

MEASURING SOCIAL CONSEQUENCES OF NON-PROFIT INSTITUTION ACTIVITIES: *A Research Note*

S. Wojciech Sokolowski
Johns Hopkins University
wojtek.sokolowski@gmail.com



WORKING PAPERS

The Johns Hopkins Comparative Nonprofit Sector Project

Lester M. Salamon, Director

MEASURING SOCIAL CONSEQUENCES OF NON-PROFIT INSTITUTION ACTIVITIES: A RESEARCH NOTE

by

S. Wojciech Sokolowski
Johns Hopkins University

Working Paper Number 50

February 2014

Measuring Social Consequences of Non-Profit Institution Activities: A Research Note

S. Wojciech Sokolowski
Johns Hopkins University
Contact information: wojtek.sokolowski@gmail.com

ABSTRACT

This paper proposes a model of a standardized measurement of social benefits created by NPI activities for the purpose of macro-economic analysis. The proposed model draws from the well-established in measurement methodology concepts: the program logic model and the supply and use and input/output tables used in the System of National Accounts. The model is based on standard definitions of NPI central products (material output) and social beneficiaries of those products (outcomes), and allocates quantitative shares of those products to different types of beneficiaries. Seven material output/outcome matrices for the industries in which NPIs tend to concentrate are proposed: education, health care, social assistance, housing construction and services, community development, culture, arts and recreation and membership organizations. Each matrix allocates material output to different outcomes for the entire industry, and separately for NPIs in that industry, which allows comparing NPIs against industry wide benchmarks. The paper also proposes a model for measuring broader social impacts that includes direct and consequential benefits as well as savings in social spending.

Key words: Nonprofit output, outcome, impact, measurement, SNA

Measuring Social Consequences of Non-Profit Institution Activities: A Research Note

A. Introduction

Measuring broadly defined social consequences nonprofit institution (NPI) activities occupies a central place in the performance management of these institutions. Since these institutions receive considerable public support in the form of tax exemptions, grants, donations and volunteer input, there is a legitimate public demand to know what difference these organizations make in society. Whereas the contribution of for-profit businesses to economy and society is measured, for the most part, by the monetary value of their products, nonprofits often provide goods or services at significantly reduced prices or for no charge at all. Therefore, their financial transactions are likely to underestimate the actual contribution these organizations make to society. Yet, the policy makers, the donors and the general public want to know what benefits NPIs contribute to the health, education, welfare, sense of satisfaction and general wellbeing of the population, and whether these contributions warrant the public support these organizations receive.

To meet this public need to know, numerous experimental approaches to measuring the social effects of organizational activities, not necessarily limited to those of NPIs, have been proposed by a wide array of research and consulting firms around the world (Board of Governors, 2011; Thornley and Dailey, 2010; Olsen and Galimidi, 2008). An important driving force behind these efforts is the 2002 World Summit on Sustainable Development initiative to define measurable indicators of sustainable development (United Nations, 2007). A group of prominent social scientists and statisticians in the US developed a series of recommendations to incorporate social outcome measures to the System of National Accounts (SNA) (Abraham and Mackie, 2005).

Unfortunately, measuring social benefits of nonprofit activity is not easy. Those benefits are difficult to define, and no common understanding of what those benefits are or ought to be exists. Nonprofits tend to concentrate in human service fields providing assistance to people in need: people without adequate income, victims of abuse or neglect, the chronically ill, people with mental disorder, victims of natural disasters, refugees and the like. While the impulse to help the people in need is seldom questioned, the results that this help is supposed to achieve are less clear. While the policy makers, donors and general public would like to see lasting solutions to social problems and an increase in general wellbeing of a society, the management and professional staff involved in service delivery perceive such lofty goals as utterly unrealistic and instead tend to focus on those aspects of their activities that they can directly control.

