

Cloud Computing and Extensive Margins of Exports –
An Update using data for 2025

by
Joachim Wagner

University of Lüneburg
Working Paper Series in Economics

No. 440

January 2026

www.leuphana.de/institute/ivwl/working-papers.html

ISSN 1860 - 5508

Cloud Computing and Extensive Margins of Exports – An Update using data for 2025*

Joachim Wagner

Leuphana University Lüneburg and Kiel Centre for Globalization

[This version: January 14, 2026]

Abstract

In a paper published in the *Journal of Information Economics* in 2024 I reported evidence that firms which use cloud computing do more often export, do more often export to various destinations all over the world, and do export to more different destinations. Results are based on data for manufacturing firms from the 27 member countries of the European Union taken from the Flash Eurobarometer 486 survey conducted in 2020. This note uses strictly comparable data from the Flash Eurobarometer 559 conducted in 2025 and the identical empirical strategy to document that the big picture found for 2020 did not change over the last five years. Extensive margins of exports and the use of cloud computing are still positively related.

JEL classification: D22, F14

Keywords: Cloud computing, exports, firm level data, Flash Eurobarometer 559, kernel-regularized least squares (KRLS)

* The firm level data used in this study are taken from the Flash Eurobarometer 559 and can be downloaded free of charge after registration at <http://www.gesis/eurobarometer>. Stata code used to generate the empirical results reported in this note is available from the author.

Professor Dr. Joachim Wagner
Leuphana University Lüneburg
D-21314 Lüneburg
Germany
e-mail: joachim.wagner@leuphana.de

1. Motivation

In a paper published in the *Journal of Information Economics* Wagner (2024) reported evidence that firms which use cloud computing do more often export, do more often export to various destinations all over the world, and do export to more different destinations. Results are based on data for manufacturing firms from the 27 member countries of the European Union taken from the Flash Eurobarometer 486 survey conducted at the beginning of 2020 – before the Corona pandemic hit the world and before artificial intelligence models were easily available on our laptops.

Do these results still hold five years later after all this progress in advanced technologies? This short note uses strictly comparable data from the Flash Eurobarometer 559 conducted in 2025 and applies the identical empirical strategy that is used in Wagner (2024) to investigate this question. Given that this note is an update of the earlier study, neither the related literature nor the econometric methods applied are discussed in any detail here; readers are referred to the original study. Furthermore, note that the data from the two surveys conducted in 2020 and 2025 are not panel data, so firms (and any estimated coefficients) cannot be compared over time.

To anticipate the most important result, this note reports that the big picture did not change over time. Extensive margins of exports and the use of cloud computing are still positively related in 2025.

The rest of this note is organized as follows. Section 2 introduces the data used and discusses the export activities that are looked at. Section 3 reports results from the econometric investigation. Section 4 concludes.

2. Data and discussion of variables

The firm level data used in this study are taken from the Flash Eurobarometer 559 survey conducted between February and April 2025. Note that information on export activities relates to the year 2024. We use data for firms from the 27 member states of the European Union in 2025. The sample covers 1,539 firms from manufacturing industries (included in NACE section C); the numbers of firms by country are reported in the appendix table.

In the survey firms were asked in question Q14_2 whether they introduced cloud computing, i.e. the use of remote servers via the internet for storage of files or processing of data. Firms that answered in the affirmative are classified as users of cloud computing. Descriptive evidence is reported in Table 1, showing a share of 48.9 percent of firms using cloud computing. Compared to the sample from the survey conducted in 2020 used in Wagner (2024) this share of users increased by five percentage points.

In the empirical study we look at various measures of export activity of firms:¹

First, firms were asked in question Q8_1 whether they exported any goods (or not) in 2024. Firms are classified as exporters or non-exporters based thereon. Descriptive evidence is reported in Table 1, showing a share of 58 percent of exporters.

[Table 1 near here]

Second, firms were asked in questions Q8_2 to Q8_8 whether they exported goods in 2024 to the following destinations: Other EU countries; other European countries outside the EU (including Russia); North America; Latin America; China;

¹ Note that all measures looked at here refer to extensive margins of exports; information on intensive margins (share of exports in total sales) are not available in the data used.

other countries from Asia and the Pacific; countries from the Middle East and Africa. Descriptive evidence is reported in Table 1, showing that 54.7 percent of firms exported to countries from the EU, while 25.7 percent exported to other European countries. The other destinations follow with shares between some eight percent and about 13 percent. Exporters to each destination are investigated separately.

