



33 COUNTRIES · 14 PILLARS · 7 INDUSTRIES

Industry Economics & Competitiveness 2025 Annual Review

Where in the world it's cheapest — and most competitive — to make the industrial commodities behind everyday products.



Published October 2026

Every month, our analysts put the same question to thirty-three manufacturing nations: what does it cost to make things here, and is that getting easier or harder? The answers come from fourteen pillars — labor, energy, taxes, and eleven others — measured across the seven industries behind everyday products: the plastics, fertilizers, metals, and other industrial commodities nobody notices until they get expensive.

Few questions matter more for jobs and prices — and this one gets argued with remarkably little data. One country gets called cheap, another the next big thing, usually with no yardstick in sight. This report is our attempt at that yardstick: rebuilt from the ground up every month, distilled once a year.

The pages ahead open with the year in brief, then set out what we measure and how. From there, the standings and how they shifted, region by region. A profile of each of the thirty-three nations comes next, then the pillar map — all fourteen measures, and where each country leads or trails — and a closing chapter walks through the method step by step.

At the very top, nothing moved.

China just closed its eleventh straight year at the top, and it still isn't the cheapest place to build. What it has is the fewest weak spots in the field — and that's what these standings reward.

Below it, almost everything moved. The United States slipped to ninth; its costly labor is offset, for now, by the sheer size of its home market. Canada turns the best processing margins of the thirty-three — the widest gap between raw-material cost and finished-product price — and held eleventh for a second year on the strength of them. And cheapness itself kept moving: labor costs jumped in Russia and in Turkey. South Korea's climb into the top ten came from the other half of the ledger — what it makes, not what it costs.

The stories I find myself retelling sit a little further down the table. Germany pays a premium on nearly every line we track and gives up only a single place anyway, on sheer industrial weight. Japan is carrying the heaviest construction bill of the field. Mexico is the hard case: genuinely cheap labor, tied to trade links that go almost nowhere.

Energy still marks the extremes — Saudi Arabia runs industry on the cheapest we track, Britain pays the dearest. And tariffs did the year's quiet reshuffling, lifting much of Europe and sliding Brazil.

If the year had one lesson, it's the one this report was built around:

Cheap and competitive aren't the same thing. No country leads on all fourteen pillars; the top of this table goes to whoever gets the most of them right at once.

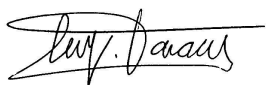
You'll see it all through these pages. The leaders get there on different strengths, and when a country slips, the real cause is usually something other than price.

As for how far to trust it: every country goes through the same fourteen pillars and the same math, with nothing weighted to favor one factor over another and no paid placements; the full methodology is published in the open, so anyone who wants to can check our work.

We publish this for the public. Everything in these pages may be quoted, charted, or republished with attribution — that's what it's for.

Welcome to the 2025 edition. I hope it serves you well.

Warm regards,



Felipe Tavares

Founder & CEO, Intratec Solutions

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The Year in Brief

The highlights of 2025: China on top once more, movement all through the middle of the table — and the year in three costs: labor, taxes, energy.

THE TOP FIVE DIDN'T BUDGE — THE MIDDLE DID

China closed 2025 on top for an **eleventh straight year**, and the four countries behind it held their exact positions. Movement began at #6, where Singapore and the Philippines traded places, and ran deep below them: Finland climbed five places, the Czech Republic and South Korea four apiece, Brazil fell five, and energy prices, wage rises and new tariffs redrew the middle of the ranking.

The top seven are the same seven countries as 2024 — China, India, Indonesia, Saudi Arabia, Thailand, Singapore and the Philippines — and no eighth country broke in. Only the last two changed places.

11 YEARS AT #1 FOR CHINA

“The winner is not the cheapest anywhere: China holds #1 without the lowest wage (Indonesia’s \$1.6) or the lowest energy price (Saudi Arabia’s \$12.1). The ranking rewards the best combination of costs, not a single cheap input.”

THE 2025 STANDINGS

OVERALL COUNTRY SCORE, 0–100

1	China	61.2
2	India	55.4
3	Indonesia	54.7
4	Saudi Arabia	53.2
5	Thailand	52.3

THE YEAR'S MOVERS

TOP RISERS

▲	Finland	29→24	+5
▲	South Korea	12→8	+4
▲	Czech Rep.	32→28	+4
▲	Belgium	21→18	+3

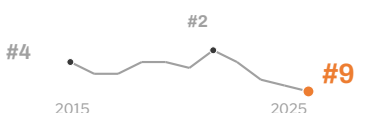
TOP FALLERS

▼	Brazil	25→30	–5
▼	Taiwan	10→14	–4
▼	Chile	19→22	–3

UNITED STATES 8 → 9

THE UNITED STATES SLID TO #9

The United States fell to **#9** — its lowest finish in the report's eleven years — as manufacturing labor rose **4%** to \$50.8 an hour, even with industrial energy **1%** cheaper at \$22.3 per MMBtu.



RANK BY YEAR, 2015–2025

CANADA 11 → 11

CANADA'S MARGINS LEAD THE FIELD

World **#1** on processing margin — the gap between raw-material cost and product price. Held **#11** overall, its best of the decade for a second year, with energy down **7%** (\$19.3 per MMBtu).



RANK BY YEAR, 2015–2025

GERMANY 20 → 21

CHEAPER ENERGY DIDN'T SAVE GERMANY

Industrial energy fell **6%** to \$22.7 per MMBtu in 2025 — and Germany still slipped to **#21** from **#20**, as manufacturing labor rose **2%** to \$55.0 an hour.



RANK BY YEAR, 2015–2025

MANUFACTURING LABOR COSTS

An hour of manufacturing labor costs \$1.6 in Indonesia and \$57.1 in Belgium — the floor and the ceiling of the pay line, with eight more manufacturing economies strung between them.

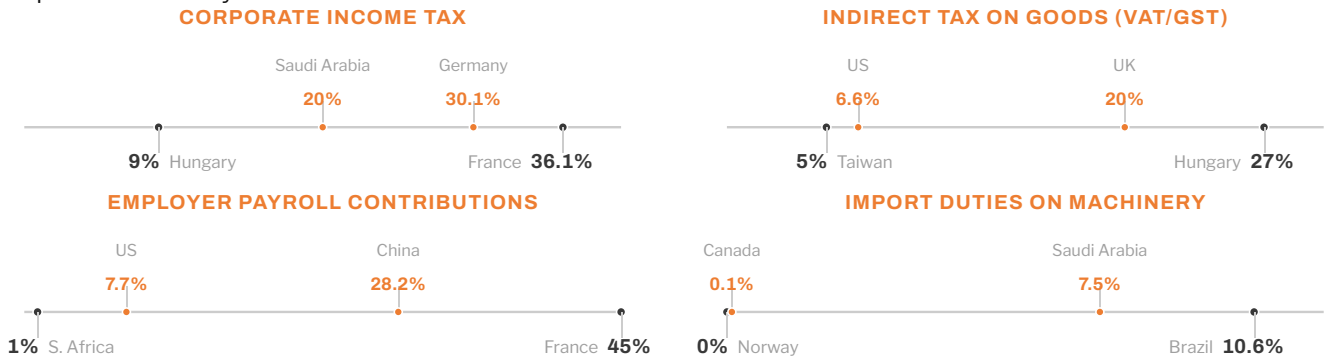


Manufacturing labor is the full cost to an employer of one hour of factory-floor work — wages, benefits and employer taxes.

Figure 1.1 The floor and the ceiling of the pay line — Indonesia cheapest of the 33 countries, Belgium priciest — US\$ per hour, 2025.

TAXES ON MANUFACTURERS

Four taxes make up the report's domestic tax measure: what companies pay on profits, on goods sold, on payroll, and on imported machinery.



Hungary charges the lowest corporate rate of the 33 (9%) — and the highest VAT (27%). No country is a tax haven across the board.

Figure 1.2 The four taxes that make up the report's domestic tax measure: statutory rates on manufacturers, percent, 2025.

INDUSTRIAL ENERGY PRICES

Industrial energy cost about \$12 per MMBtu in Saudi Arabia through 2025 and close to \$40 in the United Kingdom — a threefold gap that held all year, while the 33-country average barely moved. The British price eased from \$45 in January to \$37 in December and was still the dearest of the four.

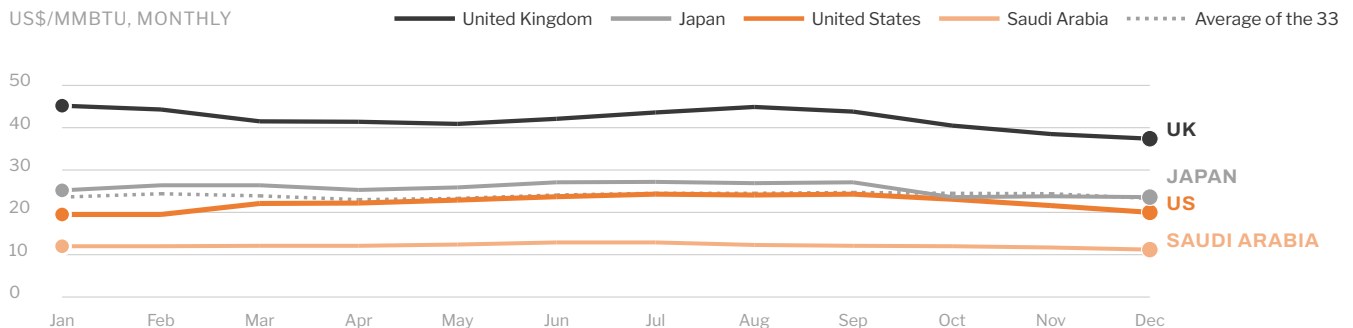


Figure 1.3 Industrial energy price, US\$/MMBtu, monthly, 2025 — the United Kingdom, Japan, the United States and Saudi Arabia against the 33-country average.

What This Report Measures

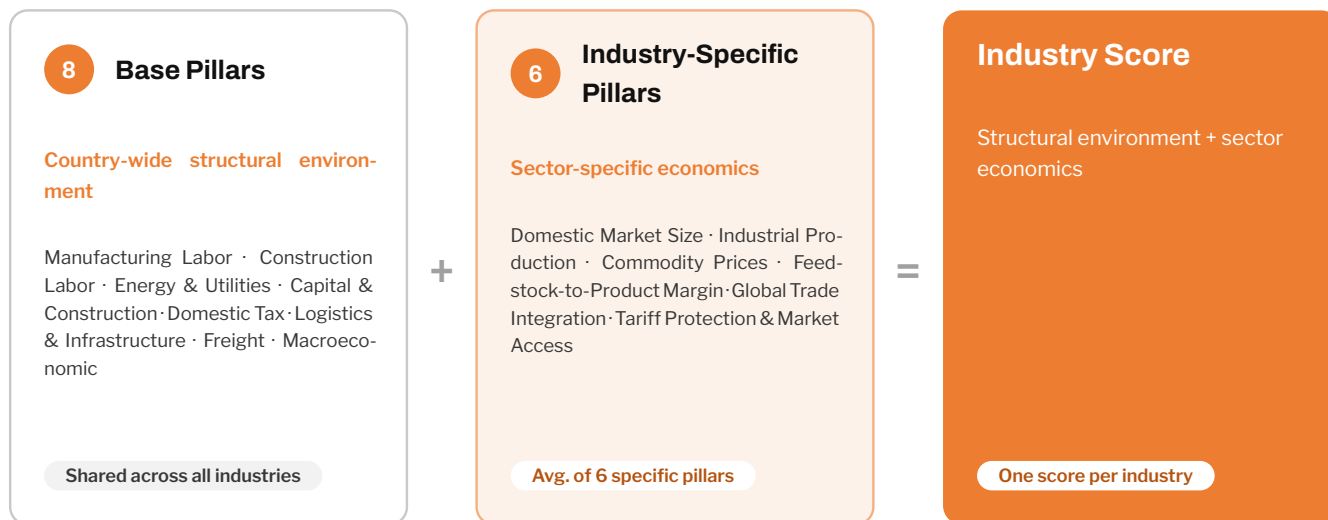
Before the rankings: what this report measures, how it is built, and why these 33 countries. It answers one question — where in the world is it cheapest, and most competitive, to make the commodities behind everything from plastics to fertilizer.

Each year, Intratec scores **33 countries** as places to make the industrial commodities the modern economy runs on — plastics, fertilizers and industrial metals among them — turning the answer into a single **0–100 Country Score** and a ranking from 1 to 33 — every country shown, nothing withheld.

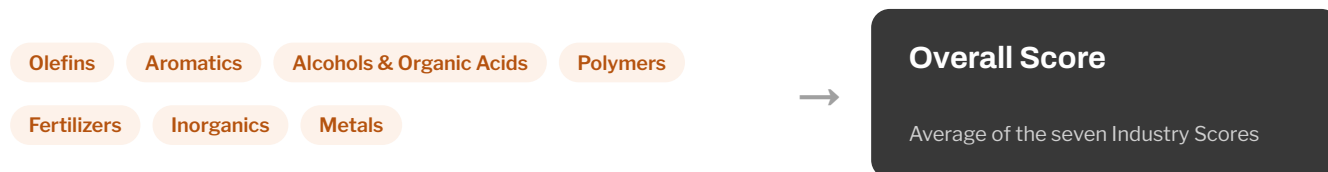
Competitiveness, Measured Across 14 Pillars

The score comes from two things: costs any plant faces anywhere — wages, energy, taxes — and advantages specific to each industry, like access to raw materials. Eight of the first, six of the second — **14 pillars** in all. The two combine into a score for each of the seven industries, and those average into one **0–100 Country Score**. That split drives the pattern at the heart of this report — **the cheapest place to operate is rarely the most competitive**.

FOR EACH INDUSTRY



ACROSS ALL INDUSTRIES



Why These 33 Countries

Together, the 33 account for **more than 80% of global manufacturing output**, spanning four world regions — a curated mix of mature high-income hubs (the United States, Germany, Japan), resource-rich exporters (Saudi Arabia, Canada) and fast-growing manufacturing powers (Mexico, India, Brazil). The list of 33 is **held constant across editions**, so when a country's standing moves it reflects real change on the ground, not a changed comparison group.

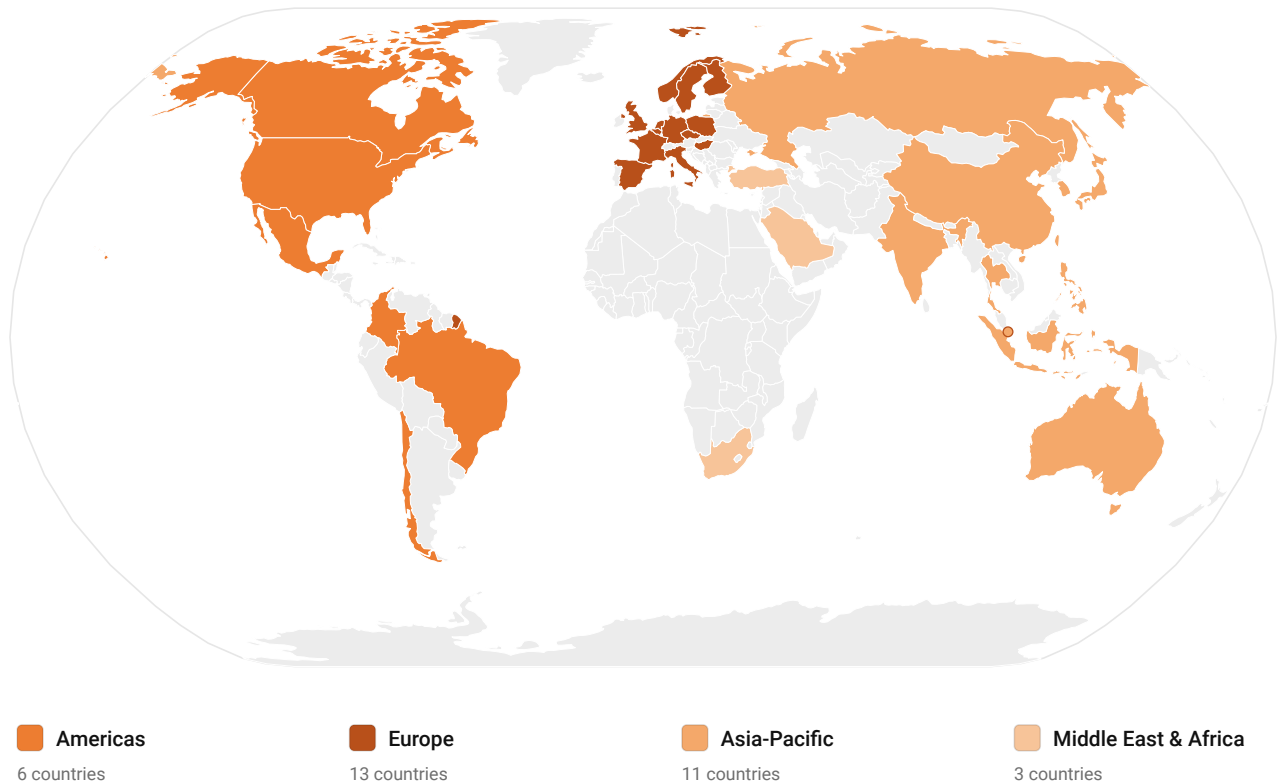
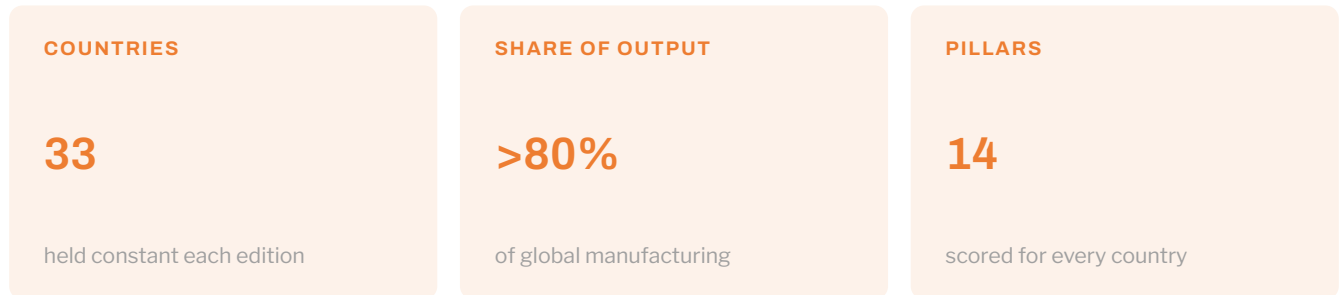


Figure 2.1 The 33 benchmarked countries, shaded by Intratec world region. The list is held constant across editions, so a shift in a country's standing reflects underlying conditions rather than a changed comparison group.

