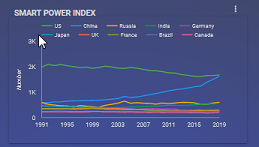
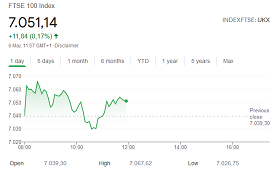


**LEAGUE OF NATIONS SMART POWER INDEX:**

**BRIEF**: MAKE OUR ANNUALISED SMART POWER INDEX ACTIVE LIKE A WEEKLY SHARE PRICE INDEX BY CONVERTING OUR INPUTTED DATA VIA YOUR **SIMPLE** RANKING ALGORITHM FORMULA SO THAT OUR SMART POWER INDEX IS LIKE THE FTSE-100!…..

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**WHAT IS THIS?**

1. We have an online ranking news site called the League of Nations. [www.leaguenations.com](http://www.leaguenations.com)
2. Our aim is to show our audience how the top ten countries are trending against each other in the world. Not annually but weekly.
3. We have created a dashboard of line graphs tracking the success or failure of countries from 1991 to 2019. We have called this the Smart Power Index. You will see the way we do that here:

* Embedded GSD: <https://datastudio.google.com/embed/u/0/reporting/0e6e703c-d89a-479b-af6b-5085caedb8e0/page/VgD>
* GSD: <https://datastudio.google.com/reporting/0e6e703c-d89a-479b-af6b-5085caedb8e0>

1. We now want to integrate these annualised line graphs and make them respond to more regular data input.
2. And remember this is a news site so we want the data input to have newsworthy visual impact by clear movement in the Smart Power Index.

**BACKGROUND CONTEXT**

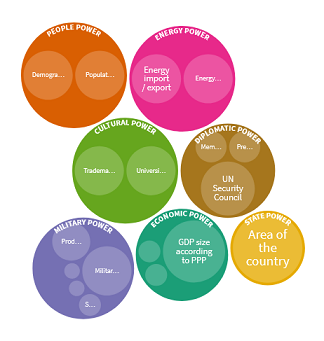
This set of linked indices derives from our colleagues at the State Power Index <http://www.statepowerindex.com/>. **We have renamed this the Smart Power Index.**

ISSUE

1. This data has been good for showing how countries have done on an annual basis since 1991.
2. However, now we want to show how countries perform in future more regularly.
3. We want to make the Smart Power Index more like a football league table or a share price index.
4. The current algorithm doesn’t work for this objective.
5. The old State Power Index contains:
6. 7 sub-indexes:

* Economic power
* Military Power
* People Power
* Cultural Power
* State Power
* Energy Power
* Diplomatic Power

1. These are made up of 18 metrics



2. We are retaining the 7 State Power Index sub-indexes and expanding the 18 metrics to 33

3. The data in these indexes feed through to the results you see in the Smart Power Index. Here is the data in full: <https://docs.google.com/spreadsheets/d/1dSVelQHBpkbAhjgDrwPdIR_AF8UpV3soWjwS89Kr3eU/edit#gid=0>

**TASK**

1. We would like you to **create a ranking formula** which award points to countries in four quick stages. Imagine it as a university degree course. You are creating a formula which allocates **weighted** points to coursework, then modules and then exams to compile the final degree score. For example:

* Stage one: coursework – you get 100%. What points would you give yourself and the 9 other people who got less?
* Stage two: module – coursework represents 50% of the module points. How would you convert and weigh coursework points to change the module points?
* Stage three: exam – module represents 50% of the exam points. How would you convert and weigh module points to change the exam points?
* Stage four: degree – exam represents 20% of the degree. How would you convert and weigh exam points to change the overall degree points?

1. We want you to activate the system by applying a formula where we can add “market-moving” data to those 33 metrics from up to 600 specific indices published by world organisations. In the degree course example, the coursework graph (Billionaires per city) comes from Forbes which is one of the 600 publicly published indexes we will use. This feeds up to the Private Wealth League (module), one of the 33 metrics. This feeds up to the Economic Power Index (exam), one of the 7 sub-indexes which eventually shows on the Smart Power Index, which is the overall total and your final degree score!
2. In the League of Nations our four stages look like this. I have used Brazil as an example. The aim is for you to allocate points to each country at each stage. I have done a mock up beneath so you can better understand. The process works like this:

* Tier 1: We find a popular story metric, in this case billionaires per country. We look to see if Brazil is up or down the ranking over the year. There are 4 more billionaires since last year. You calculate points for countries going up or down this table.
* Tier 2: Next step up, we have to integrate this into the final Smart Power Index. Billionaires fit into our tier 2 group: private wealth. This represents 10% of the Tier 3 Economic Index, which itself represents 40% of the overall Smart Power Index. So 10% of the 286 points Brazil had in 2019 = 28.6.
* Tier 3: You add points to the Economic Power Index.
* Tier 4: You divide the points and apply them to the Smart Power Index

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Coursework | | | Module | | | Exam | | | Degree | | |
| Tier 1 Policy indicators | | | Tier 2: 33 League indicators | | | Tier 3: 7 Power Indicators | | | Tier 4: Smart Power Index | | |
| Billionaires by country | | | Private Wealth League | | | Economic Power League | | | Smart Power Index | | |
|  | | |  | | |  | | |  | | |
| **Billionaires ranking in each country**  100% Of Private Wealth League => | | | **Private Wealth League ranking is 10% of the Economic Power Index =>**  I think we need to renumerate this league to reflect the Tier 1 points realistically. | | | **Economic Power ranking is 40% of the Smart Power Index =>** | | | **The aim at this stage is to ensure a visible statistical change in the Smart Power Index from the Tier 1,2,3 data** | | |
| **Country** | **Rank +/- since previous data** | **Points toward Private Wealth League?** | **Country** | **Current points** | **Points** | **Country** | **Current points** | **Points**  **10% of 40** | **Country** | **Current points** | **Points** |
| Brazil | **+4** | **+40** | Brazil | **28.6 or renumerate as 286?** | **+4 = 32.6**  **+40 = 326?** | Brazil | **286** | **+4 = 290** | Brazil | **254** | **+1 = 255** |
| China | **+5** | **+50** | China |  |  | China |  |  | China |  |  |
| France | **-2** | **-20** | France |  |  | France |  |  | France |  |  |
| Germany | **-4** | **-40** | Germany |  |  | Germany |  |  | Germany |  |  |
| India | **+5** | **+50** | India |  |  | India |  |  | India |  |  |
| Italy | **-2** | **-20** | Italy |  |  | Italy |  |  | Italy |  |  |
| Japan | **-1** | **-10** | Japan |  |  | Japan |  |  | Japan |  |  |
| Russia | **+5** | **+50** | Russia |  |  | Russia |  |  | Russia |  |  |
| UK | **+2** | **+20** | UK |  |  | UK |  |  | UK |  |  |
| US | **+5** | **+50** | US |  |  | US |  |  | US |  |  |

CHALLENGES

1. This formula needs to be logical but not absolute. We need an easy-to- explain methodology.
2. As a news site we need the formula to show movement most of all. We would like countries on the main Smart Power Index to move +/-1 at least per week. The 7 sub-indices could move in the range +/-5.
3. The issue is the Tier 2 League. Here the percentage numbers we are allocated by the current Smart Power Index data are too small to achieve the +/-1 to 5 range we want. Solution: The Tier 2 Private Wealth League’s y axis is numbered in the thousand just like the Economic and Smart Power Indices it feeds into.