




Heritage Assets: Recognition, Measurement and Disclosure in Museums

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Abstract

Purpose: This study investigates how heritage assets are recognized, measured, and disclosed by museums.

Method: A documentary research was carried out focusing on a quali-quantitative approach. We analyzed financial statements of 42 Australian, 25 New Zealand, and 171 English museums, totaling a sample of 238 entities. Data were analyzed considering the dimensions defined in items of AASB 116, PBE IPSAS 17, and FRS 102 standards.

Results: The results of the documentary analysis revealed the adoption of different practices, either when looking at museums in the same country or when making a comparison between countries. In Australia, museums predominantly capitalize their heritage assets, while in the United Kingdom most museums have adopted the mixed approach or have not recognized these assets. New Zealand, in turn, presents an intermediate scenario, with entities divided between these two possibilities.

Contributions: The study contributes to understanding the limits of the application of the current standards, leading to discussions on the most appropriate approach in the context of the investigated organizations.

Keywords: Heritage assets. Recognition. Measurement. Disclosure.

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Introduction

The definition of criteria for recognition, measurement and disclosure is essential for assets to be properly represented in the financial statements. For Craig et al. (2012, p. 1025), “measuring wealth is a permanent challenge inherent to the accounting profession”, and the greatest difficulty is defining what values should be attributed to the assets that comprise it. When these assets have peculiar attributes, as with heritage assets (HA), this task can be even more complex, since the characteristics of these assets can make their accounting treatment difficult (Biondi & Lapsley, 2014).

In this scenario, both governmental and nonprofit entities are challenged to choose the criteria that allow the proper accounting treatment of these assets, as they need to be accountable to society about the heritage assets that are under their administration. They do so in their financial statements without there being, currently, a consensus on the paths to be followed for their recognition, measurement and disclosure, and this lack of alignment is reported, for example, by Aversano et al. (2020) and De Wolf et al. (2021).

Among scholars on the subject, there are those who defend its recognition in the Balance Sheet (Pallot, 1990; Micallef & Peirson, 1997) and those who believe that this is not possible without distorting the economic and financial situation of the entity that holds these assets. (Mautz, 1988; Carnegie & Wolnizer, 1995; Barton, 2000; Biondi & Lapsley, 2014). Likewise, several measurement bases are analyzed and, in most cases, criticized (Carnegie & Wolnizer, 1995; Porter, 2004; Barton, 2005; Landriani & Pozzoli, 2014; Anessi-Pessina et al., 2020; De Wolf et al., 2021; Biondi et al., 2021). As for the information to be disclosed, both financial and non-financial information disclosure is recommended, although it is still unclear what they would be (Barker, 2006; Wild, 2013; Ouda, 2014; Aversano et al., 2019).

The lack of consensus among academic studies is also perceived in the accounting standards applicable to heritage assets. Examples are the accounting standards of Australia, Canada, the United States, New Zealand and the United Kingdom, indicated by several authors (Wild, 2013; Biondi & Lapsley, 2014; Ouda, 2014; Ellwood & Greenwood, 2016) as the precursors the adoption of the accrual basis in the public sector. Canadian and American standards establish that information related to these assets must be evidenced only in explanatory notes, without presenting monetary values, while Australian, New Zealand and English standards require that these elements be capitalized.

The International Public Sector Accounting Standards Board (IPSASB), responsible for issuing accounting standards applicable to the public sector, also does not have a definitive answer regarding the accounting treatment of heritage assets (Aversano et al., 2020; Biondi et al., 2021). Currently, guidance on accounting for these items is only in IPSAS 17- Property, Plant and Equipment, which allows, but does not require, the recognition of these assets (IPSASB, 2006). By allowing entities to choose which approach to adopt, a variety of different practices can emerge, compromising the comparability of the information disclosed (Aversano et al., 2020; Biondi et al., 2021; Ferri et al., 2021).

In this scenario of uncertainty regarding the applicable accounting procedures, and given that the standards themselves offer flexibility for choices to be made, different procedures can be verified, as revealed by research by West and Carnegie (2010), Adam et al. (2011), Rua and Buch Gómez (2012), Carnegie et al. (2013), Campos et al. (2016), Ellwood and Greenwood (2016) and Ferri et al. (2021), which are among the theoretical-empirical studies identified that address these issues. Additionally, Biondi et al. (2021) indicate that a study carried out by the Organization for Economic Co-operation and Development (OECD) pointed out that heritage assets were reported by only 43% of member governments due to the lack of clear guidelines for accounting treatment and the difficulties involved in measuring these items.

Thus, we perceive a gap in the guidelines in the accounting standards and the way they are implemented by the entities, which leads to the formulation of the following research problem: How are heritage assets recognized, measured and evidenced by museums? In this sense, this study aims to investigate how heritage assets are recognized, measured and evidenced by museums in Australia, New Zealand and the United Kingdom, with the focus of analysis being the financial statements for the period 2015/2016 of these entities.

We chose to investigate museums due to the fact that these organizations have characteristics that define them as natural holders of heritage assets (ICOM, 2018a). The choice of these countries stems from the fact that they are identified in the literature as pioneers in the adoption of accrual accounting in the public sector, providing for norms that require the capitalization of heritage assets (Carnegie & Wolnizer, 1995; Porter, 2004; Landriani & Pozzoli, 2014).). The period of analysis was chosen

because 2016 was the first year in which all the current standards were adopted in the entities of the three investigated countries.

