RESEARCH NOTE[1]

4. USING THE INCOME APPROACH TO CALCULATE THE VOLUNTARY SECTOR'S ECONOMIC CONTRIBUTION TO GROSS DOMESTIC PRODUCT: A WELSH CASE STUDY

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ABSTRACT

Assessing the economic contribution of the voluntary sector to gross domestic product can be considered methodologically as an under-researched area in the UK, since the majority of research work lacks detailed methodology, including unclear sampling procedures, questionable analytical techniques and unverified data sources. Notably, earlier studies mainly focussed on approaches to estimate volunteers' economic contribution, rather than discussing main economic models to measure overall income variables of the sector. Therefore, this article is expected to fill a gap in the literature by taking into account all possible income components of the sector, including factor payments, as the total income of the voluntary sector. An earlier study (Hasan, 2008) was conducted on the Wrexham voluntary sector to verify the applicability of the income approach. The main difficulties of Hasan's research were twofold: there were insufficient data sources and there was reluctance on the part of voluntary organizations to supply monetary information. However, the earlier study recommended that the income approach gave the sector more accurate estimates (while not overly under- or over-estimating) when complete information regarding income, expenditure and volunteers' hourly contribution were properly considered. Accordingly, this paper critically explores the utility of the income approach.

INTRODUCTION

GDP (gross domestic product) is widely used as a tool to measure the total income or output of an economy. It is the market value of total goods and services produced in a year within the boundary of a country (Beardshaw et al., 2001; Case and Fair, 2004; Sloman, 2006). As is the case in public and private sectors, the voluntary sector is engaged in a wide range of activities that benefit both public and community. The sector ranges from groups working at a local community level to large, well-known national organizations, which both campaign for and deliver public services. Nonetheless, the voluntary sector has a positive impact on both the individuals involved and society as a whole; however, its contribution cannot be measured merely in crude economic terms. For example, the contribution of volunteers is not included in the national accounting procedures of GDP. This is in spite of this activity forming a significant part of the sector's economic contribution, since most studies of the sector attempt to estimate it when valuing the sector. Moreover, little evidence has been found in previous research assessing the overall economic contribution of the sector. Accordingly, some studies have underlined how, despite the significant contribution of the third sector to the UK economy, very little importance has been placed on estimating its monetary contribution (Davies, 2004).

This is not to say that such issues have wholly escaped analytical attention. For example, the National Council for Voluntary Organisations (NCVO, 2012) has recently addressed the issues of volunteers' contribution in calculating the voluntary sector's contribution to GDP. In so doing it developed a method in the early 2000s that incorporates the contribution of the paid workforce in calculating the voluntary sector's contribution to GDP. Meanwhile, the European Statistics Agency (Eurostat) has also attempted to improve the current approach of measuring the voluntary sector's contribution to GDP (NCVO, 2012). Presently, voluntary organisations are included in the Office for National Statistics (ONS) data where they are estimated as 'Non-Profit Institutions Serving Households' (NPISH). However, this inclusion is problematic in that it is not synonymous with the voluntary sector itself (NCVO, 2012). For example, in the United Kingdom, the NPISH sector includes charities, trade unions, religious organizations and the majority of universities. Hence, at the time of writing the NCVO and ONS are working together to refine the method for measuring the full output of the voluntary sector.

Theoretically, there are certain recognized approaches for measuring GDP. First, there is the production approach (also known as the 'value added' or

'output' approach), which measures GDP by adding up the total production of firms in the market (Colander and Gamber, 2006; Rossana, 2011; Mankiw, 2012). Value added is defined in this instance as 'the revenue received for output minus the cost of all intermediate goods that it buys' (Hall and Lieberman, 2010, p.147). The value added approach is thus a robust method for calculating GDP by avoiding 'double counting' errors, that is, where goods and services are counted more than once when computing GDP.

Double counting happens because of the limitation of valuation practices for estimating total outputs. That said, there is always a possibility that an output of production will be counted twice (double counting) – once as a raw material and again as a final product. To avoid this, production-based measures can be used to prevent double counting and promote greater consistency and comparability of data (Taylor, 2007; Taylor and Weerapana, 2012).

However, employing the production-based approach in measuring the voluntary sector's contribution to GDP might be a daunting task for various reasons, including: (a) it lacks a centre register; (b) it is difficult to measure volunteer management cost, as organizations lack specific volunteer management systems (Sajardo and Serra, 2010); (c) it is difficult to determine the intermediary costs of products, because of the non-physical nature of the products produced by the voluntary sector; and (d) a variety of contrasting definitions of the voluntary sector makes it hard to measure a production unit precisely within the sector. For example, if the market value of the outputs of each voluntary organization were added up, it would provide excess values of output rather than the actual outputs available to consumers.

The second method of measuring GDP is to add up all incomes generated by households and businesses in the process of producing commodities in the form of wages and salaries, profits, rent and interest, as suggested by Sloman (2006); while the expenditure approach is the third method to calculate a sector's contribution to GDP. The latter is formed by adding together four components of spending, namely personal (household) spending on consumer goods; spending by firms and households on domestic investment; Government consumption; and gross investment and net export (Case and Fair, 2004). It is evident from the expenditure components that most of the variables have relatively little relevancy in the context of the third sector. By definition, voluntary organizations are non-governmental bodies and comprise paid and unpaid workforce. However, since the expenditure approach measures only paid labour, it is clearly not a suitable tool to calculate the voluntary sector's contribution to GDP.

Accordingly, the following discussion reviews the methodological issues and findings of previous studies and highlights current trends in voluntary sector

research. It then explores issues concerning the utility of the income approach for computing the broader contribution of the voluntary sector to GDP. Methodological considerations are outlined and the findings are presented that relate to a case study of the voluntary sector in Wrexham. The discussion concludes with some strategic recommendations and directions for future research.

PREVIOUS RESEARCH

Adopting an appropriate methodology to identify the economic contribution of the sector has been a major concern in current literature (NCVO, 2012). As a result of the heterogeneity of voluntary organizations (inter alia, in their type, size, activities and objectives), it is likely to be impossible to develop a universal approach (Wainwright, 2002). For example, Davies (2004, 352) carried out a study on valuing the voluntary sector, where he noted:

> In the UK, two strands of literature have emerged relating to the economic importance of the voluntary sector in sport. The first, which has received relatively little attention, relates to the economic contribution (value-added) of the voluntary sector to the sports industry; the second concerns the value of the volunteer labour market.

