



Productivity and size of the export market

Wagner, Joachim

Publication date:
2007

Document Version
Publisher's PDF, also known as Version of record

[Link to publication](#)

Citation for published version (APA):

Wagner, J. (2007). *Productivity and size of the export market: evidence for West and East German plants 2004*. (Working paper series in economics; No. 43). Institut für Volkswirtschaftslehre der Universität Lüneburg.

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

**Productivity and Size of the Export Market
Evidence for West and East German Plants, 2004**

by
Joachim Wagner

University of Lüneburg
Working Paper Series in Economics

No. 43

March 2007

www.uni-lueneburg.de/vwl/papers

ISSN 1860 - 5508

Productivity and Size of the Export Market

Evidence for West and East German Plants, 2004

Joachim Wagner

University of Lueneburg, Institute of Economics

Institute for the Study of Labor (IZA), Bonn

Max Planck Institute of Economics, Jena

wagner@uni-lueneburg.de

Abstract:

Using unique recently released nationally representative high-quality data at the plant level, this paper presents the first comprehensive evidence on the relationship between productivity and size of the export market for Germany, a leading actor on the world market for manufactured goods. It documents that firms that export to countries inside the euro-zone are more productive than firms that sell their products in Germany only, but less productive than firms that export to countries outside the euro-zone, too. This is in line with the hypothesis that export markets outside the euro-zone have higher entry costs that can only be paid by more productive firms.

Keywords: Exports, productivity, micro data, Germany

JEL classification: F14, D21

Address for correspondence:

Prof. Dr. Joachim Wagner
University of Lueneburg
Institute of Economics
PO Box 2440
D-21314 Lueneburg
Germany
Phone: +49-4131-677-2330
Fax: +49-4131-677-2026
<http://www.uni-lueneburg.de/wifo>

Acknowledgement: All computations for this study were done inside the Research Data Centre of the Statistical Office of Berlin. Many thanks to Anja Münch and Ramona Pohl for running my Stata do-files, and for carefully checking the log-files for violations of privacy.

1. Motivation

A recent survey of 54 micro-econometric studies with data for firms from 34 countries that were published between 1995 and 2006 shows that exporters are more productive than non-exporters (see Wagner 2007a). Germany is a case in point; productivity differentials in favour of exporting firms compared to firms that sell their products on the national market only are found to be statistically significant and economically important even when observed and unobserved firm characteristics are controlled for.¹

According to findings from this literature, this productivity differential tends to be due to self-selection of more productive plants on export markets, and to a market driven selection process in which exporters that have low productivity fail as a successful exporter, while only those that are more productive continue to export. The reason for this is that there exist additional costs of selling goods in foreign countries. The range of extra costs include transportation costs, distribution or marketing costs, personnel with skill to manage foreign networks, or production costs in modifying current domestic products for foreign consumption. These costs provide an entry barrier that less productive firms cannot overcome.

This implies that plants that export to a larger number of foreign markets have to be more productive than plants that serve a smaller number of foreign markets only because at least some of the extra costs mentioned recur for each market (e.g., preparing a user's manual in another language, or checking the relevant national

¹ Empirical evidence for Germany based on census data for plants from the federal state Lower Saxony is reported in Bernard and Wagner (1997, 2001) and Wagner (2002, 2006a, 2006b), while Arnold and Hussinger (2005a, 2005b) used enterprise data from the Mannheim Innovation Panel, a sample that covers Germany as a whole. Results from these earlier studies are summarized in tabular form in Wagner (2007a). Wagner (2007b) is comprehensive study using panel data for manufacturing plants from the official census for the years 1995 to 2004 that cover Germany as a whole.

laws). Furthermore, it seems plausible to assume that the larger the number of markets the higher will be (at least, on average) the distance related costs of exporting an exporter has to bear.

A case in point that can be expected to be relevant for German firms is the distinction between exporting inside the euro-zone only and exporting to countries that do not belong to the euro-zone, too. A plant that exports to, say, the US has to deal with all extra costs due to changes in the exchange rate between the euro and the dollar, while an exporter that serves markets where the euro is the local currency does not need to take care of this. Furthermore, transportation costs and other export related costs can be expected to be higher on average for serving markets outside the euro-zone.

