desenvolvimento em QUESTÃO

MULTIDIMENSIONAL INDEX OF TERRITORIAL HERITAGE ACTIVATION: The Human and Intellectual Dimension and its Components

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ABSTRACT

The work aimed to develop the methodological bases of the Human and Intellectual Dimension Index of Territorial Heritage (IDHI), operationalizing the variables that compose it from a scale. The methodology was based on the use and adaptation of the Likert Scale, with five points, parameterizing the indicators on human and intellectual development that integrate this dimension of territorial development. As a result, we have an index that can be applied to measure the human and intellectual dimension of the territorial heritage in a scientific and multifaceted way, but at the same time being flexible and adaptable to the empirical realities and specificities of the territories in which it will be used. This index can be used by researchers from different territories and by managers of public policies who are concerned with measuring the territorial heritage in its human and intellectual aspects.

Keywords: territorial heritage; methodology; index of the human and intellectual dimension; territorial development.

ÍNDICE MULTIDIMENSIONAL DA ATIVAÇÃO DO PATRIMÔNIO TERRITORIAL: A DIMENSÃO HUMANA E INTELECTUAL E SEUS COMPONENTES

RESUMO

O trabalho objetivou desenvolver as bases metodológicas do Índice da Dimensão Humana e Intelectual do Patrimônio Territorial (IDHI), operacionalizando as variáveis que o compõem a partir de uma escala. A metodologia baseou-se no uso e adaptação da Escala Likert, com cinco pontas, sendo parametrizados os indicadores sobre desenvolvimento humano e intelectual que integram esta dimensão do desenvolvimento territorial. Como resultados tem-se um índice que pode ser aplicado para mensurar a dimensão humana e intelectual do patrimônio territorial de forma científica e multifacetada, mas ao mesmo tempo flexível e adaptável às realidades empíricas e especificidades dos territórios em que será utilizado. Este índice pode ser usado por pesquisadores de diferentes territórios e por gestores de políticas públicas que possuam como preocupação a mensuração do patrimônio territorial em suas vertentes humana e intelectual.

Palavras-chave: patrimônio territorial; metodologia; índice da dimensão humana e intelectual; desenvolvimento territorial

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INTRODUCTION

This work seeks to establish and clarify the bases and procedures necessary for the construction of the Index of the Human and Intellectual Dimension of Territorial Heritage (IDHI), which, together with the respective texts of the other five dimensions that constitute Territorial Heritage (PT), present to the public the Multidimensional Index of Territorial Heritage Activation (IMAP)[6]. The IDHI, in addition to its role in the composition of the IMAP, can also be seen separately, in case the researcher prefers to delimit his study, focusing only on the aspects of this dimension. Furthermore, it is worth noting that the IDHI is a way of enabling the analytical-systematizing phase of the Progressive Triangulation, presented and discussed in Mueller *et al.* (2022).

The conceptual elements underlying this dimension are anchored in discussions about territory, territorial heritage, the distinction between formal and informal knowledge, as well as the distinction between vertical and horizontal human groups, according to the theoretical foundations presented in Mueller *et al.* (2022). The bases for the notion of development are found in the Capability Approach (Amartya Sen), also presented in Mueller *et al.* (2022). It is worth resuming, however, that the option for such a theoretical approach aims to connect the notion of territorial development with the focus of the Human and Intellectual Dimension (DHI), which is precisely the constituent population of the various territories. In this sense, the same approach provides the notions of "intrinsic value" and "instrumental value" as criteria for choosing the elements indicative of the respective inclusion of the variables in the composition of the index. Both aspects are discussed in the first section, following this introduction.

The criterion for constructing the scale for each of the variables privileges, whenever possible, rates and percentages, to the detriment of absolute values, aiming to present contextualized results, according to the realities of each territory. Such construction, together with the indication of data sources for the respective variables and the explanation of the scale construction criteria, constitute the second section of the text. The third section, on the other hand, presents ways of how to proceed with contextual adjustments in the index, without this distorting the results, in case of lack of data, or territorial particularities. Finally, in the last section, the necessary steps are elucidated for transforming the numbers obtained in the measurement of each variable into a synthetic index.