Until recently this accurately summed-up research within the sector. However, over the past decade, the situation has changed considerably due to the work of analysts at the NCVO. Consequently, the third sector's role in the macro-economy is now better understood. NCVO (2012) estimates that the voluntary sector contributes a minimum of £11.6 billion to the UK GVA in 2010. This is equivalent to 0.8 per cent of the whole of the UK's GVA. This GVA concept is broadly similar to gross domestic product (GDP) (ONS, 2012).

Notwithstanding such advances the NCVO (2012) acknowledged the shortcomings of the measurement of voluntary sector contribution to GDP, because it only accounts for paid staff costs, despite the sector's economic impact being much wider than GVA. For example, the voluntary sector helps the economy by creating jobs, providing services for individuals and communities, spending money on local goods and services and attracting into an area volunteer time and grants (NCVO, 2012). Furthermore, research conducted by NCVO (cited in Holt, 2010) suggests that between 1999 and 2008, the sector's workforce increased by 23 per cent (124,000 people). Over the same period, the

public and private sector grew by 18 per cent and 7 per cent respectively. In contrast, the voluntary sector accounts for only 2 per cent of the overall national budget or Government spending. However, the voluntary sector earning income from delivering statutory contracts had increased to £9.1 billion, up 128 per cent since 2000/1.

Despite the economic contribution of the voluntary sector to GDP, limited progress has to date been made for comprehensively estimating the sector's overall contribution to GDP. Past studies on the subject have been undertaken in England, Wales, Scotland and Canada. Yet these have drawn on limited empirical evidence and lack overall coherence. For example, the majority of past work (Lewis, 2001; Ahmed and Palmer, 2007; Lawtie, 2007) is largely based on anecdotal evidence and lacks academic and analytical rigour, owing to limited data sources and biased sampling techniques.

According to official statistics, the voluntary sector has always been under-valued since the System of National Accounts (SNS) classified it within other sectors. In this regard a significant initiative is currently being undertaken by the Third Sector Research Centre (TSRC) to create a shared, consistent dataset that will provide a rigorous base for future research of the sector. For example, it used the Charity Commission registers as a sampling frame and outlined the challenges faced during data collection and classification, such as input errors, difficulty in replicating the varied hierarchy of account data in a flat database form and classifying income sources (Kane et al., 2013).

Apart from earlier limitations, the majority of earlier studies have been unsupported by robust theory and lack credible empirical data from which inferences can be drawn. Furthermore, in the absence of a single method of quantifying voluntary labour, the total output of the sector remains under-estimated, even at a national level. For example, Davies (2004) undertook a study to value the voluntary sector within the sport sector by applying the national income approach. He suggested revising the approach of valuation to make it more credible. In such studies, the voluntary sector contribution to GDP has been understated by not considering other income components than staff costs, whether paid or unpaid.

Inevitably, estimating the contribution of volunteers is not a straightforward exercise. There is no universal approach for estimating their contribution to GDP. For example, many studies (Cambridge Econometrics, 2003; Petrie and Hawtin, 2004; NCVO, 2012) have avoided using total voluntary hours to calculate the sector's contribution in monetary terms and have therefore accounted only for the contribution of full-time and part-time paid staff. At the same time, limited data sources are available at various levels of voluntary

organizations. Attempts to collect primary data have often been hindered due to time and resource constraints, banded data and inadequate and/or unavailability of data, resulting in poor quality outcomes (Davies, 2004).

Furthermore, the accurate information of some important income generating elements such as rent, insurance and net interest (which are paid by voluntary organizations) have been completely ignored in past studies. This information is hardly ever recorded by many small and medium organizations. Correspond-ingly, although many studies have attempted to calculate the voluntary sector's contribution towards GDP, the sector's contribution had not been clearly outlined (Lawtie, 2007; OPM, 2007; Ahmed and Palmer, 2007). In addition, the absence of detailed research methods in the earlier studies (Lewis, 2001; Ahmed and Palmer, 2007) provides little help for other researchers working in the area of national income accounting.

A NATIONAL INCOME APPROACH FOR THE VOLUNTARY SECTOR

According to economic theory, land, labour, capital and organization are classified as factors of production, which are used to produce outputs. Pay-ments are made in return for participation in the production process in the form of rent, wages, interest and profits. There are two ways to measure total income or monetary contribution to the economy (Wessels, 2012). The first one is to calculate the sum of all the incomes of each factor of production. To do so, some adjustments need to be made (i.e., in relation to corporate income taxes, dividends, undistributed corporate profits). The second is to add the income created by each business in the economy. In this case, the value added created by each voluntary and community organization could be added up. However, a number of authors have questioned applying the value added method to the voluntary sector because of inadequate data sources (Sajardo and Serra, 2010; Landefeld et al., 2008).

Following Keynes's law of economic aggregate demand, two assumptions have been made in this study: first, the economy consists of two sectors – households and the voluntary sector, and, secondly, there is no Government intervention and international trade. Figure 3.1 (adapted from Beardshaw et al., 2001) illustrates how voluntary organizations produce while households con-sume. The households own factors of production that are hired by the voluntary sector for production, and in return they pay wages and salaries, rent, insurance and interest.

