Will, Matthias Georg

Working Paper

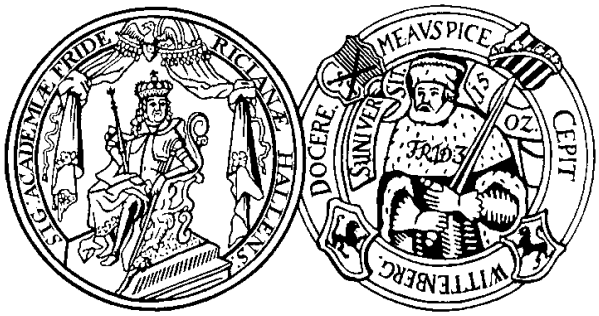
Voluntary turnover: What we measure and what it (really) means

Diskussionspapier, No. 2017-01

Provided in Cooperation with:
Martin Luther University of Halle-Wittenberg, Chair of Economic Ethics

Suggested Citation: Will, Matthias Georg (2017) : Voluntary turnover: What we measure and what it (really) means, Diskussionspapier, No. 2017-01, ISBN 978-3-86829-880-2, Martin-Luther-Universität Halle-Wittenberg, Lehrstuhl für Wirtschaftsethik, Halle (Saale), https://nbn-resolving.de/urn:nbn:de:gbv:3:2-67749

This Version is available at:
https://hdl.handle.net/10419/170457



Matthias Georg Will

V**oluntary Turnover: What We Measure and What It (Really) Means**

Discussion Paper No. 2017-01

of the Chair in Economic Ethics
at Martin-Luther-University Halle-Wittenberg,
edited by Ingo Pies,
Halle 2017

Haftungsausschluss

Diese Diskussionspapiere schaffen eine Plattform, um Diskurse und Lernen zu fördern. Der Herausgeber teilt daher nicht notwendigerweise die in diesen Diskussionspapieren geäußerten Ideen und Ansichten. Die Autoren selbst sind und bleiben verantwortlich für ihre Aussagen.

ISBN 978-3-86829-879-6 (gedruckte Form)
ISBN 978-3-86829-880-2 (elektronische Form)
ISSN 1861-3594 (Printausgabe)
ISSN 1861-3608 (Internetausgabe)

Autoranschrift

Dr. Matthias Georg Will
Martin-Luther-Universität Halle-Wittenberg
Juristische und Wirtschaftswissenschaftliche Fakultät
Wirtschaftswissenschaftlicher Bereich
Lehrstuhl für Wirtschaftsethik
Große Steinstraße 73
D-06108 Halle
Tel.: +49 (0) 345 55-23420
Fax: +49 (0) 345 55 27385
Email: matthias.will@wiwi.uni-halle.de

Korrespondenzanschrift

Dr. Matthias Georg Will
Martin-Luther-Universität Halle-Wittenberg
Juristische und Wirtschaftswissenschaftliche Fakultät
Wirtschaftswissenschaftlicher Bereich
Lehrstuhl für Wirtschaftsethik
Große Steinstraße 73
D-06108 Halle
Tel.: +49 (0) 345 55-23420
Fax: +49 (0) 345 55 27385
Email: ingo.pies@wiwi.uni-halle.de

Kurzfassung

Dieser Beitrag präsentiert mehrere Regressionsanalysen zur Erklärung freiwilliger Fluktuation. Die Schätzungen bauen auf einem Datensatz mit über 5.000 Personen und ca. 250 erklärenden Variablen auf. Die Ergebnisse deuten darauf hin, dass bisherige empirische Beiträge den Einfluss und die Signifikanz vieler Faktoren überschätzt haben. Aufgrund der Vielzahl an erklärenden Variablen hebt dieser Aufsatz die Bedeutung des so genannten „omitted variable bis“ für die empirische Fluktuations-Forschung hervor. Vor dem Hintergrund des umfangreichen Datensatzes untersucht dieser Beitrag detailliert die Effekte (a) der Arbeitnehmerzufriedenheit, (b) Branche, (c) Unternehmensgröße, (d) von Status und Position, (e) des Pendelns und der Arbeitszeit, (f) von Einkommen, Anreizen und Fairness, (g) der Karriereentwicklung, (h) Gesundheit, (j) politischen Orientierung, (k) verschiedener demographischer Variablen und (l) unterschiedlicher Persönlichkeitsmerkmale auf die Wahrscheinlichkeit, freiwillig den Arbeitsplatz zu wechseln.

Schlüsselbegriffe: Fluktuation, SOEP, Regressionsanalyse, Ökonometrie
JEL-Klassifikation: J28, J63, C13

Abstract

In this paper, we run regression analyses to explain voluntary turnover intentions with data from more than 5,000 employees and with about 250 explanatory variables. The findings of our multi-factor approach highlight the fact that previous empirical research might have over-estimated the impact and significance of many factors. We show the relevance of the so-called omitted variable bias to our findings and present an empirical approach to gain estimations that are more accurate. Our approach can estimate in detail the relevance of different factors from the following categories: (a) employees’ satisfaction, (b) industry, (c) firm size, (d) status and position, (e) commuting and working hours, (f) income, incentives and fairness, (g) career development, (h) health, (j) political orientation, (k) demographics, and (l) personality traits.

Keywords: Voluntary Turnover, SOEP, Regression, Econometrics
JEL Classification: J28, J63, C13

Voluntary Turnover: What We Measure and What It (Really) Means

Matthias Georg Will

1. Introduction

The rich research on employee turnover reveals that voluntary turnover may be a serious issue for many companies: when skilled and specialized employees quit, the firm has to find suitable successors who may have to receive expensive training. Thus, it is not surprising that voluntary turnover has a negative effect on the firm's performance as indicated by an extensive empirical literature (for an overview see the meta-analysis of Hancock et al. (2013), Park and Shaw (2013) and the study of Sturman et al. (2012)). Turnover rates, especially if high, may have a negative and statistically significant effect on the firm's performance, on average; in the case of a single firm, this effect may be moderated by factors like proficiencies of the person who quit, time dispersion, positional distribution, remaining member proficiencies, and newcomer proficiencies (Hausknecht and Holwerda, 2013).

Nevertheless, voluntary turnover is typically a cost factor and a non- negligible risk for the firm. Consequently, extensive research has been done to identify reasons why employees quit their jobs voluntarily. Although Holtom et al., (2008) present a literature review of several decades of rich conceptual developments of this research, this summary represents a mere snapshot in time as the contribution of Hom et al. (2012) clarifies. These authors present a model that explains how the interplay of preferences and constraints influence employees' decisions to stay or leave. They present a comprehensive approach that further develops the conceptual research as summarized by the literature review of Holtom et al. (2008). Besides these theoretical developments, the empirical studies that analyze the reasons for voluntary turnover have become more and more extensive as highlighted by several meta-analyses. One early contribution that summarizes the empirical findings is the meta-analysis of Hom and Griffeth (1995). These authors' findings were duplicated and extended by the meta-analysis of Griffeth et al. (2000). Rubenstein et al. (forthcoming) also apply the aggregated findings of their meta-analysis to determine an empirically underpinned multi-factor model of turnover.

Despite these great conceptual and empirical findings, the research on turnover remains unable to analyze the precise impact of the various factors that might influence turnover behavior. Holtom et al. (2008; p. 243), for example, conclude their literature review with "the field of study is richer, but perhaps farther from a unified view of the turnover process than ever be-fore." These authors suggest that, to develop this field further, approaches have to consider various factors including temporal elements, job level and type, the (individual) consequences of turnover in empirical studies. According to these authors, this has to be done on both a conceptual and empirical basis (Holtom et al. (2008; pp. 256-264)). These authors argue that a key deficit of empirical research is that most empirical studies use far too few explanatory variables. The latest meta-analysis of Rubenstein et al. (forthcoming; p. 21) presents a similar assessment of the state of the art of empirical studies noting that they still fail to explain employee turnover adequately.

2. Data and Approach

2.1 Data

In our empirical analysis, we use data from the representative panel survey SOEP (in German: Sozio-oekonomisches Panel, SOEP (2015)). This enables us to draw on personal data from around 10,800 employees (including self-employed) that either work in Germany or abroad. Compared to other studies, we can control for a large range of explanatory variables. Table 1 summarizes the descriptive statistics of our data set. All data are from the year 2013. As Table 1 illustrates, we have valuable information about the following variables that might be relevant for explaining turnover behavior according to the academic literature (Holtom et al. (2008); Hom et al. (2012); Rubenstein et al. (forthcoming)): individual differences (e.g., ability, biodata, personality), nature of the job, attitudes (e.g., job satisfaction, met expectation, stress, exhaustion and well-being, psychological uncertainty, change perceptions), organizational context (organization size, reward system, institutional pressures), person-context interface (job preview, leadership, justice) and additional factors that might influence the withdrawal decision (e.g., perceived alternatives, general job availability/unemployment).