[6] Project coordinated by Prof. Valdir Roque Dallabrida, referring to the Research Productivity Program of the National Council for Scientific and Technological Development (CNPQ). In addition, it makes reference to three other projects: (i) *Territorial heritage as a reference in the development process of territories or regions: a study in three regions of Rio Grande do Sul*, involving a network of institutions and researchers led from the PPGDR- Unijuí and supported by Fapergs; (ii) *The territorial heritage as a reference in the process of development of territories or regions: epistemic-theoretical assumptions and proposal of methodological instruments*, which is being executed in the PPGDTS--UFPR; (iii) *Epistemic-methodological foundations of territorial heritage, converging with the Social Dimension*, being carried out at the PPGDPP-UFFS.

DIMENSION OF TERRITORIAL HERITAGE: CONCEPTUAL AND INDICATIVE ELEMENTS

Conceptual elements

The Human and Intellectual Dimension of Territorial Heritage is anchored, in theoretical terms, in the Territorial Approach to Development (DALLABRIDA, 2020; DALLABRIDA *et al.*, 2021), as a general reference framework and in the Capabilities Approach (SEN, 2000, 1992, 1987, 1985; SEM; KLIKSBERG, 2010), as a specific reference framework. The connections between both approaches were presented and discussed in Mueller *et al.* (2022). However, it is worth summarizing this undertaking, saying that DHI,

> [...] is invariably about people. Therefore, it deals with groups and subgroups formed by them, their knowledge, their sociodemographic characteristics and the social arrangements that impact their intellectual formation, as well as the production and dissemination of new knowledge and innovations (MUELLER *et al.*, 2022, p. 204).

Therefore, the Human and Intellectual Dimension is composed of two components, which, in turn, are subdivided into subcomponents. The components are: 1) Knowledge and 2) Human Groups. The subcomponents are, respectively: Formal Knowledge, Informal Knowledge, Vertical Groups and Horizontal Groups.

Formal knowledge concerns those linked to teaching and research institutions formally recognized by legal apparatuses. These are, for example, schools, universities, research centers and the like. Likewise, they include titles, diplomas and certificates of completion issued by them. They also incorporate the production and registration of patents, as well as scientific production, conveyed in appropriate forums and formats, such as, for example, scientific papers.

Informal knowledge, in turn, is understood here as all other knowledge not produced and legitimized by the aforementioned institutions. Examples of this knowledge are: foreign languages; indigenous languages specific to certain social groups rooted in the territories; ancestral practices perpetuated by orality that denote specific knowledge, such as, knowledge of medicinal herbs and inherent in cultural practices, such as preparing typical dishes, making regional clothing, etc. (MUELLER *et al.*, 2022, p. 207) .

As for human groups, Mueller *et al.* (2022), based on Stewart (2010) and Stewart; Graham and Luca (2021), adopt the distinction between vertical groups and horizontal groups as a criterion for stratification/grouping of inhabitants of a territory. According to this criterion, vertical groups are those that do not consider distinctive characteristics such as, ethnic, racial or religious differences. Segmentations by income brackets or education levels are examples of vertical groups. Horizontal groups, in turn, are those arising from characteristics that give specificity to some population group, such as ethnicity, religion, gender, etc.

These components and their respective subcomponents are operationalized through variables, which constitute the indicative level, as presented in the next topic.

Indicative elements

This topic explains the reasons and criteria that justify the inclusion of the respective variables in the aforementioned indicative level. Such criteria are in line with the discussion of

the constitutive and instrumental roles of freedom in the development process, according to the Capability Approach (SEN, 2000). The notion that there is a constitutive role under discussion is presented by Sen (2000) as synonymous with intrinsic importance to development. In the author's words, "[...] the *intrinsic* importance of human freedom as the pre-eminent objective of development needs to be distinguished [from its] *instrumental effectiveness* [...]" (SEN, 2000. p. 53, highlights in the original).

In this sense, the notions of Intrinsic Value and Instrumental Value are adopted here, as underlying each of the variables included in the index. The instrumental value refers to the fact that its existence and mobilization can have positive impacts in terms of generating territorial development, in a broad sense. Intrinsic value, on the other hand, concerns the fact that something should exist, or be preserved, by ethical or moral arguments, regardless of its instrumental value.

For illustrative purposes, it is worth bringing some examples. Scientific research activities have a very clear instrumental value in relation to the development of a territory. Defending the preservation of an indigenous language may not clearly have such instrumental value, but it has an unquestionable intrinsic value. The same can be said about the concern with respect for religious diversity. The instrumental value may not stand out to the eye, as would be the case with patent registration, but its intrinsic value justifies including such information in the index.