Figure 4.1
The Simplified circular flow of income (adapted from Beardshaw et al, 2001)
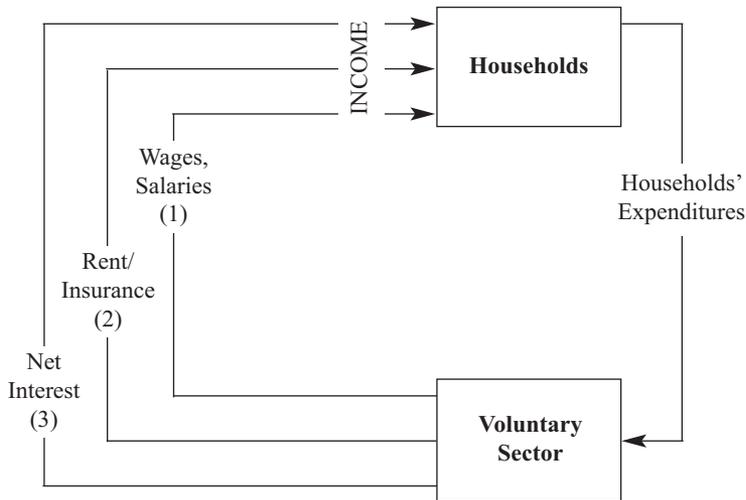
In Figure 3.1, wages and salaries (1) are paid to the households by the voluntary sector as compensation in return for their contribution. Since volunteers are essential to charities' activities along with paid staff (Narraway and Cordery, 2009), their contribution also needs to be carefully estimated. Most studies (Vonne, 2000; Collis, 2003; Handy and Srinivasan, 2004; Sajardo and Serra, 2010; Eglington, 2010) make an attempt to measure volunteers' monetary contribution when valuing the sector by using different approaches. One of the fundamental problems here is that there is no unique approach to valuing the economic contribution of volunteers. The predominant approaches are based on the concept of 'opportunity cost' and the replacement cost (Handy and Srinivasan, 2004). In relation to measuring volunteers' contribution to GDP, another approach has been used in some studies (Fujiwara et al., 2013; Fujiwara and Campbell, 2011), namely measuring the monetary value of volunteering through wellbeing. The WV (wellbeing valuation) technique was mainly developed for valuing the effect, in monetary terms, of a health problem on an individual's wellbeing (Sampson, 2011).

Fujiwara et al. (2013) applied the WV approach for valuing volunteering from the perspective of the participant and suggested, with evidence, that the traditional approaches may significantly underestimate the value of volunteering to the individual. They estimated the value of volunteering by using data on

life satisfaction and volunteering status in the British Household Panel Survey (BHPS). Undoubtedly, it is an outstanding initiative for valuing volunteering as it uses people's actual experiences, rather than preferences and choices. How-ever, WV may create difficulty in practice where the sample size is relatively large. It is not a cost-efficient approach and requires respondents to remember past experiences. In addition, a number of biases may emerge, such as the tendency to evaluate experiences based only on the peak emotion and the experience at the end (a 'peak-end' rule) (Fujiwara et al., 2013).

In Figure 4.1, voluntary organizations pay rent (2) to the households for using their properties for purposes such as land, housing, office space, etc. On the other hand, voluntary organizations that possess their own property pay insurance to cover building risks. Meanwhile, net interest (3) income is the difference between the interest received from assets and the interest paid on liabilities by the voluntary sector.

One of the distinctive features of the voluntary sector is its not-for-profit orientation. This essentially means that any profits must be used to further its charitable purposes. Such profits or surpluses must not be distributed to owners, members or any other individual or group of individuals. Therefore, profit has been excluded from the 'circular flow of income' model. Consequently, the overall income of the voluntary and community sector will be:

Sum of Value Added = National Income = Sum of Factor Payments (wages, salaries, rents, insurance, and net interest payments)

The income (GDP) measurement by either of the approaches will produce identical results because, theoretically (Dawson et al., 2003), national income should thus be equal to national output or national expenditure.

METHODOLOGY

As noted, this study employs data and information from earlier studies (Hasan, 2008; Binsardi, 2004) that were carried out to measure the economic con-tribution of the Wrexham voluntary sector to GDP. In this work the (unknown) number of voluntary and charity organizations that were operating in the Wrexham region was selected as the target population. From this target population, the sampling frame was estimated to be 1,987 voluntary and charity organizations. This sampling frame was obtained according to the information obtained from the WCVA and the Charity Commission database. The frame for

the survey consisted of a list of the population of 1,987 voluntary and com-munity organizations on the WCVA and the Charity Commission register.

According to the relevant literature (Saunders, Lewis and Thornhill, 2003), two general approaches of sampling methodology are available, namely probability and non-probability sampling. In non-probability sampling, members are selected from the population in a non-random manner, which means some organizations might have no chance of being selected. As a result, collected data may not represent a true scenario of the entire population of the voluntary sector. Accordingly, it has been established that the technique cannot be used to draw any inference from the sample to the general population and the generalization is valid only when population cases and characteristics are similar (Lucas, 2013). In contrast, in random sampling, all elements in the sampling frame have equal chance of at a non-zero probability of being selected. The best probabilistic sampling method of 'simple random sampling' can be used where the samples are homogeneous and very little is known about the characteristics of individual population members prior to data collection (Jeppeson, 2001; Fowler, 2002). However, if the samples are heterogeneous, it may represent the true value of the population. Accordingly, other probabilistic sampling must be employed, such as systematic random sampling or stratified random sampling (Zikmund, 2002). Stratified random sampling involves dividing population into homogeneous subgroups and then taking a simple random sample from each subgroup (Kane et al., 2013). Consequently, the samples will represent the entire population, even its small subgroups. The relative advantages of the stratified technique over simple random sampling meant that the stratified random sampling method was applied in this study. It was operationalized by dividing the target population into groups broken down by income; samples were then taken in a random manner from each group.

The data used in this study were collected in 2004. During that period, the North East Wales Institute of Higher Education (NEWI) was commissioned on behalf of the Association of Voluntary Organisations in Wrexham (AVOW) to conduct an in-depth research project (financial and statistical survey) on the voluntary sector organizations operating within the Wrexham area. Primary research was conducted by issuing survey questionnaires, which were targeted at the associate members of AVOW, which had been identified in its directory. Out of the 160 members (160 as AVOW population), fifty-eight organizations (fifty-eight as samples) replied to the survey, a relatively high 36.3 per cent response rate.

The survey questionnaire was compiled in both English and Welsh. Semantic differentials and Likert scales (as the method of attitude measurement) were

applied to the questions. Multi-item, numeric and closed scales were also applied. Survey questionnaires were sent to voluntary organizations in Wrexham based on the data obtained from the WCVA and the Charity Commission. Several techniques were used to increase response rates, including:

- Using follow-up telephone calls
- Offering incentives[2]
- Using a simple introductory letter explaining the communal benefits of the research and the principles of independence and confidentiality in undertaking the survey.