This research is justified by the need to understand what the accounting standards for this topic already provide, as well as the criteria effectively adopted in the entities that are subject to these standards, mainly because the scarce empirical literature revealed an apparent detachment between the standards and practice (West & Carnegie, 2010; Adam et al., 2011; Rua & Buch Gómez, 2012; Carnegie et al., 2013; Campos et al., 2016; Ellwood & Greenwood, 2016; Ferri et al., 2021).

When analyzing the practices that have become widespread despite what the accounting standards provide, the results contribute to the literature by revealing the limits of application of the current standards in the accounting of assets with special characteristics, such as heritage assets. They also have practical implications, insofar as they provide subsidies to standard-setting bodies that can contribute to the definition of guidelines that are more appropriate to the context of the investigated organizations. Finally, the social impact of the research lies in the possibility of generating insights that improve the accountability of entities that hold these goods that are of public interest.

2 Theoretical reference

2.1 Definition and accounting treatment of heritage assets

There is no single legal, formal or accounting definition of heritage assets (Wild, 2013; Biondi & Lapsley, 2014; Aversano et al., 2020; Biondi et al., 2021). According to Adam et al. (2011, p. 107), "it is easier to name these assets than to define them in a conceptual framework or accounting standard, even in a single language". According to Aversano et al. (2020), there is still no widely accepted formal definition, so that the inclusion of a certain asset in the category of heritage asset must consider some criteria such as: (a) the existence of restrictions on its sale; (b) the fact that its value derives from the impossibility of being replaced or reproduced; and (c) its indefinite lifespan.

Accounting agencies have proposed a definition for heritage assets in order to define the accounting scope of their standards (Landriani & Pozzoli, 2014). Among these, we can mention the PBE IPSAS 17 - Property, Plant and Equipment, issued by the External Reporting Board (XBR), in force in New Zealand, which states that the assets described as heritage assets are defined according to their

cultural, environmental and historical significance.

The standard clarifies that the following factors characterize these assets: (a) market values, exclusively, have little chance of fully reflecting the value of these assets; (b) the sale of these assets may be prohibited or at least restricted by legal and/or statutory provisions; (c) these goods are irreplaceable; (d) even if the physical condition deteriorates over time, these assets tend to appreciate in value; (e) the lifespan is difficult to estimate; and (f) normally these assets are not held for their ability to generate cash flows, as legal or social obstacles may restrict their use for this purpose (XBR, 2014).

Within the scope of international standards, the definition of heritage assets is provided for in IPSAS 17- Property, Plant and Equipment issued by the IPSASB which, in its items 9 and 10, brings the same definition already presented for the PBE IPSAS 17 of New Zealand. However, the IPSASB launched, in April 2017, the Consultation Paper - Financial Reporting for Heritage in the Public Sector. In this document, which addresses the recognition and presentation of heritage assets, the preliminary view is that the following characteristics distinguish what they called heritage items from other phenomena: (a) they are maintained indefinitely for the benefit of present and future generations; and (b) its rarity and/or significance in relation to archaeological, architectural, agricultural, artistic, cultural, environmental, historical, natural or scientific aspects justify this maintenance (IPSASB, 2017).

For Biondi and Lapsley (2014), the difficulty in formulating a common definition reveals the challenges faced in providing accounting information on these assets. Buch Gómez and Cabaleiro Casal (2008) state that heritage assets correspond to a category of assets that is among the most complex when it comes to their incorporation into the accounting system. As a result, the literature reveals heterogeneous positions on whether and how this should be done (Mautz, 1988; Pallot, 1990; Carnegie & Wolnizer, 1995; Micallef & Peirson, 1997; Barton, 2000; Aversano & Christiaens, 2014; De Wolf et al., 2021).

Diverse opinions on the im/possibility, (non)obligation and way of accounting for heritage assets mean that several countries have not yet adopted standards that establish the recognition of these assets (Hooper et al., 2005), while Austria, Belgium, Croatia, France, Germany, Ireland, Italy, United Kingdom, among others, have already moved towards its capitalization, according to Anessi-Pessina et al. (2020). For Ellwood and Greenwood (2016), despite the difficulty associated with

the measurement process and, therefore, the recognition of heritage assets, the tendency is that governments and regulatory bodies increasingly require their inclusion in the financial statements.

Among the countries cited in the literature as pioneers in the adoption of accrual accounting in public sector entities, it is observed that expenditure on heritage assets should still be treated as an expense, according to the provisions of the Statement of Federal Financial Accounting Standards 29: Heritage Assets and Stewardship Land, adopted in the United States, and PS 3150 - Tangible Capital Assets, issued by the Public Sector Accounting Board (PSAB) and in force in Canada. In these two countries, information on heritage assets should only be disclosed in explanatory notes, and while SFFAS 29 provides for the disclosure of quantitative information in physical terms, PS 3150 only requires a description of the nature of these assets.

The regulations in force in Australia, New Zealand and the United Kingdom, in turn, require the capitalization of heritage assets. In defining the recognition of these assets, these standards differ from IPSAS 17, which allows, but does not require, the accounting for these elements.