In general, this instrumental and/or intrinsic argument is well understood in the distinction between Formal Knowledge and Informal Knowledge. In the case of formal ones, the instrumental value is invariably present, whereas for informal ones, its intrinsic value stands out. However, a variable can be justified by both "values" simultaneously, for example, the production of handicrafts with identity value and/or tourist potential. If such activities represent ways of generating income for certain groups in a territory (instrumental value), they also act in the sense of preserving the identity of such a group and, thus, preserving the cultural diversity of the territory (intrinsic value), therefore, it is a question of one of the faces of the territorial heritage of unquestionable importance.

Such simultaneity of value (intrinsic and instrumental) is also underlying the variables that portray human groups, especially the vertical ones. In this case, it is quite intuitive that, for example, higher levels of education and income of a population are desirable in themselves, but that they also have positive impacts on other aspects of life. Consequently, there is an (instrumental) impact on the quality of life and the level of development of a territory.

From the point of view of horizontal groups, as mentioned, intrinsic value stands out. However, it is quite evident that the living conditions of the population of a territory are the basis for its development in a broad sense. If, for example, a territory is predominantly inhabited by an ethnic group that for racist reasons is considered "inferior", this condition will affect the territory as a whole. Hence the importance of bearing in mind the distinction between horizontal and vertical groups. Therefore, it is assumed that inherent to each variable included here, there is intrinsic, or instrumental value, or both and, thus, justifies its inclusion in the composition of the index of the human and intellectual dimension, without the need to list detailed justifications for each variable.

Figure 1 presents the set of elements that constitute the DHI. It should be noted that, for purposes of feasibility and operational simplicity, it was decided here to group some of the

variables presented in Mueller *et al.* (2022), resulting in a smaller number effectively to be operationalized. Thus, there are a total of eight variables, three per subcomponent, except for the Informal Knowledge subcomponent, which is represented by only two variables.

Figure 1: Human and Intellectual Dimension: components and variables

Dimension	Components		Variables
HUMAN AND INTELLECTUAL DIMENSION	KNOWLEDGE	Formal	• Issuance of academic titles and certificates • Scientific production • Patent registration
		Informal	• Knowledge transmitted by oral tradition • Domain of non-official languages
	HUMAN GROUPS	Vertical	• Education levels • Income levels • Age groups
		Horizontal	• Religious groups • Gender • Ethnic-racial groups

Source: Elaborated by the authors (2023).

Human and intellectual dimension: scale construction criteria and data collection instruments

The Index of the Human and Intellectual Dimension of Territorial Heritage (IDHI) follows a scale of 1 to 5, with 1 being the worst grade and 5 being the best. Thus, we have: 5 = Very High; 4 = High ; 3 = Medium; 2 = Low and 1 = Very Low. These five levels are based on the Likert Scale . In this sense, the definition of each of the variables is presented here, together with the construction criteria of the respective scale. Furthermore, indications are given of how the respective necessary empirical data can be obtained, bearing in mind the Brazilian reality.

The exposition of the parameters follows the sequence of Formal Knowledge, Informal Knowledge, Vertical Human Groups and Horizontal Human Groups. For each group of variables, a letter and a cardinal number are used for abbreviation purposes. Such abbreviation aims to facilitate the process of aggregation and calculation of the index, according to components and index of the dimension as a whole.

Formal Knowledge is preceded by the letter “F”, in allusion to the word “formal”. Likewise, Informal Knowledge is preceded by the letter “I”, Vertical Human Groups by the letter “V” and Horizontal Human Groups by the letter “H”. The numbers correspond to the number of variables of each subcomponent. So, we have: (F1, F2, F3), (I1 and I2), (V1, V2, V3) and (H1, H2 and H3).

Component: Formal Knowledge

F1 variable: Issuance of academic titles and certificates.

a – Definition and criteria for constructing the scale:

These are undergraduate and graduate diplomas issued by institutions based in the territory. Such a measure constitutes, simultaneously, a proxy of the infrastructure of the territory

regarding the higher education of its population, as well as the contribution of the territory to the training of people from other territories, since it is common for students to seek their training in regions other than the one of their birth. Therefore, information on the issuance of academic titles is more relevant than the simple presence of a greater or lesser number of institutions. The objective is to calculate a title issuance rate, per 1000 inhabitants of the territory, in a given period of time. That is, divide the number of titles issued by a thousand inhabitants. If, for example, in a territory where 1000 people live, 50 titles were issued , in the chosen period, there is a rate of 0.05. If 20 titles are issued in this same territory, there is a rate of 0.02, and so on.

b – Scale structure:

5. The issuance of academic titles is equal to or greater than 0.05.
4. The issuance of academic titles is equal to or greater than 0.03 and less than 0.05.
3. The issuance of academic titles is equal to or greater than 0.01 and less than 0.03.
2. The issuance of academic titles is less than 0.01.
1. There is no issue of academic titles in the territory.

c – Techniques and/or data collection sources:

e-MEC Registry: National Registry of Higher Education Courses and Institutions.