Initially, five personal interviews by prior arrangement with AVOW members yielded a 100 per cent successful response rate. Statistical software packages (SPSS and Sphinx) were used in creating and analysing the survey question-naires.

Besides accessing information through primary research, secondary research was carried out via the media of the internet, published accounts and company literature. Sources included Wrexham County Borough Council, Office for National Statistics, the Charity Commission and individual voluntary organization web-sites. The number of respondents, as sampling, was expected to be higher than 5 per cent of the total population in order to satisfy the Central Limit Theorem (Cohen and Holliday, 1998). The wider research literature indicates that postal surveys have the poorest response rate. In a mail survey, without any previous contact, a response rate normally is less than 5 per cent. Such response rates can lead to a serious bias. Response rates increase with the following, inter alia, prepaid envelop or promised incentives (Malhotra and Birks, 2007). Hence, following revised mailing and telephone calls by explaining the principle of research independence, by providing respondents incentives to reply (offering complementary courses) and by encouraging respondents to reply anonymously, the response rate increased significantly.

The literature states that when the sample mean is distributed normally, it is an unbiased estimator of the population mean. So, as noted, a series of measures was taken to increase the sample size in order to satisfy the Central Limit Theorem. For, as Cohen and Holliday (1998, p. 75) explain: 'when the size of the sample increases and becomes sufficiently large the distribution of the sample means tends to Normal Distribution'. This is important as the parent population was unknown. Although, it was reported based on the data supplied by WCVA that there are 1,987 voluntary organizations in the Wrexham area,

the actual number is unknown because, initial survey indicated that some of the organizations (N = 46 organizations) are no longer in existence. Revised (independent) mailing was compiled in order to target mainly non-members (1,987 voluntary organizations and charities).

Where a survey is concerned with data and measures of relationship, the scholarly literature on sample surveys has emphasized sampling distributions and efficient design of surveys. The main characteristic is its use of the theory of probability to maximize the yield information for a limited expenditure of skills and funds. However, sampling possesses some disadvantages. For example, it does not provide detailed information concerning every individual voluntary organization or charity, however it gives the researcher aggregate general-izations with efficiency in terms of time and costs. To counter such concerns, although sampling was the chief tool in this research, samples were supple-mented by other information such as secondary data.

The number of voluntary organizations and charities (1,941) bore almost no relation to the size of the sample. All data (obtained by a census or a sample), are subject to various types of uncertainty. There are three types of uncertainty: type I, type II and type III. Type I comprises built-in limitations of the question-naire. Any reply to a question is only a response to a stimuli and a matter of judgement. Deficiencies may arise from incomplete understanding of the problem (that is, actual accounting may give results different from those given by mere inquiry about total expenditure of a charity organization). Type II errors includes operational faults, for example, the existence of bias from non-response, illegible entries etc. In contrast, uncertainty introduced by type III error is caused by random variation (i.e., repeated random samples taken from the sample frame will give different results).

Data (second sampling) was collated in relation to a series of the survey questions. They were then analysed with regard to the following factors and considerations:

1. In order to investigate the training gap (or the demand for voluntary sector training), the first questionnaire asked respondents what type of training or short courses they would like to join. This was intended to provide information for the voluntary sector umbrella body in terms of enhancing voluntary sector capacity and networking.
2. The geographical distribution and density of voluntary organizations.
3. The number, area of activity, size distribution and legal type of voluntary organizations. This was challenging for although many organizations were trading in Wrexham, their registered office was sometimes outside

Wrexham. As such, their accounts may not be broken down geographic-
ally in a way that always aligned with this study's coverage.

5. The status of the voluntary organizations, inter alia: an informal group,
an informal neighbourhood organization, a registered charity, an unin-
corporated association, a trust (with a deed of trust), etc.

6. The scope of operation of each voluntary organization (for example,
local, regional, national, international).

7. The distribution of organizations between activity areas (for example,
advocacy, animal welfare, arts, benevolent organizations, etc.).

8. The beneficiaries of the organization (for example, by gender, age,
employment status, ethnicity, etc.).

10. Human resources (for example, number of paid full-time and part-time
employees; volunteers, paid and unpaid trustees, trainees, etc.).

11. The number of volunteered hours per week.

12. Time established (for example, less than six months, 7–12 months, 1–2
years, etc).

13. The current funders (for example, local, central, or devolved govern-
ment, public donations, etc.).

14. The distribution of voluntary organizations by income band.

15. The trends in organizational grants, income and expenses.

16. The trends in the demand for the charitable services.

17. Welsh language use in the organization.

FINDINGS

Human resources (HR) within the Wrexham voluntary sector

The study followed the New Earnings Survey (ONS, 2003) to calculate the
human resources component of the contribution of the local voluntary sector to
GDP. The ONS (2003) indicated that average gross weekly earnings in Wales
were £414.50 for full-time hours of 39.6, while part-time hours were 19.4.
Weekly earnings according to the Government Office region in Wales was
estimated to be £414.50, and average total weekly hours of full-timers and part-
timers was estimated at 39.6 and 19.4 hours respectively. Therefore, on a pro
rata basis, the average weekly income of a part-time paid staff member was
assumed to be £203.06 (Table 4.1).

The opportunity cost can be defined as income that could be gained using
time in paid employment. This is widely used to measure volunteers' con-
tribution following work by Davies (2004). By using this simple approach,

Table 4.1
Human resources (HR) engaged within the Wrexham
voluntary sector

Staff/Personnel	*Number*	*% of working population engaged in Wrexham VOs*
Full-time staff	1,520 (5.11 %)	1.88
Part-time staff	1,744 (5.87 %)	2.15
Volunteers	26,460 (89.02%)	32.67
Total	29,724 (100 %)	36.7

Source: Hasan (2008).

