



# Promoting Inclusive Economic Opportunities Across Germany

Small Business Activity Flourishing  
in Structurally Weak Areas

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ebay

## EXECUTIVE SUMMARY

Supporting structurally weak economic areas to help them catch up and provide improved standards of living across Germany remains an important priority. This includes disparities between East and West as well as the challenges of remote rural jurisdictions and areas marked by the decline of once-dominant heavy industries. However, as wealthier, and more urban hotspots attract more entrepreneurs, younger and higher skilled workers, and financial capital, it pushes against a more balanced national economy.

This report uses eBay Digital Density data, a measurement of the per capita eBay selling activity carried out by registered businesses, to illustrate that eBay small businesses are an inclusive business phenomenon in Germany. There is robust eBay seller activity in communities far removed from the economic elites. These include many rural and structurally disadvantaged Districts and holds true whether you look at the top Districts nationwide or look Region-by-Region across the country.

More intense selling activity is coming from eBay small businesses in Germany's structurally disadvantaged and rural areas than from the most well-off urban centers.

### Highlights of inclusive economic impacts include:

- The Top 20 Digital Density Districts have a per capita GDP 20 percent below the national average.
- Half of the eBay Top 20 are among Germany's least densely populated Districts.
- Collectively, structurally disadvantaged Districts average an Index score of 108 for eBay Digital Density, beating Germany's wealthy Districts by almost 20 percent.

eBay allows a small business to access consumer demand across the country, Europe more broadly, and globally. This is especially valuable if the local economy is weaker. The ability to sell to remote markets is clearly visible in eBay cross-border trade success that defies traditional small business expectations.

- 96 percent of Germany's eBay small businesses are exporters.
- eBay small business exporters average 16 different export markets per year.
- eBay small businesses in 45 structurally disadvantaged Districts and 42 rural Districts exceeded the overall national eBay trade averages.

eBay is a force for balanced growth in Germany. Its entrepreneurs have thrived on its level-playing field ecommerce platform for nearly 25 years. The ability to take advantage of sales opportunities, locally, nationally, and across borders, continues to be particularly valuable to small and mid-size enterprises operating in areas that are among Germany's less prosperous and more remote.

## INTRODUCTION



Germany, like advanced economies across Europe and globally, is challenged to provide inclusive economic opportunities that better serve a wide range of areas, communities, and even individuals. The unification of East and West Germany created a unique set of deep regional development disparities, but the country also faces the full set of challenges caused by the economic and social magnetism of urban hotspots and other hubs of productivity and growth. And while the march forward of these centers of activity, entrepreneurship, and culture is generally an attractive development, the prospect that they metaphorically “pull away” from the county’s structurally weak areas is a recognized problem undermining long-term economic and social progress.

eBay supports small businesses in countries across the globe. This is especially true in Germany, where entrepreneurs have thrived on its level-playing field ecommerce platform for almost 25 years, taking advantage of sales opportunities locally, nationally, and across borders. eBay is a proven tool that empowers even very small businesses to reach consumers where they are, which is particularly valuable to small and medium-sized enterprises (SMEs) operating in areas that are less prosperous and more remote.

This paper presents eBay “Digital Density” data, a measurement of eBay small business activity on a per-capita basis, across Germany’s 401 Districts (Kreise).<sup>1</sup> The data indicates that eBay is fostering vibrant small business activity in a way that is more balanced than growth in the overall economy, helping counter the trend of urban hotspot dominance and supporting governmental goals to advance business activity in areas that are structurally weak. Across the country, Regions and Districts that dominate the traditional Germany economy generally do not lead in eBay Digital Density. Instead, independent small businesspeople based in a wide range of Districts are providing an inclusive counterbalance to the prevailing economic growth trends.

The ecommerce analysis in this report is based on data covering transactions on eBay in 2021 unless otherwise indicated. When analyzing the activities of small businesses on eBay, the data was limited to transactions by sellers who were registered business enterprises in Germany with sales of 9,145 EUR (\$10,000 USD) or more annually on eBay. In this report, these sellers are called “eBay small businesses”.



### Julia Weinrebe

gruenes.warenhaus  
St. Michaelisdonn

More than 125 years ago, Julia Weinrebe’s great-grandfather founded an agricultural trading and cartage business and laid the foundation for a northern German family dynasty. Exactly 100 years later, Julia Weinrebe took over the management of the family business. As early as 2009, she opened an additional eBay shop that took off rapidly in online trading. There she sells fertilizers and pesticides as well as bird feed. With a 99.9 percent positive rating and top ratings on eBay.de, her shop gruenes.warenhaus has an excellent record in terms of customer satisfaction. For its terrific record, it was awarded the German eBay Seller Award in 2020.