	Observations	Mean	Std. Dev.	Min.	Max.
Probability of Voluntary Withdrawal	**10,814**	**23.29**	**32.76**	**0**	**100**
Satisfaction					
Satisfaction Health	24,077	6.75	2.28	0	10
Satisfaction Sleep	19,118	6.77	2.28	0	10
Satisfaction Work	14,242	7.13	2.12	0	10
Satisfaction Household Tasks	15,608	6.91	1.93	0	10
Satisfaction Household Income	23,831	6.64	2.29	0	10
Satisfaction Personal Income	18,513	6.22	2.52	0	10
Satisfaction Flat	24,043	7.82	1.96	0	10
Satisfaction Free Time	18,896	7.26	2.13	0	10
Satisfaction Family Life	18,693	7.91	1.91	0	10
Satisfaction Standard of Living	24,032	7.52	1.92	0	10
Satisfaction Health One Year Ago	17,285	6.60	2.20	0	10
Satisfaction Sleep One Year Ago	17,285	6.80	2.27	0	10
Satisfaction Work One Year Ago	10,036	7.04	2.08	0	10
Satisfaction Household Tasks One Year Ago	14,222	6.90	1.89	0	10
Satisfaction Household Income One Year Ago	17,084	6.66	2.24	0	10
Satisfaction Personal Income One Year Ago	16,857	6.15	2.51	0	10
Satisfaction Flat One Year Ago	17,250	7.92	1.80	0	10
Satisfaction Free Time One Year Ago	17,230	7.23	2.13	0	10
Satisfaction Family Life One Year Ago	17,003	7.91	1.89	0	10
Change Satisfaction Health	17,260	-0.08	1.87	-10	10
Change Satisfaction Sleep	17,260	-0.05	1.96	-10	10
Change Satisfaction Work	9,181	-0.04	1.98	-10	10
Change Satisfaction Household Tasks	13,161	-0.01	1.87	-10	9
Change Satisfaction Household Income	16,952	0.08	1.77	-10	10
Change Satisfaction Personal Income	16,642	0.08	2.03	-10	10
Change Satisfaction Flat	17,204	0.00	1.66	-10	10
Change Satisfaction Free Time	17,161	0.01	1.93	-10	10
Change Satisfaction Family Life	16,838	-0.01	1.72	-10	10
Satisfaction Life	24,043	7.25	1.77	0	10

Satisfaction Life in One Year	23,806	7.48	1.72	0	10
Satisfaction Life in Fife Years	23,292	7.45	1.98	0	10
Industry					
Crop and animal production, hunting and related service activities	13,855	0.01	0.12	0	1
Forestry and logging	13,855	0.00	0.04	0	1
Fishing and aquaculture	13,855	0.00	0.01	0	1
Mining of coal and lignite	13,855	0.00	0.03	0	1
Extraction of crude petroleum	13,855	0.00	0.02	0	1
Other mining and quarrying	13,855	0.00	0.01	0	1
Manufacture of food products	13,855	0.02	0.15	0	1
Manufacture of tobacco products	13,855	0.00	0.01	0	1
Manufacture of textiles	13,855	0.00	0.06	0	1
Manufacture of wearing apparel	13,855	0.00	0.04	0	1
Manufacture of leather and related products	13,855	0.00	0.02	0	1
Manufacture of wood and products of wood and cork	13,855	0.00	0.06	0	1
Manufacture of paper and paper products	13,855	0.00	0.06	0	1
Printing of reproduction of recorded media	13,855	0.01	0.10	0	1
Manufacture of coke and refined petroleum products	13,855	0.00	0.01	0	1
Manufacture of chemicals and chemical products	13,855	0.02	0.13	0	1
Manufacture of rubber and plastic products	13,855	0.01	0.09	0	1
Manufacture of other non-metallic mineral products	13,855	0.00	0.07	0	1
Manufacture of basic metals	13,855	0.00	0.06	0	1
Manufacture of fabricated metal products	13,855	0.03	0.18	0	1
Manufacture of computer, electronic and optical products	13,855	0.03	0.16	0	1
Manufacture of electrical equipment	13,855	0.00	0.02	0	1
Manufacture of machinery and equipment n.e.c.	13,855	0.02	0.14	0	1
Construction of utility projects for electricity and telecommunications	13,855	0.01	0.07	0	1
Manufacture of medical and dental instruments and supplies	13,855	0.01	0.08	0	1
Manufacture of motor vehicles, trailers and semi-trailers	13,855	0.03	0.18	0	1
Manufacture of other transport equipment	13,855	0.00	0.06	0	1
Manufacture of furniture	13,855	0.00	0.06	0	1
Repair and installation of machinery and equipment	13,855	0.00	0.03	0	1
Electricity, gas, steam and air conditioning supply	13,855	0.01	0.09	0	1
Water collection, treatment and supply	13,855	0.00	0.03	0	1
Construction of buildings	13,855	0.05	0.22	0	1
Wholesale and retail trade and repair of motor vehicles	13,855	0.01	0.09	0	1
Wholesale trade, except of motor vehicles and motorcycles	13,855	0.01	0.12	0	1
Retail trade, except of motor vehicles and motorcycles	13,855	0.09	0.29	0	1
Catering and hotel industry	13,855	0.04	0.20	0	1
Land transport and transport via pipelines	13,855	0.02	0.14	0	1
Water transport	13,855	0.00	0.03	0	1
Air transport	13,855	0.00	0.05	0	1
Warehousing and support activities for transportation	13,855	0.01	0.12	0	1
Postal and courier activities	13,855	0.02	0.13	0	1
Financial service activities, except insurance and pension funding	13,855	0.02	0.15	0	1
Insurance, reinsurance and pension funding	13,855	0.01	0.10	0	1
Other Insurance, reinsurance, and finance	13,855	0.00	0.04	0	1
Services to buildings and landscape activities	13,855	0.01	0.10	0	1
Rental and leasing activities of motor vehicles	13,855	0.00	0.03	0	1
Data processing, hosting and related activities; web portals	13,855	0.02	0.13	0	1
Scientific research and development	13,855	0.01	0.07	0	1
Employment activities	13,855	0.07	0.25	0	1
Public administration and defense, compulsory social activities	13,855	0.07	0.25	0	1
Education	13,855	0.08	0.27	0	1
Human Health and social Work activities	13,855	0.13	0.34	0	1

Water supply; sewerage; waste management and remediation activities	13,855	0.00	0.06	0	1
Activities of religious organizations	13,855	0.01	0.11	0	1
Arts, entertainment and recreation	13,855	0.02	0.14	0	1
Other service activities	13,855	0.01	0.10	0	1
Undifferentiated goods- and services	13,855	0.01	0.08	0	1
Other specialized wholesale	13,855	0.01	0.08	0	1
Other crafts	13,855	0.00	0.06	0	1
Other services activities	13,855	0.01	0.11	0	1
Activities of extraterritorial organizations and bodies	13,855	0.00	0.02	0	1
Other manufacturing	13,855	0.00	0.05	0	1
Firm Size					
Number of Employees = 0	13,542	0.04	0.19	0	1
Number of Employees 0 < x < 5	13,542	0.09	0.29	0	1
Number of Employees 4 < x < 11	13,542	0.09	0.29	0	1
Number of Employees 10 < x < 20	13,542	0.08	0.27	0	1
Number of Employees 19 < x < 100	13,542	0.18	0.39	0	1
Number of Employees 99 < x < 200	13,542	0.09	0.29	0	1
Number of Employees 199 < x < 2000	13,542	0.20	0.40	0	1
Number of Employees > 1999	13,542	0.23	0.42	0	1
Increasing Number of Employees	10,551	0.19	0.39	0	1
Const. Number of Employees	10,551	0.54	0.50	0	1
Decreasing Number of Employees	10,551	0.17	0.37	0	1
Status and Position					
Full-Time Employment	24,113	0.37	0.48	0	1
Part-Time Employment	24,113	0.12	0.33	0	1
Training	24,113	0.03	0.16	0	1
Insignificant Employment	24,113	0.06	0.24	0	1
Current Job equals Profession	13,876	0.53	0.50	0	1
Never Learnt a Profession	13,876	0.07	0.26	0	1
No Training is Necessary	13,932	0.28	0.45	0	1
Training is Necessary	13,932	0.49	0.50	0	1
Bachelor Degree Necessary	13,932	0.09	0.29	0	1
Master Degree Necessary	13,932	0.14	0.34	0	1
Unskilled Worker	24,113	0.03	0.17	0	1
Semiskilled Worker	24,113	0.06	0.23	0	1
Skilled Worker	24,113	0.05	0.21	0	1
Foreman	24,113	0.01	0.09	0	1
Master, Senior Foreman	24,113	0.00	0.05	0	1
Lower-Level Civil Servant	24,113	0.00	0.03	0	1
Mid-Level Civil Servant	24,113	0.01	0.08	0	1
Higher-Level Civil Servant	24,113	0.02	0.13	0	1
Highest-Level Civil Servant	24,113	0.01	0.10	0	1
Technical Training	24,113	0.02	0.13	0	1
Commercial Training	24,113	0.01	0.09	0	1
Internship	24,113	0.00	0.06	0	1
Industrial Supervisor	24,113	0.00	0.05	0	1
Unskilled Clerk	24,113	0.04	0.20	0	1
Skilled Clerk	24,113	0.05	0.21	0	1
Qualified Task	24,113	0.13	0.34	0	1
Highly Qualified Task	24,113	0.08	0.27	0	1
Executive Function	24,113	0.01	0.09	0	1
Civil Service	12,514	0.24	0.43	0	1
Interim Staffing	12,508	0.03	0.17	0	1
Time Limitation	12,535	0.17	0.38	0	1
No Employment Contract	12,535	0.04	0.20	0	1
Span of Control	24,113	2.43	38.50	0	3,500
Top Management	24,113	0.02	0.13	0	1