Note: Figures in parentheses indicate the percentage of total manpower engaged in Wrexham voluntary sector.

volunteers' hourly contributions were compensated by the minimum prevailing wage rate in the belief that he/she could earn this money by spending that specific amount of time in a paid job. However, opportunity cost of time may not be representative in a number of cases. For example, a large number of people who are retired and/or seeking work experience and engaged in volunteering may not expect any financial return and consider it as an invaluable opportunity to spend their leisure time in a positive way. In addition, not all third sector organizations require volunteers to produce outputs. However, volunteers' opportunity costs are not zero (Independent Sector, 2001; Brown, 1999). On the other hand, the replacement cost (the amount of money any organization has to pay for the service being provided by volunteers) is very precise, but the necessary information where this is concerned may be difficult to obtain from many organizations because of their lack of resources. This method requires more expertise for evaluating the role of volunteers and comparing it in the paid job market (Mook and Quarter, 2003; Gaskin, 1999). Accordingly, this study applied an opportunity-cost approach for the sake of simplicity.

It was resource intensive to calculate volunteers' contribution to GDP, since roughly 25 per cent (24.8 per cent) of the respondents were unable to provide any information about the hourly contribution of volunteers. Thus there may be an issue of relative accuracy in the findings. It was evident from the various findings of this study (and consistent with an earlier study by Collis (2005)) –

that most of the voluntary organizations in the Wrexham area operated at a local level and dealt mostly with community issues, children and family issues and sports and recreation. They were also mostly small organizations. Normally, organizations with fewer than twenty staff members and with an annual income below £20,000 can be classified as a small organization (Petrie and Hawtin, 2004). It was therefore estimated that the average contribution of a volunteer was 7.5 hours per week. Yet the study made a recommendation for further research to be conducted to increase the accuracy of calculating volunteers' economic contribution.

To take the weekly figures into account, the total monetary contribution of the manpower involved in the sector can be computed as (£414.50 x 4 x 12 x 1,520) + (£203.06 x 4 x 12 x 1,744) + (£10.47 x 7.5 x 4 x 12 x 26,460) = £147.12 million per annum (Appendix 1). Figure 4.2 describes the economic contribution of human resources in the Wrexham voluntary sector and charities by category.

Figure 4.2
Contributions of different income components of Wrexham voluntary sector
(in monetary terms, £M) Hasan, 2008)

Rent and Insurance
£15.52
£30.40
£16.99   Part-time staff
£99.73
Volunteers

Valuation of the premises
Of the organizations that owned their own premises, just over a quarter (26.0 per cent) of properties were valued at over £500,000, followed by a smaller per-

centage of 8.0 per cent valued at £400,000–£500,000. Only a few organizations (2 per cent) in the study area were valued in the ranges of £10,000–£20,000 and £80,000–£100,000 (Appendix 2).

Rent paid by the organizations for premises
It was revealed that 40 per cent of the voluntary organizations (VOs) and charities do not own premises in Wrexham (Hasan, 2008). Over half (58.5 per cent) of those surveyed paid less than £6,000 of rent per annum, followed by a smaller group paying more than £30,000 (18.3 per cent). A few organizations (1.2 per cent) paid a high rate of rent of £20,000–£30,000 per annum. Organizations that owned their own premises might be paying or have already paid mortgages. It was therefore assumed here that all organizations were paying money in the form of rent or mortgages for their organization's premises (Appendix 3).

Annual insurance payment
Insurance is necessary for VOs and charities. The trustees have a duty to safeguard the property from direct loss or damage, and, at the same time, from third party liabilities, including professional indemnity insurance, employers' liability insurance, public liability insurance, etc. The present study shows that most of the sample organizations hold insurance to cover public liability (29.6 per cent) as it offers protection against claims from members of the public for injury, loss or damage incurred on the premises of the organization. Just under a fifth of those surveyed had employee liability insurance (18.8 per cent). This is in response to the legal requirement that all employers are required to have a minimum insurance cover of £5 million for injury or disease suffered or contracted by employees while carrying out their duties; and contents cover (18.3 per cent). The lowest ranking type of insurance policy held by the organizations studied was loss or no claims (1.6 per cent). It was also revealed that the majority of organizations (20.7 per cent) paid £200–£400 in annual insurance, followed by under £200 (13.8 per cent), and £400–£600 (11.2 per cent).[3]

Contribution to regional GDP
The overall contribution of the sector was dependent on income parameters (Figure 4.1), such as wage, salary and rent. Net interest (the interest received from assets minus the interest paid on liabilities) was overlooked because of a lack of information supplied by the respondents. If the value was counted here, the contribution would be higher than the present figure. An earlier study by

Collis (2003) indicated that the 1.12 million volunteers gave an average of eight hours of time a month, valued at £1.1 billion, which was equivalent to 3.6 per cent of the GDP of Wales. Here, Table 4.2 describes the contribution of human resources in monetary terms (= £147.12 million). In the study area 40 per cent of sample organizations rented their premises and most of them paid less than £6,000 as rent. Based on the present survey, applying the income approach, the estimated contribution of the Wrexham voluntary sector is provided in Table 4.2.

Table 4.2
Economic Contribution of Wrexham voluntary sector
to regional economy

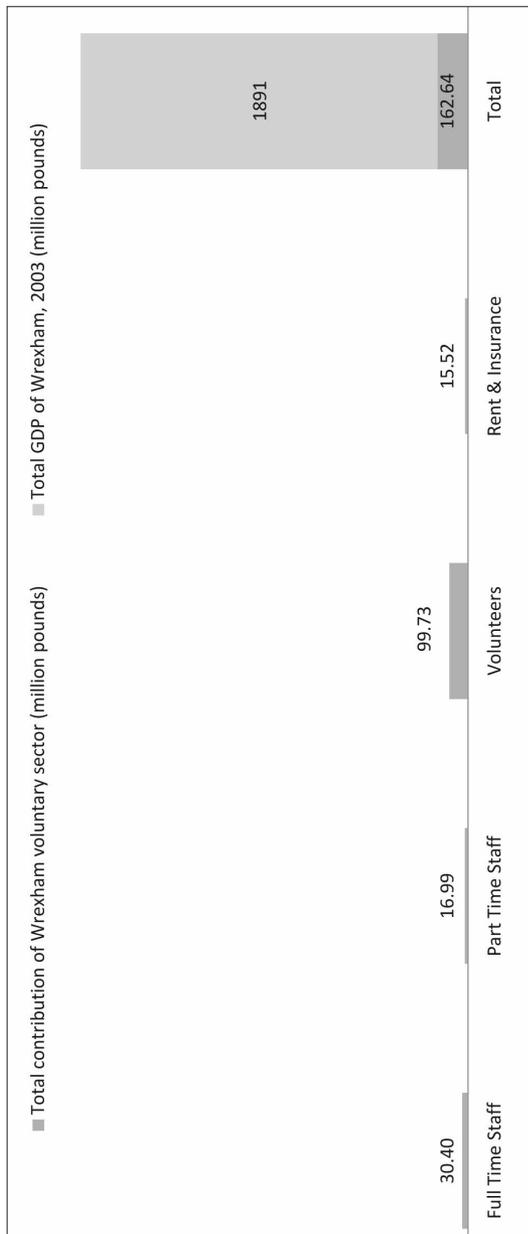| *Item*	*Contribution (in £ million)*
Compensation of staff	147.12
Rent and insurance	15.52
Total contribution	162.64