**“Through my eBay store, I can advise my customers online and help them choose the right product.”**



# Regional Challenges Expanding Beyond “East – West”



Regional economic and social imbalances are not unique to Germany. They have plagued Europe for decades. And Germany has been at the forefront of investing in efforts to address them due to the striking developmental challenges brought on by the reunification of East and West. Almost €2 trillion<sup>2</sup> of public investment has been spent over more than 30 years to address regional imbalances and structural weakness, and the result has been unquestionable progress.<sup>3</sup> East-West labor productivity<sup>4</sup> and mortality<sup>5</sup> gaps have been reduced and major advances have been made in several eastern cities.<sup>6</sup>

At the same time, even after a decade of robust economic growth following the 2008 downturn, some measurements showed that the gap between rich and poor cities in Germany had increased.<sup>7</sup> That problem is not unique to Germany and similar increases in regional economic disparities occurred inside many European countries over that time.<sup>8</sup> One contributing factor is attractive cities drawing in workers who are more productive<sup>9</sup>, younger<sup>10</sup>, and more highly educated<sup>11</sup>, leading to “a slow process of geographic sorting, with more highly educated people clustering together.”<sup>12</sup> For example, Berlin and Munich, two of the top tech hubs in Europe<sup>13</sup>, combined with Paris, London, and Stockholm in 2021 to account for 54 percent of all regional investment.<sup>14</sup>

Germany is simultaneously far less dominated by a single top city than most European states, enjoying a “polycentric distribution of its major cities” spread around the country.<sup>15</sup>

Germany’s regional policy to assist structurally disadvantaged areas by promoting business investment and fostering more balanced infrastructure now aims more broadly to address widespread rural challenges, as well as aid areas that face structural challenges due to the decline of certain heavy industries such as coal.<sup>16</sup> The country’s highly diverse SME sector accounts for over 99 percent of all businesses and roughly 60 percent of all jobs subject to compulsory social security contributions, and the Federal Government recognizes the important contributions that SMEs can make toward development in structurally disadvantaged areas, including through digitization, innovation, and engaging in foreign trade opportunities.<sup>17</sup>

In the next section, data will be presented that illustrates how eBay small business activity is contributing to the important goal of balanced regional development. More selling activity, on a per capita basis, is coming from eBay small businesses in structurally disadvantaged and rural areas than from the most well-off urban centers.



## Jennifer Sax, née Geiger

Musikhaus Geiger & Geiger GmbH  
Kehl am Rhein

The family business “Musikhaus Geiger und Geiger”, located in Kehl am Rhein, was founded in 1988 by Wolfgang and Irene Geiger. They have always supplied the music associations in the Ortenau region and customers from all over Germany with musical instruments and accessories. With daughter Jennifer, the next generation is already an integral part of the company. They have compensated for the decreasing number of walk-in customers over the years with their online presence and thus maintain their company.

**“As experts for woodwind and brass instruments, we serve a large clientele throughout Germany. With our eBay store, we can sell our products, both new and used, even across national borders.”**

# eBay Sellers Flourishing in Disadvantaged Regions



In this section we calculate and use two Indexes to rank and compare eBay small business activity in Germany's Districts. One, called **eBay Digital Density**<sup>18</sup>, is an Index based on the per capita eBay selling activity carried out by registered businesses in the District who are eBay small businesses. The second, which we call **Relative Economic Advantage**<sup>19</sup>, is an Index based on the District's GDP per capita.<sup>20</sup> In both cases, the figures represent per capita values, allowing for more helpful comparisons between Districts with larger and smaller populations. Both Indexes normalize their values by presenting an individual District's performance as a percentage of the national average. A value that is 25 percent above the national average has an Index value of 125. For example, if the national GDP per capita is 48.000 EUR, a District with a GDP per capita of 60.000 EUR would result in a Relative Economic Advantage Index value of 125. A District with a GDP per capita of 48.000 EUR has a Relative Economic Advantage value of 100. And a District with a GDP per capita of 36.000 EUR has an Index value of 75. The Relative Economic Advantage Index scores across all the Districts in Germany for the period studied ranged from 383 to 37.<sup>21</sup>

Data backs up the contention that vibrant eBay small business communities (i.e., those with eBay Digital Density scores above 100) come from a diverse range of Districts across Germany. Rather than following the general trend of the strongest economic growth being concentrated in the wealthiest and most urbanized areas, the most robust eBay selling communities are found in a wide mix of Districts based on geography, population, population density and underlying economic conditions, including structurally weak Districts (See map on page 8).

## eBay Activity in Economically Challenged Districts

**Comparing the Top 20 Districts Nationally Based on Each Index.** We first compare the Top 20 Districts with the highest Relative Economic Advantage values<sup>22</sup> and the Top 20 Districts with the highest eBay Digital Density scores.<sup>23</sup> The GDP differences are stark. The average of the top Districts in Germany based on Relative Economic Advantage is 202, meaning they enjoy, on average, just over double the per capita GDP as the country as a whole. The comparable value of Relative Economic Advantage for the top Districts for eBay Digital Density is 80, meaning 20 percent below the national average and just 40 percent of that in the highest-flying Districts. The per capita intensity of eBay small business activity is effectively reversed between the two sets, with the top eBay Digital Density Districts having an average mark of 272, while the leaders in the traditional economy average just 82 in eBay Digital Density. Finally, this comparison reveals the first of a consistent pattern of the more advantaged Districts having higher population densities than those leading in per capita eBay small business selling. The average population density of the Top 20 for the traditional economy was 1,715 people per sq km, compared to 301 people per sq km in the Top 20 for eBay Digital Density.

The average per capita GDP in the Top 20 Districts for eBay Digital Density is 20 percent below the national average.



