

DAI – DIGITAL ACCESS INDEX

BRAZIL BREAKDOWN

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I. INTRODUCTION

ITU recently published a study showing Digital Access Index (DAI) of several countries, giving an idea of world digital division. This study gave to Brazil a score of 0.50, in the border between UPPER and MEDIUM level.

After a quick analysis of index components, we realised that DAI could be extremely useful to measure digital division among different regions inside a country.

Our purpose is to show Brazilian internal digital division, measuring DAI of all Brazilian states, based on 2002 data.

II. DATA SOURCES & METHODOLOGY

According to ITU methodology, five factors are forming DAI and calculation of these factors are depending on several parameters.

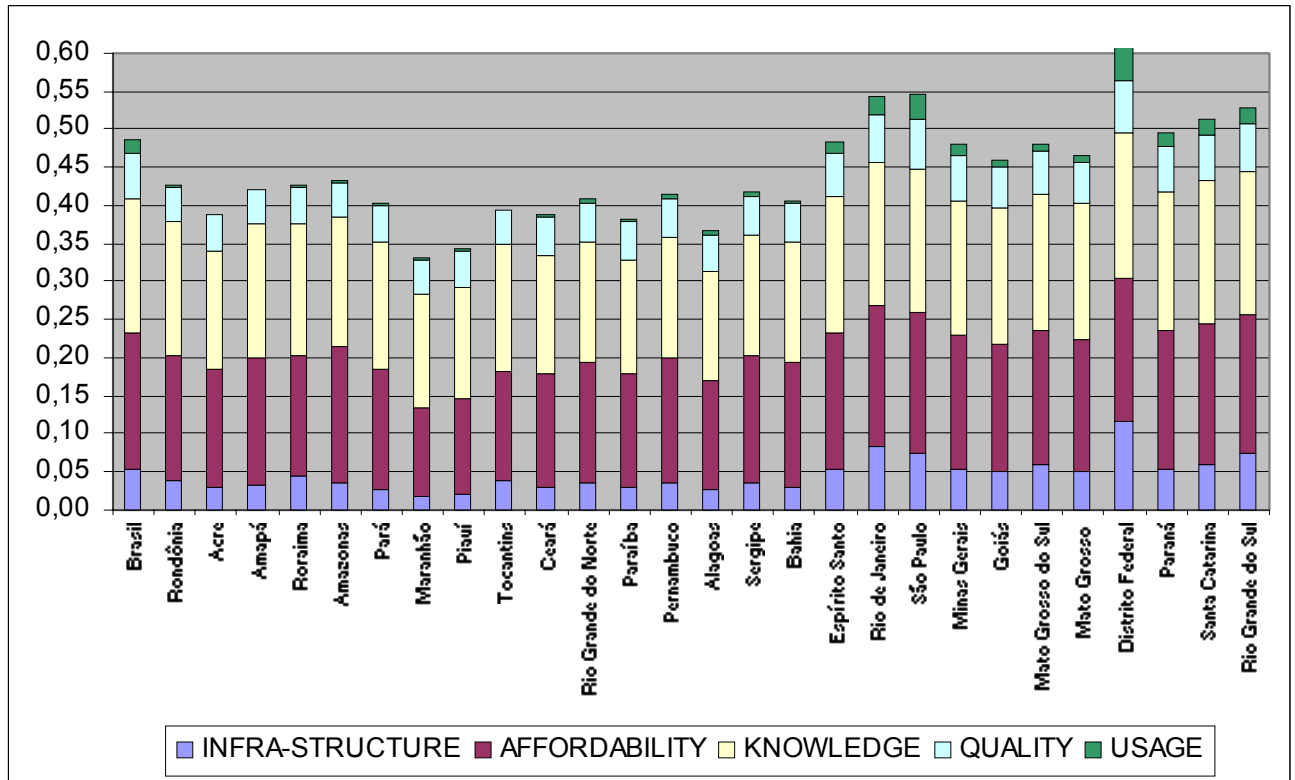
In the Brazilian case, some of these parameters are available, others we have used our database. Data sources are:

