Review of Non-market Value Estimation for Festivals and Events

A Discussion Paper

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A. A Lay Person's Glossary

Term	Acronym	Definition
Benefits transfer		A tool used by economists to estimate the value of a good or service using existing primary measures of the value of *similar* goods or services. In essence, *benefits transfer* requires the researcher to rely on estimates of "value" from primary information about analogous or similar goods or services. It is a literature-based estimate of value, so naturally, if there is no literature available, the method cannot be used.
Consumer's surplus		The difference between the maximum a consumer is willing to pay for a good and the market price is *consumer's surplus.* For example, if the entrance fee to an event is lower than the consumer would have been willing to pay, the difference between the actual price and the maximum amount the consumer *would have paid* is *consumer's surplus*.
Contingent Valuation	CV	Contingent valuation is the use of questionnaire responses to estimate the willingness of respondents to pay for public projects or programs (WTP). Often the question is framed, "Would you accept a tax of x dollars to pay for the program?"
Crowding out		You can't spend the same dollar on two *different* goods or services. For example, if you are committing to spend resources on a festival or event, you are drawing down or *crowding out* the income that is available to spend on other goods and services.
Discrete choice model		A modelling technique developed to estimate the relative values of various characteristics of an event, festival or consumer product. The technique involves developing a discrete number of "choice sets" that include salient characteristics of the event or product and asking consumers to make a choice between pairs of options, or sets of options. Sophisticated statistical methods are required to set up materials for this type of test and to analyze the results.
Externalities		These are *values produced by a good or service accruing to third parties who are not participants in the market transaction* for that good or service. They can be positive or negative . . . *producers sometimes confer benefits on other members of the economy but are unable to obtain payment for these benefits, and they sometimes act in such a way as to harm others without having to pay the full costs.*[1] In the case of a festival or event, a positive *externality* could be publicity it generates that causes people to visit the town in the future who would not have visited it otherwise. The event organizers are unable to obtain "payment" for the publicity but it has an economic value nevertheless. A negative externality might be the inability of local residents to find parking during the festival. The event organizers do not pay the cost of this inconvenience, but it has a negative value to community residents.

[1] Mansfield, E., *Micro Economics Theory and Applications*, Second Edition, W.W. Norton & Company Inc., New York, 1975, page 450.

Term	Acronym	Definition
Externalities (cont'd)		*Non-use* or *passive use* values can be related to the presence of *externalities*. Example: a local resident is proud of the fact that the community offers a world-renowned festival annually even though he/she never goes to the festival, and this might be reflected in his/her non-use value for the festival.
Hedonic property/ wage models		*Hedonic* refers to the *utility* or *pleasure* an event or good provides to the consumer. A hedonic property is related to a specific quality or feature of a product. Estimates of demand for a good may be obtained by decomposing the good into its constituent features and obtaining estimates of the value of each feature. This technique is applicable to goods such as real estate where the value of a building may be determined by its location, lot size and other relevant characteristics.
Market clearing		Also known as *market equilibrium price*, the market clearing price is the maximum price at which all the good or service offered for sale are purchased. For example, the market clearing price for a concert would be highest ticket price that would result in no seat being left unoccupied.
Market equilibrium		See *Market clearing*
Non-use or passive use values		Values that are not directly associated with the use of a good or service. See *externalities*
Ordinary least squares	OLS	A standard linear regression technique. A method of determining the curve that best describes the relationship between expected and observed sets of data by minimizing the sums of the squares of deviation between observed and expected values.
Poisson distribution		In probability theory and statistics, the **Poisson distribution** is a particular discrete probability distribution. Values are non-negative integers (0,1,2,3,4,…etc.). The Poisson distribution expresses the probability of a number or "count" of events occurring in a fixed time if these events occur with a known average rate, and are independent of the time since the last event. Some events are rare. For instance, car accidents are the exception rather than the rule. Still, over a period of time, we can say something about the nature of rare events. An example is the improvement of traffic safety. A government may want to know if wearing seat belts reduces the number of deaths in car accidents. Here, the Poisson distribution can be a useful tool to answer question about benefits of seat belt use by estimating the probability of car accidents occurring in a fixed time period in which seat belts are or are not worn.
Primary valuation methods		Techniques for measuring *revealed preferences* including travel cost, hedonic property and market pricing methodologies and/or for measuring *stated preferences* including contingent valuation, contingent behaviour, stated choice modelling and the like. These methods involve collection of primary data.

Term	Acronym	Definition
Producer's surplus		Producer's surplus is a measure of the difference between the revenue a producer actually receives at the market price for the quantity of goods sold and the revenue the producer would have received at the minimum price he/she would have accepted for this same quantity of goods.
Revealed Preference	RP	*Doing* something (e.g., making a choice, or going to an event) is a measure of person's level of preference for the "thing" (event). The individual's behaviour or choice is, in effect, his or her way of *revealing* their preferences. Those who do something have a *preference* for the "thing" whereas those who do not do "it", reveal no preference for it. Economists have developed ways of estimating a monetary value for revealed preference.
Secondary valuation methods		Using secondary tools to estimate value (see *benefits transfer*).
Stated Preference	SP	Asking someone to *tell* you how important something is to him/her, or to make trade-offs among a list of options is a *stated* preference. This includes responses to valuation questions. In non-market evaluations, common techniques to estimate Stated Preference might include survey questions that ask people to choose between a series of "pairs" of options that include some shared and some different attributes. Using sophisticated statistical techniques, the preference or *utility value* of each attribute can be calculated.
Willingness To Accept	WTA	The minimum willingness to accept compensation rather than do without the good or to accept a "bad". For example, people in a community may be willing to accept a heavy-metal band concert next to their homes, if they are compensated sufficiently. Similarly, residents may be willing to lose a view, if the developer of a site provides adequate compensation.
Willingness To Pay	WTP	The *most money* a person is willing to pay to obtain a good or service.

B. Introduction

Organizers are often called upon to make estimates of the benefits or "value" their event or festival brings to a community. Commonly, such estimates take the form of measuring **tourism-related economic impacts**. Tools to help event and festival organizers determine whether they are in a position to implement studies to generate inputs for tourism economic impact estimation and guidelines for implementation are provided in other documents associated with this project[2]:

1. *Guidelines for Measuring Tourism Economic Impact At Gated Events and Festivals*
2. *Guidelines for Measuring Tourism Economic Impact At Ungated or Open Access Events and Festivals*
3. *Guidelines for Measuring On-Site Spending At Gated Events and Festivals*[3]
4. *Guidelines for Measuring On-Site Spending At Ungated or Open Access Events and Festivals.*

1. Economic Impact is Only Part of the "Value" Story

The **tourism economic impact** of an event or festival is framed in classic "market" terms. The process generates estimates of the number of new jobs, contributions to economic activity in a community (gross domestic product or GDP), and tax revenues that can be said to accrue to the community as a result of additional spending by visitors drawn to the community, at least in part, because the event or festival took place. Of course, additional spending by visitors may not reflect all the benefits created by an event or festival. If the event has a low or zero admission price, the value of the event to attendees may far exceed the amount spent on attending the event. For example, the Rolling Stones occasionally give unannounced performances in a club in Toronto. Attendees pay a nominal cover charge, far less than the actual value they place on attending the event. If admission tickets were instead auctioned on e-Bay the price would be bid up to a level much more reflective of the actual value of attending the event. Thus, sometimes the amount spent on attending the event does not accurately reflect the value of the event to attendees and should be considered to be a lower bound on the actual value.

There are ***other types of benefits*** that might be generated by events and festivals. These *other types of benefits* are commonly referred to as *non-market* values or benefits. They could include the contribution an event or festival might make to:

- community pride;
- the maintenance of social or cultural traditions;
- the physical and mental health of community residents;

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[2] This review was commissioned to Dr. W. Douglass Shaw by Research Resolutions & Consulting Ltd. as part of a larger project supported by numerous partners. The authors gratefully acknowledge the support provided by Alberta Economic Development; Canadian Tourism Commission; Federal, Provincial, Territorial Culture/Heritage and Tourism Initiative (Managed by the Department of Canadian Heritage); Government of the Northwest Territories – Department of Resources, Wildlife, & Economic Development; Government of Yukon – Department of Tourism and Culture; Nova Scotia Department of Tourism, Culture and Heritage; Ontario Ministry of Tourism; Tourism British Columbia; Tourism Prince Edward Island; and Texas A&M University.

[3] *Guidelines for Measuring On-Site Spending At Gated Events and Festivals* and the analogous set of guidelines for ungated events were prepared as a separate project for Alberta Economic Development, Tourism British Columbia and other provincial partners. These additional Guidelines follow the format and basic approaches described in the Guidelines for capturing inputs to estimate the tourism economic impact of an event.

- capacity building that might occur among those engaged in the organization and implementation of the event or festival; and

- individual happiness of artists or performers .

Non-market benefits may, at first glance, appear to be *qualitative* in nature. They are attributes or "states of being" that may not have a "market price". For example, the *joy* experienced by local choral group members as they perform at the opening ceremonies of a festival does not have an obvious "price tag" but this *joyful experience* can certainly be said to have "value" to the choir members.

Even people who are not members of the choir and do *not* attend the festival's choral concert may be made "happier" knowing that other people have come to their community to listen to their local choir. Making people in a community "happier" or the joy experienced by the choristers has "value" or "benefit" but the "value" or "benefit" can be difficult to *quantify.*

Although joy and pleasure appear to be qualitative, they *can* be measured in economic terms. In many cases, the "marketplace" performs this function. We can think of the price someone is willing to pay for a soft drink as a measure of the pleasure it gives the consumer. For many goods, including parks and festivals, however, there is no marketplace (market). Nevertheless, there are techniques in economics for evaluating the joy or pleasure derived from a good or service in actual dollars and cents even though consumers do *not* indicate its value to them through direct money purchases. In other words, no "market" exists for these goods or services, yet they have a value. Public officials are often faced with the need to value these non-market goods or services because they face costs of producing them and some may question whether the costs are warranted.