Variable F2: Scientific production:

a – Definition and criteria for constructing the scale:

For the purposes of operational viability, it is a matter of ascertaining whether the territory has high-impact national and international scientific production, in various areas of knowledge, according to definitions by the Coordination for the Improvement of Higher Education Personnel (CAPES). An approximate, but quite viable, way of obtaining such production is through the existence of *stricto sensu* postgraduate programs and the respective grades awarded by CAPES in the most recent evaluation. In this case, it is suggested to work with the existence of programs, plus a qualitative criterion, instead of carrying out a survey of all academic production carried out in a territory. It is assumed that a greater number of programs, associated with higher grades, can indicate in a very satisfactory way the scientific production of a territory. It should be noted that CAPES works with grades ranging from 3 to 7, to keep postgraduate courses in operation, with grade 7 being considered excellent. There are 49 areas of knowledge considered by CAPES for program evaluation purposes.

b – Scale structure:

5. There are more than 6 *stricto sensu* graduate programs in the territory, of which at least two were evaluated with a grade of 6 or 7 in the most recent evaluation.
4. There are less than 6 *stricto sensu* graduate programs in the territory, of which at least one was evaluated with a grade of 6 or 7 in the most recent evaluation.
3. There are more than one *stricto sensu* graduate programs in the territory, but none of them received a score of 6 or 7 in the most recent evaluation.

2. There is at least one *stricto sensu* graduate program in the territory, regardless of the score obtained in the most recent evaluation.
1. There is no *stricto sensu* graduate program in the territory.

c – Techniques and/or sources of data collection:

Sucupira Platform (2023).

Variable F3: Registration of patents:

a – Definition and criteria for constructing the scale:

This is the patent application with the National Institute of Industrial Property (INPI), carried out by institutions headquartered in the territory. The objective is to calculate a rate of patents per 1000 inhabitants residing in the territory. The number of patent applications is divided by the size of the population and the result is multiplied by 1000. If, for example, in a territory where 1,000,000 people live, 100 patents were registered, in the chosen period, there is a rate from 0.1. If 2,000,000 people lived in this territory, the rate would be 0.05 and so on.

b – Scale structure:

5. The registration of patent applications at the INPI is equal to or greater than 0.1.
4. The registration of patent applications at the INPI is equal to or greater than 0.05 and less than 0.1.
3. The registration of patent applications at the INPI is equal to or greater than 0.01 and less than 0.05.
2. The registration of patent applications at the INPI is less than 0.01.
1. The territory does not have records of patent applications at the INPI.

c – Techniques and/or data collection sources:

INPI (2023).

Informal Knowledge

Variable I1: Knowledge transmitted by oral tradition.

a – Definition and criteria for constructing the scale:

This involves knowledge about medicinal herbs associated with the vegetation of the territory, about Creole plants and seeds, production of handicrafts with identity value and/or tourist potential, and regional culinary (typical dishes). The underlying criteria are the diversity of knowledge and its recognition by local authorities. The more diverse the territory, the better in terms of territorial heritage. Likewise, it is positive that such knowledge is formally recognized and plays a leading role in the lives of those around them. A viable way to verify such recognition is through its representativeness in municipal councils of culture.

b – Scale structure:

5. In the territory there are more than 10 human groups that experience practices linked to knowledge transmitted through oral tradition in their daily lives and such groups are fully represented in the municipal council of culture.
4. In the territory there are more than 10 human groups that experience practices linked to knowledge transmitted through oral tradition in their daily lives and these groups are partially represented in the municipal council of culture.
3. In the territory there are between 01 and 10 human groups that experience in their daily lives practices linked to knowledge transmitted by oral tradition and such groups are not represented in the municipal council of culture.
2. In the territory there are no human groups that experience practices linked to knowledge transmitted through oral tradition in their daily lives, but there is a municipal cultural council.
1. In the territory there are no human groups that experience practices linked to knowledge transmitted through oral tradition in their daily lives and there is no municipal cultural council.

c – Techniques and/or data collection sources:

Primary research (ethnography, interviews with representative social actors). Secondary source research: local public records.