Middle Management	24,113	0.03	0.16	0	1
Lowe Management	24,113	0.05	0.22	0	1
High Qualified Specialist	24,113	0.03	0.16	0	1
Difficulty Finding Comparable Job: Easy	10,559	0.31	0.46	0	1
Difficulty Finding Comparable Job: Difficult	10,559	0.51	0.50	0	1
Difficulty Finding Comparable Job: Impossible	10,559	0.18	0.39	0	1
Commuting and Working Hours					
Workplace at Residence	10,726	0.48	0.50	0	1
Daily Commuting	24,113	0.20	0.40	0	1
Weekly Commuting	24,113	0.02	0.14	0	1
Rarely Commuting	24,113	0.01	0.08	0	1
Changing Workplace	24,113	0.04	0.19	0	1
Workplace at Home	24,113	0.03	0.17	0	1
Distance Workplace (in km)	24,113	10.42	38.17	0	999
Preferred Work Times	10,542	33.65	10.59	0	100
No Contractually Agreed Working Hours	24,113	0.10	0.30	0	1
Contractually Agreed Working Hours	13,799	34.11	12.49	1	99
Average Working Hours	13,751	36.75	13.77	1	99
Income, Incentives and Fairness					
Fair Income	13,893	0.62	0.49	0	1
Net Income	13,201	1649.13	1358.85	0	37,000
Job in East Germany (without Berlin)	24,113	0.10	0.30	0	1
Job Abroad	24,113	0.00	0.05	0	1
Secondary Employment at Family's Business	24,113	0.00	0.06	0	1
Regular Secondary Employment	24,113	0.03	0.16	0	1
Irregular Secondary Employment	24,113	0.02	0.15	0	1
13th Salary	24,113	190.46	824.25	0	17,000
14th Salary	24,113	18.42	272.10	0	8,000
Christmas Bonus	24,113	201.34	633.52	0	10,000
Holiday Pay	24,113	124.06	473.26	0	10,000
Profit-sharing	24,113	379.00	7745.76	0	999,999
Other Bonuses	24,113	20.96	378.91	0	30,000
Fare	24,113	13.83	190.60	0	12,000
Company Pension Scheme: Yes	24,113	0.16	0.37	0	1
Getting Supplementary Pension at the Moment	24,113	0.05	0.22	0	1
Career Development					
Probability to Lose Job	10,759	17.33	24.59	0	100
Probability to Get Promoted	10,711	16.35	25.20	0	100
Probability to Become a Freelancer	9,663	5.79	16.62	0	100
Probability to Look for a Completely New Job	10,773	12.44	24.42	0	100
Probability to Give up Job	10,771	9.81	22.70	0	100
Probability to Get Demoted	10,718	7.66	17.25	0	100
Probability to Get Retired	10,126	6.38	20.99	0	100
Probability to Change Working Hours Significantly	10,748	12.55	24.38	0	100
Probability to Attend Courses/Training	10,764	38.87	36.96	0	100
Probability to Receive Increase in Salary	10,665	16.82	26.88	0	100
Health					
Weak Restrictions on Health	24,113	0.23	0.42	0	1
Strong Restrictions on Health	24,113	0.09	0.29	0	1
Restrictions on Health > 6 Months	24,113	0.30	0.46	0	1
Disability	24,012	0.12	0.33	0	1
Sick Days	14,614	10.82	31.30	0	365
Absent Days because of Child	24,113	0.20	1.74	0	90
Absent Days Personal Reasons	24,113	0.03	0.16	0	1
Political Orientation					
Permanent Political Inclination	23,928	0.42	0.49	0	1
Strength Inclination: Worker Party (SPD)	24,047	0.33	0.90	0	5

Strength Inclination: Conservatives (CDU)	24,053	0.35	0.93	0	5
Strength Inclination: Conservatives (CSU)	24,095	0.06	0.42	0	5
Strength Inclination: Liberal Party (FDP)	24,110	0.03	0.28	0	5
Strength Inclination: Green Party (Gruene)	24,102	0.15	0.63	0	5
Strength Inclination: Left Wing Party (Linke)	24,104	0.06	0.39	0	5
Strength Inclination: Right Wing Party (DVU, NPD, etc.)	24,111	0.01	0.13	0	5
Concern Economy	19,058	1.99	0.60	1	3
Concern Own Economic Situation	24,004	2.19	0.69	1	3
Concern Stability Finance Markets	18,999	1.86	0.68	1	3
Concern Inflation	18,993	1.99	0.69	1	3
Concern Health	24,027	2.16	0.70	1	3
Concern Environment	19,047	1.89	0.63	1	3
Concern Climate Change	19,042	1.94	0.67	1	3
Concern Peace	19,045	1.87	0.68	1	3
Concern Terrorism	19,035	1.88	0.69	1	3
Concern Criminality	19,047	1.89	0.70	1	3
Concern Migration	19,033	2.16	0.75	1	3
Concern Xenophobia	23,965	2.12	0.68	1	3
Concern Stability Euro	19,034	1.89	0.69	1	3
Concern Stability Employment	14,836	2.47	0.68	1	3
Demographics					
Duration of Employment	14,008	10.37	10.42	0	64
Sex	19,149	0.47	0.50	0	1
Age	19,149	52.35	17.88	18	103
Unmarried	24,077	0.24	0.43	0	1
Divorced	24,077	0.08	0.27	0	1
German as Mother Tongue	19,123	0.91	0.29	0	1
Speaking German	23,669	0.49	0.94	0	5
Writing German	23,667	0.55	1.08	0	5
Reading German	23,664	0.49	0.97	0	5
Personality Traits					
Trust in Others	18,910	2.31	0.65	1	4
Count on Others	18,893	2.67	0.75	1	4
Reserved to Strangers	18,897	1.72	0.72	1	4
Thorough Worker	19,020	6.16	0.99	1	7
Communicative, Talkative	19,039	5.55	1.30	1	7
Sometimes a Bit Rude to Ohers	19,019	3.04	1.67	1	7
Coming Up with New Ideas	18,992	4.67	1.39	1	7
Worrier	19,040	4.24	1.68	1	7
Forgiving	19,042	5.43	1.32	1	7
Lazy	18,997	2.46	1.59	1	7
Outgoing, Sociable	19,024	5.15	1.41	1	7
Valuing Artistic, Aesthetic Experiences	18,939	4.25	1.83	1	7
Nervous	19,019	3.65	1.69	1	7
Effective and Efficient in Completing Tasks	19,004	5.79	1.08	1	7
Reserved to Strangers	19,029	4.13	1.59	1	7
Considerate and Kind to Others	19,035	5.80	1.06	1	7
Imaginative	19,014	4.83	1.50	1	7
Relaxed	19,036	4.59	1.48	1	7
Eager of Knowledge	19,045	5.48	1.26	1	7
Patience	19,114	6.18	2.34	0	10
Openness to Risk	24,059	4.52	2.49	0	10
Impulsivity	19,107	5.18	2.21	0	10

Own Calculations. Data: SOEP (2015).

Table 1: Descriptive Statistics

Heeding the call for better empirical and conceptual explanations of turnover behavior, this study analyzes an upstream step of withdrawal behavior. Our study addresses the intention of voluntary withdrawal. In our data set, we find this intention in the variable "probability of voluntary withdrawal". The underlying question for this variable was: "How likely is it that you will experience the following career changes within the next two years? Please estimate the probability on a scale of 0 to 100, with 0 meaning that such a change definitely will not take place, and 100 meaning that such a change definitely will take place. Will you seek a new job on your own initiative?" (SOEP (2015): Individual Questionnaire 2013, Question 79). As Table 2 highlights for a first overview, voluntary turnover varies markedly among industries and job positions. This indicates that job characteristics may have an influence on the individual's decision whether or not to quit their job.

