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Unrecognized Assets Created by Public Sector Investments in Health and Social Services

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Abstract

Purpose: This paper analyzes two types of potential intangible public sector assets for consideration by public sector accounting boards. Government investments in health and social programs can create two potential intangible assets: the intangible infrastructure used to deliver the health or social program, and the enhanced human capital embodied in the recipients of program services. Because neither of these assets is currently recognized in a government's year-end financial statements or broader General Purpose Financial Reports (GPFR), these reports may under-represent the government's true fiscal and service capacity.

Approach: The paper uses an international accounting standards framework to analyze: whether investments in health and social programs create intangible assets that meet the definition of an asset as set out by International Public Sector Accounting Standards (IPSAS), whether they are assets of the government, and whether they are recognizable for the purpose of financial reporting.

Findings: The intangible infrastructure asset created to facilitate the delivery of health and social programs would often qualify as a recognizable asset of the government. However, the enhanced recipient human capital asset created through the delivery of health and social programs would, in most instances, not qualify as a recognizable asset of the government, though there likely would be benefits from reporting on it through GPFRs or other mechanisms.

Originality: This paper makes two contributions. First, it identifies a previously overlooked intangible asset — the infrastructure created to facilitate the delivery of health and social programs. Second, it presents an argument regarding why, even when it fails to generate a recognizable intangible asset to government, it would be valuable for government to report such investments in supplementary statements.

Key Words: Public Sector Accounting, Intangible Assets, Infrastructure, Human Capital

Introduction

The COVID-19 pandemic has revealed cracks in public health and social system infrastructure in many countries following years of underinvestment by governments, resulting among other things in inadequate testing and tracing capabilities, inadequate case-reporting protocols; and outdated systems of financial support for out-of-work citizens, especially those participating in the modern gig economy. While some of these challenges derive from unique, unpredictable features of COVID-19, many reflect a long-standing failure by governments to invest adequately in modernizing intangible public infrastructure—organizational systems, processes, protocols—required to deliver services effectively.

This paper analyzes two potential public sector intangible assets for consideration by public sector accounting boards. Government investments in health, social, community, educational, and related programs (hereafter, “health and social” services) create two potential intangible assets—intangible program infrastructure and intangible human capital embodied in the *recipients* of program services (hereafter “enhanced recipient human capital”). Are these recognizable assets and how should they be reported by governments? To answer these questions, the paper undertakes an analysis based on The International Public Sector Accounting Standards Board’s (IPSASB) Conceptual Framework (2014), and International Public Sector Accounting Standards (IPSAS), specifically, IPSAS 31, *Intangible Assets*, and IPSAS 1, *Presentation of Financial Statements*, as guides to relevant theory and practice.

The analysis concludes that intangible program infrastructure often would qualify as a recognizable asset of the government under current international accounting standards, while the human capital embodied in program recipients would not likely qualify as a recognizable asset under current accounting standards but deserves further exploration and consideration for reporting within broader reporting and accountability frameworks. Because government financial reports currently do not recognize either of these intangibles as assets, governments under-report their available resources and misstate their expenses. This under-reporting has at least three consequences: (a) it inaccurately represents the fiscal and service capacity of government; (b) it reduces the accountability of governments particularly with respect to the management and maintenance of these assets; and (c) it inhibits transparency because significant aspects of government investments remain hidden.

Background: The Relationship Among Internally Generated Assets, Goodwill, Program Infrastructure and Recipient Human Capital

The IPSASB provides authoritative guidance for the accounting treatment of intangible assets through IPSAS 31, *Intangible Assets*, which is based on IAS38 that sets standards for intangible assets for private-sector organizations. The IPSASB Conceptual Framework (2014) establishes the fundamental concepts applied in the development of such standards. The Conceptual

Framework states that the objective of General Purpose Financial Reports (GPFR) is to provide users with information useful for accountability and decision-making purposes (IPSASB 2014, para. 2.1), and it identifies the primary users of GPFR as parliamentarians, legislators, and citizens (IPSASB 2014, para 2.3-2.6). GPFRs fail this objective, however, to the extent that they omit information on aspects of government operations and assets that affect citizens' everyday lives, such as intangible assets created through investments in health and social services.

The "hidden" assets of interest in this paper, intangible program infrastructure and the enhanced recipient human capital, are best described as internally generated intangible assets. Internally generated intangible assets are widely acknowledged to pose challenges for identification, measurement and recognition (Brännström et al., 2009; Colley and Volkan, 1988; International Public Sector Accounting Standards Board (IPSASB), 2012, IPSAS 31; Powell, 2003), but omitting them from financial reports reduces the relevance, reliability and comparability of those reports (Canibano, L., Garcia-Ayuso, M., & Sanchez, 2000; CIDP, 2016; Eckstein, 2004; Hartley and Robey, 2005; Jenkins and Upton, 2001; McCracken et al., 2018; Petkov, 2011; Regnan, 2017; Sollosy et al., 2016).