Measuring the outcomes and benefits of nonprofit activities can also be challenging due to the lack of agreed upon measurement standards. Unlike for-profit businesses whose output is measured by a common metric – currency units – nonprofit activities often involve monetary transactions only in a limited, if any, extent. As a result, a wide array of alternative, often subjective measures are being used that may help the management to gauge the progress toward achieving program objectives, but are of little help in answering a more pertinent to policy concerns question “How much have organizations actually contributed to society?”

This paper offers a proposal to standardize the measurement of social benefits created by NPI activities for the purpose of macro-economic analysis. This proposal draws from the well-established in measurement methodology concepts: the program logic model developed, among others, by the Kellogg Foundation and the supply and use tables used in the SNA (United Nations, 2009, ch. 14). The model

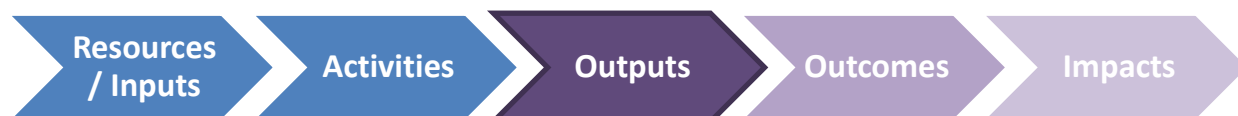
proposed here provides standard definitions of NPI central products and beneficiaries of those products, and allocates shares of those products to different types of beneficiaries in a manner similar to the allocation of supply to different uses in the SNA supply and use tables (or input / output tables). The model also distinguishes between short and long term benefits and direct and consequential benefits. While this model does not capture the full range of social benefits by NPIs, it can provide a standard metric for measuring main social benefits allowing cross sector and cross-national comparisons.

B. Conceptual model

The measurement model proposed here is based on the concept of program logic model, widely used by managers and evaluators to assess the effectiveness of programs run by organizations. The program logic model provides a conceptual framework for defining different elements of a program and placing them in the context of a purpose-oriented rational action that encompasses the goals to be achieved, the process leading to their achievement, and the resources used in the process.

The logic model used in this exercise has been developed by the Kellogg Foundation (2001) for evaluating nonprofit organizations and their programs. It consists of five elements depicted in Figure 1 below.

Figure 1. Elements of Program Logic Model



The first element, Resources and Inputs, identifies human and material resources employed to execute a program. The second element, Activities, describes what the program does to achieve its objectives. The last three elements, in turn, describe three different goals or consequence of the program. Outputs denote the volume of goods produced or clients served by the program. Outcomes identify the benefits accrued, or expected to be accrued, by people as a direct result of program activities, such as improvements in health, education, job skills, social situation etc. within a relatively short reference period (typically one year or less). Finally, Impacts denote direct and indirect (consequential) benefits accrued to clients served by their program and the community in which they live.

Of particular interests to the proposed measurement model are the three last elements denoting goals or consequences of NPI activities (Figure 2.) I propose to apply this conceptual scheme to macro-economic aggregates of institutional units, both nonprofit and for-profit. To avoid confusion with the terminology used in macroeconomics and the SNA, where the term “output” denotes the total monetary value of goods or services sold in the market, the term “*material output*” is used in this paper to denote the actual quantity of the delivered goods or services within a defined reference period.

Figure 2. Classification of consequences on NPI activities

Type of consequence	What is being measured?	What is the social scope of measurement?	What is the time frame of measurement?
Material output	Quantity of goods or services produced	Producers (institutional units)	Short term (1 year or less) or long term
Outcome	Benefits of goods or services produced	People directly receiving goods or services produced	Short term (1 year or less)
Impact	Benefits of goods or services produced	Communities directly and indirectly benefiting from goods or services produced	Long term (over 1 year)

