What is E-REGI?

LaSalle’s annual European Regional Economic Growth Index (E-REGI) identifies the European regions with the best economic growth prospects. E-REGI therefore approximates the relative strength of future occupier demand for real estate in the medium term.

Our analysis covers nearly 300 regions across 32 European countries, with a total population of more than 740 million. Our main interest goes out to the 100 major city-regions (regions including cities with more than 500,000 inhabitants and all national capitals).

E-REGI gives a score to each region in Europe based on its economic growth prospects, its level of wealth and the quality of its business environment - relative to the European average (see technical note p. 24-27 for more details on methodology).

When combined with detailed real estate knowledge, supply side information and relative pricing, the E-REGI is a valuable tool for determining real estate market outperformance and investment strategy.

Please also visit www.lasalle.com/research for more information on E-REGI.
E-REGI 2016 Key Takeaways

This year’s E-REGI shows that political decision-making is beginning to affect the economic outlook of Europe’s major cities. The other main driver to changes in the index is the inclusion of the Human Capital component which has replaced the previous indicator for innovation and future productivity growth, R&D expenditure. The highlights of the 17th edition of E-REGI are:

- London loses its top spot in the ranking, slipping to 2nd position. All UK cities lose out to European peers due to post-Brexit growth revisions, with Manchester and Birmingham being the most affected. However, strong Human Capital scores cushion the negative Brexit impact on UK cities. London and the wider South East, Bristol, Manchester and Edinburgh remain strong-scoring regions in a European context.

- Paris tops the index for the first time since 2005, its score reaching a record high. French cities are the best improvers this year due to stronger employment growth prospects as government policies start to pay off. All French cities also benefit from strong Human Capital factors.

- German cities collectively outperform. Munich reaches 4th position and Berlin jumps 19 positions in the ranking on the back of strong Human Capital scores. The main German cities improve further as structural reforms and immigration increased the size of their workforce, boosting their employment scores.

- Polish cities fall in the ranking this year as the protectionist stance of the new Polish government weakens Poland’s GDP growth outlook. Warsaw remains in the top 20, leading in Central and Eastern Europe.

- Political upheaval in Turkey damages the country’s Business Environment score, weakening all Turkish cities. However, Istanbul remains in the top 10. This reflects the size and exceptional growth potential of the region.

- The inclusion of the Human Capital component to the E-REGI favours many cities in Europe. It has helped Paris and London at the very top of the ranking, but also boosted the scores of Stockholm, Moscow, Edinburgh, Dublin, Brussels, Berlin and Barcelona in particular. We believe that this indicator which encapsulates Skilled Labour, Creativity and Investment is a superior metric for productivity growth, making E-REGI even more powerful in predicting Europe’s winning cities.
E-REGI 2016

Very Strong 1.20 - 2.31
Strong 1.07 - 1.20
Good Medium 0.97 - 1.06
Poor Medium 0.90 - 0.96
Weak 0.78 - 0.90
Very Weak 0.27 - 0.78
No data

Coverage Cities
Top 15 Cities

1. PARIS
2. LONDON
3. STOCKHOLM
4. MUNICH
5. LUXEMBOURG
6. ISTANBUL
7. DUBLIN
8. MADRID
9. STUTTGART
10. OSLO
11. COPENHAGEN-MALMO
12. ZURICH
13. LYON
14. BRUSSELS
15. BARCELONA
E-REGI 2016 Scores

All European Regions (n=295)

Cities Regions Only (n=100)
E-REGI 2016 Results

This year’s E-REGI results can be explained by two main factors. First, political decisions have derailed the economic outlook of a number of European countries, while in others, successful policies have proved beneficial to many cities. Second, the inclusion of the Human Capital component which has replaced the previous indicator for innovation and future productivity growth, R&D expenditure, is another main reason for changes in the scores.

Politics

This year, the E-REGI results show that political events are changing the European economic landscape, for better and for worse.