Third, from the evidence reported for exports to the seven destinations mentioned for each exporting firm the number of different destinations exported to is calculated. The share of firms by number of export destinations is reported in Table 2. Not surprisingly, most exporters serve one or two destinations only, but there are quite some firms that export to more destinations.

[Table 2 near here]

In the empirical investigation of the link between the use of cloud computing and exports we control for three firm characteristics that are known to be positively linked with exports: firm age (measured in years, based on the answer given to question DX2a), firm size (measured as the number of employees – excluding the owners - at the time of the survey; see question DX3a), and whether the firm has introduced an innovation over the last twelve months for which it received a patent or has a patent application pending (see question Q12_7). Descriptive statistics are again reported in Table 1.

Furthermore, in empirical investigations the country of origin of the firms is controlled for by including a full set of country dummy variables.

3. Testing for cloud computing premium in export activities

To test for the difference in the types of export activities listed in section 2 between firms that do and do not use cloud computing, and to document the size of these differences, the following empirical approach is applied:

. For export activities that are measured by dummy variables (the decision to export or not, and the decision to export to one of the seven export destinations listed in section 2) the empirical model in (1) is estimated by Probit.

$$(1) \text{Indicator}_i = a + \beta \text{Cloud computing}_i + c \text{Control}_i + e_i$$

where i is the index of the firm, Indicator is a dummy variable for the use or not of a type of export activity, Cloud computing is a dummy variable for the use of cloud computing by the firm (1 if the firm uses it, 0 else), Control is a vector of control variables (that consists of measures of firm age, firm size, and patents, and dummy variables for countries), and e is an error term. The cloud computing premium is computed as the estimated average marginal effects of the cloud computing dummy variable.

For the number of export destinations, (1) becomes (2)

$$(2) \text{Number}_i = a + \beta \text{Cloud computing}_i + c \text{Control}_i + e_i$$

where i is the index of the firm, number is the number of export destinations, Cloud computing is a dummy variable for the use of cloud computing by the firm (1 if the firm uses it, 0 else), Control is a vector of control variables (that consists of measures of firm age, firm size, and patents, and dummy variables for countries), and e is an error term. The model (2) is estimated by OLS. The cloud computing premium is the

estimated coefficient β ; it shows the average difference between firms that use and do not use cloud computing, controlling for firm age, firm size, patents, and country of origin of the firm.

3.1 Results from standard parametric models

In a first step, the empirical models outlined above are estimated using standard parametric econometric models with Probit or OLS. Results are reported in the first columns of tables 3 - 5.

The big picture that is shown is crystal clear: Firms that use cloud computing are more often exporters. Furthermore, firms with cloud computing do more often export to all different destinations looked at here except Latin America, and do export to a larger number of destinations. Each estimated cloud computing premium is statistically significant *ceteris paribus* after controlling for firm age, firm size, patents, and country of origin of the firms.²

[Tables 3 – 5 near here]

3.2 Results from Kernel-Regularized Least Squares (KRLS) models

In the standard parametric models used in section 3.1 the firm characteristics that explain the export margins enter the empirical model in linear form. This functional form which is used in hundreds of empirical studies for margins of exports, however, is rather restrictive. If any non-linear relationships (like quadratic terms or higher order polynomials, or interaction terms) do matter and if they are ignored in the specification of the empirical model this leads to biased results. Researchers, however, can never be sure that all possible relevant non-linear relationships are

² Results for the control variables are not reported to economize on space; they are available on request.

taken care of in their chosen specifications. In a robustness check of the results from the standard parametric models, therefore, this note uses the Kernel-Regularized Least Squares (KRLS) estimator to deal with this issue. KRLS is a machine learning method that learns the functional form from the data. It has been introduced in Hainmueller and Hazlett (2014) and Ferwerda, Hainmueller and Hazlett (2017), and used to estimate empirical models for margins of trade for the first time in Wagner (2026). A discussion of the Kernel-Regularized Least Squares (KRLS) estimator is far beyond the scope of this applied note; for a short outline of some of the important features and characteristics might help to understand why this estimator can be considered as an extremely helpful addition to the box of tools of empirical trade economists see Wagner (2024).