Source: Hasan (2008).

In 2003 the GDP of Wrexham was calculated at £1,891 million at 2001 market prices, which equates to £14,570 per head. At the same time, GDP was also forecast at £2,386 million for 2013 (Wrexham CBC, 2007). Consequently, it can be concluded from the above findings that voluntary organizations and charities in the Wrexham area contributed over 8.6 per cent to the regional GDP of Wrexham in 2004 (Figure 4.3) (equivalent to 6.8 per cent of local GDP in 2013).

CONCLUSION

The principal aim of this paper was to place an emphasis on the income generating sources of the voluntary sector. Allied to contemporary research on the third sector, this study focussed on the applicability of an earlier national income approach. It used earlier data collected by Hasan (2008) and Binsardi (2004). Based on a stratified random sample of 1,987 voluntary organizations and charities this study found that most of the voluntary organizations in Wrexham are small (having twenty staff members and an annual income below £20,000) and work locally. This is in line with other studies (Collis, 2003;

Figure 4.3
Total contribution of Wrexham voluntary sector to its GDP

■ Total contribution of Wrexham voluntary sector (million pounds)   ■ Total GDP of Wrexham, 2003 (million pounds)

	Full Time Staff	Part Time Staff	Volunteers	Rent & Insurance	Total
Total contribution	30.40	16.99	99.73	15.52	162.64
Total GDP					1891

2005) on this region. It was estimated that a total of 29,724 people were involved in this sector during the study period, comprising about 37 per cent of Wrexham's working population. It was also estimated that the volunteers spent an average of 7.5 hour per week volunteering, time valued at an equivalent of £99.73 million a year. When the other parameters (paid staff, rent and insurance) were taken into account, the total contribution of the sector to Wrexham became £162.64 million a year, which was 8.6 per cent of Wrexham's total GDP in 2004, (equivalent to 6.8 per cent in 2013).

The foregoing discussion suggests that 'triple bottom line' (TBL) approaches seem to be a more sensible way to evaluate the third sector's performance for it not only recognizes the traditional financial bottom line, but equally furthers understanding of the social contribution of the sector (Slaper and Hall, 2011; New Economics Foundation, 2009). However, there are challenges to putting the TBL into practice. These include measuring each of the components of GDP contribution and finding applicable data (Slaper and Hall, 2011; Norman and MacDonald, 2003).

Some limitations in the methodology were identified during data collection through survey and focus group discussion. These include: (a) although all respondents were requested to submit their accounting statements, only a few organizations sent their complete statements; (b) a significant number of respondents could not provide any information about their volunteers' hourly contributions; (c) limited information was available regarding various income components; and, (d) not all organizations were registered with WCVA (the third sector's representative body), therefore an underestimation might have been made in terms of measuring the contribution of Wrexham voluntary sector. Though the case study was mainly designed to test the usability of national income approach for measuring the sector's wider economic impact on GDP, the authors also made some suggestions to improve its future application to research on the sector. The latter includes the need for future work to apply 'shadow wage' rates. This is the rate at which the workers are willing to work for and, it is argued, should be used to estimate volunteers' monetary contribution rather than using national average minimum wage as opportunity cost. This is because it would help the sector to minimize under/overestimation as this rate can be higher or lower than the market wage for volunteers, depending on numerous factors, such as age, employment status, gender, behaviour, etc. (see Dwyer et al., 2010). A further suggestion is to increase sample size in order to get sufficient data and better representation of the whole sector (larger sample size also means greater chance of identifying outliers and attendant data distortion). It is will also be beneficial if future research takes accounts of

remaining income variable of national income approach, net interest (the interest received from assets minus the interest paid on liabilities), along with wages/salaries, rent and insurance in order to get a more complete measure of the GDP contribution of the third sector – and uses more secondary data from the voluntary organizations, such as balance sheets and/or income statements for accuracy.

In summary, this research paper has concentrated on examining the initial findings of the income approach in order to critically evaluate methodological issues. Not only does this contribute to the theoretical underpinning of national income accounting, it also provides direction for future researchers and practitioners in the field. In addition, the current study is of benefit to the voluntary sector, for it will: first, enhance the understanding of the resources and capacities of voluntary organizations to avoid underestimation and over-estimation of the sector contribution; secondly, provide better information for external bodies seeking to work in partnership with organizations to deliver governmental services; and, thirdly, enhance understanding of third sector economics in a time of austerity. Furthermore, the present discussion underlines the social and economic contribution of voluntary organizations to the local economy.

APPENDIX 1

Calculation of GDP

According to NES (ONS, 2003):

Full-time weekly earnings in Wales: £414.50
Total weekly hours of full-timers: 39.6
Total weekly hours of part-timers: 19.4
Average hourly payment: £10.47

On the basis of the survey (Hasan, 2008):

It was estimated that the average contribution of a volunteer was 7.5 hours per week in this area.
Part-time weekly earnings had been assumed as £203.06 based on ONS, 2003.