For example, they might ask: *How much is a public park worth to the community?* It might well be the case that no one pays an entrance fee to use the park, but it does have an economic value to the community. Its value can be revealed by the amount of taxes the community is willing to pay for it, if such information is available. In most cases this type of information is not readily available, and public officials try to guess what this value is. If the cost is sufficiently great or funding is politically very sensitive, economists may be brought in to calculate its value in dollars and cents. Such economic studies can be very useful in helping officials make investment decisions about competing public goods for which no markets exist. Such analyses can answer these questions: Does the official fund a new public park, an annual music festival, both or neither? Which is worth more to the community - the park or the festival?

2. Transforming Non-Market Values Into Dollars and Cents

Many festivals or events bring only modest or no *tourism economic impact* (new jobs, new economic activity [GDP], new tax revenues) to the community but they may bring considerable non-market value. How do organizers at events with *minimal* tourism economic impact present their case for support to local politicians, the community at large, and potential sponsors?

To begin with, organizers could say that their festival or event makes people *happier*. They could do surveys in the community or at the event to assess how *important* people say the event is to them and present the results of these surveys. They could also *transform non-market values into dollars and cents* and present an estimate of this dollar value to local politicians, the community at large and potential sponsors. Approaches to generating a dollar amount that represents non-market value are the subject of this discussion paper.

Unlike the *Guidelines* (see above), this paper is NOT a "*how to" manual*. Instead, it provides event and festival organizers with a description of *alternative approaches* for estimating the "value" of their events. It is designed to provide an introduction to the concepts and tools economists have developed to transform non-market value into dollars and cents.

When reading this paper, it is important to note the following:

- Some of the tools developed to estimate non-market value have a comparatively long history. They are "tried and tested". Others are much more exploratory in nature and are still in the development stages;

- There is no single or universally accepted approach to estimating non-market value;

- Estimating non-market value relies on many *assumptions.* For example, assumptions are made in modeling exactly how people value "public goods" (e.g., *air* or *water*), how much "satisfaction", "joy" or "happiness" is worth in dollars and cents terms, and so on[4]. As such, the estimates produced by the various approaches described in this paper might differ from study to study, depending on the researchers' modeling assumptions.

- Generally, estimating non-market value requires the collection of information directly from the public via surveys of some type. The process also requires the application of relatively complex economic modeling techniques to the survey information.

- Expertise in survey design and economic modeling is required to generate credible estimates of non-market value. Highly trained economists who specialize in this field are commonly required to undertake non-market valuation studies.

- Measurement of non-market value was pioneered on topics associated with natural resource and environmental management (water management, air quality, etc.) and is slowly making its way into other areas of society such as cultural and heritage sites and events. Because it had its start in resource and environmental management issues, many of the non-market value measurement approaches described in this paper originate in studies of these sectors.

- Over 100 articles and journal papers were reviewed to prepare this paper. The extensive literature review generated many titles that appeared relevant and promising. Upon examination, however, very few articles were attempts to estimate the non-market value of an event or festival (see Myerscough, McCarthy, etc.). The absence of material to identify, operationalize and value non-market benefits such as community pride, social cohesion, ethnic diversity, etc. in the context of festivals and events also suggests that considerably more work is required before the tools will be in place to apply some of the economic methodologies described in this paper.

3. There are always "costs" and "benefits"

When decision-makers are asked to assign resources to events or festivals, they are most likely operating in a trade-off environment from a budget perspective. They have a fixed amount of funding to distribute. If they elect to spend money on Festival A, they may not have funds available to spend on Festival B or on some other good or service that

[4] When estimating the worth in dollars and cents of "satisfaction" a person receives from an event, what is really being estimated is the value of the goods the person would be willing to give up in exchange for the "satisfaction" received from the event in question.

might be of value to the community (e.g., better schools, more roads, etc.). Throughout the following discussion it is assumed that there is a fixed budget environment in which the total benefits/costs of one spending option would be weighed against the total benefits/costs of another spending option.

We recognize the reality of opportunity costs and the importance of undertaking cost/benefit analyses to identify spending priorities in many situations. These topics are, however, beyond the scope of this paper. Instead, the focus is on non-market benefits and how they might be valued and measured for events and festivals.

4. Steps in the Process

The "critical path" for estimating non-market value includes the following steps.

- Step 1: Agreement on a set of assumptions about what is *good* or *bad* for a community. Identifying these variables and obtaining community-based agreement with them is an essential step in gaining acceptance of non-market benefit estimates[5]. If funders or potential partners do not agree with the basic assumptions in the modeling exercise, they are unlikely to pay attention to the results.[6]

- Step 2: Generating "operational" definitions of the variables that will be included in the non-market value estimation process and determining how best to measure them (e.g., what dollar value will be associated with specific non-market benefits and costs?).

- Step 3: Implementing studies to capture consumer responses to the variables that will be included in the non-market value estimation process.

- Step 4: Modeling results of the survey(s) and interpreting the findings.

Each of these steps is complex, particularly since there is no accepted "template" for events and festivals to estimate their non-market value. Nonetheless, the debate about the importance of measuring and reporting non-market benefits of festivals and fairs – and the best tools to attempt such measurement – is ongoing. As Whiting (1999) notes:

> *. . . if the arts and culture are to be recognized in a manner similar to other sectors of the economy, professionals and institutions in the sector must begin describing and representing the sector in ways which are comparable to other sectors. This means developing an analytical framework which incorporates all the beneficial aspects derived from the sector and its component parts*[7]*.*

5. Before You Read Further . . .

Because economists have led the exploration of how to transform non-market value into the same unit of measurement as traditional economic impact assessments – dollars and cents – readers who are not familiar with

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[5] This includes deciding whose benefits and costs matter. While spending of community residents may have no economic impact on the community, the non-market benefits (and costs) received by community residents will likely be considered to be very important. Conversely, while the spending of visitors to the community will have an economic impact and thus be of interest to the community, the non-market benefits received by non-residents may not be of interest.

[6] Examples of the costs (*bad)* such as crowding, noise, parking and traffic congestion are referred to later in this paper. For examples of the types of benefits (*good*) that might be included, see Whiting, Peter C. (1999), pages 19, 20.

[7] Whiting, Peter C. (1999), page 19.

economic terminology may find it useful to acquaint themselves with the acronyms and definitions of economic terms used throughout the paper (see glossary and list of acronyms).

The discussion that follows was prepared primarily by Dr. Shaw, an economist at the Departments of Agricultural Economics and Recreation, Parks and Tourism Sciences at Texas A&M University who specializes in non-market valuation of goods such as clean rivers and protection against health risks such as from arsenic contamination. We present the concepts and techniques associated with non-market value estimation in ways that are appropriate for policy analysts, event managers and organizers, researchers and other educated *lay* readers. We recognize that some of the terminology and concepts may seem "technical" but they reflect the actual complexity of the concepts, data collection and modelling techniques economists have developed to measure non-market value. To aid the lay reader, however, the most important and simple points in the paper are presented in highlighted text.

C. Background and Key Concepts

1. Why Consider Measuring Non-Market Value for Events and Festivals?

Tourism is an integral part of many provincial, state and regional economies. Events and festivals are increasingly part of many communities' efforts to promote tourism in many places around the world (Clarke 2004). Such events are often subsidized by regional government agencies and people within the host community.

Many events and festivals can be *consumed at a market price*. The cost of admission is this market price. For such events, access to the festival is permitted only if the participant pays. If the cost of admission perfectly reflects each participant's maximum willingness to pay (WTP) for that event, then one can say that the market ticket price is a good representation of the value that each event participant has for the event or festival. Even in cases where there is no admission fee, a *surrogate* market price or *value* is typically defined and measured by economists as the consumer's willingness to pay (WTP).

Tourists and others who attend an event might spend additional monies in the community where the event is held. The revenue generated by these additional expenditures may, in turn, be a good representation of the extra economic value to those in the community who may or may not attend the event, but who benefit from expenditures because these monies become income paid to them. Commonly, the revenue generated in the community by additional tourism expenditures is captured in a traditional tourism economic impact assessment.

Acronyms commonly used in this paper	
CV	Contingent Valuation
OLS	Ordinary Least Squares
RP	Revealed Preference
SP	Stated Preference
WTA	Willingness To Accept
WTP	Willingness To Pay

As noted in the Introduction, these tourism economic impact assessments are typically measured by evaluating markets. Examples of the measurement of this type of economic impact are abundant in the literature (e.g. Stynes and Sun 2004), and include estimates of the economic impacts of arts festivals, and sporting events such as boxing, badminton, and other competitive tournaments, as well as mountain bike competitions (see Clarke 2004).[8]

Unlike traditional economic impact studies, here the focus is on features of events that lead to values over and beyond the observable price that participants pay, and/or stem from ticket sales and expenditures by tourists.

Central to estimating the non-market value is the relationship between price and value.

2. Price and Value

When markets exist and function well, it is typically assumed that the price of the market good reflects its value to purchasers. For example, if an event's ticket can be sold at the point at which the "price" is consistent with the "value" the good or service holds for the individual purchaser, the price is assumed to encompass the value that the individual purchaser has for that event. Thus, if a ticket to the event costs $10.00 and the purchaser is willing to pay no more than $10.00 to attend, a market is assumed to exist and to be functioning well. The price, in this case, is at *market equilibrium* (also referred to as *market clearing*).

[8] Such studies might involve the calculation of expenditure and employment multipliers. Note also that some rules or guidelines applied to the calculation of traditional economic impacts do not necessarily pertain here. While this is not the subject of this document, it is noted that some economists and analysts question the accuracy of such studies (see Snowball and Antrobus 2004).

In the cases discussed below, we consider those instances where markets do not work so well, or do not exist at all:

- When markets fail, prices may not reflect the value to the typical individual purchaser;
- When people *other than the purchaser* of a ticket to an event obtain or lose value for that event.

Before exploring these topics, the value concept is discussed. It is presumed to generally hold for all goods and services consumed.

3. What is "value"?

Modern economists believe that scarcity of resources, relative to desires and wants, is the basic determinant of value. Diamonds have great value because they are desired and scarce. Dirt has little value because most people don't want a lot of it, and it is not scarce. An individual's value for a good is measured in economics as his or her maximum willingness to pay (WTP) for that good. This WTP takes into account all of the things that an individual could purchase with his or her scarce resources, so it is another way of saying that any person chooses to give up something he/she may desire (a new television set, or money set aside in savings) to get something else (support for an event of importance).

