Albania's Industry Targeting Dashboard

Methodological and Data Notes

The Industry Targeting Dashboard allows a user to select any of 272 industries (based on NACE Rev. 2 industry codes) in order to explore their viability and attractiveness for Albania, identify major global companies investing across borders in each industry, and observe labor market characteristics for each industry as it stands in Albania today. The dashboard is built on data from a variety of sources, carefully selected to capture important dimensions of viability, attractiveness, company-level investment patterns, and current industry presence.

VIABILITY AND ATTRACTIVENESS FACTORS

Viability Factors capture how well-suited Albania is to competitively host businesses in the industry selected. These are relative scores (on a range of 0-10) that measure the industry in question against all other industries for which data is available. The overall viability score is the simple average of all these factors for which data are available for the industry.

Factor	How is it indicative of viability?	Measurement and data sources
Revealed Comparative Advantage (RCA)	RCA captures the current intensity of an industry in Albania based on employment data. This is a basic indicator of viability that recognizes that industries that already have an intensive presence in Albania are proven to be viable in the country. In order to be indicative of intensity rather than simply scale, RCA captures the share of Albanian employment in an industry relative to what is "normal" for other countries. In this case, employment data for all of Europe is used to determine what is "normal". RCAs could be measured based on various indicators of intensity, such as production or export values, so long as data is available for all industries both in Albania and in the reference geography (in this case, Europe). For this application, employment data was used: *RCA = (share of Albanian employment in an industry) / (share of European employment the industry)*	RCA is measured here using Albanian Business Register data from the year 2017 (in the numerator) and Eurostat data that summarizes labor force survey results from all available European countries over the period of 2017-2019 (in the denominator). Albanian business registry data was available at a more granular level of disaggregation (3-digit NACE codes) than Eurostat data (2-digit NACE codes). Therefore, 2-digit European job shares were evenly divided across 3-digit codes for the calculation. This was an oversimplified assumption but one that does not undermine the use of this factor. The raw RCA values were then used to construct a 0-10 score as follows: • RCA ≥ 5 equates to a score of 10; • RCA ≥ 2 equates to a score of 9; • RCA ≥ 1 equates to a score of 8; • RCA = 0 equates to a score of 0; • Scores from 1-7 were roughly evenly awarded for industries where 0 < RCA < 1 *Note: The use of Albanian business registry data implies that this variable captures more formal employment in Albania. This necessarily underrepresents agriculture and*

		other sectors with a high informality rate such as tourism and construction.
Low Distance to Industry	For industries that have little-to-no presence in Albania at the current time, it is possible to measure how related they are to the country's existing productive capabilities. This is captured through the measure of "distance," where a higher distance indicates that the industry in question is far away from existing productive capabilities and will be relatively less viable in Albania. Lower distance indicates the opposite — that there are existing industries in Albania that share many productive capabilities with the industry in question — indicating that the industry has a higher chance of thriving in Albania because there is likely to be capable labor and available factors of productivity for the industry. In order to calculate a distance measure, one first needs to calculate "proximities" between all pairs of industries. With industry-to-industry proximities available, one can aggregate across these to measure distance to any individual industry. Proximities can be calculated in a few different ways, including with data that can identify when industries tend to co-locate in the same geography and with data that can identify the frequency of movement of workers between industries.	Distance is measured using industry-to-industry proximities. Here we use skill-relatedness matrices derived from labor flows between industries using German Social Security data (see methodology here). The more common that it is for an individual to move from one industry to another in Germany over their career, the higher the proximity of that industry pair. German data is useful for this purpose because of the highly diversified nature of its economy. The distance measure captures the extent to which Albania has a revealed comparative advantage in industries that are proximate to the one in question. Specifically, the distance value is the sum of the proximities connecting the industry in question to all the industries in which Albania does *not* currently have an RCA ≥ 1, divided by the sum of all proximities to the industry. Through this construction, distance values range from 0 to 1 and are higher for those industries where Albania does not have a revealed comparative advantage in many proximate industries. The raw distance values were used to calculate a 0-10 score. All industries with RCA ≥ 1 were given a score of 10, and distance scores of 0-9 were roughly evenly distributed to all industries with RCA < 1 based on their distance values. Higher scores indicate lower distance to existing industries in Albania. *Note: Industry-to-industry proximities are also used in the "Nearby Industries" section.*