In the Wrexham voluntary sector, the following number of manpower involved three different components (figures in the parentheses show the economic contribution per year):

Full-time: 1,520; (equivalent to £414.50 x 4 x 12 x 1,520 = £30.40 million)
Part-time: 1,744; (equivalent to £203.06 x 4 x 12 x 1,744 = £16.99 million)
Volunteer: 26,460; (equivalent to £10.47 x 7.5 x 4 x 12 x 26,460 = £99.73 million)
Total number of HR: 29,724; (equivalent to £147.12 million per year)

It was also estimated that the average annual rent and insurance payment of per organization in this area was just over £7,000 (£7,197.33) and about £800 (£798.56) respectively. In total, the sector contributed £15.52 million to the local economy in the form of rent and insurance.

APPENDIX 2

Value of the premises owned by the VOs and charities in Wrexham

Rank	Premises valued	Number of organizations	Percentage	Monetary value £M
1	Not own premises at all	778	40.0	0
2	Premises valued over £500,000	505	26.0	151.5
3	£400,000–£500,000	155	8.0	37.2
4	£250,000–£300,000	117	6.0	17.55
5	£350,000–£400,000	77	4.0	16.17
6	£150,000–£200,000	77	4.0	16.17
7	£20,000–£40,000	77	4.0	16.17
8	Less than £10,000	77	4.0	16.17
9	£80,000–£100,000	39	2.0	1.87
10	£10,000–£20,000	39	2.0	1.87
	Total	1941	100	274.67

(Hasan, 2008).

APPENDIX 3

Annual rent paid by the voluntary organizations and charities

Rank	Premises valued	Number of organizations	Percentage	Monetary value £M
1	Less than £6,000	1136	58.5	4.09
2	More than £30,000	356	18.3	6.40
3	£10,000–£15,000	118	6.1	0.70
4	£6,000–£10,000	118	6.1	0.42
5	£15,000–£20,000	95	4.9	0.85
6	£20,000–£25,000	95	4.9	1.14
7	£25,000–£30,000	23	1.2	0.34
	Total	1941	100	13.97

(Hasan, 2008).

NOTES

[1] Research notes are shorter papers often on methodological issues aimed at practitioners as well as researchers.
[2] For example, inviting the respondents to join a complementary third sector research 'taster course' at Glyndŵr University.
[3] In addition, a minority paid £1,800–£2,000 (0.9 per cent), £2,500–£3,000 and £1,600–£1,800 (joint equal 1.7 per cent).

REFERENCES

Ahmed, S. and Palmer, J. (2007). *Mapping the Voluntary and Community Sector in Bath and North East Somerset, Final Report*, North Harbour Consulting. Available at: *http://northharbourconsulting.co.uk/file_download/5* (accessed 4 October 2013).

Beardshaw, J., Brewster, D., Cormack, P., Ross, A. (2001). *Economics: A Student's Guide*, 5th edn, Essex: Prentice Hall.

Binsardi, A. B. (2004). 'Mapping the contribution of the Wrexham voluntary sector to gross domestic product', *working paper*, Wrexham Business School.

Brown, E. (1999). 'Assessing the value of volunteer activity', *Nonprofit and Voluntary Sector Quarterly*, 28(1), 3–17.

Cambridge Econometrics (2003). *The Value of the Sports Economy in England*, London: Sport England.

Case, K. E. and Fair, R. C. (2004). *Principles of Economics*, 7th edn, Upper Saddle River, NJ: Prentice Hall.

Charity Commission (2006). *Small Charities: Dissolutions and Removals from the Register, Identifying and Advising Small Charities,* operational guidance*,* available at: *http:// www.charitycommission.gov.uk/supportingcharities/ogs/g202b001.asp* (accessed 10 February 2008).

Cohen, L. and Holliday, M. (1996, reprinted in 1998). *Practical Statistics for Students,* London: Sage Publications.

Colander, D. C. and Gamber, E. N. (2006). *Macroeconomics,* Cape Town: Pearson Education South Africa (Pty) Ltd.

Collis, B. (2003). 'Wales voluntary sector almanac 2003: a new era?', Cardiff: WCVA.

Collis, B. (2005). 'Essential information about the voluntary sector in Wrexham', Wales voluntary sector panel survey: report 1.3.6', Cardiff: WCVA.

Davies, L. E. (2004). 'Valuing the voluntary sector: rethinking economic analysis', Leisure *S*tudies, 23 (4), 347–64.

Dawson, G., Athreye, S., Himmelweit, S., Sawyer, M. (eds) (2003). *Economics and Economic Change: Macroeconomics*, Glasgow: The Bath Press.

Dwyer, L., Forsyth, P. and Dwyer, W. (2010). *Tourism Economics and Policy*, Bristol: Channel View Publications.

Eglington, K. (2010). *The Economic Impact of the Voluntary Sector on the Braintree Economy.* Available at: *http://www.bdvsa.org.uk/files/101129%20braintree%20 FINAL. pdf* (accessed 1 January 2013).

Fowler, F. J. (2002). *Survey Research Methods*, 3rd edn, Thousand Oaks, California: Sage Publications.

Fujiwara, D. and Campbell, R. (2011). 'Valuation techniques for social cost-benefit analysis: stated preference, Revealed preference and subjective well-Being approaches', London: HM Treasury and the Department for Work and Pensions.

Fujiwara, D., Oroyemi, P., and McKinnon, E. (2013). *Wellbeing and Civil Society: Estimating the Value of Volunteering Using Subjective Wellbeing Data,* working paper, London: Cabinet Office and the Department for Work and Pensions. Available at: *https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/221227/ WP112.pdf* (accessed on 8 January 2014).

Gaskin, K. (1999). 'Valuing volunteering in Europe: a comparative study of the volunteer investment and value audit', London: Institute for Volunteering Research.

Hall, R. E. and Lieberman, M. (2010). *Macroeconomics: Principles and Applications,* 5th edn (e-book, p. 147). Available at: *<books.google.co.uk/books>* (acessed 10 June 2013)

Handy, F. and Srinivasan, N. (2004). 'Valuing volunteers: an economic evaluation of the net benefits of hospital volunteers', *Nonprofit and Voluntary Sector Quarterly*, 33(1), 28–54.

Hasan, M. (2008). '*An Economic Analysis on the Contribution of the Wrexham Voluntary Sector to its Regional GDP*', MBA dissertation, Glyndŵr University.