Variable I2: Domain of non-official languages:

a – Definition and criteria for constructing the scale:

These are languages and dialects spoken by the local population, which are not used by the state apparatus in its activities. The underlying criterion here is also diversity and recognition by local government and society. The more diverse the territory is in terms of languages, the better in terms of territorial heritage. However, the promotion, negligence or repression by the State and the local society itself, can make all the difference in terms of vitality of such heritage.

b – Scale structure:

5. In the territory, more than 6 non-official languages are spoken and this practice is encouraged by the public authorities, some of which are incorporated into formal school activities.
4. Between 3 and 6 non-official languages are spoken in the territory and this practice is encouraged by the public authorities, some of which are incorporated into formal school activities.
3. In the territory, more than 6 non-official languages are spoken, but they are not incorporated into formal school activities.
2. One to 6 non-official languages are spoken in the territory, but they are not incorporated into formal school activities.

1. Unofficial languages are spoken in the territory, but this practice is repressed by the local government.

c – Techniques and/or data collection sources:

Research with qualified informants (anthropologists), research in municipal education departments.

Vertical Human Groups

Variable V1: Education levels:

a – Definition and criteria for constructing the scale:

For the purposes of this variable, it was decided to adopt the data already available through the Municipal Human Development Index – IDHM - Education. In cases where a territory covers more than one municipality, it is necessary to work with the averages obtained from the various municipalities being studied.

b – Scale structure:

5. IDHM Education is equal to or above 0.8.
4. IDHM Education equal to or above 0.6 and below 0.8.
3. IDHM Education equal to or above 0.4 and below 0.6.
2. IDHM Education equal to or above 0.2 and below 0.4.
1. IDHM Education below 0.2.

c – Techniques and/or data collection sources:

Atlas of Human Development.

Variable V2: Income levels:

a – Definition and criteria for constructing the scale:

For the purposes of this variable, it was decided to adopt the data already available through the Municipal Human Development Index – IDHM - Income. In cases where a territory covers more than one municipality, it is necessary to work with the averages obtained from the various municipalities being studied.

b – Scale structure:

5. IDHM Income equal to or above 0.8.
4. HDI Income equal to or above 0.6 and below 0.8.
3. HDI Income equal to or above 0.4 and below 0.6.
2. IDHM Income equal to or above 0.2 and below 0.4.
1. HDI Income below 0.2.

c – Techniques and/or sources of data collection:

Atlas of Human Development.

Variable V3: Age groups:

a – Definition and criteria for constructing the scale:

The age groups considered here refer to population groups aggregated according to working age population - PIA (between 15 and 64 years old) and other groups. That is, young people (under 15 years old) and elderly (over 65 years old) are the group that constitutes the so-called dependent population. Based on the population data of a territory grouped in this way, the Dependency Ratio is calculated. The lower this indicator is, the more apt the territory is to produce and streamline economic activities, generate savings and development. There are three types of dependency ratio: Elderly (RDI), Younger (RDJ) and Total (RDT). As the names themselves show, the RDI takes into account only the relationship between PIA and the elderly population, the RDJ considers only the relationship between PIA and young people. The Total Dependency Ratio (TDR), in turn, simultaneously considers both dependent groups. The calculation shows how many dependents there are for every 100 people of working age in a certain territory. The dependents are added, divided by the PIA and the result is multiplied by 100. Here, we chose to work with the RDT because of its greater representation of the population of a territory.

b – Scale structure:

5. Total dependency ratio below 40.
4. Total dependency ratio equal to or above 40 and below 50.
3. Total dependency ratio equal to or above 50 and below 60.
2. Total dependency ratio equal to or above 60 and below 70.
1. Total dependency ratio equal to or above 70.

c – Techniques and/or sources of data collection:

Brazilian Institute of Geography and Statistics (IBGE), Demographic Census.

Horizontal Human Groups

Variable H1: Religious groups:

a – Definition and criteria for constructing the scale:

Religious groups are here understood in a broad sense, including the most diverse religions and their variants. These are, for example, Christians, Muslims, religions of African origin, in addition to any other religious practices that are organized in groups and that are being practiced in the territory. Diversity and respectful and therefore peaceful coexistence between religious groups are the criteria that guide this variable.

b – Scale structure:

5. In the territory there are more than 10 groups of different religions and there are no records of conflicts for religious reasons, prevailing respect and mutual tolerance.
4. In the territory there is a predominance of a religious group, but different forms of ecumenical activities are common.