Any WTP for a unit of a good characterizes a point on the individual's demand curve for the good. This is true whether there is a market or not, though of course, in the absence of markets, finding the demand curve for the individual is more difficult than when there are markets. Obviously, WTP also depends on an individual's income level.[9]

Acronyms commonly used in this paper	
CV	Contingent Valuation
OLS	Ordinary Least Squares
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WTA	Willingness To Accept
WTP	Willingness To Pay

4. A Demand Curve

As an example, consider Bill. Suppose this imaginary person, Bill, is willing to pay $6.00 to see one (1) movie per month. Thus, Bill's willingness to pay to see the *one* movie per month is expressed as:

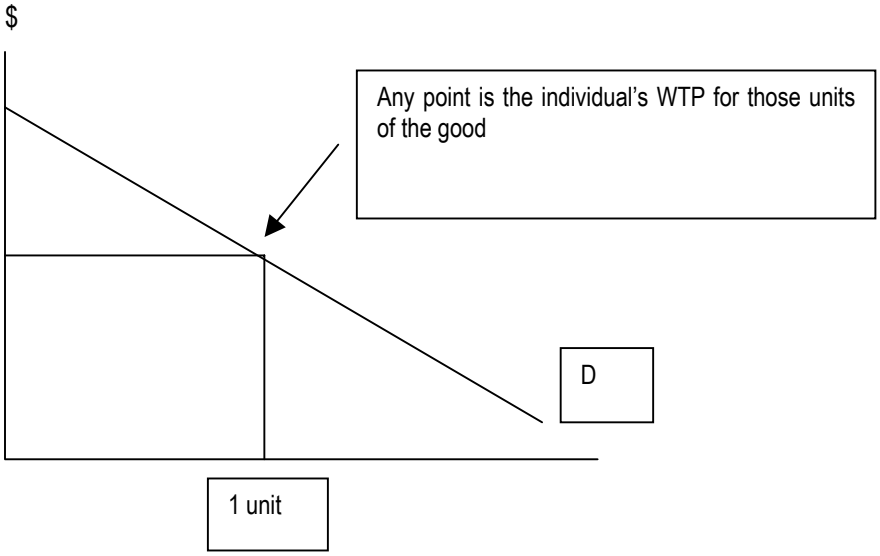
Bill's WTP (willingness to pay) = $6.00

Economists typically believe that the WTP will fall with more consumption of the good (the movies) as the consumer becomes satisfied and less willing to give up other goods to get more of the good being considered. In other words, Bill's WTP for one movie per month might be quite high, but the WTP for seven movies per month might be considerably lower, as Bill considers the other goods that must be given up to consume seven such movies. Thus, Bill might be willing to spend $6.00 to see one movie per month but would *not* be willing to spend $42.00 per month to see seven movies (7 movies * $6.00 per movie = $42.00 per month).

Economists represent the *relationship between* the price Bill is willing to pay for movies and the quantity of movies seen using "demand curves". Figure 1 is a *generic* demand curve that plots the price a consumer is willing to pay for each additional unit of the good or service. In Bill's case, it would be the number of movies per month. Note that this demand curve can be shifted up or down, but the factors that shift it include anything *except* the price of the good.

[9] Income throughout the document pertains to all income, earned and unearned, including wealth accumulated from savings.

Figure 1 Individual Demand Curve



Of course it is possible that the individual gets to pay less than his or her WTP for a good, when the equilibrium market price is below his or her WTP.[10] In this case the individual obtains what is known as "consumer's surplus" (see next section for more details).

5. Ways to Estimate Value: Consumer's and Producer's Surplus

a) Consumer's Surplus

Consumer's surplus measures the net benefit that the consumer gets from the good. Put simply:

Consumer's surplus is the value to the consumer over and above what is actually paid for a good or service. It is what economists deem as the appropriate value to measure when focusing on consumers of a market good.

Consumer's surplus is defined as the difference between the individual's WTP and the price paid (see Appendix A for a more rigorous definition). For example, it may well be that a person purchases a ticket to an event at a given price, but would have been willing to pay considerably more than the going price, because of the pleasure (utility) obtained from attending it.[11] Individuals who find events greatly pleasurable are likely to have considerable consumer's surplus for the events, holding other factors constant (e.g. Moore 1966).

b) Producer's Surplus

The supplier's portion of any good also has a value, but is measured for the supplier as "producer's surplus." Producer's surplus is actually what most people think of when they think about the economics of an event or festival, as this is the additional revenue that businesses earn in a community when such an event or festival occurs[12].

[10] Equilibrium is determined by both supply and demand. Since one individual's demand is only part of the aggregate demand that determines equilibrium, it can well be that many individuals obtain consumer's surplus.

[11] See the Rolling Stones performance example discussed earlier.

[12] More precisely, it is the net revenue businesses earn due to the event or the additional revenue businesses earn in excess of the additional costs incurred due to the event or festival.

Commonly heard are things like "The Reno 'Hot August Nights (Car Show)' will net the community $5 million over a three day period." This $5 million is typically only producer's surplus and does not include consumer's surplus.

c) Total Value or Benefit to Society

Total value or benefit to society from a good is the sum of both producer's and consumer's surplus. And so, to supplement the usual studies of economic impacts that are limited to analyses of producer's surplus, quantification should include consumer's surplus. This quantification often takes the form of a study to assess consumers' willingness to pay for the good (see Snowball and Antrobus).

6. Measuring the Value of "Public Goods"

Markets most often do quite well in allocating what economists call *private goods* but many goods that people in society enjoy are not private goods. In such cases the market does not perform so well in allocating these "public" goods or externalities, and therefore, there is often a shortage, or in some cases, too much of the public good (or bad).

Economists know that for many things that society cares about there is no market, and hence, no observable market price. Examples are environmental amenities, such as a lake or scenic forest, to which people take trips. Though there is no market for trips to the lake or forest, it is obvious that people value such trips, or they would not take them. The action of taking such a trip reveals their preference, or value for the recreational area. In some instances, such as for a ski area like Whistler Mountain, the area may charge a daily fee (the lift ticket), but the true cost of the ski trip to Whistler includes the costs of getting there, and back again. Thus, the ski lift ticket price alone may not accurately reveal the total value of the day of skiing at the area.

Policy and decision makers can estimate the value individuals have for non-market goods by collecting data on their behaviour or actions and preferences.

For example, we know that Banff or Yosemite National Park has value in at least two ways. First, an agency collects data on attendance at the park and tracks it over time. Attendance is high, and people come from all over the world, often at great expense. The very fact that these people travel great distances and at great expense indicates a *value* in going there. In addition, when Yosemite National Park raised the entry price substantially a few years ago, there was no noticeable drop in attendance.

Second, agencies do surveys of preference for goods and services, including non-market goods. Data have been collected that demonstrate that individuals would rather pay to support parks than to not have them. Sometimes the payment is expressed in the form of higher gate or entry fees, and other times it is expressed in the form of higher taxes or contributions. These are often quite real payments, observed in the passage of a political referendum to raise taxes.

7. Value in the Context of Events and Festivals

First, suppose that an event or festival is a **private** good. Even in this situation, the market ticket price may not reflect the total value, for the same reason that the ski lift ticket does not in the Whistler example cited above. Again, the idea is that an individual also exerts a good deal of effort to get to and from the event. This "effort cost" is over and above the event ticket price.

There are also events and festivals that are free to those who attend them. Similar to national parks, an event such as the Caribana Parade in Toronto that is free requires effort on the part of an event participant who travels a great distance to attend it. The trip to the event *reveals* the visitor's value for it, even when there is no market price (attendance fee) to help us quantify the value. To estimate the *value* for a free event or festival or the additional value beyond the attendance fee, the appropriate data must be gathered from attendees.

Of course, not everyone will highly value a free event of a particular nature. Consequently, event organizers can anticipate that many people will choose to stay home rather than attend their free event. A middle-aged father, for example, would probably not attend a heavy-metal band concert for free. The father might even be willing to pay something to make sure he avoids the noise. Similarly, his teenaged daughter would not attend a free classical string quartet concert. For actual attendees, the reverse is true: they may have extremely high consumer's surplus from low-priced or free events.

Individuals may certainly be affected by goods even though they are not the direct purchasers of those goods. There is nothing in economic theory that says that people must be direct purchasers to value a good or service. Consumers and producers can each be affected by the production or consumption of goods by others. Residents may take pride in their events, and these feelings are essentially benefits (Carlsen 2002), even though they may be difficult to quantify. In such a case it can be said that there are externalities that are not easily captured by consumers or producers through markets; or, as is consistent with the economists' definition of some non-private goods, there may be benefits or costs that accrue to people other than the direct consumers.

Events and festivals may be at least partly, non-private goods with externalities. In these circumstances, the market will not allocate them well.

a) Instrumental and Intrinsic Benefits

The fact that activities such as events and festivals have non-market benefits that should be considered is certainly not new. Many studies of these benefits exist (e.g. Myerscough, 1988). Externalities are consistent with the emerging concept of *instrumental* benefits of the arts (see McCarthy et al. 2005). The arts, or events and festivals simply may enrich people's lives in a tangible way. The notion here is that benefits are indeed "tangible," suggesting that measurement of them is not that difficult. McCarthy et al. (2005) include improved learning for children and others in society, health benefits, and benefits from community interaction as *instrumental* benefits. They distinguish these types of benefits from *intrinsic* benefits, which include pleasure that people get from events, the creation of social bonds, and cognitive growth.

In contrast to *instrumental* benefits, *intrinsic* benefits are thought by some to be much less tangible and therefore, more difficult to measure and quantify. Both *instrumental* and *intrinsic* benefits are founded on the premise that values accrue to the public, as well as to private individuals, rather than solely to private individuals. As an early example in the literature, Throsby and O'Shea (1980) note that residents of the Mildura district (Australia) may well be prepared to pay to maintain the arts centre there, even though they never set foot inside it. The same is likely the case for festivals and other events.

b) The Presence of Non-Market Values

Returning to the concept of value, we might see more value for events that are scarce relative to demand or desire. There are many possibilities:

- If events or festivals are frequent or commonplace, perhaps the value of each event will be lower.
- When events are highly attended, this is an indication that they may create a substantial value.
- If attendance is thought to be "too high" it may well be that the ticket price, if any exists, is so low that there is a large amount of consumer's surplus that is not reflected in the market prices.