Material output of institutional units depends on the field of economic activity in which these units operate. It is defined as the total volume of the central product of an institutional units, or group of units, generated within a defined reference period (typically one year). Material output of NPIs is measured by assessing the quantities of their central products delivered to recipients. If the central product of an NPI, or group of NPIs, involves manufacturing or distribution of material goods (e.g. a building, food, clothing, etc.) the measure of material output represents the quantity of these goods produced within the reference period (e.g. their total count, weight, volume, area or other appropriate physical measure). If the central product of NPIs involves services (e.g. education, health care, social assistance, entertainment, etc.), the measure of material output represents the number of individuals who have received those services within the reference period. If the central products of NPIs involve both distribution of goods and service delivery (e.g. housing, utilities, retail trade or catering), the measure of material output may include either the quantity of goods or the number of people served (or both), depending on the feasibility of obtaining the relevant information.

Outcome is defined as a benefit or utility that persons receiving material output of activity of institutional units obtain from that output within a relatively short reference period (no longer than one year). These measures are, therefore, derivatives of the material output measures. In this paper, outcomes are measured by the observed manifestations of benefits ordinarily expected to result from material output in the population of recipients of that output. For example, if the material output of education is measured by the number of students graduating from educational institutions in a given year, the outcome is measured by the number of graduates who used their education in manners normally expected, for example, obtaining a job consistent with the acquired qualifications or enrolling in an educational institution of a higher level.

Of course, effects of material outputs on persons receiving those outputs are mediated by a wide range of factors, and therefore vary considerably. For example the same amount and type of schooling may have very different effects on different people, depending on their abilities, motivation, socio-economic background, opportunities, or life events. But these intervening factors notwithstanding, it is reasonable to assume that there is a connection between the output and outcome, e.g. graduating from high schools and enrolling in college or getting a job that does not require higher educational credentials. Therefore, the proposed measure captures to what degree a typically expected outcome has been achieved in a population receiving a service provided by a particular type of institution.

To measure outcomes of various NPI activities, this paper draws on a conceptual model of supply and use and input – output tables, commonly used in the SNA (United Nations, 2009, ch. 14 and 28). These tables are rectangular matrices that record supplies of different kinds of goods and services that originate from different industries (represented by one dimension of the matrix, e.g. columns) and how those supplies are allocated between various types of uses or industries receiving those supplies (represented by the other dimension of the matrix, e.g. rows). Quantities in individual cells represent shares of the total supply of an industry going to a particular use or industry receiving that supply.

In the proposed model one material output/outcome matrix is constructed for each industry. The supply of material output is represented by columns of the matrix, where individual columns represent different subdivisions of that industry. Figure 3 below shows an example of the material output / outcome matrix constructed for education services.

Figure 3 Material output/outcome matrix for education services

Material Output> Outcome:	All education		Primary/ Secondary education		Tertiary education		Other education	
	Total	NPIs	Total	NPIs	Total	NPIs	Total	NPIs
Total enrolled:								
Intermediate outcomes (total)								
Advance to the next level								
Repeat the level:								
Final outcomes (total):								
Completion								
Employment By industry and occupation								
Unemployment								
Leave abroad								
Termination								
Employment By industry and occupation								
Unemployment								
Leave abroad								
Other outcomes (specify)								

The primary products of education establishments can be grouped into three classes: primary and secondary education services (in-school instruction typically provided to children and adolescents), tertiary education services (college level instruction typically provided to adults) and other education and training services (such as vocational training or educational support services). Tertiary and other education can be further subdivided into different specialties, such as engineering, medicine, law, social sciences, humanities, etc. for tertiary education, or vocational training for different occupations (technicians, electricians, drivers, hair stylists etc.). This material output can be measured by the number of students receiving educational services from various types of educational establishments within a given reference period.

The concept of “receiving educational services” involves enrollment in the program offered by the institution and completion of the program offered by that institution. Both measures are used as UN

indicators of sustainable development. Since enrollment is a broader concept than completion in the sense of having a wider range of expected outcomes, we use it as the measure of material output in this example.