**A Region-by-Region Analysis.** The fact that the Districts that are home to the most vibrant eBay small business seller communities represent a more economically diverse grouping than the overall economic hotspots is not just a national-level phenomenon, but it is also evident at the Regional level. Within each German Region, we identified the District with the highest Relative Economic Advantage score, as well as the District with the top level of eBay Digital Density. The two are generally not the same. The same District tops both rankings in just five Regions.<sup>24</sup>

Analyzing the 36 Districts that top their Region for Relative Economic Advantage<sup>25</sup> reveals a well-above-average score of 146 on the GDP-based Index, but a slightly below average 89 on the eBay Digital Density Index. Just one of the Districts in the national Top 20 for eBay Digital Density also leads its Region in GDP per capita. By comparison, the collection of 36 Districts that are home to their Region's most vibrant eBay small business community<sup>26</sup>, average 86 on the Relative Economic Advantage Index and 188 on the eBay Digital Density Index. The broad geographic distribution of eBay selling is also reflected in the fact that 12 of the Top 20 Districts for eBay Digital Density nationally are individual Region leaders.

In 31 German Regions, the top District for eBay Digital Density does not enjoy the Region's highest income level.

**eBay Small Business Success in Structurally Disadvantaged Districts.** As noted earlier, Germany has been engaged in long-standing and widely recognized efforts to address regional economic disparities and foster more balanced growth. The Joint Federal/Länder Task for the Improvement of Regional Economic Structures, otherwise known as the GRW, promotes investment and development in the former East German Regions as well as in disadvantaged rural Districts and those once dominated by traditional heavy industries like coal and steel. 97 Districts are designated as structurally disadvantaged.<sup>27</sup> Collectively, those 97 Districts average just 69 on the Relative Economic Advantage Index, a not surprising result, but they are home to many vibrant eBay small business communities and average 108 for eBay Digital Density. Nine of the Top 20 Districts nationally for eBay small business selling come from structurally weak Districts.

Looking for a comparable group of economically advantaged Districts, we discovered that the combined population of all the Districts in the country that score 100 or higher on the Relative Economic Advantage Index, was nearly the same as the combined population of the 97 disadvantaged Districts. Both account for slightly over 20 million people.<sup>28</sup> Continuing the trend of eBay small business success not being tied to top-level local economic prosperity, those 79 Districts average 141 on the GDP-based Index and 91 for eBay Digital Density, nearly 20 percent below the disadvantaged Districts. However, they do contribute three of the national Top 20 for eBay Digital Density as well.

Nine of the Top 20 Districts for eBay Digital Density are structurally weak.



**Carolin Langer**

lacatho  
Öhringen

At just 24 years old, Carolin Langer founded LaCaTho GmbH in the spring of 2020. Since then, she has been selling insect-friendly seeds from Germany and Austria online. Her goal is to support customers in taking a step towards an environmentally conscious future and to take responsibility for animal welfare. Since its foundation, the business has grown considerably: Today, 9 employees take care of the shipping of the products. Of course, the goods arrive at the customers in plastic-free packaging and recycled boxes. For this great success story, Carolin was honored in the Young Entrepreneur category at the eBay Awards 2022.

**“For me, online business offers the advantages that we can reach our customers around the clock, but also the reach across Germany. In contrast to the local brick and mortar business, we can present our products better. We can provide pictures or videos to show customers how the plants will look later when they have grown.”**

## Urbanization and Population Density Not Correlated to eBay Seller Success

While higher population density and greater urbanization is not always a mark of stronger economic growth, the phenomenon of urban hotspots pulling in growing numbers of people, especially younger, more highly educated, more productive workers, is well understood. Similarly, areas facing economic development challenges often include more remote and rural areas with low population densities and minimal urbanization. Unlike with many traditional indicators of entrepreneurship and technology-led economic activity, higher population density and greater urbanization have not traditionally been tied to eBay seller success. In fact, if anything, it is slightly the opposite.

**Comparing Districts Based on Population Density.** We grouped the 20 Districts in Germany with the highest population density.<sup>29</sup> Their total population is 14.7 million. We then created an equal size collection of 14.7 million people from the Districts with the lowest levels of population density, starting with the lowest and proceeding to progressively more densely populated Districts. That grouping eventually accounted for the 109 Districts with the lowest population density. Again, we calculated average values for both Indexes for both groups of Districts. The 20 highest population density Districts had an average Relative Economic Advantage Index score of 124 and an average eBay Digital Density of 93. The group of 109 lowest density Districts had an average GDP Index of 69 and an average eBay Digital Density of 100. Fully half of the Top 20 eBay Digital Density Districts are among those least densely populated Districts.

Half of the Top 20 Districts for eBay Digital Density are among Germany's least densely populated.

**Comparing Districts Based on the European Commission's Urban-to-Rural Scale.** Population density is a helpful, but inexact indicator of the level of urbanization or rural character. The European Commission classifies all Districts on a 1 to 5 urban to rural scale, including remoteness, based on population density and population distribution.<sup>30</sup> In Germany, 36 million people live in the 95 most highly urban Category 1 Districts. There are 192 Category 2 Districts with 33 million total residents. The 114 Districts from Categories 3 to 5 (mostly 4 and 5, as only four German Districts are category 3) are home to 13.5 million.<sup>31</sup> We again calculated the economic and eBay numbers for these District groupings, and again, the more rural Districts did not have less vibrant eBay seller activity. In fact, they had more.