Debates about internally generated intangible assets arise primarily in the context of goodwill (Colley and Volkan, 1988; Courtis, 1983; Giuliani and Brännström, 2011). Traditionally, goodwill was viewed as the excess value associated with a company's good reputation (Courtis, 1983; Gynther, 1969). With the growth of information-based industries, however, goodwill became defined as the difference between a firm's market value and the book value of all its identifiable tangible and intangible assets (Colley and Volkan, 1988), often referred to as residual goodwill (Brännström et al., 2009; Giuliani and Brännström, 2011) or hidden assets (Colley and Volkan, 1988; Lev et al., 2009). Residual goodwill converts from an internally generated intangible asset to an externally acquired intangible asset upon the sale of a firm, which sets a market value. Accounting standards make a distinction between internally generated and externally acquired intangible assets because the costs of internally generated assets often cannot be ". . . distinguished from the costs of developing the entity's operations as a whole" (2012, para. IPSAB, IPSAS 31.62), precluding accurate identification and measurement, and hence recognition. But the sale of a firm converts an internally generated asset into an identifiable externally validated asset because the sale reveals the difference between the market value and the value of all identifiable assets. While a widely accepted distinction, acceptance is not universal as some argue that internally generated and externally acquired intangible assets are conceptually the same and that treating them differently creates other distortions (Bloom, 2009; Jenkins and Upton, 2001).

Whether internally generated or externally acquired, the composition of goodwill often remains unclear, which has led some to characterize it as a black box (Giuliani and Brännström, 2011;

Power, 2001), one that academics, accounting professionals and managers have been trying to pry open for decades so the components can be explicitly measured and managed (Gowthorpe, 2009; Power, 2001). Goodwill is thought to comprise, for instance, a firm's customer lists, brand names, and knowledge and know-how (Colley and Volkan, 1988; Käpylä et al., 2012). Knowledge-based intangibles within goodwill such as employee human capital, structural capital and relational capital, referred to collectively as intellectual capital (IC), have become increasingly recognized as drivers of business success and economic growth (Canibano, L., Garcia-Ayuso, M., & Sanchez, 2000; Hervas-Oliver and Dalmau-Porta, 2007; Jenkins and Upton, 2001; Labra and Sánchez, 2013; McCracken et al., 2018; Sharma and Dharni, 2016). IC has been examined in the context of both broad business systems and large economic systems (Hervas-Oliver and Dalmau-Porta, 2007; Käpylä et al., 2012; Labra and Sánchez, 2013; Stähle and Bounfour, 2008). In the public sector, macro-focused IC system models include multi-dimensional accumulative determinants of growth such as human capital of the population as measured by proxies like educational attainment, investments in research and development (R&D), and computers per capita. (Hervas-Oliver and Dalmau-Porta, 2007; Käpylä et al., 2012). While the composition of goodwill (and IC), and associated measurement and identification challenges, varies by context (Courtis, 1983; Eugénia et al., 2018; Käpylä et al., 2012), a shared point of emphasis across this large literature on goodwill and IC is the desirability of identifying and separating where possible specific components perceived to be drivers of value. Because the focus has been on private sector entities, the value is predominantly assessed through private sector metrics such as profit (e.g., Penman, 2009). Such metrics are not appropriate for the public sector, for which value aligns more closely with social outcomes.

While the concept of goodwill has questionable meaning in the public sector context on which we focus, the potential internally generated intangible assets of interest—program infrastructure and recipient enhanced human capital—correspond to components that would in other contexts be included in goodwill. For the same reason that it is desirable to separately identify components of goodwill in private sector organizations, there is benefit in separating and identifying these potential assets of government. It is important to know whether the government has expended resources to develop an asset and whether the government has used, managed and accounted for this resource appropriately, and the value generated by these resources. Hence, the importance of analyzing whether under public-sector accounting standards they constitute recognizable, internally generated intangible assets of government.

The treatment of these potential assets is particularly important under accrual accounting, now more widely used in the public sector. Accrual accounting in the public sector is intended to improve government performance by providing more complete financial reports (Buhr, 2012; García, 2014) that better reflect a government's true financial position (Tiron-Tudor, 2017). Additionally, accrual accounting methods are argued to facilitate transparency and accountability (Christine, 1998; Guthrie, 1998), promote better decision-making (Chan, 2003;

Likierman, 2000), improve governments' asset management (Blöndal, 2004; House of Commons Canada, 2006; Robinson, 2009; U.S. Government Accountability Office, 2000), encourage long-term investment (House of Commons Canada, 2006; U.S. Government Accountability Office, 2000), and signal that government has invested scarce resources into enduring assets that will benefit society many years into the future. These considerations apply equally to tangible assets, externally acquired intangible assets, and internally generated intangible assets. However, when considering operational assets that generate services, public-sector accrual accounting has focused on the identification and valuation of tangible assets (Martí, 2013; U.S. Government Accountability Office, 2000; Wynne, 2008) and, to a lesser extent, externally acquired intangible assets (Jenkins and Upton, 2001) To date, it has failed to fully incorporate internally generated intangible assets, especially as they relate to health and social investments. As a result, the perceived advantages associated with accrual accounting have accrued disproportionately to these tangible operational assets.

