<td>20</td>
<td>.095969122</td>
<td>Prob &gt; F = 0.0006</td>
</tr>
<tr>
<td>Total</td>
<td>4.02547716</td>
<td>22</td>
<td>.182976235</td>
<td>R-squared = 0.5232</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Adj R-squared = 0.4755</td>
</tr>
</tbody>
</table>

| logCR2018 | Coef.    | Std. Err. | t     | P>|t|   | [95% Conf. Interval] |
|-----------|----------|-----------|-------|-------|---------------------|
| SUMINFO   | -.091053 | .0390711  | -2.33 | 0.030 | -.1725539  -.0095522 |
| MLM       | .6003781 | .2066217  | 2.91  | 0.009 | .1693728   1.031383  |
| _cons     | 1.670024 | .2183558  | 7.65  | 0.000 | 1.214542   2.125506  |

Figure 10

Graphical test on homoskedasticity log-model

Figure 11

Numerical test on homoskedasticity log-model

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of logCR2018

\[ \text{chi2(1)} = 0.13 \\
\text{Prob > chi2} = 0.7206 \]
Both the graphical and numerical analyses give no reason to conclude that the normal distribution assumption would be violated in the revised log-model.

As a final test I check the correlation of the explanatory variables. It can be seen in Figure 14 that the variance inflation factor is clearly close to 1 and leads to harmless values of multicollinearity. To be concrete, the standard error of the MLM-variable coefficient is just 1.077 times larger than if it was completely uncorrelated with the SUMINFO-variable.

**Figure 12**

**Graphical test on normality log-model**

![Graphical test on normality log-model](image)

**Figure 13**

**Numerical test on normality log-model**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Pr(Skewness)</th>
<th>Pr(Kurtosis)</th>
<th>adj chi2(2)</th>
<th>Prob&gt;chi2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fehlernreu</td>
<td>23</td>
<td>0.6497</td>
<td>0.0853</td>
<td>3.56</td>
<td>0.1688</td>
</tr>
</tbody>
</table>

**Figure 14**

**Numerical test on multicollinearity log-model**

<table>
<thead>
<tr>
<th>Variable</th>
<th>VIF</th>
<th>1/VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLM</td>
<td>1.16</td>
<td>0.8617</td>
</tr>
<tr>
<td>SUMINFO</td>
<td>1.16</td>
<td>0.8617</td>
</tr>
<tr>
<td>Mean VIF</td>
<td>1.16</td>
<td></td>
</tr>
</tbody>
</table>
The log model thus passes the essential tests and the results can be considered valid. The better the RJP, the lower the cancellation rate is. The presence of an MLM in turn significantly increases the cancellation rate.

CONCLUSIONS

Recruiting processes bring with them a considerable potential for wasting resources, both in general and in the area of insurance sales focused here. A plausible measure of sustainability in sales has been identified. While the recruitment of lateral entrants has no measurable influence on sustainable sales, clear correlations between the information offered for future salespeople and sustainable results were found. Any additional information has a positive effect on sustainability. In addition, a clear negative correlation between multi-level marketing and sustainable insurance sales has been found. Whether this applies to every type of MLM could be the subject of future research.

REFERENCES


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