The most urban, Category 1 group had the top average Relative Economic Advantage Index score (99) and an identical average eBay Digital Density score of 99. Two of the Top 20 eBay Digital Density Districts nationally are Category 1 urban Districts. The second-tier urban group, Category 2, had a lower average Relative Economic Advantage Index of 83 and an average eBay Digital Density score of 96. However, 10 of the Top 20 eBay Digital Density Districts are Category 2 "Intermediate" urban Districts. The group of 114 Districts from the most rural and remote Categories 3 to 5 had the lowest per capita GDP Index average value (77), but the highest average eBay Digital Density score (107). Eight of the Top 20 for eBay Digital Density were rural.

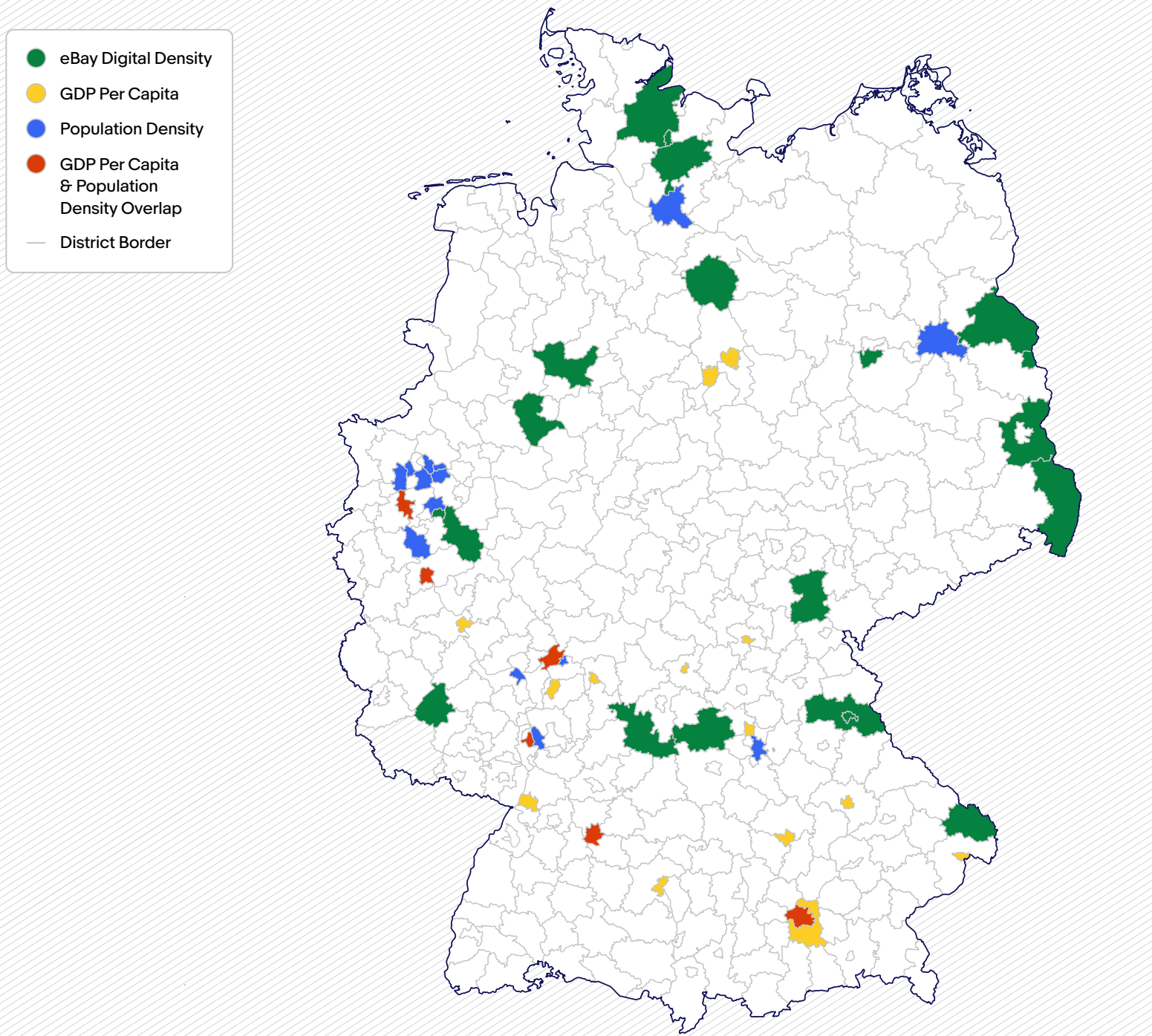
Rural Districts in Germany collectively score highest in eBay Digital Density and lowest in GDP per capita.

eBay-enabled small business activity in many of Germany's structurally weak Districts is outperforming that in many of the most advantaged, running counter to most economic expectations. The next section turns to trade data to illustrate how a digital marketplace platform enables small businesses to engage in significant commerce over great distances. This ability to access consumer demand across the country, Europe more broadly, and globally, is central to the inclusive economic results on eBay in Germany.