This differential treatment of tangible and intangible public sector assets can distort decision-making (Arvidsson, 2011; Kelly, 2007) by disadvantaging health and social service programs that produce internally generated intangible assets. Other things being equal, tangible physical assets recognized on the government's balance sheet and amortized over many years will be preferred over investments that must be expensed in a single year. Further, politicians and the public generally view government consumption expenditures less favourably than investment expenditures, so the current treatment of health and social service investments as the equivalent to consumption expenditures further disadvantages them. Explicitly identifying and labelling such health and social services expenditures as investments that generate productive assets of the government, frames them more favourably by correctly identifying these assets as valuable and enduring resources of government. The asymmetric treatment of tangible and intangible assets can also induce strategic behaviour by governments such as a shift in the timing of projects in order to record the costs in government accounts in ways that advantage them politically. Government nearing the end of a term in office, for example, may opt for investments in large physical infrastructure that push recorded costs into the future.

The motivation for this work is three-fold: (1) improve the quality of government financial reports by more comprehensively reporting the operational assets of government—tangible and intangible, externally generated and internally generated; (2) support better government decision-making, transparency and accountability through more complete information; and (3) further discussions regarding government reporting of investment outcomes, such as recipient enhanced human capital. As a first step towards those goals, the specific objective of this paper is to assess the case for the recognition of intangible infrastructure used for the delivery of health and social programs and enhanced human capital embodied in the recipients of these programs.

The Analytic Approach

The analysis adopts a largely deductive approach that draws heavily on International Public Accounting Standards (IPSAS) to answer the following questions: (1) does investment in health and social services create intangible resources; (2) are these resources assets?; (3) if yes, are the assets created through health and social services investments assets of the government?; and (4), if yes to (1) – (3), do the assets comply with the recognition criteria of the International Public Sector Accounting Standards (IPSAS) for intangible assets?

IPSAS are used as the analytical framework because of their global importance. IPSAS are high quality, highly regarded accounting standards adopted by over half the countries now using accrual reporting methods (IFAC and CIPFA, 2018). IPSAS also underpin the recommended PSAS of the EU (European Commission, 2019) and align with the public sector accrual accounting practices in United States, Australia, New Zealand and the United Kingdom.

The analysis draws on IPSAS authorities IPSAS 1, *Presentation of Financial Statements* and IPSAS 31, *Intangible Assets* to evaluate whether these potential intangible assets align with current generally accepted practice. The analysis also looks to the Conceptual Framework to enrich and support discussion in areas beyond the scope of the standards such as recommended practices for non-financial information. Although the Conceptual Framework lacks authority, Bergmann et al., (2019) suggest that the Conceptual Framework can serve as a general starting point to inform new theoretical developments. Following the lead of other researchers whose work reaches beyond current practices to explore novel solutions to the complex issue of accounting for intangible assets (Bloom, 2009; Lev and Zarowin, 1999; Mindermann et al., 2012), we also consider established approaches to measurement problems from areas outside accounting that may provide useful options for addressing measurement challenges in this context.

IPSAS 1, *Presentation of Financial Statements*, defines an asset as a “resource controlled by the entity as a result of past events and from which future economic benefits or service potential are expected to flow to the entity” (IPSAB, 2006, IPSAS 1.7). Three critical features of an asset are: (1) the resource is controlled by the entity; (2) the asset arises as a result of a past event; and (3) there is a flow of future economic benefits. However, because intangible assets lack a physical substance, creating greater uncertainty as to whether an asset does indeed exist, IPSAS 31 requires intangible assets to meet additional recognition criteria: (1) the asset must be identifiable—it can be separated from the entity and sold or transferred, or it arises from contractual or other legal rights (IPSASB, 2012, IPSAS 31.19) and (2) the cost or fair value of the asset must be reliably measured (IPSASB 2012 IPSAS 31.28).

Nature of the Potential Assets Created by Investments in Health and Social Services

The two potential assets that are the focus of this paper are: (a) intangible program infrastructure for service delivery, and (b) enhanced human capital created and embodied in the recipients of the health and social services program.

Health and social services programs normally require both tangible and intangible infrastructure before any services can be delivered. This analysis focuses solely on intangible elements of the infrastructure. The intangible infrastructure can include a combination of elements related to program design such as service protocols and processes, networks, external consultation fees, licenses, and legal fees and development costs that in aggregate forms a distinct program or service delivery model. This intangible infrastructure, in its aggregate, is necessary for the delivery of the services and, as such, is an economic resource that enables the delivery of program services over many years into the future.