Political headwinds

Over the last year, political risks have accumulated in Europe. The overall outlook of the European economy - underpinning the E-REGI scores - has therefore weakened; the five-year GDP growth forecast of all regions combined has been reduced compared to last year’s expectations (1.8% versus 2.0% per annum).

The UK and Poland were among the fastest-growing economies in Europe last year, enjoying low unemployment rates. Yet, these are the countries where voter disillusion has had the greatest impact so far.

UK

The much-anticipated referendum on the UK’s EU membership took place on 23 June 2016 and the outcome, which saw Leave take victory with 52% of the vote, surprised financial markets. While a British exit from the EU has not yet been formalised, the uncertainty over the future relationship between the UK and the EU negatively impacts the economic outlook of all UK cities.

Brexit has had a negative impact on most E-REGI sub-scores, including Wealth and Business Environment but the greatest impacts are visible on the GDP and Employment scores. The forecasts for UK GDP growth have been downgraded from 2.6% - as used in E-REGI last year - to 1.6% on average per annum over the next 5 years. However, the UK economy is expected to avoid a recession with London financial institutions being able to keep some of their passporting rights.
In addition to the impact on GDP, service sector employment growth forecasts of all UK cities have been downgraded. Business investment had already slowed before the referendum and this is now likely to be amplified since it is still unclear what form Brexit will take or what the next steps are.

The other reason why employment growth forecasts are weaker this year is due to the impact of immigration on population growth. Immigration might increase in the short term as EU citizens seize the opportunity to take employment in the UK before the freedom of movement between the UK and the EU will be constrained. Beyond the potential impact of immigration restrictions for EU citizens, the outlook for employment growth of UK cities in the medium term is affected by a weaker job market and depreciation of Sterling.

Nevertheless, service sector employment growth is expected to remain positive over the next five years in most UK cities and to remain strong in London.
As a result, **London** (2016 rank: 2 / change from 2015: -1) falls to second position after four consecutive years at the top of the E-REGI ranking. London’s E-REGI score fell more than any other city in Europe. Nevertheless, London and the rest of the South East remain a strong-scoring region as London benefits from a very diverse economy. The London financial sector is also expected to weather the Brexit storm.

All UK regional cities fell in the ranking, with the exception of **Edinburgh** (50/0) which benefits from a high Human Capital score. **Manchester** (57/-40) and **Birmingham** (62/-25) fell the most in the ranking. In comparison with other UK cities, Manchester has not benefited from a strong increase in its Human Capital score as the city is weaker than the European average in terms of educational attainment, R&D expenditure and patent production. **Bristol** (29/-4) is the second-best performing city in the UK due to strong Employment and Human Capital scores with the presence of high value-add companies such as BAE. Bristol and Manchester remain strong scoring regions in a European context.

Rural and predominantly industrial regions are likely to suffer the most from Brexit as they could be hit by the end of the EU agricultural subsidies and by tariffs on exports. This is not particularly visible in the changes in ranking because most UK cities have seen their Human Capital score improve, which has cushioned the impact of Brexit. **Belfast** (86/-5), in Northern Ireland, is particularly vulnerable due to its trade connection with the Republic of Ireland. Ironically, these are the regions which predominantly voted to leave the EU.

Thousands of people demonstrated against Brexit in London on 2nd July. Protests also took place in Edinburgh, Birmingham and Bristol.
Poland

In Poland, the conservative, nationalist PiS party won the election in October last year. Since then, the government has pushed through several pieces of controversial legislation, strengthening controls over the High Court and public media. For this reason, the European Commission has expressed its concerns about the maintenance of the rule of law in Poland. This means that the European Commission could block the voting rights of Poland in European Union decision-making.

The Polish government is also planning to introduce a number of protectionist measures such as a tax on banks and large distribution groups which are held by foreign interests. These protectionist policies risk dampening foreign investor sentiment.
As a result, GDP growth forecasts have been downgraded compared to last year from 3.5% to 3.0% per annum over the next five years - which is still strong in a European context. While the Polish economy has benefited tremendously from the EU single market since Poland joined the EU in 2004, the government’s protectionist stance could harm this open economy.