# Promoting Inclusive Economic Opportunities Across Germany

This map of Germany's 401 Districts displays the **Top 20 Districts** for eBay Digital Density, GDP per capita, and population density. The Top Districts for eBay Digital Density do not overlap with any of the Top Districts for GDP per capita and population density, thus demonstrating the level-playing nature of the platform and how it is a force for balanced growth.



## eBay Digital Density Rank

1. Neustadt a. d. Waldnaab
2. Frankfurt (Oder)
3. Görlitz
4. Weiden i. d. Opf
5. Freyung-Grafenau

## GDP Per Capita Rank

1. Wolfsburg
2. Ingolstadt
3. München, Landkreis
4. Erlangen
5. Coburg

## Population Density Rank

1. München
2. Berlin
3. Frankfurt am Main
4. Herne
5. Stuttgart



# SME Ecommerce Exports Helping Power Inclusive Growth



It has been well understood, both intuitively and through economic study<sup>32</sup>, that distance reduces opportunities to engage in commerce. It is easier to do business with a customer that is nearby rather than one who is 100 kilometers away, or 1,000 kilometers, or on the other side of the world. This has traditionally meant that small businesses, largely limited to serving local customers, were often dependent on local economic fortunes. Distance matters less for commerce online<sup>33</sup>, facilitating trade, especially by small businesses. German small business development policies recognize the importance of expanding trade opportunities for SMEs, who represent 99 percent of all German enterprises.<sup>34</sup> The cross-border commerce occurring over eBay's level-playing field marketplaces, carried out by small businesses across Germany, including in structurally disadvantaged Districts, validates these policy initiatives.

## Share of Enterprises Exporting

Nearly all German small businesses selling on eBay are exporting. This remarkable export success is far removed from the export rates of traditional businesses. Across Germany, 95.9 percent of the small businesses on eBay are exporters.<sup>35</sup> The comparable export rate of traditional businesses is 10.5 percent.<sup>36</sup> In 29 Districts, all eBay small businesses are exporters, which includes Frankfurt an der Oder, the District ranking second nationally in eBay Digital Density, as well as six other structurally disadvantaged Districts.

All eBay Small Businesses in These Structurally Weak Regions are Exporters

1. Frankfurt an der Oder (DE403)
2. Dessau-Rosslau (DEE01)
3. Ostprignitz-Ruppin (DE40D)
4. Harz (DEE09)
5. Pirmasens (DEB37)
6. Hof (DE244)
7. Zweibrücken (DEB3A)

## Average Number of International Destination Markets

Exporting to a new international market traditionally imposes new costs of entry, leading to smaller firms with smaller budgets exporting to fewer markets than larger firms with more financial resources.<sup>37</sup> The eBay marketplace largely ends that relationship between size and reach into more export markets. eBay small business exporters in Germany average 16 different export markets<sup>38</sup> reached in a year.<sup>39</sup> eBay small business sellers in 45 structurally disadvantaged Districts and 42 rural Districts exceeded the overall national average. In comparison, the average number of export markets reached per year for traditional businesses in Germany lags far behind at just four markets.

eBay Small Businesses in Six Rural Districts Average 20+ Export Markets

1. Ansbach (DE25I)
2. Holzminden (DE926)
3. Kelheim (DE226)
4. Northeim (DE918)
5. Nordhausen (DEG07)
6. Wittmund (DE94H)

## CONCLUSION

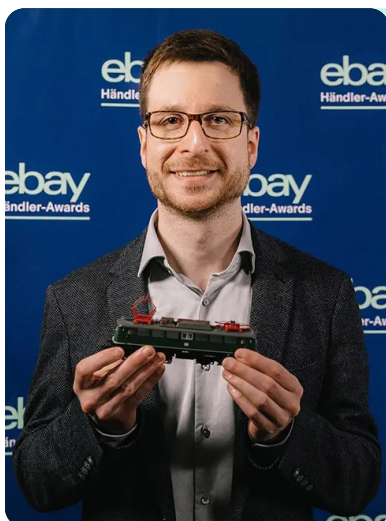


Supporting structurally weak areas to help them catch up and provide improved standards of living across the country remains an important priority in Germany. This includes addressing disparate development between East and West as well as the challenges of remote rural locales and areas marked by the decline of once-dominant heavy industries. Pushing against efforts to provide more balanced economic opportunities and living standards is the continued pull that wealthy urban hotspots have on entrepreneurs, workers, and financial capital. Their “magnetic” ability to concentrate business activity threatens to depress national economic potential and undermine social cohesion.

eBay Digital Density data, a measurement of the per capita eBay selling activity carried out by registered businesses, illustrates that eBay small businesses are an inclusive business phenomenon in Germany. There is robust eBay seller activity in areas that are far outside the economic elites. These include many rural communities and dozens of structurally

disadvantaged Districts. This is true whether you look at the top Digital Density Districts nationwide or go region-by-region across the country. eBay small business communities in areas with lower incomes and outside the urban centers generally outperform those in wealthier and more urban Districts, often by a significant margin. eBay is a force for balanced growth.