This brief covers seven industries: polymers, olefins and derivatives, aromatics and derivatives, alcohols and organic acids, inorganic chemicals, fertilizers and metals. The closing **Methodology** page sets out the figures in full.

The Big Picture: Industry Competitiveness

The big picture: all 33 countries ranked for 2025, and the map of why they land where they do. China leads; below the top handful the field tightens fast, reshuffled hard this year by tariffs — where a country lands owes as much to industry as to cost.

Figure 3.1 Overall Country Score (0–100), all 33 countries. The axis starts at 45.

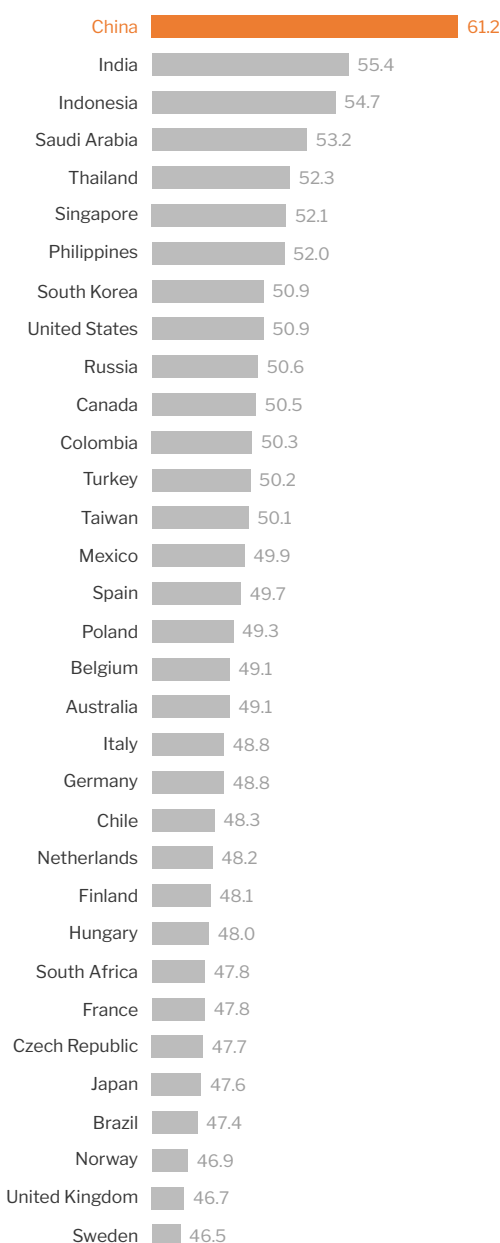


Table 3.1 Full ranking — overall Country Score (0–100) and its year-on-year percent change.

RANK	COUNTRY	SCORE	YOY %
1	China	61.2	+0.6
2	India	55.4	−0.5
3	Indonesia	54.7	−0.3
4	Saudi Arabia	53.2	−0.3
5	Thailand	52.3	−0.4
6	Singapore	52.1	−0.2
7	Philippines	52.0	−0.4
8	South Korea	50.9	+0.8
9	United States	50.9	−1.4
10	Russia	50.6	−1.3
11	Canada	50.5	−0.1
12	Colombia	50.3	−0.2
13	Turkey	50.2	−0.4
14	Taiwan	50.1	−1.1
15	Mexico	49.9	+0.2
16	Spain	49.7	+0.9
17	Poland	49.3	+0.7
18	Belgium	49.1	+1.1
19	Australia	49.1	−0.1
20	Italy	48.8	+0.5
21	Germany	48.8	+0.1
22	Chile	48.3	−1.2
23	Netherlands	48.2	+0.6
24	Finland	48.1	+1.8
25	Hungary	48.0	+1.2
26	South Africa	47.8	+0.1
27	France	47.8	+0.9
28	Czech Republic	47.7	+1.6
29	Japan	47.6	+0.1
30	Brazil	47.4	−0.6
31	Norway	46.9	−0.3
32	United Kingdom	46.7	−1.3
33	Sweden	46.5	−0.8

The Year's Biggest Movers

Europe climbed and Brazil slid. Finland gained five places in the 2025 league and Brazil lost five, dropping from 25th to 30th — the year's two widest swings, and the steepest slide in the field. One pillar of the fourteen did most of the moving.

Table 3.2 Overall league — the four biggest risers and the three biggest fallers of the 33, at any size of move. Places = change in overall rank, 2024→2025. Fifth column: the same move on a shared 1–33 scale (hollow = 2024, filled = 2025). No pillar rank anywhere here.

COUNTRY	RANK 2024	RANK 2025	PLACES	RANK 1 → 33
Finland	29	24	+5	
Czech Republic	32	28	+4	
South Korea	12	8	+4	
Belgium	21	18	+3	
Brazil	25	30	-5	
Taiwan	10	14	-4	
Chile	19	22	-3	

Three of the four risers — Finland, the Czech Republic and Belgium — owe their gains chiefly to one pillar of the fourteen: tariff protection and market access, which measures the import duties a country applies and, with greater weight, the duties its exporters meet abroad. All three are European Union members, where the duties applied are set in common and the duties exporters meet abroad are negotiated as a bloc — so what looks like eleven countries moving is closer to one decision moving eleven. All eleven EU members in the field are that pillar's eleven largest climbers, Poland and the Netherlands furthest of all; the next in line is China, and the United Kingdom and Norway, European but outside the union, went the other way.

So this was a policy event, not a geography, and most of the countries that slipped in that pillar were displaced by the bloc's climb rather than deteriorating. No single reading covers the rest of the board: South Korea's climb, the year's other big gain, was broad-based, with no pillar moving it three places, and Taiwan gave up four places without any one pillar accounting for it. Brazil slid furthest for the tariff reason, falling far further in that pillar than the five league places it lost.

“ In a field this tight, you don't need a country to get cheaper to move it five places — you need one factor to swing. This year that factor was trade tariffs, and it cut both ways.

— Thiago Carneiro, Senior Partner, Intratec Solutions

TAKEAWAYS

- * Finland rose five places and Brazil fell five — the year's widest swings, and Brazil's the steepest slide of the 33.
- * One pillar did most of the moving, and it moved as a bloc: every European Union member in the field climbed the tariff-and-market-access standing, while the two European countries outside the union fell.
- * One policy decision redrew a whole pillar's standings this year, while wage and energy costs moved slowly — which is why a league this compressed can look volatile while the scores barely move.

The Map Behind the Ranking

Tariffs moved the field this year, but the ranking hides a deeper, steadier split. One half of each country's score is how cheap and stable it is to operate there — labor, energy, capital, freight, tax, logistics; the other half is how strong its actual industry is — how much it makes, how big its home market is, how well it trades. The two rarely belong to the same country: Indonesia owns the cheapest operating base in the field yet ranks only third overall, while the United States reaches ninth on a middling cost base, carried by the strength of its industries. The pattern is stark: the leaders are strong on both counts, the economies at the foot fall short on one half or both, and the real trade-off — a cheap place to operate but a thin industry, or a strong industry at a high cost — belongs to the middle.

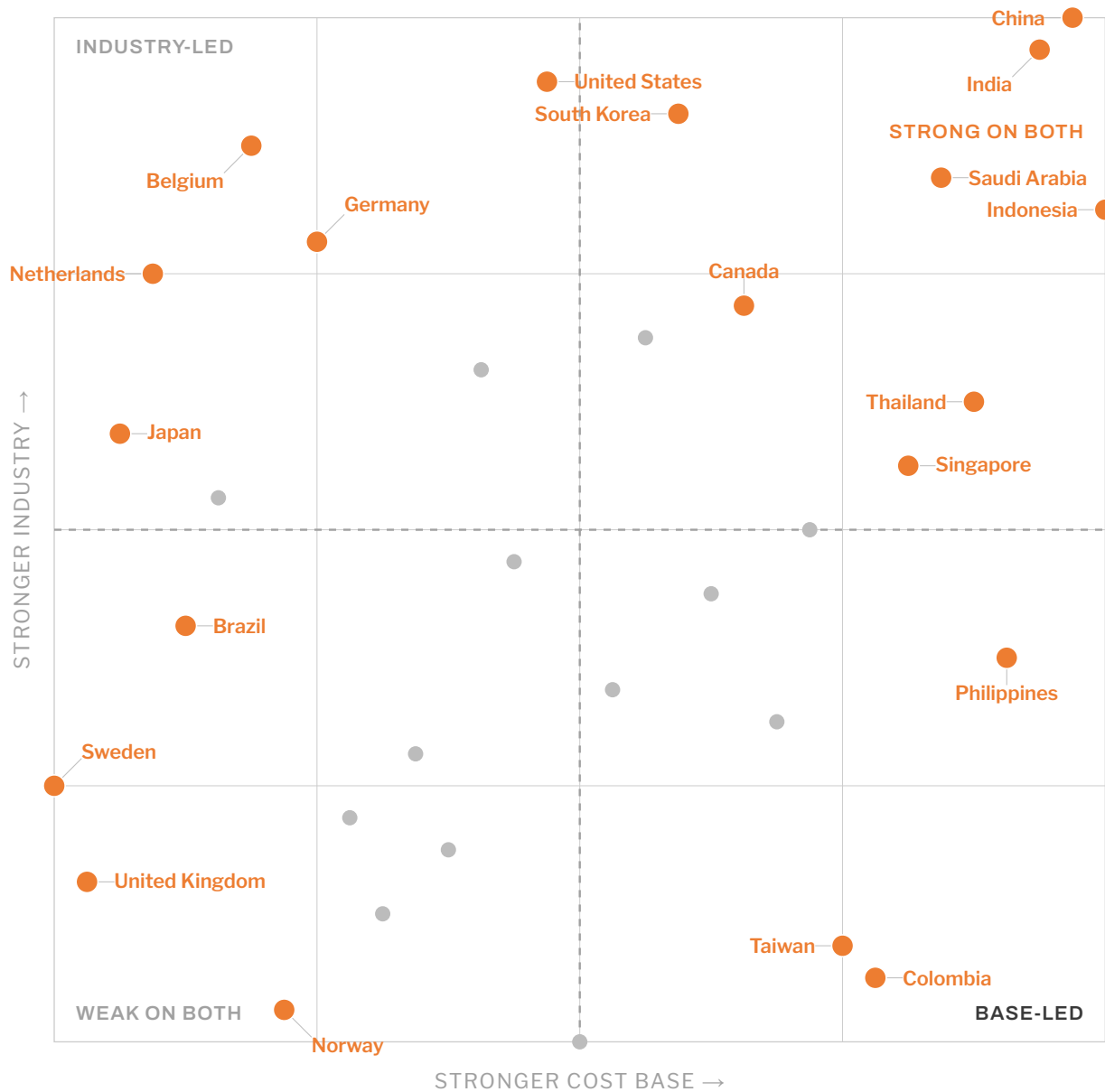


Figure 3.2 The field of 33 — Base-pillars rank (horizontal) against Industry-Specific rank (vertical); on both axes a better rank sits higher/further right. China leads the industry axis; Indonesia leads the base axis. The crosshair sits at the middle of this field, so “strong” and “weak” are relative to the other 32.

Each pillar has its own top three and its own bottom three, on the same #1-of-33 ranks as the pillar map. Across four of the pillars that move a manufacturer's decision most — the cheapest labor, the cheapest energy, the friendliest domestic-tax environment and the largest domestic market — no country tops them all.

EACH PILLAR'S TOP & BOTTOM THREE — RANK OF 33

Top three vs. bottom three of the 33. Labor and energy read 1 = cheapest; domestic tax 1 = friendliest; domestic market size 1 = largest. China is marked where it appears.

MANUFACTURING LABOR COSTS	ENERGY & UTILITIES COSTS	DOMESTIC TAX ENVIRONMENT	DOMESTIC MARKET SIZE
CHEAPEST	CHEAPEST	FRIENDLIEST	LARGEST
#1 Indonesia	#1 Saudi Arabia	#1 Singapore	#1 China
#2 Saudi Arabia	#2 Russia	#2 Thailand	#2 India
#3 India	#3 Indonesia	#3 United States	#3 United States
ANCHORS	ANCHORS	ANCHORS	ANCHORS
#31 Netherlands	#31 Brazil	#31 Italy	#31 Philippines
#32 Germany	#32 Hungary	#32 France	#32 Sweden
#33 Belgium	#33 United Kingdom	#33 Brazil	#33 Finland

TAKEAWAYS

- * The leaderboard is tight below the top: ranks 8 through 33 sit inside a 4.4-point band (about 50.9 down to about 46.5), so a small score move shifts several places.
- * The trade-off belongs to the middle: the top of the table (China, India, Saudi Arabia) is strong on both halves, while the three at the foot get there by different routes — Sweden on cost, Norway on a thin industry, the UK on both — and it is the mid-field that must trade a cheap base against a strong industry.
- * No country leads every pillar: Indonesia is cheapest on labor, Saudi Arabia on energy, Singapore on domestic tax, China on the home market — and at the dear end, Belgium is costliest for labor and the United Kingdom for energy, both in Western Europe.

IN A SENTENCE

Being cheap to operate is not the same as being competitive to manufacture. What the score rewards is where a country sits on this whole field — the strength of its industries, not the size of its wage bill.

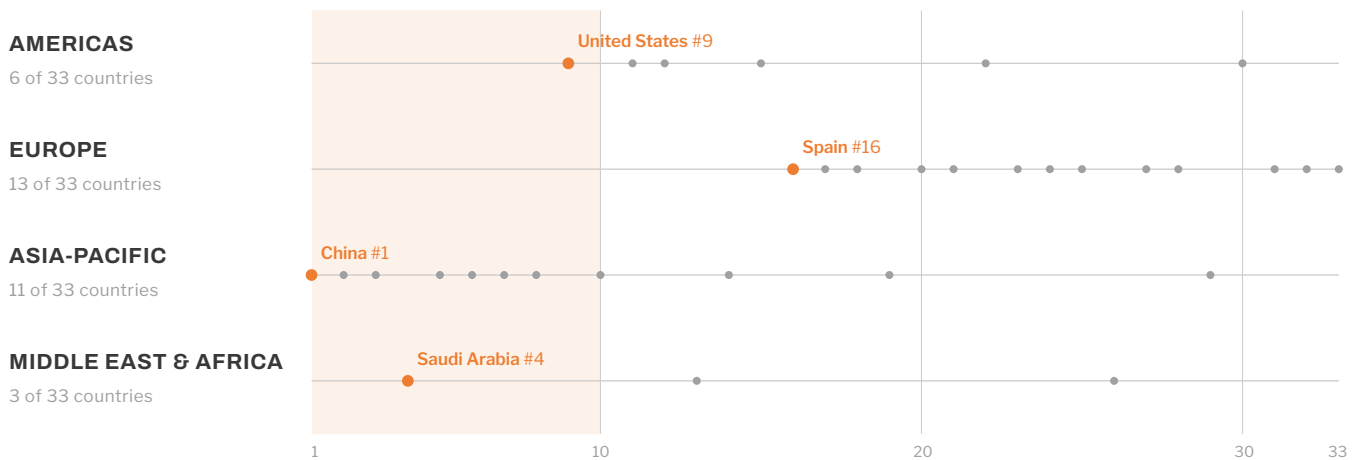
Regional Snapshots

The same 33, cut by geography. The competitive center of gravity sits in Asia-Pacific — the global podium and eight of the top ten — while Europe fills the bottom and the Americas hold a single top-ten seat above a lower-third laggard.

The ranking divides into four regions. **Asia-Pacific** holds **#1 China, #2 India and #3 Indonesia** and eight of the top ten; the **Americas** place one — the **United States at #9** — with **Canada #11** just outside and **Brazil #30** in the lower third; **Europe** fields the most countries, 13, yet not one reaches the top ten; and **the Middle East & Africa** is the smallest bloc, punching high on **Saudi Arabia #4**. Each roster below places its members on the overall ranking.

THE 33 BY REGION — POSITION ON THE OVERALL RANKING

All four blocs share one 1→33 overall-ranking axis (1 = most competitive); the shaded band is the top 10. Each orange dot marks the bloc's best-ranked country.