This implication has not been tested empirically before. A reason for this gap in the literature is that the data from official statistics in Germany that were used in the past to investigate the relation between exporting and productivity did not contain any information about the countries the plants exported to. Beginning with the year 2003, plants have to report not only the value of total exports, but the value of exports to countries outside the euro-zone separately, too. This paper contributes to the literature by using this newly available information and unique recently released nationally representative high-quality data at the plant level to document the relationship between productivity and size of the export market for Germany, a leading actor on the world market for manufactured goods.

The rest of the paper is organised as follows: Section 2 introduces the newly available data set and discusses measurement issues. Section 3 presents descriptive evidence and results from statistical tests for the existence of productivity differentials between non-exporters and exporters by size of the export markets. Section 4 concludes.

2. Data and Measurement Issues

The empirical investigation uses data from an unbalanced panel of establishments (local production units, plants)² built from cross section data collected in regular surveys by the Statistical Offices of the German federal states. The surveys cover all establishments from mining³ and manufacturing industries that employ at least twenty persons in the local production unit or in the company that owns the unit. Participation of firms in the survey is mandated in official statistics law, and the firms have to report the true figures. Only recently data from these surveys at the state level were matched over all federal states to form a data set that covers Germany as a whole. In this paper annual data for 2004, the most recent year for which information is available, are used. Note that the micro level data are strictly confidential and for use inside the Statistical Office only, but not exclusive. Further information on the content of the data set and how to access it is given in Wagner (2000) and in Zühlke et al. (2004).

It should be noted that in this data set *export* refers to the amount of sales to a customer in a foreign country plus sales to a German export trading company; indirect exports (for example, tires produced in a plant in Germany that are delivered to a German manufacturer of cars who exports some of his products) are not covered by this definition. Furthermore, note that single or multiple establishment enterprises with less than 20 employees in total do not report to the survey.

² In this paper we will use the terms *firm*, *establishment*, and *plant* interchangeably to describe the (local production) unit of analysis.

³ Given that there are only a few establishments from mining industries we will use the term manufacturing industries to describe our sample in this paper.

The plants are divided into three groups: Non-exporting plants, plants with exports to the euro-zone only, and plants that export to the euro-zone and to countries outside the euro-zone.⁴

Productivity is measured as total sales (in constant prices) per employee, i.e. labour productivity.⁵ More appropriate measures of productivity like value added per employee (or per hour worked), or total factor productivity, cannot be computed because of a lack of information on hours worked, value added, and the capital stock⁶ in the surveys. Controlling for the industry affiliation by using an index computed as labour productivity of the plant divided by the average labour productivity of all plants in the industry at the detailed 4-digit-level (and multiplied by 100), however, can be expected to absorb much of these differences in the degree of vertical integration and capital intensity.⁷ Some establishments reported either tiny or

⁴ According to the questionnaire used in the survey for 2004 the euro-zone is defined to cover (besides Germany) Austria, Belgium, Finland, France, Greece, Ireland, Italy, Luxemburg, the Netherlands, Portugal, and Spain; neither Andorra and Monaco, nor San Marino and the Vatican (which have a currency union with the euro-countries France and Italy, respectively, and therefore should be regarded as members of the euro-zone, too) are included here. Note that a fourth group of plants – those that export to countries outside the euro-zone only – is omitted. The number of plants in this group is very small (only 1.2 percent of all plants from West Germany and 2.5 percent from East Germany), and the average labour productivity in these plants does not differ significantly from the average labour productivity in plants that export to the euro-zone only.

⁵ Note that the number of employees is computed as the average value reported in the monthly surveys; establishments with less than twelve reports in a year were excluded from all computations because they were not active during the whole year, and are therefore not comparable to the rest of the establishments. Furthermore, note that the number of employees includes the owners of the firm if they worked in the firm.