Acronyms commonly used in this paper	
CV	Contingent Valuation
OLS	Ordinary Least Squares
RP	Revealed Preference
SP	Stated Preference
WTA	Willingness To Accept
WTP	Willingness To Pay

The "too high" scenario (above) appears to be in conflict with our notion of the correct equilibrium price, but could occur for a variety of reasons.

1. If events are subsidized this is a usual departure from a perfectly operating market because the producer does not bear all of the costs. Subsequently, the price charged may be distorted, as compared to a natural equilibrium price.
2. Many markets do not operate perfectly, especially when information is hard to obtain, so the market may not even be in equilibrium.

In any case, here "too high" attendance means that the community may well observe congestion (inadequate space, seating, etc.) and over-crowding at the event. It may be that as event organizers raise prices in some effort to reduce demand and eliminate congestion, they find there is little or no sensitivity to the ticket price increase. Naturally, such a lack of sensitivity leads to a gain for event organizers, but it will perhaps reduce consumer's surplus for remaining attendees, as well as for those who discontinue coming. The main point is that if there is evidence of such a lack of sensitivity, it may signal the presence of initial consumer's surplus and value not apparent in the observed initial ticket price.

c) Positive and Negative Value to the Community

As stated above, in the case where there is no market price (no ticket or admission price required) the value is deemed to be equivalent to the amount a consumer is willing to pay (WTP). This value, however, is unobservable without the collection of other information (e.g., surveys that ask people to indicate how much they would be willing to pay). Further, if an event has no market price, such as an Independence Day celebration put on by the community, event organizers may well ask the community for extra funds to pay to support the event. The extra money might be in the form of higher taxes, or a one-time fund-raiser for contributions. When communities ask for and *receive* support, this support is an indication of the value for an event. In contrast, if a community has asked for support for public events and has not received it, it may be an indication that at least within the area where support was asked for, there is little or no "value" associated with the event on the part of the community.

The other side of benefits pertains to overlooked *negative* externalities, which can be viewed as costs. For example, Spring (2003) found evidence of the following associated with Manchester, England's hosting of the Commonwealth Games:

- overcrowding,
- noise pollution,
- built but unused facilities,
- damage to local shops and businesses, and
- increased rates of crime.

Table 1 lists possible types and sources of values associated with events and festivals, as well as ways that a community might know if such values exist. Included in the table are some reasons why the community may experience negative externalities, or costs from events over and above the actual monetary costs of hosting the festival.

Table 1 Possible Values, Motives and Evidence

Type of Value	Possible Reasons and Motives	Evidence of Value
Use Value or Consumer's Surplus	• Ticket price too low • No ticket price or charge • Price of ticket does not capture all value for the event or festival • Events are scarce commodities	• Very high attendance, even over-crowding • Easy acceptance of a rise in ticket prices • Data from exit surveys on attendees that indicate high satisfaction or high value for money
Non-use Value	• Community pride in the event or festival • Spill-overs in terms of educational benefits or cultural benefits that affect non-attendees	• Support given in referendum elections on the event or for similar events and issues • Ample numbers of volunteers from the community, who get involved
Negative Externality (Cost)	• Negative impacts from the event even for non-participants (e.g. traffic congestion, trash, noise)	• Complaints to city officials and police • Reports of employees late to work because of traffic congestion • Costs to city services in clean up • Protests of events by some groups

Obtaining the "Evidence of Value" in the right-hand column in Table 1 may be problematic. Although not necessarily as systematic or as rigorous as might be desired, indications of the presence of non-use values or externalities might be deduced from *general knowledge* of the community that is shared among community leaders and officials, as well as event organizers. For example, the population of some cities may be strongly supportive of sporting events but not of education or arts events. Local residents may demonstrate a record of apathy when it comes to negative impacts. Other community residents may be the reverse in their preferences. News media coverage and stories, editorials, and/or voting outcomes may also be signals of these sentiments.

8. "No Market Price" Does Not Equal "No Value"

When there is no market at all, there is a zero market price. In this situation, the value of a good or service is the individual's WTP, or in some cases the minimum willingness to accept compensation (WTA) rather than do without

the good.[13] We can think of the observed market price as being equal to zero, and thus, the consumer's surplus is simply the WTP. These WTP are relevant in the calculation of social benefits: a zero observed market price does not mean the good has no value but it does mean that a *surrogate* market price needs to be estimated using other information.

Acronyms commonly used in this paper	
CV	Contingent Valuation
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The question then becomes, how can an individual's WTP or WTA be identified in the absence of markets? The answer is by using non-market valuation methods developed by economists who specialize in this task. There are two general classes of valuation methods (see Table 2 for examples):

- **Primary methods** require data collection, usually from surveys, and the implementation of one or more non-market valuation approaches, discussed below.

- **Secondary methods** rely on the results of estimates generated by *others* and reported in the literature. The secondary method requires the application of non-market valuations from *primary methods* for *similar* contexts to a new context.

The most popular secondary method is called *benefits transfer*. It requires that someone has done one or more primary valuation study prior to the need for an estimate. In benefits transfer, a policy or decision maker examines the literature for existing values that might be applied to another context. For example, the United States Environmental Protection Agency frequently takes a value for improving drinking water in one context, such as for eliminating the risks of Giardosis (resulting in the illness giardia), and attempts to apply it to value the elimination of the risks from another, similar contaminant (illness from cryptosporidium, for example). A requirement for secondary methods is that many studies exist where primary valuation methods have already been used and applied. Where many other studies have *not* been done, primary valuation methods must be undertaken and applied to a problem.

Table 2 Simple Nomenclature for Non-Market Valuation

Primary Valuation Methods	
Revealed Preference	**Stated Preference**
Travel Cost Method	Contingent Valuation
Hedonic Property/Wage Method	Contingent Behaviour
Market Pricing	Stated Choice Modeling
	Conjoint Analysis
Secondary Valuation Methods	
Benefits transfer approach (reliant on existing literature)	

[13] For this report we will limit the discussion to the WTP. The WTA is relevant if there are instances when property rights stances are important. For example, people in a community may come to feel that an event is their right, and that if it is to be taken away, then they must be compensated to be made whole. This may be important in certain cultures and if so, the WTA should be sought instead of the WTP. The WTA can exceed the WTP for a given change because WTA is not limited by a person's income level.

a) Two Types of Primary Valuation Classes: Revealed and Stated Preference

The primary valuation methods can be broken into two general classes: revealed preference (RP) and stated preference (SP). Both Revealed and Stated Preference approaches are generally based on primary data captured directly from consumers via surveys. As a consequence, they require survey research expertise and sufficient financial support to generate credible results (rigorous sampling procedures; sufficient sample sizes, etc.).

Revealed Preference: *Doing* something (e.g., going to an event) is a measure of a person's level of preference for the "thing" (event). People's behaviour is, in effect, their way of *revealing* their preferences. Those who do something have a *preference* for the "thing" whereas those who do not do "it", reveal no preference for it.

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Revealed preference (RP) methods rely on observed behaviour of individuals. From this behaviour, such as the act of an individual visiting an event, we make inferences regarding the value of the event. If markets exist and are thought to work perfectly, market prices can be used to make inferences about values.

In contrast, **Stated Preference** (SP) methods typically directly ask individuals to state their value for a visit to a lake, an environmental change at the lake, or the existence of an event.

Using the SP approach, one would literally ask an event participant a question such as "What is the maximum you would be willing to pay to attend this event next year, if conditions were…?"

Asking someone to *tell* you how important something is to him/her or to make trade-offs among a list of options is a *stated* preference. In non-market evaluations, common techniques to estimate Stated Preference might include survey questions that ask people to choose between a series of "pairs" of options that include some shared and some different attributes. Using sophisticated statistical techniques, the preference or *utility value* of each attribute can be calculated. The most common of the SP methods is known as Contingent Valuation (CV). Contingent valuation has frequently been applied to cultural resources (see Noonan, 2003). The question highlighted above is a CV question, in what is called an "open-ended format". More details about CV techniques are provided in Section C-5.

b) Differences between Stated Preference and Revealed Preference

- *Users and Non-Users of the Good*

The main difference between the SP and RP methods is that RP methods can only be used when an individual **uses** a good, service, or resource. One cannot generally ask a question relating to actual observed behaviour and obtain non-use values. In turn, the SP method **does not require that an individual use the good**. For example, the SP method can be used to estimate the value that a townsperson who does not attend an event might have for that event taking place. In this way the SP approach can be used to obtain non-use, or passive use values. Stated preference measures are not necessarily time-sensitive. People can be asked about their preferences for events in the future. For example, if one seeks out responses from a non-participant at an event in 2005, one could still ask a question about the value of an event to him or her for 2006. Respondents might be able to respond whether they plan to attend, or not.

- *Credibility*

Another key difference between RP and SP approaches is that many economists believe the RP data to be more credible because they are based on actual behaviour, rather than simply what a person says he/she will do. The SP approach is most often based on a hypothetical scenario. Thus, critics of the approach question individual's cognitive ability to value a hypothetical change. In addition, questions have been raised regarding individuals' ability to bias results (strategic bias), whether individuals are really valuing a specific good or resource change as opposed to a more general set of feelings, whether some respondents simply say "yes" because they want to please the interviewer (called *yea-saying*), and many other issues.

Acronyms commonly used in this paper	
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Difficulties associated with obtaining credible estimates of value using the CV approach, for example, have caused some economists to shy away from its use. However, most economists who object to the use of contingent valuation do so when it is used to obtain non-use, rather than use values. They believe that values for a person who does not use the good or resource must be more difficult to ascertain with accuracy for the simple reason that unfamiliarity is thought to lead to the poor formulation of values.

- *Data analysis*

The final difference between the SP and RP approaches that will be mentioned here relates to how data can be analyzed. Some types of SP data can be more simply analyzed than the RP data typically can. This is explained in Section C-8-c, below.