3. In the territory there is a predominance of a religious group, however there is no ecumenical integration.
2. In the territory there are records of sporadic situations of religious intolerance.
1. Violent conflicts among different religious groups are common in the territory.

c – Techniques and/or sources of data collection:

IBGE, Demographic Census. As for the harmonious or conflictual coexistence among groups, it is recommended to research in local communication vehicles, or in public security agencies, or directly with religious leaders of the territory.

Variable H2: Genre:

a – Definition and criteria for constructing the scale:

Gender relations are certainly a fundamental aspect in any discussion about the degree of development of a people. In general terms, the idea of gender concerns the way society builds expectations about what it means to be a man or a woman. However, it transcends the notion of gender binary, male and female, encompassing several other gender identities, such as bisexual and transsexual. Cases of violence, wage differences and discrimination in general, motivated by gender differences, are indicative of how equal or unequal gender relations are in a society. In this sense, the guiding criterion for this variable is gender equality/inequality in a territory, with equality being the ideal to be sought. Among the different possible empirical evidences, priority is given to those that may be generally representative, but which, above all, may be easy to obtain in terms of data at the level of the various territories. Therefore, it was decided to focus on female representation in municipal legislative chambers, imagining that where such representation is more egalitarian, gender relations, in general, are also closer to equality. For this reason, the indicator seeks to ascertain the percentage of men and women in municipal councils.

b – Scale structure:

5. In the territory, vacancies in the local legislature are occupied equally, with 50% men and 50% women.
4. In the territory, vacancies in the local legislature are occupied in a non-parity manner, with 60% men and 40% women.
3. In the territory, vacancies in the local legislature are occupied in a non-parity manner, with 70% men and 30% women.
2. In the territory, vacancies in the local legislature are occupied in a non-parity manner, with 80% men and 20% women.
1. In the territory, vacancies in the local legislature are occupied in a non-parity manner, with more than 80% men and less than 20% women.

c – Techniques and/or sources of data collection:

Municipal Legislative Chambers.

Variable H3: Ethnic-racial groups:

a – Definition and Criteria for constructing the scale:

Ethnic-racial diversity is considered a positive aspect in terms of territorial heritage. Similarly, equality among groups is another positive criterion. Therefore, situations of racism, xenophobia, intolerance and different inequalities among groups are harmful to the activation of this form of heritage. For operational purposes, a distinction is made between whites and non-whites, with non-whites being those groups with which IBGE works, following the self-declaration criterion, except for Asians. That is, it seeks to identify inequalities between whites x blacks, browns and indigenous people, since the latter are the groups historically in greater socioeconomic vulnerability (IBGE, 2000). Such differences are verified in different ways, above all with regard to access to different goods and services essential to well-being, such as access to health, education, housing, work and income, and so on. The exclusion of yellow people is due to the fact that, in terms of indicators of access to the aforementioned goods and services, this group is more similar to whites than to other non-white groups. For the purposes of representing equality/inequality among groups, we choose to analyze monetary income[7].

b – Scale structure:

5. The territory is very diversified in number of ethnic groups, having inhabitants from all five groups considered here and income inequality between whites and non-whites does not exist.
4. The territory is very diversified in number of ethnic groups, having inhabitants from all five groups considered here and the income inequality shows that the income of whites is, at most, 10% above that of non-whites.
3. The territory is diversified in number of ethnic groups, having inhabitants from at least four of the groups considered here, and income inequality shows that the income of whites is 10% to 20% above that of non-whites.
2. The territory is little diversified in terms of ethnic groups, with inhabitants from less than three of the groups considered here, and income inequality shows that the income of whites is 20% to 30% higher than that of non-whites.
1. The territory is not very diversified in terms of ethnic groups, with inhabitants from less than three of the groups considered here, and income inequality shows that the income of whites is more than 30% higher than that of non-whites.

c – Techniques and/or sources of data collection:

Source: IBGE, Demographic Census.

[7] Although diversity is relevant, equality between groups is understood as a superior criterion. Therefore, in case of doubts as to the score that a territory should receive in this variable, the income criterion should take precedence.

CONTEXTUAL ADJUSTMENTS AND AGGREGATION METHOD

Adjustments to the empirical context

It is essential to bring clearly the fact that it is possible that human diversity and the innumerable heterogeneities of territories are greater than that predicted here by the variables presented. In this sense, there will be empirical contexts in which the inclusion or exclusion of variables will be necessary.

For example, one can imagine a territory that is inhabited by indigenous groups, or riverine groups (Horizontal Human Groups) and another territory that is not. In this case, it is necessary to make the necessary adjustments so that the index actually reflects the reality of each territory.