Differences Regarding Industry

	Obs	Mean	Std. Dev.	Min	Max
For the whole dataset	10814	23.3	32.8	0	100
Crop and animal production, hunting and related service activities	140	17.1	27.0	0	100
Forestry and logging	24	21.7	32.3	0	100
Fishing and aquaculture	1	0.0		0	0
Mining of coal and lignite	9	6.7	11.2	0	30
Extraction of crude petroleum	5	20.0	44.7	0	100
Other mining and quarrying	1	0.0		0	0
Manufacture of food products	207	24.5	33.0	0	100
Manufacture of tobacco products	1	0.0		0	0
Manufacture of textiles	37	20.0	30.4	0	100
Manufacture of wearing apparel	15	20.7	29.9	0	100
Manufacture of leather and related products	5	24.0	43.4	0	100
Manufacture of wood and products of wood and cork; except furniture; manufacture of articles of straw and plaiting materials	33	33.3	37.1	0	100
Manufacture of paper and paper products	39	9.5	21.9	0	100
Printing of reproduction of recorded media	125	25.2	32.4	0	100
Manufacture of coke and refined petroleum products	1	0.0		0	0
Manufacture of chemicals and chemical products	205	23.1	31.4	0	100
Manufacture of rubber and plastic products	67	19.6	31.2	0	100
Manufacture of other non-metallic mineral products	50	21.8	28.3	0	100
Manufacture of basic metals	40	17.0	28.7	0	100
Manufacture of fabricated metal products, except machinery and equipment	323	19.5	28.3	0	100
Manufacture of computer, electronic and optical products	285	26.1	33.8	0	100
Manufacture of electrical equipment	4	45.0	52.6	0	100
Manufacture of machinery and equipment n.e.c.	233	21.5	28.0	0	100
Construction of utility projects for electricity and telecommunications	48	19.0	24.6	0	100
Manufacture of medical and dental instruments and supplies	84	21.2	27.1	0	100
Manufacture of motor vehicles, trailers and semi-trailers	327	23.5	32.9	0	100
Manufacture of other transport equipment	32	25.3	30.4	0	100
Manufacture of furniture	38	16.1	29.1	0	100
Repair and installation of machinery and equipment	9	17.8	25.9	0	70
Electricity, gas, steam and air conditioning supply	96	27.4	35.9	0	100
Water collection, treatment and supply	15	5.3	11.3	0	30
Construction of buildings	511	21.4	30.4	0	100
Wholesale and retail trade and repair of motor vehicles and motorcycles	92	25.2	35.3	0	100
Wholesale trade, except of motor vehicles and motorcycles	156	22.1	31.2	0	100
Retail trade, except of motor vehicles and motorcycles	954	26.3	34.7	0	100
Catering and hotel industry	320	37.0	39.8	0	100
Land transport and transport via pipelines	199	18.9	29.3	0	100
Water transport	6	18.3	40.2	0	100

Air transport	24	25.4	34.6	0	100
Warehousing and support activities for transportation	132	27.2	37.5	0	100
Postal and courier activities	182	22.0	30.9	0	100
Financial service activities, except insurance and pension funding	257	17.7	27.1	0	100
Insurance, reinsurance and pension funding, except compulsory social security	114	15.7	27.8	0	100
Other Insurance, reinsurance, and finance	17	11.2	26.0	0	100
Services to buildings and landscape activities	129	19.4	30.1	0	100
Rental and leasing activities of motor vehicles	10	49.0	43.3	0	100
Data processing, hosting and related activities; web portals	196	29.1	32.5	0	100
Scientific research and development	59	43.9	41.2	0	100
Employment activities	645	28.5	34.3	0	100
Public administration and defense, compulsory social activities	843	14.8	28.8	0	100
Education	928	24.3	34.9	0	100
Human Health and social Work activities	1458	24.1	32.7	0	100
Water supply; sewerage; waste management and remediation activities	47	16.6	27.7	0	100
Activities of religious organizations	148	23.4	33.8	0	100
Arts, entertainment and recreation	212	32.4	37.7	0	100
Other service activities	98	15.5	28.1	0	100
Undifferentiated goods- and services-producing activities of private households for own use	51	29.2	35.2	0	100
Other specialized wholesale	63	20.3	28.3	0	100
Other crafts	41	19.0	29.9	0	100
Other services activities	131	23.4	34.6	0	100
Activities of extraterritorial organizations and bodies	5	44.0	45.6	0	100
Other manufacturing	24	25.0	30.5	0	100

Differences Regarding Position

	Obs	Mean	Std. Dev.	Min	Max
For the whole dataset	10814	23.3	32.8	0	100
Semiskilled Worker	802	23.5	32.5	0	100
Skilled Worker	938	20.2	29.8	0	100
Master, Senior Foreman	56	24.1	29.0	0	100
Unskilled Worker	388	33.4	39.4	0	100
Foreman	150	17.1	25.6	0	100
Commercial Training	136	43.7	39.5	0	100
Technical Training	239	44.0	41.3	0	100
Internship	62	76.9	37.7	0	100
Executive Function	164	16.3	27.9	0	100
Highly Qualified Task	1552	27.6	32.4	0	100
Skilled Clerk	903	24.6	32.7	0	100
Unskilled Clerk	645	32.7	39.1	0	100
Qualified Task	2623	21.7	30.9	0	100
Industrial Supervisor	59	16.6	25.4	0	100
Lower-Level Civil Servant	20	20.0	31.5	0	100
Higher-Level Civil Servant	378	14.6	27.6	0	100
Highest-Level Civil Servant	212	9.1	22.5	0	100
Mid-Level Civil Servant	161	13.5	28.1	0	100

Own Calculations. Data: SOEP (2015).

Table 2: The Potential Impact of Industries and Positions on Voluntary Turnover

According to the meta-review of Holtom et al. (2008) and the latest developments in conceptual research (Hom et al. (2012)), analyzing the withdrawal intention might be a valuable and timely contribution for gaining a better understanding of withdrawal behavior. We attempt to explain the employee's intention to quit the job voluntarily by considering factors such as perceived alternatives and general job availability/unemployment as explanatory variables that may also influence the withdrawal cognition. Thus, we follow the

conceptual approach of Hom et al (2012; p. 838; Figure 1) rather than the approach of Holtom et al. (2008; p. 244; Figure 5.5) that regards such factors as influencing the withdrawal behavior and not the withdrawal cognition.

2.2 Findings

Our empirical evaluation starts with a correlation analysis. We correlate the explanatory variables with the dependent variable "probability of voluntary withdrawal". Many of the explanatory variables slightly correlate with the probability of voluntary withdrawal on a statistically significant level (see Table 2). Compared to other empirical studies, we present a much greater number of about 250 explanatory variables. These variables consider various potential factors that may influence withdrawal behavior. As Table 2 illustrates, we consider subjective and objective factors regarding (a) satisfaction, (b) industry, (c) firm size, (d) status and position, (e) commuting and working hours, (f) income, incentives and fairness, (g) career development, (h) health, (j) political orientation, (k) demographics, and (l) personality traits. Compared to other empirical studies and, as required by the latest meta-studies (Holtom et al. (2008; pp. 256-264), Rubenstein et al. (forthcoming; p. 21)), we can control for dynamic effects (e. g., changes of satisfaction, development of the size of the workforce), personality traits, a broad number of demographic factors (e. g., native speaker, marriage, age, sex), political interests and a large number of status and position variables (e. g., education, training, career level, etc.).

Correlations with/ Estimation of the Probability of Voluntary Withdrawal	**Correlations**	**Regression Block by Block**	**Comprehensive Regression**	**Reduced Regression I**	**Reduced Regression II**
Satisfaction					
Satisfaction Health	-0.0101	2.5408 ***	0.7914 **	0.5842 **	0.6569 **
Satisfaction Sleep	-0.0375 *	0.5845 **	0.3800 *	0.2395	0.2327
Satisfaction Work	-0.3016 *	-5.4090 ***	-3.6990 ***	-3.4438 ***	-3.5883 ***
Satisfaction Household Tasks	-0.0494 *	1.0271 ***	0.5534 **	0.6116 **	0.6206 **
Satisfaction Household Income	-0.1569 *	0.5107	0.0370		
Satisfaction Personal Income	-0.2231 *	-2.6519 ***	-0.5294	-0.4425 *	-0.3781
Satisfaction Flat	-0.1177 *	-0.7332 **	0.0319		
Satisfaction Free Time	-0.0668 *	0.1341	0.6371 ***	0.5135 **	0.5861 ***
Satisfaction Family Life	-0.0914 *	-0.5098	0.0381		
Satisfaction Standard of Living	-0.1258 *	0.4205	0.0639		
Satisfaction Health One Year Ago	0.0130				
Satisfaction Sleep One Year Ago	-0.0178				
Satisfaction Work One Year Ago	-0.1790 *				
Satisfaction Household Tasks One Year Ago	-0.0380 *				
Satisfaction Household Income One Year Ago	-0.1271 *				
Satisfaction Personal Income One Year Ago	-0.1806 *				
Satisfaction Flat One Year Ago	-0.1058 *				
Satisfaction Free Time One Year Ago	-0.0354 *				
Satisfaction Family Life One Year Ago	-0.0865 *				
Change Satisfaction Health	-0.0313 *	-1.1889 ***	-0.3520	-0.2023	-0.2429
Change Satisfaction Sleep	-0.0248 *	-0.0827	-0.1126	0.0286	0.0642
Change Satisfaction Work	-0.1314 *	0.7497 ***	0.4228 *	0.2323	0.3212