TAKEAWAYS

- * Asia-Pacific owns the top of the table — the global podium and eight of the top ten — while also stretching the widest of any region, all the way to Japan in the global bottom five.
- * Europe sends the most countries, 13, yet holds none in the top ten; Finland posted the year's largest rank gain anywhere in the report, up five places, with the Czech Republic up four and Belgium up three.
- * Each region wins on something different: the Americas' United States on industrial scale, Asia-Pacific's China on the whole package, the Gulf's Saudi Arabia on cheap energy, Europe's Spain as the best of a high-cost bloc.

AMERICAS

The **United States** leads the region at **#9 overall**, the bloc's lone top-ten seat, on top-three showings in industrial production and market size; costly labor and capital keep it off the podium. **Canada** (#11) sits just outside and runs world **#1 on processing margin**, the widest gap between raw-material cost and product price. **Colombia** (#12) and **Mexico** (#15) hold the middle: cheap labor and capital in Colombia, strong tariff access in Mexico. **Chile** (#22) and **Brazil** (#30) trail the lower third, Brazil down five, with the heaviest domestic tax burden of the 33.

“ The Americas runs at two speeds: a top-ten industrial power in the United States and, in Brazil, the heaviest domestic tax burden on Earth — competitiveness and its opposite, a single region apart.

— Bruno Maia, Lead Analyst

EUROPE

Europe fields the most countries — 13 — yet none reach the top ten. **Spain** (#16) leads the region. **Belgium** (#18) is world #1 in freight and trade despite the costliest labor anywhere; **Poland** (#17), **Italy** (#20) and **Germany** (#21) form an industrial core, Germany #8 globally in output, though high costs cap the bloc. **Finland** (#24) posted the largest gain of any country in the report, up five places, with the **Czech Republic** (#28) up four and **Belgium** up three. **Sweden** (#33) trails on cost, **Norway** (#31) on a thin industry, the **United Kingdom** (#32) on both.

“ Belgium runs the world's best freight and trade on the costliest labor anywhere — Europe in miniature: thirteen countries, not one in the top ten, priced out by what they cost to run.

— Thiago Carneiro, Senior Partner

ASIA-PACIFIC

Asia-Pacific dominates: **China #1**, **India #2** and **Indonesia #3** hold the global podium, and **Thailand** (#5), **Singapore** (#6), the **Philippines** (#7), **South Korea** (#8) and **Russia** (#10) fill eight of the top ten. **South Korea** climbed four places, the region's biggest riser, breaking into the top ten; **Russia** slipped one and kept the last seat inside it. **Taiwan** (#14) fell four, the bloc's steepest drop, and **Australia** (#19) fell two. **Japan** (#29) is the outlier — the region's only member in the global bottom five. No region spans a wider range.

“ One region holds the whole podium and the widest spread on the board — China at the summit, Japan down in the global bottom five. Asia-Pacific isn't a tier, it's the entire ladder.

— Bruno Maia, Lead Analyst

MIDDLE EAST & AFRICA

A small bloc that punches high. **Saudi Arabia** leads at **#4 overall**, on the world's cheapest industrial energy and the third-widest **processing margin**. **Turkey** (#13) sits highest of the rest on cheap construction labor (world #5), despite the field's weakest macroeconomic environment, 33rd of 33. **South Africa** (#26) fell two to the lower third — the lone African entry, world #2 on **processing margin** but held back by logistics near the foot of the field, #30 of 33. Global top five, upper middle, lower third — three countries, no two of them alike.

“ Three countries, no shared ground — the world's cheapest energy and two of the three widest processing margins up top, the weakest macroeconomic footing of the 33 just below. A bloc of extremes.

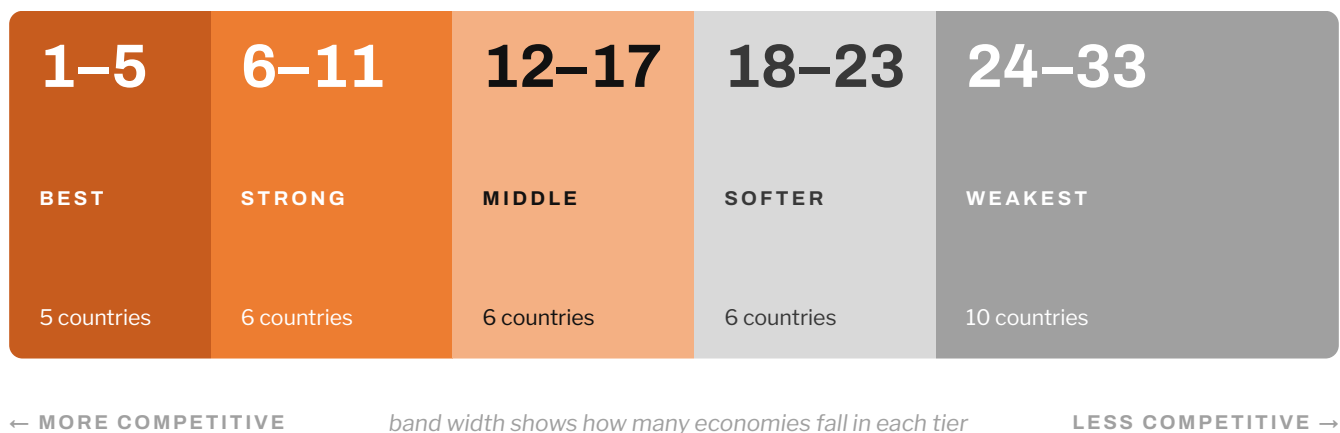
— Alexandre Carvalho, Analyst

CHAPTER 5

Country-by-Country Reviews

One product, thirty-three price tags: staffing a plant alone runs from about \$1.6 an hour to about \$57, depending where you build. But cost is only half the score — here are all 33, graded most competitive to least, in five tiers.

PERFORMANCE SPECTRUM



INSIDE EVERY PROFILE

All 33 countries are reviewed here — eight in two-page in-depth profiles first, then twenty-five in short form, two to a page. Every review has the same three parts:

- 1 THE STORY**
 An analytical read on why the country sits where it does — the strength that carries it and the cost or constraint that holds it back — with its key strengths and weaknesses drawn out alongside.
- 2 WHAT IT COSTS ON THE GROUND**
 What energy and labor actually cost, the tax an employer carries on every wage, and what it takes to build a plant there.
- 3 PILLAR STANDINGS, STRONGEST TO WEAKEST**
 Where the country leads the field and where it trails, ordered from its strongest measure to its weakest — 1 = best of 33.

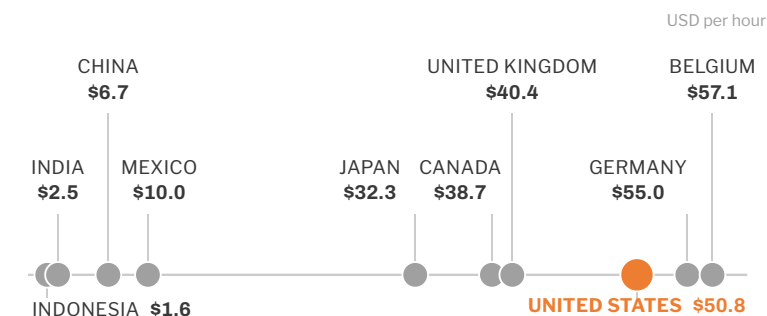
United States

▼ Slipping this year

Second of 33 for output, \$51-an-hour labor

Manufacturing labor in the United States costs about **\$50.8 an hour**, counting everything an employer pays. That is more than seven times China's \$6.7, and above Canada's \$38.7 and the UK's \$40.4. Germany costs more, at \$55.0. It is this cost, not any lack of industry, that leaves the country **9th of 33** — one place lower than last year.

What one hour of manufacturing labor costs



Each dot is one country's total employer cost for an hour of manufacturing labor, as paid, 2025. Ten of the 33 countries are shown; the United States, in orange, pays \$50.8 — among the dearest of the field.

The United States is the benchmark for what a plant costs to build: its own build cost is set at **1.00x**, and every other country is measured against it. Employers here pay a light charge on top of wages, just **8%**, the fourth-lightest of the 33 countries. Energy is middling, at **\$22.3 per MMBtu**. Labor is the exception. At \$50.8 an hour, manufacturing labor is among the most expensive of the 33 countries, and construction labor is dearer still.

“ At \$50.8 an hour, all costs included, one American manufacturing worker costs more than seven Chinese ones — and construction labor has risen every year since 2015. Wage relief is not coming.
— Alexandre Carvalho, Analyst, Industry Economics & Competitiveness

OVERALL RANK

#9 of 33

AT A GLANCE

Average energy price	\$22.3/MMBtu
Manufacturing labor, as paid	\$50.8/h
Employer payroll	8% of pay
Consumption tax	6.6%

PILLAR RANKS, OF 33

Industrial production		#2
Domestic market size		#3
Domestic tax environment		#3
Logistics & infrastructure		#4
Manufacturing labor costs		#27
Tariff protection & market access		#31

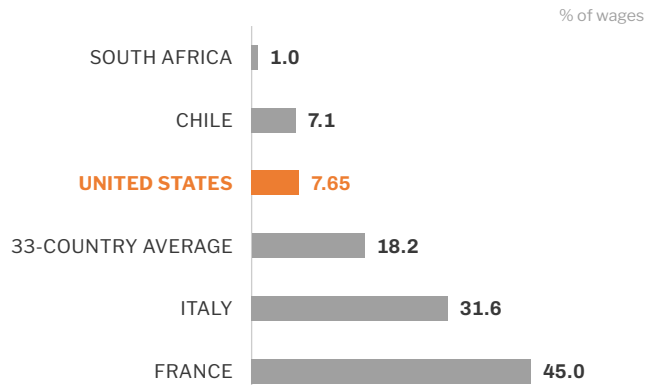
INDUSTRIAL OUTPUT, OF 33

2nd

Only China produces more industrial output than the United States.

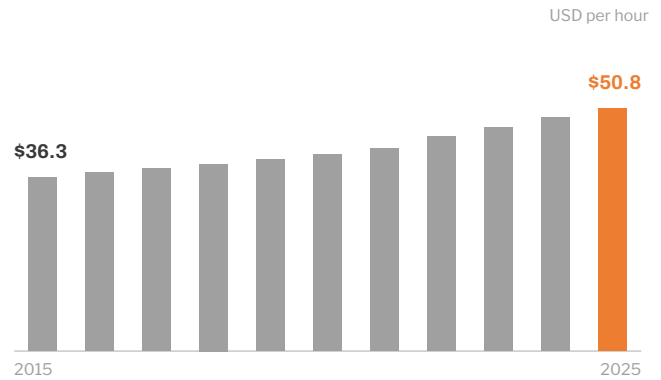
UNITED STATES — CONTINUED

What employers pay on top of wages



Each bar is the charge an employer pays on top of wages, as a % of the wage, 2025; one bar is the average of all 33 countries. The US charge has not moved since 2015.

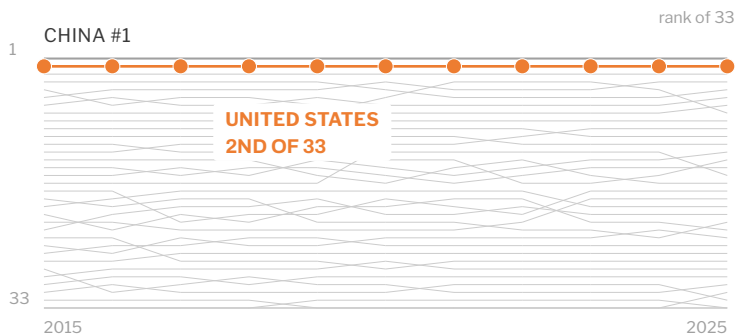
Construction labor has cost more every year



Each column is what an hour of construction labor cost an employer in the United States, adjusted for productivity. It rose every year since 2015; only five of the 33 countries pay more.

Scale is what keeps the United States near the top. It ranks **2nd of 33** for industrial production, behind only China. It is **3rd** for the size of its home market, **3rd** for its tax environment and **4th** for logistics and infrastructure. Its wider economy is among the five strongest of the 33 countries, and it ranks 7th for how well it is connected to world trade. Plants also earn well: **9th of 33** for processing margin.

The US held 2nd every year; most others moved



Rank for industrial production among the 33 countries, 2015–2025. Each line is one country, and rank 1 sits at the top, so a rising line means a country improved. The United States, in orange, held 2nd in every year, behind only China; 29 of the 33 moved at some point.

“ Only China produces more industrial output than the United States. That scale, not the wage bill, is what keeps American plants in the top third of the 33 countries.
— Bruno Maia, Lead Analyst, Industry Economics & Competitiveness

The weak spot is market access. Tariff protection ranks **31st of 33**, among the most restricted of the 33 countries. Scale does not fully offset that friction. The United States competes on volume, not on price.

China

— Unchanged this year

Eleven years at the top, on scale not wages

China has topped Intratec's competitiveness ranking for eleven years in a row. That run rests on industrial scale, not on being the cheapest place to build. Manufacturing labor costs about **\$6.7 an hour**, counting everything an employer pays. That is far below the **US's \$50.8** or **Germany's \$55.0**. It is not the lowest of the 33, though: **Indonesia's \$1.6** is four times cheaper.

China is cheap on most costs, cheapest on none

MANUFACTURING LABOR, AS PAID

USD per hour, 2025



AVERAGE ENERGY PRICE

USD per MMBtu, 2025



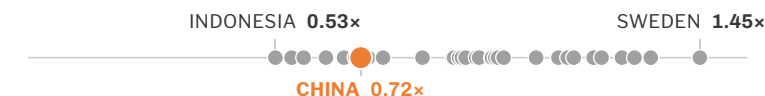
EMPLOYER PAYROLL

% of wages, 2025



PLANT-BUILD COST

multiple of US cost, US = 1.00, 2025



Four separate cost measures, 2025 averages. Each row shows all 33 countries as dots on its own scale; China is the orange dot. Manufacturing labor costs \$6.7 an hour — cheap, but not the cheapest. China is 5th-cheapest on energy and 8th-lowest on plant-build cost. The payroll charge is the exception: the 8th-heaviest of the 33.

China's costs are low almost everywhere, but never the lowest. Energy costs **\$18.5 per MMBtu**, the **fifth-cheapest** of the 33 countries. That is below the **US's \$22.3** and above **Saudi Arabia's \$12.1**. Building a plant costs **0.72 times** the US price. Payroll is the exception. Employers pay a **28%** charge on top of wages, among the heaviest of the 33 — far above the US's 8%, though below France's 45%.

OVERALL RANK

#1 of 33

AT A GLANCE

Average energy price **\$18.5/MMBtu**

Manufacturing labor, as paid **\$6.7/h**

Employer payroll **28% of pay**

Plant-build cost **0.72x US**

PILLAR RANKS, OF 33

Domestic market size **#1**

Industrial production **#1**

Logistics & infrastructure **#1**

Energy & utilities costs **#4**

Manufacturing labor costs **#10**

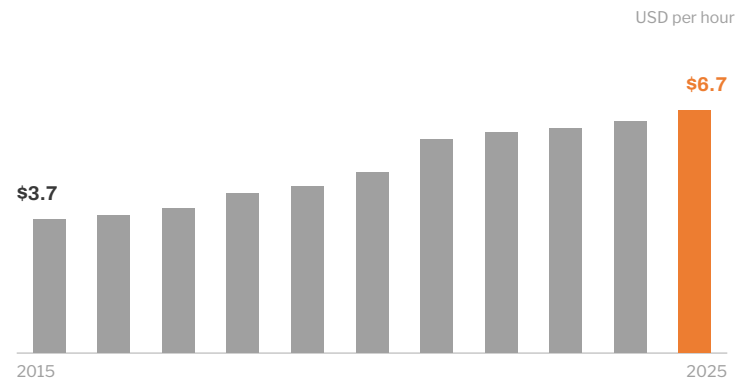
Domestic tax environment **#24**

11

YEARS RUNNING

Unbroken at #1 of 33 — the longest run at the top the ranking has seen.

China's labor cost has risen every year



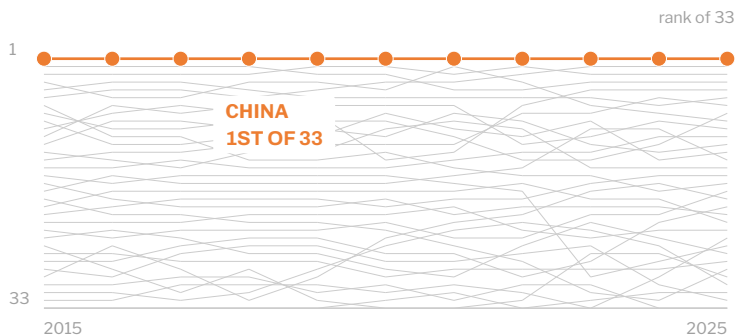
What one hour of manufacturing labor costs an employer in China, as paid, USD. It has risen every year since 2015, up 78% over the decade — to \$6.7, still among the cheapest of the 33.

“ China’s manufacturing labor costs \$6.7 an hour, and it has risen every year since 2015 — up 78% over the decade. Every wage also carries a 28% employer charge, among the heaviest of the 33.

— Alexandre Carvalho, Analyst, Industry Economics & Competitiveness

None of that dents China’s standing. It has the **world’s largest domestic market** and the **biggest industrial output** of the 33 countries. It also ranks **first for logistics** and infrastructure, and among the top three for how well it is connected to world trade. Construction labor is cheaper still.