The expected outcomes of enrollment in an educational institution can be divided into two groups: *intermediate outcomes* and *final outcomes*. The intermediate outcomes entail the attainment of interim goals necessary for the continuation of the educational services in the future (i.e. advancement to the next level of training). The final outcomes entail the attainment of the final level of training (i.e. graduation or successful completion of training), or termination of training without successful completion (i.e. expulsion or dropping out). Furthermore, the final outcomes can be subdivided by different types of utilities or benefits they produce. These include gaining employment, which can be further subdivided by occupations or industries, inability to obtain employment, or leaving the country in search of other opportunities. All these expected outcomes are listed as rows in the material output/outcome matrix.

Another feature of the matrix is the subdivision of each column into industry totals and NPIs within those industries. Industry totals can be conceptualized as typical results expected in those industries, or national “benchmarks” against which NPIs are compared. Such comparison can be helpful in answering substantive questions about NPI performance, for example, their shares of the total material outputs, shares of different outcomes, and – if paired with input measures – their effectiveness in producing material outputs and outcomes.

The list of possible outcomes is not limited to those listed in Figure 3 and may include other outcomes of interest to policy makers. For example, it may be of interest to examine material outputs and outcomes of educational services for different socio-demographic groups, such as men and women, ethnic groups, or income groups. In such cases, the set of outcomes listed in Figure 3 should be generated for each socio-demographic group of interest.

C. A Few Examples

Most NPIs operate in service industries, especially education, health care, social assistance, and disaster preparedness and relief. Other areas of NPI activity include arts and entertainment, and activities of membership organizations. A sizeable number of NPIs operate in areas that involve elements of both, good production or distribution and service, such as housing, community development, environmental protection and natural resource management. This section provides examples of material output/outcome matrices for selected industries in which NPIs can be typically found. These matrices feature the subdivision of each column into industry totals and NPIs within those industries for the purpose of comparing NPIs to industry “benchmarks.” The only exception is the matrix for membership organizations, since virtually all such organizations are NPIs.

1. *Material output/outcome matrix for health services.* The main function of health care services is to cure or prevent illness. The material output of these services is individuals receiving medical treatment that consists of prevention, diagnosis, medical intervention, and post intervention convalescence. Different elements of that treatment are typically performed by different institutional units, individual practitioners (doctors or dentists), primary care clinics, hospitals or residential care facilities. Material outputs of different types of health care establishments are listed as columns of the matrix shown in Figure 4.

There are two expected outcomes of that treatment: intermediate and final. The intermediate outcome is the continuation of treatment in the same institutional unit or referral for further treatment by another institutional unit (e.g. a specialist, or a hospital). The final outcome entails successful cure or termination of the treatment without curing the illness either because no further cure was possible or because the patient died. These different outcomes represent different “paths” that people receiving services from a health care provider can enter as a consequence of that service. The “paths” are enumerated in the columns of the material output / outcome matrix for health care.

Figure 4 Material output/outcome matrix for health care services

Material Output> Outcome:	All health		Ambulatory		Hospitals		Nursing homes	
	Total	NPIs	Total	NPIs	Total	NPIs	Total	NPIs
Total patients:								
Intermediate outcomes (total)								
Continue treatment								
Refer to a different unit								
Final outcomes (total):								
Completion (cure) by type of illness								
Completion (cure) by type of illness								
Termination of treatment without cure								
Patient survived								
By illness								
By patient type								
Patient died								
By illness								
By patient type								

The approach to measuring outcomes of health care combines a conventional institution-focused output measure counting the number of people receiving health care from health care units within a reference period, and an alternative treatment-centered approach counting the number of completed treatments (Triplet, 2001). The main difference between these two approaches is that the former measures the output provided by a single institutional unit (e.g. a hospital or a clinic), whereas the latter measures the output provided by multiple units to treat an illness in a single patient. Although the complete treatment approach offers advantages in evaluating efficiency of health care as a whole, it can be problematic for measuring output of specific institutional units providing health care services. Treatment is often performed by multiple institutional unit, e.g. primary provider diagnosing the condition and referring it to a specialist, the specialist proposing the treatment, the institutional units (hospitals, laboratories, pharmacies, etc.) implementing the treatment and providers of post-treatment convalescence care. Allocating material output to these multiple providers is very difficult, if at all possible. The approach proposed in this paper combines the benefits of the institution- and treatment-focused measures by capturing material outputs of different types of institutions and linking to specific outcomes of the treatment.