In Australia, the Australian Accounting Standard AASB 116 - Property, Plant and Equipment provides that heritage asset should be recognized as an asset if (i) it is probable that future economic benefits associated with it will flow to the entity; and (ii) the cost can be measured reliably. The PBE IPSAS 17 - Property, Plant and Equipment, New Zealand standard, indicates that recognition as an asset should be carried out if (i) it is probable that future economic benefits or service potential associated with that item will flow to society; and (ii) cost or fair value can be measured reliably. Finally, the English standard, FRS 102 - The Financial Reporting Standard applicable in the UK and Republic of Ireland, indicates that heritage assets must be recognized when information about the cost or value of these assets is available or when such information can be obtained. at a cost that does not exceed the benefits arising from its availability to users of the financial statements.

In general terms, the regulations in force in the different countries this research focuses on are similar in terms of guidelines related to the initial measurement and subsequent measurement of heritage assets accounted for. As for disclosure, AASB 116 does not establish specific rules for the disclosure of heritage assets. The entity shall comply with the definitions applicable to property, plant and equipment. In the case of PBE IPSAS 17, in addition to

the requirements defined for all classes of property, plant and equipment, the entity must present a description of the heritage assets held by it that were not recognized in the financial statements, as well as, when available, estimates of the values of these assets. FRS 102, in turn, has specific requirements for the disclosure of capitalized and non capitalized assets, and requires that heritage assets be disclosed separately from other fixed assets.

Thus, it is possible to affirm that, in the three countries, the norms indicate the possibility of different treatments, since the recognition of heritage assets is not mandatory in some cases, as well as there are several paths for the initial measurement of items acquired in non-commercial transactions and for the subsequent measurement of all assets. Likewise, the information, often of a qualitative and/or non-monetary quantitative nature, to be disclosed in the financial statements may vary.

2.2 Previous studies on the topic

The different opinions on recognition of heritage assets literature are also seen in theoretical-empirical studies.

West and Carnegie (2010) analyzed the annual reports of 36 Australian public universities, from 2002 to 2006, in order to verify how they reported library collections. The research revealed what the authors called a chaotic practice field, as it was found a diversity and subjectivity of accounting practices, as well as sudden and relevant changes in reported values due to changes in accounting treatment. According to the authors, the research results provide empirical support to the arguments of those who oppose the recognition of these non-financial elements in financial reports.

Carnegie et al. (2013) investigated 36 Australian public universities to verify how they accounted for their collections in the annual reports from 2007 to 2011. The authors found signs of improvement, as the entities showed that they were moving towards a harmonization of the procedures used. However, it was still possible to verify the adoption of inconsistent policies that ended up compromising the reports issued.

Adam et al. (2011) investigated the diversity of practices adopted in Germany, Italy and the United Kingdom for the accounting of infrastructure, art and heritage assets in the financial statements of six cities. The authors observed that, in the case of heritage assets, even though the norms issued provided for the recognition of these assets, the cities had the option of partially recognizing them or

recognizing them for notional values. They found that, although the norms of the investigated countries were related, the practices adopted were different. Likewise, diversified practices were observed among cities in the same country.

Rua and Buch Gómez (2012) analyzed the valuation criteria for public domain assets indicated in the accounting standards and the practices adopted by 297 municipalities in Portugal, from 2005 to 2007. The authors observed that the standards allowed the application of different criteria. However, the use of historical cost was still predominant, being the only one adopted in many municipalities.

The study by Campos et al. (2016) sought to identify the practices adopted by two historic cities in Goiás for the recognition, measurement and disclosure of their heritage assets. The analysis indicated that the cities had listed works that met the criteria set out in Accounting Theory to be recognized, but, despite this, no evidence of heritage assets accounted for was found. For the authors, the lack of disclosure may be associated with the fact that there are no rules that clearly specify the accounting treatment to be given to assets of this nature.

Ellwood and Greenwood (2016) investigated the application and effects of heritage asset accounting in two British entities. The authors found that, despite receiving public resources to finance their activities, the two case study organizations did not consider the measurement and disclosure of heritage assets useful or significant, claiming that these assets could not be traded and that the disclosure of information about the values and location of these goods could pique the interest of thieves.

Finally, the study by Ferri et al. (2021) analyzed the financial statements from 1992 to 2019 of 16 large Australian non-profit cultural institutions in order to verify how these entities responded to the paradoxical tensions created by the meeting between the approaches proposed by accounting and by heritage assets experts (curators) to the measurement of collections. According to the authors, it was possible to observe the persistence, over time, of heterogeneous practices. Despite this, the current evolutionary phase (2016/2017–2018/2019), characterized by what the authors call “mutual adjustment”, reveals that entities have managed to minimize the negative impacts arising from the attribution of monetary values to heritage assets.

These results reinforce that there is a scenario of multiple practices, even when the entities are subject to the

same accounting standards. They also show that more comprehensive studies need to be carried out to better understand this heterogeneity.

3 Methodology

This documentary study had Australian, New Zealand and English museums as their population, which hold heritage assets. The sample consisted of museums located in Australia, New Zealand and the United Kingdom, whose financial statements for the period 2015-2016 were available and contained information on heritage assets. In defining the sample, we found that there is no online database that gathers information about museums operating in the world. According to ICOM (2018b), information about museums can be accessed on the websites of associations of different types of museums or countries. Thus, from this query, 3,020 entities were located.