China held 1st every year; most others moved



Overall competitiveness rank among the 33 countries, 2015–2025. Each line is one country, and rank 1 sits at the top, so a line that rises means a country improved. China, in orange, held 1st in every year; 30 of the 33 ended the decade at a different rank than they started.

“ China is the only country of the 33 that leads on market size, industrial output and logistics all at once. Eleven straight years at number one were built on that scale, not on cheap labor.

— Bruno Maia, Lead Analyst, Industry Economics & Competitiveness

China’s weak spots lie elsewhere. Its tax environment ranks **24th of 33**. Tariff access to foreign markets is near the bottom at **27th**, and its processing margin is middling at **23rd**. Eleven years on, none of it has loosened China’s grip on the top spot.

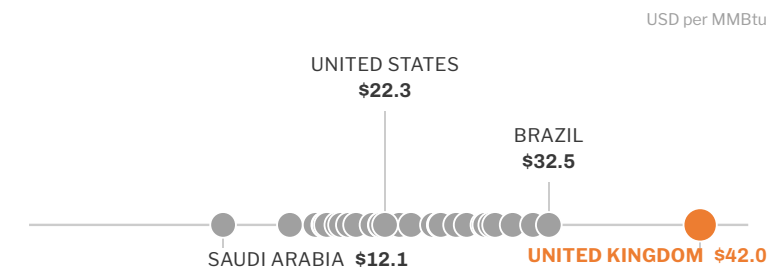
United Kingdom

▼ Slipping this year

\$42 energy, the highest of all 33

Britain pays about **\$42 per MMBtu** for energy. That is the highest price of the 33 countries tracked, and more than three times what Saudi Arabia pays at **\$12.1**. Energy is what pulls the United Kingdom down to **32nd of 33** overall, two places lower than a year earlier.

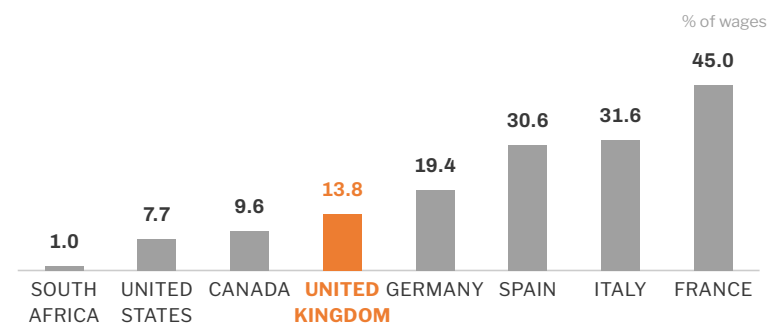
Britain pays the highest energy price of the 33 countries



Each dot is one of the 33 countries, placed by what its industry paid for energy in 2025; the United Kingdom is the orange dot. Thirty-two countries sit between Saudi Arabia's \$12.1 and Brazil's \$32.5. Britain pays \$42.0, the highest of all 33.

The rest of the cost sheet is ordinary. An hour of manufacturing labor costs **\$40.4**, in the dearer half of the 33 countries. That is more than Canada's \$38.7, but well below Germany's \$55.0 and Belgium's \$57.1 at the top. Payroll charges are light, at **14%** of wages. Building a new plant costs **1.10 times** what the same plant costs in the United States — Canada is 0.97 and Sweden 1.45.

UK employers pay less on top of wages than in western Europe



Each column is one country. It shows what an employer pays in payroll charges on top of wages, as a share of the wage, in 2025; Britain is orange. UK employers pay 13.8%, 14th-lowest of the 33. France charges 45.0%, the heaviest of all 33.

OVERALL RANK
#32 of 33

AT A GLANCE

Average energy price	\$42.0/MMBtu
Manufacturing labor, as paid	\$40.4/h
Machinery import duty	0.7%
Cost to build a plant	1.10× US

PILLAR RANKS, OF 33

Domestic tax environment		#11
Freight costs		#12
Logistics & infrastructure		#15
Manufacturing labor costs		#23
Industrial production		#27
Energy & utilities costs		#33

FOR TAXES AT HOME, OF 33

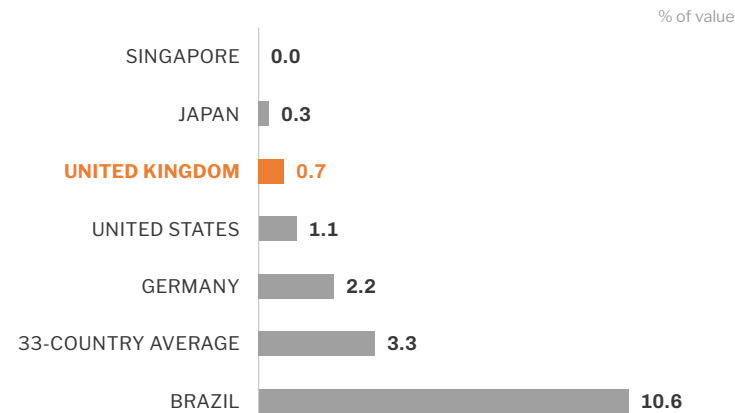
11th

Backed by 12th for freight costs and 15th for logistics — a well-run base.

UNITED KINGDOM — CONTINUED

What keeps Britain off the bottom is how well the place is run. It ranks **11th of 33** for taxes at home, 12th for freight costs and 15th for logistics and infrastructure — a well-connected, lightly taxed country. Trade access sits in the middle at 15th as well, and borrowing is dear but not extreme at 24th.

UK import duties on machinery are lower than the EU's



Each bar is the duty one country charges to import machinery, as a share of the machine's value, in 2025; Britain is orange. The UK charges 0.7%, the fifth-lowest of the 33. EU members all charge 2.2%. Brazil's 10.6% is the heaviest of all 33.

“ Leave the power bill aside and Britain looks built for trade. Industrial machinery clears customs at a duty of 0.7 percent, a third of the rate EU members charge and the fifth-lowest of the 33. Behind it sits a logistics and infrastructure network ranked 15th of 33 and one of the field's lighter tax bills, 11th of 33.

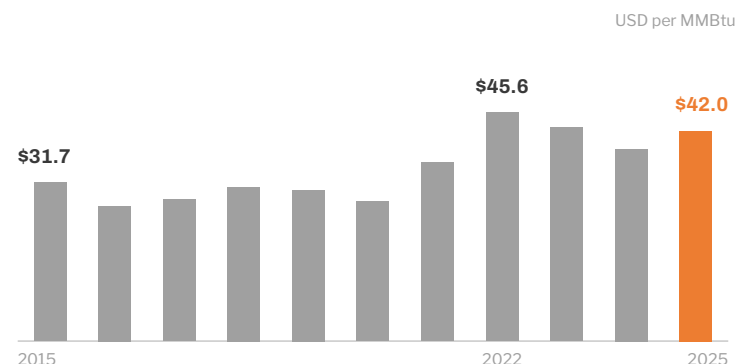
— Bruno Maia, Lead Analyst, Industry Economics & Competitiveness

None of that fixes a weak industrial base. Industrial production and processing margins both rank 27th of 33. The home market is in the lower third, at 25th. A country can staff its plants reasonably, tax them lightly and move their goods well, and still not overcome the most expensive energy of the 33 countries. Energy is what explains the drop toward the bottom.

“ At \$42 per MMBtu, Britain pays the most for industrial energy of the 33 countries we track — nearly three and a half times what Saudi Arabia pays. It has not left the bottom three on energy in a decade, and prices never came back down after the 2022 spike.

— Alexandre Carvalho, Analyst, Industry Economics & Competitiveness

UK energy has stayed among the three most expensive



Each column is one year's average UK industrial energy price. The grey \$45.6 marks 2022, the decade's peak — above today's price. Britain has been among the three most expensive of the 33 in every year since 2015, and pays about a third more than in 2015.

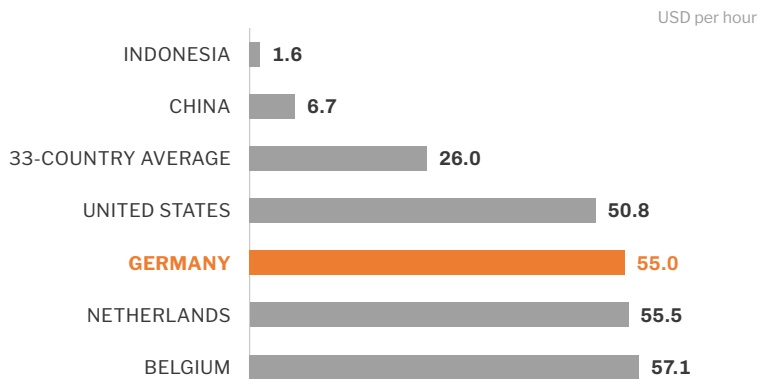
Germany

▼ Slipping this year

\$55-an-hour labor, offset by sheer scale

Employing a manufacturing worker in Germany costs about **\$55 an hour**, counting everything an employer pays. That is dearer than in the United States, and more than eight times China's bill. German industry is not weak. It is the cost base that pins Germany to **21st of 33**, down one place this year.

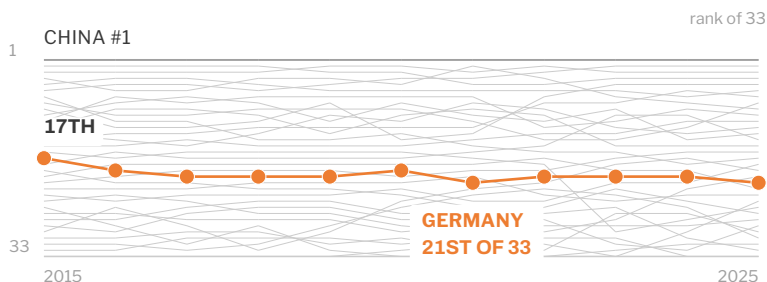
German manufacturing labor costs \$55 an hour



What an employer pays for one hour of manufacturing labor, 2025 — six of the 33 countries, plus their average. As paid, only the Netherlands and Belgium cost more than Germany.

Every operating cost in Germany runs high. A plant costs **1.24 times** what it does in the United States, and capital is dear as well. Employers pay a **19%** charge on wages, and energy runs about **\$22.7 per MMBtu**. On plant cost alone it would rank in the bottom third.

Germany slipped from 17th to 21st over the decade



Overall competitiveness rank among the 33 countries, 2015–2025. Each line is one country; rank 1 is at the top, so a falling line means a country slipped. Germany is orange.

OVERALL RANK

#21 of 33

Germany is expensive on every operating cost the report tracks — its ranking rests on industrial scale and export reach, not on cheap costs.

AT A GLANCE

Manufacturing labor, as paid	\$55.0/h
Construction labor, as paid	\$44.7/h
Import duty	2.2%
Plant-build cost	1.24× US

PILLAR RANKS, OF 33

Freight costs		#4
Feedstock-to-product margins		#6
Domestic market size		#8
Industrial production		#8
Energy & utilities costs		#18
Manufacturing labor costs		#32

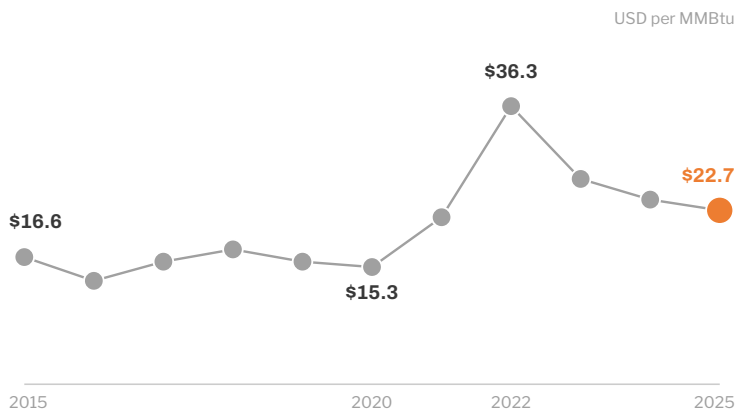
FOR FREIGHT COSTS, OF 33

4th

8th for home-market size and 8th for industrial output too — real weight.

GERMANY — CONTINUED

Energy still costs far more than it did in 2020



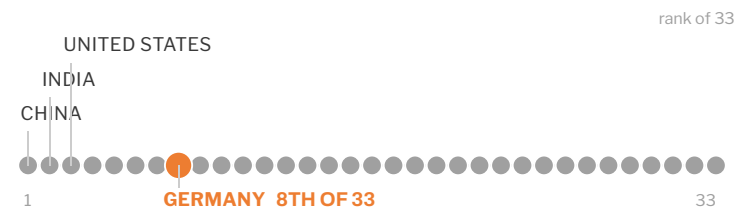
What industry pays for energy in Germany, USD per MMBtu. Every year since 2021 has cost more than any year from 2015 to 2020. In 2025 the price is still about half again the 2020 price. On the price itself Germany sits mid-table, the 16th-cheapest of the 33.

“ German plants still pay half again the energy price they paid in 2020, three years after the shock. And that bill lands on top of manufacturing labor that has been among the three dearest of 33 every year since 2015. The spike passed; the plateau did not.

— Alexandre Carvalho, Analyst, Industry Economics & Competitiveness

What keeps Germany off the bottom is industrial weight and its reach into world trade. It ranks **eighth of 33** for the size of its home market and **eighth** for industrial output. It is **fourth** for freight costs, and in the top ten for how well it connects to world trade and for economic stability. Logistics sits just outside, at 12th.

Germany has the 8th-largest home market of 33



Where the 33 countries rank on the size of their home market, 2025. Each dot is one country; rank 1, the biggest, sits at the left. Germany, in orange, is 8th — behind China, India, the United States, South Korea, Japan, Saudi Arabia and Russia, and the biggest in Europe.

“ Seven countries put a bigger home market behind their plants than Germany, and every one of them sits outside Europe. That scale, plus the eighth-largest industrial output of the 33, is what keeps Germany competitive at \$55-an-hour labor costs.

— Bruno Maia, Lead Analyst, Industry Economics & Competitiveness

Margins tell the same story. Germany ranks **sixth of 33** for its processing margin: its plants still turn raw materials into finished product at a profit, despite what the inputs cost. Take the industrial side away and little is left to lean on — on the cost of raw materials themselves Germany ranks **27th of 33**, among the dearest input bills in the field. This is a mature industrial country that pays a high cost base and earns it back through scale and engineering.

Canada

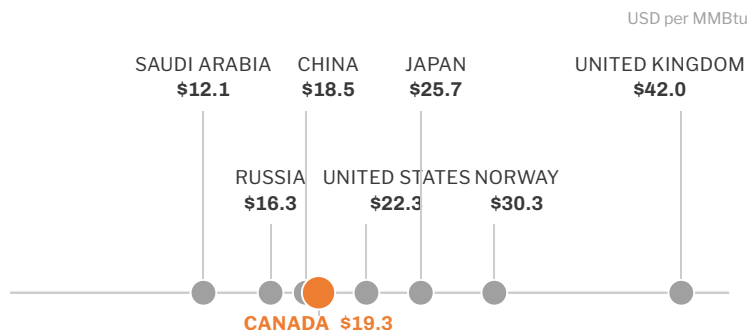
— Unchanged this year

Best margins of the 33, paid for in wages

The widest gap of the 33 countries between what raw materials cost and what the product sells for — carried on expensive manufacturing labor.

Canada ranks **11th of 33** countries this year, the same place it held last year. Industry there pays **\$19.3 per MMBtu** for energy. That is less than the \$22.3 the United States pays, and more than China's \$18.5. Manufacturing labor costs about **\$38.7 an hour**, one of the dearer wage bills of the 33. No single cost line explains that standing. Canada does well across the board rather than winning on price.

Canada's energy is among the cheapest of the 33



Average industrial energy price, USD per MMBtu, 2025 — selected countries of the 33. Only a handful pay less. Canada's energy bill has fallen for three years, from \$24.0 in 2022 to \$19.3 now.

What sets Canada apart is the **best processing margin of the 33 countries**. That means the gap between what raw materials cost and what the finished product sells for is wider in Canada than anywhere else the report tracks.

The rest of the cost base is solid. Canada ranks **5th of 33** for its tax environment and **8th** for macroeconomic stability. Employers pay a charge of just **10%** on top of wages. Building a new plant costs **0.97 times** the US price — slightly cheaper than in the United States itself.

OVERALL RANK

#11 of 33

AT A GLANCE

Average energy price	\$19.3/MMBtu
Construction labor, as paid	\$38.8/h
Employer payroll	10% of pay
Plant-build cost	0.97× US

PILLAR RANKS, OF 33

Feedstock-to-product margins		#1
Domestic tax environment		#5
Energy & utilities costs		#6
Macroeconomic environment		#8
Manufacturing labor costs		#24
Logistics & infrastructure		#26

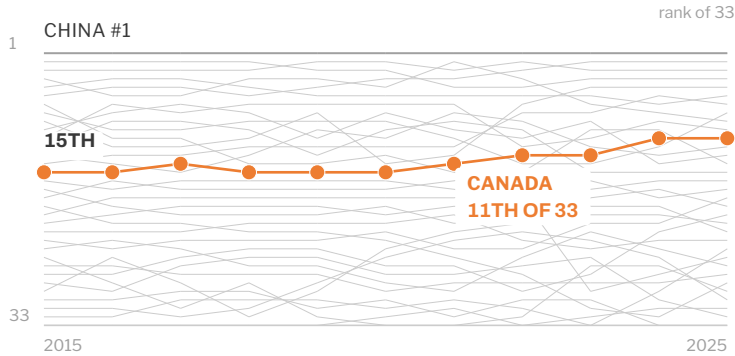
PROCESSING MARGIN, OF 33

1st

No other country of the 33 turns raw materials into product value at a wider gap.