⁶ The survey has information about investment that might be used to approximate the capital stock. A close inspection of the investment data, however, reveals that many establishments report no or only a very small amount of investment in many years, while others report huge values in one year. Any attempt to compute a capital stock measure based on these data would result in a proxy that seems to be useless.

⁷ Note that Bartelsman and Doms (2000, p. 575) point to the fact that heterogeneity in labor productivity has been found to be accompanied by similar heterogeneity in total factor productivity in

very huge amounts of turnover in some years, leading to tiny or very huge values of labour productivity. Due to data protection rules it is impossible to investigate the reasons for these implausible figures, and to discriminate between reporting errors, idiosyncratic events, or other causes. Given that outliers of this kind might influence findings from empirical investigations, as a sensitivity analysis establishments from the bottom and top one percent of the labour productivity distribution were excluded from all computations, and results for the reduced sample are reported, too.

Given that the East German economy still differs in many respects from the West German economy, all computations were done for both parts of Germany separately.⁸

3. Productivity and Size of Export Market

Table 1 and table 2 report the results of the empirical investigation for West German and East German plants. The big picture is in accordance with the priors stated in the introduction to this paper: On average, firms that export to countries inside the euro-zone are more productive than firms that sell their products in Germany only, but less productive than firms that export to countries outside the euro-zone, too. These results hold for both parts of Germany, and when firms from the top and the bottom one percent of the productivity distribution are excluded from the calculations, too. T-

the reviewed research where both concepts are measured. Furthermore, Foster, Haltiwanger and Syverson (2005) show that productivity measures that use sales (i.e. quantities multiplied by prices) and measures that use quantities only are highly positively correlated.

⁸ Note that the federal state of Berlin is included in East Germany here.

tests show that all these differences are statistically significant at an error level that is smaller than 0.1 percent.

Table 1: Productivity in non-exporting plants, and in exporting plants by export markets, West Germany, 2004

	Non-exporting plants	Plants with exports to euro-zone only	Plants with exports to euro- and non-euro zone
Average labour productivity (index)	88.07 <i>84.71</i>	99.37 <i>94.27</i>	108.68 <i>103.05</i>
Number of plants	12,849 <i>12,492</i>	5,241 <i>5,145</i>	18,206 <i>17,941</i>
Percentage share of all plants	34.98 <i>34.70</i>	14.27 <i>14.29</i>	49.57 <i>49.83</i>
	Test for difference in labour productivity between groups of plants		
	t-test (prob-value)	Kolmogorov-Smirnov-test (prob-value)	
Non-exporting plants vs. plants with exports to euro-zone only	0.000 <i>0.000</i>	0.000 <i>0.000</i>	
Non-exporting plants vs. plants with exports to euro-zone and non-euro zone	0.000 <i>0.000</i>	0.000 <i>0.000</i>	
Plants with exports to euro-zone only vs. plants with exports to euro-zone and non-euro-zone	0.000 <i>0.000</i>	0.000 <i>0.000</i>	

Note: The index of labour productivity is computed as the percentage difference of the labour productivity in a plant compared to the average labour productivity in all plants from the same 4-digit industry. The percentage shares of all plants for the three groups of plants do not sum to 100 percent because the few plants that export to the non-euro-zone only are omitted here. Figures *in italics* refer to a sample where the top and bottom one percent of firms from the distribution of labour productivity are dropped from all computation. The t-test does not assume identical variances for both groups. A p-value of 0.05 or less indicates that the difference between the two groups is statistically significant at an error level of 5 percent or less. The Kolmogorov-Smirnow -test tests the null-hypothesis that the distribution of labour productivity for the two groups of plants mentioned are identical against the alternative hypothesis that the distribution for plants from the second group first-order stochastically dominates the distribution for the first group. A p-value of 0.05 or smaller indicates that the null-hypothesis can be rejected in favour of the alternative hypothesis at an error level of 5 percent or better.