Holt, A. (2010). 'New research reveals importance of voluntary organisations', *Charity-times.* Available at *http://www.charitytimes.com/ct/NCVOAlmanac.php* (accessed on 25 April 2013).

Independent Sector. (2001). *The New Nonprofit Almanac in Brief: Facts and Figures on the Independent Sector.* Available at: *http://community-wealth.org/sites/clone.community-wealth.org/files/downloads/report-independent-sector.pdf* (accessed 15 December 2013).

Kane, D., Clark, J., Clifford, D., Mohan, J., Dobbs, J., Bass, P. (2013). Collecting and Classifying Data from Charity Accounts for England and Wales, working paper no. 93, Birmingham: Third Sector Research Centre. Available at: *http://www.birmingham.ac.uk/generic/tsrc/documents/tsrc/working-papers/working-paper-93.pdf* (accessed on 28 December 2013).

Jeppeson, M. K. (2001). *Probability Sampling – Why Not Sample Everyone?*, Sigma Research Consultants, available at: *http://www.invert5.com/probability.pdf* (accessed on 15 January 2013).

Landefeld, J. S., Seskin, E. P. and Fraumeni, B. M. (2008). 'Taking the pulse of the economy: measuring GDP', *Journal of Economic Perspectives*, 22(2), 193–216.

Lawtie, A. (2007). *Aberdeen's Voluntary Sector – A Report on the Economic Impact of the Sector, Aberdeen: Aberdeen Council of Voluntary Organisations*. Available at: *http://acvo.org.uk/* (accessed 15 January 2011).

Lewis, G. (2001). 'Mapping the contribution of the voluntary and community sector in Yorkshire and the Humber', Yorkshire and the Humber Regional Forum.

Lucas, S. R. (2013). 'Beyond the existence proof: ontological conditions, epistemological implications, and in-depth interview research', *Quality & Quantity,* 48 (1), 387–408.

Malhotra, N. and Birks, D. (1991). *Marketing Research: An Applied Approach*, 3rd edn, Essex: Pearson Education Ltd.

Mankiw, N. G. (2012). *Brief Principles of Economics*, 6th edn, Mason, OH: South-Western Cengage Learning.

Mook, L. and Quarter, J. (2003)*. How to Assign a Monetary Value to Volunteer Contribution: A Manual*, Canadian Centre for Philanthropy. Available at: *http://www.imaginecanada.ca/files/www/en/library/kdc-cdc/quarter_final_eng.pdf* (accessed 15 July 2013).

Narraway, G. and Cordery, C. J. (2009). 'Volunteers: valuable but invisible to accountants?', *Third Sector Review, 15*(*1*), 11–29.

NCVO (National Council for Voluntary Action) (2012). 'The economic contribution of voluntary sector', *Annual Report 2012.* Available at: *www.ncvo-vol.org.uk* (accessed on 25 February 2013).

New Economics Foundation (2009). 'Triple bottom line measurement and the third sector: a review of the history and context, main approaches and challenges'. London: Charities Evaluation Services. Available at: *www.neweconomics.org* (accessed on 9 January 2014).

Norman, W. and MacDonald, C. (2003). 'Getting to the bottom of "Triple Bottom Line"', *Press, Business Ethics Quarterly*, 'Online First' (March), available at: *http://*

isites.harvard.edu/fs/docs/icb.topic549945.files/Canadian%20Paper.pdf (accessed on 9 January 2014).

ONS (2003). 'New Earnings Survey', Office for National Statistics, London: Office for National Statistics.

ONS (2012). 'United Kingdom National Accounts – The Blue Book'. Available at: *http://www.ons.gov.uk/onsindex.html* (accessed 15 October 2013).

POM (2007). *Assessing the Economic and Social Contribution of the Voluntary and Community Sector in Camden*. Available at: *http://www.camdencen.org.uk* (accessed on 2 February 2012).

Petrie, A. and Hawtin, M. (2004). *Impact of the voluntary and community sector in Greater Nottingham*, Policy Research Institute, Leeds: Leeds Metropolitan University.

Rossana, R. J. (2011). *Macroeconomics*, Oxon: Routledge.

Sampson, C. (2011). *The well-being valuation approach: Solution or convolution?*, The Academic Health Economists' Blog. Available at: *http://aheblog.com/tag/well-being-valuation-method/* (accessed 8 January 2014).

Saunders, M., Lewis, P. and Thornhill, A. (2003). *Research Methods for Business Students*, 3rd edn, New York: Prentice Hall.

Slaper, T. F. and Hall, T. J. (2011). 'The triple bottom line: what is st and how does it work?, *IBR Indiana Business Review.* Available at: *http://www.ibrc.indiana.edu/ibr/2011/spring/article2.html* (accessed 9 January 2014).

Sloman, J. (2006). *Economics*, 6th edn, Essex: Pearson Education Limited.

Sajardo, A. and Serra, I. (2010). 'The cconomic value of volunteer work: methodological analysis and application to Spain', *Nonprofit and Voluntary Sector Quarterly.* Available at: *http://nvs.sagepub.com/content/early/2010/07/23/0899764010371233* (acccessed 20 February 2013).

Taylor, J. B. (2007). *Economics*, 5th edn, New York: Cengage Learning Inc.

Taylor, J. B. and Weerapana, A. (2012). *Principles of Macroeconomics*, 7th edn, Mason, OH: South-Western Cengage Learning.

VONNE (Voluntary Organisations' Network North East) (2000). 'The contribution of the voluntary and community sector to the economic life of the north east region'. Available at: *http://www.vonne.org.uk* (accessed on 20 June 2011).

Wainwright, S. (2002). *Measuring Impact – A Guide to Resources*, London: NCVO.

Wessels, W. J. (2012). *Economics: Barron's Business Review*, 5th edn (revised), New York: Barron's Educational Series Inc.

Wrexham CBC (2007). 'Wrexham Employment Sites Study. Appendix A – Economic Review'.Available at: *http://wrecsam.gov.uk/assets/pdfs/planning/ldp/wrexham_employment_sites_study_appendixa.pdf* (accessed 22 January 2014).

Zikmund, W. G. (2002). *Business Research Methods*, 7th edn, Orlando: The Dryden Press.