Change Satisfaction Household Tasks	-0.0231	*	-0.3287		-0.1788		-0.1249		-0.1898			
Change Satisfaction Household Income	-0.0320	*	-0.5982		0.0735							
Change Satisfaction Personal Income	-0.0335	*	1.1001	***	-0.1607		-0.0857		-0.1996			
Change Satisfaction Flat	-0.0222	*	0.2233		-0.0901							
Change Satisfaction Free Time	-0.0372	*	-0.1878		-0.4280	*	-0.3708	*	-0.4464	**		
Change Satisfaction Family Life	-0.0137		0.3177		0.3821		0.3131		0.3817	*		
Satisfaction Life	-0.1474	*	-4.0125	***	-1.4778	***	-1.3264	***	-1.3130	***		
Satisfaction Life in One Year	-0.0470	*	1.6822	**	0.8282		0.5543		0.6341			
Satisfaction Life in Fife Years	0.0395	*	2.7336	***	0.4029		0.5086		0.3724			
Constant			47.1446	***								
Number of Observations			6497									
R^2			0.1587									
R^2 adjusted			0.1558									
F Value			43.9012									
Log Likelihood			-31000									
Industry												
Crop and animal production, hunting and related service activities	-0.0226	*			-0.8451		0.2254		0.5043			
Forestry and logging	-0.0026				-4.7270		-3.6687		-4.3702			
Fishing and aquaculture	-0.0070				(omitted)							
Mining of coal and lignite	-0.0150				0.4646		0.8761		0.7224			
Extraction of crude petroleum	-0.0023				-3.5559		-5.0609		-2.6269			
Other mining and quarrying	-0.0070				-6.6087		-9.4759	**	-7.7138	*		
Manufacture of food products	0.0046				0.6043		1.2346		1.7689			
Manufacture of tobacco products	-0.0070				(omitted)							
Manufacture of textiles	-0.0063				-8.3848		-8.9382	*	-7.5349			
Manufacture of wearing apparel	-0.0032				4.6875		5.6753		5.7812			
Manufacture of leather and related products	0.0004				-17.7679	***	-17.8776	***	-16.5951	***		
Manufacture of wood and products of wood and cork	0.0168				-2.3252		-5.3852		-2.9630			
Manufacture of paper and paper products	-0.0260	*			-3.4133		-3.2364		-2.6779			
Printing of reproduction of recorded media	0.0058				-1.9590		-1.6893		-0.9491			
Manufacture of coke and refined petroleum products	-0.0070				-2.0871							
Manufacture of chemicals and chemical products	-0.0015				2.1879		2.2554		2.3875			
Manufacture of rubber and plastic products	-0.0095				-4.1533		-4.2232		-4.0371			
Manufacture of other non-metallic mineral products	-0.0035				-1.0888		-0.0407		-0.3535			
Manufacture of basic metals	-0.0122				2.0661		3.1861		2.7398			
Manufacture of fabricated metal products	-0.0216	*			-1.0188		-0.8298		-0.8402			
Manufacture of computer, electronic and optical products	0.0134				-1.8484		-0.2995		-0.3088			
Manufacture of electrical equipment	0.0128				-13.4132	*	-14.8128	**	-11.7909	*		
Manufacture of machinery and equipment n.e.c.	-0.0092				-3.7493		-1.2382		-1.2654			
Construction of utility projects for electricity and telecommunications	-0.0093				-2.8213		-3.1068		-2.5912			
Manufacture of medical and dental instruments and supplies	-0.0062				-8.8982		-6.6653	*	-7.4894	*		
Manufacture of motor vehicles, trailers and semi-trailers	0.0002				-2.3165		-1.2758		-1.3250			
Manufacture of other transport equipment	0.0031				-4.9231		-2.6362		-3.0476			
Manufacture of furniture	-0.0136				-8.1005		-6.4980		-6.1250			

Repair and installation of machinery and equipment	-0.0051			-10.9229		-8.2102		-9.6808	
Electricity, gas, steam and air conditioning supply	0.0115			-5.3887		-4.1422		-4.8025	
Water collection, treatment and supply	-0.0209	*		-3.5995		-2.7166		-3.0564	
Construction of buildings	-0.0139			-3.6568		-3.4134		-2.7995	
Wholesale and retail trade and repair of motor vehicles	0.0050			-3.1752		-3.8528		-3.1573	
Wholesale trade, except of motor vehicles and motorcycles	-0.0053			-0.3107		-0.3642		0.1940	
Retail trade, except of motor vehicles and motorcycles	0.0274	*		-3.1289		-3.0465		-2.5044	
Catering and hotel industry	0.0729	*		-0.3486		0.1998		0.5787	
Land transport and transport via pipelines	-0.0191	*		-3.1770		-2.9001		-2.2924	
Water transport	-0.0037			-0.5753		-3.7630		-1.5034	
Air transport	0.0028			-9.4220		-6.8876		-7.3234	
Warehousing and support activities for transportation	0.0128			-1.3502		-0.1877		-0.5914	
Postal and courier activities	-0.0058			-1.3606		-1.1783		-1.2379	
Financial service activities, except insurance and pension funding	-0.0278	*		-5.2606		-3.4501		-3.5188	
Insurance, reinsurance and pension funding	-0.0247	*		-6.0734		-4.3068		-3.5017	
Other Insurance, reinsurance, and finance	-0.0150			(omitted)					
Services to buildings and landscape activities	-0.0139			2.2146		-0.3336		0.7789	
Rental and leasing activities of motor vehicles	0.0240	*		-14.2146	**	-12.6850	***	-10.7289	**
Data processing, hosting and related activities; web portals	0.0237	*		-0.6154		0.0826		-0.0179	
Scientific research and development	0.0467	*		0.5647		1.4820		0.8633	
Employment activities	0.0393	*		0.3435		1.0768		1.2235	
Public administration and defence, compulsory social activities	-0.0776	*		-2.8738		-2.2999		-2.4919	
Education	0.0082			-2.7500		-1.4665		-1.6012	
Human Health and social Work activities	0.0080			0.2214		0.0035		0.3495	
Water supply; sewerage; waste management and remediation activities	-0.0140			0.0009					
Activities of religious organizations	-0.0003			-2.3475		-2.0979		-1.1267	
Arts, entertainment and recreation	0.0388	*		-4.5234		-2.3926		-2.2179	
Other service activities	-0.0235	*		-9.2849		-8.0051	*	-9.1923	**
Undifferentiated goods- and services	0.0122			-3.2969		-0.0902		1.3715	
Other specialized wholesale	-0.0074			-6.6288		-6.3540		-5.7988	
Other crafts	-0.0085			-7.9814		-7.6979		-7.3113	
Other services activities	-0.0001			-2.4744		-1.9280		-2.0700	
Activities of extraterritorial organizations and bodies	0.0136			7.2596		9.5326		7.9139	
Other manufacturing	0.0022			-0.1547		-0.9097		-0.4052	
Firm Size									
Number of Employees = 0	-0.0356	*		-71.5903	***	-7.9611		-10.1921	
Number of Employees 0 < x < 5	-0.0263	*		0.8392		1.2311		1.1692	
Number of Employees 4 < x < 11	0.0277	*		0.1111		0.4182		0.4245	
Number of Employees 10 < x < 20	0.0406	*		0.2678		0.5606		0.6216	
Number of Employees 19 < x < 100	0.0432	*		1.6426		1.9466		1.9234	
Number of Employees 99 < x < 200	0.0019								
Number of Employees 199 < x < 2000	-0.0136			-0.3087		0.1843		0.0217	
Number of Employees > 1999	-0.0344	*		0.8904		1.6015		1.2653	
Increasing Number of Employees	0.0153								