Table 2: Productivity in non-exporting plants, and in exporting plants by export markets, East Germany, 2004

	Non-exporting plants	Plants with exports to euro-zone only	Plants with exports to euro- and non-euro zone
Average labour productivity (index)	89.15 <i>87.95</i>	101.79 <i>97.34</i>	117.33 <i>109.96</i>
Number of plants	4,585 <i>4,509</i>	882 <i>860</i>	2,837 <i>2,773</i>
Percentage share of all plants	53.80 <i>53.97</i>	10.35 <i>10.29</i>	33.29 <i>33.19</i>
	Test for difference in labour productivity between groups of plants		
	t-test (prob-value)	Kolmogorov-Smirnov-test (prob-value)	
Non-exporting plants vs. plants with exports to euro-zone only	0.000 <i>0.000</i>	0.000 <i>0.000</i>	
Non-exporting plants vs. plants with exports to euro-zone and non-euro zone	0.000 <i>0.000</i>	0.000 <i>0.000</i>	
Plants with exports to euro-zone only vs. plants with exports to euro-zone and non-euro-zone	0.000 <i>0.000</i>	0.000 <i>0.000</i>	

Note: The index of labour productivity is computed as the percentage difference of the labour productivity in a plant compared to the average labour productivity in all plants from the same 4-digit industry. The percentage shares of all plants for the three groups of plants do not sum to 100 percent because the few plants that export to the non-euro-zone only are omitted here. Figures *in italics* refer to a sample where the top and bottom one percent of firms from the distribution of labour productivity are dropped from all computation. The t-test does not assume identical variances for both groups. A p-value of 0.05 or less indicates that the difference between the two groups is statistically significant at an error level of 5 percent or less. The Kolmogorov-Smirnow -test tests the null-hypothesis that the distribution of labour productivity for the two groups of plants mentioned are identical against the alternative hypothesis that the distribution for plants from the second group first-order stochastically dominates the distribution for the first group. A p-value of 0.05 or smaller indicates that the null-hypothesis can be rejected in favour of the alternative hypothesis at an error level of 5 percent or better.

If one looks at differences in the mean value for two groups only, one focuses on just one moment of the productivity distribution. A stricter test that considers all moments is a test for stochastic dominance of the productivity distribution for one group over the productivity distribution for another group. More formally, let F and G denote the cumulative distribution functions of productivity for exporters to the euro-zone only and for non-exporters. Then first order stochastic dominance of F relative to G means that $F(z) - G(z)$ must be less or equal zero for all values of z , with strict inequality for some z . Whether this holds or not is tested non-parametrically by adopting the Kolmogorov-Smirnov test. This method has been used to discuss the issue of exports and productivity for the first time by Delgado, Farinas and Ruano (2002); applications for German data are Arnold and Hussinger (2005b) and Wagner (2006a).

Here three Kolmogorov-Smirnov-tests were performed, comparing the productivity distributions of either non-exporting plants and plants with exports to the euro-zone only, or of non-exporting plants and plants with exports to both the euro-zone and the non-euro-zone, or of plants with exports to the euro-zone only and plants with exports to both the euro-zone and the non-euro-zone. For both West Germany and East Germany, and for samples including and excluding extreme values of productivity, the prob-value for the Kolmogorov-Smirnov test of the null-hypothesis that the distribution of labor productivity for the two groups of firms considered are identical against the alternative hypothesis that the distribution for the second group first-order stochastically dominates the distribution for the first group is 0.000 in all cases, indicating that the null-hypothesis can be rejected in favour of the alternative hypothesis at any usual error level.

4. Discussion

Using unique recently released nationally representative high-quality data at the plant level, this paper documents that German firms that export to countries inside the euro-zone are more productive than firms that sell their products in Germany only, but less productive than firms that export to countries outside the euro-zone, too. This is in line with the hypothesis that export markets outside the euro-zone have higher entry costs that can only be paid by more productive firms.

An open question, however, is the direction of causality between exporting and productivity inside and outside the euro-zone. Are firms that export beyond the euro-zone more productive than firms that export inside the euro-zone only *before* they start to sell their products in these markets, or does selling on non-euro-zone markets increase productivity (more than selling inside this zone) due to learning effects and more intense competition that leads to higher improvements in productivity via more innovation? An empirical investigation of these questions can only be performed when longitudinal data over a period of at least seven years allow a comparison of plants over time before and after starting to export beyond the euro-zone. Suitable data are available for the years starting 2003; therefore, this has to be a topic for future research.