As Table 2 indicates (see above), examples of the RP approach are the recreation demand or travel cost and hedonic property or wage valuation methods, while SP approaches include contingent valuation and contingent behaviour (how many trips would you take if conditions were better than they are today?), stated choice modeling, and closely related, conjoint analysis (see Section D-5 for more details).

c) Combining Revealed & Stated Preferences: Mixed Valuation Approaches

When revealed and stated preferences are combined, the behavioural data provides a "reality check" for consumer responses to hypothetical situations (see Morey, 2001, for a recent discussion).

RP and SP approaches can be mixed or blended together, and we refer to the combination as a "Mixed" valuation approach.

The attractive feature of a mixed approach is that it allows a check on the validity of the SP data using the RP data. For example, if a person says that the value of an event to her is $1,000 per year, we can examine whether this statement is consistent with her taking trips to the event (how many trips she actually took).

This mixing of data and approaches has been applied in many instances to recreation trip data (e.g. Eiswerth et al.; Grijalva et al.). Actual trip data are obtained, as well as trip data on responses to hypothetical scenarios. Individuals were asked in the Eiswerth et al. study whether they would take more, fewer, or the same number of trips when water conditions at lakes improved. If they said they would take 50 more trips per year this was checked against the actual trips to formally determine consistency. Intuition suggests that a person who takes one trip every other year is not likely to start taking 50 trips per year because water conditions change slightly. If, on average, people in a sample show wildly inconsistent SP responses relative to their RP responses, a formal test will reject the validity of the SP responses. In the two studies cited here, the validity of the SP responses was confirmed.

D. Methodologies for valuing events and festivals

An Overview

Before event or festival organizers attempt to implement any of the methodologies used by economists to estimate non-market value, they need to formulate the question(s) they want to answer because different methodologies will provide answers to different types of questions. Some examples of the types of non-market value estimates an event organizer might want to produce and the corresponding methods that might produce such estimates are displayed in Table 3 (see following page).

Minimum requirements for undertaking each of the options listed in Table 3 are described in Table 4.

Table 3: Examples of Non-Market Value Estimating Questions and Options			
Question	**Options**	**Assumptions**	**Pros and Cons**
What is the additional value of your event to attendees or potential attendees beyond the entry fee? In other words, how much **consumer's surplus** does the event generate?	**Travel cost model** (a study that estimates *revealed preference* by comparing travel costs among attendees at various events)	There is *additional* value to the attendee of your event that can be captured by estimating how much *more* a tourist was willing to pay in travel costs to come to your event, instead of a different event in a different location. The community expects that the negative externalities of the event, or any positive externalities, are so small that they can be ignored.	**Pro**: Results are quantitative and some feel more credible than those obtained from *stated preference* approaches **Con**: Only estimates additional *non-market use value* for attendees (excludes non-use values for people who do not come to your event). **Con**: Requires information from a sizeable number of attendees from varying distances to estimate the demand curve.
As above	**Simple WTP Study** (Stated Preference)	There is *additional* value to the public that can be captured by estimating how much *more* a person would have been willing to pay than the entry fee to your event (even if you did not charge an entry fee) or, for non-use values, how much they would pay to ensure the event is held.	**Pro**: Can be used to estimate consumer's surplus for locals, tourists and those who do or do not attend your event. Can include non-use values, if desired. **Con**: A person's stated preference (what they would or might have done) may not be a true reflection of their behaviour. **Con**: May produce *qualitative estimates (e.g., frequencies and mean scores*) or values that may not be realistic.
What is the additional value (or cost) of your event to the community beyond revenue generated in the community by additional tourism expenditures? AND/OR What is the additional value of your event to attendees or potential attendees beyond the entry fee? In other words, what is the value of the **externalities** your event generates and how much **consumer's surplus** does it generate?	**Choice Experiment/ Choice Set Modelling**	A more sophisticated method of measuring stated preferences than the Simple WTP approach. The Choice Experiment Approach relies on a series of paired options. Respondents select their *preference* between each pair.	**Pro**: Compared to the *Simple WTP* approach, the choice experiment is considerably more sensitive to the complexities of people's decision-making processes. **Pro**: Can be used to estimate consumer's surplus for locals, tourists and those who do or do not attend your event. **Con**: Complex and difficult to undertake.
What is the additional value (or cost) of your event to the community beyond revenue generated in the community by additional tourism expenditures? In other words, what is the value of the **externalities** your event generates?[14]	**Hedonic property/wage model**	Events may generate costs and benefits for third parties that do not attend the event. For example, property values may be affected positively or negatively by their proximity to the site of an event. Good time-series data available (e.g., real estate sales; wages) External costs and benefits are significant.	**Pro**: May capture additional costs and benefits in the community. **Con**: Not appropriate for infrequent events. **Con**: Sophisticated analytical tools and skills required.
What is the additional value of your event to producers? In other words, how much **producer's surplus** does the event generate?	**Traditional tourism economic impact study**[15]	Tourism economic impact is expected to be significant	**Pro**: Provides credible quantitative results **Con**: Not suitable to events with few or no tourists **Con**: Complex data collection and analysis (see *Guidelines for Measuring Tourism Economic Impact at Gated (or Ungated) Events and Festivals*, under separate cover)

[14] Additional revenue from tourism is traditionally captured in a tourism economic impact assessment (jobs, contribution to GDP, and taxes).

[15] Assuming that the employees and supplies needed to stage the event or festival had no alternative use during the time of the event. If there were alternatives available the value of the best alternative use must be subtracted from the tourism impact to determine producer's surplus.

Table 4: Requirements To Implement Various Non-Market Value Estimating Options	
Options	**Requirements**
Travel Cost Model	▪ Tourists (people who travel to attend the event). The option is *not* suitable for events primarily attended by *local residents.* ▪ Systematic survey of tourists to determine distance travelled ▪ Way to estimate cost per kilometre/mile travelled by tourists ▪ Expertise in regression techniques (e.g., Poisson distribution, ordinary least squares)
Simple WTP Study	▪ Open-ended survey question(s) asking respondents to indicate their willingness to pay for the event or festival or the amount they would be willing to pay for a new set of conditions ▪ Systematic survey(s) of community residents, event attendees and/or residents of other communities who might attend an event
Choice Experiment/ Choice Set Modelling	▪ Systematic survey(s) of community residents, event attendees and/or residents of other communities who might attend an event ▪ Questionnaire development tasks (focus groups or other techniques to determine the appropriate characteristics of saliency to various audiences) ▪ Expertise in developing appropriate "pairs" for a conjoint or "choice experiment" ▪ Expertise in statistics and regression techniques to interpret findings
Hedonic Property/ Wage Model	▪ A repetitive event (*not* suitable for events that occur annually or less frequently) ▪ Access to time-series property value/wage information for the area under study

We assume that event valuation will rely on primary, rather than secondary valuation methods because of the scant amount of existing literature to which benefits transfer can be applied (*benefits transfer* is the use of literature-based estimates of value).

Specifically, the *benefits transfer* approach works best when the desired event or festival is close to the type of event or festival for which values have been already found using a primary valuation approach. Our review of the literature has uncovered very few available values for events or festivals.[16] Thus, at this stage in its development, non-market valuation of events and festivals will likely have to rely on *primary valuation methods.* As noted in the Introduction, primary valuation methods generally require the application of relatively complex economic modeling techniques and expertise in survey design.

In the following pages, more details about each of the following approaches to estimating non-market impacts are provided.[17] Readers are encouraged to refer to Tables 3 and 4 as they explore the methodologies associated with each of the following:

1. Travel Cost Model
2. Simple WTP Study
3. Choice Experiment/ Choice Set Modelling
4. Hedonic Property/Wage Model

[16] A few exceptions are documented by Snowball and Antrobus, including positive externalities estimated at about R2.3 to R3 million per year for an arts festival in Grahamstown, South Africa (see also, Antrobus et al. 1997). This compares to R23.5 million the festival generated in basic economic impacts (employment and revenue).

[17] An additional option for estimating non-market value for events and festivals – market pricing – is excluded from this discussion because of the high level of statistical and economic expertise required.

Revealed preference (RP) and mixed valuation approaches rather than purely stated preference (SP) approaches are recommended as long as sufficient survey design, statistical and economic expertise and budget are available to conduct them successfully.

If the expertise and budget required for revealed preference or mixed valuation approaches are not available to a community or to event and festival organizers, a more *qualitative* approach is recommended (*Simple WTP Study*). This blend of qualitative analysis and simple, open-ended stated preference data is described following some of the more complex approaches to estimating non-market value.

1. Travel Cost Model (Revealed Preference)

a) Basic Information

Here we consider the situation and conditions of an event or festival where only a revealed preference (RP) method might be the best approach to take. As will be shown, this is likely the simplest valuation exercise that can be undertaken. The method is appropriate when events draw a large percentage of visitors who are not locals. Instead, attendees come from a variety of origin points at varying distances from the event location. If attendees are only locals, or only come from one or two other locations, then it is unlikely that implementation of the travel cost approach will reveal true values that participants have for the event.

In some instances, communities may have a strong sense that the primary or only economic impact of an event relates to the value to the actual attendee at the event. In this case the community expects that the negative externalities of the event, or any positive externalities, are so small that they can be ignored. In addition, here it is thought that the event ticket price does not alone provide a good estimate of the value of the event to the individual who participates in it. For example, if the ticket price is heavily subsidized it might be much lower than the true equilibrium price that would prevail in the absence of a subsidy. One might expect such an event to be over-attended, and/or that actual participants receive a high consumer's surplus from the event.

The only way to know if attendees come from a good cross section of origins, of course, is to find out where they are coming from, and the best way to do this is via a survey questionnaire. Table 5 lists the type of information that should be collected in such a survey questionnaire in order to estimate a travel cost model.