This report therefore offers a counterweight to the suggestion that urban and tech startup hotspots dominate every measure of entrepreneurship, the mastery digital tools, and the ability to exploit global trade opportunities. Rather, small businesses and entrepreneurs in every kind of region can succeed when they are empowered by a level-playing field marketplace. Policies and public investments that facilitate ecommerce by truly independent small businesses offer more than just additional economic growth. Instead, they will disproportionately pay dividends in areas that are otherwise falling behind the growth hotspots, spurring inclusive growth and promoting social cohesion.



### Franziskus Weinert

Toyshop Mittelrhein  
Oberwesel

Franziskus Weinert is the fourth generation to run his local toy store in Oberwesel. Even before Weinert took over the business in 2014, it was clear to the toy seller that e-commerce offered his company the chance to grow far beyond the small town of 3,000 inhabitants. That’s why he opened the eBay shop toyshopmittelrhein in 2003, which has since become a mainstay. By combining online and offline sales, Franziskus Weinert can offer more products in his stationary shop. In addition, many customers get an initial overview online and then come to the local store with specific wishes and ask for advice.

**“eBay is a good addition to my brick-and-mortar retail store and gives me an opportunity as a seller to be successful with my toys online as well.”**



## RESOURCES

- <sup>1</sup> In this report, the term Region (Regierungsbezirke) is used to designate NUTS 2 Governmental Regions in Germany, and the term District (Kreise) is used to designate NUTS 3 Districts in Germany. There are 16 NUTS 1 Regions in Germany, the federal states (Länder). There are 38 NUTS 2 Regions (Regierungsbezirke) in Germany, and 242 in the EU overall. There are 401 NUTS 3 Districts (Kreise) in Germany, and 1166 in the EU overall. Additional background on the NUTS (Nomenclature of territorial units for statistics) is available from Eurostat at <https://ec.europa.eu/eurostat/web/nuts/background>.
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- <sup>18</sup> **Calculating eBay Digital Density:** Digital Density is a measurement of the per capita eBay selling activity carried out by registered eBay small businesses in a jurisdiction. Digital Density in this report is calculated at the District level. The level of Digital Density is based on two factors – (1) the number of eBay small businesses per 100,000 inhabitants and (2) the total sales by eBay small businesses per 100,000 inhabitants. These two factors are combined in a weighted average and normalized in an Index based on how the District's eBay seller community performs in relation to the national average.
- <sup>19</sup> **Calculating Relative Economic Advantage:** Similar to our calculation of Digital Density, the Index of Relative Economic Advantage provides a per capita ranking at the District level, in this case of GDP per capita. If the per capita GDP in a region is the same as their national GDP per capita, meaning income was perfectly average, the Relative Economic Advantage Index value would be 100. In this report, this Index is based on a national GDP per capita of 44 887 EUR / \$51,182 USD.
- <sup>20</sup> Gross domestic product (GDP) at current market prices per capita, nominal (Districts). "Eurostat Gross domestic product (GDP) at current market prices by NUTS 3 regions." Available at: [https://ec.europa.eu/eurostat/databrowser/view/NAMA\\_10R\\_3GDP\\_custom\\_5678222/default/table](https://ec.europa.eu/eurostat/databrowser/view/NAMA_10R_3GDP_custom_5678222/default/table). Note: Data is for 2020 and converted from EUR to USD using an exchange rate (of 0.877) available at: <https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates>.