1. **Infra-structure:** we are using fixed and mobile access information from ANATEL (Agência Nacional de Telecom) and population from IBGE (Instituto Brasileiro Geografia Estatística);
2. **Affordability:** we are using price information from ISP's and Telecom Operators and *per-capita* income from IBGE (Instituto Brasileiro de Geografia & Estatística);
3. **Knowledge:** we are using literacy and school enrolment information from IBGE;
4. **Quality:** we are using information from our database and ISP information;
5. **Usage:** we are using Internet usage information from IBOPE (Instituto Brasileiro Opiniao Publica & Estatística) and our database.

III. BRAZIL BREAKDOWN

Initially, we have calculated Brazil index using our data and the same methodology calculation from ITU. We reach a value of **0.49**. After a contact with ITU consultant, we found out that the big difference was in the International Internet Bandwidth: ITU is considering *available* bandwidth and our calculation is based on *used* bandwidth.

After this, we have applied the methodology for all states. Results can be seen at the figure:



IV. RESULTS

Results are showing that all states of North, Northeast, Centerwest (except DF-Federal District), Espírito Santo and Minas Gerais, in a total of 21 states (78%) have DAI values lower than Brazil. Only DF, São Paulo, Rio de Janeiro and southern states are higher than national DAI.

These results are showing a clear internal “digital division”, as a mirror of economical inequalities and requires a government special treatment. Otherwise, it is probable an increase of this differences overtime.

	IIFRA- STRUCTURE	AFFORDA BILITY	KNOWLEDGE	QUALITY	USAGE	DAI
Brasil	0,05	0,18	0,18	0,06	0,02	0,49
Rondônia	0,04	0,17	0,18	0,05	0,00	0,43
Acre	0,03	0,15	0,15	0,05	0,00	0,39
Amapá	0,03	0,17	0,18	0,04	0,00	0,42
Roraima	0,04	0,16	0,18	0,05	0,00	0,43
Amazonas	0,04	0,18	0,17	0,05	0,00	0,43
Pará	0,03	0,16	0,17	0,05	0,00	0,40
Maranhão	0,02	0,12	0,15	0,04	0,00	0,33
Piauí	0,02	0,12	0,15	0,05	0,00	0,34
Tocantins	0,04	0,14	0,17	0,05	0,00	0,40
Ceará	0,03	0,15	0,16	0,05	0,01	0,39
Rio Grande do Norte	0,04	0,16	0,16	0,05	0,01	0,41
Paraíba	0,03	0,15	0,15	0,05	0,00	0,38
Pernambuco	0,04	0,16	0,16	0,05	0,01	0,41
Alagoas	0,03	0,14	0,14	0,05	0,00	0,37
Sergipe	0,04	0,17	0,16	0,05	0,01	0,42
Bahia	0,03	0,16	0,16	0,05	0,01	0,41
Espírito Santo	0,05	0,18	0,18	0,06	0,01	0,48
Rio de Janeiro	0,08	0,18	0,19	0,06	0,02	0,54
São Paulo	0,07	0,19	0,19	0,07	0,03	0,55
Minas Gerais	0,05	0,18	0,18	0,06	0,02	0,48
Goiás	0,05	0,17	0,18	0,05	0,01	0,46
Mato Grosso do Sul	0,06	0,18	0,18	0,06	0,01	0,48
Mato Grosso	0,05	0,17	0,18	0,05	0,01	0,47
Distrito Federal	0,12	0,19	0,19	0,07	0,04	0,61
Paraná	0,05	0,18	0,18	0,06	0,02	0,50
Santa Catarina	0,06	0,18	0,19	0,06	0,02	0,51
Rio Grande do Sul	0,07	0,18	0,19	0,06	0,02	0,53