Table 5 Basic Travel Cost Information
Origin location (postal/zip code, latitude/longitude or GIS coordinate)
Means of transportation to event
Hourly wage or annual income (include all sources)
Name/location of competing event
Length of stay at event
Expenditures on hotel/overnight stay (if relevant)
Number of trips to similar events, in past year
(Optional)
Years of Education
Age
Gender
Individual's estimate of time spent in travel to event
Individual's estimate of time spent at actual event
Locations/names of events to which trips were taken in the past year

b) Producer's Surplus Must Be Measured Separately

The variables included in Table 5 do **not** cover information required to estimate producer's surplus. In order to include producer's surplus in the final estimate of the event's value, information on trip and local expenditures would also be collected. If the final estimate is to include producer's surplus, the *travel cost* questions could be added to an on-site tourism economic impact study, as described in *Guidelines for Measuring Tourism Economic Impact At Gated (or Ungated) Events and Festivals* (under separate cover).

c) Estimating the Travel Cost Model

Once the data have been collected, they must be analyzed by estimating a travel cost model. The "price" (P) in the travel cost model is, for each individual in the sample, the distance traveled to and from the event multiplied by the cost of operating a vehicle. Current year estimates for the vehicle operating cost can be obtained from national transportation authorities (e.g., the website for the U.S. Department of Transportation (DOT)[18]). Many modellers include the cost of the individual's time in travel and while at the event, but this opens complex issues and is not recommended here (Shaw and Feather). Failure to incorporate the opportunity cost of time typically allows one to assume that estimated consumer's surplus is a lower bound of the true benefits.

Other variables that may explain a person's trips to events are income, gender, age, household size, and one or more key characteristics of the event itself. However, if there is little or no variation in the data on each of these variables, there is no point in including them in the statistical analysis. If you are modelling trips to only one event, then the event characteristics cannot vary. Event characteristics must be taken into account, however, if you are modeling trips to events at a variety of locations. For example, assume that the event is a county fair and that a key characteristic – a characteristic that is important to attendees – is the number of animal competitions (best steer, pig, dog shows, etc.) at each event. The hypothesis would be that more animal competitions lead to more trips being taken to that event, holding other factors constant. There must be variation in the number of animal competitions offered to event attendees, which, in turn, means you must be assessing several events.

To carry out the modelling, the analyst must be familiar with basic regression analysis at the very least. Many models involve more sophisticated statistical methods. The basic idea is that the modeller will obtain estimates of the parameters that describe the demand function. For example, for the simple linear demand function relating the quantity of trips (Q) to the travel price (P), $Q = a - bP$, the parameters to be estimated are the intercept (a) and the slope coefficient on the price variable, or b. These in turn can be used to estimate consumer's surplus, which is the value that is sought.

d) The Poisson Demand Model - One Event

An especially simple and convenient demand specification is called the single event count data, or Poisson demand model. It is assumed that the model only explains trips to one event location, though it may be that one has access to data for a long period of time, perhaps several years. Though it is not simply an ordinary least squares regression, readily available software handles it in the same fashion.[19] What is particularly appealing is that in this specification, the consumer's surplus per trip is equal to 1/b, or 1 divided by the slope coefficient. To obtain the total consumer's surplus over a season for each individual, one should take a person's total estimated trips, and multiply by the estimate of per trip consumer's surplus.

[18] Though DOT estimates vary by the type (size/weight) of automobile, modelers typically use one overall average for everyone in the sample.

[19] The count data model can be estimated using the packages Limdep, SST, SHAZAM, and SAS, as well as any general routine allowing the user to write his/her own likelihood function.

Total estimated trips are the predicted trips for each individual, not the actual reported trips. Most software packages allow predictions. The computer simply takes the fitted model and its parameters and predicts the value of trips using the data for each individual. For example, for an individual with travel costs of $100, with a = 5 and b = -.025, the individual's predicted trips are equal to 7.5. Each individual's predicted trips are averaged for the entire sample, and this average is applied to the population under study. These steps are outlined in Table 6.

Table 6: Steps in Calculating Consumer's Surplus with the Single Event Location Poisson Demand Model

1. Estimate the Poisson model and obtain the estimate of the slope coefficient on the travel cost or price variable, β.
2. 1/ β = per trip consumer's surplus.
3. Estimate each individual's total trips = Q*
4. Total season's consumer's surplus, TCS = Q* X 1/ β
5. Average the TCS for the sample to obtain mean TCS.
6. Multiply mean TCS X number of event participants in the population.

* The asterisk represents trips "estimated" by the model, not actual trips reported taken.

If a canned software package is not available that allows estimation of the Poisson model, we recommend the use of ordinary least squares (OLS). OLS can be done even with simple spreadsheet programs such as Excel. A disadvantage of the OLS vis à vis the Poisson model is that OLS does not lead to the simple calculation of the consumer's surplus that the Poisson does. This is because OLS assumes that the variable to be explained (the number of trips) is normally distributed, while the Poisson distribution assumes that the number of trips is a positive integer.[20]

Inclusion of other variables to explain trips in the single-event Poisson model is limited to characteristics that vary across participants, or that vary over time. If event characteristics are to be used, they must vary over time.

It is possible to estimate the demand for a variety of locations (*multi-event models*) using a systems approach. This estimation process would, however, require advanced statistics and economic theory knowledge for design and interpretation. For this reason the systems approach is not recommended here.

2. Simple WTP Study (Stated Preference)

This approach requires collection of information that can be qualitatively rather than quantitatively assessed. It relies on examining frequencies and means from very simple stated preference (SP) data. Even at this simplified level, the approach will still require inputting the data into a format that can be used in a computer, but analysis could be done using a simple spreadsheet software package.

It is unlikely that a *quantitative value* can be obtained using the discrete choice or referendum approach although one possibility is to ask a simple open-ended WTP question. For example, after laying out a scenario about a hypothetical event, a survey question could be: *how much would you be willing to pay per event (per year in additional taxes) to attend (support) such an event?* This type of open-ended question is often criticized as lacking credibility because some or many respondents may have no idea at all of the amount that they should pay. To overcome this criticism, a

[20] The Poisson distribution assumes that trips are positive integers: they cannot take values below zero. The normal density function assumes that the explanatory variable, trips, can take any continuous value, theoretically between minus and plus infinity.

close-ended approach such as a payment card[21] could be used. The payment card asks the same question as the open-ended version (above), but tells the respondent to circle the appropriate amount, as per the example below:

Payment Card

$0	$1	$2	$5	$7	$10
$12	$15	$18	$20	$22	$25
Etc.					

Regardless of how the *value* question is asked, studies of this type require systematic and representative sampling and survey design.

The population to be surveyed would be determined by the type of information of interest to the researchers, as per the following examples:

- **non-market value to the local community**: the survey would be conducted among household residents in the community;
- **valuation of a *free event* to attendees**: the survey would be conducted among event attendees (on-site surveys);
- **value to attendees and non-attendees in the community:** on-site surveys among attendees and resident surveys would be conducted.

For resident surveys, information on the history of attendance at the event, future interest in attending this event or similar ones and basic demographic characteristics should be included in the questionnaire. Analysis would take the form of *reporting* the average or cumulative amount residents and/or attendees would be willing to pay for the event under the stated circumstances (the *if conditions were . . .* portion of a question such as *What is the maximum you would be willing to pay to attend this event next year, if conditions were…?*).

As an alternative to a *willingness to pay* approach, a *discrete choice contingent valuation* approach can be used. The discrete choice approach asks the respondent to indicate whether or not he/she would be willing to pay a given amount, e.g., $20.00 per year, to have a new set of conditions. This approach is referred to as *discrete choice* because the options are "discrete" (yes/no).

Standard techniques for designing a ***resident survey*** (e.g., telephone survey of a random, representative sample of community residents with telephones) are widely available in textbooks, from survey research consultants, academic institutions and the like. These techniques should be implemented for a Simple WTP Study in order to ensure that the results are credible.

[21] A key consideration in setting values for a payment card is in determining the highest amount that is reasonable for anyone in the sample to pay. Some economists have also criticized the payment card approach on the basis that they believe respondents just choose any number that is depicted in the middle. In general, there are critics of any contingent valuation approach (see Throsby 2003; Epstein 2003).

Guidelines for the design and implementation of ***on-site surveys*** are available from these same sources and from the following documents prepared as part of this project:

1. *Guidelines for Measuring Tourism Economic Impact At Gated Events and Festivals*
2. *Guidelines for Measuring Tourism Economic Impact At Ungated or Open Access Events and Festivals*
3. *Guidelines for Measuring On-Site Spending At Gated Events and Festivals*[22]
4. *Guidelines for Measuring On-Site Spending At Ungated or Open Access Events and Festivals*

Table 7 includes considerations before survey questionnaire design has begun. It is impossible to provide one set of actual questionnaire content or wording that would be appropriate for any type of event in any community. The reader is directed to the Guidelines listed above for examples of the types of questions that might be asked of event and festival attendees.

Table 7 Some Considerations for Survey Design

- Level of education of typical respondents to ensure that wording of your questionnaire is consistent with the "average" level of education of respondents
- Amount respondents already know about the event: too little information requires more extensive explanation within the questionnaire, but too much information prior to the survey on the part of selected respondents may lead to a biased sample response
- Number of competing events within reasonable distance of the host community
- Budget available for survey implementation and outside analysis
- Magnitude of impacts on non-participants
- Complexity of key issues
- Whether non-market measures can be included in traditional economic impact surveys at events and festivals

3. Contingent Behaviour or Choice Experiment/Choice Set Modeling

Choice experiments are increasingly popular in the literature because they can incorporate both *stated* (SP) and *revealed preferences* (RP) (see Adamowicz et al. 1997). They are also thought to be *incentive compatible*, if carefully designed. *Incentive compatibility* means that an individual keeps in mind the proper incentives when answering questions. In other words, the amount people commit to paying is consistent with their overall budget and desire to give up other goods.

The experiment involves asking individuals to state their preference between pairs of depicted events, each event having a set of characteristics (see Table 8). These characteristics must adequately describe the event so that individuals feel they are capable of making a choice between the paired options provided. It is incumbent on the researchers to ascertain which characteristics are important to people, perhaps through the use of focus groups or other qualitative techniques. Typically, one of these characteristics will be the price or cost of the event to individuals or the community.

Determination of the type and number of event characteristics to be included (e.g., duration, crowding, etc.) and the number of levels used for each characteristic (e.g., 2 or 3 levels for duration; 3 or 4 levels for degree of crowding, etc.) in the experiment is a complex task. It generally requires the listing of all possible combinations and permutations of variables/levels and a statistical analysis to identify the final set that will be used in the test.