The enhanced human capital comprises new skills, knowledge, health or other capabilities that a recipient gains as a result of receiving or participating in a health or social program. To emphasize, this is enhanced human capital embodied in a program recipient; it does not refer to enhanced human capital of government employees. Such government investment in the human capital of its employees is not within the scope of this paper. However, to set this analysis in context, it does consider the large literature on the human capital of organizations (public and private).

Figure 1 presents a simplified depiction of the flow of benefits from these two potential assets. The benefit to the government of the infrastructure is the future service potential, which enables the delivery of services, which in turn enhances program recipients' human capital. The direct benefits to the government from the enhanced human capital are future cost savings for government services that the recipient otherwise would have required, and/or higher future taxes from recipients whose work productivity increases. Benefits also flow to society more generally but are less important to this analysis.

Does Intangible Program Infrastructure Constitute an Asset?

IPSAS describes an essential characteristic of government assets as generating "future economic benefits or service potential" (IPSASB 2006 IPSAS 1.11), and further notes that assets "provide a means for entities to achieve their objectives." Assets used to deliver goods and services in accordance with an entity's objectives, but which do not directly generate net cash inflows embody service potential (IPSASB 2006, IPSAS 1.11). Health and social services program infrastructure creates future service potential that enables a government to meet its objective of addressing the health and social needs of its citizens, thereby fulfilling two of the three requirements of the IPSAS definition of an asset: the infrastructure provides a future flow of

benefits (the service potential), and the event (investment in the infrastructure) has already occurred. The third critical feature of an asset is control of the benefits by the entity.

Ownership constitutes legal rights over a resource and is perhaps the most common form of control (IPSASB 2012 IPSAS 31.21-24). When the government invests in and develops infrastructure to deliver health and social programs, it owns the infrastructure and, because the government can restrict access to this infrastructure through legal and/or other means, the government has control over the resource and the future service potential. Therefore, the intangible health and social service infrastructure meets all three criteria for an asset as defined by IPSAS 1.7 and the Conceptual Framework: the infrastructure is a resource controlled by the government as a result of a past event for which there is a flow of “future economic benefits or service potential.”

Is the Intangible Infrastructure a Recognizable Asset?

Due to their intangible nature, IPSAS 31 requires intangible assets to meet the additional criteria of identifiability and reliable measurement.

One condition under which an intangible asset is identifiable is transferability. Although the assessment of transferability would be specific to each program, program infrastructure is in principle transferable. A government agency that has developed a distinctive program delivery or service model could in principle license or sell the model to obtain a financial return. The government is not likely to do this given its objectives, but just as a government can in principle sell a highway, a government can in principle license and sell the right to use its service delivery models. In such cases, the infrastructure asset would meet the recognition criterion of being separably identifiable. Potentially, uncertainty around identification could be reduced by demonstrating that the asset is market ready; but the same could be said of all government assets, tangible or intangible, many of which would never actually be sold.

One method through which infrastructure asset can be reliably measured is the historical cost method. Historical cost accounting for assets is a generally accepted accounting practice for public sector assets (IPSAB, 2014, Conceptual Framework 7.13). While a determination of the precise allowable costs are beyond the scope of this paper, broadly speaking these would encompass development costs associated with the IPSAS guidance on “Development Phase” for internally generated assets (IPSAB, 2012, IPSAS 31.55-62) or already allowable cost identified under the section “Costs of Internally Generated Intangible Assets” (IPSAB, 2012, IPSAS 31.63-65). All associated research costs must be expensed in accordance with the standards (IPSAB, 2012, IPSAS 31.52).

Conclusion: Recognizable Public Sector Infrastructure Assets

Based on the analysis above, government-created intangible program infrastructure for health and social service programs would often constitute a public sector asset that is recognizable. The specific determination would vary by program, but the program infrastructure asset is in principle identifiable and can be reliably measured.

It should be noted that whether a government's health and social investment creates a public sector asset in the form of program infrastructure also depends importantly on how the program is delivered. Consider two common program delivery models. Government can fund and deliver a program through the public sector, in which case the government owns the program infrastructure and, following the above analysis, such infrastructure would constitute a public sector asset provided all the criteria are met. Alternatively, government could fund a program but contract with a private provider to deliver the services. Depending on the nature of the contract, the government may no longer have a claim to the infrastructure asset. The funding would create new program infrastructure and the associated service potential, but the infrastructure would be in the hands of the private contractor and the government might lack sufficient control of the program infrastructure for it to be a recognizable asset of the government. The determination of control depends crucially on the nature of the contractual arrangement. If the government has funded the infrastructure development and has contractual rights to the infrastructure, it could be argued that the infrastructure is a shared asset of the government and the private contractor. International accounting standards recognize that in principle multiple parties may have individual rights over the same asset (CPA 2015a, para 21; IPSASB 2018 IPSAS 37.23). Hence, even some public-private contracting arrangements may create a recognizable shared asset.