2. *Material output/outcome matrix for social assistance.* Social assistance is similar to health care in that it consists of treatment aimed to alleviate some functional difficulty experienced by the client. The main purpose of social assistance services is to enable the client to follow the norms of behavior or social interaction that are generally accepted in a given society. The material output of social assistance is individuals receiving treatment that consists of different types of behavior modification interventions (counseling, group sessions, protective custody, etc.) or material assistance (e.g. food, clothing, shelter, etc.). Similarly to health care, the outcomes of social assistance treatment can be represented by different types of “paths” that people receiving services from a social assistance unit can enter as a consequence of that service.

Intermediate outcomes entail continued treatment, such as the continuation of the service from the same institutional unit or referral to another unit or institutional placement (e.g. a self-help group, an organization providing material support, half-way home, prison, or a hospital). Final outcome entails completion of treatment due to effective alleviation of the treated condition, and termination of treatment without effective alleviation of the treated condition. This type of outcome has paths that are essentially similar to those in health care or education: employment (further classified by industry or occupation), unemployment, disability or retirement, resuming education (e.g. client enrolls in school), or in some cases deportation abroad. Finally the termination of treatment includes four paths: client becoming ineligible for further assistance, client’s unwillingness or inability to continue, court order (e.g. in cases involving protective custody), and the death of the client.

Figure 5 Material output/outcome matrix for social assistance services

Outcome:	Material Output>	Social assistance	
		Total	NPIs
Total clients:			
Intermediate outcomes			
Continuation by the same unit			
Referral to a non-residential unit			
Referral to a residential unit (prison, hospital, shelter)			
Final outcomes:			
Completion of treatment			
Employment (by industry and occupation)			
Unemployment			
Disability			
Retirement			
Education (by level)			
Household			
Leave abroad			
Termination of treatment due to:			
Client no longer eligible			
Client unwilling to continue			
Court order			
Client deceased			
Other outcome n.e.c.			

3. *Material output/outcome matrix for housing.* The provision of housing involves two different types of material output: construction or rehabilitation of dwelling units, and housing services (such as

management and maintenance of dwelling units, or material assistance in finding and maintaining homes). Material output of housing construction is measured by the volume of produced goods within a given reference period, such as the number of dwelling units or the total area of these units. Material output of housing services is measured by the number of people receiving these services in a given reference period. These two types of material outputs are listed in the columns of Figure 6.

The main purpose of housing provision is to create residence for individuals and families. There are, therefore, two different types of outcomes of housing provision: one involving improvements to geographical areas by creation of different types of residences in those areas, and another one involving benefits to people. Improvements to geographical areas may be of particular interest of regional planning policy (e.g. rural development, urban renewal, etc.) whose main concern is building structures in specific geographic locations. Benefits to people is of interest of social policies dealing with issues like poverty, homelessness, delinquency or family protection. These two different types of outcomes are enumerated in the rows of Figure 6. The improvements to areas can be further broken down by categories that are of interest to urban and regional planning: geographic location (e.g. urban vs. rural), dwelling types (e.g. single or multi-family units or size of the households housed by these units), and the form of ownership (e.g. individual, collective, public, or private). The benefits to people are described by enumerating different socio-demographic groups that benefit from housing provision, and consist of categories of interest to social policy (gender, age, income level, disability status, etc.).