[22] *Guidelines for Measuring On-Site Spending At Gated Events and Festivals* and the analogous set of guidelines for ungated events were prepared as a separate project for Alberta Economic Development, Tourism British Columbia and other provincial partners. These additional Guidelines follow the format and basic approaches described in the Guidelines for capturing inputs to estimate the tourism economic impact of an event.

Table 8 Characteristics of Hypothetical Event A and Event B	
Event A	**Event B**
Duration: Two Days	Duration: One Day
Estimated Crowd: 10,000 people	Estimated Crowd: 2,000 people
Estimated Revenue Generation: $1 million	Estimated Revenue Generation: $.75 million
Direct community cost: $200,000	Direct community cost: $200,000
Total estimated additional time spent in traffic: 19 hours	Total estimated additional time spent in traffic: 9 hours

Approximately ten pairs of events with different *menus* of characteristics are included in the experiment. The combination of characteristics and "pairs" of events to be measured in the experiment are selected using sophisticated statistical tools. The questionnaire also reminds respondents that they can spend their money on anything they choose, and that committing to spend resources on a festival or event draws down the income they have to spend on other goods and services.

Options in the choice experiment are generally printed on individual "cards". Respondents are asked to read each card and select the one they prefer within each "pair". They may also be asked to *rank order* all the option cards in terms of their preference (*highest* to *lowest*). Because of the amount of "physical material" (cards, etc.) involved in the study and the requirement that a survey respondent consider a number of *similar-but-not-identical* options, choice modelling or *conjoint analysis* studies generally require a face-to-face interview. In turn, to produce results from a random and representative sample of the population under study, door-to-door household survey samples are typically required. Such studies are, therefore, comparatively costly to conduct. They also require that a community have access to sophisticated statistical modeling expertise because they involve a higher degree of complexity than other valuation approaches, such as application of the Poisson distribution (see travel cost model).

The advantage of choice experiments over the simple RP-Travel Cost model (see Section D-2) is that they allow values to be obtained for **non-participants** – individuals who have not attended an event and do not plan to do so. Inclusion of non-participants would be of particular interest when characteristics of the event that affect the entire community, rather than solely those factors that influence the decision for **participants** might be important.[23] Thus, choice experiments permit measurement of *consumer's surplus* and *externalities* that might accrue to the individual and the community, respectively. When both **participants** and **non-participants** are included as respondents in the choice experiment, both *revealed preferences* (participants) and *stated preferences* (non-participants) can be estimated.

The choice experiment approach is most appropriate in situations where it is assumed that participants and non-participants might have (or experience) substantial values (or economic impacts) from the event. Particularly if non-participant impacts are considered large (either positive or negative) and thought to be different than those of the participants, then it is important to develop a study of non-participants. For example, it may be the case that participants are completely oblivious to any negative impacts of the event, and non-participants bear all of these negative impacts. In contrast, if only participants are thought to have values, we recommend the use of the simpler attendee demand (travel cost) model above.

[23] Throughout this paper, *participants* and *non-participants* are equivalent to event *attendees* and *non-attendees,* respectively.

a) Participants Choice Experiment Survey

Participants are defined by their actual attendance at the event of interest, in the past or present. Potential attendees or participants may be relevant here also, as people who have not been to an event, but who state that they intend attending one in the future. The survey questionnaire given to participants could take the form of the example shown in Table 8, but would typically include about ten pairs of choices.

Individuals involved in the experiment are asked which event they prefer, between the two depicted in Table 8 and for each additional "pair". With the *mixed choice set approach,* Event A or B in Table 8 would be the actual event the respondent attended (participant) rather than a hypothetical one. If a "real" event is depicted (e.g., a county fair respondents actually attended), the hypothetical nature of the *pure stated choice model* experiment is removed.

Similarly, one could test two choices, each with events in a hypothetical or real town or community. If a person faces a ticket cost of an event in Town A of $10 and a ticket cost of an event in Town B of $20, and still chooses the event in Town B, then the characteristics of the event in Town B must be of higher value than the Town A event, presuming that other factors are constant (the cost of making the trip to each town, etc.). If the respondent is allowed to accept one of two choices and reject the other, where one of these is the status quo, then the valuation experiment is essentially the same as the discrete choice (yes/no) contingent valuation approach (see Section D- 2 – Simple WTP Study).

These pair choices might be worded to explore future impacts from future events if these are being contemplated. In this case, key stated preference data must be collected in addition to the data on the visit to the event. Capturing information about current and future value could be accomplished by **combining** a *choice set or conjoint experiment* with a basic *travel cost survey*. The stated choice portion could be almost the same as the questionnaire given to non-participants (see below). By giving participants both surveys, the travel cost that gauges values for actual participation (trips to) at events and the stated choice experiment survey that estimates future value, all values could be captured.

b) Non-Participant Impacts

Non-participants clearly state that they have never been to an event in the past and have no intention of attending one in the future. They may still care about the event and value certain dimensions of it. Take, for example, a Reno Nevada resident who does not like auto shows at all and consequently has no intention of ever being involved in *Hot August Nights* – the annual summer automobile show held in Reno. It is possible that such a resident experiences negative or positive externalities and may either be willing to pay to avoid the event, or to support it. Some analysts refer to negatively impacted residents who leave town to escape the impacts of a festival as "refugees." (Snowball and Antrobus).

Non-participant economic impacts might be expected to be large in one or more situations, including when the event is:

- of high educational or cultural importance to the hosting community;
- quite large, and requires considerable investment of time and energy for the community;
- attended by a large number of participants, relative to the size of the host community;
- a tradition in the community;

- highly liked or disliked by a considerable segment of the hosting community; and/or
- capable of leading to permanent changes in the community.

An example of an event generating *permanent changes in the community* would be when an event visitor decides to move to the host community, or at least commits to a long term lease or purchase of vacation property. For example, visitors may primarily come to see the Reno automobile show (Hot August Nights). While visiting Reno, they find that they like the community. They could ultimately decide to move there. These decisions, prompted by attendance at the festival, could affect infrastructure and lead to growth in the community.

c) Choice Set Modelling Experiment for Participants and Non-Participants

We propose a choice set modeling experiment that can be given to both participants and non-participants, with slight variation in the survey text for each group. In other words, particular and specific choice set characteristics can be different for each group, depending on the issues that face the non-participants in the host community. It is the job of the researchers to ascertain what key issues each group is concerned about, perhaps through initial focus groups.

The valuation of the event requires the estimation of parameters accompanying a discrete choice model. With the appropriate level of technical expertise, this is relatively simple to accomplish. After estimation of the basic model, simulations may be run to recover the contribution to value (or decrement to value) from changes in particular characteristics. Adamowicz et al. provide details on these calculations. Finally, checks on the validity and credibility of the stated preference (SP) part of the design are implemented. These are discussed in Sections D-6-a) and E-5.

d) An Alternative Way to Use Choice Experiment Data

If an event organizer does not have access to a technical expert who can recover values from the choice experiment, then data still might be used in simple ways. Cross tabulations that hold one variable (characteristic) constant and provide the relative support for each of the other characteristics in the test can reveal which combinations of characteristics are most appealing to members of the sample. These tabulations may provide information regarding the eventual design and plan for a type of event. Careful experimental design must be undertaken to reveal useful information. For example, suppose a community wishes to know how important the negative aspect of an event's crowding and congestion is. Design of the choices offered in the experiment must allow for many different levels of crowding or congestion, and for participants and non-participants to partake in the choice of a large number of combinations.

4. Hedonic Property/Wage Models

Because local values cannot be obtained using the travel cost model, it might be possible to use hedonic property or wage models. The idea with residential property is simply that residential or other property may capture the amenity benefit of the event, presuming it is a positive one. The underlying concept associated with wage studies is that if events have a large positive impact on people in the community, they might actually forego something in money wages because of this extra positive impact. An individual might choose to live in Stratford, Ontario at a lower wage than other places, for example, because of Stratford's theatre program. In contrast, in order to live in a town with fewer cultural assets, an individual might demand a much higher wage, holding everything else constant.

Hedonic property studies have long been used in assessing questions such as why property with a lakeshore is more valuable than property located more distant from that shore. It is also the case, of course, that an event with a negative stigma may lower property values. For example, it is possible that homes near a sports stadium or concert arena may be lower in value than they would otherwise be in the absence of it.

A simple analysis of sales values in the neighbourhood of the event or festival may reveal whether this type of analysis would be fruitful. It is unlikely to be appropriate in the case where the event is held only once per year or less, or is held on an irregular basis. These infrequent situations in fact may be the norm for events (Smith, 2004). However, a regular weekend event (a town's open farmer's market for example) might be a case to consider for the hedonic property valuation approach. It may also be possible to explore wage differentials in communities with events versus communities that do not have them. We might expect, other things held constant, that events with a positive influence allow people to live in the host community for lower wages.

5. Additional Comments on Measurement Tools

a) Qualitative Versus Quantitative Interpretation of Non-Market Impact "Estimates"

As indicated above, the RP approach does not yield simple numbers that are readily converted to *values*. To recover values requires implementation and estimation of a statistical model of the demand for events, and following that, calculation of the consumer's surplus. Doing this using the Poisson model, the simplest of the RP models, was described above. Similarly, the more complicated SP or Mixed approaches (the choice experiment) do not directly yield simple numbers that are values either. Therefore, if more sophisticated modeling is ruled out by having insufficient expertise or budget to permit outside analysis, we recommend implementation of the Simple WTP Study (see Section D-2).

b) Surveys to Capture Non-Market Impacts of an Event or Festival

As noted above, *intercept* or *on-site surveys* are recommended if information from event *participants* is required (e.g., Poisson Travel Cost approach, and the Simple WTP Study). For more details about the issues and methods associated with doing on-site surveys at events, see *Guidelines for Measuring Tourism Economic Impact at Gated (or Ungated) Events and Festivals* (under separate cover).

A well-done intercept sample is representative of the people who actually attend an event. However, it may not be representative of people who do not attend the event, or those who attend events like them. Therefore, if the goal is to obtain results that shed light on non-participants within and outside the community, an intercept sample will not be appropriate or sufficient.