The first stage of sample selection consisted of checking the type of museum, considering its framework based on the typology presented by Ambrose and Paine (2012). However, no private museums were identified. Museums classified as municipal, university and commercial companies were also excluded from the list, since specific accounting statements are not available in these cases, and accounting information is included in the statements of local governments, companies and universities that hold heritage assets. We also excluded government museums whose information on heritage assets was not available in specific financial statements, only in government department reports.

After this verification, an initial sample of 1,430 organizations was obtained that were responsible for the administration of 1,781 museums that were included in the investigated list. Thus, a search was carried out for the financial statements for the period 2015-2016 and for the entities that provided information on heritage assets, capitalized or not. The research took place from the analysis of the websites of museums and of the bodies that are responsible for the registration, regulation and monitoring of charities (non-profit) in each country. As a result, the final research sample consisted of 238 entities, 42 Australian, 25 New Zealand and 171 English.

Data were collected from reading the financial statements and respective explanatory notes, referring to the period 2015-2016, made available by the 238 investigated organizations. As for the accounting treatment of heritage assets, the data were categorized considering the analysis dimensions defined according to the items presented in the AASB 116, PBE IPSAS 17 and FRS 102

standards: (a) heritage assets capitalization approach; (b) initial recognition; (c) subsequent measurement; and (d) additional information evidenced. For the analysis of categorized data, absolute and relative frequencies were determined.

4 Results Analysis

Table 1 shows the approach adopted regarding the capitalization of heritage assets, considering the possibility that these items may be fully or partially recognized or that they may not be accounted for, as AASB 116 and PBE IPSAS 17 provide for that these assets should be recognized only when they can be measured reliably and that FRS 102 establishes that capitalization should occur when information about the cost or value is available or can be obtained at a cost compatible with the benefit generated for users of the financial statements.

Table 1- Approach to capitalizing heritage assets

Approach	Australia		New Zealand		United Kingdom		Total	
	fi	%	fi	%	fi	%	fi	%
Full Capitalization	39	92,9	11	44,0	44	25,7	94	39,5
Partial Capitalization	3	7,1	7	28,0	80	46,8	90	37,8
No Capitalization	-	0,0	7	28,0	47	27,5	54	22,7
Total	42	100,0	25	100,0	171	100,0	238	100,0

Source: Made by the authors

As shown in Table 1, the Australian sample is mainly composed of museums in which heritage assets are fully recognized in the financial statements (92.9%), with only a small portion of museums opting for the mixed approach. In New Zealand and the United Kingdom the behaviors are different, with the choices being distributed among the three possibilities. New Zealand entities prefer the fully capitalized approach (44.0%), while among English museums a mixed approach prevails in which only part of the heritage assets are accounted for (46.8%).

The global analysis of the sample indicates the predominance of museums in which, at least in part, the capitalization of heritage assets is observed, as foreseen in the accounting standards in force in the three investigated countries. It is noted, however, that in only 39.5% there was an option to recognize all assets of this nature, which indicates that in more than half of the sample, heritage assets are not fully present in the financial statements. Therefore, even under rules with aligned guidelines, choices differ between countries and within the same country, with Australia being the only exception.

Among the museums in which there was partial recognition or non-recognition of heritage assets, there are several arguments in place. First, in 56.3% of the museums in

the sample, the decision was not to recognize heritage assets due to the lack of readily available information and the cost involved in obtaining it, which is considered incompatible with the benefits generated for managers, curators, the public in general and other users of the financial statements. Second, there are justifications related to the impossibility of measuring these assets reliably using available measurement techniques (43.1%). In addition to these reasons, other arguments are included in the explanatory notes. The size and diversity of collections are pointed out by museums as obstacles to the recognition of heritage assets (9.7%). Another 8.3% say they do not recognize heritage assets because they understand that the attribution of financial values to items of a non-financial nature distorts their meaning, since monetary values are not able to capture their cultural relevance. Another part of the sample claims that the inherent characteristics of heritage assets prevent their capitalization. In the understanding of these museums, as they are priceless items (6.3%) and of a cultural and inalienable nature (5.6%), evaluations that make sense to the users of the financial statements cannot be obtained. Thus, the justifications are in line with the arguments presented by authors such as Mautz (1988), Carnegie and Wolnizer (1995), Barton (2000) and Biondi and Lapsley (2014) and identified in the research by Ellwood and Greenwood (2016). On the other hand, they differ from the prevailing perception in the Comment Letters to the Consultation Paper analyzed by De Wolf et al. (2021) who indicate that 84% of respondents agree with the IPSASB's position that the special characteristics of heritage assets should not prevent their recognition as an asset.

