**LITERATURE SURVEY**

Creating a cultural diversity index / occupational diversity index for all states that can be used in reports.

Census tables:

[Census tables | Government of India](https://censusindia.gov.in/census.website/data/census-tables)

References:

* Simpson’s Diversity Index ([Simpson's Diversity Index: Definition, Formula, Calculation - Statistics How To](https://www.statisticshowto.com/simpsons-diversity-index/)) ✅d
* Fearon, J.D. Ethnic and Cultural Diversity by Country\*. Journal of Economic Growth 8, 195–222 (2003). <https://doi.org/10.1023/A:1024419522867> (<https://sci-hub.se/10.1023/A:1024419522867>)
* [Measuring cultural diversity with the Stirling model](https://cros-legacy.ec.europa.eu/system/files/NTTS2013fullPaper_186.pdf) ✅
* [Measuring a new aspect of ethnicity: The appropriate diversity index](https://www.econstor.eu/bitstream/10419/92997/1/720108012.pdf) ✅
* [Biolinguistic Diversity Index of India](https://osf.io/9x3p6/download) ✅
* [Measuring the Diversity of Cultural Expressions: Applying the Stirling Model of Diversity in Culture](https://uis.unesco.org/sites/default/files/documents/measuring-the-diversity-of-cultural-expressions-applying-the-stirling-model-of-diversity-in-culture-2011-en.pdf) ✅
* [Long read] <https://deliverypdf.ssrn.com/delivery.php?ID=478069124110089024098030021006008092062042006012089031090009059040118075055025080064074091052059038120111001103011010073000065001091079074080064091097083098115104100073093087004&EXT=pdf&INDEX=TRUE>

Reference for the report format:

[Measuring Racial and Ethnic Diversity for the 2020 Census](https://www.census.gov/newsroom/blogs/random-samplings/2021/08/measuring-racial-ethnic-diversity-2020-census.html)

| ***Yobah***  It was initially designed to measure biodiversity but can be used to measure the diversity of places too. SDI ranges from 0 to 1 with diversity increasing as we approach one. It can be used to compare the diversity of two or more places.  SDI = 1 - (sum(n \* (n - 1)) / N \* (N - 1))  Where n is the number of instances in one class and N is the total number of instances across all classes. |
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| ***Saba:***  Simpson’s Diversity Index - To calculate community diversity or differences in the diversity.  Ranges from 0 to 1. 1 indicates high diversity whereas 0 low diversity.  is the formula to calculate SDI.   * n = number of individuals of each species * N = total number of individuals of all species   LD/RD = (log Li)/ (log L state) (here, LD is linguistic diversity and RD is religious diversity)  CD = (LD + RD + ⍺)/3 |
| ***Alvina***   | Simpson’s Diversity Index (SDI) is used to measure and compare the diversity of a given population. The values range only from 0 and 1 (they cannot be negative).  How can we apply this? ▶️*We could use this to calculate the SDI for each state given the migration, languages, occupation*   1. ~~B-04: Main workers classified by age, industrial category and sex (total) -> India table for occupation~~ 2. B-27: Occupational classification of main workers and marginal workers other than cultivators and agricultural labourers by sex and educational level -> India table for occupation 3. D-02: Migrants classified by place of last residence, sex and duration of residence in place of enumeration -> India table for migration diversity in each state 4. ~~D-03: Migrants within the State/UT by place of last residence, duration of residence and reason of migration - 2011 -> India table for migration diversity in each state~~ 5. C-16: Population by mother tongue -> India table for language diversity in each state 6. C-17: Population by bilingualism and trilingualism -> India table for language diversity for each mother tongue language group 7. Religion information | | --- | | Measuring the Diversity of Cultural Expressions: Applying the Stirling Model of Diversity in Culture  Explained diversity and the three main components of balance, variety and disparity. They provided the Stirling Index as well but will need to look further into that formula to see how we can implement it to our datasets | |  | |  | |