References

- Arnold, Jens Martin and Katrin Hussinger. 2005a. "Export Behavior and Firm Productivity in German Manufacturing. A Firm-level Analysis." *Review of World Economics* 141, 219-243.
- Arnold, Jens Martin and Katrin Hussinger. 2005b. "Export versus FDI in German Manufacturing: Firm Performance and Participation in International Markets." Centre for European Economic Research Discussion Paper No. 05-73, October.
- Bartelsman, Eric J. and Mark Doms. 2000. "Understanding Productivity: Lessons from Longitudinal Micro Data." *Journal of Economic Literature* XXXVIII(3), 569-594.
- Bernard, Andrew B. and Joachim Wagner. 1997. "Exports and Success in German Manufacturing." *Weltwirtschaftliches Archiv / Review of World Economics* 133, 134-157.
- Bernard, Andrew B. and Joachim Wagner. 2001. "Export Entry and Exit by German Firms." *Weltwirtschaftliches Archiv / Review of World Economics* 137, 105-123.
- Delgado, Miguel A., Jose C. Farinas and Sonia Ruano. 2002. "Firm productivity and export markets: a non-parametric approach." *Journal of International Economics* 57, 397-422.
- Foster, Lucia, John Haltiwanger and Chad Syverson. 2005. Reallocation, Firm Turnover, and Efficiency: Selection on Productivity or Profitability? Institute for the Study of Labor IZA DP No. 1705, August.
- Wagner, Joachim. 2000. "Firm Panel Data from Official Statistics." *Schmollers Jahrbuch / Journal of Applied Social Science Studies* 120 (1): 143-150.

- Wagner, Joachim. 2002. "The causal effect of exports on firm size and labor productivity: First evidence from a matching approach." *Economics Letters* 77, 287-292.
- Wagner, Joachim. 2006a. "Exports, foreign direct investment, and productivity: Evidence from German firm level data." *Applied Economics Letters* 13, 347-349.
- Wagner, Joachim. 2006b. "Exporte und Produktivität in mittelständischen Betrieben. Befunde aus der niedersächsischen Industrie (1995-2004)." In: Joachim Merz (Hrsg.), *Fortschritte in der Mittelstandsforschung*, Münster etc.: Lit-Verlag, S. 145-165.
- Wagner, Joachim. 2007a. "Exports and Productivity: A Survey of the Evidence from Firm Level Data." *The World Economy* 30(1), 60-82.
- Wagner, Joachim. 2007b. "Exports and Productivity in Germany." Mimeo, University of Lueneburg.
- Zühlke, Sylvia et al. 2004. "The Research Data Centres of the Federal Statistical Office and the Statistical Offices of the Länder." *Schmollers Jahrbuch / Journal of Applied Social Science Studies* 124(4), 567-578.

Working Paper Series in Economics

(see www.uni-lueneburg.de/vwl/papers for a complete list)