KRLS works well both with continuous outcomes and with binary outcomes. It is easy to apply in Stata using the `krls` program provided in Ferwerda, Hainmueller and Hazlett (2017). Instead of doing a tedious specification search that does not guarantee a successful result, users simply pass the outcome variable and the matrix of covariates to the KRLS estimator which then learns the target function from the data. As shown in Hainmueller and Hazlett (2014), the KRLS estimator has desirable statistical properties, including unbiasedness, consistency, and asymptotic normality under mild regularity conditions. An additional advantage of KRLS is that it provides closed-form estimates of the pointwise derivatives that characterize the marginal effect of each covariate at each data point in the covariate space (see Ferwerda, Hainmueller and Hazlett (2017), p. 11). These estimates can be used to examine the heterogeneity of the marginal effects.

Therefore, KRLS is suitable to estimate empirical models when the correct functional form is not known for sure – which is usually the case because we do not

know which polynomials or interaction terms matter for correctly modelling the relation between the covariates and the outcome variable.

Results for an application of KRLS to the models for margins of exports are reported in the second to fifth columns of tables 3 - 5.

The big picture that is shown is again crystal clear, and it is identical to the one shown by the standard parametric models: Firms that use cloud computing are more often exporters, do more often export to any of the different destinations except for Latin America, and do export to a larger number of destinations. Each estimated premium is statistically significant *ceteris paribus* after controlling for firm age, firm size, patents, and country of origin of the firms. Note that the estimated average marginal effects tend to be somewhat smaller here than in the standard parametric models. The difference in the size of the average marginal effects can be explained by the fact that the parametric model in column 1 imposes a restrictive functional form in the shape of the estimated relationships, while KRLS estimated this relationship without imposing a functional form.

An additional advantage of KRLS compared to the parametric models is that it provides closed-form estimates of the pointwise derivatives that characterize the marginal effect of each covariate at each data point in the covariate space (see Ferwerda, Hainmueller and Hazlett (2017), p. 11). The last three columns of tables 3 - 5 report the marginal effects estimated by KRLS at the 1st quartile, at the median, and at the 3rd quartile. We can clearly see the heterogeneity in the marginal effects. The estimated marginal effects differ widely over the quartiles. This shows the nonlinearity and heterogeneity of the relationship between the covariates and the extensive margins of exports.

4. Concluding remarks

This study finds that manufacturing firms from 27 EU member countries that use cloud computing are more often exporters than firms that do not use cloud computing. Furthermore, firms with cloud computing do more often export to different destinations, and do export to a larger number of destinations.

Does this study imply that in order to be successful in export markets, firms should use cloud computing? Or that using cloud computing will help the firms to be successful as an exporter? This is an open question because we do not know whether this premium is due to self-selection of exporting firms into the use of cloud computing, or whether it is the effect of using cloud computing. This issue cannot be investigated with the cross-section data at hand. To answer this important question longitudinal data for firms are needed that cover several years and that include a sufficiently large number of firms that switch the status between using cloud or not over time (in both directions). The jury is still out to find a generally accepted answer.

References

- Ferwerda, Jeremy, Jens Hainmueller and Chad J. Hazlett (2017). Kernel-Based Regularized Least Squares in R (KRLS) and Stata (krls). *Journal of Statistical Software* 79 (3), 1-26.
- Hainmueller, Jens and Chad Hazlett (2014). Kernel Regularized Least Squares: Reducing Misspecification Bias with a Flexible and Interpretable Machine Learning Approach. *Political Analysis* 22, 143-168.
- Wagner, Joachim (2024). Cloud computing and extensive margins of exports: Evidence for manufacturing firms from 27 EU countries. *Journal of Information Economics* 2 (1), 102-111.

Wagner, Joachim (2026). A note on estimation of empirical models for margins of exports with unknown non-linear functional forms: A Kernel-Regularized Least Squares (KRLS) approach. *Journal of Economics and Statistics* (in press).

Table 1: Descriptive statistics

Variable	Mean	Std. Dev.	Min	Max
Cloud computing (Dummy; 1 = yes)	0.4886	0.5000	0	1
Exporter (Dummy; 1 = yes)	0.5796	0.4938	0	1
Export Destination (Dummy-Variables; 1 = yes)				
- EU-countries	0.5471	0.4979	0	1
- Other Europe	0.2573	0.4373	0	1
- North America	0.1313	0.3378	0	1
- Latin America	0.0760	0.2651	0	1
- China	0.0858	0.2801	0	1
- Other Asia	0.1189	0.3238	0	1
- Middle East, Africa	0.1046	0.3062	0	1
Number of Export Destinations	1.32	1.62	0	7
Firm Age (years)	33.47	32.19	1	325
No. of Employees	138.14	167.13	1	11457
Patent (Dummy; 1 = yes)	0.0572	0.2322	0	1
No. of Firms in Sample	1,539			