## RESOURCES


- <sup>21</sup> The District with the highest Relative Economic Advantage Index value was Wolfsburg, Kreisfreie Stadt (DE913). The District with the lowest Index value was Sudwestpfalz (DEB3K).
- <sup>22</sup> Top 20 Districts based on Relative Economic Advantage: Wolfsburg, Kreisfreie Stadt (DE913), Ingolstadt, Kreisfreie Stadt (DE211), München, Landkreis (DE21H), Erlangen, Kreisfreie Stadt (DE252), Coburg, Kreisfreie Stadt (DE243), Schweinfurt, Kreisfreie Stadt (DE262), Frankfurt am Main, Kreisfreie Stadt (DE712), Regensburg, Kreisfreie Stadt (DE232), Stuttgart, Stadtkreis (DE111), Darmstadt, Kreisfreie Stadt (DE711), Düsseldorf, Kreisfreie Stadt (DEA11), München, Kreisfreie Stadt (DE212), Ulm, Stadtkreis (DE144), Braunschweig, Kreisfreie Stadt (DE911), Bonn, Kreisfreie Stadt (DEA22), Ludwigshafen am Rhein, Kreisfreie Stadt (DEB34), Koblenz, Kreisfreie Stadt (DEB11), Karlsruhe, Stadtkreis (DE122), Aschaffenburg, Kreisfreie Stadt (DE261), Emden, Kreisfreie Stadt (DE942)
- <sup>23</sup> Top 20 Districts based on eBay Digital Density - Neustadt a. d. Waldnaab (DE237), Frankfurt (Oder), Kreisfreie Stadt (DE403), Görlitz (DED2D), Weiden i. d. Opf, Kreisfreie Stadt (DE233), Freyung-Grafenau (DE225), Segeberg (DEF0D), Neustadt a. d. Aisch-Bad Windsheim (DE25A), Uelzen (DE93A), Main-Tauber-Kreis (DE11B), Saale-Orla-Kreis (DEG0K), Remscheid, Kreisfreie Stadt (DEA18), Spree-Neiße (DE40G), Märkisch-Oderland (DE409), Rendsburg-Eckernförde (DEF0B), Gütersloh (DEA42), Oberbergischer Kreis (DEA2A), Birkenfeld (DEB15), Brandenburg an der Havel, Kreisfreie Stadt (DE401), Neumünster, Kreisfreie Stadt (DEF04), and Minden-Lübbecke (DEA46).
- <sup>24</sup> The Regions of Berlin (DE30) and Hamburg (DE60) do not include Districts. The five Districts that are top in their region for both the Relative Economic Advantage Index and eBay Digital Density are Ingolstadt, Kreisfreie Stadt (DE211) in Oberbayern, Bremen, Kreisfreie Stadt (DE501) in Bremen, Gütersloh (DEA42) in Detmold, Ludwigshafen am Rhein, Kreisfreie Stadt (DEB34) in Rheinland-Pfalz, and Chemnitz, Kreisfreie Stadt (DED41) in Chemnitz.
- <sup>25</sup> The 36 Districts with the top Relative Economic Advantage Index score for their Region: Ingolstadt, Kreisfreie Stadt (DE211), Bremen, Kreisfreie Stadt (DE501), Gütersloh (DEA42), Ludwigshafen am Rhein, Kreisfreie Stadt (DEB34), Chemnitz, Kreisfreie Stadt (DED41), Stuttgart, Stadtkreis (DE111), Karlsruhe, Stadtkreis (DE122), Freiburg im Breisgau, Stadtkreis (DE131), Ulm, Stadtkreis (DE144), Passau, Kreisfreie Stadt (DE222), Regensburg, Kreisfreie Stadt (DE232), Coburg, Kreisfreie Stadt (DE243), Erlangen, Kreisfreie Stadt (DE252), Schweinfurt, Kreisfreie Stadt (DE262), Memmingen, Kreisfreie Stadt (DE274), Potsdam, Kreisfreie Stadt (DE404), Frankfurt am Main, Kreisfreie Stadt (DE712), Kassel, Kreisfreie Stadt (DE731), Schwerin, Kreisfreie Stadt (DE804), Wolfsburg, Kreisfreie Stadt (DE913), Region Hannover (DE929), Verden (DE93B), Emden, Kreisfreie Stadt (DE942), Düsseldorf, Kreisfreie Stadt (DEA11), Köln, Kreisfreie Stadt (DEA23), Münster, Kreisfreie Stadt (DEA33), Dortmund, Kreisfreie Stadt (DEA52), Koblenz, Kreisfreie Stadt (DEB11), Trier, Kreisfreie Stadt (DEB21), Regionalverband Saarbrücken (DEC01), Dresden, Kreisfreie Stadt (DED21), Leipzig, Kreisfreie Stadt (DED51), Magdeburg, Kreisfreie Stadt (DEE03), Kiel, Kreisfreie Stadt (DEF02), Jena, and Kreisfreie Stadt (DEG03).
- <sup>26</sup> The 36 Districts with the top eBay Digital Density score in their Region: Ingolstadt, Kreisfreie Stadt (DE211), Bremen, Kreisfreie Stadt (DE501), Gütersloh (DEA42), Ludwigshafen am Rhein, Kreisfreie Stadt (DEB34), Chemnitz, Kreisfreie Stadt (DED41), Main-Tauber-Kreis (DE11B), Enzkreis (DE12B), Tuttlingen (DE137), Reutlingen (DE141), Freyung-Grafenau (DE225), Neustadt a. d. Waldnaab (DE237), Kulmbach (DE24B), Neustadt a. d. Aisch-Bad Windsheim (DE25A), Würzburg, Landkreis (DE26C), Neu-Ulm (DE279), Frankfurt an der Oder, Kreisfreie Stadt (DE403), Wetteraukreis (DE71E), Gießen, Landkreis (DE721), Marburg-Biedenkopf (DE724), Fulda (DE732), Vorpommern-Greifswald (DE80N), Northeim (DE91B), Diepholz (DE922), Osterholz (DE936), Osnabrück, Kreisfreie Stadt (DE944), Remscheid, Kreisfreie Stadt (DEA18), Oberbergischer Kreis (DEA2A), Steinfurt (DEA37), Hagen, Kreisfreie Stadt (DEA53), Birkenfeld (DEB15), Vulkaneifel (DEB24), Saarlouis (DEC04), Görlitz (DED2D), Nordsachsen (DED53), Dessau-Roßlau, Kreisfreie Stadt (DEE01), Segeberg (DEF0D), and Saale-Orla-Kreis (DEG0K).
- <sup>27</sup> European Commission (12/15/2021) "State aid SA.64020 (2021/N) – Germany Regional aid map for Germany (1 January 2022 – 31 December 2027)." Available at: [https://ec.europa.eu/competition/state\\_aid/cases/202215/SA\\_64020\\_30770380-0100-C540-80D4-2C66AF831E31\\_89\\_1.pdf](https://ec.europa.eu/competition/state_aid/cases/202215/SA_64020_30770380-0100-C540-80D4-2C66AF831E31_89_1.pdf).
- <sup>28</sup> The 97 Districts qualified for the GRW have a combined population of 20.68 million. The 79 Districts with Relative Economic Advantage Index values at 100 or above have a combined population of 20.36 million. See: Eurostat (04/12/2023) "Population on 1 January by age group, sex and Region (2021)." Available at: [https://ec.europa.eu/eurostat/databrowser/view/DEMO\\_R\\_PJANGRP3/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/DEMO_R_PJANGRP3/default/table?lang=en).
- <sup>29</sup> Population density and land area for Districts calculated based on Eurostat data for 2021. See: Eurostat (04/12/2023) "Population on 1 January by age group, sex and NUTS 3 region (2021)." Available at: [https://ec.europa.eu/eurostat/databrowser/view/DEMO\\_R\\_PJANGRP3/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/DEMO_R_PJANGRP3/default/table?lang=en); Eurostat (01/31/2023) "Area by NUTS 3 region." Available at: [https://ec.europa.eu/eurostat/databrowser/view/reg\\_area3/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/reg_area3/default/table?lang=en).
- <sup>30</sup> The five categories in the European Commission's Urban-Rural typology are: 1 = Predominantly Urban, 2 = Intermediate, close to city, 3 = Intermediate, remote, 4 = Predominantly rural, close to city, 5 = Predominantly rural, remote. See: Eurostat (07/13/2018) "Archive:Regional typologies overview." Available at: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Regional\\_typologies\\_overview&oldid=394702#Urban-rural\\_typology\\_including\\_remoteness](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Regional_typologies_overview&oldid=394702#Urban-rural_typology_including_remoteness).
- <sup>31</sup> Eurostat (02/21/2023) "Gross domestic product (GDP) at current market prices by NUTS 3 regions." Available at: [https://ec.europa.eu/eurostat/databrowser/view/NAMA\\_10R\\_3GDP\\_custom\\_5678222/default/table](https://ec.europa.eu/eurostat/databrowser/view/NAMA_10R_3GDP_custom_5678222/default/table).
- <sup>32</sup> Examples from economic literature on this are: "The Puzzling Persistence of the Distance Effect on Bilateral Trade" (2008), by Anne-Celia Disdier and Keith Head, in Review of Economics and Statistics 90(1), 37-48; "The Gravity Equation in International Trade: an Explanation" (2011), by Thomas Chaney; and "Information Frictions in Trade" (2011), by Treb Allen, Job-Market paper, Yale University.
- <sup>33</sup> Gomez-Herrera, E., Martens, B., and G. Turlea (January 2013) "The drivers and impediments for cross-border e-commerce in the EU." Digital Economy Working Paper 2013/2. European Commission JRC Technical Report- Institute for Prospective Technological Studies. Available at: <http://docplayer.net/10084572-The-drivers-and-impediments-for-cross-border-e-commerce-in-the-eu.html>.
- <sup>34</sup> Federal Ministry for Economic Affairs and Energy (10/01/2019) "Valuing SMEs, Strengthening Opportunities, Easing the Burden – The German SME Strategy." Available at: [https://www.bmwk.de/Redaktion/EN/Publikationen/Mittelstand/german-sme-strategy.pdf?\\_\\_blob=publicationFile&v=3](https://www.bmwk.de/Redaktion/EN/Publikationen/Mittelstand/german-sme-strategy.pdf?__blob=publicationFile&v=3).
- <sup>35</sup> The eBay data reflects the share of eBay small businesses (those with \$10,000 USD or more in annual sales on eBay) in Germany who exported in 2021.