CANADA — CONTINUED

Canada climbed from 15th to 11th of 33



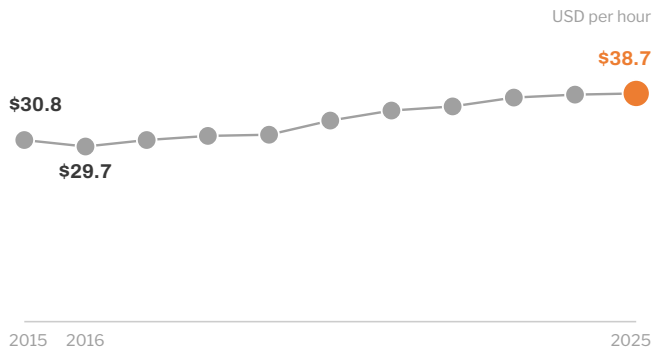
Overall rank among the 33 countries, 2015–2025. Each line is one country; rank 1 sits at the top, so a rising line means a country is improving. Canada, in orange, was never worse than 15th and ends 2025 at 11th — the position it first reached in 2024 and has held since.

“ No other country of the 33 we track turns raw materials into finished product as profitably as Canada. That margin, not a cheap cost base, is what has carried the country four places up the table over the decade, from 15th to 11th.

— Bruno Maia, Lead Analyst, Industry Economics & Competitiveness

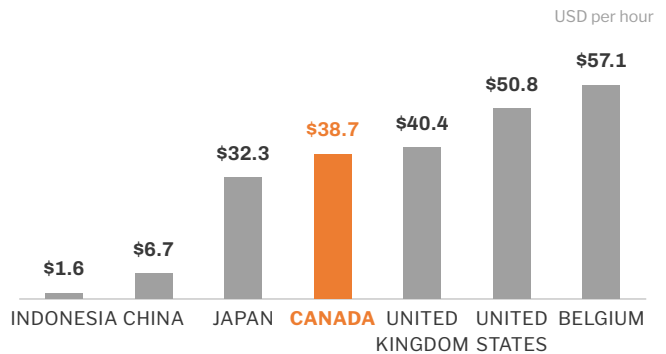
Getting product to customers is where Canada gives ground. Logistics and infrastructure rank **26th of 33**, and access to foreign markets **23rd**. Freight costs sit mid-pack at **18th**. Industrial output ranks **9th** and commodity prices **13th**. The best margin of the 33, paid for with expensive labor and a longer road to market — a trade-off, not a bargain.

Wages have risen nine years in a row



What one hour of manufacturing labor costs an employer in Canada, USD. The cost fell once, in 2016, and has risen every year since. On the report's overall labor-cost measure, Canada ranks 24th of 33.

Employers in Canada pay \$38.7 an hour



What one hour of manufacturing labor costs an employer, USD, 2025 — selected countries of the 33. On the hourly rate alone, Canada is more expensive than Japan and cheaper than the United States.

“ At \$38.7 an hour, one Canadian manufacturing worker costs what nearly six Chinese workers cost — and that wage has risen nine years in a row. The best margin of the 33 countries is paying for one of the dearest wage bills.

— Alexandre Carvalho, Analyst, Industry Economics & Competitiveness

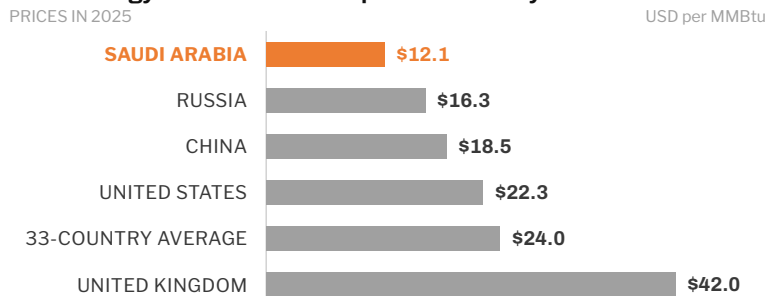
Saudi Arabia

— Unchanged this year

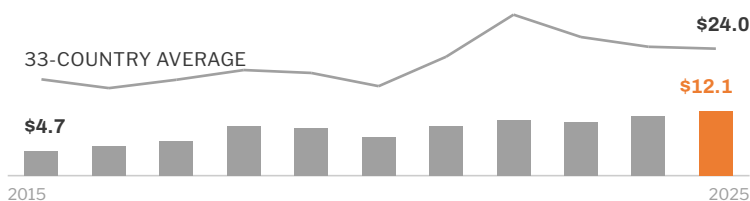
\$12 energy, the cheapest on earth

Saudi industry pays **\$12.1 per MMBtu** for energy. That is the cheapest price of the 33 countries this report tracks. The United Kingdom, the most expensive, pays \$42.0 — more than three times as much. Cheap energy, more than anything else, is why Saudi Arabia ranks **4th of 33** overall, the same place it held all year.

Saudi energy has been the cheapest for eleven years



SAUDI PRICES SINCE 2015



Average industrial energy price, USD per MMBtu. Saudi Arabia has been the cheapest of the 33 countries in every year since 2015. Russia, the next cheapest today, pays about a third more. In the 2022 price spike, when the 33-country average hit \$30.4, Saudi industry still paid under \$10.5.

The rest of the cost base is cheap too. Manufacturing labor costs **\$4.0 an hour**, the sixth-cheapest wage as paid, and second on the labor pillar once output is counted — the **second-best value** for labor of the 33. Building a plant costs **0.92 times** the US price. Employers pay a moderate **15%** charge on wages. Saudi Arabia also ranks **3rd** for its macroeconomic environment and **3rd** for its processing margin — the gap between what raw materials cost and what the product sells for. Its home market is big enough to rank **6th**, and its industrial output ranks **6th** as well.

OVERALL RANK

#4 of 33

AT A GLANCE

Average energy price	\$12.1/MMBtu
Manufacturing labor, as paid	\$4.0/h
Import duty	7.5%
Plant-build cost	0.92× US

PILLAR RANKS, OF 33

Energy & utilities costs		#1
Manufacturing labor costs		#2
Macroeconomic environment		#3
Feedstock-to-product margins		#3
Domestic market size		#6
Freight costs		#28

BEST LABOR
VALUE, OF 33

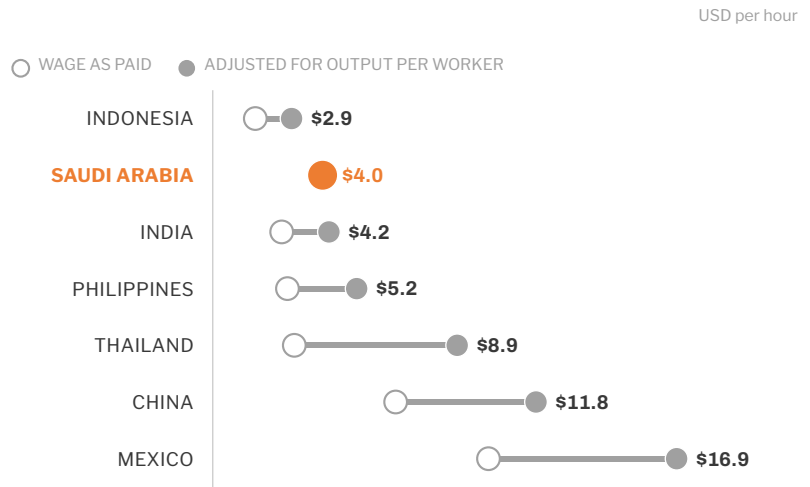
2nd

Wages of \$4 an hour, and output that beats most of the 33.

“ Saudi Arabia buys the cheapest energy of the 33 countries we track — \$12.1 per MMBtu, and it has held first place for eleven years running. Only Indonesia gives better value for manufacturing labor. For a company choosing where to build, 4th of 33 is not an oil story; it is arithmetic.

— Bruno Maia, Lead Analyst, Industry Economics & Competitiveness

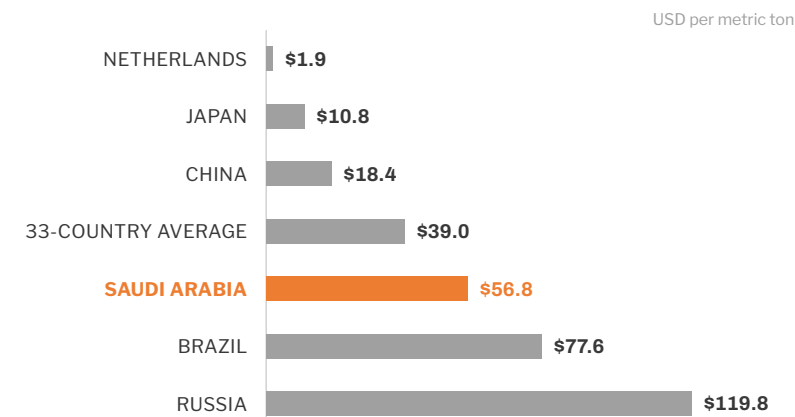
Saudi labor costs \$4 an hour, output counted or not



Manufacturing labor cost, USD per hour, 2025 — low-wage countries of the 33. The open dot is the hourly wage as paid. The solid dot is what that hour costs once output per worker is counted. Every other cheap-wage country gets more expensive on the second measure; Saudi Arabia's \$4.0 does not move — the sixth-cheapest wage as paid, and the second-best labor value of the 33, behind only Indonesia.

What holds Saudi Arabia back is not the cost of making things. It is the cost of selling them abroad. Freight ranks **28th of 33** and logistics **21st**. Access to foreign markets is weak at **28th**. The hard part is not making the product. It is getting that product to market.

Cheap to make, expensive to ship



Cost of shipping exports by container, USD per metric ton, 2025 — selected countries of the 33. On this shipping rate alone, Saudi Arabia is the 9th-dearest of the 33. It pays about half as much again as the 33-country average.

“ Making the product is the easy part in Saudi Arabia. Freight ranks 28th of 33 and access to foreign markets 28th, so the real costs start at the port. Shipping a ton of product out costs about \$57, nearly thirty times what Dutch exporters pay.

— Alexandre Carvalho, Analyst, Industry Economics & Competitiveness

Saudi Arabia offers some of the cheapest and most productive inputs on earth. What it still has to fix is the distance between the plant gate and the customer.

Japan

▼ Slipping this year

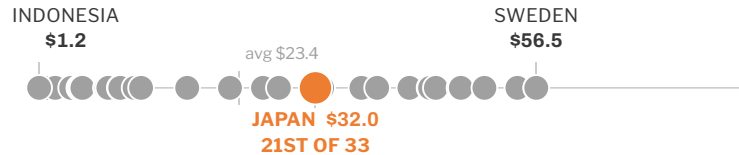
Costliest construction labor, output counted

Building a plant in Japan is expensive, and staffing it is more expensive still. Once output per worker is counted, no country of the 33 pays more for construction labor than Japan. Manufacturing labor is costly too, at **\$32.3 an hour**; Canada pays **\$38.7** and the UK **\$40.4**. Japan ranks **29th of 33** overall, down three places this year.

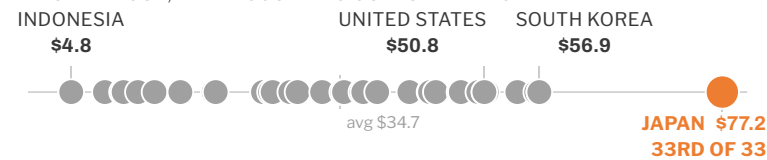
\$32 an hour in wages, \$77 in real cost

USD per hour, 2025 · one shared scale

HOURLY WAGE PAID — ALL 33 COUNTRIES



THE SAME HOUR, AFTER COUNTING OUTPUT PER WORKER



What employers pay per construction worker, USD per hour, 2025 — all 33 countries, as paid (top) and adjusted for output per worker (bottom). As paid, Japan's \$32.0 is mid-table, the 21st-cheapest of the 33. Adjusted for how much a worker produces, the same hour costs \$77.2 — the highest of the 33, half again the US price and \$20 above South Korea.

“ Adjusted for output per worker, an hour of construction labor in Japan costs \$77.2 — more than in any of the 33 countries we track. That is half again the US price, and more than double Japan's own 2015 level. Japan has been last on this measure for seven straight years.

— Alexandre Carvalho, Analyst, Industry Economics & Competitiveness

The industry underneath is strong. Domestic market size and industrial production both rank **5th of 33**, logistics and infrastructure **6th**, and the tax environment **9th**. Building is the expensive part: a new plant costs **1.16 times** what it would cost in the United States. With construction labor last of 33 as well, Japan is among the priciest places tracked to build from scratch.

OVERALL RANK

#29 of 33

AT A GLANCE

Average energy price **\$25.7/MMBtu**

Construction labor, as paid **\$32.0/h**

Import duty **0.3%**

Plant-build cost **1.16× US**

PILLAR RANKS, OF 33

Domestic market size **#5**

Industrial production **#5**

Logistics & infrastructure **#6**

Domestic tax environment **#9**

Manufacturing labor costs **#21**

Construction labor costs **#33**

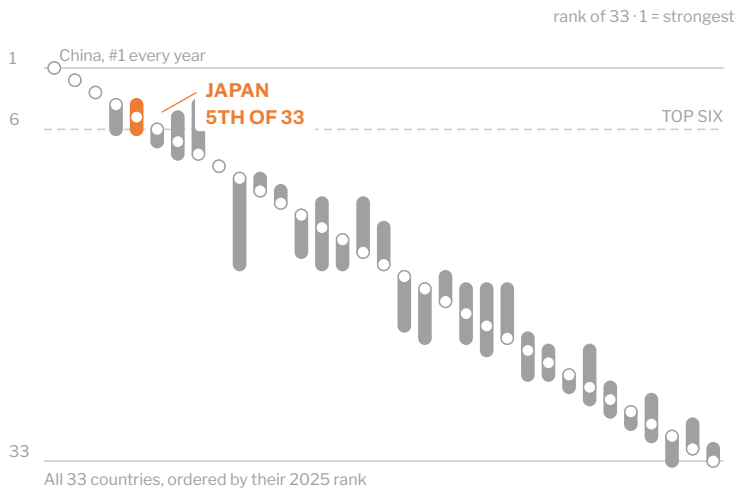
MARKET SIZE · INDUSTRIAL OUTPUT

5th

Logistics ranks 6th, taxes 9th and economic stability 11th.

JAPAN — CONTINUED

Always in the top six for industrial output



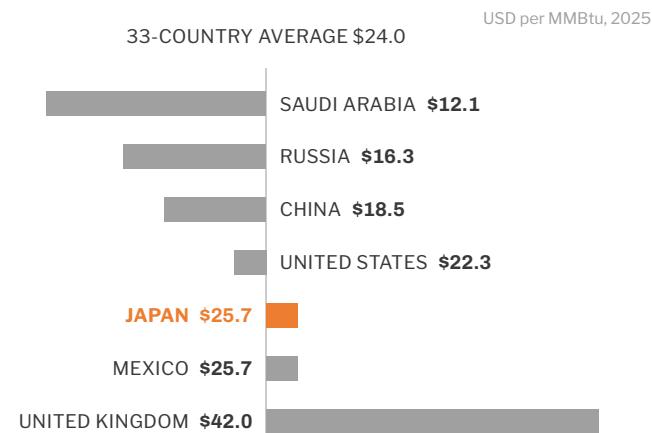
Rank for industrial production among the 33 countries. Each column runs from a country's best to its worst rank over 2015–2025; the white dot is 2025, and the dashed line marks eighth place. Japan ranked between 4th and 6th every year, and 5th in 2025. Only four countries kept the same rank throughout.

“ Japan is still a top-ten industrial power — 5th of 33 for industrial production and 5th for domestic market size, and it has not fallen out of the production top six in any year since 2015. What holds it at 29th overall is not what the country can make; it is what it costs to build there.

— Bruno Maia, Lead Analyst, Industry Economics & Competitiveness

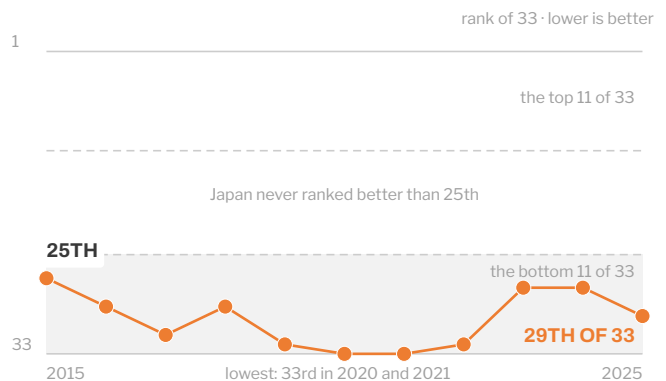
Energy is mid-table at **\$25.7 per MMBtu**, and employers pay a light payroll charge of **16%** — the cheapest part of an otherwise expensive cost base. Trade access is where Japan gives ground. Freight costs rank 29th and tariff access 30th. Processing margins sit in the lower third, at 25th.