In E-REGI, the scores of Polish cities are mostly driven by the GDP and Employment components; Warsaw (20/-4) ranks an impressive third for its GDP score and thirteenth for its service Employment score. Weaker growth prospects have mainly hit secondary Polish cities – Krakow (54/-2), Poznan (58/-13), Katowice (65/-8) which have therefore slid down in the ranking. Polish cities are also held back in the ranking by their low Wealth and Business Environment scores compared to the rest of Europe - as are all Central and Eastern European cities. Nevertheless, Warsaw remains in the top 20 and the highest-ranking city in Central and Eastern Europe.
**Turkey**

Turkey’s political situation has also noticeably worsened over the course of last year. President Recep Tayyip Erdoğan’s tighter grip on power following the failed coup in July is prompting international concerns about the future of Turkey’s fragile democracy, where few checks and balances remain in place. In addition, Turkey has recently been hit by a series of terrorist attacks and by the conflicts intensifying along its southern border.

In these conditions, the Turkish cities **Istanbul** (6/-3), **Ankara** (46/-3), **Izmir** (61/-21) and **Antalya** (83/-19) have seen their E-REGI score decrease due to weaker growth prospects but also due to the downgrade of Turkey’s Business Environment Score. Turkey already had the second weakest Business Environment score in Europe – after Russia. This score could be downgraded even further if Turkey’s rule of law remains under threat.

**More political risk looming on the horizon...**

Going forward, a number of political events have the potential to derail the economic outlook of a number of other European countries.

Political uncertainty remains high in Spain and Italy but this has not (yet) had a meaningful impact on the scores of the Spanish and Italian cities. After an impressive recovery over the last two years, the Spanish cities have not moved significantly in the ranking. Strong Human Capital scores have benefited Spain’s main cities: **Madrid** (8/+3) ranks 8th, moving up three positions, while **Barcelona** (15/0) remains at 15th place. Italian cities continue to lag their European peers, with **Milan** (31/0) ranking 31st despite benefiting from a strong Human Capital score. **Rome** (49/+10), **Bologna** (53/+7), **Verona-Venice** (69/+4) and **Florence** (80/+5) move up in the ranking - albeit from a low base - due to improved GDP growth prospects.
Next year, the Dutch, French and German voters will go to the polls. Nationalist, populist parties are expected to make further gains, which could complicate coalition-building processes in Germany and in the Netherlands. In France, the National Front of Marine Le Pen is expected to make it to the second round of the presidential elections, challenging the two main parties. The fragmentation of the political spectrum is a growing risk in Europe, with the potential of changing the relative growth outlook overnight.

Successful policies

While political decisions have derailed the economic outlook of many European cities, in France and Germany a number of policies implemented in previous years helped the performance of their cities in E-REGI.

France

Paris and the other French cities are among the top improvers this year. Higher employment scores are benefiting all French cities in this year’s E-REGI - in addition to strong Human Capital scores.

The labour market started to recover in 2015 as the economic recovery began to take hold. The unemployment rate has reached its peak and the number of private service sector jobs has been increasing since 2013. While this is partially attributable to a cyclical recovery, it is also the result of government measures to incentivise companies to hire more workers. These measures include fiscal incentives for companies when they hire low-to-medium-paid employees. In 2015 only, it has been estimated that fiscal incentives alone have saved or created 45,000 jobs.

As such, service sector employment growth forecasts for all French cities have been upgraded compared to last year. Economic growth is expected to create more jobs going forward as the cost of labour has effectively been reduced. The improved competitiveness of French cities

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labour has caused a significant change compared to last year because the French cities previously had a rather weak employment growth outlook.