- No.42: *Joachim Wagner*: Why more West than East German firms export, March 2007
- No.41: *Joachim Wagner*: Exports and Productivity in Germany, March 2007
- No.40: *Lena Koller, Klaus Schnabel und Joachim Wagner*: Schwellenwerte im Arbeitsrecht. Höhere Transparenz und Effizienz durch Vereinheitlichung, Februar 2007
[erscheint in: Perspektiven der Wirtschaftspolitik]
- No.39: *Thomas Wein und Wiebke B. Röber*: Sind ausbildende Handwerksbetriebe erfolgreicher?, Januar 2007
- No.38: *Joachim Wagner*: Institut für Volkswirtschaft: Forschungsbericht 2006, Januar 2007
- No.37: *Nils Braakmann*: The impact of September 11th, 2001 on the job prospects of foreigners with Arab background – Evidence from German labor market data, January 2007
- No.36: *Jens Korunig*: Regulierung des Netzmonopolisten durch Peak-load Pricing?, Dezember 2006
- No.35: *Nils Braakmann*: Die Einführung der fachkundigen Stellungnahme bei der Ich-AG, November 2006
- No.34: *Martin F. Quaas and Stefan Baumgärtner*: Natural vs. financial insurance in the management of public-good ecosystems, October 2006
- No.33: *Stefan Baumgärtner and Martin F. Quaas*: The Private and Public Insurance Value of Conservative Biodiversity Management, October 2006
- No.32: *Ingrid Ott and Christian Papilloud*: Converging institutions. Shaping the relationships between nanotechnologies, economy and society, October 2006
- No.31: *Claus Schnabel and Joachim Wagner*: The persistent decline in unionization in western and eastern Germany, 1980-2004: What can we learn from a decomposition analysis?, October 2006
- No.30: *Ingrid Ott and Susanne Soretz*: Regional growth strategies: fiscal versus institutional governmental policies, September 2006
- No.29: *Christian Growitsch and Heike Wetzel*: Economies of Scope in European Railways: An Efficiency Analysis, July 2006
- No.28: *Thorsten Schank, Claus Schnabel and Joachim Wagner*: Do exporters really pay higher wages? First evidence from German linked employer-employee data, June 2006
[forthcoming in: Journal of International Economics]
- No.27: *Joachim Wagner*: Markteintritte, Marktaustritte und Produktivität
Empirische Befunde zur Dynamik in der Industrie, März 2006
- No.26: *Ingrid Ott and Susanne Soretz*: Governmental activity and private capital adjustment, March 2006
[forthcoming in: Icfai Journal of Managerial Economics]
- No.25: *Joachim Wagner*: International Firm Activities and Innovation:
Evidence from Knowledge Production Functions for German Firms, March 2006
- No.24: *Ingrid Ott und Susanne Soretz*: Nachhaltige Entwicklung durch endogene Umweltwahrnehmung, März 2006
- No.23: *John T. Addison, Claus Schnabel, and Joachim Wagner*: The (Parlous) State of German Unions, February 2006
[forthcoming in: Journal of Labor Research]

- No.22: *Joachim Wagner, Thorsten Schank, Claus Schnabel, and John T. Addison: Works Councils, Labor Productivity and Plant Heterogeneity: First Evidence from Quantile Regressions, February 2006*
[published in: *Jahrbücher für Nationalökonomie und Statistik* 226 (2006), 505 - 518]
- No.21: *Corinna Bunk: Betriebliche Mitbestimmung vier Jahre nach der Reform des BetrVG: Ergebnisse der 2. Befragung der Mitglieder des Arbeitgeberverbandes Lüneburg Nordostniedersachsen, Februar 2006*
- No.20: *Jan Kranich: The Strength of Vertical Linkages, July 2006*
- No.19: *Jan Kranich und Ingrid Ott: Geographische Restrukturierung internationaler Wertschöpfungsketten – Standortentscheidungen von KMU aus regionalökonomischer Perspektive, Februar 2006*
- No.18: *Thomas Wein und Wiebke B. Röber: Handwerksreform 2004 – Rückwirkungen auf das Ausbildungsverhalten Lüneburger Handwerksbetriebe?, Februar 2006*
- No.17: *Wiebke B. Röber und Thomas Wein: Mehr Wettbewerb im Handwerk durch die Handwerksreform?, Februar 2006*
- No.16: *Joachim Wagner: Politikrelevante Folgerungen aus Analysen mit wirtschaftsstatistischen Einzeldaten der Amtlichen Statistik, Februar 2006*
[publiziert in: *Schmollers Jahrbuch* 126 (2006) 359-374]
- No.15: *Joachim Wagner: Firmenalter und Firmenperformance*
Empirische Befunde zu Unterschieden zwischen jungen und alten Firmen in Deutschland, September 2005
[publiziert in: *Lutz Bellmann und Joachim Wagner (Hrsg.), Betriebsdemographie (Beiträge zur Arbeitsmarkt- und Berufsforschung, Band 305), Nürnberg: IAB der BA, 83-111]*
- No.14: *Joachim Wagner: German Works Councils and Productivity: First Evidence from a Nonparametric Test, September 2005*
[forthcoming in: *Applied Economics Letters*]
- No.13: *Lena Koller, Claus Schnabel und Joachim Wagner: Arbeitsrechtliche Schwellenwerte und betriebliche Arbeitsplatzdynamik: Eine empirische Untersuchung am Beispiel des Schwerbehindertengesetzes, August 2005*
[publiziert in: *Zeitschrift für ArbeitsmarktForschung/ Journal for Labour Market Research* 39 (2006), 181-199]
- No.12: *Claus Schnabel and Joachim Wagner: Who are the workers who never joined a union? Empirical evidence from Germany, July 2005*
[published in: *Industrielle Beziehungen/ The German Journal of Industrial Relations* 13 (2006), 118-131]
- No.11: *Joachim Wagner: Exporte und Produktivität in mittelständischen Betrieben*
Befunde aus der niedersächsischen Industrie (1995 – 2004), June 2005
[publiziert in: *Niedersächsisches Landesamt für Statistik, Statistische Berichte Niedersachsen, Sonderausgabe: Tagung der NLS am 9. März 2006, Globalisierung und regionale Wirtschaftsentwicklung - Datenlage und Datenbedarf in Niedersachsen. Hannover, Niedersächsisches Landesamt für Statistik, Juli 2006, 18–29]*