Const. Number of Employees	-0.0859	*				0.7918			0.9078			0.9292	
Decreasing Number of Employees	0.0277	*				0.1567			0.5008			0.5427	
Status and Position													
Full-Time Employment	-0.0949	*				23.0880	***		20.4988	***		21.5426	***
Part-Time Employment	-0.0202	*				20.3938	***		18.9843	***		19.5251	***
Training	0.1240	*				-1.5378							
Insignificant Employment	0.1322	*				24.3698	***		23.2815	***		22.8633	***
Current Job equals Profession	-0.0915	*				1.1279			1.3251			1.2346	
Never Learnt a Profession	0.0806	*				1.6162			1.2774			1.3471	
No Training is Necessary	0.0777	*				0.2482			-0.4190			0.2193	
Training is Necessary	-0.0717	*											
Bachelor Degree Necessary	-0.0250	*				1.8401			2.3097	*		1.9439	
Master Degree Necessary	0.0323	*				5.4213	***		7.0823	***		6.2916	***
Unskilled Worker	0.0597	*				4.4532	**		5.3207	**		4.8078	**
Semiskilled Worker	0.0019												
Skilled Worker	-0.0290	*				-0.5185			-0.7728			-0.6576	
Foreman	-0.0225	*				-0.8458			-0.6815			-0.7715	
Master, Senior Foreman	0.0018												
Lower-Level Civil Servant	-0.0043												
Mid-Level Civil Servant	-0.0366	*				5.0657			5.5048	*		5.4577	*
Higher-Level Civil Servant	-0.0507	*				2.6751			3.9154			3.1189	
Highest-Level Civil Servant	-0.0615	*				-2.0549			-3.5711			-2.8753	
Technical Training	0.0949	*				41.6861	**		35.2411	***		36.0178	***
Commercial Training	0.0702	*				33.9173	**		32.3929	***		32.0625	***
Internship	0.1244	*				31.2231	***		27.1734	***		26.2372	***
Industrial Supervisor	-0.0151												
Unskilled Clerk	0.0724	*				-0.2474			0.1455			-0.1534	
Skilled Clerk	0.0123												
Qualified Task	-0.0279	*				2.2131	**		2.6995	***		2.6764	***
Highly Qualified Task	0.0532	*				4.0300	**		3.5497	**		4.0313	***
Executive Function	-0.0263	*				3.5089			3.2524			3.6213	
Civil Service	-0.0864	*				0.3444			0.3654			0.3196	
Interim Staffing	0.1007	*				-1.6906			-1.9081			-1.2081	
Time Limitation	0.2871	*				4.6904	***		4.6689	***		4.2494	***
No Employment Contract	0.0257	*				1.6549			1.0548			1.2338	
Span of Control	-0.0229	*				-0.0050	**					-0.0048	**
Top Management	-0.0810	*				-5.8124			-3.7775			-3.4586	
Middle Management	-0.0330	*				-0.8701			-0.5361			-0.7410	
Lower Management	-0.0330	*				-2.3701	**		-0.8639			-1.5435	
High Qualified Specialist	0.0191	*				0.7596			1.5017			1.2032	
Difficulty Finding Comparable Job: Easy	0.1876	*				2.5298	***		2.4770	***		2.5482	***
Difficulty Finding Comparable Job: Difficult	-0.0162												
Difficulty Finding Comparable Job: Impossible	-0.2040	*				-2.7070	***		-2.7865	***		-2.5589	***
Commuting and Working Hours													
Workplace at Residence	-0.0087		-4.7026			-7.5049			-6.5183			-7.8683	
Daily Commuting	-0.0225	*	-6.5673			-7.4069			-6.0027			-7.5261	
Weekly Commuting	0.0686	*	0.1487			-6.3459			-3.2419			-4.0836	
Rarely Commuting	0.0338	*	-3.2684			-2.0582			-0.3835			-1.8600	
Changing Workplace	0.0178		1.2987			-0.1719			0.0118			-0.9817	
Workplace at Home	-0.0820	*	-11.5632	***		-3.3146	*		-3.4431	*		-4.2539	**
Distance Workplace (in km)	0.0568	*	0.0255	***		0.0110							
Preferred Work Times	0.0002		0.3873	***		0.0989	*					0.1272	**
No Contractually Agreed Working Hours	-0.0108		1.6052			-0.6505			-0.4117			-0.3464	
Contractually Agreed Working Hours	-0.0891	*	-0.6045	***		-0.1759	*		-0.0488			-0.1252	*

Average Working Hours	-0.0674 *	0.1421 *	0.0141		
Constant		30.9129 ***			
Number of Observations		10309			
R^2		0.0272			
R^2 adjusted		0.0262			
F Value		27.8137			
Log Likelihood		-50000			
Income, Incentives and Fairness					
Fair Income	-0.1589 *	-9.3312 ***	-3.9004 ***	-3.6818 ***	-3.8345 ***
Net Income	-0.1557 *	-0.0028 ***	0.0007		
Job in East Germany (without Berlin)	-0.0130	-3.9790 ***	-3.0911 ***	-2.8540 ***	-3.0657 ***
Job Abroad	0.0398 *	23.0450 ***	16.7299 ***	15.2769 **	16.7069 ***
Secondary Employment at Family's Business	0.0118	5.5028	4.2768	1.7257	3.0637
Regular Secondary Employment	0.0177	2.3749	1.6917	2.6393	2.6292
Irregular Secondary Employment	0.0490 *	8.7061 ***	1.6630	3.2532	2.4444
13th Salary	-0.0559 *	-0.0008 ***	-0.0003		
14th Salary	-0.0203 *	0.0000	-0.0007		
Christmas Bonus	-0.0990 *	-0.0029 ***	-0.0007 *		-0.0004
Holiday Pay	-0.0546 *	0.0008	0.0006		
Profit-sharing	-0.0182	0.0000	0.0000		
Other Bonuses	0.0087	0.0015 **	0.0018 *		0.0019 *
Fare	0.0077	0.0019 *	0.0014		
Company Pension Scheme: Yes	-0.1073 *	-4.4648 ***	0.2907	0.1568	0.0864
Getting Supplementary Pension at the Moment	-0.0483 *	-22.2975 ***	-5.5716	-6.1093	-6.7530
Constant		37.4963 ***			
Number of Observations		9985			
R^2		0.0636			
R^2 adjusted		0.0621			
F Value		45.6611			
Log Likelihood		-49000			
Career Development					
Probability to Lose Job	0.4078 *	0.2866 ***	0.2187 ***	0.2240 ***	0.2245 ***
Probability to Get Promoted	0.1765 *	0.0606 ***	-0.0044		
Probability to Become a Freelancer	0.2856 *	0.1290 ***	0.1117 ***	0.1190 ***	0.1017 ***
Probability to Look for a Completely New Job	0.6130 *	0.6417 ***	0.4803 ***	0.4947 ***	0.4746 ***
Probability to Give up Job	0.1291 *	0.0094	0.0057		
Probability to Get Demoted	0.2131 *	-0.0370 *	-0.0093		
Probability to Get Retired	-0.1033 *	-0.1444 ***	-0.0473 **		-0.0517 ***
Probability to Change Working Hours Significantly	0.3177 *	0.1002 ***	0.0546 ***		0.0733 ***
Probability to Attend Courses/Training	0.2033 *	0.0746 ***	0.0356 ***		0.0336 ***
Probability to Receive Increase in Salary	0.1452 *	0.0154	0.0107		
Constant		5.5741 ***			
Number of Observations		9035			
R^2		0.4501			
R^2 adjusted		0.4495			
F Value		665.8521			
Log Likelihood		-42000			
Health					
Weak Restrictions on Health	-0.0311 *	2.3680	2.4497	1.8994	1.6250
Strong Restrictions on Health	-0.0117	3.2360	-0.6669	-1.4368	-1.0774
Restrictions on Health > 6 Months	-0.0395 *	-3.5395	-0.7160	-0.4014	-0.0929
Disability	-0.0717 *	-8.8803 ***	-1.2678	-1.1547	-0.9743

Sick Days	0.0186	0.0405 ***	0.0266		
Absent Days because of Child	0.0226 *	0.3470 *	0.5114 **	0.4960 **	0.5029 **
Absent Days Personal Reasons	0.0423 *	7.2700 ***	-0.9631	-1.3951	-1.5098
Constant		23.1936 ***			
Number of Observations		10318			
R^2		0.0086			
R^2 adjusted		0.0079			
F Value		14.6699			
Log Likelihood		-51000			
Political Orientation					
Permanent Political Inclination	-0.0333 *	-1.7339	0.5150	0.2058	0.1280
Strength Inclination: Worker Party (SPD)	-0.0094	0.5269	0.8630	0.9175 **	0.9569 **
Strength Inclination: Conservatives (CDU)	-0.0645 *	-0.4875	-0.0439		
Strength Inclination: Conservatives (CSU)	-0.0299 *	-0.9130	0.0680		
Strength Inclination: Liberal Party (FDP)	0.0075	1.9343	3.9051 **	3.5168 **	3.8417 **
Strength Inclination: Green Party (Gruene)	0.0472 *	1.6173 **	-0.5435	-0.2367	-0.4315
Strength Inclination: Left Wing Party (Linke)	0.0187	1.3284	-0.7382	-0.2679	-0.1639
Strength Inclination: Right Wing Party (DVU, NPD, etc.)	0.0178	5.8743 **	1.9189	1.2080	1.5634
Concern Economy	0.0182	-0.2474	0.3744	0.3574	0.4195
Concern Own Economic Situation	-0.1402 *	-7.0826 ***	-0.2462	-0.5047	-0.2146
Concern Stability Finance Markets	0.0859 *	2.7382 ***	-0.0831		
Concern Inflation	0.0718 *	1.6183 **	-0.2654	-0.3490	-0.3527
Concern Health	0.0016	3.3801 ***	0.6438	0.8899	0.6741
Concern Environment	-0.0162	-1.8052 **	-2.2860 ***	-2.3970 ***	-2.4179 ***
Concern Climate Change	-0.0023	-0.6203	0.8060	1.2614	1.1437
Concern Peace	0.0118	-1.7927 ***	0.5458	0.1693	0.5553
Concern Terrorism	0.0916 *	3.4055 ***	1.2845 *	1.6777 **	1.2983 *
Concern Criminality	0.0915 *	3.4915 ***	0.9190	0.8413	0.8762
Concern Migration	0.0658 *	1.0436 **	-0.0496		
Concern Xenophobia	0.0152	-1.0155 *	-0.5747	-0.6922	-0.6316
Concern Stability Euro	0.0698 *	1.8327 ***	0.5511	0.3372	0.3436
Concern Stability Employment	-0.1602 *	-7.2012 ***	0.4419	0.6904	0.7644
Constant		32.5793 ***			
Number of Observations		10135			
R^2		0.0708			
R^2 adjusted		0.0688			
F Value		35.6882			
Log Likelihood		-49000			
Demographics					
Duration of Employment	-0.3607 *	-0.6134 ***	-0.2386 ***	-0.2531 ***	-0.2275 ***
Sex	-0.0310 *	-0.5229	-0.6778	-0.4569	-0.4710
Age	-0.4055 *	-0.6257 ***	-0.3463 ***	-0.4043 ***	-0.3423 ***
Unmarried	0.2973 *	6.9234 ***	2.2016 **	2.2657 **	2.4456 **
Divorced	-0.0267 *	4.6892 ***	0.6819	1.2823	0.4919
German as Mother Tongue	-0.0472 *	-5.7579 **	0.3943	0.2464	0.2134
Speaking German	0.0176	-5.4729 **	0.1509	-0.3663	-0.4600
Writing German	0.0180	3.0065	1.7570	1.0669	1.3336
Reading German	0.0190 *	-1.2809	-3.1887	-1.7203	-1.8567
Constant		62.4465 ***			
Number of Observations		10655			
R^2		0.1986			
R^2 adjusted		0.1979			