**Paris** (1/+1) takes the first position in the ranking due to a combination of stronger growth prospects and a high Human Capital score. **Lyon** (13/+11), **Toulouse** (24/+5) and **Marseilles-Nice** (32/+12) have consistently performed well in E-REGI and these cities have improved further for the same reasons. **Bordeaux** (45/+10) is a fast changing city. The city is trying to attract companies from Paris with the opening of the high-speed train line next year, which will make Bordeaux just over two hours away from Paris. This year, **Nantes** (42/+20) has successfully attracted many Parisians in search of a better quality of life. The city benefits from a highly-educated workforce and from a dynamic IT sector. **Lille** (52/+32) has an established office market, Euralille, and a large number of good universities.
Germany

The majority of Germany’s regions and cities consistently outperform the European average in E-REGI. This demonstrates the strength of Germany as an attractive investment market throughout the cycle.

In this year’s E-REGI, all German cities see their employment score improved significantly compared to last year, although this remains a weak point on the overall index. Only the five strongest German cities of Munich, Stuttgart, Berlin, Frankfurt, Mannheim-Karlsruhe and Hamburg outperform the European average on this metric. With a low unemployment rate and weak population growth, the German economy struggles to recruit the workers it needs to meet its potential.

Employment in Germany is nevertheless growing strongly. The German labour market is seeing more vacancies filled due to increasing
participation rates. The share of the working-age population (aged 15 to 65) currently employed has increased from 59% in 2005 to 69% in 2014. This is the result of political decisions. Over the last decade, German governments have promoted female labour market participation by improving childcare facilities. In addition, as a result of a number of pension reforms postponing retirement age, an increasing number of older workers have joined the workforce: the share of the 60 to 65 year old in employment has increased from 15% to 35% over the last ten years. Last but not least, immigration has contributed to the increase in the German workforce.

As the German labour market is showing more spare capacity than previously assumed, the employment growth prospects of German cities have been upgraded. Their future economic growth indeed relies on the capacity of their economy to fill the jobs, not just to create them.
Human Capital

This year’s E-REGI includes an indicator of Human Capital as one of the key components to identify the regions with the best economic growth prospects. Human Capital replaces the previous indicator for innovation and future productivity growth, R&D expenditure.

What is Human Capital?

LaSalle defines Human Capital as the stock of skills, knowledge, creativity and innovation, which is enhanced by investment and embodied in the ability of the labour force of a region to produce economic value. Over the past year, we have designed an indicator, LaSalle’s European Human Capital Index, which encapsulates all criteria that make up Human Capital: Skilled Population, Creativity and Investment.

LaSalle’s European Human Capital Index

LaSalle’s European Human Capital Index is based on three components. Each of these components relies on two variables as indicated in the following table:

<table>
<thead>
<tr>
<th>Theme</th>
<th>Indicator</th>
<th>Variable</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skilled Workforce</td>
<td>Education level</td>
<td>Tertiary Education Attainment Level of population aged 30-34 years</td>
<td>Eurostat</td>
</tr>
<tr>
<td></td>
<td>Quality of education</td>
<td>University Ranking score</td>
<td>Center for World University Rankings (CWUR)</td>
</tr>
<tr>
<td>Creativity</td>
<td>Patent production</td>
<td>Number of patents filed</td>
<td>OECD</td>
</tr>
<tr>
<td></td>
<td>Agglomeration effect</td>
<td>Population density</td>
<td>Eurostat</td>
</tr>
<tr>
<td>Investment</td>
<td>R&amp;D Investments</td>
<td>R&amp;D expenditure as % GDP</td>
<td>Eurostat</td>
</tr>
<tr>
<td></td>
<td>Tech Venture Capital Investments</td>
<td>Venture capital invested in tech firms</td>
<td>Thomson Reuters</td>
</tr>
</tbody>
</table>
Why include Human Capital in E-REGI?

LaSalle’s European Human Capital Index replaces the single variable R&D expenditures previously included in E-REGI. This variable was insufficient to capture the innovation potential that underpins future productivity growth. For this reason, LaSalle’s European Research & Strategy team has developed this more comprehensive measure of human capital and included it in the E-REGI index. It represents 15% of the total E-REGI score. R&D expenditure is still one of the indicators within the Human Capital component.

Despite technological progress, productivity growth in much of the developed world has been disappointing over the past decade. With this in mind, research on Human Capital has been gaining traction. It has become clear that the skills and abilities that reside in people and how to put these to productive use are indeed major determinants of long-term economic success. How to attract and cultivate Human Capital has therefore become one of the main determinants of economic growth.