Source: Own calculation based on data from Flash Eurobarometer 559

Table 2: Share of Firms by Number of Export Destinations

Number of Export Destinations	Number of Firms	Percent
0	647	42.04
1	352	22.87
2	268	17.41
3	114	7.41
4	68	4.42
5	37	2.40
6	25	1.62
7	28	1.82
Total	1,539	100.0

Source: Own calculation based of data from Flash Eurobarometer 559

Table 3: Empirical results, Part I: Export participation

Method	Probit Average marginal effects	KRLS Average marginal effect	P25	P50	P75
Cloud computing (Dummy; 1 = yes)	0.1195 (0.000)	0.0902 (0.001)	0.0511	0.0818	0.1215
Control variables	included	included			
26 country dummies	included	included			
Number of cases	1,539				

Note: Probit reports average marginal effects from a model estimated by ML Probit. KRLS reports average marginal effects and marginal effects at the 25th, 50th and 75th percentile estimated by kernel-based regularized least squares. P-values are reported in parentheses. For details, see text.

Table 4: Empirical results, Part II: Exporter by destination

Method	Probit Average marginal effects	KRLS Average marginal effect	P25	P50	P75
EU countries					
Cloud computing (Dummy; 1 = yes)	0.1224 (0.000)	0.0870 (0.004)	0.0607	0.0807	0.1180
Other Europe					
Cloud computing (Dummy; 1 = yes)	0.0912 (0.000)	0.0690 (0.007)	0.0211	0.0630	0.1109
North America					
Cloud computing (Dummy; 1 = yes)	0.0476 (0.005)	0.0391 (0.057)	0.0076	0.0407	0.0716
Latin America					
Cloud computing (Dummy; 1 = yes)	0.0126 (0.381)	0.0075 (0.589)	-0.0107	0.0125	0.0218
China					
Cloud computing (Dummy; 1 = yes)	0.0462 (0.003)	0.0297 (0.075)	0.0091	0.0264	0.0610

Other Asia

Cloud computing (Dummy; 1 = yes)	0.0564 (0.001)	0.0451 (0.018)	0.0062	0.0467	0.0739
-------------------------------------	-------------------	-------------------	--------	--------	--------

Middle East, Africa

Cloud computing (Dummy; 1 = yes)	0.0533 (0.001)	0.0334 (0.021)	0.0196	0.0305	0.0469
-------------------------------------	-------------------	-------------------	--------	--------	--------

Number of cases	1,539				
-----------------	-------	--	--	--	--

Note: Probit reports average marginal effects from a model estimated by ML Probit. KRLS reports average marginal effects and marginal effects at the 25th, 50th and 75th percentile estimated by kernel-based regularized least squares. P-values are reported in parentheses. All models include control variables (firm size, firm age, patent) and a set of country dummies. For details, see text.

Table 5: Empirical results, Part III: Number of export destinations

Method	OLS Regression coefficient	KRLS Average marginal effect	P25	P50	P75
Cloud computing (Dummy; 1 = yes)	0.2873 (0.003)	0.2305 (0,036)	0.0211	0.2876	0.3989
Control variables	included	included			
26 country dummies	included	included			
Number of cases	992				

Note: OLS reports the estimated regression coefficients from a linear model. KRLS reports average marginal effects and marginal effects at the 25th, 50th and 75th percentile estimated by kernel-based regularized least squares. P-values are reported in parentheses. For details, see text.

Appendix: Number of Firms by Country

Country	Number of Firms	Percent
Austria	45	2.92
Belgium	53	3.44
Bulgaria	48	3.12
Cyprus	26	1.69
Czech Republic	60	1.90
Germany	77	5.00
Denmark	109	7.08
Estonia	67	4.35
Spain	59	3.83
Finland	83	5.39
France	59	3.83
Greece	62	4.03
Croatia	62	4.03
Hungary	57	3.70
Ireland	49	3.18
Italy	66	4.29
Lithuania	46	2.99
Luxembourg	24	1.56
Latvia	60	3.90
Malta	26	1.69
Netherlands	53	3.44
Poland	56	3.64
Portugal	50	3.25
Romania	56	3.64
Sweden	69	4.48
Slovenia	48	3.12
Slovakia	69	4.48
Total	1,539	100.0

Source: Own calculations based on data from Flash Eurobarometer 559

Working Paper Series in Economics

(recent issues)