Regarding the heritage assets accounted for and that were acquired through purchase, the three standards studied indicate that in the initial recognition the measurement must be made by cost. There are, therefore, no possibilities of choice involved in this procedure. The analysis of the financial statements revealed, as a result, few variations regarding the accounting of heritage assets purchased by the analyzed museums. In 30.4% of the investigated museums, information was not provided on the criteria adopted in the initial recognition of heritage assets. For the rest of the sample, the main measurement base was cost, following what the applicable accounting standards indicate. We found, however, that, mainly in Australia and the United Kingdom, it is common that conditions are established that must be met for the recognition of these assets, and only heritage assets with a value above the defined limit and/or considered relevant are capitalized. In addition to recognizing purchased heritage assets, the entities studied can account for items acquired in non-commercial transactions, mainly donations. In this case,

AASB 116, PBE IPSAS 17 and FRS 102 establish that such assets must be recognized by fair value. In entities whose heritage assets were obtained in non-commercial transactions (57.6% of the sample), the adoption of fair value was verified, as provided for by accounting standards.

As for the determination of fair value, entities can resort to diversified techniques and information, and the measurement bases most cited in museums that indicated recognizing heritage assets by fair value derive, in the case of Australian museums, from professional judgment, with the attributed values defined by external evaluators (22.6%) and by curators or managers of the entity itself (9.7%). The same is seen in English museums, in which case there are also reports that market values for identical or similar items are used as a measurement basis (22.1%). In addition to these main bases, the entities also indicated that they use other sources to measure the recognized items, such as the cost of the item to the donor or the value attributed by it (4.7%); assessments carried out for tax purposes (4.7%); values defined for asset insurance purposes (2.8%); depreciated replacement cost (1.9%); and estimated reconstruction cost (0.9%). Among the museums in which heritage assets obtained in non-commercial transactions (20.7%) are not recognized, the justifications presented are that the assets cannot be measured reliably and/or, because they are donated, the values of the assets are not available and cannot be obtained at a reasonable cost.

It appears that, although most of the sample that partially or fully capitalizes heritage assets indicates measuring assets by fair value when they are donated, heterogeneity characterizes the measurement process, since the ways of determining this value are diversified.

At this point, it is worth mentioning that the literature on the subject also does not present a consensus regarding the measurement criteria to be adopted. According to Biondi et al. (2021), all methods have strengths and weaknesses that need to be considered. Barton (2005), for example, criticizes the use of fair value, arguing that, in view of the characteristics of heritage assets, there is no active market for this asset and that the market price, although identifiable, is not capable of reflecting its social benefits as a result of the transfer to a private buyer. As for professional judgment, both Carnegie and Wolnizer (1995) and Landriani and Pozzoli (2014) indicate as the main weakness the fact that personal preferences can influence established values.

As for the choices involving the subsequent measurement of heritage assets, according to the AASB 116, PBE IPSAS 17 and FRS 102 standards, entities can choose between the cost or revaluation model, as shown in Table 2.

Table 2 - Subsequent measurement of heritage assets

Model	Australia		New Zealand		United Kingdom		Total	
	fi	%	fi	%	fi	%	fi	%
Cost Model	1	2,4	11	61,1	108	87,1	120	65,2
Reassessment Model	41	97,6	7	38,9	12	9,7	60	32,6
Both	0	0,0	0	0,0	4	3,2	4	2,2
Total	42	100,0	18	100,0	124	100,0	184	100,0

Source: Made by the authors.

It is noted that the practices adopted for the subsequent measurement of heritage assets are heterogeneous. In 65.2% of the museums, the cost model is adopted; in 32.6% the option is for reassessment and in 2.2% of the museums in the sample both models are used. While in Australia, museums that adopt the revaluation model predominate (97.6%), in New Zealand and the United Kingdom, the choice for the cost model predominates, representing 61.1% and 87.1% of the sample in these countries, respectively. The results converge with the findings of Rua and Buch Gómez (2012), who verified the predominance of historical cost as a criterion for measuring public domain assets in Portuguese municipalities.

Despite its prevalence, the use of historical cost is criticized in the literature, since: historical cost can lose its relevance over time; it is difficult to assign historical cost to collections; and historical cost is not able to reflect the benefits of assets with long or indefinite useful lives (Carnegie & Wolnizer, 1995; Barton, 2005; Micallef & Peirson, 1997; Porter, 2004).

The choice of the reassessment model by the Australian entities may be related to the fact that 83.3% of the entities in the sample are subject to other regulations that provide for the accounting treatment of heritage assets and that present guidelines or requirements regarding the adoption of fair value after initial recognition, even though this is not a requirement of AASB 116.

As for the way in which the reassessment is carried out, we noticed in the explanatory notes that the levels of detail provided by the studied entities are heterogeneous, as well as the techniques used and information (inputs) used to determine the fair value of the revalued heritage assets are diversified. In addition to the frequency of carrying out the evaluations, the entities basically differ in three aspects: (a) the basis used for the revaluation; (b)

involvement of independent professionals; and (c) scope. particular.

Regarding the measurement base used, we found that the accounting standards studied do not determine a specific way to measure the fair value of heritage assets. The bases used in the researched museums are distributed as indicated in Table 3, and more than one base can be adopted in the same museum.

Table 3 - Basis for reassessment of heritage assets

Basis for reassessment	Australia (N=41)		New Zealand (N=7)		United Kingdom (N=16)		Total	
	(N=64)	f%	fi	f%	fi	f%	fi	f%
Market value for identical or similar items	30	73,2%	5	71,4%	7	43,8%	42	65,6%
Professional judgment	21	51,2%	4	57,1%	3	18,8%	28	43,8%
Depreciated replacement cost	11	26,8%	1	14,3%	0	0,0%	12	18,8%
Replacement cost	6	14,6%	1	14,3%	1	6,3%	8	12,5%
Cost to collect again	3	7,3%	0	0,0%	0	0,0%	3	4,7%
Net present value of revenue	1	2,4%	0	0,0%	0	0,0%	1	1,6%

Source: Made by the authors.