Does Enhanced Recipient Human Capital Constitute an Asset?

No national or international accounting standard (Canadian Professional Accountants of Canada (CPA), 2015b; International Accounting Standards Board (IASB), 2004; International Public Sector Accounting Standards Board (IPSASB), 2012) currently recognize human capital assets for the purpose of financial reporting. This exclusion of human capital is based on analyses of the human capital of an entity's employees in the context of employee training or an entity's human capital stock more generally. The concept of recipient human capital has not been considered in previous debates; therefore, the proceeding analysis is a reconsideration of this exclusion in this new context.

Human capital can be described as a person's accumulated stock of physical, emotional and intellectual abilities, including knowledge and skills (Becker, 1992), which contributes to the production of goods and services with tangible value: "The human capital approach considers

how the productivity of people in market and non-market situations is changed by investments” (Becker, 1992, p. 39).

Government investment in the human capital of its citizens provides recipients with greater opportunities to participate fully in society. The government’s primary objective is the wellbeing of its citizens and society more generally. Benefits that accrue directly to the government are secondary.

Government investment in the human capital of its citizens creates three potential streams of benefit associated with the recipients, the government and society (see Figure 1). The benefits for program recipients include improved quality of life, health and wellbeing, and both market (e.g., labour market) and non-market productivity. The benefits for government include reduced future service costs for health care, social services, special educational needs, criminal justice, and other affected programs, as well as increased tax revenue if recipients work more or are more productive in the labour market. The benefits for society more generally include those that accrue to the recipient’s family, which may include a reduced caregiving burden that can again translate into increased labour market activity that generates tax revenue for government as well, and benefits to other citizens in the form of safer more inclusive neighbourhoods, lowered risk of contracting communicable disease or illness, or caring externalities [1] derived from citizens’ knowledge that individuals in need have access to appropriate services without unreasonable financial burden.

While it is unequivocal that the human capital developed through health and social investments is an asset of the program recipients, it is equivocal whether it is also a shared asset of the government. From the perspective of the government, enhanced human capital would often satisfy two of the three criteria of an asset as defined by IPSAS 1.7: enhanced human capital creates a future stream of benefits for the government in the form of decreased future service costs and future tax revenue (*ceteris paribus*), and this stream of benefits results from a past event— the investment in program delivery.

Less certain, however, is whether enhanced human capital would satisfy the criterion of government control. As noted, debate regarding human capital assets has primarily focused on the context of an entity’s employees (Brás and Rodrigues, 2007; CIDP, 2016; Higson, 2016; McCracken et al., 2018; Mindermann et al., 2012; Sollosy et al., 2016) and in this context it is generally agreed that there is “. . . insufficient control over the future economic benefits . . .” (IPSASB, 2012, IPSAS 31.20).. For example, a firm that invests in the human capital of its employees cannot prevent these employees from leaving to work elsewhere (Sollosy et al., 2016), though some argue that these concerns can be mitigated through contractual agreements or other means (Mindermann et al. (2012) Brás and Rodrigues (2007).

Further challenges arise in regard to the recognition of human capital. For example, measurement problems arise because there is often no active skills market by which to value employee skills; employees are usually directly and fully compensated for their skills through wages; and the excess value an employee brings to an organization is often the result of team interaction (Higson, 2016). The core identifiability problem stems from the fact that the human capital is embodied in the individual and as such cannot be separated from the individual. An analogous problem of control arises when considering the human capital of program recipients, but we argue that alternative solutions are available. Program recipients can leave the jurisdiction of the investing government, taking with them their enhanced human capital and the future benefits to government. The definition of an asset, however, explicitly refers to *expected* benefits: “. . . future economic benefits *expected* to be obtained.” For a program with a large number of recipients, the statistical Law of Large Numbers becomes relevant, enabling the government to estimate the expected value of government benefits accurately and reliably. While not an accepted accounting practice, measurement based on this Law of Large Numbers is exploited in other sectors to estimate expected values under uncertainty. In the case of insurance, an insurer does not know which specific individuals in its risk pool will file a claim, but with a sufficiently large risk pool it can very accurately predict the number of policyholders who will file a claim and the expected value of those claims. Indeed, the entire insurance industry rests on this ability. Analogously, while the government cannot predict which specific program recipients will move away from its jurisdiction, if a program has a large number of recipients, government can predict with reasonable certainty the number of recipients that will leave its jurisdiction, and can therefore predict the *expected* benefits adjusted for such migration. Therefore, the requirement of control could be satisfied at the program level.