- No. 439 *Joachim Wagner*: Who uses Advanced Technologies? Evidence from Manufacturing Firms from 38 Countries in 2025, January 2026
- No. 438 *Joachim Wagner*: Use of Advanced Technologies and Extensive Margins of Exports in Manufacturing Firms from 27 EU Countries in 2025 , January 2026
- No. 437 *Joachim Wagner*: Ten Years Data Observer – A service for empirical researchers in economics , October 2025
- No. 436 *Joachim Wagner*: [nep-iaf](#) A new e-mail service to stay up to date with working papers on international activities of firms, October 2025
- No. 435 *Christoph Kleineberg*: The Effect of Price Transparency: Assessment of the German Highway Retail Gasoline Sector, July 2025
- No. 434 *Joachim Wagner*: Firm characteristics and survival in times of COVID 19: First evidence from Kernel Regularized Least Squares regressions, July 2025
- No. 433 *Joachim Wagner*: Firm characteristics of two-way traders: Evidence from Probit vs. Kernel-Regularized Least Squares regressions, May 2025
- No. 432 *Institut für Volkswirtschaftslehre*: Forschungsbericht 2024, January 2025
- No. 431 *Thomas Wein*: Kampf an falschen Fronten - Verbrenner-Aus, Gebäudeenergiegesetz (GEG) oder Brennstoffemissionshandelsgesetz (BEHG)?, December 2024
- No. 430 *Mats Petter Kahl und Thomas Wein*: Existiert Wettbewerb beim Laden von Elektrofahrzeugen in Deutschland?, October 2024
- No. 429 *Joachim Wagner*: Data Observer – A guide to data that can help to inform evidence-based policymaking, April 2024
- No. 428 *Joachim Wagner*: Digitalization Intensity and Extensive Margins of Exports in Manufacturing Firms from 27 EU Countries - Evidence from Kernel-Regularized Least Squares Regression , April 2024
- No. 427 *Joachim Wagner*: Cloud Computing and Extensive Margins of Exports -Evidence for Manufacturing Firms from 27 EU Countries, February 2024
- No. 426 *Joachim Wagner*: Robots and Extensive Margins of Exports - Evidence for Manufacturing Firms from 27 EU Countries, January 2024
- No. 425 *Institut für Volkswirtschaftslehre*: Forschungsbericht 2023, January 2024
- No. 424 *Joachim Wagner*: Estimation of empirical models for margins of exports with unknown non-linear functional forms: A Kernel-Regularized Least Squares (KRLS) approach, January 2024
- No. 423 *Luise Goerges, Tom Lane, Daniele Nosenzo and Silvia Sonderegger*: Equal before the (expressive power of) law?, November 2023
- No. 422 *Joachim Wagner*: Exports and firm survival in times of COVID-19 – Evidence from eight European countries, October 2023

- No. 421 *Joachim Wagner*: Big Data Analytics and Exports – Evidence for Manufacturing Firms from 27 EU Countries, September 2023
- No. 420 *Christian Pfeifer*: Can worker codetermination stabilize democracies? Works councils and satisfaction with democracy in Germany, May 2023
- No. 419 *Mats Petter Kahl*: Was the German fuel discount passed on to consumers?, March 2023
- No. 418 *Nils Braakmann & Boris Hirsch*: Unions as insurance: Employer–worker risk sharing and workers' outcomes during COVID-19, January 2023
- No. 417 *Institut für Volkswirtschaftslehre*: Forschungsbericht 2022, January 2023
- No. 416 *Philipp Lentge*: Second job holding in Germany – a persistent feature?, November 2022
- No. 415 *Joachim Wagner*: Online Channels Sales Premia in Times of COVID-19: First Evidence from Germany, November 2022
- No. 414 *Boris Hirsch, Elke J. Jahn, Alan Manning, and Michael Oberfichtner*: The wage elasticity of recruitment, October 2022
- No. 413 *Lukas Tohoff and Mario Mechtel*: Fading Shooting Stars – The Relative Age Effect, Misallocation of Talent, and Returns to Training in German Elite Youth Soccer, September 2022
- No. 412 *Joachim Wagner*: The first 50 contributions to the Data Observer Series – An overview, May 2022
- No. 411 *Mats Petter Kahl and Thomas Wein*: How to Reach the Land of Cockaigne? Edgeworth Cycle Theory and Why a Gasoline Station is the First to Raise Its Price, April 2022
- No. 410 *Joachim Wagner*: Website premia for extensive margins of international firm activities Evidence for SMEs from 34 countries; April 2022
- No. 409 *Joachim Wagner*: Firm survival and gender of firm owner in times of COVID-19 Evidence from 10 European countries, March 2022
- No. 408 *Boris Hirsch, Philipp Lentge and Claus Schnabel*: Uncovered workers in plants covered by collective bargaining: Who are they and how do they fare?, February 2022
- No. 407 *Lena Dräger, Michael J. Lamla and Damjan Pfajfar*: How to limit the Spillover from the 2021 Inflation Surge to Inflation Expectations?, February 2022
- No. 406 *Institut für Volkswirtschaftslehre*: Forschungsbericht 2021, January 2022
- No. 405 *Leif Jacobs, Lara Quack and Mario Mechtel*: Distributional Effects of Carbon Pricing by Transport Fuel Taxation, December 2021
- No. 404 *Boris Hirsch and Philipp Lentge*: Non-Base Compensation and the Gender Pay Gap, July 2021
- No. 403 *Michael J. Lamla and Dmitri V. Vinogradov*: Is the Word of a Gentleman as Good as His Tweet? Policy communications of the Bank of England, May 2021
- No. 402 *Lena Dräger, Michael J. Lamla and Damjan Pfajfar*: The Hidden Heterogeneity of Inflation and Interest Rate Expectations: The Role of Preferences, May 2021
- No. 401 *Joachim Wagner*: The Good have a Website Evidence on website premia for firms from 18 European countries, April 2021