## RESOURCES

- <sup>36</sup> Source for total number of enterprises that export: OECD Trade by enterprise characteristics (TEC) data: IV. Trade by the number of partner countries and economic sector. Available at: [https://stats.oecd.org/Index.aspx?DataSetCode=TEC4\\_REV4](https://stats.oecd.org/Index.aspx?DataSetCode=TEC4_REV4); Source for total number of enterprises: ECD SDBS Structural Business Statistics (ISIC Rev. 4): Total number of enterprises, by sector. Available at: [https://stats.oecd.org/Index.aspx?DataSetCode=SSIS\\_BSC\\_ISIC4](https://stats.oecd.org/Index.aspx?DataSetCode=SSIS_BSC_ISIC4). Share = (total number of enterprises that export) / (total number of enterprises).
- <sup>37</sup> For example, see Roberts, Mark J. and James R. Tybout. Directions in Development: What Makes Exports Boom? (Washington, D.C.: The World Bank, 1997a); Bernard, Andrew and Joachim Wagner. Export entry and exit by German firms. Review of World Economics (Weltwirtschaftliches Archiv), 137 (2001), 105-123.; Bernard, Andrew and J. Bradford Jensen. Entry, Expansion, and Intensity in the U.S. Export Boom, 1987-1992. Review of International Economics, 12 (2004b), 662-675.
- <sup>38</sup> Includes countries and territories.
- <sup>39</sup> The eBay data reflects the average number of different international markets reached by eBay small businesses (those with \$10,000 USD or more in annual sales on eBay) in Germany, who exported in 2021.



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