Another challenge to establishing control is that program recipients’ enhanced human capital has multiple beneficiaries to whom benefits flow—the government, the individual recipient, and society more generally. However, as mentioned previously, international accounting standards recognize that in principle multiple parties may have individual rights over the same asset (CPA 2015a, para 21; IPSASB 2018 IPSAS 37.23). Furthermore, establishing control does not require that an entity has legal ownership of the asset or even legally enforceable claims to the asset (IPSAB, 2014 Conceptual Framework BC5.9-.BC5.14). The crucial issue is whether the “...entity has the power to obtain the future economic benefits or service potential flowing from the underlying resource and to restrict the access of others to those benefits...” (IPSAB, 2012, IPSAS 31.21). In this case, the government has the power to restrict access to its stream of benefits—future cost savings for government-provided goods and services and future tax revenue—and therefore exercises control over those benefits.

Is Enhanced Recipient Human Capital a Recognizable Asset?

The identifiability criterion normally requires that an intangible asset be either separable from the entity such that it can be sold or transferred, or that it arises from contractual or other legal rights. However, some argue that identifiability and separability can be satisfied through the concept of “measurement separability.” Introduced in the early 1990s, measurement separability holds that, “. . . if we can measure the intangible, then the question of whether or not we can identify the asset is pre-empted” (Napier and Power, 1992, p. 87). Measurement separability has been (and continues to be) debated. Detractors argue that an asset must first be identified to be measured, otherwise one cannot be sure of what is being measured (El-Tawy and Tollington, 2010). However, drawing on the accounting treatment of goodwill, others argue that measurement separability is a useful accounting concept (Napier and Power, 1992). Goodwill becomes measurable (and is recognized) when the organization is sold because through the market exchange its value becomes verifiable (Petkov, 2011). Measurement separability argues that the same reasoning can apply in situations in which it is possible to measure the value of the intangible asset through other means. Enhanced human capital developed through government health and social investments is arguably one such case. Such human capital can be measured using the annual cost of delivering the program. These costs are distinct and easily measurable, and historical costs represent a standard way to value assets according to IPSAS.

It can also be argued that enhanced human capital is identifiable based on contractual or other legal rights. An asset need not be separable if it arises from contractual or other rights [IPSAS 31.19(b)]. Although the government does not have legal rights over the asset per se, the government unequivocally has rights to a stream of benefits—the future cost savings and future tax revenue.

Conclusion: Recognizable Enhanced Human Capital Public Sector Assets

Based on the preceding analysis, it can be argued that, in some instances, recipient enhanced human capital developed through investments in health and social services programs would satisfy the requirements of an asset as defined by IPSAS. The government would have sufficient control of the future stream of benefits that arise from a past event — investment in the program services. Further, the enhanced human capital asset would be a recognizable asset of the government because it is identifiable—in that it can be separably and reliably measured using the historical cost method.

Discussion

The preceding analysis leads to the conclusion that intangible program infrastructure developed to deliver health and social service programs would often be a recognizable government asset. In contrast, while enhanced human capital of program recipients may in some cases qualify as a recognizable asset, in most cases it likely would not and, further, the

argument for recognition rests in part on the acceptance of methods not currently part of accounting practice. Regardless, for both potential intangible assets, better reporting may be appropriate as part of government performance assessment. The Conceptual Framework acknowledges that reporting on information such as this may be necessary for government “to discharge its obligation to be accountable” (IPSASB 2014, para. 2.22-2.24). Better reporting of investments in program infrastructure and the human capital of citizens can improve government performance, accountability, and transparency by providing insight into whether governments are using scarce resources efficiently and effectively to create outcomes that lead to improved wellbeing (IPSASB 2014, para. 2.7). This information cannot be captured by financial reports alone.

Although some advocate for the disclosure of all identifiable intangible assets (Jenkins and Upton, 2001; Petkov, 2011), accounting standards state that consideration must be given to whether the benefits of financial reporting justifies the associated costs (IPSAB, 2014, Conceptual Framework 3.35). The program infrastructure costs occur upfront over a brief period, making them relatively easy to measure. These costs, however, generally constitute a small share of the total costs of creating and operating a health and social service program which, other things being equal, does not support capitalization. But other considerations suggest that the overall non-financial benefits may be substantial. Such health and social programs are becoming an increasing share of public sector activity and the infrastructure created for their delivery is central to achieving government objectives, leading to growing support for more comprehensive accounting of this form of infrastructure within these agencies (Jones et al., 2012). Integrating the intangible infrastructure asset created by health and social programs into government financial reporting can help fill an information gap. Failure to report such financial effects can have important consequences. A previous lack of reliable and consistent financial and non-financial reporting of public sector tangible infrastructure assets is believed to have contributed to underinvestment in new infrastructure and mismanagement of current infrastructure (Jones et al., 2012). A similar lack of reporting for intangible assets created through health and social investment may contribute to underinvestment in this context as well (Asselin and Speer, 2019; Laroche et al., 1999; Riddell, 2008; The Canadian Chamber of Commerce, 2013; Trades Union Congress, 2018; Trust for America’s Health, 2019; Voluntary Organisations Disability Group, 2019; Whitaker, 2010). More importantly, documenting such intangibles makes the invisible visible, which would improve government transparency and accountability to citizens.