It is noted in Table 3 that 65.6% of museums indicated that they use market values for identical or similar items in determining fair value, and such values, as stated in the explanatory notes of the Cultural Facilities Corporation, can be obtained from several sources, such as auction records, gallery sales, catalogs and research with artists and/or their agents. Additionally, 43.8% of the entities adopt evaluations that depend on professional judgment, that is, information generated from evaluations by independent professionals (external) and curators and museum administrators (internal) is used.

The depreciated replacement cost, in turn, is adopted by 18.8% of museums. Furthermore, considering that some assets of this nature do not suffer depreciation, in 12.5% of the sample the basis for the revaluation is the replacement cost. In this case, the Museum of New Zealand Te Papa Tongarewa, for example, indicated that archaeological items are valued based on the estimated replacement cost of archaeological excavations. In addition, 4.7% of museums, all of them Australian, reported using the recollection cost. Finally, only one entity (Australian National Maritime Museum) indicated using the revenue approach to determine fair value, using the net present value of revenue.

At this point, it is worth mentioning that, according to Anessi-Pessina et al. (2020), the cost of replacement or replication can be considered inappropriate for heritage assets, since its value does not derive from the material with which it was built, but from the fact that it belongs to a certain historical period or was created by one artist in

particular. It is noted that the scenario is heterogeneous, with different combinations being observed when evaluating museums in the same country or when comparing the practices adopted between countries. This diversity can be explained by the different nature of the heritage assets held by these entities, which may require the use of different techniques to measure fair value.

The practices that involve the reassessment of heritage assets also differ in terms of the involvement of independent professionals external to the organizations. In this regard, the practices adopted in Australian and New Zealand museums are similar, insofar as the participation of external and independent professionals in the process of reassessing the heritage assets of museums in Australia prevails in 95.1% of cases, and in museums in New Zealand in 100.0% of the entities. This, however, is not seen in English museums, as 43.8% of the investigated entities indicated that the revaluation of assets is carried out by professionals internal to the entity, whether administrators or curators of the museums.

In Australia, this choice may be related to the fact that, even if accounting standards do not require the involvement of independent professionals, the other regulations to which museums are subject guide or require that reassessments be conducted by external professionals. In New Zealand, on the other hand, museums are not justified in opting for external evaluators.

Although the accounting standards do not provide guidance on the scope of revaluations, that is, they do not address the possibility that sampling techniques are used in the entities, the analysis of the explanatory notes revealed that this is a practice present in part of the investigated museums, mainly in the cases where collections are extensive. We found that, mainly in Australian museums (36.6%), the sampling technique is adopted by the entities, so that the museums of this country differ from the others in this aspect, making use of techniques that lead to the reassessment of heritage assets samples that ultimately give rise to the value assigned to the collection as a whole.

In these cases, as a rule, a minimum value is assigned to each item, and items below this value are evaluated by an average value, established through sampling techniques. The mean values of the sample items, in turn, are multiplied by the size of the population in order to define the total value of the collection for each category, as indicated, for example, in the explanatory notes of the

Library Council of New South Wales.

Regarding the use of sampling techniques, Ferri et al. (2021) report that in December 2018 the Council of Australasian Museums Directors (CAMD) released a framework of general guidelines for the industry that suggests that random sampling be used to measure organized but not yet cataloged assets, thus reinforcing , the use of this technique.

Regardless of the model adopted, cost or reassessment, heritage assets may be subject to depreciation or impairment losses. With regard to depreciation, it is worth mentioning that the three current regulations indicate that heritage assets can be depreciated. However, Australia's AASB 116 mentions that when the useful lives of these assets are not limited, these items are not subject to depreciation. The English standard also states that items with an indefinite lifespan do not need to be depreciated. In view of these possibilities, Table 4 presents the practices adopted in the investigated museums.

Table 4 - Heritage assets depreciation

Depreciation Approach	Australia		New Zealand		United Kingdom		Total	
	fi	f%	fi	f%	fi	f%	fi	f%
Depreciates	15	35,7	2	11,1	21	16,9	38	20,7
Does not depreciate	27	64,3	16	88,9	103	83,1	146	79,3
Total	42	100,0	18	100,0	124	100,0	184	100,0

Source: Made by the authors.

Among the museums that make up the sample, those who chose not to depreciate heritage assets predominate (79.3%), with this being the choice predominantly observed in all countries, that is, the practices of Australia, New Zealand and the United Kingdom are close in this regard. However, differences can be verified mainly in Australia, because in this country, while 64.3% of the surveyed entities do not depreciate heritage assets, a portion of 35.7% chooses to recognize depreciation. This scenario is different in New Zealand and the United Kingdom, where 88.9% and 83.1% of the sample, respectively, do not depreciate heritage assets, therefore a more similar behavior.