Figure 6 Material output/outcome matrix for housing construction and services

Outcome:	Material Output>	Housing construction/rehabilitation		Housing services	
		Total	NPIs	Total	NPIs
	<u>Improvements to areas:</u>				
	Residences by geography:				
	Urban				
	Rural				
	Administrative regions/districts				
	Other geographies (specify)				
	Residences by dwelling type:				
	Single/multiple unit				
	Household size				
	Residences by ownership type:				
	Individual by occupant				
	Collective by occupants				
	Public agency				
	Non-profit institution				
	Private third party				
	<u>Benefits to people:</u>				
	Residents by socio-demographic group:				
	Sex				
	Age				
	Labor force status				
	Employed				
	Unemployed				
	Not in labor force				
	Employment (by industry and occupation)				
	Income level (by quintiles)				
	Educational attainment				
	Disability status				
	Immigrant status				
	Second+ generation native				
	First generation native				
	Foreign born				
	Other outcomes n.e.c.				
	Specify				

4. *Material output/outcome matrix for arts culture and recreation.* As Marshall McLuhan famously observed “the medium is the message.” The activities of cultural media themselves are their material output and also the outcome. Their outcome can be measured only by the level of participation in these activities by different audiences, which may be of interest to cultural policy. The outcome measures of cultural activities represent participation of different socio-demographic groups enumerated in the rows of Figure 4.10. Four different types of material outputs of these activities are enumerated in the columns. As in all previous cases, separate matrices ought to be constructed for the entire industries and one for NPIs in those industries to determine NPI shares of the outcomes.

Figure 7 Material output/outcome matrix for arts culture and recreation

Outcome:	Material Output>	Museums/galleries/historical sites		Performances (dance, music, theater)		Recreation events		Sporting events	
		Total	NPIs	Total	NPIs	Total	NPIs	Total	NPIs
Participants by socio-demographic group:									
Sex									
Age									
Labor force status									
Income level (by quintiles)									
Educational attainment									
Disability status									
Immigrant status									
Second+ generation native									
First generation native									
Foreign born									
Other outcomes n.e.c.									
Specify									

5. *Material output/outcome matrix for membership organizations.* Membership organizations are similar to art and culture in that in both fields “the medium is the message” and the activities of the organizations themselves are their material output and also the outcome. Material output of these organizations is measured by the number of paid staff, volunteers and members engaged in four different types of membership organizations listed in the columns of Figure 8.

The outcome of membership organizations is measured by the level of participation in two different types of activities. The first type entails internal organizational activities whose main function is to maintain the organization itself. Included here are: membership meetings, fundraising functions, religious services, office functions etc. Outcome of this type is measured by the engagement of different socio economic groups engaged in internal organizational activities as staff, volunteers and members. The second type entails public organizational activities whose main function is to provide some kind of service or benefit to a broader community. Included here are: community or environmental cleanup events, community fairs, political events such as petition drives or public demonstrations, volunteering for populations in need, animal rescue, etc. Outcome of this type is measured by the engagement of different socio economic groups in public organizational activities as both, the general public and staff, volunteers and members of the units organizing these events. It is likely that all membership organizations are NPIs, so the distinction between NPIs and other units has been omitted from the matrix.

Figure 8 Material output/outcome matrix for membership organizations

Material Output> Outcome:	Civic associations	Business organizations	Professional organizations	Labor unions	Religious organizations
Internal activities (staff, volunteers, members)					
Participants by socio-demographic group:					
Sex					
Age					
Labor force status					
Income level (by quintiles)					
Educational attainment					
Disability status					
Immigrant status					
Second+ generation native					
First generation native					
Foreign born					
External activities (public, staff, volunteers, members)					
Participants by socio-demographic group:					
Sex					
Age					
Labor force status					
Income level (by quintiles)					
Educational attainment					
Disability status					
Immigrant status					
Second+ generation native					
First generation native					
Foreign born					