Recognition of the infrastructure and the disclosure of recipient enhanced human capital would likely have other direct and indirect benefits for government that should be considered. Recognition can improve asset management. In the case of tangible assets, for example, the adoption of accrual accounting methods has facilitated the identification and valuation of current tangible assets and the disposal of underutilized ones (House of Commons Canada,

2006; Martí, 2013; U.S. Government Accountability Office, 2000; Wynne, 2008). Another direct benefit, and an objective of GPFR noted in the Conceptual Framework, arises within the budgeting and decision-making processes. Both recognition and disclosure would encourage individual departments to strengthen their business case for social investments because a full accounting of the costs and benefits would be required to maintain the continuity between the budget and financial reports. A demand for strengthened business cases would increase demand for rigorous evidence regarding a program's expected effectiveness, including information about when and for whom the costs are incurred and benefits realized. In addition to any aid to decision-making, this could improve accountability by providing a more explicit statement of a program's objectives and expected outcomes, establishing a benchmark for future performance assessment.

Recording these assets in the GPFR would make more explicit the investment nature of these expenditures. This would change budget and decision-making dialogue for such programs from one of operational consumption expenditures to one of investment, which is a more positive (and appropriate) view of such expenditures, especially if the full stream of benefits is well documented and publicly accessible. Lastly, as noted above, evidence-based documentation of expected performance would enable better public resource management and government accountability. One could clearly identify when program performance deviates substantially from expectations, supporting either modification or termination of the program. The United Kingdom, for example, has emphasized that such performance-focused evaluation is a critical component of its approach to evidence-based policy (HM Treasury, 2011, 2018a, 2018b). The evidence-based approach gives governments the tools to manage programs and resources more effectively, consistent with objectives articulated in the Conceptual Framework (IPSASB 2014 ,para. 2.3), and gives citizens the information needed to hold governments accountable.

The full set of benefits that follow from recognition or disclosure of assets created through investment in health and social programs—benefits that accrue to government, society, and users of government financial reports—provides a compelling case for improved reporting of them even when such assets fail to meet all the criteria for recognition. This can be without any substantial change to current generally accounting practices. The PSASB Conceptual Framework and, IPSAS 1, *Presentation of Financial Statement*, acknowledges that financial statements may not be able to meet all relevant objectives so, “Supplementary information, including non-financial statements, may be reported alongside the financial statements to provide a more comprehensive picture of the entity's activities during the period” (IPSAB, 2006 IPSAS 1.18). Indeed, by describing a broader set of information for inclusion in GPFR, the Conceptual Framework is clear that financial statements are just one part of financial reporting (IPSASB 2014 Conceptual Framework, Ch. 8).

It is notable that the private sector increasingly relies on supplementary information to capture the intangible assets they view as drivers of success but which cannot be recognized in financial statements (Canibano, L., Garcia-Ayuso, M., & Sanchez, 2000; Jenkins and Upton, 2001; McCracken et al., 2018; Sharma and Dharni, 2016). The International Integrated Reporting Council (IIRC)—a global coalition of regulators, investors, standard setters, and accounting professionals—has developed a framework for such reporting that can be used in combination with or alongside a company’s financial reports (The International Integrated Reporting Council, 2013). The IIRC framework can also be used in some public sector contexts but again this is a framework originally designed to address private sector concerns and as such may not make it well-suited for a public sector context. The voluntary nature of the framework has also been criticized for leaving too much discretion in the hands of managers (Flower, 2015). Elsewhere, the United Kingdom amended the Companies Act to facilitate greater disclosure of intangibles like human capital assets (McCracken et al., 2018) and in December 2018, the International Organization of Standards (ISO) tabled the first International Standards aimed at addressing the contribution of human capital (Naden, 2019).

Governments increasingly appreciate the link between what gets measured, reported, and prioritized. In 2019, for example, New Zealand introduced its first ever wellbeing budget, a budget that aligns policy initiatives with their four pillars of capital: natural (environmental), human, social and financial (New Zealand. The Treasury, 2019) with the intent to account for this capital in the year end report. Also in 2019, the United Kingdom’s All-Party Parliamentary Group on Wellbeing Economics released its report on wellbeing, stating that “wellbeing serves as a valuable and pragmatic framing for making policy decisions” (All-Party Parliamentary Group on Wellbeing Economics (APPG), 2019). And, Canada tabled its first-ever Gender Report which weighted policy initiatives announced in the budget in terms of gender equity and other metrics of an inclusive society (Canada, 2019). Governments introducing these new metrics into their budgeting process will also require guidance on reporting their progress in year-end reports in ways consistent with characteristics of GPFs expressed in the Conceptual Framework: relevance, faithful representation, understandability, timeliness, comparability and verifiability (IPSASB International Public Sector Accounting Standards Board (IPSASB), 2014, para. 3.2). Without standardized authoritative guidance, this will not be achievable. Drawing on lessons from the private sector, companies have been strategic when reporting nonfinancial information by, for instance, favouring the reporting of positive information such as intangible assets while omitting less favourable elements such as intangible liabilities (Flower, 2015; Giuliani and Brännström, 2011; Gowthorpe, 2009). One can assume that governments are likely to engage in similar strategic behaviors particularly if they are politically advantaged by doing so. Therefore, reporting governments’ intangible assets like enhanced human capital in sections of GPF that are governed by RPGs that are not authoritative might be a good place to start, but if these recommendations do not become more authoritative over time then reporting of such assets would remain essentially irrelevant.