F Value			305.2457							
Log Likelihood			-51000							
Personality Traits										
Trust in Others	0.0211	*	1.7051	***	0.3882		0.2311		0.4695	
Count on Others	0.0012		0.2215		-0.2944		-0.4246		-0.4540	
Reserved to Strangers	0.0441	*	1.9867	***	0.0580					
Thorough Worker	-0.0881	*	-1.0525	**	-0.4952		-0.4122		-0.5592	
Communicative, Talkative	-0.0123		-0.8167	**	0.1614		0.1907		0.2112	
Sometimes a Bit Rude to Ohers	0.0603	*	0.2216		0.0970					
Coming Up with New Ideas	0.0401	*	0.8759	***	0.5828	*	0.6678	**	0.6204	**
Worrier	0.0617	*	1.1993	***	-0.0888					
Forgiving	-0.0307	*	-0.4630	*	-0.2760		-0.3730		-0.3732	
Lazy	0.1391	*	2.3734	***	-0.3075		-0.2163		-0.2189	
Outgoing, Sociable	0.0164		0.2929		0.2694		0.2819		0.2901	
Valuing Artistic, Aesthetic Experiences	0.0193	*	-0.0033		0.1349		0.1392		0.1279	
Nervous	0.0663	*	0.3561		0.0022					
Effective and Efficient in Completing Tasks	-0.0772	*	-1.3533	***	-0.1814		-0.2993		-0.1940	
Reserved to Strangers	-0.0566	*	-1.1695	***	0.0236					
Considerate and Kind to Others	-0.0046		1.8224	***	-0.3451		-0.1872		-0.2022	
Imaginative	0.0500	*	0.1979		-0.2197		-0.2331		-0.1980	
Relaxed	-0.0767	*	-1.2698	***	0.2138		0.1405		0.2339	
Eager of Knowledge	0.0038		0.4734		0.8326	**	0.8363	***	0.6375	**
Patience	-0.0741	*	-0.4121	***	-0.0137					
Openness to Risk	0.0723	*	1.0384	***	0.1642		0.1815		0.1676	
Impulsivity	0.0451	*	-0.1024		0.1084		0.1573		0.1080	
Constant			12.8224	***	19.2633		24.5583	**	19.7214	*
Number of Observations			10467		4586		5193		4986	
R^2			0.0478		0.5514		0.5433		0.5440	
R^2 adjusted			0.0458		0.5287		0.5268		0.5262	
F Value			23.9055		24.2733		32.9369		30.4455	
Log Likelihood			-51000		-21000		-23000		-22000	

Note: The stars in the correlation column indicate a level of statistical significance < 0.1. The remaining stars indicate the following significance levels: * < 0.1, ** < 0.05 and *** < 0.01. The F Values of the three regressions on the right originate from the non-robust version of the regressions. Own Calculations. Data: SOEP (2015).

Table 3: Correlations and Regression Results

In the second step, to explain the probability of voluntary withdrawal, we conduct robust regressions of eight out of these eleven categories. We do not run regressions on the industry category, the firm size, and the status and position variables because all of these attributes are (more or less) binary. In addition, we do not consider the satisfaction variables of the prior year. Such a regression would result in problems of multicollinearity because of the high correlations between 2013's satisfactions and the prior year's satisfactions. Therefore, we consider only this year's satisfactions and the changes of satisfaction for acquiring the unique information of these particular developments. One central finding of these eight regressions is that fewer variables seem to have a statistically significant impact compared to the preceding correlations. Another finding – consistent with the literature (Hom and Griffeth (1995); Griffeth et al. (2000); Rubenstein et al. (forthcoming)) – is that these regressions fail to explain an appropriate amount of the total variance within our observations as the overall statistics reveal (R^2 is 13% on average).

A third robust regression considers all explanatory variables of our data set. This regression underlines the findings from the comparison of correlation analysis with the previous regressions. Many variables do not seem to have a statistically significant influence even if the above correlations indicate this. In addition, we find that the overall regression identifies less statistically significant parameters compared to the eight regressions of the previous step. In addition, the comprehensive regression is able to explain about 55% of the total variance within our observations. So far, we have not found estimations with a comparable explanatory power in the literature on voluntary turnover.

One reason for the declining number of statistically significant parameters may be that correlations and regressions, with a limited number of parameters, systematically overestimate strength of the parameters and their levels of significance. In econometric research, academics know this phenomenon as the omitted variable bias for long (Wooldridge (2013; pp. 88-93, 99)). This effect emerges if explanatory variables are missing in an empirical model. Consequently, the estimated parameters are biased just as the regression underestimates the variances of the estimated parameters. Thus, tests on statistical significance may assume statistically significant effects even if the "real" effect of the parameter (in a well-specified model) is statistically insignificant. Consequently, research on turnover may reveal spurious dependencies that only exist as statistical artifacts.

As a consequence, we argue that the present estimation with around 250 explanatory parameters is a valuable contribution for revealing the actual dependencies that determine the intentions of voluntary withdrawal. However, parameters that do not have any explanatory power may cause an over-specified model, in which case, we can estimate the explanatory parameters in an unbiased way, but the variances of the estimators may increase. Therefore, it may not be obvious that some parameters have a statistically significant effect because the tests on significance are biased.

We conduct two additional robust regressions to solve this issue The first regression excludes the parameters of the comprehensive estimation that have an absolute value of < 0.1. The second estimation only excludes parameters whose absolute values are below 0.1 and that are insignificant. Both regressions increase the number of observations from 4.600 to 5.200 and 5.000, respectively. The parameters of these two regressions reveal significance levels similar to the levels of the overall estimation. In addition, the strength of most parameters changes only slightly. Because of these similar findings, we assume that our overall estimation, just as in the two following regressions, are an empirically robust approach for revealing relevant parameters that influence the probability of voluntary withdrawal.

3. Discussion and Conclusion

The findings of our empirical analysis may encourage further research in the field of voluntary turnover. We recognize Holtom et al.'s (2008; p. 243) critique that this field lacks a unified view of turnover and Rubenstein et al.'s (forthcoming; p. 21) argument that empirical studies are inadequate to explain the reasons of turnover We, therefore, present a multi-factor regression analysis that enables us to estimate the impact of various factors simultaneously. As argued above, such a procedure reduces the consequences of the omitted variable bias. Such a bias may result in wrongly estimated parameters with misleading levels of significance. As our procedure – from simple correlations to the over-specified model – illustrates, basic correlations and regressions with few explanatory parameters

are vulnerable to this issue. Thus, previous research may over-estimate the influence and significance of various parameters.

Our comprehensive regression might be over-specified, and this may reduce the efficiency of the model but not the consistency of the regression. We tried to address the issue of over-specification in our last two regressions. These regressions reveal parameters and levels of significance that are similar to the findings of the comprehensive regression. This hints at a consistent and efficient approach. Another problem of our regression may be multicollinearity, which, however, is more likely an issue in datasets with few observations and less variety (Wooldridge (2013; pp. 94-98)). Regarding our regressions with about 5,000 heterogeneous individuals, we assume that multicollinearity is not a serious issue associated with our multi-factor estimations.

Finally, even our most comprehensive regression does not explain more than 55% of the variance. From our point of view, one reason might be that cross-effects between different explanatory variables might have mitigating or reinforcing effects (Will (2015; pp. 40-41)). As highlighted by conceptual literature reviews as well as empirical meta-analyses, (Holtom et al. (2008); Hom et al. (2012); Hom and Griffeth (1995); Griffeth et al. (2000); Rubenstein et al. (forthcoming)), cross-effects are barely researched in the field of turnover. Following our findings, these cross-effects might explain up to 45% of the variance. Thus, further developing conceptual and empirical research on the impact of cross-effects on turnover behavior might be a timely and worthwhile contribution.