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In a knowledge-based economy, having access to a large pool of Human Capital is the main priority of companies. By contrast, having easy and cheap access to other factors of production such as land, energy or physical capital (plants, machinery) is becoming of secondary importance. Similarly, economic growth can no longer be explained by increases in the labour force as workers are not perfectly substitutable.

Human Capital has a tendency to cluster in places which benefit from the presence of universities, high value-added companies or research centres. This creates a virtuous circle as technological progress spawns faster in areas with higher stock of Human Capital. Spatial concentration of Human Capital in urban areas also facilitates knowledge exchanges known as the agglomeration effect.

Accessing these agglomeration benefits and a large pool of Human Capital is the reason why companies are willing to pay high rents. This can be seen as an investment by the company where higher productivity - and therefore higher profits - would be the return on this investment. Similarly, workers are willing to pay higher residential rents/house prices to get access to these productive companies which are capable of paying higher wages. For this reason, regions with high Human Capital are likely to be outperforming real estate market in the long run.
Impact of including Human Capital in E-REGI 2016

The introduction of LaSalle’s Human Capital Index in the E-REGI model has not significantly changed the ranking. The change in scores would have been similar if we had stuck to updating the R&D expenditure data.

Including a more comprehensive indicator of innovation and productivity growth has benefited city regions over predominantly rural regions. With stronger Human Capital scores than their rural counterparts, European cities have collectively never performed so well in E-REGI. In 2016, the average score of the 100 city regions is the highest since the launch of E-REGI in 2000. As such, the 2016 results demonstrate that Europe’s major urban centres are well-positioned to weather uncertain political environments as Human Capital factors guarantee long-term growth opportunities.
Overall, almost all French and UK cities benefited from the introduction of the Human Capital Index. Paris, London, Lyon, Toulouse, Bristol, Edinburgh are among the 20 best performing regions on the Human Capital component.

Paris is 1st in Europe for the quality of universities and patent production, and 2nd for attracting venture capital. In 17 years of E-REGI analysis, Paris has never dropped below 4th position and has reached the top spot six times. This demonstrates the resilience of this large market. London is Europe’s second-best performing city in LaSalle’s European Human Capital Index. London scores well on all indicators of the index, particularly in terms of the quality of its universities, venture capital and agglomeration benefits.

New London mayor Sadiq Khan met Mayor of Paris Anne Hidalgo for his first foreign trip to discuss post-Brexit business opportunities in the Halle Freyssinet, a 34,000 sqm start-up incubator, Paris
Berlin (16/+19), Munich (4/+3), Hamburg (28/+11) and Düsseldorf (36/+6) progress further in the ranking, boosted by strong Human Capital scores. Berlin attracts more venture capital into its tech companies than any other city in Europe. Munich scores well on all components, with good universities, strong patent production, high R&D expenditure and venture capital.

Other German cities remain in the strong-scoring category but are not improving as much. Stuttgart (9/0) is still Germany’s second best performing city and is ranked 5th for Human Capital but its Human Capital score is comparable to its R&D score last year, so it does not benefit from the broadening of our metric. Frankfurt (22/-3), Mannheim-Karlsruhe (25/-3), Cologne-Bonn (35/-5) and Nuremberg (44/-11) dropped a few positions in the ranking. Despite stronger Employment scores, these cities do not score as well as others in Europe in the Human Capital Index - mostly because their populations are weaker in terms of educational attainment, which can be traced back to a long-standing tradition of vocational training.
The Nordic region is once again well-represented at the top of the ranking as all Nordic cities benefit from high Human Capital scores. **Stockholm** (3/+1) climbs to third position of the E-REGI index. **Oslo** (10/-4) and **Copenhagen-Malmö** (11/-3) remain in the top 15, while **Helsinki** (17/+4) rises four positions.