Energy is close to the 33-country average



Average industrial energy price, 2025. Each bar shows how far a country sits from the 33-country average of \$24.0. Japan pays \$25.7, just \$1.7 above that average and the 21st-cheapest of the 33. The United Kingdom pays \$42.0, the highest of the 33.

Eleven years ranked 25th or worse of 33



Japan's overall rank among the 33 countries, 2015–2025. The shaded area covers the bottom 11 places, 23rd to 33rd. Japan has been inside it every year of the decade. Its best year was 25th and its worst 33rd, in 2020 and 2021; it ended 2025 at 29th, down three places on the year.

Commodity prices help, at 10th of 33, and macroeconomic stability at 11th keeps the ground steady. Japan's industry is large and well connected, ranking in the top ten on several measures. What holds the country back is what it costs to build a plant and to staff it.

Mexico

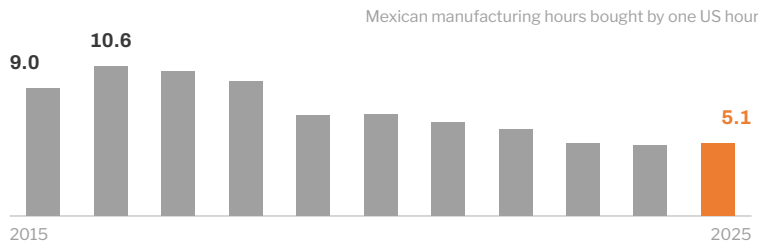
— Unchanged this year

\$10-an-hour labor, cut off from trade

Cheap to staff, cheap to build — and dead last of 33 for global trade integration.

Manufacturing labor in Mexico costs about **\$10.0 an hour**. That is roughly a fifth of the **\$50.8** paid in the United States, and more than China's **\$6.7**. Yet Mexico ranks only **15th of 33** in the overall assessment, flat this year — cheap labor alone has not lifted its standing.

A US manufacturing wage now pays for five Mexican workers, not nine



Total employer cost of a manufacturing worker, US rate divided by Mexico's, 2015–2025. In 2015 one US hour paid for nine Mexican hours — over ten at the 2016 peak. Today it pays for five: Mexico's hourly cost rose from \$4.7 to \$10.0.

“ Mexico's cost advantage is quietly eroding: manufacturing labor has more than doubled since 2015, from \$4.7 to \$10.0 an hour, and industrial energy now costs more than it does in the United States. Cheap is not the whole story anymore.

— Alexandre Carvalho, Analyst, Industry Economics & Competitiveness

The cost base is genuinely cheap across the board. Construction labor runs **\$4.8 an hour** and manufacturing labor **\$10.0**, among the cheapest bills of the 33 countries. Building a plant costs **0.92 times** the US benchmark — just under the American price — and capital costs are low as well. Employers pay a moderate **11%** payroll charge, lighter than the **28%** charged in China. Mexico also holds the **4th**-best tariff access to markets, among the most open in the assessment.

OVERALL RANK

#15 of 33

AT A GLANCE

Average energy price	\$25.7/MMBtu
Manufacturing labor, as paid	\$10.0/h
Construction labor, as paid	\$4.8/h
Plant-build cost	0.92× US

PILLAR RANKS, OF 33

Tariff protection & market access		#4
Construction labor costs		#7
Manufacturing labor costs		#12
Capital & construction costs		#12
Logistics & infrastructure		#24
Global trade integration		#33

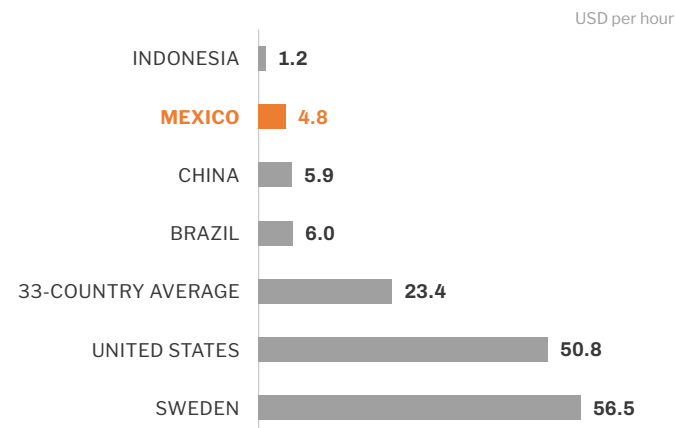
TARIFF ACCESS, OF 33

4th

Only three countries open their markets wider.

MEXICO — CONTINUED

Mexican construction labor costs a tenth of the US rate

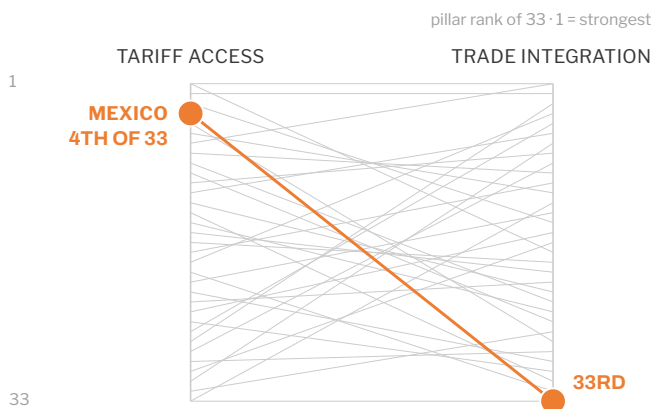


Construction worker total employer cost, USD per hour, 2025 — selected countries of the 33, including the cheapest and the most expensive. Mexico's construction labor is among the cheapest of the 33, at less than a tenth of what the same hour costs in the United States.

“ At \$10 an hour all-in, a Mexican manufacturing worker costs a fifth of an American one — and the plant around them is cheaper to build than in the United States. On pure cost, the nearshoring case still holds.
— Bruno Maia, Lead Analyst, Industry Economics & Competitiveness

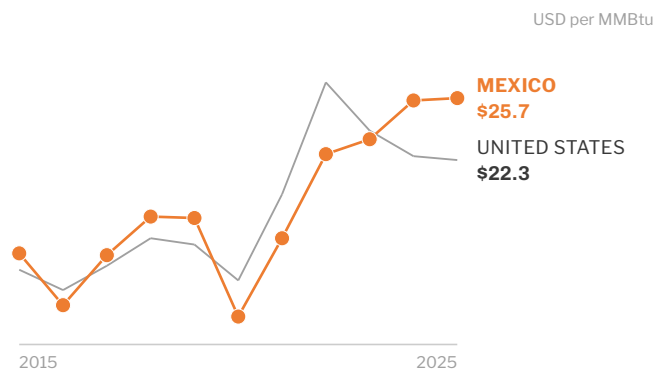
That openness is the paradox. Mexico ranks 4th of 33 for tariff protection and market access, yet finishes **33rd of 33** — dead last — for global trade integration. Little else on the scorecard helps. Logistics and infrastructure rank **24th**, macroeconomic stability **28th** and industrial production **21st**. Freight access, domestic taxes, commodity prices and processing margin all sit mid-table, between 17th and 21st, adding little lift.

Top-tier trade deals, last place in actual trade



Each line is one of the 33 countries, running from its 2025 rank for tariff protection & market access (left) to its rank for global trade integration (right). Mexico pairs the 4th-best market access with dead-last trade integration — a 29-place fall. No other country drops more than 22.

Mexico now pays more for energy than the US



Average industrial energy price, USD per MMBtu, 2015–2025. As recently as 2023, Mexican industry paid less for energy than US industry. Since 2024 it has paid more — \$25.7 versus \$22.3 in 2025 — the 22nd-cheapest of the 33.

A plant in Mexico is cheap to staff and cheap to build. Beyond its open tariff terms, though, the country remains poorly connected to global trade — access on paper that has not yet turned into actual trade.

India

— Unchanged this year

Staffing a plant for about \$2.5 an hour

India can staff a plant for about **\$2.5 an hour**, among the cheapest wages in the field, and pairs that with the second-largest domestic market — the closest rival to China's blend of low cost and scale. It holds second overall. Once productivity is counted the country still offers some of the best labor value in the field, and it also holds the third-biggest industrial output, with a plant build costing just **0.68 times the US** benchmark, fifth-lowest anywhere. Energy is mid-pack at **\$22.0 per MMBtu** and the employer payroll a light **12%**, but a heavy tax structure — 28th of 33 — is the drag that keeps India from closing on the leader.

OVERALL RANK

#2 of 33

PILLAR RANKS, OF 33

Domestic market size		#2
Manufacturing labor costs		#3
Industrial production		#3
Domestic tax environment		#28

Cheap labor and the second-largest market, one rung below China.

Indonesia

— Unchanged this year

Nowhere is cheaper to build and staff

Manufacturing labor in Indonesia is the cheapest of all 33 at about **\$1.6 an hour**, and a plant build costs the least anywhere too, **0.53 times the US** — barely half what the same plant costs in America. That cost edge holds the country third overall. Energy is inexpensive too at **\$17.9 per MMBtu**, third-cheapest of 33, and the employer payroll a modest **12%**. The one soft spot is its processing margin — the gap between raw-material cost and product price — which sits in the bottom third at 24th, the thin margin that caps how far the cost edge carries.

OVERALL RANK

#3 of 33

PILLAR RANKS, OF 33

Manufacturing labor costs		#1
Capital & construction costs		#1
Energy & utilities costs		#3
Feedstock-to-product margins		#24

The world's cheapest place to build a plant and hire.

Thailand

— Unchanged this year

Wages at \$3.0 an hour, plus a 5% payroll

Manufacturing labor in Thailand runs about **\$3.0 an hour**, among the cheapest wages of all 33 — and the tax bill is just as light: the field's second-lightest employer payroll, only **5%** of wages. A plant build costs a low **0.59 times the US** benchmark. Together they hold the country firmly in the cheap-to-operate tier, fifth overall. The costlier input is energy, at **\$29.2 per MMBtu** near the back of the field, and processing margins lag well behind at 28th of 33 — Thailand's standing rests on labor and tax, not on energy or industrial reach.

OVERALL RANK

#5 of 33

PILLAR RANKS, OF 33

Domestic tax environment		#2
Capital & construction costs		#3
Manufacturing labor costs		#8
Feedstock-to-product margins		#28

Among the cheapest workforces and lightest employer payrolls anywhere.

Singapore

▲ Rising this year

The steadiest base of 33, yet last on freight

Singapore climbed a place to sixth overall on the bedrock of the most macro-stable economy in the field and the single most tax-friendly base of all 33. The advantages come dear: manufacturing labor costs about **\$18.1 an hour** and energy **\$25.3 per MMBtu**, both mid-pack, while a plant build is competitive at **0.68 times the US** and the employer payroll sits at **17%**. Freight is where the island struggles, ranking dead last of all 33 — remote from the cheap ocean lanes that serve its neighbors. A first-place macro footing, the best logistics network bar China's, and a light tax base keep Singapore high despite that isolation.

OVERALL RANK

#6 of 33

PILLAR RANKS, OF 33

Macroeconomic environment		#1
Domestic tax environment		#1
Logistics & infrastructure		#2
Freight costs		#33

The lightest tax burden of all 33, undone by the costliest freight.

Philippines

▼ Slipping this year

Second only to Singapore on commodity prices

Commodity prices are more favorable in the Philippines than anywhere in the field bar Singapore, and the rest of the cost base follows suit: manufacturing labor at about **\$2.7 an hour**, third-cheapest of 33, and a very low plant-build cost of **0.57 times the US**. Employer payroll is light at **10%**, though energy runs dearer at **\$28.4 per MMBtu**. Down a place to seventh overall, the country is held back by isolation from world trade — global trade integration and its home market both rank 31st of 33 — so cheap inputs and labor make it a low-cost producer with little outlet for the payoff.

OVERALL RANK

#7 of 33

PILLAR RANKS, OF 33

Commodity prices		#2
Capital & construction costs		#2
Construction labor costs		#2
Domestic market size		#31

Cheap inputs and labor, cut off from world trade.

South Korea

▲ Rising this year

A four-place climb into the top ten

South Korea climbed four places to eighth over the year, one of the field's largest gains and a move into the top ten — a high-capability economy that advanced on what it can do, not what it costs. Energy is among the cheapest in the field at about **\$18.5 per MMBtu**, fourth-lowest of 33, and the country sits inside the top five for industrial output, home-market size and global trade integration alike. The cost it carries is labor: manufacturing labor runs about **\$27.6 an hour** and construction labor sits near the very bottom of the field — a capability-led climb paid for with dear wages.

OVERALL RANK

#8 of 33

PILLAR RANKS, OF 33

Industrial production		#4
Domestic market size		#4
Global trade integration		#5
Construction labor costs		#32

A capability-led climb into the top ten, paid for with dear labor.

Russia

▼ Slipping this year

Cheap energy, nowhere to send it

Energy in Russia costs about **\$16.3 per MMBtu**, the second-lowest of all 33. That advantage sits alongside moderate manufacturing labor at about **\$8.2 an hour** and a low plant-build cost of **0.77 times the US**. The drags are a heavy **30%** employer payroll tax and, above all, the reach to market: freight ranks 32nd of 33 and logistics dead last of all 33, the weakest network anywhere in the field. Russia slipped a place to tenth over the year, and cheap energy and a cheap build base count for little when goods still struggle to leave the country.

OVERALL RANK

#10 of 33

PILLAR RANKS, OF 33

Energy & utilities costs		#2
Manufacturing labor costs		#6
Capital & construction costs		#9
Freight costs		#32

Among the cheapest energy anywhere, stranded by the worst logistics.

Colombia

▲ Rising this year

\$3.2 an hour, and the weakest margins of 33

Colombia's manufacturing labor is among the cheapest in the field at about **\$3.2 an hour**, paired with a low plant-build cost of **0.64 times the US** and cheap energy at **\$18.6 per MMBtu**, sixth-cheapest anywhere. That cost edge lifted the country a place to twelfth over the year. The offsets are heavier: employer payroll runs a heavier **21%**, and its processing margin is the weakest in the entire field, 33rd of 33, with trade reach and logistics both near the bottom. Low-cost, skilled hands give Colombia real savings, but thin margins keep it from turning that edge into a higher standing.

OVERALL RANK

#12 of 33

PILLAR RANKS, OF 33

Manufacturing labor costs		#4
Capital & construction costs		#4
Energy & utilities costs		#5
Feedstock-to-product margins		#33

Cheap, skilled labor, undercut by the field's thinnest margins.

Turkey

▲ Rising this year

Inside the top ten on processing margins

Turkey pairs a cheap operating base with real trade reach — a top-ten processing margin at eighth and solid global-trade integration at eleventh — behind moderate manufacturing labor at about **\$9.5 an hour** and a low plant-build cost of **0.71 times the US**. Energy is dearer at **\$26.7 per MMBtu** and the employer payroll a heavier **19%**. The glaring weakness is macro stability, where Turkey ranks last of all 33; the cheap base and the open trade routes lifted it a place to thirteenth over the year, but that shaky footing caps how high it can climb.

OVERALL RANK

#13 of 33

PILLAR RANKS, OF 33

Capital & construction costs		#6
Feedstock-to-product margins		#8
Manufacturing labor costs		#9
Macroeconomic environment		#33

A capable trader on a shaky footing — last of all 33 on macro stability.

Taiwan

▼ Slipping this year

A stable base walled off by tariffs

Only Singapore sits on a steadier macro footing than Taiwan, second-most stable of all 33 — the base behind mid-pack manufacturing labor at about **\$15.5 an hour** and energy at **\$28.6 per MMBtu**. A plant build is competitive at **0.85 times the US**, and employer payroll is moderate at **15%**. Taiwan fell four places to fourteenth over the year, and reach is the constraint: tariff access ranks dead last, walling the island off from easy market entry — a capable, stable economy held back by market access rather than by what it costs to build or operate there.

OVERALL RANK

#14 of 33

PILLAR RANKS, OF 33

Macroeconomic environment		#2
Domestic tax environment		#4
Capital & construction costs		#11
Tariff protection & market access		#33

Steady and stable, but boxed in by the field's worst tariff access.

Spain

— Unchanged this year

A near-US cost base taxed at 31% of wages

Spain's tariff access is third-best of all 33, and its cost base sits close to the US benchmark: a plant build at **0.97 times the US** and mid-pack energy at **\$22.7 per MMBtu**, with reliable freight at eighth. Those strengths hold the country at sixteenth, unchanged over the year. The burden sits squarely on the payroll: manufacturing labor is dear at about **\$32.4 an hour** against a steep **31%** employer payroll, its softest dimension at 27th of 33. An open market and a near-US build cost make Spain competitive on access; the heavy tax-and-labor bill is what keeps it mid-field rather than climbing the table.

OVERALL RANK

#16 of 33

PILLAR RANKS, OF 33

Tariff protection & market access		#3
Freight costs		#8
Manufacturing labor costs		#20
Domestic tax environment		#27

Good market access, weighed down by a heavy employer payroll.

Poland

▲ Rising this year

First of all 33 for market access

Poland has the widest open door to major markets in the field: tariff access ranks best of all 33, and reliable freight at third reinforces the reach. That strength lifted the country a place to seventeenth over the year. Manufacturing labor is mid-pack at about **\$19.2 an hour**, the plant build runs **1.01 times the US**, energy sits at **\$23.2 per MMBtu** and the employer payroll a moderate **22%** of wages. The soft spot is logistics, in the bottom third of the field at 27th. Excellent market access carries Poland up the table; weak logistics and a slightly-above-US cost base keep it from climbing further.