High FDI to Peer Countries	Patterns of global FDI flows can also be indicative of viability. Of course, if FDI is reaching Albania, this is a clear indication of revealed viability, but this will be captured within the RCA measure described above. It is additionally revealing if and when FDI is reaching "similar" countries to Albania, since this is suggestive that foreign companies may find Albania is an equally viable place to invest in operations. For this application, peer countries are taken simply to be other Balkan countries, broadly defined.[1] Countries with somewhat higher income levels are included since companies may be looking for lower cost locations to which to expand operations.	The 0-10 score on this indicator is based on the number of investments to the Balkan region captured in the fDi Markets dataset for the period 2003-2018. Industries are placed into deciles based on the number of investment projects to the region. Industries with a larger number of investments in the region over the whole time period are given a higher score. A score of 10 reflects that the industry is in the tenth decile in terms of its frequency of FDI projects in the Balkan region. *Note: To evaluate this factor in the NACE Rev. 2 classification, industry classifications had to be matched with the "sub-sector" industry classification of fDi Markets. This led to blank values in the dashboard for some NACE industry codes that do not have a corresponding fDi Markets subsector code.*
Low Contract Intensity	Intensity of contract needs is another important viability indicator in the context of Albania. As the country undergoes a significant judicial reform, industries which typically require heavy use of the court system may experience necessary delays, as reflected in recent firm surveys. For example, the 2019 World Bank Enterprise Survey shows that the court system is a significantly bigger constraint for firms in Albania than elsewhere in the region and among other middle-income countries. We treat contract intensity as a relevant proxy for the degree to which industries are likely to need impartial mediation through courts in order to function efficiently.	The contract intensity score utilizes a measure developed in Nunn (2007) that reflects the share of intermediate input costs of production that come from input markets that require relationship-specific supply chains (through contracts) as opposed to inputs sold on exchanges where prices are market determined and inputs that have reference prices. We use the inverse of the narrower of the two metrics developed in the paper ($1 - z^{rs1}$) to develop our 0-10 score, such that a lower contract intensity equates to a higher viability score. A score of 10 therefore reflects that an industry is in the lowest decile of contract intensity. *Note: Since this measure is only available for goods (and not services) and because source data was concorded into NACE Rev. 2 codes, many industries do not have a score for this viability factor.*
High Electricity Intensity	Electricity-intensive will enjoy cost advantages in Albania due to the relatively low cost of electricity in the country. The country's electricity system reliability has improved significantly in terms of the reliability and quality of service as well. The	Electricity intensity is calculated from U.S. Input-Output tables. The methodology developed by the Growth Lab first identifies how intensively electricity is required by each industry. Specifically, an RCA in the use of electricity (RCAE) is calculated for each industry. The RCAE is the share of

[1] The group includes: Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Moldova, Montenegro, North Macedonia, Romania, Serbia, and Slovenia. Kosovo is excluded due to data limitations.

	price of electricity in Albania is expected to fall further in the coming years while the reliability continues to improve as Albania diversifies its electricity generation mix with low-cost renewables.	electricity in the industry's overall input cost divided by the average share of electricity in all industries' input costs. The 0-10 score reflects the deciles of electricity intensity based on RCAEs. *Note: Since industry classifications had to be matched with those used in U.S. input-output tables, some industries do not have a score for this viability factor.*

Attractiveness Factors capture important benefits of industries to Albanian workers and the overall economy if they were to be expanded in the country. These are relative scores (on a range of 0-10) that measure the industry in question against all other industries for which data is available. The overall attractiveness score is the simple average of all these factors for which data are available for the industry.