D. Impact Measures

Impact is defined as long term benefits to the community or society as a whole resulting from activities of organizational units. Impact is not limited to benefits accrued by individuals directly receiving good or services provided by these units, but also includes consequential benefits that indirectly result from the availability of these goods and services. These consequential benefits accrue to individuals to whom the original beneficiaries are socially connected (e.g. relatives, neighbors, associates etc.) and to economic or administrative units that interact with these individuals as a part of their business. For example, an alcoholic who successfully completes an Alcoholic Anonymous program directly benefits from that program by being able to function in society again. The consequential benefits may include obtaining employment, which in turn benefits the family members in the form of additional household income, neighborhood businesses in the form of purchases that this extra income makes, and social welfare agencies in the form of savings on social assistance provided to that household.

While it is theoretically possible to compound consequential benefits over time and social connections, this also exponentially increases the number of intervening factors that may possibly affect these consequential benefits. As a result of these intervening factors, tracking the effects that can be positively linked to the original material output becomes increasingly difficult, if at all possible.

Therefore, practical considerations of determining the impact require setting reasonable boundaries of the consequential effects to be considered. This paper recommends setting these boundaries at one degree of separation in social relations and time. One degree of separation in social relations includes all individuals and economic or administrative units that directly interact with the original recipients of goods or services including, members of their households, close family members living outside their households (parents, children and siblings), economic units maintaining regular business relations with the recipients (employers, landlords, insurance companies, and business partners or clients) and administrative units providing services to the recipients or their households (tax collection authorities, social welfare agencies, and penal institutions, if applicable). One degree of separation in time means one year period following the time period in which the material output (goods or services) was originally recorded (e.g. if the material output was recorded in 2012, the reference period for consequential impact is 2012-2013). However, in some instances, such as environmental impacts, this time frame may be too short and a longer frame may be necessary.

Impacts are measured by the estimated monetary value of direct and consequential benefits of the material output. These include the monetary value of:

- a) outcome i.e. material output received by the original recipients;
- b) consequential benefits accrued by individuals and economic units within one degree of separation from the original recipient (e.g. increased household income, increased productivity, or added business);
- c) savings of the expenses that would have been incurred in the absence of that material output (e.g. social support payments forgone due to recipients obtaining employment); and
- d) compound benefits resulting from the process of production of that output (i.e. economic effects of purchases and wages paid by the unit producing the material output).

Of course, impacts are not limited to economic benefits measured by money, but include a whole range of psychological and social benefits that are difficult, if at all possible, to quantify. However, using money as a metric makes it possible to compare the magnitude and significance of different outcomes of economic activities and their consequences that otherwise would be difficult to compare. To make such comparisons valid, however, the estimated monetary values must be as objective as possible. Outcomes can be valued by applying market prices when possible. For example, the value of education for graduates who entered employment is represented by the compensation they receive. In many cases, however, direct application of market prices is not possible because the material output is a non-market good (e.g. health), or is exchanged outside market relations (e.g. housing assistance for the poor). In such situations, alternative approaches to estimating the value should be applied. There are two broadly defined approaches to valuing non-market goods: the market replacement (or market substitute) approach and the contingent valuation approach.

The market replacement approach involves a comparison of the non-market asset (the target asset) to an analogous asset exchanged in the market (the reference asset), observing the actual market value of that asset, and applying the observed market value to the non-market asset. This comparison may focus on different aspects of market value (e.g., market price, market cost of producing or procuring an asset, or the market value of consequential outcomes of using the asset in question). Since the reference asset may not have the exact qualities of the target asset, this approach may require an adjustment for differences in the attributes and qualities of assets involved in the comparison (known as hedonic valuation), which can significantly vary in its complexity. However, regardless of which particular

methodology is employed, the estimated value of the non-market asset in this approach is always a derivative of the actually observed market value of the reference asset. The market replacement approach is appropriate for outcomes that are exchanged through both market and non-market transactions, such as housing, community development or education. For example, if college graduates work without compensation, the value of their work can be estimated by comparing them to earnings of graduates who are gainfully employed. However, the market replacement approach may be problematic for material outputs or outcomes that are not bought and sold on the market.