Considering the total sample, it appears that among those entities that depreciate their heritage assets and provide information about the method used, there seems to be a consensus regarding the adoption of the Linear Method (60.5%). Decisions regarding the lifespan of these assets, on the other hand, are diversified, with different periods being established for the depreciation of heritage assets. While in New Zealand and the United Kingdom

the stipulated time frames range from 5 to 250 years, in Australia the lifespan attributed to heritage assets can reach 5000 years.

In order for assets not to be useful in examples of impaired assets, several as examples of assets are depreciated, with 3 indicating that assets are not used in depreciated samples, with 3% indicating that assets are useful in non-sampled depreciated, 7.5% indicate that the items do not have maintenance and preservation depreciation, and 3.4% justify the non-recognition of depreciation due to the unlimited useful life of the assets (3.4%).

Other arguments were also presented by museums, which are different from what the norms establish. Such justifications are related to the fact that (a) the depreciation value is not material, both because the assets have a very long useful life (15.1%) and because of the residual value (5.5%); (b) when assets are accounted for at cost, the residual value tends to exceed the book value, making no sense to depreciate them (7.5%); (c) given their nature, heritage assets do not suffer depreciation, increasing in value over time (2.7%); and (d) depreciation cannot be measured reliably due to the inherent characteristics of heritage assets that make it difficult to define both the useful life and the residual value to be considered (2.7%).

The analysis revealed, therefore, discrepancies regarding the point of view of the investigated museums on the depreciation of these assets, since, while some entities attribute long lifespans to heritage assets (eg, 600, 825 and 5000 years), others consider that the depreciation cannot be carried out or does not make sense precisely because of this, in line with the specific characteristics of these assets present in the literature (Biondi & Lapsley, 2014; Anessi-Pessina et al., 2020).

As with depreciation, the subsequent measurement may consider impairment losses, and, in general terms, AASB 116, PBE IPSAS 17 and FRS 102 establish that reviews must be carried out to verify impairment. Table 5 shows how this aspect is treated in the investigated entities.

Table 5 - Heritage assets impairment

Impairment verification review	Australia		New Zealand		United Kingdom		Total	
	fi	f%	fi	f%	fi	f%	fi	f%
Regularly	30	71,4	7	38,9	26	21,0	63	34,2
When events indicate that the book value may not be recoverable	2	4,8	2	11,1	5	4,0	9	4,9
Not made	5	11,9	0	0,0	1	0,8	6	3,3
Not evidenced	5	11,9	9	50,0	92	74,2	106	57,6
Total	42	100,0	18	100,0	124	100,0	184	100,0

Source: Made by the authors.

According to Table 5, there is a trend towards homogenization of practices related to the verification of impairment in the analyzed entities, whether when considering museums in a given country or when considering the sample as a whole. Among those that provided information, heritage assets are reviewed for impairment on a regular basis (34.2%) or when events or changes in circumstances indicate that the carrying amount may not be recoverable (4.9%). In 3.3% of the sample, the review for the verification of impairment should not be carried out, since these assets are not impaired, as they are held in perpetuity, or because the impairment loss is considered unlikely for non-profit entities and without cash-generating units.

In the analyzed period, only four English entities, one Australian and one New Zealand had recognized impairment losses/reversals. In two cases the circumstances were not indicated and, in the other cases, the justifications for recognizing impairment losses were as follows: (a) physical deterioration (United Kingdom); (b) shortened lifespan (UK); (c) seizure of heritage and cultural assets (Australia); and (d) severe damage suffered due to earthquakes that affected the region (New Zealand). In view of the information presented and the percentage of disclosure for this category, it is possible to affirm that this is the aspect that receives less attention in museums when considering the information provided in the financial statements and explanatory notes, mainly in New Zealand and the United Kingdom.

As heritage assets have specific attributes that several authors consider not measurable in financial terms (Carnegie & Wolnizer, 1995; West & Carnegie, 2010; Biondi & Lapsley, 2014; Ellwood & Greenwood, 2016; Anessi-Pessina et al., 2020; Biondi et al., 2021), it is expected that entities, especially those that do not capitalize or partially capitalize these assets, present, in addition to the accounting information itself, additional information that allows understanding what Carnegie and Wolnizer (1996) define as the cultural, hereditary, scientific and educational values of the collections.

Regarding this aspect, it was observed that the disclosure of additional information by Australian museums in the explanatory notes is low, regardless of the capitalization approach. Thus, the organizations that make up the sample in this country can be characterized by their preference for the presentation of information of an accounting nature. In a way, the same can be seen in New Zealand, as in this country, with one exception, additional information is only made available by museums that do not capitalize on heritage assets. Less disclosure in these two countries may be related to the fact that both AASB 116 and PBE IPSAS 17 do not provide detailed guidance on the disclosure

of additional information on heritage assets, unlike the standard adopted in the United Kingdom (FRS 102).

Regarding the type of information disclosed, in Australia and the United Kingdom, additional information regarding the detailing/description of the heritage assets that make up the museum collections predominates, and it is important to note that this information may vary in extent, with entities presenting items of summarized and others providing detailed accounts, including the way in which the assets are maintained and preserved. In New Zealand, the additional information that is most frequently included in the notes relates to amounts for insurance purposes. This is because the standard guides that for heritage assets not capitalized, estimates of the value of these assets must be presented.