The smaller but affluent cities of **Zürich** (12/-2), **Brussels** (14/+4) and **Vienna** (27/+11) also perform strongly on the Human Capital component. However, this is not the case for **Luxembourg** (5/0). Nevertheless, the Grand Duchy ranks 5th in Europe in E-REGI due strong overall growth prospects.

**Dublin** (7/+5) is the second most-improved city after Paris this year, boosted by a high Human Capital score. Since 2011, the Irish capital - which is one of the most volatile cities in E-REGI - has been moving up the ranking, now reaching 7th position.
Rotterdam-Den Haag (18/+14) moves up 14 positions to 18th due to a high Human Capital score, stripping the title of best-performing Dutch city from Amsterdam (19/+1) which is just one position behind. The Human Capital scores of the Dutch cities are driven by the high population density of the Netherlands, which favours strong knowledge exchange.

Spanish cities also benefit from strong Human Capital scores, with Madrid, Barcelona, but also Bilbao (43/-2) performing well in terms of the quality of their universities and educational attainment. The Italian cities are weaker, many of them underperforming compared to the European average. Milan stands out as the strongest Italian city by far. The improvement in score for Rome, however, has been enough to lift the city into the group of strong-scoring regions.

Although Central & Eastern European cities generally lag behind in terms of Human Capital, Bucharest (33/+28) and Budapest (40/+43) are also among the best improvers this year due to having relatively high Human Capital scores compared to weaker R&D scores previously. In addition, stronger GDP and employment prospects have also helped to lift these cities E-REGI scores. The cities move up 28 and 43 positions respectively this year. After Warsaw, and alongside Bratislava (34/-6), they are the best-performing cities in Central and Eastern Europe, followed by Prague (47/+1).

Russian cities remain at the bottom of the E-REGI ranking, despite Moscow (97/0) being one of the main beneficiaries of our change in metric. Together with St Petersburg (99/-1), Moscow shows high levels of educational attainment as well as strong levels of R&D investment and venture capital. All the Russian cities do relatively better on Human Capital than on the other E-REGI components.
Technical Note

E-REGI (“European Regional Economic Growth Index”) was first published by LaSalle Investment Management in 2000 with the aim of identifying those European regions with the greatest economic growth potential over the medium term. E-REGI complements other more real estate specific approaches to determining target markets. The E-REGI analysis is updated annually and published in October.

E-REGI Coverage

The 2016 model covers 295 regions across 32 countries in Europe with a total population of more than 740 million. This report focuses on a subset of 100 major cities (metros with ≥500,000 inhabitants and all national capitals). Compared to last year, the coverage has remained unchanged.

The E-REGI analysis is undertaken on geographic regions as defined by Eurostat, the central statistical bureau for the European Union. Eurostat has adopted a classification system, the Nomenclature of Territorial Units for Statistics, referred to as “NUTS”. This classification provides a breakdown of administrative units for the production of regional statistics within the European Union and beyond.

NUTS is a hierarchical classification. The country level is referred to as NUTS 0. NUTS 1, 2 and 3 are sub-national levels. The E-REGI model uses the NUTS 2 level classification, which we believe is best suited to capture urban agglomerations. However, one should be aware that in formulating the NUTS-level classification, Eurostat has attempted to standardise a disparate set of national classification systems and as a result NUTS 2 regions do not always provide the most appropriate definition of a city region. In some cases a combination of NUTS 2 and 3 areas that better correspond with the physical and economic agglomeration of those cities has been used for the E-REGI analysis.

This year only minor changes have occurred in the geographic definition of NUTS 2 regions. The most significant change is the split of the Croatian region; previously the country was represented by one region which has now been replaced by two. As such, the E-REGI analysis has gained one region compared to last year.
**E-REGI Model**

The E-REGI model is expressed as the function set out in *Figure 1* and presents a weighted overall score based on three sub-scores consisting of 18 variables. The variables used in the model are set out in *Figure 2*. For each variable, the model calculates a score based on the region’s performance relative to the average of all regions, with the average represented by a score of unity (“1.00”). The E-REGI ranking then sorts the city regions based on their weighted overall score.