OVERALL RANK

#17 of 33

PILLAR RANKS, OF 33

Tariff protection & market access		#1
Freight costs		#3
Manufacturing labor costs		#17
Logistics & infrastructure		#27

Good market access, undercut by weak logistics.

Belgium

▲ Rising this year

A trade gateway with the field's dearest labor

Nowhere in the field costs more to staff than Belgium, where manufacturing labor runs about **\$57.1 an hour**, the single most expensive of all 33. The country climbed three places to eighteenth over the year on the flip side of that ledger: first of all 33 for both freight costs and global trade integration. Energy is moderate at **\$21.5 per MMBtu**, while a plant build climbs to **1.28 times the US** and employer payroll to **27%**. Europe's trade hub is the cheapest of the 33 to ship from; the dearest labor in the field is the price that pins it only to mid-table.

OVERALL RANK

#18 of 33

PILLAR RANKS, OF 33

Freight costs		#1
Global trade integration		#1
Capital & construction costs		#30
Manufacturing labor costs		#33

Europe's trade gateway, saddled with the priciest labor in the field.

Australia

▼ Slipping this year

Low-cost energy against \$47-an-hour labor

Australia's strengths are reach and cheap energy: global trade integration ranks sixth of all 33 and its energy is cheap at about **\$20.0 per MMBtu**, ninth-lowest in the field, with a near-US plant build at **0.94 times the US** and a light **12%** employer payroll. The cost is labor, dear at about **\$47.0 an hour** and near the bottom of the field. Those wages helped pull the country two places down to nineteenth over the year. Open markets and cheap energy are genuine strengths; the steep wage bill pins an otherwise efficient, open economy to the middle of the table.

OVERALL RANK

#19 of 33

PILLAR RANKS, OF 33

Global trade integration		#6
Energy & utilities costs		#8
Domestic tax environment		#13
Manufacturing labor costs		#25

Open markets and cheap energy, paid for with very dear labor.

Italy

▲ Rising this year

Inside the top third for trade and logistics

Italy's relative strength is its network: global trade integration ranks tenth of 33 and logistics eleventh, just inside the top third of the field. Behind that sit dear manufacturing labor at about **\$37.1 an hour**, a plant build of **1.03 times the US** and mid-pack energy at **\$23.9 per MMBtu**. The real drag is employer payroll, a steep **32%** that ranks among the heaviest in the field at 31st of 33. Up two places to twentieth over the year, Italy has a serviceable industrial base and decent logistics, but one of the heaviest tax loads of all 33 is what pins its overall standing well down the table.

OVERALL RANK

#20 of 33

PILLAR RANKS, OF 33

Global trade integration		#10
Logistics & infrastructure		#11
Manufacturing labor costs		#22
Domestic tax environment		#31

Solid logistics, dragged down by one of the heaviest tax loads.

Chile

▼ Slipping this year

Thirtieth of 33 for domestic market size

Chile carries the third-lightest employer payroll of all 33, just **7%** of wages, paired with relatively affordable capital and a cheap plant build at **0.73 times the US**. Manufacturing labor is moderate at about **\$14.0 an hour**, while energy is the costlier input at **\$28.9 per MMBtu**. The country slipped three places to twenty-second over the year, and its binding weakness is a small domestic market, 30th of 33. Cheap to finance and lightly taxed, Chile is an efficient place to build a plant, but a thin home market limits how much it can profitably sell into.

OVERALL RANK

#22 of 33

PILLAR RANKS, OF 33

Capital & construction costs		#10
Manufacturing labor costs		#14
Domestic tax environment		#20
Domestic market size		#30

Cheap capital and a light payroll, limited by a thin home market.

Netherlands

— Unchanged this year

Second-best trade reach at \$55.5 an hour

The Netherlands pays some of the field's dearest manufacturing labor — about **\$55.5 an hour**, among the dearest of all 33 — the price of a trade hub second of all 33 for both global trade integration and tariff access, with a top-ten macro footing at sixth. A plant build runs a steep **1.31 times the US** and energy **\$22.0 per MMBtu**, though employer payroll stays light at **10%**. Holding twenty-third over the year, the Netherlands has deep market reach that is weighed down by some of the dearest labor in the field and a costly base in which to build a plant.

OVERALL RANK

#23 of 33

PILLAR RANKS, OF 33

Global trade integration		#2
Tariff protection & market access		#2
Macroeconomic environment		#6
Manufacturing labor costs		#31

A world trade hub, weighed down by some of the dearest labor.

Finland

▲ Rising this year

A five-place climb on easing energy

Finland was the year's biggest climber, rising five places to twenty-fourth as easing energy costs and a strong processing margin — seventh-best of all 33 — lifted it up the table. Manufacturing labor is dear at about **\$48.7 an hour**, energy has fallen to **\$20.5 per MMBtu**, tenth-lowest of 33, and a plant build runs **1.14 times the US**, with employer payroll at **21%**. Commodity prices trail furthest behind, near the bottom of the field at 30th. Healthy margins and cheaper energy are the bright lines in an otherwise expensive cost base — enough to move Finland up, not yet enough to leave the lower third.

OVERALL RANK

#24 of 33

PILLAR RANKS, OF 33

Feedstock-to-product margins		#7
Freight costs		#9
Manufacturing labor costs		#26
Commodity prices		#30

The year's biggest climber, lifted by strong margins and easing energy.

Hungary

▲ Rising this year

\$31.5 per MMBtu to power a plant

A lighter tax bill lifted Hungary two places to twenty-fifth this year — sixth-best of all 33 on the tax pillar, behind a **13% employer payroll**. Manufacturing labor is mid-pack at about **\$16.7 an hour** and a plant build is competitive at **0.93 times the US**. The cost is energy, expensive at **\$31.5 per MMBtu** near the back of the field, while commodity prices trail even further behind in the bottom third at 32nd. A light tax and a competitive build cost lift Hungary; dear energy and unfavorable input prices are the weights that hold it back.

OVERALL RANK

#25 of 33

PILLAR RANKS, OF 33

Domestic tax environment		#6
Capital & construction costs		#17
Energy & utilities costs		#32
Commodity prices		#32

One of the lighter tax environments, offset by costly energy.

South Africa

▼ Slipping this year

The world's lightest employer payroll

Employers in South Africa carry the lightest payroll of all 33: just **1%** of wages. Processing margins are strong too, second-best, alongside moderate manufacturing labor at about **\$10.1 an hour** and cheap energy at **\$19.5 per MMBtu**, eighth-lowest anywhere, with a plant build near the US benchmark at **0.94 times**. What pulled the country two places down to twenty-sixth over the year is reach: logistics sit in the bottom third at 30th of 33, and freight lower still at 31st. An exceptionally light tax and healthy margins are real draws; a poorly-connected base is what keeps South Africa in the lower third.

OVERALL RANK

#26 of 33

PILLAR RANKS, OF 33

Feedstock-to-product margins		#2
Energy & utilities costs		#9
Domestic tax environment		#10
Logistics & infrastructure		#30

The lightest employer payroll anywhere, undone by weak links to market.

France

▲ Rising this year

45% on every wage

No country in the field taxes wages as heavily as France: its employer social-security rate takes **45%** of every wage, the dearest of all 33. That compounds with expensive labor at about **\$53.0 an hour** and a build cost of **1.18 times the US**, pushing the operating base into the field's bottom tier. What holds France up is trade reach: sixth for tariff access, fifth for freight costs and twelfth for global trade integration, with energy moderate by European standards at **\$22.8 per MMBtu**. Up a place to twenty-seventh over the year, France offsets the costliest tax-and-labor combination in the ranking with strong reach to market.

OVERALL RANK

#27 of 33

PILLAR RANKS, OF 33

Freight costs		#5
Tariff protection & market access		#6
Global trade integration		#12
Domestic tax environment		#32

The field's heaviest employer payroll — 45% on every wage.

Czech Republic

▲ Rising this year

Only five of the 33 ship more cheaply

Reliable freight — sixth-best of all 33 — and solid tariff access at ninth carried the Czech Republic up four places to twenty-eighth this year. It manages that even while carrying one of the heaviest tax loads in the field, employer social security at **34%**. Manufacturing labor costs about **\$28.0 an hour**, energy **\$27.4 per MMBtu**, and a plant build runs a steep **1.34 times the US**, the softest line in the whole profile. Dependable freight and open markets lift the country; a punishing payroll tax and an expensive base to build in are the weights that hold it in the lower third.

OVERALL RANK

#28 of 33

PILLAR RANKS, OF 33

Freight costs		#6
Tariff protection & market access		#9
Manufacturing labor costs		#16
Capital & construction costs		#32

Dependable freight and open markets, weighed by a heavy payroll tax.

Brazil

▼ Slipping this year

No country of the 33 taxes industry harder

Brazil was the year's sharpest faller, sliding five places to thirtieth. The paradox is that its labor is cheap — manufacturing labor at about **\$5.2 an hour**, among the cheapest of all 33, with construction labor cheap too — yet almost everything else costs dearly. Its tax structure is the **worst of all 33**, behind a **29%** employer payroll; energy is near the ceiling at **\$32.5 per MMBtu**, second-dearest of the field, and it ranks near the bottom for both freight and logistics. The one genuine asset beyond cheap labor is the ninth-largest home market, which keeps it mid-pack on industrial output — cheap to staff, expensive in almost every other line.

OVERALL RANK

#30 of 33

PILLAR RANKS, OF 33

Manufacturing labor costs		#7
Domestic market size		#9
Logistics & infrastructure		#31
Domestic tax environment		#33

Some of the field's cheapest labor and its single worst tax pillar.

Norway

— Unchanged this year

Strong margins, almost no industry to use them

Norway runs one of the thinnest industrial bases in the field, 31st of 33 for industrial production — the structural weakness behind a standing that has not moved off thirty-first. It carries expensive energy at about **\$30.3 per MMBtu** near the back of the field, very dear manufacturing labor at about **\$53.4 an hour**, and a plant build of **1.22 times the US**, though employer payroll is moderate at **14%** and a stable macro footing ranks seventh. Its relative strength is its processing margin, fourth-best of all 33. Strong margins and stability cannot offset a costly base and the thin industrial base left to absorb that cost at home.

OVERALL RANK

#31 of 33

PILLAR RANKS, OF 33

Feedstock-to-product margins		#4
Macroeconomic environment		#7
Manufacturing labor costs		#29
Industrial production		#31

Strong margins stranded by one of the thinnest industrial bases of 33.

Sweden

— Unchanged this year

The field's most expensive place to build

Sweden anchors the very bottom of the ranking, 33rd of 33 both this year and last, on raw cost. The plant-build cost is the steepest of all 33 at **1.45 times the US**, manufacturing labor runs about **\$51.1 an hour**, and energy **\$25.8 per MMBtu**, with a heavy **31%** employer payroll on top. Its relative strengths are freight, second-best of the field, and a healthy processing margin at fifth. That freight edge is real, but the dearest build cost anywhere and an expensive base across almost every other line leave Sweden with the highest overall price tag of any of the 33 places in the ranking.

OVERALL RANK

#33 of 33

PILLAR RANKS, OF 33

Freight costs		#2
Feedstock-to-product margins		#5
Manufacturing labor costs		#28
Capital & construction costs		#33

The dearest country to build and operate in the entire field.

The World

One product, thirty-three price tags

Put the same plant in a different country and the bill changes beyond recognition. All-in manufacturing labor runs from **\$1.6 an hour in Indonesia** to **\$57.1 in Belgium** — a 36-fold spread. Energy costs about **\$12.1 per MMBtu in Saudi Arabia** against **\$42.0 in the United Kingdom**, better than three times wider. A plant build costs **0.53 times the US benchmark in Indonesia** versus **1.45 times in Sweden**. And the employer's payroll bill runs from **1% of wages in South Africa** to **45% in France**. The cheap end and the dear end are not blocs: **Indonesia** takes both the cheapest labor and the cheapest build, but the dear lines scatter across Europe — **Belgium** on wages, the **United Kingdom** on energy, **Sweden** on plant builds, **France** on payroll.

Where you put the plant is the biggest cost decision of all.

THE FIELD'S SPREADS

LABOR (ALL-IN)		36×
Indonesia · \$1.6/h		Belgium · \$57.1/h
ENERGY		3×
Saudi Arabia · \$12.1/MMBtu		UK · \$42.0/MMBtu
PLANT BUILD		3×
Indonesia · 0.53×US		Sweden · 1.45×US
PAYROLL		45×
South Africa · 1% of wages		France · 45% of wages

How the Score Is Built

Some countries win on cost, some on raw industrial muscle — and rarely both. The Country Score is built from fourteen pillars in two families: how cheap and steady it is to operate, and how strong the country's industry already is. Here is each one.

THE TWO FAMILIES

8

BASE PILLARS

The cost and stability of operating

What it takes to run and build a plant there — and how steady the wider economy is.

- Manufacturing Labor
- Construction Labor
- Energy & Utilities
- Capital & Construction
- Domestic Tax
- Logistics & Infrastructure
- Freight
- Macroeconomic

6

INDUSTRY-SPECIFIC

The strength of the industry itself

Whether the commodity industry is already there, and at what scale.

- Domestic Market Size
- Industrial Production
- Commodity Prices
- Feedstock-to-Product Margin
- Global Trade Integration
- Tariff Protection & Market Access

HOW THIS CHAPTER WORKS

Every pillar gets the same five-part look:



WHAT IT MEASURES

the metric behind the pillar, in plain terms

e.g. all-in manufacturing labor, in \$/hour



BUILT FROM

the drivers that make it up

e.g. productivity, direct & indirect pay



IN THE SCORE

which way ranks higher, and the family it sits in

e.g. lower cost ranks higher · a base pillar



WHY IT MATTERS

what the pillar does to a plant's economics

e.g. the cost that lands on every ton



FIVE CHEAPEST, FIVE DEAREST

the field's extremes on that pillar, as a ranked bar

the five best and five worst of the 33

1 MANUFACTURING LABOR COSTS

Once output is counted, the five cheapest places to run a factory floor sit inside **a point and a half** of each other — Indonesia, Saudi Arabia, India, Colombia and the Philippines. Belgium is the dearest of the 33.

▲ TOP 5

1	Indonesia		64.1
2	Saudi Arabia		63.5
3	India		63.4
4	Colombia		62.9
5	Philippines		62.7

▼ BOTTOM 5

29	Norway		36.6
30	France		36.4
31	Netherlands		35.7
32	Germany		34.6
33	Belgium		33.4

WHAT IT MEASURES

What it costs an employer to run a manufacturing worker for an hour, once output is counted.

BUILT FROM

- * **Direct pay** — base wages, overtime, bonuses and allowances
- * **Indirect pay** — benefits, social security and payroll contributions
- * **Productivity factor** — total employer cost scaled by output per worker (US = 1.0×)

IN THE SCORE

Lower cost ranks higher.

WHY IT MATTERS

A commodity plant runs shift labor around the clock, so the hourly cost lands on every ton it ships.

Figure 6.1 · Pillar score, 0–100 · higher = better. Manufacturing Labor pillar score. Five highest, five lowest of 33.

2 CONSTRUCTION LABOR COSTS

The building trades break apart at the bottom: Japan sits more than **ten points** below South Korea in 32nd, while the four countries above it bunch inside five. Low productivity, not high pay, pins Japan there; Indonesia leads.

▲ TOP 5

1	Indonesia		67.7
2	Philippines		65.7
3	Thailand		64.5
4	India		64.3
5	Turkey		63.2

▼ BOTTOM 5

29	United States		39.9
30	Netherlands		39.1
31	Sweden		36.3
32	South Korea		35.4
33	Japan		25.2

WHAT IT MEASURES

What it costs to employ the skilled trades that build a process plant, once their output is counted.

BUILT FROM

- * **Direct pay** — base wages, overtime, bonuses and allowances
- * **Indirect pay** — benefits, social security and payroll contributions
- * **Productivity factor** — total employer cost scaled by output per worker (US = 1.0×)

IN THE SCORE

Lower cost ranks higher.

WHY IT MATTERS

These trades pour the concrete and weld the pipe, so their wage sets a large slice of the upfront build bill.

Figure 6.2 · Pillar score, 0–100 · higher = better. Construction Labor pillar score. Five highest, five lowest of 33.

3 ENERGY & UTILITIES COSTS

No Base pillar spreads wider than the utility bill: **47 points** separate Saudi Arabia from the United Kingdom, and the UK sits nearly eight points below Hungary in 32nd. Norway, an energy exporter, ranks 30th.

▲ TOP 5

1	Saudi Arabia		69.7
2	Russia		65.2
3	Indonesia		60.7
4	China		59.2
5	Colombia		59.0

WHAT IT MEASURES

What it costs to power a plant and feed it the utilities it runs on — electricity, gas, steam, water and industrial gases.

BUILT FROM

- * **Energy price** — the blended cost of power, gas and fuels
- * **Industrial utilities** — steam, process and cooling water, and industrial gases

▼ BOTTOM 5

29	Chile		44.2
30	Norway		41.3
31	Brazil		39.4
32	Hungary		30.5
33	United Kingdom		22.7

IN THE SCORE

A cheaper energy-and-utility base ranks higher.

WHY IT MATTERS

Commodity plants are energy-hungry, so a cheap energy and utilities bill can decide whether a site clears its margin.

Figure 6.3 · Pillar score, 0–100 · higher = better. Energy & Utilities pillar score. Five highest, five lowest of 33.