In addition to the detailing/description of assets, 26.3% of English museums present non-monetary quantitative information regarding the size of the collections. This result can be explained by the fact that the FRS 102 standard indicates that information about the nature and scale of heritage assets must be evidenced. It is also noted that a number of UK museums present monetary information to provide an approximate assessment of the heritage assets in their possession. Such information may be related to the values defined for insurance purposes (8.2%), as well as the historical cost or values obtained from internal and external evaluations (2.9%).

English institutions, mainly large ones, present information on the amount of capitalized heritage assets compared to the volume of unrecognized assets of this nature. This is the case, for example, of the Natural History Museum, which indicates that the total number of capitalized items in the collection represents less than 1% of the museum's total collection, comprising approximately 80 million items. Based on statements of this nature, it is possible to assess how far museums are from fully capitalizing on heritage assets. Such results are an indication that the adoption of the rules regarding the recognition of these assets did not qualify the information made available in the financial statements. That is, when considering the objective of presenting the value of the assets managed by these entities in favor of society, it is verified that there are still gaps to be filled.

At the same time, in two museums, the complexity involved in the process of full recognition of the collections was informed by disclosing the estimated time for cataloging the items, a procedure that precedes their accounting. At Sir John Soane's Museum, for example, it has been estimated that if a person with appropriate knowledge could devote all their time to locating, manipulating and making each item in the collection available for appraisal, that task alone would take more than 12 years.

The additional information presented, therefore, indicates that, for the most part, disclosures are linked to requirements set out in applicable accounting standards, so that, when there are no specific requirements, disclosure does not take place. Voluntary disclosure, when carried out, seems to be associated with an attempt by museums to contextualize the choices regarding the approach adopted for capitalization (or not) of heritage assets. Thus, although authors defend the disclosure of qualitative and quantitative information capable of complementing or even replacing monetary accounting information, which is subjective and limited (Carnegie & Wolnizer, 1996; Barker, 2006; West & Carnegie, 2010; Aversano & Christiaens, 2014; Ouda, 2014), the survey results indicate that this is not the practice in the museums investigated in the financial statements and their respective explanatory notes.

5 Final Considerations

The survey results revealed that in Australia, there is a predominance of museums that chose full recognition of heritage assets, adopting the reassessment model for subsequent measurement and evidencing a small amount of additional information in the explanatory notes. In the United Kingdom, there is a prevalence of museums that partially recognized or did not recognize their heritage assets, with a greater amount of information complementary to accounting data. In New Zealand, an intermediate scenario was found, with half of museums fully capitalizing on their assets, while the other half did not recognize them or took the mixed approach. In addition, in this country, the predominance of the cost model was verified, as in the United Kingdom, and a low volume of additional information disclosed, as in Australia.

This way we see that, although the norms that guide the accounting of heritage assets are, in essence, similar, the practices adopted in museums were presented in a diversified way in each of the investigated countries. Likewise, there were several accounting treatments observed in museums in the same country. This is possible because, considering what the standards establish, these entities can make choices that end up leading to the adoption of different methods and, thus, result in different information made available to the users of the financial statements.

In response to the research problem, it can be said that Australian museums, it seems, reveal the criticisms present in the literature, presented in this study, about the problems that may arise from the recognition of heritage assets.

Despite the limitations indicated for the measurement bases used, these entities used methods that allowed not only the initial recognition of these assets, but also their subsequent measurement at fair value. On the other hand, the New Zealand and, especially, the English reality challenge the IPSASB's initial understanding, reported in its Consultation Paper, that the specific characteristics of heritage assets should not prevent them from being treated in the same way as other assets.

In general, in view of the findings of this study, it was possible to verify that the accounting treatment of heritage assets is a controversial topic not only in the literature, but also in the entities that hold these assets. This is because, despite the understanding of regulatory bodies explained in the accounting standards already issued, which provide for the accounting of these assets, in New Zealand and English museums such guidelines are not fully followed. Australian museums, on the other hand, have resorted to sometimes subjective and arbitrary criteria, such as sampling evaluation, in order to comply with such regulations, which can harm the quality of the information disclosed.

This disconnection between what is prescribed and practice may be an indication that Accounting, by proposing the same treatment used for other assets for heritage assets, has not yet managed to provide definitive answers to the problem at hand. As indicated by West and Carnegie (2010), there are pragmatic limits to the application of conventional accounting techniques and concepts in this specific context.

The findings of this research may reveal opportunities for future studies on heritage assets, involving the investigation of the practices adopted for the capitalization of these assets in other countries, whose norms also require the accounting of these assets; the analysis of the techniques and procedures adopted for the measurement of heritage assets in museums that adopt the revaluation model, since the results related to Australian museums, mainly, revealed the development of a diverse range of methodologies that deserve greater attention; the investigation of the main motivations of museum managers (trustees) for the full capitalization of heritage assets and disclosure of these assets through financial statements; and the examination of additional information voluntarily disclosed, not only in the financial statements, but also in the Annual Reports, as these may reveal, in the perception of these entities, the information of priority disclosure for the stakeholders.

It is noteworthy that whatever the research method adopted,

it will always have limitations. As it is a documentary research, whose collected data were tabulated according to the established categories, this study presents as its main limitation possible framing errors resulting from subjective classification, or from incomplete information provided by the investigated museums. Thus, we recommend that the study be replicated, considering a broader period, and in other research samples.

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