The model combines variables on economic growth, the overall level of wealth, and the relative attractiveness of the business environment.

*Figure 1*

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\text{E-REGI} = F[\text{GDP, EMPm, HC, WEALTH, BEnv}]
\]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>GDP</td>
<td>Change in Regional GDP</td>
</tr>
<tr>
<td>EMPm</td>
<td>Change in number of Service Sector Employees</td>
</tr>
<tr>
<td>HC</td>
<td>Stock of Human Capital</td>
</tr>
<tr>
<td>WEALTH</td>
<td>Level of GDP per Capita</td>
</tr>
<tr>
<td>BEnv</td>
<td>Quality of Operating Environment for Business</td>
</tr>
</tbody>
</table>
The overall score is made up from three component scores:

- The growth score (accounting for 60% of the model) includes regional GDP output (22.5%) and service sector employment (22.5%), as the principal drivers of real estate demand. For both GDP and service sector employment, historic growth (to capture momentum) and forecasts, in both absolute and relative terms, are used. Employment growth is closely correlated with population growth. Additionally, LaSalle’s European Human Capital Index is included (15%) as an important indicator of long-term economic value. LaSalle’s European Human Capital Index is itself based on six variables measuring Skilled Labour, Creativity and Investment.

- The wealth score (accounting for 20% of the model) acts as a further screen to ensure that regions catching up from a lower base are not unduly represented. Market intelligence also suggests that wealth levels are correlated with demand for real estate.

- The business environment score (accounting for 20% of the model) has been included as future growth potential is partially determined by the attractiveness of the business environment. Best prospects are likely to be in those countries that benefit from a stable political, monetary, fiscal and regulatory environment.

### Figure 2

1. **Growth Component:** 60%

   **A. GDP**  (22.5%)
   - GDP growth 2013-15: 2.5%
   - Forecast GDP Growth 2016-20: 7.5%
   - Forecast GDP Growth 2016-20 (% growth): 12.5%

   **B. Employment**  (22.5%)
   - Employment Growth 2013-15: 2.5%
   - Forecast Empl. Growth 2016-20 (absolute): 7.5%
   - Forecast Empl. Growth 2016-20 (% growth): 12.5%

   **C. Human Capital**  (15%)
   - Education Level: 3.7%
   - Quality of Education: 2.3%
   - Patent Production: 3.0%
   - Agglomeration Effect: 1.5%
   - R&D Expenditure as % GDP: 3.0%
   - Venture Capital Invested in Tech Firms: 1.5%

2. **Wealth**  20%

   GDP per Capita 2015

3. **Business Environment Components:** 20%

   **A. Country Business Environment**  (15%)
   - Sovereign Default: 3.3%
   - Political Stability: 3.3%
   - Trade Credit: 3.3%
   - Regulatory Environment: 5%

   **B. Eurozone/European Union Participation**  5%

**Total**  100%
Data Sources

Data for the E-REGI model is primarily provided by independent data provider Oxford Economics, which supplies historic data and provides forecasts on NUTS 1, 2 and 3 levels for GDP, service sector employment and population. Oxford Economics also provides the risk scores that underpin the business environment scores. These data are provided at national level.

Data for LaSalle’s European Human Capital Index is primarily provided by Eurostat (for the variables Tertiary Education Attainment Level, Population density, R&D expenditure as % GDP). The University Ranking score is provided by the Centre for World University Rankings (CWUR). This consulting organisation publishes annually global university ranking based on quality of education, alumni employment, quality of faculty, number of publications, number of publications in renowned journals, citations and number of patents. Data on Patents are provided by the Organisation for Economic Co-operation and Development (OECD), while the data on Venture Capital in to Technology companies is from Thomson Reuters.

The E-REGI model is based upon data which LaSalle Research & Strategy believe to be reliable. Whilst every effort has been made to ensure the accuracy and completeness of the data used, we cannot offer any warranty that factual errors may not occur. National statistical offices across Europe continue to make progress in their efforts to improve data comparability and accuracy. As such, economic data are commonly revised many years after events have occurred.