Variables can be excluded from the table form, for different reasons, such as the lack of data, the impossibility of accessing them, or, as the previous example illustrates, due to the peculiarities of some territory in terms of the absence of a certain group or know. In this case, adjustments in the construction of the index will also be necessary.

In operational terms, in case of exclusion of variables, it will be necessary to pay attention only to the "method of agglutination" (presented below) and in case of inclusion of variables, adjustments will be necessary, both in the transformation stage of the variables (creation of the scale) and in the agglutination stage.

It is precisely this possibility of including and excluding variables, with due contextual justification, that makes the index proposed here adjustable to different situations, without losing its theoretical and empirical consistency. This solves the problem inherent to most indices in the sense of not being able to capture the diversity and heterogeneity of different empirical realities. This is a solution similar to Purchasing Power Parity, a measure widely used to compare countries in terms of the purchasing power of their respective populations, taking into account the local currency and the local cost of living[8]. This opens up the possibility of comparisons between territories in terms of their respective territorial heritage, even if they are territories that are quite different from each other, which is certainly a considerable gain for all those interested in the theme of territorial development and highlights the advantages that the Multidimensional Index of Territorial Heritage Activation (IMAP) presents compared to other existing indices.

Method of agglutination and construction of the index

The agglutination method consists of several subsequent steps. It starts with the transposition of the respective scales assigned to each of the variables, inserting the values in Figure 2. Then the averages of each subcomponent (F, I, V and H) are calculated. Subsequently, the subindex is calculated (average of knowledge and average of groups) of each of the two

[8] The OECD presents the following definition of such measure: "PPPs [Purchasing Power Parities] are the rates of currency conversion that equalize the purchasing power of different currencies by eliminating the differences in price levels between countries". Available at: https://www.oecd.org/sdd/purchasingpowerparities-frequentlyasked-questionsfaqs.htm . Accessed on: 09/12/2022.

components and, finally, the general index is arrived at by the simple average of the subindex of each component, as illustrated in Figure 2 (MS + MG / 2).

With this procedure, we have a wealth of information, since we can have an idea of the reality of a territory as a whole, but also of the reality of each component, as well as the respective groups of components. That is, in the Value column (in averages) the "F" value provides information about the reality of the territory in terms of its formal knowledge. The letter "I", in the same column, brings information about informal knowledge. When the sum of both is carried out and the subsequent division by "2", "MS" is obtained, which shows the synthesis of the Knowledge component. The same reasoning is valid for the Human Groups component and its subcomponents, vertical groups and horizontal groups.

Figure 2: Distribution of weights according to components and index calculation.

Components		**Variables**	**Scale**						**AVERAGES**	
		1	2	3	4	5	zero	Equation	Value	
Knowledge	Formal	F1							F1+ F2+ F3 / 3	F =
		F2								
		F3								
	Informal	I1							I1+ I2 / 2	I =
		I2								
	Average knowledge								F+I/2	MS =
Human groups	Vertical	V1							V1+ V2+ V3 / 3	V =
		V2								
		V3								
	Horizontal	H1							H1+ H2+ H3 / 3	H =
		H2								
		H3								
	Average groups								V+ H / 2	MG =
Index that represents the Human and Intellectual Dimension									MS+MG / 2	**IDHI =**

Source: Elaborated by the authors (2023).

If any variable is not relevant to the territory under study, zero is assigned. The same happens in case of absence of data, or impossibility of obtaining them. Thus, such absence will not interfere with the denominator of the component. Regardless of the reason, in case a variable receives 0 (zero), the denominator value of the respective component is adjusted to the concrete number of variables used. The same should be done when the empirical reality of a given territory is more plural than expected here, there is then the possibility of including one or more variables. In this sense, the adjustment of the denominator of the respective subcomponent must also be carried out.

FINAL CONSIDERATIONS

This paper initially sought to systematize the conceptual bases, constitutive and indicative elements of what a group of researchers agreed to call the Human and Intellectual Dimension of Territorial Heritage, within the scope of discussions on the Territorial Approach to Development. More in-depth theoretical discussions were previously made in Mueller *et al.* (2022), whose reading becomes indispensable for a proper understanding of what was proposed here. It should be noted that small modifications were introduced in this text, especially with regard to the indicative elements of the dimension. This was done for practical reasons in order to make it possible to obtain data and simplify the construction of the index itself. Then, this is the central focus of the text, criteria for constructing a scale between 1 and 5 for each of the variables that make up the DHI were discussed. After that, it was shown how to transform the results of such a scale into an index that summarizes the dimension as a whole, which leads to the Index of the Human and Intellectual Dimension of Territorial Heritage (IDHI).