Factor	**How is it indicative of attractiveness?**	**Measurement and data sources**
High Relative Wages	Industries that offer better pay are clearly more attractive for Albanian workers. Through attracting industries that drive up wage levels, FDI can increase not only the wages paid directly to workers in these firms but also wages paid by other firms that compete in the same labor market. High-wage industries also increase aggregate demand in the economy, which increases job opportunities in the non-tradable economy. Meanwhile, lower wage industries are not only less attractive, they may also be less viable as firms may struggle to attract workers.	The scores on this factor are calculated based on the average monthly wages that each industry pays in Europe (specifically from the EU-28 in 2016) based data from the Eurostat Labor Force Survey.This information is only made available at the level of 2-digit industry codes, so the average wage for each 2-digit industry was used for each 3-digit industry that falls within it. This was an oversimplified assumption but one that does not undermine the use of this factor. The 0-10 score reflects the deciles of average wage level based on these average wages at the European level.
High Youth Employment	For the past several years, unemployment rates in Albania have been falling across age groups while labor force participation rates have been rising. However, unemployment for the 15-29 year-old age group has remained consistently higher than for older Albanians. Thus, industries that employ relatively more young people are more attractive for investment promotion.	Youth employment scores are based on the share of industry employment in the 15-24 year-old age bracket out of total employment by industry based on the Eurostat Labor Force Survey. Just as for the factor above, this information is only available at the level of 2-digit industry codes, so the same value was applied for all 3-digit industries that fall within the 2-digit industry grouping. Likewise, the 0-10 score reflects the deciles of the share of youth employment in overall employment by industry at the European level.

High Global FDI Flows	Higher flows of FDI at the global level are an important proxy for current and future demand for the goods and services produced by the industry. Industries that have high FDI flows are expanding to serve current and expected demand. Therefore, industries with higher global FDI flows are more attractive to Albania because these industries are likely to grow in the future.	This factor utilizes data on publicly announced FDI projects by fDi Markets over the period 2003-18. As with the Balkan-focused viability factor, industries are placed into deciles based on the number of investment projects, but in this case globally. A score of 10 reflects that the industry is in the tenth decile in terms of its frequency of FDI projects, which we interpret as a signal of very high global demand. *Note: To evaluate this factor in the NACE classification, industry concordances are used. This led once again to blank values in the dashboard for some industries.*
High Export Intensity	All things equal, an industry that tends to export a significant amount of its output is more attractive. Exporting industries serve markets that are much larger than Albania and can grow even during domestic business cycles. Industries that export also tend to introduce more new productive capabilities into the economy as they need to compete globally and thus operate at a productive frontier.	This factor uses data collected globally at the establishment level by Dun & Bradstreet to estimate the percentage of industry employment worldwide that is in firms that export. The 0-10 score captures the deciles of export-intensity based on these employment shares. *Note: To evaluate this factor in the NACE classification, industry concordances are used. This led once again to blank values in the dashboard for some industries.*

MAJOR FDI COMPANIES

This section of the dashboard utilizes data from fDi Markets. The graph provides the total capital expenditure captured in the fDi Markets database by industry (after matching industry codes to NACE Rev. 2, which results in no data for some NACE industry codes). The top 10 list of companies is ordered by number of investment projects globally, in Europe, and in the Balkans, respectively. As in other portions of the dashboard, the Balkans includes: Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Moldova, Montenegro, North Macedonia, Romania, Serbia, and Slovenia. Kosovo is excluded due to data limitations. The filtering list for identifying FDI companies by country and city of headquarters is available to users who have purchased a subscription to the fDi Markets Database. Contact cid@harvard.edu for more information.

INDUSTRY NOW

Location of workers utilizes data from Albania's 2018 Labor Force Survey. For each NACE 2-digit industry, we calculate the share of workers in each region relative to total workers in the industry in the country. Sampling weights are used to arrive at these estimates.

Education distribution again utilizes data from Albania's 2018 Labor Force Survey. For each NACE 2-digit industry, we calculate the share of workers by the highest level of education attained and by gender. Sampling weights are used to arrive at these estimates.

Occupation distribution again utilizes data from Albania's 2018 Labor Force Survey. For each NACE 2-digit industry, we calculate the share of workers by occupation category and by gender. Sampling weights are used to arrive at these estimates.

Industry wages utilizes national payroll data from the year 2017 from the Albanian General Directorate of Taxes. The two histograms show average gross monthly wages in Lek for the industry and for all industries, respectively.

NEARBY INDUSTRIES

This list uses industry-to-industry proximities and revealed comparative advantage (RCA) calculations as described above under "Viability Factors".