The analysis presented herein, of course, reflects some important limitations. Gowthorpe (2009) provides a general critique for research similar to this analysis—a failure to fully take into account potential risks and liabilities because the subjective nature of IC makes it prone to manipulation (Gowthorpe, 2009; Power, 2001). One such risk is managing earnings — inflating the value of an asset upward. In the context of an infrastructure asset, such inflation might happen by including research costs and perhaps other administrative costs that should be expensed.

Enhanced human capital should most likely be reported as non-financial information and as such would be covered by non-authoritative Recommended Practice Guidelines (RPG). The lack of a generally accepted and standardized accounting practice for measuring such human capital means that reporting of this information may be largely qualitative, resulting in a lack of faithfulness, verifiability and compatibility—characteristics a GPFR should possess (IPSASB 2014, para 3.2). Future research should explore the applicability of accepted and standardized methods for measuring intangible outputs such as those used in cost-benefit analysis and other forms of program evaluation. While these approaches can be costly, government should be conducting program evaluation regardless so it may just be a matter of repurposing already available information or resources. The cost of doing nothing is also high.

Other research should include the systematic investigation into whether the reporting of intangible assets—like enhanced human capital—that are an indicator of government performance, should be included in the year-end financial report or as a stand-alone performance report. Reporting this information alongside financial reports may elevate the importance of such information. However, it may also discourage those who would have otherwise read the performance information because of the perceived complexity of the financial information or sheer volume of information reported.

In summary, government investments have shifted from predominately tangible infrastructure (e.g., transportation networks) to a broad range of health and social services for which a primary goal is enhanced human capital. Currently, there is not a standardized way to account for this activity so that users of financial and related reports know whether the objectives of these investments are being met. There is a lack of transparency and accountability in this regard. A government's record with respect to its investment in health and social services, and hence development of society's human capital, is one metric for evaluating its performance. Failure to disclose this in financial reports or associated documents inhibits citizens' or other stakeholders' ability to assess government performance. Disclosure of supplementary information regarding intangible assets created through investments in health and social services would (1) enhance accountability and transparency; (2) encourage governments to strengthen the evidentiary requirements for these investments during budget decision-making

and after program implementation; (3) discourage government from terminating initiatives that have clear, proven and documented societal benefit and encourage government to terminate those that do not; and (4) encourage better government communication of the expected costs and benefits of health and social investment.

The recognition of public sector intangible infrastructure assets is likely to be met with some resistance and controversy. Many of today's generally accepted accounting practices, however, were highly debated at the time of adoption—concepts like depreciation of assets, impairment of goodwill, definition and recognition of assets and even the development of an accounting standard's conceptual framework (Brief, 1966; Canibano, L., Garcia-Ayuso, M., & Sanchez, 2000; García, 2014; Jones, 1992; Skinner, 2008; Williams, 2003). Countries that have adopted elements of International Accounting Standards (IAS) or IPSAS like Australia, New Zealand and the United Kingdom already recognize some public sector intangible assets, but no accounting standards, public or private, recognize internally generated intangible assets such as the program infrastructure asset or require the disclosure of internally generated assets like the enhanced human capital embodied in program recipients. In some countries, such as Canada, the PSAB does not allow for recognition of any type of intangible asset (CPA 2015b) making the way forward in such settings even more challenging.

Conclusion

The intangible infrastructure developed to facilitate the delivery of health and social service programs would often qualify as a recognizable government asset. The exclusion of this infrastructure from government financial statements distorts the value of government assets and under-represents a government's true fiscal and service capacity rendering government financial statements less relevant, reliable and transparent. The enhanced human capital embodied in program recipients would less often meet the requirements of a recognizable asset, but users of government financial reports would benefit from the disclosure of this information in the supplemental non-financial information of year-end financial reports. Both actions would improve government accountability and transparency and the quality of their reports.

Endnotes

[1] A caring externality arises when one person's well-being is affected by other peoples' health and well-being, or access to needed services, because that person cares about such matters

(Culyer, 1976). Such persons are thought, for instance, to be widely present in the health sector (Hurley, 2000; Hurley and Mentzakis, 2013).

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