It also demonstrated how researchers can proceed in the face of empirical difficulties that may arise due to the plurality of territorial realities, proceeding with the exclusion or inclusion of variables, without this compromising the consistency of the index. This, on the contrary, increases its consistency, precisely because it is more faithful to different territorial realities. This is what, in our view, constitutes a very positive point in comparison with other already known indexes. This obviously applies to IMPAT as a whole, if the same procedure is adopted for all its dimensions.

The IDHI-PT, on the one hand, is just one of the pieces of information that will constitute the IMPAT, being pleased with the other five dimensions, as evidenced in this work. On the other hand, the index can obviously be seen in isolation from the other dimensions of Territorial Heritage, if this is the interest of the researcher. Furthermore, this index can be seen as the final phase of the methodological proposition presented in Mueller *et al.* (2022), called Progressive Triangulation.

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REFERENCES

DALLABRIDA, V. R.; ROTTA, E.; BÜTTENBENDER, P. L.; DENARDIN, V. F.; ARENHART, L. Categorias conceituais e pressupostos metodológicos convergentes com a abordagem territorial. *Guaju – Revista Brasileira de Desenvolvimento Territorial Sustentável,* v. 7, n. 1, p. 43-80, jan./jun. 2021.

DALLABRIDA, V. R. Patrimônio territorial: abordagens teóricas e indicativos metodológicos para estudos territoriais. *Desenvolvimento em Questão*, Ijuí: Editora Unijuí, v. 18, n. 52, jul./set. 2020.

IBGE. Desigualdades sociais por cor ou raça no Brasil. *In: Estudos e Pesquisas. Informação Demográfica e Socioeconômica,* n. 48, 2. ed. 2000. Disponível em: https://biblioteca.ibge.gov.br/visualizacao/livros/liv101972_informativo.pdf. Acesso em: 22 mar. 2023.

INPI. Instituto Nacional da Propriedade Industrial. Brasília, DF. Disponível em: https://www.gov.br/inpi/pt-br. Acesso em: 19 abr. 2023.

MUELLER, A. A.; MAIA, C. M.; GAZOLLA, M.; SILVA, S. P.; LUTZER, A. V. B.; TABASCO, J. J. P. Abordagem territorial do desenvolvimento e sua dimensão humana e intelectual: uma proposição teórico-metodológica à luz de Amartya Sen e Jhon Thomson. *Revista Brasileira de Gestão e Desenvolvimento Regional*, v. 18, p. 203, 2022.

PLATAFORMA SUCUPIRA. *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior* (Capes). Disponível em: https://sucupira.capes.gov.br/sucupira/. Acesso em 19 abr. 2023.

SEN, A. *The Idea of Justice*. London: Penguin Books, 2010.

SEN, A. *Desenvolvimento como liberdade*. Tradução Laura Teixeira Motta. São Paulo: Companhia das Letras, 2000.

SEN, A. *Inequality Re-examined*. Oxford: Clarendon Press, 1992.

SEN, A. The Standard of living. In The Tanner Lecture on Human Values. Delivered at Stanford University. *In:* SEN, A. *et al. The Standard of Living:* The Tanner Lectures on Human Values. Cambridge: Cambridge University Press, 1987.

SEN, A. Well-Being, Agency and Freedom: The Dewey Lectures. *The Journal of Philosophy*, v. 82, n. 4, p. 169-221, Apr. 1985.

SEN, A.; KLIKSBERG, B. *As pessoas em primeiro lugar:* a ética do desenvolvimento e os problemas do mundo globalizado. Rio de Janeiro: Companhia das Letras, 2010.

STEWART, F. Por qué persisten las desigualdades de grupo? Las trampas de la desigualdad horizontal. *In:* JIMÉNEZ, Félix (ed.). *Teoría económica y desigualdad social.* Exclusión, desigualdad y democracia. Homenaje a Adolfo Figueroa. Lima: Fondo Editorial de la PUC-Peru, 2010. p. 269-298.

STEWART, F.; GRAHAM; B.; LUCA M. *Why Horizontal Inequalities Matter:* Some Implications for Measurement. *Crise Working Paper 19,* University of Oxford, 2005. Disponível em: http://www.crise.ox.ac.uk/pubs/workingpaper19.pdf. Acesso em: 26 out. 2021.