The contingent valuation approach to estimating the value of non-market assets involves an assessment of the stated willingness to pay for the non-market good or service. In contrast to the market replacement approach, which relies on actually observed market values, contingent valuation relies on a hypothetical value (i.e., one that does not involve any actual market transactions) determined by querying people thought to have stakes in the asset in question. The advantage of this approach is its applicability to anything of potential value, even unique assets that have no obvious market substitutes (such as good health, freedom, or clean environment). However, contingent valuation method has been criticized by economists who argue that the hypothetical value declared by survey respondents is an arbitrary number that has little relation to the actual market value determined by supply and demand. Nonetheless, a careful survey design can reduce this potential discrepancy, and this method is widely used in legal practice, assessing environmental damage, or value of leisure time. The drawback of this approach is that it is costly and difficult to apply, especially on a large scale.

E. Conclusion

This paper proposes a model of a standardized measurement of social benefits created by NPI activities for the purpose of macro-economic analysis. This model draws from the program logic model and the supply and use and input/output tables used in the SNA, which allocate outputs of institutional units to different “uses” or social benefits. Seven material output/outcome matrices for the industries in which NPIs tend to concentrate have been developed: education, health care, social assistance, housing construction and services, community development, culture, arts and recreation and membership organizations. Each matrix allocated material output to different outcomes for the entire industry, and separately for NPIs in that industry, which allows comparing NPIs against industry wide standards. The paper also proposes a model for measuring broader social impacts that includes direct and consequential benefits and savings in social spending. While the models proposed in this paper do not capture the full range of subjective psychological and social benefits resulting from NPI activities, they can provide a standard metric for measuring main social benefits to supplement macro-economic statistics, such the SNA, and allow meaningful cross sector and cross-national comparisons.

References

Abraham, Katherine G. and Christopher Mackie eds., *Beyond the Market: Designing Nonmarket Accounts for the United States*, National Academic Press, 2005

Board of Governors of the Federal Reserve System, *Proceedings of the conference on Advancing Social Impact Investments Through Measurement*, Washington, DC, 2011

Olsen, Sara and Brett Galimidi, *Catalog of Approaches to Impact Measurement: Assessing social impact in private ventures*, Social Venture Technology Group, 2008

Thornley, Ben and Colby Dailey, Building Scale in Community Impact Investing through Nonfinancial Performance Measurement, *Community Development INVESTMENT REVIEW*, October 2010.

Triplett, Jack E., *Measuring Health Output: The Draft Eurostat Handbook On Price And Volume Measures In National Accounts*, Paper presented at Eurostat-CBS Seminar, Voorburg, Netherlands, March 14-16, 2001.

United Nations, *Indicators of Sustainable Development: Guidelines and Methodologies*, New York, 2007

United Nations, *System of National Accounts 2008*, New York, 2009

W. K. Kellogg Foundation, *W. K. Kellogg Foundation Logic Model Development Guide*, 2001

JOHNS HOPKINS
UNIVERSITY

CENTER FOR CIVIL SOCIETY STUDIES

THE JOHNS HOPKINS CENTER FOR CIVIL SOCIETY STUDIES

The Johns Hopkins Center for Civil Society Studies is a leading source of ground-breaking research and knowledge about the nonprofit sector, social investing, and the tools of government. Working in collaboration with governments, international organizations, investment innovators, and colleagues around the world, the Center encourages the use of this knowledge to strengthen and mobilize the capabilities and resources of the public, nonprofit, and for-profit sectors to address the complex problems that face the world today. The Center conducts research and educational programs that seek to improve current understanding, analyze emerging trends, and promote promising innovations in the ways that government, civil society, and business can collaborate to address social and environmental challenges.