If it is desirable to make inferences to non-participants, then a different sampling plan is required so that the non-participants can be reached. Smith (2004) recommends that off-site sampling be done if the goal is to extrapolate to a broader population than event-goers. She recommends a telephone survey, or recruitment elsewhere in the community than the actual event site. She notes that such off-site schemes are expensive, in part because they require a general database allowing contact of people in the general population. This can be accomplished using random digit dialling and a telephone survey, or by purchasing a set of mailing addresses that is random within a population. Use of utility companies' customer lists is another tool used with success to reach a representative sample of community residents. Cooperation of the utility and appropriate random sampling techniques would be required if this sampling frame were to be used. Regardless of which sampling approach is used, costs will likely be incurred and the research budget must be adjusted accordingly. For more discussion, see the report "Estimating the Economic Impact of Festivals, Fairs and Events: Issues and General Guidelines" (Research Resolutions and Consulting, Ltd. 2004).

E. Outstanding issues

Some of the outstanding issues associated with non-market valuation approaches are identified in this section.

1. Non-use or Passive Values

As suggested by others (e.g. Morey 2001), the most difficult aspect to valuing cultural events and festivals may pertain to estimation of non-use values, or those values that non-participants may have. This is because of a lack of familiarity with the event or festival by someone who has never been, and who might never go, and because of the nature of the exercise in assigning a value to something that is not used. However, obstacles may be overcome and there are many instances where individuals contribute their money to a cause even though they may not be participants. For example, thousands of dollars a year are collected by environmental groups wishing to protect rain forests overseas, and few of the contributors will ever go to these rain forests.

2. Missed Instrumental and Intrinsic Benefits to Attendees

To the extent that event-goers obtain some specific instrumental and/or intrinsic benefits, it is quite possible that the RP and mixed approaches will not capture them. For example, suppose there are significant cognitive benefits that children and others receive by attending musical events such as a concert. The approach described in this paper does not seek information on improved Scholastic Achievement Test (SAT) scores and the like. It might be possible to analyze independent data to assess this (for example, time series data on test scores in relation to annual events), but such an analysis may be complicated by confounding factors. As another example, suppose regular concerts encourage local students to study music themselves, and this later provides them with benefits that, in turn, spill over to the community. Similarly, McCarthy et al. (2005) mention community empowerment and social interaction as instrumental benefits. Again, these long-term benefits will likely be missed by use of RP data alone.

It is likely, however, that long term benefits such as those noted above would be small if events are irregular or sporadically held. Long term benefits may not, therefore, be a major issue for estimating non-market benefits for events and festivals.

3. Crowding Out

Some economists have argued that the indirect benefits of events should not be included without considering whether direct spending on the indirect impacts would have been more fruitful (e.g. Seaman 2000). We can deem this argument "crowding out" of spending on other things. For example, if a community wants to see students improve on test scores, they could spend monies directly on education to improve such test scores. These economists suggest that direct spending on the events should be examined, and only net benefits and not gross benefits should be attributed to the events. However, this issue seems more of a concern for direct economic benefits calculations than it does here. In addition, any well-done valuation study considers substitution as a possibility for the respondent. For example, a well-written Contingent Valuation or Choice-Experiment study frequently reminds respondents that they can spend their money on anything they choose, and that committing to spend resources on a festival or event draws down the income they have to spend on other goods and services. So, crowding out is already factored into each individual's stated WTP or value.

4. Sampling Issues

As noted by Smith (2004) and Seaton (1997) and briefly discussed above, each event may be unique so it is difficult to develop the best sampling plan. Intercept sampling may lead to a biased sample, depending on the target population. At best, the resulting sample will lead to an unbiased sample of all individuals who actually attend the event. Inferences cannot be made to those who have some latent desire to attend the event but do not, or to those who do not even have a latent desire.

5. Limitations of Travel Cost Approach for Locals

In addition, Morey (2001) notes that the travel cost method is not likely to be fruitful to value cultural amenities for locals. There is not enough variation in the cost of making a "trip" for locals from their homes to the local museum. The same may well be true for events attended by locals: the travel cost approach likely will not work well in ascertaining their benefits. Locals will indicate zero or only a few miles in travel to the event. Therefore, it is probable that values for local residents must be found using an approach other than the travel cost approach.

6. Contingent Valuation Issues

The appeal of contingent valuation is high because of its relative simplicity in analyzing the data. However, the accuracy of the CV approach makes it controversial. While the approach is still the only one that economists know can produce non-use values, its worth continues to be debated in the literature (see Epstein 2003; Morey 2001; Throsby 2003).

7. Establishing Parameters for Social "Benefits"

As noted elsewhere in this discussion, there is no *a priori* set of social benefits that might be associated with an event or festival. Instead, each community would examine community values in the context of the characteristics of its events and festivals to determine the social benefits might accrue to the community as a result of these events. We have recommended that qualitative research (e.g., focus groups, discussions with community leaders, etc.) be used to determine these values.

To aid in this type of undertaking, we have provided Crompton's list of economic, environmental and social benefits associated with park and recreational activities because there may be commonalities between "recreation" and "events and festivals" (Crompton 2005). The categories in which there is most likely to be overlap between "events" and "parks and recreational activities" are *economic prosperity* and *alleviating social problems.* Crompton's list is not necessarily inclusive and may not be appropriate for every type of event or festival in every type of community. Instead, it provides readers with some general guidelines for the formulation of benefits in their own communities (see following page).[24]

[24] For more details about each of the benefits in Crompton's list, refer to his monograph (in production).

Crompton's List of Public Benefits which Parks and Recreation Agencies Could Potentially Deliver

Economic Prosperity

- Attracting tourists
- Attracting businesses
- Attracting retirees
- Enhancing real estate values
- Reducing taxes
- Stimulation of equipment sales

Environmental Sustainability

- Protecting drinking water
- Alleviating river flooding
- Controlling storm water runoff
- Alleviating air pollution
- Reducing energy costs
- Reducing environmental stress
- Preserving genetic diversity
- Historical preservation

Alleviating Social Problems

- Preventing deviant behaviour among youth
- Social inclusion
- Community regeneration
- Healthy lifestyles
- Raising levels of educational achievement

F. Summary and Conclusions

Some have suggested the appropriate manner to assess the economic impacts of a festival or an event combines traditional revenue and employment and consumer's surplus or WTP estimates (e.g. Antrobus et al. 1997; Snowball and Antrobus; Throsby and O'Shea 1980). Others advocate a more "holistic" view of events and festivals (see Clarke 2004). We agree that the basic economic impacts associated with spending (revenue and employment) do not indicate all of the benefits in some circumstances, and have focused here on non-market impacts.

If measurement of non-market impacts for an event or festival is being considered by event organizers, community planners or politicians, the most important first step in the process is to evaluate whether, and what type of non-market benefits might be associated with the event or festival.

This first step is not simple. It relies upon a clear understanding of the potential for these types of benefits to exist in association with one or more festivals. Because they exist for one event does not mean they will exist for every event.

It is particularly important to recognize that non-market valuation estimates require agreement on a set of assumptions about what is *good* or *bad* for a community and how best to measure the degree of *good* and *bad*. These relate to the nature and type of benefits that might accrue to members of the community. Identifying these variables and obtaining community-based agreement with them is a critical factor in the acceptance of non-market benefit estimates. If funding agents or potential partners do not agree with the basic assumptions in the modeling exercise, they are unlikely to pay attention to the results. In addition, if the community has large segments that are openly hostile to the events in the first place, then there will likely be resistance to any positive interpretation of the results and the benefits estimated for the community.

As noted earlier, over 100 articles and journal papers were reviewed to prepare this paper. The extensive literature review generated many titles that appeared relevant and promising. Upon examination, however, very few articles were attempts to estimate the non-market value of an event or festival. The current literature is also scarce with respect to systematic or comprehensive materials to identify, operationalize and value non-market benefits such as community pride, social cohesion, ethnic diversity, etc.

There is no single or easy tool for events and festivals to estimate their non-market value. There is also debate within some parts of the economics community about the most appropriate methods to use, so those involved in assessing benefits need to recognize that there is a trade-off between simplicity in the approach and expected criticisms of those simple approaches. Even the simpler approaches require the following:

- A clear understanding of the types of benefits and costs that might accrue to a community;
- Ways to operationalize, measure and attach a value to these benefits and costs;
- Survey design, sampling, weighting, and projection skills; and
- Statistical and economic expertise to interpret results.

The first two items listed above – identifying and subsequently operationalizing and valuing benefits and costs to a community – are especially difficult because they reflect social, economic and political values. There is, in effect, no single "list" of non-market benefits a community might obtain from an event or festival. For example, if most people in

a community support cultural and linguistic **homogeneity**, an event that highlights a particular ethnic group's culture and language might be viewed as one that brings *negative benefits* (costs). If, on the other hand, most community residents support cultural and linguistic **heterogeneity**, the same event might be regarded as one generating positive non-market benefits.

Because the benefit identification process is idiosyncratic to the particulars of a community and to the particulars of the event under scrutiny, we have recommended that event organizers engage in a qualitative[25] research exercise to identify the positive and negative non-market values that *might* be associated with the event (see Table 1 for some examples).

Estimating non-market values for festivals and events is an important and evolving application of econometric tools that have been used primarily to aid land, water and other environmental management decisions, to build a case for support for cultural institutions, and the like. This paper provides an overview of the options currently used to estimate these values and reflects the complexity of the measurement tasks involved. The findings suggest that existing tools could be adapted for application to events and festivals but there is considerably more work to be done to develop a *tool kit* for estimating the non-market values of such events.

[25] E.g., focus groups, interviews with community leaders, politicians, etc.

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H. Appendix A

Technical measures of consumer's surplus are the compensating and equivalent variation, CV, and EV. Compensating variation is the amount of income that must be subtracted from an individual in a proposed state to make him indifferent between the proposed state with the payment made, and initial state. The EV is the amount that must be added to income in the initial state to make him indifferent between the initial state with the compensation, and the proposed state. For improvements (see Morey 2001) the CV and EV are positive, and for deteriorations, they are both negative. For an improvement, the CV is the WTP, and the EV is a WTA. For deteriorations, the CV is the WTA to accept it, and the EV is the WTP to prevent it from happening.