4 CAPITAL & CONSTRUCTION COSTS

Southeast Asia builds cheapest — Indonesia, the Philippines and Thailand sit within **two and a half points** of one another — while Europe fills all five of the dearest places: Sweden last, the Czech Republic 32nd.

▲ TOP 5

1	Indonesia		68.4
2	Philippines		66.8
3	Thailand		66.1
4	Colombia		62.2
5	India		62.1

WHAT IT MEASURES

What it costs to build a process plant from the ground up, measured against the US.

BUILT FROM

- * **Materials & equipment** — steel, cement and imported machinery, delivered
- * **Construction labor** — local crews, plus imported skilled labor where needed
- * **Business & logistics adjustments** — regulatory quality and the cost of moving goods

IN THE SCORE

Lower cost ranks higher.

WHY IT MATTERS

A new plant is a billion-dollar bet, and the build cost sets the bar every future ton of output has to clear.

▼ BOTTOM 5

29	Germany		38.6
30	Belgium		35.5
31	Netherlands		35.2
32	Czech Rep.		34.0
33	Sweden		31.0

Figure 6.4 · Pillar score, 0–100 · higher = better. Capital & Construction pillar score. Five highest, five lowest of 33.

5 DOMESTIC TAX ENVIRONMENT

Tax bunches at the friendly end — the top five sit inside **three and a half points**, Singapore first — and stretches at the heavy end, where Brazil, last of the 33, sits **nine points** below Italy in 31st.

▲ TOP 5

1	Singapore		60.5
2	Thailand		59.4
3	United States		58.8
4	Taiwan		57.7
5	Canada		57.2

WHAT IT MEASURES

The total tax a plant carries — corporate income, consumption, employer payroll and equipment import duties.

BUILT FROM

- * **Corporate income tax** — the statutory rate on profits
- * **Payroll & consumption** — employer social security and VAT/GST
- * **Equipment import duties** — tariffs on imported plant machinery

▼ BOTTOM 5

29	Turkey		45.4
30	Colombia		44.5
31	Italy		44.1
32	France		37.6
33	Brazil		34.8

IN THE SCORE

A friendlier tax regime ranks higher.

WHY IT MATTERS

A plant lives with the tax code for its whole life; a heavy profit, payroll or import levy quietly taxes every ton it makes.

Figure 6.5 · Pillar score, 0–100 · higher = friendlier. Domestic Tax pillar score. Five friendliest, five heaviest of 33.

6 LOGISTICS & INFRASTRUCTURE

China runs the field's strongest logistics and infrastructure and Singapore is second; the other 31, from Belgium in third down to Russia at the foot, fit inside **ten points**.

▲ TOP 5

1	China		72.0
2	Singapore		60.3
3	Belgium		53.4
4	United States		53.2
5	South Korea		53.2

WHAT IT MEASURES

How well a country moves goods inside its borders and out to the world.

BUILT FROM

- * **Transport networks** — road and rail reach, and the ports and shipping links
- * **Utility infrastructure** — the power, water and gas networks a plant plugs into
- * **Logistics efficiency & investment** — how well the system runs, and the capital going into it

IN THE SCORE

Stronger logistics ranks higher.

WHY IT MATTERS

Raw materials come in and product goes out by ship, rail and truck, so weak links add cost and delay to every shipment.

▼ BOTTOM 5

29	Colombia		45.7
30	South Africa		45.6
31	Brazil		44.7
32	Thailand		43.8
33	Russia		43.7

Figure 6.6 · Pillar score, 0–100 · higher = better. Logistics & Infrastructure pillar score. Five highest, five lowest of 33.

7 FREIGHT COSTS

Belgium holds the most competitive freight position — on interior connectivity, not sea access; the pure-port city-state of Singapore sits last.

▲ TOP 5

1	Belgium		57.9
2	Sweden		55.9
3	Poland		55.3
4	Germany		55.3
5	France		55.3

WHAT IT MEASURES

What it costs to ship raw materials in and finished product out to market.

BUILT FROM

- * **Maritime freight rates** — ocean freight across container, dry-bulk and liquid lanes, import and export
- * **Inland freight rates** — the rail and road haul to and from port

▼ BOTTOM 5

29	Japan		44.9
30	Brazil		44.3
31	South Africa		43.4
32	Russia		43.3
33	Singapore		42.1

IN THE SCORE

Stronger freight position ranks higher.

WHY IT MATTERS

Commodities are heavy and low-value per ton, so the freight bill can swing a plant's delivered price more than its manufacturing cost.

Figure 6.7 · Pillar score, 0–100 · higher = better. Freight pillar score. Five highest, five lowest of 33.

8 MACROECONOMIC ENVIRONMENT

Turkey anchors the macroeconomic field; Singapore, at the far end, offers the steadiest environment of the 33.

▲ TOP 5

1	Singapore		57.7
2	Taiwan		57.7
3	Saudi Arabia		55.4
4	United States		54.8
5	South Korea		54.7

WHAT IT MEASURES

How stable a country is to operate in — its inflation, currency and credit conditions.

BUILT FROM

- * **Price stability** — steady, moderate inflation scores best
- * **Exchange-rate stability** — how steadily the currency holds against the dollar
- * **Financing conditions** — interest rates, credit standing and national savings

▼ BOTTOM 5

29	South Africa		44.1
30	Colombia		43.6
31	Brazil		41.6
32	Russia		35.3
33	Turkey		22.8

IN THE SCORE

Stronger stability ranks higher.

WHY IT MATTERS

A plant signs long contracts and borrows for decades, so runaway inflation or a swinging currency can wreck a sound investment.

Figure 6.8 · Pillar score, 0–100 · higher = better. Macroeconomic pillar score. Five highest, five lowest of 33.

1 DOMESTIC MARKET SIZE

China's home market is in a class of its own: India, second, sits closer to the field's floor than to China. At the foot, Chile, the Philippines, Sweden and Finland all land on the same score.

▲ TOP 5

1	China		92.1
2	India		61.4
3	United States		59.1
4	South Korea		52.3
5	Japan		51.3

▼ BOTTOM 5

29	Colombia		46.1
30	Chile		46.0
31	Philippines		46.0
32	Sweden		46.0
33	Finland		46.0

WHAT IT MEASURES

How large the in-country demand is for the commodity family.

BUILT FROM

* **Apparent consumption** — local production, plus imports, minus exports

* **Seven commodity families** — a representative basket each — olefins, polymers, fertilizers, metals and more — averaged at equal weight

IN THE SCORE

Stronger market ranks higher.

WHY IT MATTERS

A large home market lets a plant sell next door instead of exporting, sparing it freight and the swings of foreign demand.

Figure 6.9 · Pillar score, 0–100 · higher = better. Domestic market-size pillar score. Five highest, five lowest of 33.

2 INDUSTRIAL PRODUCTION

A **32-point** gap separates the field's industrial leader from its nearest rival: China leads outright, the United States a distant #2 — the widest lead anywhere in the brief, ahead of domestic market size.

▲ TOP 5

1	China		91.9
2	United States		60.0
3	India		56.2
4	South Korea		53.4
5	Japan		52.6

▼ BOTTOM 5

29	Finland		46.2
30	Sweden		46.1
31	Norway		46.1
32	Colombia		46.1
33	Philippines		46.1

WHAT IT MEASURES

How much of the commodity the country already makes, and at what scale.

BUILT FROM

* **Output volume** — physical production of each commodity, in tonnes or energy-equivalent

* **Seven commodity families** — a representative basket each — olefins, polymers, fertilizers, metals and more — averaged at equal weight

IN THE SCORE

Stronger production ranks higher.

WHY IT MATTERS

A deep production base brings suppliers, skilled workers and shared infrastructure that make the next plant cheaper to run.

Figure 6.10 · Pillar score, 0–100 · higher = better. Industrial-production pillar score. Five highest, five lowest of 33.

3 COMMODITY PRICES

Singapore has the cheapest commodity-price position of the 33, just ahead of the Philippines and Indonesia; Norway is the dearest.

▲ TOP 5

1	Singapore		57.3
2	Philippines		57.2
3	Indonesia		57.1
4	Thailand		56.7
5	Russia		55.7

▼ BOTTOM 5

29	Czech Rep.		44.9
30	Finland		44.3
31	Sweden		44.1
32	Hungary		43.2
33	Norway		43.1

WHAT IT MEASURES

The delivered price level of the country's commodity basket — its input-cost position.

BUILT FROM

- * **Delivered commodity price** — landed cost in USD/tonne; prices inverted, so the cheapest scores highest
- * **Seven commodity families** — a representative basket each — olefins, polymers, fertilizers, metals and more — averaged at equal weight

IN THE SCORE

A lower delivered price ranks higher — a structural input-cost edge.

WHY IT MATTERS

The commodity basket is the largest single input cost, so a cheaper local price is a standing advantage for every plant that buys it.

Figure 6.11 · Pillar score, 0–100 · higher = better. Commodity-prices pillar score. Five highest, five lowest of 33.

4 FEEDSTOCK-TO-PRODUCT MARGIN

This gap between raw-material cost and product price is where a plant earns its keep, and the field is tightly bunched: Canada leads, South Africa and Saudi Arabia close behind.

▲ TOP 5

1	Canada		54.1
2	South Africa		53.6
3	Saudi Arabia		53.5
4	Norway		53.3
5	Sweden		52.9

▼ BOTTOM 5

29	South Korea		47.4
30	Chile		47.1
31	Philippines		46.4
32	Singapore		45.1
33	Colombia		44.9

WHAT IT MEASURES

The gap between what raw materials cost and what the finished product sells for.

BUILT FROM

- * **Raw-material cost** — the price of the input the route runs on
- * **Product price** — what the finished commodity fetches
- * **Dominant production route** — assessed for each country's main raw-material-to-product path

IN THE SCORE

Wider margin ranks higher.

WHY IT MATTERS

This gap is where a commodity plant actually earns its money: cheap raw materials and a firm product price keep it profitable.

Figure 6.12 · Pillar score, 0–100 · higher = better. Feedstock-to-product-margin pillar score. Five highest, five lowest of 33.

5 GLOBAL TRADE INTEGRATION

Mexico trails the field on global trade integration; Belgium leads, ahead of the Netherlands and China in this year's benchmark.

▲ TOP 5

1	Belgium		61.8
2	Netherlands		58.7
3	China		57.3
4	India		56.9
5	South Korea		55.3

▼ BOTTOM 5

29	Norway		44.5
30	Chile		44.2
31	Philippines		44.0
32	Colombia		43.6
33	Mexico		43.2

WHAT IT MEASURES

How tied the country's industry is to international trade flows.

BUILT FROM

- * **Export & import value** — the scale of trade flows in both directions
- * **Trade openness** — combined flows relative to the size of the economy
- * **Partner diversification** — how widely export and import partners are spread

IN THE SCORE

Stronger integration ranks higher.

WHY IT MATTERS

A well-connected industry can sell surplus abroad and source cheaper inputs, smoothing the booms and busts of its home market.

Figure 6.13 · Pillar score, 0–100 · higher = better. Global-trade-integration pillar score. Five highest, five lowest of 33.

6 TARIFF PROTECTION & MARKET ACCESS

A plant's access to export markets turns on tariffs. Poland ranks best, with the Netherlands and Spain close behind; Taiwan sits at the foot.

▲ TOP 5

1	Poland		54.4
2	Netherlands		54.3
3	Spain		54.3
4	Mexico		54.2
5	Sweden		54.2

▼ BOTTOM 5

29	South Africa		44.3
30	Japan		41.9
31	United States		39.6
32	Russia		39.1
33	Taiwan		34.7

WHAT IT MEASURES

The tariffs and trade barriers shaping what crosses the country's borders.

BUILT FROM

- * **Import protection** — the applied tariffs a country charges on incoming goods
- * **Export market access** — the tariffs its exporters face in destination markets

IN THE SCORE

More favorable access ranks higher.

WHY IT MATTERS

Tariffs decide whether a plant can reach export customers and whether cheaper imports undercut it at home.

Figure 6.14 · Pillar score, 0–100 · higher = better. Tariff-protection & market-access pillar score. Five highest, five lowest of 33.

No Country Is Strong Everywhere

Across all fourteen pillars, one pattern holds: no country is strong everywhere. The economies that operate cheapest rarely lead on the industry itself, and the ones with the deepest industrial strength seldom offer the lowest cost base — competitiveness is a balance struck across the fourteen, not a single edge.

Base pillars (8)

MfgLab = Manufacturing Labor · ConLab = Construction Labor ·
Enrgy = Energy & Utilities · Logis = Logistics & Infrastructure · Capit =
Capital & Construction · Frght = Freight · Macro = Macroeconomic ·
Tax = Domestic Tax

Industry-Specific (6)

Prod = Industrial Production · Price = Commodity Prices · Marg =
Feedstock-to-Product Margin · Trade = Global Trade Integration ·
Mkt = Domestic Market Size · Tarif = Tariff Protection & Market
Access

RANK BAND 1-5 6-11 12-17 18-23 24-33

Table 6.1 Pillar map — every country on all 14 pillars, by rank (1 = best of 33). Base pillars (8) || Industry-Specific (6). Darker orange = stronger; grey = weaker.

	MfgLab	ConLab	Enrgy	Logis	Capit	Frght	Macro	Tax	Prod	Price	Marg	Trade	Mkt	Tarif
China	10	9	4	1	8	16	17	24	1	7	23	3	1	27
India	3	4	11	13	5	14	13	28	3	11	11	4	2	19
Indonesia	1	1	3	16	1	11	20	8	12	3	24	19	10	17
Saudi Arabia	2	12	1	21	13	28	3	16	6	9	3	9	6	28
Thailand	8	3	28	32	3	13	25	2	13	4	28	16	16	24
Singapore	13	11	22	2	7	33	1	1	15	1	32	14	18	21
Philippines	5	2	24	17	2	26	23	7	33	2	31	31	31	14
South Korea	18	32	7	5	23	10	5	14	4	8	29	5	4	26
United States	27	29	12	4	22	25	4	3	2	12	9	7	3	31
Canada	24	20	6	26	21	18	8	5	9	13	1	21	15	23
Russia	6	8	2	33	9	32	32	25	7	5	13	26	7	32
Colombia	4	6	5	29	4	20	30	30	32	15	33	32	29	20
Taiwan	11	18	25	9	11	22	2	4	11	6	22	13	12	33
Spain	20	10	15	22	16	8	19	27	20	22	12	15	22	3
Turkey	9	5	27	8	6	15	33	29	18	14	8	11	14	18
Mexico	12	7	17	24	12	21	28	19	21	17	20	33	13	4
Belgium	33	27	13	3	30	1	14	23	10	26	15	1	11	7
Italy	22	15	16	11	20	23	21	31	23	24	14	10	20	8
Poland	17	17	19	27	19	3	24	17	19	25	19	18	21	1
Germany	32	23	18	12	29	4	9	21	8	27	6	8	8	11
Australia	25	26	8	25	15	24	16	13	22	19	16	6	23	12
Finland	26	24	10	23	25	9	12	18	29	30	7	25	33	10
Chile	14	13	29	28	10	27	26	20	28	16	30	30	30	25
Netherlands	31	30	20	10	31	17	6	15	14	28	17	2	19	2
Hungary	15	16	32	19	17	19	27	6	24	32	18	22	27	13
France	30	22	14	14	26	5	15	32	17	23	10	12	17	6
Czech Republic	16	25	26	7	32	6	18	22	25	29	21	23	26	9
Brazil	7	14	31	31	18	30	31	33	16	20	26	20	9	16
South Africa	19	28	9	30	14	31	29	10	26	18	2	28	24	29
Japan	21	33	23	6	27	29	11	9	5	10	25	17	5	30
United Kingdom	23	19	33	15	24	12	22	11	27	21	27	24	25	15
Norway	29	21	30	20	28	7	7	12	31	33	4	29	28	22
Sweden	28	31	21	18	33	2	10	26	30	31	5	27	32	5

The gap after Tax separates the Base-pillars family (8) from the Industry-Specific family (6). 1 = best of 33, per pillar.

Methodology & The Full Report

No black-box scoring, no hidden weighting — here is exactly how these numbers are checked, who to contact, and where the deeper per-country detail lives.

Where these figures come from. Intratec delivers independent commodity, energy and industrial intelligence. It has no commercial ties to the markets it measures and no stake in where any country lands. The rankings are not survey results or expert opinion — they are calculated from real, checkable numbers, and all 33 countries, together representing more than 80% of global manufacturing output, are assessed by exactly the same rules: the same 14 pillars, the same calculations, and the same standards. No country is weighted, adjusted, or favored, and every figure is checked twice — first by computer, then by a human analyst — before it is published. The full methodology is open for inspection — no login, no subscription — at <https://methodology.intratec.us>.

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Independent Commodity, Energy & Industrial Intelligence

In operation since 2002, Intratec turns complex commodity and industrial data into clear, comparable intelligence. Its AI-enabled products cover prices, market dynamics, production economics, and the broader conditions that shape competitiveness.

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This brief is complete and self-standing — all 33 countries, the full ranking, real figures, nothing withheld. Behind it sits the full **Industry Economics & Competitiveness** program: **thirty-three country reports, refreshed monthly** — one per nation, each benchmarking its country against the entire field, pillar by pillar, across all seven industries. Where this brief gives a country a page, its report gives it the complete picture: every pillar broken down to its underlying metrics, the history behind each figure, and the forecasts. If this brief told you **where** a country stands, the country's own report tells you **why** — and what to watch next.

See the country reports at <https://intrat.ec/iie>, or reach us at press@intratec.us.

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