Literature

Griffeth, Rodger W., Peter W. Hom, and Stefan Gaertner (2000): A Meta-Analysis of Antecedents and Correlates of Employee Turnover: Update, Moderator Tests, and Research Implications for the Next Millennium.

Hancock, Julie I., David G. Allen, Frank A. Bosco, Karen R. McDaniel, and Charles A. Pierce (2013): Meta-Analytic Review of Employee Turnover as a Predictor of Firma Performance, in: Journal of Management, Vol. 39, No. 3, pp. 573-603.

Hausknecht, John P., and Jacob A. Holwerda (2013): When Does Employee Turnover Matter? Dynamic Member Configurations, Productive Capacity, and Collective Performance, in: Organization Science, Vol. 24, No. 1, pp. 210-225.

Holtom, Brooks C., Terence R. Mitchell, Thomas W. Lee, and Marion B. Eberly (2008): Turnover and Retention Research: A Glance at the Past, a Closer Review of the Present, and a Venture into the Future, in: The Academy of Management Annals, Vol. 2, No. 1, pp. 231-274.

Hom, Peter W., and Rodger W. Griffeth (1995): Employee Turnover, South-Western College, Cincinnati.

Hom, Peter W., Terence R. Mitchell, Thomas W. Lee, and Rodger W. Griffeth (2012): Reviewing Employee Turnover: Focusing on Proximal Withdrawal States and an Expanded Criterion, in: Psychological Bulletin, Vol. 138, No. 5, pp. 831-858.

Park, Tae-Youn, and Jason D. Shaw (2013): Turnover Rates and Organizational Performance: A Meta-Analysis, in: Journal of Applied Psychology, Vol. 98, No. 2, pp. 268-309.

Rubenstein, Alex L., Marion B. Eberly, Thomas Lee and Terence R. Mitchell (forthcoming): Looking Beyond the Trees: A Meta-Analysis and Integration of Voluntary Turnover Research, an early version of this paper was presented at the 2015's AOM Meeting in Vancouver, Canada.

SOEP (2015): SOEP-Data 2013, Personenbefragung, Deutsches Institut für Wirtschaft Berlin, Berlin.

Sturman, Michael C., Lian Shao and Jan H. Katz (2012): The Effect of Culture on the Curvilinear Relationship Between Performance and Turnover, in: Journal of Applied Psychology, Vol. 97, No. 1, pp. 46-62.

Will, Matthias Georg (2015): Change Management gestalten: Pro-aktiv und im wechselseitigen Interesse Organisationen wandeln, Wissenschaftlicher Verlag Berlin, Berlin.

Wooldridge, Jeffrey M. (2013): Introductory Econometrics – A Modern Approach, 5th edition, South-Western Cengage Learning, Mason.

Diskussionspapiere[1]

Nr. 2017-01	**Matthias Georg Will** Voluntary Turnover: What We Measure and What It (Really) Means
Nr. 2016-09	**Carl Christian von Weizsäcker** Die Zukunft von Zuwanderung und Integration
Nr. 2016-08	**Ingo Pies** Hunger durch Agrarspekulation? – Zur Geschichte eines Fehl-Alarms
Nr. 2016-07	**Ingo Pies** Klima, Politik und Moral
Nr. 2016-06	**Ingo Pies** Laudatio zum Max-Weber-Preis für Wirtschaftsethik für Janaina Drummond Nauck
Nr. 2016-05	**Ingo Pies** Interview zur Drogenpolitik
Nr. 2016-04	**Ingo Pies** Wirtschaftsethik zwischen Theologie und Ökonomik – ein Briefwechsel
Nr. 2016-03	**Stefan Hielscher, Jan Winkin, Ingo Pies** NGO Credibility As Private or Public Good? A Governance Perspective on How to Improve NGO Advocacy in Public Discourse
Nr. 2016-02	**Ingo Pies** **Wirtschaftsethik der Rohstoffgewinnung –** Vom Ressourcenfluch zur Governance nachhaltiger Entwicklung
Nr. 2016-01	**Ingo Pies** Werte-Erziehung? Wirtschafts-Unterricht? – Vier ordonomische Thesen zum schulischen Bildungsauftrag
Nr. 2015-14	**Ingo Pies** Die schulische Förderung Hochbegabter – Eine ordonomische Argumentationshilfe
Nr. 2015-13	**Stefan Hielscher** The Societal Role of Business in the Context of Economic History: An Argumentative Outline for a Conceptual Framework and an Empirical Research Program
Nr. 2015-12	**Stefan Hielscher** Ehre und Vertrauen im Fernhandel der Deutschen Hanse: Ein Beitrag zur Debatte um das Ideal des „Ehrbaren Kaufmanns“ aus Sicht der Ordonomik
Nr. 2015-11	**Ingo Pies** Kommentar zur Spekulation mit Agrarrohstoffen – Eine Replik auf Christian Conrad
Nr. 2015-10	**Joachim Weimann** Wissen wir, was wir tun? – Die deutsche Energiepolitik zwischen moralischem Anspruch und ökonomischer Realität
Nr. 2015-9	**Ingo Pies** Wirtschaftsethik ohne Wirtschaftskompetenz? – Zwei Rezensionen und eine Grundlagenreflexion zum Wirtschaftsethik-Buch von Franz Segbers
Nr. 2015-8	**Stefan Hielscher, Ingo Pies, Aloys Prinz** Umfassende Organisationsethik für die moderne Gesellschaft: Ein systematischer Vergleich gewinnorientierter und nicht-gewinnorientierter Unternehmen
Nr. 2015-7	**Ingo Pies** Individualethik versus Institutionenethik? – Zur Moral (in) der Marktwirtschaft
Nr. 2015-6	**Ingo Pies** Die Ordnungsethik plädiert nicht für maßlose Gier, sondern für eine sorgsame Vermeidung intentionalistischer Fehlschlüsse

[1] Als kostenloser Download unter http://ethik.wiwi.uni-halle.de/forschung. Hier finden sich auch die Diskussionspapiere der Jahrgänge 2003-2012.

Nr. 2015-5	**Ingo Pies** Solidarität unter Fremden –Zur moralischen Leistungsfähigkeit des Marktes
Nr. 2015-4	**Ingo Pies** Rezension zum Wirtschaftsethik-Buch von Nils Ole Oermann
Nr. 2015-3	**Mathias Georg Will** Privacy and Big Data: The Need for a Multi-Stakeholder Approach for Developing an Appropriate Privacy Regulation in the Age of Big Data
Nr. 2015-2	**Ingo Pies** Diskurs mit Schieflage Eine ordnungsethische Nachbetrachtung der Mindestlohndebatte
Nr. 2015-1	**Ingo Pies** Ordnungsethik für eine bessere Ordnungspolitik: Ordonomische Anregungen zum schulischen Bildungsauftrag

Wirtschaftsethik-Studien[2]

Nr. 2013-1	**Ingo Pies** Chancengerechtigkeit durch Ernährungssicherung – Zur Solidaritätsfunktion der Marktwirtschaft bei der Bekämpfung des weltweiten Hungers
Nr. 2010-1	**Ingo Pies, Alexandra von Winning, Markus Sardison, Katrin Girlich** Sustainability in the Petroleum Industry: Theory and Practice of Voluntary Self-Commitments
Nr. 2009-1	**Ingo Pies, Alexandra von Winning, Markus Sardison, Katrin Girlich** Nachhaltigkeit in der Mineralölindustrie: Theorie und Praxis freiwilliger Selbst-verpflichtungen
Nr. 2007-1	**Markus Beckmann** Corporate Social Responsibility und Corporate Citizenship
Nr. 2005-3	**Ingo Pies, Peter Sass, Roland Frank** Anforderungen an eine Politik der Nachhaltigkeit – eine wirtschaftsethische Studie zur europäischen Abfallpolitik
Nr. 2005-2	**Ingo Pies, Peter Sass, Henry Meyer zu Schwabedissen** Prävention von Wirtschaftskriminalität: Zur Theorie und Praxis der Korruptionsbekämpfung
Nr. 2005-1	**Valerie Schuster** Corporate Citizenship und die UN Millennium Development Goals: Ein unternehmerischer Lernprozess am Beispiel Brasiliens
Nr. 2004-1	**Johanna Brinkmann** Corporate Citizenship und Public-Private Partnerships: Zum Potential der Kooperation zwischen Privatwirtschaft, Entwicklungszusammenarbeit und Zivilgesellschaft

[2] Als kostenloser Download unter http://ethik.wiwi.uni-halle.de/forschung.

Autor:

Dr. Matthias Georg Will
Martin-Luther-Universität Halle-Wittenberg
Juristische und Wirtschaftswissenschaftliche Fakultät
Wirtschaftswissenschaftlicher Bereich
Lehrstuhl für Wirtschaftsethik
Große Steinstraße 73
D-06108 Halle

ISBN 978-3-86829-879-6
ISBN 978-3-86829-880-2