- No. 400 *Luise Görge*: Of housewives and feminists: Gender norms and intra-household division of labour, April 2021
- No. 399 *Joachim Wagner*: With a little help from my website. Firm survival and web presence in times of COVID-19 – Evidence from 10 European countries, April 2021
- No. 398 *Katja Seidel*: The transition from School to Post-Secondary Education – What factors affect educational decisions?, March 2021
- No. 397 *Institut für Volkswirtschaftslehre*: Forschungsbericht 2020, Januar 2021
- No. 396 *Sabien Dobbelaere, Boris Hirsch, Steffen Mueller and Georg Neuschaeffer*: Organised Labour, Labour Market Imperfections, and Employer Wage Premia, December 2020
- No. 395 *Stjepan Srhoj, Vanja Vitezić and Joachim Wagner*: Export boosting policies and firm behaviour: Review of empirical evidence around the world, November 2020
- No. 394 *Thomas Wein*: Why abandoning the paradise? Stations incentives to reduce gasoline prices at first, August 2020
- No. 393 *Sarah Geschonke and Thomas Wein*: Privacy Paradox –Economic Uncertainty Theory and Legal Consequences, August 2020
- No. 392 *Mats P. Kahl*: Impact of Cross-Border Competition on the German Retail Gasoline Market – German-Polish Border, July 2020
- No. 391 *John P. Weche and Joachim Wagner*: Markups and Concentration in the Context of Digitization: Evidence from German Manufacturing Industries, July 2020
- No. 390 *Thomas Wein*: Cartel behavior and efficient sanctioning by criminal sentences, July 2020
- No. 389 *Christoph Kleineberg*: Market definition of the German retail gasoline industry on highways and those in the immediate vicinity, July 2020
- No. 388 *Institut für Volkswirtschaftslehre*: Forschungsbericht 2019, Januar 2020
- No. 387 *Boris Hirsch, Elke J. Jahn, and Thomas Zwick*: Birds, Birds, Birds: Co-worker Similarity, Workplace Diversity, and Voluntary Turnover, May 2019
- No. 386 *Joachim Wagner*: Transaction data for Germany's exports and imports of goods, May 2019
- No. 385 *Joachim Wagner*: Export Scope and Characteristics of Destination Countries: Evidence from German Transaction Data, May 2019
- No. 384 *Antonia Arsova*: Exchange rate pass-through to import prices in Europe: A panel cointegration approach, February 2019
- No. 383 *Institut für Volkswirtschaftslehre*: Forschungsbericht 2018, January 2019
- No. 382 *Jörg Schwiebert*: A Sample Selection Model for Fractional Response Variables, April 2018
- No. 381 *Jörg Schwiebert*: A Bivariate Fractional Probit Model, April 2018
- No. 380 *Boris Hirsch and Steffen Mueller*: Firm wage premia, industrial relations, and rent sharing in Germany, February 2018

(see www.leuphana.de/institute/ivwl/working-papers.html for a complete list)

Leuphana Universität Lüneburg

Institut für Volkswirtschaftslehre

Postfach 2440

D-21314 Lüneburg

Tel.: ++49 4131 677 2321

email: christina.korf@leuphana.de

www.leuphana.de/institute/ivwl/working-papers.html