- No. 10: *Joachim Wagner*: Der Noth gehorchend, nicht dem eignen Trieb.
Nascent Necessity and Opportunity Entrepreneurs in Germany.
Evidence from the Regional Entrepreneurship Monitor (REM), May 2005
[published in: RWI: Mitteilungen. Quarterly 54/ 55 (2003/04), 287-303
{published June 2006}]
- No. 9: *Gabriel Desgranges and Maik Heinemann*: Strongly Rational Expectations Equilibria with
Endogenous Acquisition of Information, March 2005
- No. 8: *Joachim Wagner*: Exports, Foreign Direct Investment, and Productivity: Evidence from
German Firm Level Data, March 2005
[published in: Applied Economics Letters 13 (2006), 347-349]
- No. 7: *Thomas Wein*: Associations' Agreement and the Interest of the Network Suppliers – The
Strategic Use of Structural Features, March 2005
- No. 6: *Christiane Clemens and Maik Heinemann*: On the Effects of Redistribution on Growth
and Entrepreneurial Risk-Taking, March 2005
- No. 5: *Christiane Clemens and Maik Heinemann*: Endogenous Redistributive Cycles – An
overlapping Generations Approach to Social Conflict and Cyclical Growth, March 2005
- No. 4: *Joachim Wagner*: *Exports and Productivity*: A Survey of the Evidence from Firm Level
Data, March 2005
[published in: The World Economy 30 (2007), 1, 60-82]
- No. 3: *Thomas Wein and Reimund Schwarze*: Is the Market Classification of Risk Always
Efficient? - Evidence from German Third Party Motor Insurance, March 2005
- No. 2: *Ingrid Ott and Stephen J. Turnovsky*: Excludable and Non-Excludable Public Inputs:
Consequences for Economic Growth, June 2005 (Revised version)
[published in: *Economica* 73 (2006), 292, 725-742
also published as CESifo Working Paper 1423]
- No. 1: *Joachim Wagner*: Nascent and Infant Entrepreneurs in Germany.
Evidence from the Regional Entrepreneurship Monitor (REM), March 2005
[published in: Simon C. Parker (Ed.), *The Life Cycle of Entrepreneurial Ventures*
(International Handbook Series on Entrepreneurship, Volume 3), New York etc.: Springer,
2006, 15-37]

Universität Lüneburg
Institut für Volkswirtschaftslehre
Postfach 2440
D-21314 Lüneburg
Tel.: ++49 4131 677 2321
email: brodt@uni-lueneburg.de
www.uni-lueneburg.de/vwl/papers